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IFMA FOUNDATION ACCREDITED DEGREE PROGRAMS SELF-STUDY REPORT RE-ACCREDITATION

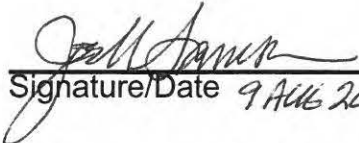
Institution: **Ferris State University**

Degree Name: **Bachelor of Science in Facility Management**

Date Approved by Institution: **1989**

Year of Initial Recognition/Accreditation by IFMA: **1996**

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Table of Contents

Section 3: Standards for Accreditation/Undergraduate-Graduate Degree Programs	Page 3
Section 3.1: Applicability	Page 3
Section 3.2: Program	Page 6
Section 3.3: Instructional	Page 16
Section 3.4: Faculty	Page 21
Section 3.5: Students	Page 37
Section 3.6: Administration	Page 48
Section 3.7: Facilities and Equipment	Page 54
Section 3.8: Computer Systems	Page 56
Section 3.9: Financial Resources	Page 57
Section 3.10: Library Services	Page 58
Section 3.11: FM Program Advisory Committee	Page 58
Section 5: Required Areas of Knowledge (Mapping)	Page 60

List of Appendices

Appendix 1a: Architectural Technology Check Sheets and Course Outlines
Appendix 1b: Facility Management Check Sheets and Course Outlines
Appendix 1c: Architectural Technology and HVACR Course Syllabi
Appendix 1d: Facility Management Course Syllabi
Appendix 1e: General Education and Service Course Syllabi and/or Course Outlines
Appendix 2a: Architecture and Facility Management Departmental Internship Policy
Appendix 2b: Internship Syllabus and Course Outline
Appendix 2c: Internship Sites – 2008 to 2014
Appendix 3: Advisory Board Members and Meeting Minutes
Appendix 4a: Sample Student Assessment Instrument
Appendix 4b: Facility Management Exit Interview Reports
Appendix 4c: Academic Program Review Feedback
Appendix 5: Placement Data – FSU Institutional Research Data and Program Review Survey
Appendix 6: FSU Transfer Student Policies
Appendix 7: Faculty Curricula Vitae
Appendix 8: Faculty Selection and Appointment Policies
Appendix 9a: Tenure and Post Tenure Review Policies
Appendix 9b: Faculty Load Policy
Appendix 10: Bulldog Values
Appendix 11: Marketing Materials
Appendix 12: TracDat Assessment Data
Appendix 13: Organizational Chart

Note 1: This self-study contains only the parts of the accreditation standard that require information or a response. This Sections 1, 2, 4, and the instructional part of Section 5 have been deleted.

Note2: Black and Blue text are part of the Standard as provided by the IFMA Foundation. Black text indicates the Standard and blue text indicates instructions. Green font indicates the information entered by Ferris State University.

Section 3

3. Standards for Accreditation – Undergraduate and Graduate Degree Programs

3.1 Applicability

3.1.1 The objective of FMAC accreditation and reaccreditation is to ensure that Accredited Degree Programs (ADP) in facility management is in compliance with established standards as outlined in this section of the document. It is understood that programs will vary in their compliance with the standards. The Facility Management Accreditation Commission will have sole responsibility for determining compliance.

3.1.2 Professional Level Education Accreditation at the professional level of education is directed toward those programs that provide academic preparation for the professional facility manager. This preparation is the first component of a recommended sequence including formal education, entry-level experience, and satisfactory completion of professional certification examination(s). Compliance with FMAC Standards can occur in a variety of academic settings.

3.1.3 Eligibility Requirements

The program is required to submit documentation with an application showing that eligible institution and program requirements are met. The FMAC will review this information. If the eligible institution and eligible program requirements are met, the application will be formally accepted by the FMAC and the program notified to that effect prior to proceeding with the review of program compliance with standards.

3.1.3.1 Institutional and Program Eligibility

A program seeking accreditation must demonstrate that it is housed within an institution that is accredited or recognized by:

An institutional accrediting body that is recognized by the U.S. Department of Higher Education, or the appropriate higher education agency or authority in the institution's country of origin.

An FM program seeking accreditation must provide evidence and demonstrate that:

- a) The institution is accredited and recognized by other accrediting organizations
- b) The program culminates at a minimum of an associate's degree.
- c) The program follows the graduation requirements of the institution, has an FM program that has been approved by the institution, has a Facility Management Advisory Committee, and demonstrates that it follows the FMAC Guidelines for an Accredited Degree Program.
- d) A minimum of two cohort classes have graduated from the program prior to submission of the application, or demonstration that the program has started within the institution and has admitted students.
- e) The majority of student work displayed as evidence of student achievement shall be produced from the current curriculum.
- f) Program outcomes are assessed based on an on-going curriculum that has produced a body of work for review, taken from no longer than the preceding 5 years, or since the previous accreditation cycle.

In addition to demonstrating the institutional and program eligibility requirements above, programs housed in institutions located outside the United States must demonstrate that the institution is accredited and recognized by local accrediting organizations

A program located in a non-English language institution must confirm that all program documents (published materials as well as course outlines, handbooks, project statements, etc.)

and communications with FMAC are to be provided in English for purposes of the accreditation process.

3.1.3.2 Eligibility of Programs Delivered through Alternate Methods

Application for accreditation is open to programs that are delivered through alternate methods, such as distance education and on-line programs. If the program demonstrates that it meets all eligible institution and eligible program requirements, the program will be reviewed for accreditation exactly like a traditional institution based FM program. These programs will require a site visit and preparing a display of student work for evaluation as described in the *Site Visit Section of the Accreditation Manual*.

Each applicant institution will prepare a self-study report that documents its compliance with the standards. In this accreditation process, the emphasis is an outcomes based assessment. The entire self-study must be submitted in English and prepared in the format provided by the FMAC. The self-study report shall follow the guidelines in this document and be completed by representatives of the institution's administrative staff and teaching faculty.

Provide and document the eligibility requirements stated above. Include: name of institution main contacts with contact information, date in which the FM program was officially approved, number of current students, number of graduates over the past 5 years (shown by year), identify the title of the degree that will be shown on the diploma and transcript. Include an approval signature of the Dean, Provost and/or highest level of approval authority.

This curriculum is delivered in a traditional face-to-face format. See cover page for institution information requested above. See Section 3.5.6 for enrollment and graduate information.

3.1.4 Philosophy and Objectives

3.1.4.1 Mission

The mission and purpose of the academic division that houses the facility management program shall be compatible with the definition of facility management as set forth in section 1.1.

Identify the mission statement and discuss its compatibility.

The mission of the Bachelor of Science in Facility Management degree program is to be a nationally recognized program that provides students with a foundation of concepts, skills and values to effectively begin the practice of facility management; and instills the value of lifelong learning.

NOTE: The program's mission is consistent with both the university's mission of excellence in career-oriented education as well as the IFMA Foundation's Accreditation Standard's Section 3.1.2. Graduates of the program are successful in finding and performing well in facility management jobs. Employers recruit students nationally and often return periodically to recruit facility managers.

3.1.4.2 Program Goals

The facility management program shall have clearly written goals and outcomes for its graduates and shall state its strategies for achieving these goals and outcomes.

Identify the program level goals and outcomes and the strategies employed to assure the goals and outcomes are met.

The overall goal of the program is to provide students with a well-rounded general education supplemented with curriculum specific to the facility management

profession such as business, management, building technology, and facility management specific studies. Students not only learn the theory of these various disciplines, but also apply these theories to real and hypothetical problems related to facilities.

Specifically, the program goals are:

(Source: TracDat – an online software program that Ferris State University has adopted to map curriculum and measure outcomes)

1. Demonstrate the ability to think effectively and develop critical thinking skills partnered with vocational readiness.
2. Understand the core competencies developed by IFMA (International Facility Management Association); students will integrate these competencies in a management-based approach to facilities.
3. Think analytically and apply research generated knowledge and quantitative tools to analyze, manage and carry out research.
4. Use a variety of media to communicate effectively with diverse audiences.
5. Understand organizational, managerial, ethical and legal principles for the delivery of facility management services.
6. Understand and integrate concepts concerning relationships between the physical work environment, social, psychological and physiological needs of the users. Understand and integrate concepts concerning safe, humane and functional work environments in the context of sustainable ecological practices.
7. Program learning objectives and course content will meet and/or address the International Facility Management Association (IFMA) Foundation student performance criteria, accreditation standards and current facility management practice standards.
8. Engage in and complete the FM internship program.
9. Graduates will be successful in finding employment and/or continuing their education.

3.1.4.3 Program Acceptance

The program shall be understood and supported by appropriate individuals and representative groups within the internal university community, the external business and the facility management community.

Identify and describe the program support within and external to the university community.

Advisory Board:

Ferris' FM program was accepted as a formal program of study by the university in 1989. The program was initially recognized by IFMA in 1996. An advisory board consisting of FM practitioners meets regularly (ideally every year) to review the program, and the program maintains ties with IFMA on the national and local level.

The current Advisory Board consists of 16 professionals from 16 organizations. Seven represent consulting (architectural, engineering, and facility management) and nine are facility managers in hospitals (1), hotels (1), education (1), public and private government (2), commercial/manufacturing (3), and utilities (1). Three remain from the original board that served during the program's formation; five are alums.

Professional Support:

The West Michigan Chapter of IFMA has been very supportive of the program and its students over the years. Students are encouraged to attend West Michigan IFMA Chapter meetings and may elect to be members at no cost if they are members of the Ferris State Chapter.

In 2013, the new president of the West Michigan IFMA Chapter initiated a program to help defray the costs for students to travel to World Workplace – the annual

facility management convention. The proceeds of a Silent Auction were donated by West MI IFMA to the Ferris State Student IFMA Chapter to help pay for student travel to World Workplace in Philadelphia. The same is planned for 2014 and students will work with the West Michigan Chapter on this project.

The West Michigan IFMA Chapter also provides a link to the FSU Student Chapter webpage.

Scholarships:

The West Michigan IFMA chapter funds a local scholarship, The Kathy Pruden Memorial Scholarship (\$1500 previously, \$2,500 for 2014). This scholarship has been offered for over 15 years. They also fund the James Hickey Scholarship through the IFMA Foundation.

MISHE, the Michigan Society of Hospital Engineers, has instituted a \$2,000 scholarship available to a single student who completes a facility management internship at a member hospital.

Other scholarships are offered through Ferris State University. One is sponsored by a former employee, the Larson Scholarship, and another is sponsored by Staples, Inc.

Internships and Placement:

Increasingly the program has found prominent organizations contacting Ferris to recruit qualified facility management personnel. These organizations include: US General Services Administration, ARAMARK, UNNICO, American Institute for Research, and others. Students have found internships and permanent employment with these organizations as well as Spectrum-Health, Hilton Hotels, Hyatt Hotels, Boeing, Fred Hutchinson Cancer Research Institute and others. See also Section 3.5.3 and Appendix 2c.

3.2 Program

3.2.1 Program Name

Each program and/or program option shall have the words "facility (facilities) management" in the title. Titles such as "business," "engineering" or "architecture," which imply that the focus of the program is in a related field of study, are not appropriate.

Identify the published program name.

Bachelor of Science in Facility Management

3.2.2 Program Level

Accredited Degree Programs may award FM degrees at the following levels:

- Associate
- Baccalaureate (Bachelor)
- Master's (Graduate)

3.2.2.1 An institution may confer any of the above degrees, but each must be accredited separately using the criteria herein.

3.2.2.2 Associate degree programs must have at least one articulation agreement with an Accredited Degree Program (this requirement can be waived by the FMAC if the institution submits compelling information as to the effect it would have on achieving accreditation).

- 3.2.2.3 Baccalaureate** programs are expected to offer the primary FM programs in the junior and senior years of study. Appropriate lower level basic courses may be offered by the aforementioned institution's or may be transferred from other institutions in accordance with the institutions transfer policy. Identify the transfer credit policy.
- 3.2.2.4 Master's** program must require that the admission criteria include a baccalaureate degree in FM or a related area.

Identify the Program level

Baccalaureate (the program is structured as a junior/senior level program of study for students graduating from Ferris' Associate in Applied Science in Architectural Technology program or similar architectural, facility management, HVACR, or building technology associate programs.)

Students also may transfer into the junior level with the equivalent of two years of college study (or 60 credit hours). Transfer applicants are evaluated individually to ensure that they have the necessary competencies from the architectural technology sequence (first 2 years) to succeed in the facility management program. Customized curriculums are developed for these students.

3.2.3 Program Definition

3.2.3.1 Associate degree. Due to limited classroom time at the associate degree level, each program should only have one option, specialization or concentration. It shall be demonstrated through the program's course of study that academic outcomes and competencies for the graduates must include:

- Operations and Maintenance
- Technology
- Project Management
- Environmental Stewardship and Sustainability

Specific course requirements for each area of knowledge shall be clearly specified and shall meet or exceed ADP standards; however, a course that teaches to the 11 core competencies is required. A capstone course at the Associate level is not required.

3.2.3.2 Baccalaureate degrees may have one or more options, specializations or concentrations. Specific course requirements shall meet or exceed all of the ADP outcome standards. Each of the 11 core competency areas must be covered in the program.

3.2.3.3 Master's programs may have one or more options, specializations or concentrations

and shall at a minimum demonstrate strength in the following outcome and competency areas:

- Finance and Business
- Communication
- Leadership and Strategy
- Quality

Master's degree program shall require independent thinking skills and the ability to solve challenging problems to which solutions can be found through research, investigation, and analysis development. A presentation in defense of compiled research data shall also be included. Specific course requirements shall meet or exceed the ADP outcome and competency standards. It is required that an institution teach at least 1 course that covers the 11 core competency areas of knowledge identified in Section 5. Certain standards, such as follow-up studies of graduates, may not be appropriate for new options within established programs,

and a waiver may be granted by the Facility Management Accreditation Commission.

3.2.3.4 Fully or partially web based programs can be accredited and are encouraged as a means to educate working FM professionals. They should meet the criteria set forth in Sections 3.2.2 and 3.2.3

Identify Program Level

This baccalaureate degree program is a general degree in facility management and has no specializations. The program is focused on producing graduates who can assist organizations in all aspects of planning and controlling the design, construction, and operation of their facilities with consideration given to people, process, place and technology. Students are accepted into this degree program and enter it in their 3rd year of study and are evaluated to ensure that previous academic work provides sufficient background in architecture, building systems, communications, mathematics, and science to successfully complete this degree.

Some students add minor degrees to their Facility Management degree. Examples are Communications and Hospitality Management.

3.2.4 Program Emphasis – Of the 11 Core Competencies, What is the Program’s Strength?

Primary emphasis in the program shall reflect accepted facility management practices.

Describe the program emphasis.

Because acceptance into the facility management program requires an Associate of Applied Science in Architectural Technology degree or comparable background and is currently taught by faculty who are licensed architects, the program places a strong emphasis on the Project Management Competency (programming, architectural design, space planning and project management). However, since Facility Management encompasses more than architectural issues, students also develop skills in the other IFMA competency areas such as real estate, operations and maintenance, budgeting and finance, and HVACR. It is especially important that successful facility managers be capable of communicating as business people. Hence, a wide variety of courses in business and management are included in the curriculum.

The strong general education component of the degree develops basic academic skills in Math (Intermediate Algebra minimum), Communications (2 college level English courses, 1 communication course, and 1 advanced writing course), Science (College Laboratory Physics plus a science elective, cultural enrichment (typically consists of three courses, one with a global component...the other 2 are typically architectural history), and social sciences (sociology or psychology plus 2 economics courses).

A brief summary of the level at which Ferris’ curriculum addresses each of the 11 competencies is provided in the following table.

COMPETENCY	LEVEL	COMMENTS
Leadership and Strategy	Medium	1 required + 1 elective course. Also discussed in courses as related to various other competencies.
Operations and Maintenance	High	Strong basis on methods and materials of construction. 2 architectural + 2 HVACR + 1 FM specific course
Project Management	Highest	Basic courses in architecture as base + 1 project management + 1 programming + 1 space planning +1 interior design course
Communications	High	3 English + 1 communication + integrated written and oral presentations in FM courses
Finance and Business	Medium	2 Economics + 2 management + finance issues such as estimating, budgeting, live cycle cost analysis, value engineering integrated into FM courses.
Human Factors	Medium	2 HVAC courses + 1 programming + 1 interior design course
Quality	Medium	1 management course + integrated into FM curriculum
Real Estate and Property Mangement	Medium	1 specific course
Technology	Medium	Microsoft Office + AutoCAD + REVIT used in courses. Online seminar on FM-Systems.
Emergency Preparedness and Business Continuity	Low	Discussed in some FM courses.
Environmental Stewardship and Sustainability	Medium	Discussed in appropriate architectural and FM courses

3.2.5 Course Sequencing

There shall be evidence of appropriate sequencing of course work in each program to ensure that advanced level courses build upon concepts covered in beginning level course work.

Provide the published graduation plan and indicate any sequencing requirements and/or prerequisites.

See Program Curriculum Guide Sheet in Appendix 1b. Note that the Bachelor of Science in Facility Management is an upper-level (junior and senior) program. The first two years consist of the Associate of Applied Science in Architectural Technology or other study that is evaluated to be appropriate preparation for entry to the degree program. This information is also included in Appendix 1a. In the case of transfer students, customized plans are developed to ensure the shortest time to graduation.

3.2.6 Field Experiences

Each program shall include industry appropriate field experiences, such as on site visits, facility tours, work-study options, internships and cooperative education, or a series of practitioner seminars focusing on problem-solving activities related to facility situations. An internship is not required, but is highly recommended.

Provide a summary of field experiences, other than internships, provided by the academic program over the past two years.

Provide the program internship requirements

A summary of field experiences include:

- *Guest speakers (alumni, content experts, recruiters), facility tours, participation in West MI and Ferris State IFMA Chapters. See table below.*
- *Faculty and Student attendance at World Workplace (annual) and Facility Fusion*

- (when local). Most students attend World Workplace in their senior year.
- Inclusion of Facility Management students in discussion with Facility Management Advisory Board members.
 - The Ferris State University Chapter of IFMA encourages facility tours as well as fund-raising activities to reimburse students for some of the expenses associated with attending World Workplace.
 - Examples of field trips include Haworth and Steelcase corporate headquarters, the Grand Rapids Art Museum, Grand Rapids YMCA – LEED Certified facilities.

Sample of Guest Speakers for Courses

Course	Guest/Title	Organization	Topic	
ARCH 115	Pete DeJong	Monsma Inc.	Air infiltration barriers	
	Charlie Applebee		Membrane roofs	
	David Sheasley	Architectural Glass and Metal, Inc	Architectural glass	
	John Arends	Home Acres Building Supply	Vinyl and VCT floor materials	
	Phil Catalona	StoEX Inc	Exterior insulation and finish systems	
	Scott Mroz, Fire Marshall	City of Big Rapids	Fire Codes	
FMAN 321	Damon Gonzales, VP Facilities (Alum)	Davenport University	Career Development, his job	
	Mike Hughes, Assoc. VP Physical Plant	Ferris State University	Career Path, FM at Ferris State	
	Mickey Albright , Coordinator; Career Services	Ferris State University	(2 sessions) Career Services Offerings/Resume Writing/Interviewing	
	Matt Larsen, Project Manager (Alum)	Wolverine Group	Career Path, Project Management	
	Skip Camp, Director Facilities (Advisory Board Member)	Collier County Florida	Security/Continuity/Risk Assessment	
	Zach MacIntosh, FM Operations (Alum)	Spectrum Health	Hospital Operations and FM; Career Path	
	Patrick McKown, FM Planner (Alum)	Spectrum Health	Hospital Planning and FM; Career Path	
	John Hohman	MI Soc of Hospital Eng	FM Careers in Healthcare; MISHE; scholarships	
	FMAN 322	Skip Camp, Director Facilities (Advisory Board Member)	Collier County Florida	Project Management
		Damon Gonzales, VP Facilities	Davenport University	Gen X & Y Work Styles

	<i>(Alum)</i>		
	<i>Design Team</i>	<i>Tower Pinkster Architects</i>	<i>LEED Gold Certification for Ferris' Student Housing</i>
<i>FMAN 431</i>	<i>Derrell Jackson, Research Division</i>	<i>Herman Miller</i>	<i>Place + Pedagogy + People: classroom design</i>
<i>FMAN 432</i>	<i>Brian Lock</i>	<i>Crites, Tidey & Assoc</i>	<i>Lighting</i>
	<i>Jim Palmer</i>	<i>Shaw Carpets</i>	<i>Carpeting</i>
	<i>Russ Kiefer/Nancy Howard</i>	<i>Herman Miller, Inc</i>	<i>Office Systems</i>
	<i>Megan Murray/Meredith Vyn</i>	<i>Haworth</i>	<i>Office Systems</i>
	<i>Karen Simmon, Facility Manager (Alum)</i>	<i>Ferris State University</i>	<i>How Interior Design Impacts My Job</i>
<i>FMAN 441</i>	<i>Mike Crowe, Commercial Real Estate Appraiser</i>	<i>Mid-Michigan Appraisal and Inspection</i>	<i>Building Appraisals--how they are done and how they affect project financing.</i>
	<i>Paul Griffith, Director</i>	<i>Michigan Works West Central</i>	<i>Leasing office space in design\build format</i>
	<i>Allen Gregory, Commercial Real Estate Agent</i>	<i>Coldwell Banker Blakely Real Estate</i>	<i>What real estate professionals bring to the table in commercial real estate transactions</i>
	<i>Arthur Spalding, Real Estate Attorney</i>	<i>Rhoades McKee PC</i>	<i>Practicing due diligence in purchasing real estate.</i>
<i>FMAN 451</i>	<i>Sergio Pages, VP; Principal (Advisory Board Member)</i>	<i>StructureTec</i>	<i>Building Audits and Maintenance Planning</i>
	<i>Brad McCormick, Professor; Health Sciences</i>	<i>Ferris State University</i>	<i>OSHA Law; Due Diligence</i>
	<i>Anne Hawkins, Dir. Lab Safety</i>	<i>Ferris State University</i>	<i>OSHA Law; Facility Specific</i>
	<i>Doug Workman, Adjunct Faculty/Independent Consultant</i>	<i>Ferris State University</i>	<i>Environmental Assessment</i>

Sample Table of Field Trips for Courses

Course	Host	Organization	Topic
<i>ARCH 112</i>	<i>Typically visit a local building site</i>		
<i>FMAN 322</i>	<i>Barb LeFever</i>	<i>Steelcase; Global Headquarters and Steelcase University</i>	
	<i>Gerb Kingma</i>	<i>Herman Miller</i>	<i>Facility Tour</i>

FMAN 431	Barb LeFever	Steelcase; Global Headquarters and Steelcase University	New office and educational products
FMAN 432	Janice Kitchen, Interior Designer/Facility Manager (Advisory Board Member)	Fishbeck, Thompson, Carr & Huber	The relationship between Interior Design and Facility Management
	Derrell Jackson	Herman Miller	Facility Tour
	Steve Hadersbeck, Facility Manager	Secchia Center	Building Tour
FMAN 441	Paul Griffith	Michigan Works West Central	Adaptive Reuse of a bowling center into an energy efficient office building

3.2.7 Program Validation

Appropriate validation and internal review of program content shall be an ongoing process and shall be accomplished through a combination of external experts, a formal advisory committee and follow-up studies of program graduates.

Provide documentation indicating how the program and academic content is reviewed, how often the program is reviewed by each method identified, and the date and results of the last two program review cycles.

The program is validated in many ways. The faculty consider recurrent themes and ongoing concerns, rather than individual comments. History has shown that concerns voiced by students and advisory board members are often reacting to specific and unique incidents. Thus integrating communication into FM courses and developing and communicating budgets were issues that are being addressed.

- Advisory Board: Active participation and support of Advisory Board consisting of FM practitioners. The advisory board is supportive of the program. Their main concerns were with regard to financial and administrative support. Financial support concerns were in response to ongoing issues in terms of providing appropriate spaces and furnishings. Administrative support concerns were in response to the constant changes in college leadership and organization. Comments on curriculum included enhancing communication skills and more emphasis on financial aspects of FM. The Advisory Board met in April 2010, October 2011, and October 2013. See **Appendix 3** for list of Advisory Board Members and Minutes of last meetings.
- Student Course Evaluation: The university requires that all tenured and tenure-track faculty have students complete a course evaluation for two courses each semester. The results of this survey are considered in reviews, promotion, etc. The results are also used by faculty to rework courses. In the case of extremely poor evaluations, university administrators require faculty to remediate and address the deficiencies in their professional development plan. A sample of the standard questions are shown in **Appendix 4a**. It should be noted that future versions of this survey will be completed on-line and faculty will have the opportunity to add questions to the survey. The results of this survey are confidential.

- Exit Interviews of Graduating Students: Exit Interviews are administered annually for review of program relevancy and consideration for program enhancements. See Appendix 4b for Exit Interview Reports.
- Academic Program Review: Academic Program Review (APR) 2010-2011 was a thorough internal evaluation of each program. This review addresses faculty, employers, students, alums, facilities, administrative support, etc. APR is required of each program every 6 years. Successful programs receive a 6-year approval. The Facility Management program received a 6-year approval for the last two program review cycles. It also received a recommendation of "Continue". (Other possible ratings include "Enhance", "Reduce", "Discontinue") The full Academic Program Review will be available at the Site Visit.

In order to minimize redundancies and better use faculty time, the Academic Program Review (APR) process has been changed to utilize the accreditation self-study and site visitation team report and recommendations as the primary documentation for APR. Thus, the Facility Management degrees will undergo APR during the 2013-2014 cycle to align IFMA Foundation accreditation with APR.

- Program Review Alumni Survey: Program Review Alumni survey. See Appendix 5.

3.2.8 Program Development, Revision and Evaluation

Program development, revision and evaluation shall involve currently enrolled students, individuals responsible for instruction, program graduates and representative employers. These individuals shall be part of the advisory process and may be members of a formal advisory committee.

Identify the membership constituency of the last program review cycle and discuss examples of specific input and how their input was solicited and applied.

- *As described in Section 3.2.7, Ferris State University conducts mandatory Academic Program Reviews of all programs. The Facility Management program was last reviewed in September 2011 and received a "Continue the Program" rating. See Appendix 4c.*
 - *The membership of the Facility Management Academic Program Review Committee were:*
 - Program Review Chair: Joe Samson, Professor
 - Program Coordinator: Diane Nagelkirk, Professor
 - Program Faculty: Mary Brayton, Professor; Gary Gerber, Associate Professor; Dane Johnson, Associate Professor.
 - Individual with Special Interest to Program: Matt Larsen (AT and FM graduate). Project Manager at Wolverine Group, Inc., Grand Rapids, MI.
 - Faculty Member Outside the College of Engineering Technology: Donna Smith, Communications Faculty Member.
 - Matt Larsen and Donna Smith reviewed the draft Academic Program Review self-study document and were asked to provide comments and input. Both are supportive of the program and provided minimal input.
 - *The Academic Program Review Council noted the following important strengths of the program: "dedicated and well-qualified faculty, accredited program, high placement rates, low attrition rate, and effective recruitment strategies."*

- *The Academic Program Review Council provided the following suggestion for program improvement: establish working relationship with FSU administration regarding long-term planning.*
- *The following actions have been taken to address this comment:*
 - *Faculty have utilized the Ferris State Campus as a subject for many student projects. FSU Facility Management personnel have been invited to attend and comment when students present these projects. They have attended and commented.*
 - *FSU Facility Management has invited students to attend sessions where the university master plan was presented.*
 - *FSU Facility Management personnel have been solicited to identify topics for student projects. No suggestions to date.*
 - *Mike Hughes, the Associate Vice President for Physical Plant (the closest thing Ferris has to a facility manager), has been a guest speaker for FMAN 321 – Principles of Facility Management, as one of a series of guest speakers who explain their FM job and responsibility to help students understand the role of the facility manager.*
 - *Mr. Hughes has also been an advocate for hiring FM students to work in his office. These often result in internships.*

3.2.9 Transfer Course Work

Policies shall ensure that course work transferred from other institutions is comparable to course work offered at the institution with program accreditation or seeking program accreditation.

Describe/provide the institutional transfer policy, and in particular, transfer policy of credit for Facility Management required coursework.

- *The program admission GPA requirement was increased from 2.3 to 2.5 in fall of 2010.*
- *See Ferris State University Transfer policies in **Appendix 6**. Credit is not given for students earning a grade of less than C for courses taken at an institution other than Ferris.*
- *Students transferring from other institutions must submit Official College Transcripts, must have an overall GPA of 2.5, and must either have an Associate of Applied Science in Architectural Technology (AAS) or an approved equivalent degree. It is rare that other community college AAS degrees match Ferris' AAS degree; as such a careful review of transcripts is undertaken at the Admission Office level and at the program level. Two areas are reviewed to guarantee that transfer students are prepared and will be successful: 1) AAS general education requirements and 2) AAS technical coursework requirements.*
- *Transcripts of students from other institutions are closely evaluated to ensure that students complete all general education courses required for a Ferris degree. Transfer equivalencies, for technical course work, are determined in consultation with other institutions on a regular basis to guarantee transfer equivalency that matches FMAN course content. Individual courses are compared for equivalency by the faculty responsible for teaching the course.*
- *The Program Coordinator confers with faculty from transfer institutions when necessary to determine course placement.*
- *Students with limited background in architecture are required to complete certain courses from the Architectural Technology program. These typically include:*
 - *ARCH 102: Architectural Digital Graphics*

- ARCH 112: Structural Materials, Systems, & Codes
- ARCH 115: Interior and Exterior Finishes, Systems
- ARCH 203: Architectural Documentation
- ARCH 204: Architectural Detailing
- ARCH 241: Design Principles
- ARCH 244: Architectural History 1
- ARCH 250: Systems Cost Estimating
- HVAC 337: Mechanical and Electrical Systems

3.2.10 Program Publicity

Institutions shall broadly and accurately publicize to potential students (on the program website and other materials): (a) Facility management program goals and learning outcomes; (b) Pre-admission standards, testing or evaluation requirements; (c) Assessment measures used to advance students through the program; (d) Graduation rates; (e) placement rates in facility management professions, and their starting salaries; and (f) Fees and other charges.

Provide evidence on how this information is publicized.

- Faculty recruit students into the program from Ferris' Architectural Technology Program as well as from the Grand Rapids Community College, Lansing Community College, other state-wide community colleges, and other regional community colleges.
- Program brochures and the program website were enhanced in 2010-2011 to provide simple, attractive information regarding the program.
www.ferris.edu/atfm
- Ferris' Admissions Office has counselors that travel to high schools, skill centers, and community colleges to promote College of Engineering Technology programs.
- Tuition and fees are set by the university Board of Trustees. These costs are published on Ferris' website.
 - Housing and Dining fees are published at the following website.
<http://www.ferris.edu/HTMLS/administration/businessoffice/housing-dining-rates.htm>
 - Tuition fees are published at the following website.
<http://www.ferris.edu/HTMLS/administration/businessoffice/20132014rategreensheet.pdf>

The university is in the process of developing a standard for publication of this information to comply with requirements of the Higher Learning Commission.

See Appendix 11 for program brochures, webpage information, etc. associated with this section. The department website can be entered at www.ferris.edu/atfm. The facility management program brochure can be viewed at <http://www.ferris.edu/HTMLS/colleges/technolo/atfm/facility/flipping-book/index.html>

3.2.11 Legal Authorization

Only institutions and programs legally authorized under applicable law to provide a program beyond the secondary level are considered for accreditation.

Identify the legal authorization of the institution.

- Ferris State University is chartered by the State of Michigan.

- *Ferris State University is accredited by the Higher Learning Commission. 230 South LaSalle Street, Suite 7-500, Chicago, Illinois 60604-1411*

3.3 Instruction

3.3.1 Syllabi and Course Manual Notebook

3.3.1.1 Syllabi

Course syllabi and other related course materials for each course specifically required by the FM program for their degree must be listed in the self-study, and fully included in the self-study report as an appendix, representing conformance to the institutional requirements, or the requirements listed below:

- Course Number and title;
- Instructor name and rank/title;
- Subject matter to include goals, learning outcomes and competencies with reference to how they relate to the ADP standards in Section 5 areas of knowledge covered;
- Summary of assessment methods, including assignments, quizzes and tests;
- Number of lecture and laboratory/workshop hours, as well as credit hours;
- If course is required (core) or elective;
- Prerequisites if required;
- Brief description of the course as shown in the program catalog or online summary;
- Required texts and/or required/recommended reading, including books, periodicals, web sources and other resources in a standard format;
- Summary outline of subjects addressed in each lecture;
- Grading methods describing attendance, participation, assignments, reports, examinations, presentations, grade percentage values, and so forth;

3.3.1.2 Course Manuals Notebook

Separate, labeled and tabbed course manuals notebook shall be available in hard copy for the site visit team, and shall include:

- Syllabi and a screen-copy of the online course description
- Written faculty summary of course objectives, teaching methodologies, and how integrative problem solving activities are applied (one to two pages maximum)
- Course mapping graphically showing how the learning outcomes and competencies are applied in the course and their relative density of application across the course.
- A summary and brief description of the written and oral assignments within the course.
- Evidence of at least one representative graded, de-identified assignment or assessment method for each competency identified, showing good, average and poor student work product, the grade for such assignment, and the faculty feedback provided. The assignment criteria as presented to students shall be supplied with the graded work.
- Final grade distribution for each class section offered over the past two years.
- Feedback methods, such as student rating of teaching surveys from students and de-identified results obtained, and explanation from the faculty how that feedback informs course improvements.
- Program review of the course including information and results of the last program level course review, such as identified weakness and actions taken.

Course syllabi and other related course materials for each course specifically required by the FM program for their degree must be listed in the self-study, and fully included in the self-study report as an appendix, representing conformance to the institutional requirements, or the requirements listed above.

Most courses include a variety of learning methodologies. Lecture, small group discussion, smaller projects, larger and research-oriented projects, individual and team activities, tests, on-line quizzes, etc. are utilized. The introductory courses are more structured as students are being acquainted with terminology, principles, etc., while projects in more advanced courses focus on utilizing and applying information to solve facility management related problems in a creative manner.

Course Outlines are provided in the following appendices. Note that HVACR course materials are included here.

Appendix 1a: Course outlines for Architectural Technology (1st 2 years)

Appendix 1b: Course outlines for Facility Management (2nd 2 years)

Appendix 1c: Syllabi for Architectural Technology (1st 2 years)

Appendix 1d: Syllabi for Facility Management (2nd 2 years)

Appendix 1e: Course outlines and syllabi for support courses outside the School of Built Environment

Also see individual Course Manuals provided at the Site Visit. Note that items G and H above are considered confidential information for the use of individual faculty members and university administration. Each faculty member has been asked to share this information as they see fit within the Course Manual they provide for the Site Visit.

In Exit Interview Surveys (Appendix 4b), students self-report GPAs of 3.0 or higher. They also feel well prepared upon entry to the program. Students generally self-report satisfaction with individual courses at 3 or higher on a 5 point scale in 2013, the most recent year this data is available. Students also appreciate the project oriented curriculum. Upon completion of the curriculum nearly all report that they would recommend the program to others.

3.3.2 Program Level Assessment of Learning

Assessment tools and methods for the program. Evaluation of the scope of learning and tools for evaluation of student achievement of the objectives shall be clearly outlined to provide the site visit team an understanding of how the program assesses student learning outcomes and how these evaluations impact course content, course development, and course and program improvement.

Describe the program level ongoing annual assessment methods and provide evidence of assessment results. Identify how these results are published to students (see section 3.02.10(c)).

Since the last accreditation, assessment has played a more prominent role at Ferris State University. Faculty are required to develop outcome statements for each degree as well as for each course. TracDat, a web-based software was purchased by the university to map the success of programs as well as individual courses in achieving the specified outcomes. TracDat can be a tool in helping faculty and administrators monitor and improve programs and individual courses.

The development of a program mission was the first step in the process of developing program-level outcomes.

The mission of the Bachelor of Science in Facility Management degree:

To be a nationally recognized program that provides students with a foundation of concepts, skills and values to effectively begin the practice of facility management. The program also seeks to instill the value of life-long learning.

Assessment that measures the fulfillment of this mission at a program level includes the following outcomes:

- Student demonstration of critical thinking skills partnered with vocational readiness.
- Student demonstration of awareness, knowledge and/or competency in course-specific skills and content.
 - Course outlines are designed to address and weigh content in terms of awareness, knowledge and/or competency based on the core competencies developed by IFMA (International Facility Management Association).
- Successful completion of the FM internship, including positive evaluation from the intern site.
- The ability of students to successfully find employment and/or continue their education.

At a program level, the FM program has successfully met its outcomes. This is mapped by TracDat. Each program outcome is associated with a course or specific assignment within a course. Success is measured by a specific percentage of students (85%-90%) attaining a grade of C+ or higher on that particular measure. See [Appendix 12](#).

At a less institutional level, assessment varies by course and instructor. Most courses use a variety of methods to evaluate student performance...most typical are projects, research papers, presentations, and exams. TracDat allows faculty to compare current with past cohorts and to track achievement over time. Faculty use this information to rework courses, emphasize areas in which students performed weakly, etc.

Since implementation, one of the weaknesses of this process is that the tracking information has statistical limitations. Since the FM program is a small program, the results of a given year's data have limited statistical validity. The faculty looks at results over a number of years, to improve the statistical significance of the results and to identify trends which suggest areas for improvement and change. It also is limited due to its recent introduction.

See [Appendix 12](#) for TracDat curriculum mapping reports.

In order to identify the IFMA Foundation competencies and the depth to which they are covered in Ferris' Facility Management curriculum, the curriculum was mapped at both the program level and at the course level. This information can be found in [Section 5](#).

3.3.3 Program Balance

A reasonable balance must be maintained in course work between the practical application of "how" and the conceptual emphasis of "why." The learning associated with program competencies shall not be concentrated in a few courses, but dispersed in a reasonable distribution of coursework, ideally providing for ways of knowing, application of that knowledge and critical thinking skills.

Provide a summary of the types of integrative and problem solving activities used in the program and a program mapping summary of all learning outcomes and competencies against the program course offerings.

The curriculum begins with overview courses; FMAN 321 – Principles of Facility Management, FMAN 431 – Principles of Space Planning, MGMT 301 – Applied Management, etc. In subsequent semesters courses focus on particular aspects

associated with Facility Management; FMAN 322 – Project Management, FMAN 331 – Programming and the Design Process, FMAN 432 – Principles of Interior Architecture, FMAN 441 – Property Development and Planning, FMAN 451 – Planning and Budgeting for Operations. As the course of study nears completion, the courses are more integrative and self-directed and allow students to explore areas of individual interest or apply content to specific problems. FMAN 489 – Capstone Research and FMAN – 499 Capstone Thesis are the integrative courses.

For example, FMAN 321 mainly makes students aware of the diversity of FM topics, using simple template style projects to communicate how the materials are applied. Courses that focus on specific topics typically have a main project where the theory is applied.

The final capstone courses allow students to work on projects that are integrative in application of the IFMA core competencies. The intent here is for students to explore how each core competency impacts other aspects of a project. Capstone projects have focused on themes such as integrating university and community, specific student interests, and partnerships with real world organizations such as John Ball Zoo, Spectrum Health, Domino Farms, and Kent Intermediate Schools to solve real world facility management problems. Examples of Capstone projects will be available at the site visit.

See Section 5 of this report for thorough curriculum and course level mapping of the FSU Facility Management curriculum and the IFMA Foundation Outcomes.

3.3.4 Computer Applications

The program shall include instruction on computer applications for facility management problem solving.

Summarize the computer applications used at the program and course levels.

The following are software which FM students acquire proficiency in prior to graduation. The primary application for this software is also identified.

Note that while students are exposed to FM specific software through tutorials, demonstration, and comparison, competency in a FM specific software is not a part of the curriculum. This concept was supported by the Advisory Committee in the 2011 meeting minutes. Rationale for this decision include the following:

- There is no specific software that is used industry wide and there are literally hundreds of FM software programs.*
- Utilizing “generic” or “enterprise” software, such as Microsoft Office, requires the student to understand the relationships and meaning of what the software is actually doing. This type of software is utilized in most courses.*
- “Generic” software is readily available.*
- “Generic” software has a shorter learning curve as the students are already familiar with it.*
- Students report learning FM software quickly in the field and have received positive comments from employers on their ability to quickly learn and use software.*
- Students are often exposed to FM software at their internship experience.*

In the AT portion (1st 2 yrs) of the curriculum, students gain basic proficiency in the following software:

- Microsoft Office (Word, Excel)*

- *AutoCAD and Revit for representational and documentation of buildings.*
- *Presentation software such as,*
 - *Microsoft Power Point*
 - *Photoshop*
 - *SketchUp*
 - *InDesign*

During the FM portion (2nd 2 yrs), in addition to those listed above:

- *AutoCAD and REVIT for FM applications.*
- *Microsoft Office (more advanced applications, especially Excel for development of budgets, estimates, planning, life cycle cost analysis, etc.)*
- *Microsoft Project (FMAN 322: Project Management and as a planning tool is subsequent projects)*
- *FM-Systems (an online seminar with hands on application provided by FM Systems personnel)*
- *Many students are exposed to and utilize FM specific software during their internships. (IE., FM-Systems, Archibus, AIM, School Dude, etc.)*

3.3.5 Communications

Oral presentations and technical report writing shall be elements of each FM course requirements and emphasized by the program. A minimum of 2 written reports and 2 presentations is required for each FM course. Formal evaluation is required for each report and presentation.

Summarize the emphasis on communication skills at the program level, and the courses with the greatest application of communication based assignments. Under Section 3.3.1.2(f), provide the course level summary of written and oral assignments.

Ferris requires all students to meet certain competencies in General Education. These include Math, Science, Cultural Enrichment, Social Awareness, Global Consciousness, Race/Ethnicity/Gender, and Communications. Four communications courses are required. ENGL 150 and 250 are typical college composition courses. A speech course COMM 121 (Public Speaking) or COMM 105 (Interpersonal Communication) is also required. There is also an upper level English course required. In the FM program, this course is ENGL 311 – Advanced Technical Writing.

Written and spoken communication is integral to all FM courses and has been identified by the Advisory Board and by employers as one of the most important skills graduates should have. The faculty's general impression is that students excel in oral presentation, but come to the program deficient in writing skills and graduate still weak in this area. The following table summarizes communication related assignments in each FMAN course.

COURSE	CR HRS	WRITTEN COMM	ORAL COMM
<i>FMAN 321 – Intro to FM</i>	<i>3</i>	<i>3-5 short assignments or exams; 1 report on Core Competencies</i>	<i>1 @ 10 minute Core Competency presentation (individual)</i>
<i>FMAN 322 – Project Mgmt</i>	<i>3</i>	<i>4 shorter papers and 1 major (individual)</i>	<i>2 presentations (team)</i>
<i>FMAN 331 – Programming/ Design Mgmt</i>	<i>3</i>	<i>7 assignments of increasing complexity</i>	<i>2 @ 20 minute presentations w/each student presenting (team)</i>

<i>FMAN 393 – Internship</i>	4	12 assignments (10 weekly reports, 1 revised resume, 1 essay)	NA...although some students are asked to discuss internship with next group of students
<i>FMAN 431 – Space Planning</i>	3	2 assignments related to programming	2 @ 20 minutes presenting design (team)
<i>FMAN 432 – Interior Arch</i>	3	2 assignments (prelim research/design)	2 presentations (prelim research/design) (team)
<i>FMAN 441 – Real Estate</i>	3		
<i>FMAN 451 – Operations/Maint</i>	3	3 short quizzes; 1 major report	1 @ 5 minute (team) and 1 @ 10 minute (individual)
<i>FMAN 489 – Capstone Research</i>	1	4 short written; 1 major proposal	1 @ 5-10 minute (individual) and 1 @ 20 minute (team)
<i>FMAN 499 – Capstone Thesis</i>	3	1 draft; 1 final paper	1 @ 15 minutes and 1 @ 30 minutes (team)

See Course Manuals at Site Visit for specifics.

3.4 Faculty

3.4.1 Full-Time Faculty

We recognize that each institution has established qualifications for faculty. This includes education/academic achievement levels, full and part time assignments, length of service requirements, and appropriate teaching load requirements.

Our interest is to make sure that each program meets the institution’s established qualification and to make sure that each program and program option shall have at least one appropriately qualified faculty member dedicated to the facility management program. Faculty qualifications shall include emphasis upon:

- a. Extent and pertinence of academic preparation;
- b. Extent, recency and pertinence of facility professional level experience (such as technical supervision or management);
- c. Extent, recency and pertinence of applied facility experience (such as technical applications); and
- d. Membership and participation in appropriate professional organizations.

Provide a summary of full time faculty and adjunct faculty, their curriculum vitae, and a web screen shot of the faculty list on the program website.

The current Architecture and Facility Management faculty consists of seven faculty members: 3 licensed architects, 3 licensed architects/LEED AP/EB, and one licensed architect/CFM (Certified Facility Manager).

The following table indicates all faculty members within the program, their architectural and FM backgrounds, and their teaching assignments. With the exception of Professor Gerber, all hold terminal degrees in architecture. The GREEN text indicates changes since last re-accreditation.

Faculty Member	Reg. Arch	CFM	Other	Relevant Experience	FM Courses Taught
Mary Brayton	Yes	No		Architectural practice. Teaches building materials/finishes.	(1) Interior Architecture.
Chris Cospser	Yes	No	LEED 2.0	Architectural practice. Teaches Environmental Systems	NA
Gary Gerber	Yes	No	LEED AP CDT	Architectural practice. Work experience with real estate development.	(1) Property Development and Planning.
Dane Johnson	Yes	No	Licensed Historic Architect	Architectural practice. Design. Space planning/master planning for Chrysler, Inc.	(1-5) Space Planning. Capstone Research. Capstone Thesis Prin.of FM (cert) Prog & Des (cert).
Paul Long	Yes	No	LEED AP	Architectural Practice. BIM. Design.	NA
Diane Nagelkirk	Yes	No		Architectural practice. Program Coordinator	(2-3) Project Management Internship Project Management (cert.)
Joe Samson	Yes	Yes		Architectural practice. Facility Planner at two hospitals.	(4-6) Principles of FM. Programming and Design. Planning and Budgeting for Operations. Internship. Capstone Res Capstone.

Note: Professor Johnson teaches Principles of FM and Programming and Design only for the online certificate (not in the accredited program). Professors Johnson and Samson have taught Capstone Research and Capstone Thesis alternating independently as well as a team.

Professor Samson serves as the Lead Facility Management Faculty member. The vast majority of his teaching load consists of Facility Management courses. He is also the Faculty Advisor to the IFMA Ferris State Chapter, represents Ferris State on the IFMA Foundation's Facility Management Academic Commission, advises primarily facility management majors, coordinates internships and serves as liaison to industry recruiters. Other faculty teach in areas where they possess expertise. The students benefit from a diversity of viewpoints and approaches. Additionally Professor Samson works with Professor Nagelkirk, Program Coordinator, on curriculum and other FM program-related issues.

The program utilizes the equivalent of 1+ (see table below) Full Time Faculty for the accredited program. The following table illustrates Full Time Equivalent loads typical of the last two academic years (most recent 2013-2014).

Faculty	% in Accred FM	% other FM	% Arch
Mary Brayton	12.5%	0%	87.5%
Chris Cospers	0%	0%	100%
Gary Gerber	12.5%	0%	87.5%
Dane Johnson	12.5%	25% summer	87.5%
Paul Long	0%	0%	100%
Diane Nagelkirk	12.5%	12.5% 33% summer	75%
Joe Samson	54.2%	37.5% 33% summer	8.3%
TOTALS	104.2%	141%	545.8%

Note that Professors Nagelkirk and Samson perform administrative duties associated with the accredited BS in FM program that are not reflected in the above table.

The following is the faculty listing from the program website.
<http://www.ferris.edu/HTMLS/colleges/technolo/atfm/faculty.html>

The screenshot shows the website for the School of Built Environment at Ferris State University. The page is titled "Faculty" and lists the following members:

- Mary Brayton**, Professor (231) 591-3584, braytonm@ferris.edu. AAS Arts, Grand Rapids Community College; BS Architecture, University of Michigan; Master of Architecture, University of Michigan.
- Chris Cospers**, AIA, LEED AP, Assistant Professor (231) 591-3113, cosperc@ferris.edu. Bachelor of Architecture, Mississippi State University; Master of Arts, English, Mississippi State University; Master of Design Studies, Harvard University.
- Gary Gerber**, AIA, LEED AP, Associate Professor (231) 591-2631, gerberg@ferris.edu. AAS Architectural Technology, Ferris State University; BS Architecture, University of Michigan; MBA Grand Valley State University.
- Dane Johnson**, Registered Historic Architect, Associate Professor (231) 591-2625, danejohnson@ferris.edu. BS Architecture, Lawrence Technological University; Master of Architecture, Lawrence Technological University.
- Paul Long**, AIA, LEED AP, Assistant Professor (231) 591-2370, paullong@ferris.edu. BS Architecture, University of Idaho; Master of Architecture, University of Idaho; MSc City Design and Social Sciences, London School of Economics.
- Diane Nagelkirk**, Program Coordinator/Professor (231) 591-2630, nagelkid@ferris.edu. BS Architecture, Lawrence Technological University; Master of Architecture, Lawrence Technological University.
- Joe Samson**, CFM, Professor (231) 591-2517, samsonj@ferris.edu. Bachelor of Architecture, Kent State University; Master of Architecture, Kent State University.

The following pages summarize faculty qualifications and accomplishments. GREEN text indicates changes/additions since the last re-accreditation.

See Curricula Vitae in Appendix 7.

Educational qualifications with degrees and dates awarded:

- Bachelor of Architecture, Kent State University, 1977.
- Master of Architecture, Kent State University, 1988.

Professional and applied facility management experience. Include organization name, title and dates:

- Project Coordinator, University Hospitals of Cleveland, 1981-1986.
- Staff Architect, Cuyahoga County Metro General Hospital, 3 mos 1988.

Memberships and participation in related professional organizations. Include dates, positions held and other applicable information:

- Member IFMA since 1996.
- CFM since 1997.
- Licensed architect Ohio 1984-2012.
- Licensed architect Michigan 1990-present.
- Member, IFMA Foundation Academic Program Accreditation Committee.

Teaching experience with institution names, dates and course/program titles:

Ferris State University since Fall 1988. Have taught in Architectural Technology and Facility Management degree programs.

Courses taught (typically taught and new shown in green):

- ARCH 101 - Architectural Graphics (3 ch): Most Fall Semesters until 2008.
- ARCH 102 - Working Drawings 1 (4 ch): Most Spring Semesters until 2008.
- ARCH 109 - Computer Graphics in Architecture 1 (3 ch): Not recently
- ARCH 110 - Computer Graphics in Architecture – HVACR (2ch): Spring '09.
- ARCH 204 – Arch'l Detailing (4ch): Team taught w/Prof Nagelkirk Sp '13.
- ARCH 241 - Design Fundamentals (3 ch): Some Semesters prior to 2006.
- ARCH 285 - House: An American Evolution (3 ch): Taught periodically.
- FMAN 321 - Principles of Facility Mgmt (3 ch): Fall semesters since 2004.
- FMAN 321 - Principles of Facility Management (3 ch): Web version for Certificate Program: Developed Fall '04. First taught Fall '05.
- FMAN 321 - Principles of Facility Management (3ch): Special section for Leadership and Recreation Management majors. Fall 2009 - Fall 2012.
- FMAN 322 – Project Management for Facility Managers (3ch): Spring 2009.
- FMAN 331 - Facility Programming & Design Process (3 ch): Spring Semesters.
- FMAN 331 - Facility Programming & Design Process (3 ch): Web version for Certificate Program: Developed Spring '05. Taught Spring '06 – Spring -08.
- FMAN 393 – Internship in Facility Management (3 ch): Summers starting '04.
- FMAN 451 – Planning and Budgeting for Operations (3 ch): Fall Semesters.
- FMAN 451 – Planning and Budgeting for Operations (3 ch): Web version for Certificate Program: Developed Spring '06; First taught Fall '06.
- FMAN 489 – Capstone Research (1ch): Taught Fall '12 - present
- FMAN 499 – Capstone Thesis (3 ch): Taught Spring '09, '10, '11, '13.

Recent short courses/seminars presented. Include titles and dates:

“Slovak Folk Architecture: Village Worship Spaces” and “Slovak Fold Architecture: Traditional Homes and Villages”, Slovak American Society of Washington D.C., June 2013.

Presentation via teleconference for Northwest Ohio IFMA Chapter; “Developments in Facility Management Education and Facility Management Educational Options at Ferris State University”; 20 March 2013.

Interviewed for and quoted in “Smaller Budgets and Rising Costs Shape the Industry in 2011”,

Buildings; Janelle Penny and Chris Olson; January 2011.

“Qualities of an Excellent Facility Manager”; Presented to General Services Administration Facility Management Staff at regional training session. Indianapolis, IN (29 April '10)

“Facilities Management – Then, Now & the Future”; Round Table Panel Member representing FM education; Presented to Southeastern Michigan IFMA. Southfield, MI (21 April '10)

“Evolution of American House Styles”; Presented as part of Ferris State University Festival of the Arts. Big Rapids, MI (10 February '10)

“The Future of FM Belongs to Higher Education”; Co-presenter with Paula Behrens, Alana Dunhoff, Kevin Burr, Ying Hua, Cathy Roper, Carol Reznikoff and Nathan Wade at World Workplace. Dallas, TX (October '08)

Recent publications:

None.

Instructor Name: Mary Brayton

Full-time

Educational qualifications:

- *Masters in Architecture, December 1988*

Professional and applied facility management experience:

None.

Memberships and participation:

None.

Teaching Experience:

*Ferris State University, Big Rapids, Michigan
Architectural Technology and Facilities Management Programs
August 1997 – Present*

Current courses taught:

*Arch 101 – Architectural Graphics
Arch 102 – Architectural Digital Graphics
Arch 112 – Structural Materials, Systems and Codes
Arch 115 – Interior and Exterior Finishes and Systems
FMAN 432 – Interior Architecture for Facility Managers*

Recent short course seminars:

*NeoCon 2013
Chicago, Illinois
June 10 – 11, 2013
Common Sense Sustainability: Tools for Better Work Stations
Sustainability and the Furniture Industry
The ABDs of Chemical Toxicity and materials*

*IFMA Facility Fusion Conference & Expo
Chicago, Illinois
April 11 – 12, 2012
IFMA & BIM for Life Cycle Management
Engaging Building Occupants in Sustainability Initiatives
How do we get from BIM to CAFM? The Process & Today's Tools
The Venter Laboratory: Zero Energy
Wellbeing in the Workplace: Are you Missing Out on the Next Big Thing?*

*Sound Healthcare 2010
Grand Rapids, MI
May 18, 2010*

Recent Publications:

None

Instructor Name: *Chris Cospers*

Full-time

Educational qualifications with degrees and dates awarded:

- *Master of Design Studies (MDesS), May 2012;*
- *Master of Arts, English, May 1996*
- *Bachelor of Architecture, May 1994*

Professional and applied facility management experience:

- *Cospers & Associates Architecture · Consulting, P.L.L.C., Starkville, MS
Owner, October 2006-present
Pryor & Morrow Architects, Columbus, MS
Partner, January 2003-September 2006*

Memberships and participation:

- *American Institute of Architects*
- *US Green Building Council*

Teaching Experience:

*Ferris State University, Big Rapids, Michigan
Architectural Technology and Facilities Management Programs
August 2013 – Present*

Courses taught currently:

*ARCH 101 – Architectural Graphics
ARCH 241 – Design Principles
ARCH 361 – Environmental Systems 1
ARCH 362 – Environmental Systems 2
FMAN432 – Principles of Interior Architecture (non-FM section)
ARCH489 – Capstone Research
ARCH499 – Capstone Thesis*

*Mississippi State University, Starkville, Mississippi
Visiting Assistant Professor, August 2012 –July 2013
Assistant Director, Educational Design Institute, September 2008-August 2011
School of Architecture Admissions and Advising Coordinator, June 2010-June 2011
Interim Director, Carl Small Town Center, Fall 2009*

Recent short course seminars:

None.

Recent Publications:

*“The Client-Based Studio: Meeting Pedagogical Needs and Serving the Community”—
presented to the University of Oklahoma Creating, Making Forum and published in the
proceedings. (2011)*

*“Evaluating the Implementation of Lean Construction into a University Curriculum”—
coauthored with MSU colleague Tom Leathem. Examines the curricular options for
integrating Lean Construction principles into a building construction curriculum: a lecture or
“silo” class, a studio, or a special summer class. Scheduled for inclusion in the 2013
Associated Schools of Construction Conference. (2013)*

Educational qualifications with degrees and dates awarded:

- Associate Degree in Architectural Drafting, Ferris State University, 1975
- Bachelor of Science in Architecture, University of Michigan, 1978
- Master of Business Administration, Grand Valley State University, 1995

Professional and applied facility management experience. Include organization name, title and dates: *None*

Memberships and participation in related professional organizations. Include dates, positions held and other applicable information:

- AIA Grand Rapids member since April 27, 2004
Continuing Education Director since January 2009
- Construction Specification Institute Member since 6/1996

Teaching experience with institution names, dates and course/program titles:

Ferris State University since August 1989, Associate Professor

Courses taught:

*ARC 101 Architectural Graphics
ARC 102 Architectural Presentations
ARC 103 Working Drawings 1
ARC 109 Introduction to Computer Graphics in Architecture
ARC 204 Architectural Construction Documents 2
ARC 209 Computer Graphics in Architecture 2
ARC 216 Architectural Documents/Administration
ARCH 101 Architectural Graphics
ARCH 102 Architectural Construction Documents I S97,S98,S99,S06,
ARCH 109 Introduction to Computer Graphics in Architecture
S98,F99,S99,S00,F00,F01,F02,F03,F04,F07,S04,F04,F06,F07
ARCH 112 Structural Materials/Systems& Codes F99,F00,F02,F03,F05
ARCH 115 Interior& Exterior Finish Systems S97,S98,
ARCH 203 Architectural Construction Detailing
F99,F00,F01,F02,F03,F04,F05,F06,F07,F09,F10,
ARCH 203 Architectural Documentation F11,F12
ARCH 204 Architectural Construction Documents 2
S00,S01,S02,S03,S04,S05,S07,S08,S10,S11
ARCH 204 Architectural Construction Detailing S12,S13
ARCH 250 Systems Cost Estimating
S97,S98,S99,S00,S01,S02,S03,S04,S05,S06,S07,S08,S10,S11,S13
BCT 106 Construction Graphics
FSUS 100 Freshman Seminar F04,F06
FMAN 441 Property Development and Planning F05,AF06,F07,F09,F10,F11,F12
ARCH 110 Introduction to Computer Graphics in Architecture\HVACR
S02,S04,S06,S08,F09,F10,F11,F12,S12,S13
FMAN 332 Project Management S10*

Recent short courses/seminars presented. Include titles and dates:

March 26 2010 Google SketchUp Basics to FSU Recreation Students

April 8, 2010 FSU Michigan Energy Conference 2010 Presented with Sarah Tyler on Lake-Osceola State Bank Big Rapids on Commercial Efficiency Adaptive Reuse of a downtown Big Rapids Landmark

April 13, 2011 FSU Michigan Energy Conference 2011 Presented "Adaptive Reuse Saves Money"

Recent publications: *None.*

Educational qualifications with degrees and dates awarded:

- *BArch, Lawrence Technological University, 1983*
- *MArch, Lawrence Technological University, 2007*
- *MS CTE, Ferris State University, Expected 2014*

Professional and applied facility management experience. Include organization name, title and dates:

- *Harley Ellington Pierce and Yee, 1984-86*
- *Kirkarchitecture, 1986-1992*
- *Dane Archer Johnson, Architect-Historian, 1992-present*

Professional and applied facility management experience. Include organization name, title and dates:

None

Teaching experience with institution names, dates and course/program titles:

Lawrence Technological University, College of Architecture and Design, adjunct 1987-2006

Courses taught:

*Twentieth Century Architecture
History of the Designed Environment 2
Frank Lloyd Wright and his Times
The Arts and Crafts Movement*

Ferris State University, Architecture and Facility Management, 2006-present

Courses taught:

*FSUS 100 – Ferris State University Seminar, 2007, 2013
ARCH 101- Architectural Graphics, 2006
ARCH 102 – Architectural Construction Documents 1, 2006-2009
ARCH 241 – Design Principles, 2006-present
ARCH 244 – Architectural History 1, 2006-present
ARCH 245 – Architectural History 2, 2011-present
ARCH 246 – Twentieth Century Architecture, 2009,2011,2013
ARCH 342 – Architectural Design 2, 2011-present
ARCH 421 – Current Issues in Architecture, 2012
FMAN 321 – Principles of Facility Management (online), 2013
FMAN 331 – Programming and the Design Process (online), 2011-present
FMAN 431 – Principles of Space Planning, 2006-present
FMAN 489 – Capstone Research, 2007-2010
FMAN 499 – Capstone Thesis, 2007-2010*

Recent short courses/seminars presented. Include titles and dates:

None.

Recent publications:

None.

Educational qualifications with degrees and dates awarded:

- *Msc City Design and Social Science, Merit, November 2008
London School of Economics – London, England*
- *Master of Architecture, June 2002
University of Idaho – Moscow, Idaho*
- *Bachelor of Science, summa cum laude in architecture, June 2002
University of Idaho – Moscow, Idaho*
- *Associate of Arts and Science, August 1998
Brigham Young University Idaho (BYU Idaho) – Rexburg, Idaho*

Professional and applied facility management experience. Include organization name, title and dates:

None

Professional and applied architecture experience:

- *Project Architect, Aug 2002 – Aug 2007, Oct 2008 – Dec 2010
Chamberlin Architects – Lakewood/Grand Junction, Colorado*
- *Architectural Designer, 2005 – 2010
In conjunction with Innovative Interiors – Evergreen, Colorado*
- *Architectural Designer, 2007 – 2010
Think-Design Build – Golden, Colorado*
- *Architectural Intern, September 2001 – December 2001
XX Architecten – Delft, Netherlands*
- *Designer/Manager, 1994 – 1999
Landscape Design Inc. – Rexburg, Idaho*

Memberships and participation in related professional organizations. Include dates, positions held and other applicable information:

- *Registered Architect, State of Colorado*
- *National Council of Architectural Registration Boards (NCARB) – Certified*
- *Leadership in Energy and Environmental Design (LEED) BD+C Accredited Professional*
- *U.S. Green Building Council (USGB) – West Michigan Chapter, Individual Member*
- *Association of College Schools of Architecture (ACSA), Basic Member*
- *Association of Pedestrian and Bicycle Professionals (APBP), Professional Member*
- *League of American Bicyclists – Individual Member*
- *League of Michigan Bicyclists – Individual Member*

Teaching experience with institution names, dates and course/program titles:

*Assistant Professor – Architecture and Sustainability, January 2011 – Present
Ferris State University – Big Rapids, Michigan*

Courses Taught:

*ARCH 101: Architectural Graphics
ARCH 102: Digital Architectural Graphics
ARCH 203: Architectural Documentation (Revit Architecture)
ARCH 270: Building Information Modeling (Advanced Revit)
ARCH 297: Special Studies in Architecture – Digital Presentation
ARCH 361: Environmental Systems I
ARCH 362: Environmental Systems II
ARCH 421: Current Issues in Architecture
ARCH 441: Architectural Design III – Small Town Studio
FMAN 432: Principles of Interior Architecture
ARCH 499: Architectural Design IV - Capstone (Spring 2013)*

Adjunct Faculty – Interior Design, October 2008 – December 2010
Art Institute of Colorado – Denver, Colorado

Courses Taught:

RS1301: Architectural Drafting (Hand Drafting)
ID3305: Revit Architecture
ID3359: Fundamentals of Working Drawings
ID3384: Computer Rendering (Adobe Photoshop, Google Sketchup, 3D Studio Max, Revit)
ID3347: Building Codes and Barrier Free Design
ID4364: Advanced Construction Documents
ID4371: Interior Architectural Detailing

Recent short courses/seminars presented. Include titles and dates:

From the Outside In: Sustainable Futures For Global Cities and Suburbs, March 7-9, 2013
National Center for Suburban Studies, Hofstra University, Hempstead, New York

- *Session VI – Collaboration, Participation, and Sustainability*
 - *Small Town Studio: Student involvement in sustainable urban solutions for Michigan small towns – Paul Long, Ferris State University*
- *Session VII – Designing and Assessing Green Cities*
 - *Sustainability Assessment Methods: A Greenwich Millennium Village case study – Paul Long, Ferris State University – Paul Long, Ferris State University*

Architectural Renderings – The Esquiline Landscape Calendar: Time, Nature, and Authority in Imperial Rome, January 3-6, 2012

Archeological Institute of America Annual Meeting, Seattle, Washington

- *Produced digital architectural renderings and digital architectural reconstructions for paper presented by Dr. Foulk exploring the relationship between ancient Roman frescoes and their physical, architectural context.*

Adobe Illustrator and InDesign for Architects, November 17, December 1, 2012

Ferris State University – Big Rapids, Michigan

- *Led series of workshops introducing architecture students to Adobe Illustrator and InDesign with an emphasis on their incorporation into the architectural design process.*

Recent publications:

Big Rapids, Michigan – Bicycle and Pedestrian Master Plan, August – December 2012
Ferris State University – Big Rapids, Michigan

Facility Master Plan, Colorado Northern Community College (CNCC), 2010
Rangely Campus – Rangely, Colorado

Sustainability Assessment Methods: A Greenwich Millennium Village Case Study, 2008
The Cities Programme, London School of Economics – London, England

Outer City, 2008

The Cities Programme, The London School of Economics – London, England

- *Co-author of chapter “Emerging Typologies and Densities” that analyzed the interaction of housing typologies, urban density, and transit accessibility.*
- *Publication can be found at:*
<http://www2.lse.ac.uk/LSECities/citiesProgramme/citiesStudioPublications.aspx>

Educational qualifications with degrees and dates awarded:

- Bachelor of Architecture, Lawrence Technological University, 1984
- Master of Architecture, Lawrence Technological University, 2007

Professional and applied facility management experience.

Include organization name, title and dates:

- Department Chair, Architecture and Facility Management Department, 2003 - current
- Project Management Consultant, Via Design, May-August, 2001; May-August 2002

Memberships and participation in related professional organizations.

Include dates, positions held and other applicable information:

- Licensed architect Michigan 1993 - present
- IFMA Member, 2003 - present
- United States Green Building Council, Member 2004-current
- Grand Rapids-Kent County Convention/Arena Authority (CAA), Operations Committee, Member 2009-current

Teaching experience with institution names, dates and course/program titles:

Ferris State University since Fall 1988.

Have taught courses in AAS in Architectural Technology, BS in Architecture and Sustainability and BS in Facility Management degree programs.

Courses taught since 2008 include:

ARCH 101	Architectural Graphics 1
ARCH 102	Architectural Construction Documents 1
ARCH 109	Computer Graphics in Architecture 1
ARCH 115	Interior & Exterior Finishes and Systems
ARCH 203	Architectural Construction Detailing
ARCH 204	Architectural Construction Documents 2
ARCH 209	Computer Graphics in Architecture 2
ARCH 241	Design Fundamentals
ARCH 244	Historical Development of Western Architecture
ARCH 290	Exploring Architecture
FMAN 322	Project Management
FMAN 393	FM Internship
FSUS 100	FSU Freshman Seminar
ARCH 341	Architectural Design 1

Recent short courses/seminars presented. Include titles and dates:

Ferris State University

Summer Educators' Teaching Academy

"AutoCAD & Architectural Applications", 2004, 2005, 2006, 2007

Ferris State University

College of Business, Graphic Design Program

"Urban Sprawl & the McMansion", 2006, 2008

Adjuncts:

During this accreditation cycle the following adjuncts have taught classes. This table only shows courses that FM majors may have taken. Due to the location of Ferris State University and the specialized nature of the programs offered, it is difficult to recruit qualified adjuncts. Thus, the Architecture and Facility Management program avoids the use of adjuncts.

Name	Highest Degree	FM Course(s) Taught	Architectural Course(s) Taught	Term(s) Taught
<i>Ray Holland</i>	<i>NA</i>	<i>FMAN 441</i>	<i>NA</i>	<i>Fall '08</i>
<i>Lauren Liebler</i>	<i>M Arch</i>	<i>NA</i>	<i>ARCH 110 ARCH 203 ARCH 421 FMAN 432</i>	<i>Fall '12 Fall '12 Fall '13 Spring '14</i>

3.4.2 Minimum Full-Time Faculty Qualifications

The minimum academic qualifications for a full time faculty member shall meet the institution's established requirements in a discipline closely related to the faculty member's instructional assignments (except in unusual circumstances that must be justified individually). Professional degrees, licenses, certifications and other professional experience also will be considered in the evaluation process.

Provide the institutional and program level summary of qualifications to teach for full time faculty.

- The Master of Architecture is a terminal degree and 6 of 7 program faculty have this degree.*
- Ferris State University expects all incoming faculty to hold a Master's level degree. In some cases exceptions may be made with the expectation that the degree will be earned within a short amount of time, typically prior to applying for tenure.*
- The Architecture and Facility Management faculty group encourages licensure and certification, as appropriate.*

3.4.3 Minimum Adjunct or Part Time Faculty Qualifications

The minimum academic qualifications for adjunct or part time faculty members shall meet the institution's established requirements in a discipline closely related to the faculty member's instructional assignments (except in unusual circumstances that must be justified individually). Professional degrees, licenses, certifications and other professional experience also will be considered in the evaluation process.

Provide the institutional and program level summary of qualifications to teach for adjunct or part-time faculty.

Ferris' policies for minimum academic qualifications for adjunct faculty is similar to its policy for full-time faculty; that this is determined by each program area. In the Architecture and Facility Management program area, a Master's degree in architecture, management, or a related degree is the minimal degree considered. Depending on the course, licensure, certifications, etc. may be considered.

In efforts to better control and ensure a consistent academic experience for students, the Architecture and Facility Management program area avoids the use of adjunct faculty.

3.4.4 Selection and Appointment Policies

Policies and procedures utilized in the selection and appointment of faculty shall be clearly specified and shall be conducive to the maintenance of high-quality instruction.

Provide the institutional and program level policies and procedures for hiring full, part-time and adjunct faculty.

See University Selection and Appointment Policy in Appendix 8.

3.4.5 Tenure and Reappointment Policies

Faculty tenure and reappointment policies and procedures shall follow the institution's established policies.

Provide a summary of the institutional tenure and re-appointment policies.

See University Tenure Policy in Appendix 9a.

3.4.6 Faculty Loads

Faculty teaching, advising and service loads shall be comparable to the faculty in other professional program areas of the institution. Consideration shall be given in faculty teaching load assignments to high contact hours resulting from laboratory and studio teaching assignments.

Provide a summary of the faculty teaching loads for all faculty regularly teaching in the program. Also, include the institutional policy on faculty loads.

- *24 credit hours or 36 contact hours per academic year (Fall and Spring semesters) maximum. During this accreditation cycle, this was changed from 12 credit hours or 18 contact hours per semester to allow more flexibility in scheduling over the academic year. IE. A faculty member can now have a heavier load one semester and a lighter load another semester and not be considered in overload if the load for the academic year does not exceed 24 credit hours or 36 contact hours.*
- *50% release time for Program Coordinator plus Summer Contract.*
- *The table below illustrates faculty load for the 2013-2014 academic year. It is typical of annual faculty loads.*

Faculty Teaching Loads Academic Year 2013 - 2014									
Faculty	Course	Cr.	Config.	Notes	Course	Cr.	Config.	Notes	Total (24/36)
	Fall Semester				Spring Semester				
Mary Brayton	ARCH 101	3	2+4		ARCH 102	4	2+6		
	ARCH 112	4	3+2		ARCH 115	3	3+0		
	ARCH 112	4	3+2		FMAN 432	3	2+2	FM students	
		11	16			10	15		21/31
Chris Casper	ARCH 101	3	2+4		ARCH 290	3	2+2		
	ARCH 241	3	2+2		ARCH 362	3	3+0		
	ARCH 361	3	3+0		ARCH 499	5	3+6		
		9	13			11	16		20/29
Gary Gerber	ARCH 203	4	2+6		ARCH 204	4	2+6		
	ARCH 110	2	1+3	HVAC students	ARCH 110	2	1+3	HVAC students	
	ARCH 110	2	1+3	HVAC students	ARCH 250	3	2+2	FM students	
	FMAN 441	3	3+0						
		11	19			9	16		20/35
Dane Johnson	ARCH 241	3	2+2		ARCH 245	3	3+0		
	ARCH 244	3	3+0		ARCH 246	3	3+0		
	FMAN 431	3	3+0		ARCH 342	5	3+6		
	FSUS 100	1	1+0						
		10	12			11	15		21/27
Paul Long	ARCH 203	4	2+6		ARCH 102	4	2+6		
	ARCH 441	5	3+6		ARCH 204	4	2+6		
	KCAD	3	3+0	Release time					
		12	20			8	16		20/36
Diane Nagelkirk	ARCH 341	5	3+6		FMAN 322	3	3+0		
	Pr. Coord.	6	9		FMAN 322	3	3+0	Cert.	
					Pr. Coord.	6	9		
		11	18			12	15		23/33
Joe Samson	FMAN 321	3	3+0		FMAN 331	3	2+2		
	FMAN 451	3	3+0		FMAN 321	3	3+0	Cert.	
	FMAN 451	3	3+0	Cert.	FMAN 499	3	2+2		
	FMAN 489	1	1+0		ARCH 285	3	2+2		
		10	10			12	15		22/25
Adjuncts:									
Lauren Liebler	ARCH 421	3	3+0		FMAN 432	3	2+2	ARST students	
					FMAN 432	3	2+2	ARST students	
		3	3			6	8		9 / 11
Bob Eastley	ARCH 223	3	3+0		ARCH 323	3	3+0		
		3	3			3	3		6 / 6

See Faculty Load Policy in Appendix 9b.

3.5 Students

3.5.1 Admission and Retention Standards

Admission and retention standards shall be used to ensure that students enrolled are of high quality. These standards shall compare favorably with the institution's standards. Sources of information may include admission test scores, secondary school rankings, grade point averages, course syllabi, course examinations, written assignments and oral presentations.

Provide institutional and program level admission and retention standards, and provide evidence of their publication on program websites.

In the years leading up to 2010, the faculty noted that students with the requisite 2.3 GPA were not prepared for the FM program, especially in terms of writing skills. The decision to raise the GPA to 2.5 was made in response to this issue. Students who do best in the program have a GPA higher than 3.0, since they are best prepared to analyze, organize, and communicate effectively. However, some students who are not academically oriented actually do well in the work environment. This new GPA standard seeks to keep the degree accessible.

Two students have been denied immediate entry to the FM program from the Architectural Technology program. In both cases the students retook courses, raised their GPA, and entered the FM program with a better work ethic.

Admission standards for students entering the Bachelor of Science in Facility Management include:

- *Holders of Ferris' Associate of Applied Science in Architectural Technology Degree:*
 - *2.5 GPA (increased from 2.3 in 2010)*
- *Holders of Associate of Applied Science in Architectural Technology Degree or similar degrees from other universities:*
 - *2.5 GPA (increased from 2.3 in 2010)*
 - *Faculty review transcripts and may waive or require additional courses to meet Ferris standards.*
- *Students with non-related Associate degrees or more than 60 semester hours of college level coursework.*
 - *2.5 GPA (increased from 2.3 in 2010)*
 - *Faculty review transcripts and may waive or require additional courses to meet Ferris standards.*
 - *The following courses or their equivalents are required:*
 - *ARCH 102: Architectural Digital Graphics*
 - *ARCH 203: Architectural Documentation*
 - *ARCH 204: Architectural Detailing*
 - *ARCH 112: Structural Materials, Systems, and Codes*
 - *ARCH 115: Interior and Exterior Finishes and Systems*
 - *ARCH 250: Systems Cost Estimating (starting Fall 2014)*
 - *HVAC 337: Mechanical/Electrical Systems for Buildings*
 - *The following courses or their equivalents are recommended depending on availability and student schedule:*

- ARCH 241: Design Principles
- ARCH 244: Architectural History 1
- ARCH 245: Architectural History 2

Note: Some titles and course numbers of the above courses have changed since the last re-accreditation due to curriculum revisions in the Architectural Technology curriculum. The content remains essentially the same with the exception that REVIT is now a requirement and more presentation content is included in the courses.

See Section 3.2.10 and Appendix 11 for publication.

3.5.2 Scholastic Success of Students

Facility management students shall have scholastic success comparable to those in other curricula in the institution. Grading practices in facility management courses shall be comparable to other departments and/or programs in the institution.

Provide evidence of scholastic success of FM students in comparison to institutional norms.

Grades are awarded comparable to other programs at the university and are based on a 4 point scale. Grades are awarded at the discretion of individual instructors and in accordance with specified criteria and standards.

The following information is not tracked specifically for the Facility Management program. The figures provided are based on calculations utilizing student records and completed by the ATFM faculty.

Percentage of Students who Graduate: Data provided by FSU Institutional Testing and Research for the Program Review in 2011 show a near 100% graduation rate. This report also indicated that in 2007 and 2010, the only years this statistic is available, 86% graduate in 2 years (reasons student may take longer are: that they need additional architectural or general education courses as prerequisites to the FM curriculum or that they did not complete their internship until after completing course work.)

Based on Departmental data:

- *From 2005-2009 all students graduated.*
- *In 2010 one student did not graduate. He still needs to complete the internship requirement.*
- *In 2011 all students graduated.*
- *In 2012 one student became ill and was not able to complete his coursework. He has returned and plans to graduate in 2015. All others graduated.*
- *In 2013 all students graduated.*
- *In 2014 all students graduated.*

Ferris State University Requires a 2.0 GPA to graduate.

*Senior class of 2013-2014
Average GPA: 2.85
Range: 2.4 - 3.6*

Incoming junior class for Fall 2013

Average GPA: 3.08

Range: 2.5 – 3.77

Note: These statistics do not include the GPAs of 2 Pre-FM students.

The following information shows academic performance as provided by FSU's Institutional Research and Testing for the 2013-2014 Accreditation and Academic Program Review. It is provided for context. Despite the higher GPA required for admission to the program since 2010, student GPAs and performance in the FM program remain relatively steady. Possible explanations for lower GPAs in 2013, could be that more academically prepared students choose to continue in the Architecture and Sustainability curriculum rather than the FM curriculum. This was also a smaller and academically weaker Architectural Technology cohort.

The following table shows FSU GPA and ACT scores for students enrolled in the BS in Facility Management. The source of this information is the FSU Institutional Research and Testing Academic Program Review Report, page 373.

YEAR	Ave GPA	Min GPA	Max GPA	Ave ACT	Min ACT	Max ACT
2009	3.07	1.93	3.94	21.6	16	28
2010	3.05	1.86	3.83	21.7	17	28
2011	3.02	2.4	3.92	21.3	16	26
2012	3.14	2.2	3.96	21.0	16	25
2013	2.9	2.23	3.65	21.3	17	26

The following table shows FSU GPA and ACT scores for students enrolled in Pre-FM. The source of this information is the FSU Institutional Research and Testing Academic Program Review Report, page 404.

YEAR	Ave GPA	Min GPA	Max GPA	Ave ACT	Min ACT	Max ACT
2009	2.90	2.15	3.65	18.0	18	18
2010	2.41	1.69	3.9	21.0	18	27
2011	2.38	2.13	2.8	19.2	18	21
2012	2.34	2.13	2.57	22.0	19	25
2013	1.36	1.36	1.36	21.0	21	21

3.5.3 Placement Services

Appropriate services shall be available to assist with the placement of program interns and graduates. Placement of graduates shall be tracked and the effectiveness of the services shall be evaluated by the administrative unit containing the facility management program.

Provide a summary of the program graduate and internship placement programs, advising procedures and staffing with website links to the program career services office where information is provided for students.

Placement of students for internships as well as permanent employment is cooperatively achieved through the Architecture and Facility Management program and Ferris' Career Services Office.

In the case of internships, the Facility Management Internship Coordinator (Joe Samson) maintains a database of past internships and uses it to remind

internship sites of the upcoming internship cycle. There are over 160 sites identified in the database. Some sites offer internship every year, while others periodically offer internships to meet their organizations' economic and work load needs. Many new organizations contact the Internship Coordinator each year. Most find out about the program through word of mouth, a web search, or through the IFMA website listing accredited programs. In all cases the students apply for the internships independently (with coaching and help if desired). This is part of the process to develop independent graduates who can seek out employment.

One of the issues with placement within the Facility Management profession, is that most FM departments are relatively small and organizations do not hire FM personnel every year. Hiring trends have also changed. Ten or more years ago, most FM jobs were in a corporate setting with FM personnel working directly for the corporation. Five years ago the public sector was a primary recruiter of graduates. Currently, the hospitality sector along with FM consulting firms are primary recruiters as more FM work is being outsourced. Since there is no specific group of organizations that can be relied upon to hire graduates each year, the main way employers find Ferris is through the IFMA website of accredited programs.

As can be seen in the table below, the number of announcements has increased over this accreditation period, with most of the employers finding Ferris through the IFMA Foundation list of accredited programs on the website or through an internet search.

All students found internships even during the recession. Many used family and friends to find opportunities.

The Facility Management Internship Coordinator for the Architecture and Facility Management program maintains three email distribution lists:

- 1. ALUMNI: Job announcements that come to the program are distributed to alums who provide the department with their email address. The number of jobs forwarded on in a given year varies. Typically 10 jobs are forwarded in a given year.*
- 2. SENIORS: Job announcements for permanent positions are forwarded to FM seniors...varies from 4 to 14.*
- 3. INTERNS: Job announcement for internships are forwarded and distributed to all juniors and seniors who have not completed the internship requirement. The average number of internships distributed in an academic year is 20-25.*

Table of Job Announcements

Year	Internship Announcements	Permanent Job Announcements
2014	35 (as of 24 April 2014)	14 (as of 24 April 2014)
2013	21	10
2012	23	14
2011	18	5
2010	20	11
2009	2	5
2008	9	4

Ferris' Career Services office works closely with the Facility Management Internship Coordinator. Seminars in Resume Writing, Interviewing Techniques, and Appropriate Dress are arranged for junior level students. Students can also take advantage of mock interviews, resume reviews, and borrowing interview attire. Career Services also offers two Job Fairs (Fall and Spring) and approximately 5 organizations attend who are interested in FM students. Career Services also coordinates recruiting visits by hotels, FM consulting organizations, governmental agencies, etc. seeking FM interns and alums.

This is the second year of Bulldog Career Link, an online system that connects students and alums with potential employers ... much like a social network. See www.ferris.edu/HTMLS/otehrsrv/placement/

As of Summer 2013, Career Services has been reorganized as a part of The Center for Leadership, Activities, and Career Services. This new center integrates activities that are not necessarily academic, but are important to developing students who have skills beyond academics. Experience in Leadership (through seminars, workshops, and student organizations) and Activities (volunteerism and student organizations) are encouraged and can be documented through this office on an Extra Curricular Transcript.

In an email survey sent to alumni who have kept in touch with Joe Samson, 19 students responded from classes of 2010-2013, only 5 students reported using Career Services and only 1 reported getting their job through Career Services. However, 7 of the students have jobs at organizations who recruited through Career Services.

3.5.4 Placement of Graduates

The initial placement, job titles, job descriptions and salaries of graduates shall be consistent with the program goals and objectives. Follow-up studies of graduates shall be conducted at least every six years to coincide with reaccreditation and made available to students and prospective students.

Provide summary placement statistics including placement rates and salary levels of program graduates, and indicate how this information is made available to students and prospective students.

Senior-level students are surveyed prior to graduation. Typically half of them have jobs by that time. Anecdotally we know that approximately 90% of students willing to seek employment and relocate outside of Michigan have jobs within a few months of graduation.

We have noted that salaries have been relatively stagnant for the past several years with starting salaries typically around \$50,000 per year, although some may be as low as \$30,000 per year. However, top graduates often start at \$65,000 or more.

In the 2010-2011 Academic Program Review, all alums were surveyed and 24% responded. Part of the survey dealt with Employment. See Appendix 5. Some of the findings:

- 77% reported finding employment within 6 months of graduation, with 45% securing jobs prior to graduation. 83% reported working in the FM field. Most alumni reported starting for less than \$40,000 per year. 18% reported earning more than \$70,000 per year. This may be due to the majority of respondents being recent graduates.
- 24% worked in government, 21% in the industrial sector, 19% in the services sector, 9% in healthcare, and 9% in the education sector.

Based on university information, from 2009-2012 the Facility Management program had an average placement rate of 88%. An average response of 23% was achieved. (Source: Institutional Research and Testing – See Appendix 5). It should be noted that the university takes the survey approximately 3 months after graduation. Anecdotally, students often require more than 3 months to secure employment. Also, many students take temporary jobs prior to securing permanent employment. It should also be noted that these statistics are from a recessionary period in the US economy.

To follow up and corroborate the information from the above-mentioned surveys, Joe Samson sent an email survey to alumni of recent graduating classes who have provided him with their email address for job announcements, etc. 19 students responded (3-2010 grads, 5-2011 grads, 5-2012 grads, and 7-2013 grads). The following tables provide information on job placement and salaries of the reporting students.

Class of 2010

Item	Average	Student		
		1	2	3
Time to 1 st Job	2 months	1 month	3 months	2 months
Starting Salary	\$41,500	\$42,500	\$30,000	\$41,500
Starting Title		Bldg Mgr	Ops Asst	Fed Career Intern
Starting Employer		GSA	FSU	GSA
Current Salary	\$63,800	\$75,400	\$41,000	\$75,000
Current Title		Bldg Mgr	Energy Cons Mgr	Mgmt Prog Analyst
Current Employer		Same	Same	Same
Current City		Chicago	Big Rapids	Washington DC
GPA	3.48	3.12	3.43	3.89
Male/Female		M	F	F

FSU/Transfer		FSU	FSU	GRCC
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Note: FSU's Institutional Research and Testing surveyed 33 grads and received 10 responses (30%). They report an 80% placement rate with an average starting salary of \$39,143 for 2010 graduates.

Class of 2011

Item	Average	Student				
		1	2	3	4	5
Time to 1 st Job	9 months	14 mos.	2 weeks	2 years	0	Still looking
Starting Salary	\$40,700	\$38,000	\$28,000	\$44,800	\$52,000	
Starting Title		Mrg in Trng	Proj Eng	Fac Coord	Assoc Fac Spct	
Starting Employer		Crothall Care	Rock Industries	GRCC	DOW	
Current Salary	\$53,800	\$55,000	\$57,500	\$46,700	\$56,000	
Current Title		Contr Mgr	Proj Eng	Fac Coord	Assoc Fac Spct	
Current Employer		Same	Same	Same	Same	
Current City		Saginaw	Lansing	Gr Rapids	Midland	
GPA	3.37	2.7	3.02	3.8	3.7	3.64
Male/Female		M	F	M	M	F
FSU/Transfer				GRCC		GRCC

Note: Only those students who found jobs are included in salary and time to job averages.

FSU's Institutional Research and Testing Academic Program Review Report surveyed 31 grads and received 6 responses (19%). They report an 83% placement rate with an average starting salary of \$49,000 for 2011 graduates.

Class of 2012

Item	Average	Student			
		1	2	3	4
Time to 1 st Job	6 months	5 months	6 months	1 month	1 year
Starting Salary	\$39,000	\$41,000	\$42,000	\$22,000	\$51,000
Starting Title		Hskpg Mgr	Area FM	FM Intern	CMMS Coord
Starting Employer		ARAMARK	ARAMARK	Dematic	Hillshire Brands
Current Salary	\$42,000	\$41,000	\$48,000	\$22,000	\$51,000
Current Title		Fac Proj Mgr	Fac PM	Maint Rel Analyst	Same
Current Employer		same	Haworth	ARAMARK	Same
Current City		Chicago	Gr Rapids	Flint	Traverse City

GPA	3.2	2,76	3.3	3.43	3.4
Male/Female		F	F	M	M
FSU/Transfer					

Note: FSU's Institutional Research and Testing Academic Program Review Report surveyed 21 grads and received 4 responses (19%). They report a 100% placement rate with an average starting salary of \$39,125 for 2012 graduates.

Class of 2013

Item	Average	Student						
		1	2	3	4	5	6	7
Time to 1 st Job		0	0	0	0	0	0	Still looking
Starting Salary	\$37,670	\$40,000	\$50,000	\$68,000	\$65,000	\$37,440	\$28,000	
Starting Title		Pr Mgr*	Prop Mgr	Fac Ops Spct	Proj Mgr*	Maint Mgr	Proj Mgr	
Starting Employer		Northstar Fire Suppress	Cent 21 Prop Mgmt	US Dept of State	Dri Design	ARAMA RK	Mich State U	
Current Salary	\$37,700	Same	Same	Same	Same	\$38,000	Same	
Current Title		Same	Same	Same	Same	Analyst	Same	
Current Employer		Same	Same	Same	Same	Same	Same	
Current City		San Antonio	Big Rapids	Washingt on DC	Holland	Detroit	Lansing	
GPA	3.4	2.8	3.0	3.5	3.81	3.1	3.9	3.71
Male/Female		M	M	M	M	M	M	M
FSU/Transfer		ITT	Mid Mi CC	GRCC	GRCC	W Shore CC	LCC	LCC

Notes: Information for this table was gathered through an email survey of alums by Joe Samson. Only those students who found jobs are included in salary and time-to-job averages.

*indicates non-FM...both jobs more construction specialty project management.

Based on the above tables several trends are evident.

- Starting salaries have been stagnant or are trending slightly lower.
- There is a great diversity of starting salaries and positions.
- Salaries of those responding alums increase quite quickly. Class of 2010 salaries increased by 53% in the 3 years since graduation. Class of 2011 salaries increased 32% in the 2 years since graduation. Class of 2012 salaries increased 7.6% in the 1 year since graduation.
- Average GPAs were relatively similar between graduating classes.
- GPAs do not correlate that closely with starting salaries or time to job placement.

The survey also reinforced observations of the author that the starting career opportunities in Facility Management continue to evolve. When the first alums graduated in the early to mid-1990s, most found jobs with large organizations. Later, in

the first decade of the 2000s, many entry-level jobs were with governmental agencies such as the GSA. Over the last few years, more organizations that specialize in Facility Services have recruited at Ferris and these jobs focus less on traditional Facility Management and much more on property management.

In networking with Facility Managers, they report that more is being outsourced at a lower cost and that starting salaries are generally not increasing. However, for those with experience and certifications, salaries are competitive. This is consistent with the results reported above.

3.5.5 Student Evaluation of the Program

Evaluations of the facility management program shall be made by its graduates at least every six years to coincide with reaccreditation. Student evaluations of individual classes shall be conducted on a regular basis.

Provide sample survey forms and results of graduate surveys evaluating the program and/or institution. Provide results of individual courses surveys in the course manual (see section 3.1.1.2(g)).

Generally, students are satisfied with the program and the curriculum. In Exit Interview Surveys (Appendix 4b), students self-report GPAs of 3.0 or higher. They also feel well prepared upon entry to the program. Students generally self-report satisfaction with individual courses at 3 or higher on a 5 point scale in 2013, the most recent year this data is available. Students also appreciate the project oriented curriculum. Upon completion of the curriculum nearly all report that they would recommend the program to others.

- All courses and instructors are evaluated by students each semester by the university. This evaluation information is one source of consideration in the securing of tenure and promotion/merit awards. Faculty who routinely earn poor marks are counseled and provided with opportunities to improve their performance.*
- Exit Surveys are distributed to students and compiled annually by the program. Trends and concerns are addressed through revisions to the curriculum whenever possible.*
- As noted previously, every 6 years all programs are required to undergo an internal Academic Program Review. A part of the review includes surveys of current students, alums, faculty, advisory board members, and employers. The FM program most recently completed this process in academic year 2010-2011. Programs can be Enhanced, Continued, Reduced, or Closed. The FM program earned a Continue rating.*

See Appendix 4 for Exit Interview Reports (summary of the Exit Survey results) and a sample evaluation form (SAI-Student Assessment Instrument) used to evaluate faculty and individual courses. The SAI surveys were formerly administered in classes without the instructor present. The university is in the process of converting the survey to an online survey. The questions shown in Appendix 4 will be used in the online survey. Faculty will have the option to add specific questions to the survey.

The Academic Program Review Self Study and Comments/Recommendations will be available at the Site Visit.

3.5.6 Student Enrollment and Retention

The level of available resources shall be considered as a constraint on the maximum number of qualified students to be admitted to the program. Enrollment and retention shall be tracked, and factors affecting enrollment and retention patterns identified and analyzed. Enrollment projections shall be made that relate closely to short and long-range goals and resource needs.

Explain the program’s enrollment history, projections and trends supported by a summary of student enrollment and retention data for the past five years.

The capacity for the BS in FM program is 25 students per year (50 students total). The following table shows the number of students who graduated in each of the years since the last re-accreditation.

Table of Bachelor of Science in Facility Management Enrollment/Graduation

Year	Number Applying to BS in FM Program (for junior level)	Number Accepted to BS in FM Program (for junior level)	Total # (junior and senior levels) of Students in FM Program	Number of Graduates from BS in FM Program
2007-08	28	26	44	21
2008-09	30	28	54	26 ¹
2009-10	29	29	57	29 ¹
2010-11	24	21	50	25 ¹
2011-12	22	21	42	21 ¹
2012-13	16	13	34	20 ¹
2013-14	21	19	32	11 ²

¹Source: FSU Institutional Research and Testing.

²Two additional students need to complete general education requirements for graduation.

The new Bachelor of Science in Architecture and Sustainability began as an alternative (to the Bachelor of Science in Facility Management) baccalaureate option for students completing the Associate of Applied Science in Architectural Technology degree. The first students graduated in Spring of 2013; thus this new degree is in part responsible for the reduction in students beginning with the fall semester of 2012. However, it should be noted that, in terms of number of graduates, the years 2008-2011 were years when the enrollment in the Facility Management program was very high in comparison to the historic average (prior to this accreditation period), which is closer to 18 graduates per year.

Factors to be considered for the drop in enrollment in the fall of 2012, and the decline in graduates in spring of 2014 include: 1) a smaller cohort of students entered the Architectural Technology program in Fall 2010 who would have entered the Facility

Management program in Fall 2012; 2) the launching of the new BS degree in Architecture and Sustainability; 3) fewer qualified students from community colleges applied to the FM program.

Since the economic recession of 2008, all School of Built Environment programs have seen a drop in enrollment. To offset this decrease, enhanced and additional recruiting at community colleges has occurred, and a 5-year Dual degree in Facility Management and Architecture and Sustainability was created to retain students who are academically strong and desire to increase their employment options.

Recruitment activities are being explored by the university, college, school, and program area. These efforts include participation in college fairs, summer camps for middle and high school students, outreach to students in related programs such as HVACR, Construction Management, and Architecture and Sustainability to make them aware of Minor and Dual degrees they can attain and the benefits of expanding their competencies into the area of Facility Management.

Nearly all students who enter the program complete it.

- In 2010-2011 one student withdrew for academic and personal reasons.*
- In 2012-2013 one student withdrew for medical reasons, that student has now returned.*
- In 2013-2014 one student dropped out due to academic reasons.*

3.5.7 Academic Advisory and Counseling Services

Adequate and timely academic advising and counseling services shall be made available for students.

Provide a summary of academic advising services, staff to student ratios, and advising usage reports. Provide a copy of standardized advising and academic progress report forms.

- All students are assigned an advisor who is a tenured or tenure-track faculty member in the Architecture and Facility Management program area. Students may not register for classes without meeting with their advisor for review of progress and approval of schedule by the advisor. Typically advisors meet with students 1-2 times throughout a semester to discuss course scheduling, internships, and professional goals.*
- The curriculum check sheet, or customized academic plan for transfer students, is used as the primary advising tool.*
- All faculty must hold a minimum of 4 office hours per week to be available for stop-in appointments. Most students schedule appointments during these office hours or outside these office hours, if necessary.*
- In addition to the personal support of the program Advisor, University counseling services are available for career, personal, medical, and other needs.*
- The ratio of faculty advisors to students in the Architecture and Facility Management program area is currently 1 faculty advisor to 16 students. If the programs were at capacity, the ratio would be 1 faculty advisor to 25 students.*

- *The advising focuses on ensuring that students are taking courses as planned in the check sheets, that they have appropriate grades and prerequisites, etc. For students who transfer from a non-traditional Associates program a customized curriculum plan and guide sheet is created to provide a sound and timely completion of the program.*

An online advising software, MyDegree, is currently being implemented at Ferris State University. This software allows students 24/7 access to an online check sheet which identifies requirements met, in progress, or not met. The software is being implemented in the College of Engineering Technology. It continues to be tweaked as problems and inconsistencies have been found within it, especially for transfer students.

3.5.8 Ethical Practices

Ethical practices shall be fostered, including equitable student tuition refunds and non-discriminatory practices in admissions and employment.

Explain the program and institutional policies on ethical practices, tuition refunds, admission practices and employment.

- *Ferris endeavors to treat all students, employees, community members, in an ethical manner. Many policies are developed to reinforce and instill these values.*
- *See **Appendix 10** for “Bulldog Values”, the ethics that the university endeavors to instill in its students.*
- *Ferris’ Refund Policy may be found in **Appendix 10**.*

3.5.9 Academic Honesty and Plagiarism

An institution’s recruiting material shall emphasize its commitment to academic integrity and reject plagiarism for both classroom and online courses. Student orientation meetings and course syllabi shall contain the same material. Typical disciplinary actions for individuals deemed to have cheated shall be explained, publicized, and readily available to all students.

Provide the academic dishonesty policies and indicate where they are publicized for students.

*Ferris’ Academic Honesty Policy is found in Ferris’ Registration and Academic Guide. The actual policy can be found in **Appendix 10**.*

3.6 Administration

3.6.1 Program Administration

Programs in facility management are expected to have an identifiable, qualified individual with direct responsibility for facility management program coordination and curriculum development. This individual shall be a full-time faculty, part-time faculty member with appropriately allocated compensated non-teaching time, or an administrative employee of the institution.

Identify the individual and explain the role of that person in administering the facility management program.

There have been several changes in the College of Engineering Technology administration and structure since the last reaccreditation. In the fall of 2009, the

College of Engineering Technology was reorganized from (12) Departments with (12) Department Chairs to (4) Schools with 4 Directors. Within the Schools there are now 11 Programs with 11 Program Coordinators. See also Section 3.6.2.

While these changes have potential for greater synergies within the college, the changes have resulted in less release time and a reduced summer stipend for the Program Coordinator (formerly a Department Chair). (See Administrative Leadership below). Also, since the implementation of the new structure in fall of 2009 there has not been sufficient continuity to allow the new structure to fully work as intended. During the first year, Dr. John Schmidt, a faculty member in Construction Management, served as Interim School Director. The first permanent director, Brian Craig, formerly a principal at a large Grand Rapids architectural firm, spent much time learning the position. After his third year, he moved to Kendall College (a subsidiary college owned by Ferris in Grand Rapids) to develop a new Master of Architecture program.

Starting Fall 2013, the university and union developed an agreement whereby faculty can move to administrative positions (putting their academic seniority on hold) for a 3-year, renewable term to serve as School Director. Thus, a School Director can now be elected by faculty and reappointed by faculty without jeopardizing their tenure and seniority. John Schmidt, PhD, who previously served as Interim School Director and as a Professor in the Construction Management program, was elected during Fall Semester 2013 to serve as Director of the School of Built Environment. The Architecture and Facility Management faculty look forward to his leadership. He understands the university as well as the challenges and opportunities that face this program.

At the time of the last reaccreditation, Diane Nagelkirk served as Department Chair. She was given 75% release time during the academic year and a summer stipend of \$14,000 to manage curriculum, scheduling, recruiting, faculty coordination, facility issues, fundraising, and retention for the two programs in existence at that time: Associate in Applied Science in Architectural Technology and the Bachelor of Science in Facility Management. She was assisted by Joe Samson, the lead FM faculty member (no release time or stipend) in matters related to the Facility Management degree program.

With the reorganization of the College of Engineering Technology administrative structure in January of 2010 and the implementation of the School of Built Environment with a more local “administrator”, the Director of the School of Built Environment, the Department Chair became a Program Coordinator. Release time and summer stipend has changed a couple of times since, as the structure has stabilized. Presently, the Program Coordinator receives release time and summer stipend based upon student enrollment in the program area. Based upon current enrollment, the Program Coordinator receives a 50% release time and a summer stipend of \$8,500. While the change was expected to reduce administrative load on the Program Coordinators, the Directors are now taking on administrative duties typical of an Associate Dean. In addition, the Directors lack specific knowledge of every program, thereby continuing to rely upon the Program Coordinator for guidance at the program level. Ultimately, while Program Coordinator administrative load has remained relatively level, their release time and summer stipend has been reduced.

In addition, over the last five years the Architecture and Facility Management program area has implemented a new baccalaureate degree, the BS in Architecture and Sustainability. The Program Coordinator is now coordinating one additional degree program. This has been a challenge, as Diane Nagelkirk, the current Program Coordinator relies upon familiarity with established procedures and other faculty to complete the highest priority tasks.

3.6.2 Administrative Leadership

Individuals assigned to administer facility management programs must demonstrate effective leadership as defined by the institution and demonstrate satisfactory support for the program.

Provide a summary of the administrative leadership structure, including an organizational chart up to the Provost level, and the role of the administrative team members.

College Level Changes

Since the last accreditation visit, the following changes in leadership have occurred.

- *College name:
The name of the College of Technology was changed to the College of Engineering Technology. This was done at the request of some faculty from other programs that felt this name more accurately reflected the character of most degrees offered within the college. Most faculty of the Architecture and Facility Management program area did not agree with this change, believing it to be more limiting and even less reflective of the degrees offered in the program area.*
- *College reorganization:
In 2009, the College of Engineering Technology moved from a department structure to a school structure (see previous section). The former 12 departments were grouped into four Schools. Architecture and Facility Management was placed in the School of Built Environment with Construction Management and HVACR, where all three program areas have commonalities. The main challenges of the new structure are:*
 - *Geographic isolation of the Architecture and Facility Management program (in Swan Building) from the rest of the school (in Granger Building). Construction Management and HVACR are housed in the Granger Center, a facility renovated about 12 years ago and a 5 minute walk north of the Swan Building – where Architecture and Facility Management are housed.*
 - *Program Coordinator and Office Support.
The separation makes it difficult for faculty to feel part of the same school. It is not possible for the Program Coordinator to spontaneously interact with the School Director and Program Coordinators of the other two program areas in the school.*
 - *Student Support.
This separation creates service issues for students when requiring assistance in that they do not know which office to visit. In addition, due to the separation, secretarial support is limited by use of shared and part-time staffing. The Architecture and Facility Management program office is not necessarily continuously open during normal business hours.*
 - *College level leadership (Dean):*
 - *Tom Oldfield, PhD, Retired July of 2010.*
 - *Ron McKean, Interim Dean, 2010-2011 and 2011-2012 academic years.*
 - *JK Yates, PhD, July 2012-Dec 2013.*

- *Larry Schult, Jan 2014 to present.*

Dean Yates had academic as well as practical credentials as a Construction Manager and Engineer. She was a collaborative and involved administrator and made an effort to meet with faculty and students to understand programs and their unique challenges. She was eager to make changes, many of which were long overdue. (e.g., secretarial needs, adjacent classroom space, and facility issues.) Her long-term goal was to create new space for the program area in or adjacent to the other SBE programs housed in the Granger Center.

Dean Schult, a former Professor and Program Coordinator from Plastics Engineering Technology and, has familiarity with Ferris' internal structure and has shown an ability to listen and solve problems in the short time in this position.

- *School of Built Environment Changes:*
 - *John Schmidt, PhD, Interim Director, August 2009-June 2010.*
 - *Brian Craig, Director, 2010-2013.*
 - *John Schmidt, PhD, Director, 2013 to present.*

Dr. Schmidt is a faculty member in the Construction Management program and served as the initial Interim School Director for 9 months. While he did a competent job as Interim Director, he was not in the position a sufficient length of time to truly establish the new structure.

Mr. Craig is a registered architect from Grand Rapids, and served as the first full-time School Director. His background included an administrator of a large architectural firm, adjunct professor, Grand Rapids School Board, international work, and a former member of the Advisory Committee for the Architectural Technology degree program. He began transitioning to Kendall College to begin work on the implementation of a NAAB Accredited Master of Architecture program during his last semester as Director. The first 2 years of Mr. Craig's tenure was in many ways influenced and limited by Mr. McKean's interim status as Dean.

Dr. Schmidt was appointed Interim School Director in August of 2013. In the meantime, the faculty union and Ferris State reached an agreement to convert the position of Director into an elected faculty position (officially, a department chair). Dr. Schmidt was elected to the position in December 2013 and should hold that position until August 2017, at which time he would be eligible for re-election. This should provide much needed stability in our School. As mentioned in Section 3.6.1., the Architecture and Facility Management program area welcomes Dr. Schmidt and looks forward to working with him as we move forward.

- *The name of the administrative area in which the BS in Facility Management program resides has changed from the Architectural Technology and Facility Management Department to the Architecture and Facility Management program area. This was done for the following reasons:*
 1. *The addition of a new baccalaureate program; the Bachelor of Science in Architecture and Sustainability. This is primarily an architectural design curriculum with a focus on sustainable practice. It shares the bulk of the first two*

- years of curriculum with the Facility Management degree.*
- 2. The term “Architectural Technology” no longer reflects the degrees offered by the program area. “Architecture” better reflects the true nature of the degree offered.*
 - 3. Due to the administrative structural changes, Architecture and Facility Management is no longer a “department”, but rather a “program area”.*

See Appendix 13 for organizational chart.

3.6.3 Administrative Support

There must be appropriate support for facility management from the personnel holding leadership positions in the departments and colleges where facility management is located.

Provide a summary of the support from the university or college level, up to and including the Provost and Dean level.

The administrators at college and school levels have verbally supported the program and provided funds as necessary for accreditation and program-related travel. They have also, to a large extent, funded the development of new brochures and website.

During this accreditation period the university has experienced a reduction in state funding while minimizing increases in tuition and fees passed on to students. Thus all administrative areas have faced decreasing budgets. This has affected the Architecture and Facility Management program area especially in terms of facilities and furnishings. While the program area’s budget has not suffered as much as other program budgets have, the budget now must support an additional program (BS in Architecture and Sustainability), and the costs associated with it. The Director of the School of Built Environment has minimized his office operational budget to minimize the impact of budget cuts on the academic program areas. See Sections 3.7.2 and 3.9.1.

Changes in leadership and the newly implemented College of Engineering Technology organizational structure may have impacted the ability of the college and school level administration to respond to program needs.

The program faculty would like to see a College of Engineering Technology commitment to provide teaching spaces that are technologically up-to-date, professional in appearance, and demonstrate and provide the optimal teaching and learning experience that match program goals for providing dynamic, accessible learning environments for instruction and study. The Swan building was built in the mid-1960s and received a substantial remodeling in 1988. In the Architecture and Facility Management program area, most spaces are not air conditioned, the spaces are not physically adjacent to each other (scattered to various corners on two floors), many spaces are not aesthetically pleasing or current, and approximately half of the furnishings are outdated. It is hoped that the current administrators will support this initiative and the planning described in Section 3.7.2 will provide an opportunity for improved spaces for the program.

3.6.4 Support Personnel

Support personnel such as administrative assistants, teaching assistants, student work-study assistants, service technicians, teaching and learning specialists, student life staff, librarians, marketing, career services and other staff as appropriate shall be adequate to support program objectives.

Summarize the list, roles and qualifications of all program support staff.

Support of operations and clerical functions are completed with the assistance of university, college, or school offices as follows:

- *Ferris State University is responsible for facilities and maintenance, financial aid and tuition issues, university library, career services, etc.*
- *The College of Engineering Technology is responsible for main budgets, graduation documentation, assessment, compliance with employment contracts, tenure, etc.*
- *The School of Built Environment administers the program area budgets. Other roles include: hiring of staff and faculty, orientation and registration, Supply and Equipment budget, recruitment and retention, etc. The clerical staff who do this work are located in a different building (school offices in Granger Center) and this can pose logistic challenges at times. As the new Architecture and Facility Management secretary becomes more familiar with Ferris processes, the bookkeeping responsibilities may become localized.*
- *Ferris does not use teaching assistants. However, Architecture and Facility Management student workers are utilized to staff studios, the digital center, and to tutor other program students as needed.*
- *Information Technology services are centralized and utilize permanent and student employees. These arrangements have been adequate.*

While many functions are handled outside the program (as noted above), many functions are handled at the program level, primarily by the Program Coordinator, clerical staff, and student workers. These include:

1. *Recruiting initiatives such as: communication to potential students, hosting student visits, conducting high school and community college visits, developing and maintaining marketing materials*
2. *Responding to student concerns and being a “face” for the program*
3. *Class scheduling*
4. *Initiating financial requests for hardware, software, classroom supplies, etc.*
5. *Reacting to school, college, and university initiatives*
6. *Maintaining studios and classrooms*
7. *Hiring and managing student workers*
8. *Coordinating special events*
9. *Initiating and maintaining curriculum and assessment records*
10. *Coordinating program review and accreditation*
11. *To assist the Program Coordinator and faculty in these issues, clerical staffing is necessary*

At the time of the 2008 reaccreditation, the Architectural Technology and Facility Management Department shared a full-time secretary with the Printing Department and had a part-time student assistant. With the implementation of the “school” structure, the Printing Program was relocated to a different college and the renamed

Architecture and Facility Management program office was relocated. Initially, a secretary came from Granger half time and a student worker would fill in most of the other times. However, due to meetings and other commitments, the Architecture and Facility Management reception area was often unstaffed. In January of 2013, Dean Yates made arrangements for Christine Grandy to serve as half-time secretary for the program area. Ms. Grandy also works half-time as a secretary for the Institute for Construction Education and Training, an outreach program located in a building across campus. She is always available by phone. A student worker is used to staff the office during her absence. For the most part, this arrangement is effective. However, student workers have limitations. It would be desirable to have a full time secretary.

3.7 Facilities and Equipment

3.7.1 Adequacy of Facilities and Equipment

Physical facilities and equipment, which are suitable to serve the goals and objectives of the program, shall be available for each program option. These include laboratory facilities, library resources, computer hardware and peripherals, facility management and office suite software, wireless broadband Internet access, etc.

Summarize the adequacy of facilities and equipment, including institutional classroom management procedures, dedicated facility management space, and available technical resources.

The Architecture and Facility Management programs have been housed in outdated facilities for many years. The current School Director and Dean recognize this need and are working to resolve it. In part, some of the delay is due to a renovation initiative currently being considered by the state. The resulting renovation of the Swan Building may require facility changes for Architecture and Facility Management.

As of Fall 2013, the primary FM teaching and studio space was relocated to Swan 218. This space adequately serves a variety of lectures and group work with a good sound system and lighting. It is located on the second floor and closer to the remaining program area spaces. As such, it begins to create a sense of unity and centralization. It does, however, have limitations and lacks in terms of ergonomics and aesthetics. It lacks windows for exterior light or ventilation and contains a collection of mismatched furniture (some old, some new). While the space serves the program well, coordinated furnishings and equipment are still needed.

The following is a list of teaching spaces used by the FM program:

Space	Capacity	Comments
SWN 218	36	Primary FM lecture area. Good condition. Large enough for small FM studio with added furnishings and equipment.
SWN 202	32	Architectural Materials lecture area. Fair condition. Has space for architectural material samples.
SWN 203	20	Hand Studio/lecture area/poor-fair condition. Used for interior architecture course.
SWN 205	24	Computer studio/lecture/good condition. Used for architectural AutoCAD and Revit courses which students take during the Architectural portion prior to starting the FM curriculum.
SWN 212	20	Computer Studio/lecture/fair condition. Used as SWN 205, but typically for FMAN 431, Space Planning.

3.7.2 Support for Facilities and Equipment

Facility and equipment needs shall be reflected in the long term goals, objectives and strategic plan of the program. Sources of potential funding shall be identified.

Identify long term facility needs (if any) tied to enrollment projections, and potential funding sources.

The university recognizes the need to keep teaching spaces up to date. However, perhaps due to funding sources, major initiatives are limited to capital projects such as new buildings on campus. While the Architecture and Facility Management program area has adequate space, the deficiencies are mainly in the area of adjacencies, ergonomics, human factors, and aesthetics. The Facility Management spaces meet or exceed the documented capacity for the program. That expected capacity is expected to remain constant for the foreseeable future.

The long-term goal of the Architecture and Facility Management Program Area is to establish a permanent, proper home that expresses a sense of pride, belonging, and sustainable design principles. Currently Architecture and Facility Management spaces are scattered throughout the Swan building and do not serve the needs of the program aesthetically or functionally. The facilities need to match the success and quality of the curriculum. As a recruitment tool, the facilities need to compare and compete with other architecture programs in Michigan and facility management programs throughout the country.

Since the creation of the Bachelor of Science in Facility Management in 1989 the program has never had a suitable dedicated space. Currently, Facility Management students must share space with students in the Architectural Technology and Architecture and Sustainability programs. When they are not in class, the FM students are nomadic, with no place to meet for group activities, which are part of the curriculum as necessitated by the demands of the industry. The existing spaces are inflexible and do little to support group engagement. Further, the shared spaces in the Swan Building do not model ideal conditions for learning environments in terms of space requirements, planning, furniture or technology.

A recent shift in state economic support for universities provided opportunity for the university to acquire significant funding to renovate the Swan Annex for the Manufacturing and the Welding programs. Several of the Architecture and Facility Management spaces are currently housed in this facility. Renovation will require relocation of these Architecture and Facility Management spaces. It is expected that such funding will include renovation of spaces into which Architecture and Facility Management will be moved. Announcement of this award is expected this Fall. In this period prior to actual relocation, the college is considering reallocation of spaces within the primary Swan building. Our desire is to bring all of Architecture and Facility Management spaces into adjacent rooms. Ultimately, moving Architecture and Facility Management to facilities closer to the School of Built Environment would solve many issues with facilities and staffing.

3.8 Computer Systems

3.8.1 Technical Support

Appropriate computer systems shall be available to students and faculty to cover functions and applications in each program area. These systems must be on-site, centralized or decentralized as long as the systems are accessible to students and faculty by networks and/or other appropriate equipment.

Summarize the software hardware and technical support available to students, including standard business applications, specialized FM systems, and institutional course management systems, including policies on their usage and application, and the degree to which they are used within the program.

Computers are utilized in every course in the curriculum to write papers and reports, document buildings and propose changes to them, etc. A combination of program associated computers and student computers meet the needs of the students.

Currently the program area has two computer studios with a total of 42 work stations that are available to students during the week days when classes are not in session, in the evenings until 11 pm, and on weekends from noon to 6 pm. These computers are available for Architecture and Facility Management student use provided they are not being used for a class. The majority of classes that use these 2 studios are at the Associate program level. Juniors and seniors of the FM and ARST program are expected to own a laptop that meets minimum hardware and software requirements. Wireless Internet is available in the Swan Building and most areas of campus. Student computers can be configured to interact with printers, plotters, etc. by university Technology Assistance Center (see below). The FLITE library is also searchable and some reference materials are available via internet.

The program area provides basic printers and plotters, where students can print at no charge, near the classrooms. The program also provides presentation-quality printers and plotters near the classrooms. A small charge is required to utilize this equipment.

The faculty is considering reducing the number of computers available in studios since most students have personal laptops and personal laptops are required for junior and

senior level students. Computers are also available in FLITE library. Computers in various areas have program specific software.

The Technology Assistance Center supports program as well as student computers through phone assistance and walk in/call in service. Students can purchase Microsoft Office, AutoCAD, REVIT, and other software at a reduced price.

BlackBoard is the university's online learning management system—referred to as FerrisConnect. Most courses in the FM program are supplemented by online resources. Lectures, reviews, and assignments may be accessed via Blackboard. Students also communicate with faculty outside of class time via internet.

Students continue to be ahead of the curve in technology. Many go beyond expectations using Drop Box and other methods to work as a team remotely (especially in the case of commuter students), or utilizing new and unique software).

See also Section 3.3.4 for more information on specific software students utilize in the courses.

3.9 Financial Resources

3.9.1 Financial Support

The budget for the facility management program shall be adequate to support program objectives, comparable to budgets of other similar programs within the institution or college, and available to the FM program director.

Summarize the program budget; how the budget is determined, managed and allocated within the institution, college and department, and comparison of the program budget to other departments of similar size and composition.

Historically the program budget has been determined by size of program (number of faculty and students), classroom equipment related needs, and myriad other factors. The budget is determined and distributed by the College of Engineering Technology Dean's office to the School of Built Environment office. The present funding mechanism distributes funds to the schools and, in turn, to the programs. The Directors have been given much latitude in their allocation of funds. However, the principal source of funding remains at the School level. Since expanding the Architecture program to a four-year degree, the Architecture and Facility Management program has added two faculty. The supplies and expenses spending in Architecture and Facility Management has increased 4% over the past four years while the spending for the other programs in the School of Built Environment and the School itself has dropped significantly (Total School of Built Environment -23%, HVACR -15%, Construction Management -34%, and School Administration -46%).

Supply and Expense Spending for Architecture and Facility Management History

<i>Academic Year</i>	<i>Supply and Expense Spending</i>
<i>2010-2011</i>	<i>\$31,831</i>
<i>2011-2012</i>	<i>\$31,034 (-2.5%)</i>
<i>2012-2013</i>	<i>\$33,886 (+9.2%)</i>
<i>2013-2014</i>	<i>\$33,200 (-2.0%)</i>

+4.3% from 2010-2013

3.10 Library Services

3.10.1 Library Resources

The administrative unit containing the facility management program and/or the institutional library shall maintain a collection of current facility management literature and reference materials adequate to meet the curriculum and research needs of students and faculty in house, through the internet, or inter-library loans.

Summarize the adequacy of the library resources for FM students and faculty, the breadth/depth of the FM materials, and the budget annual available for expanding library offerings for the FM program, and how this budget has been allocated in the past.

A state-of-the-art facility, FLITE (Ferris Library for Information Technology and Education) opened in March of 2001. FLITE contains 353,831 books, 28,455 journals accessible through FLITE web pages, databases, subscriptions (874 actual print subscriptions), and packages.

Using the Library of Congress classification system, 3,248 books are classified as NA (Architecture) and 1,677 as TH (Building Construction).

There are 17 journals specifically charged to the ATFM program area.

The space also includes lecture and meeting areas, study areas including a 24/7 area, group project rooms, rooms for presentations, computer stations, and media assistance.

A librarian is assigned to the College of Engineering Technology. She works closely and proactively with program faculty to acquire necessary resources.

3.11 Facility Management Program Advisory Committee

3.11.1 Program Advisory Committee (PAC)

An advisory committee of knowledgeable FM professionals consisting of practicing FM professionals, program graduates, and at least one member from outside the geographical area served by the institution, shall assist in the validation of program content, advise on industry trends, assist in providing access to internships, employment and publicity for the program, and if permitted, fundraising for the program. If more than one program or program option is available, then appropriately qualified facility representatives shall be added to the committee or more than one committee shall be maintained. Provide evidence of the PAC charter indicating member

selection policies, length of appointment, organization of the committee and sub-committees, committee responsibilities, frequency of meetings, and methods of conducting business.

Provide a summary of present PAC membership with their individual industry connections, the history of how the PAC has helped to sustain and support the program.

The Program Advisory Board was originally formed to develop Ferris' Facility Management program. Many of the original members are still active on this board. However, over the years, new members have been added to represent the diverse organizations with which the program and profession are associated. These include the government sector, healthcare, utilities, facility related engineering consultants, and the hospitality industry. Outstanding Ferris alumni are also represented on the advisory board.

The advisory board meets with students, sharing their knowledge and experience. They travel from around the country at their own expense. The board advocates for the program through letters of support to the administration.

*See **Appendix 3** for list of Advisory Board members.*

3.11.2 Program Advisory Committee (PAC) Meetings

The program advisory committee shall meet at least once each year and publish all recorded meeting minutes.

Provide copies of the last two PAC meeting minutes.

*See **Appendix 3** for meeting minutes.*

Section 5.0 – Required Area of Knowledge

5.03 Baccalaureate Programs

5.03.1 Introduction and Orientation to Ferris Curriculum.

The Ferris Facility Management curriculum is based in Architectural Technology. Students typically complete an Associate of Applied Science in Architectural Technology, or similar degree, prior to entering the Facility Management program. Students transferring from non-related fields of study must complete specific courses from the Architectural Technology curriculum prior to entering the Facility Management sequence.

The curriculum guides can be found in **Appendices 1a and 1b**. In this section, each course is identified as being Required, Preferred, or Optional. Required courses or their equivalent are required of all students to earn the Bachelor of Science in Facility Management Degree. Preferred courses or their equivalent are typically required for Ferris students. For transfer students, these courses are included in their curriculum. However, preferred courses may be waived if the student has adequate background in that specific topic area and if requiring the course in the student's curriculum plan would postpone/delay graduation. Preferred courses are viewed as helpful, but not integral to the competencies and understandings expected for facility management graduates. Optional courses are courses that are not viewed as integral to the competencies expected for facility management graduates, but are part of the Architectural Technology curriculum.

The Architectural Technology curriculum is designed for students planning to continue into the Bachelor of Science in Architecture and Sustainability (ARST) or into the Bachelor of Science in Facility Management (FMAN). Two elective courses are provided that allow students to select appropriate courses for either the ARST or FMAN path. For students continuing into the BS in FM program they are encouraged to enroll in ARCH 250 – Cost Estimating, ARCH 270 – Advanced BIM, or COHP 330 – OSHA Law.

5.05.1 Curriculum (Program Level) Outcomes and Mapping.

The outcomes for the Ferris State University Bachelor of Science in Facility Management are:

1. Demonstrate the ability to think effectively and develop critical thinking skills partnered with vocational readiness.
2. Understand the core competencies developed by IFMA (International Facility Management Association); students will integrate these competencies in a management based approach to facilities.
3. Think analytically and apply research generated knowledge and quantitative tools to analyze, manage and carry out research.
4. Use a variety of media to communicate effectively with diverse audiences.
5. Understand organizational, managerial, ethical and legal principles for the delivery of facility management services.
6. Understand and integrate concepts concerning relationships between the physical work environment, social, psychological and physiological needs of the users. Understand and integrate concepts concerning safe, humane and functional work environments in the context of sustainable ecological practices.
7. Program learning objectives and course content will meet and/or address the IFMA (International Facility Management Association) Foundation student performance criteria, accreditation standards and current facility management practice standards.
8. Engage in and complete the FM internship.

9. *Graduates will be successful in finding employment and/or continuing their education.*

In Table 5.1. Program Level Map of IFMA Foundation Competencies and Program Objective, these outcomes are mapped with the IFMA Foundation Competencies. Each IFMA Foundation Competency is correlated with each program learning objective. In most cases a number of program learning objectives correspond with each IFMA Foundation Competency. This illustrates the inter-related nature of the profession and the curriculum. Shaded cells indicate a correlation between accreditation standard competency and curriculum objective.

In Table 5.2. Ferris State University Curriculum/IFMA Foundation Competencies, each course is mapped with the IFMA Competencies.

In the Course Level Mapping section of this report, see Section 5.05.02, each IFMA Foundation Competency is mapped with the Learning Objectives identified for each course.

In Table 5.3. Course Level Map, the IFMA Foundation Competencies are mapped with the Learning Objectives for each course.

In each course binder, the IFMA Foundation Competencies are correlated with each Learning Unit of Instruction (Topic) and individual assignments.

Table 5.1. Program Level Map of IFMA Foundation Competencies and Program Objectives.

IFMA Foundation Competencies	Program Objectives					
Blue Text indicates the IFMA Competencies as they appear in the Standard.	Demonstrate the ability to think effectively and develop critical thinking skills partnered with vocational readiness.	Understand the core competencies developed by IFMA (International Facility Management Association); students will integrate these competencies in a management based approach to facilities.	Think analytically and apply research generated knowledge and quantitative tools to analyze, manage and carry out research.	Use a variety of media to communicate effectively with diverse audiences.	Understand organizational, managerial, ethical and legal principles for the delivery of facility management services.	Understand and integrate concepts concerning relationships between the physical work environment, social, psychological and physiological needs of the users. Understand and integrate concepts concerning safe, humane and functional work environments in the context of sustainable ecological practices.
Competency 1.1 The student can explain the history, international practices, corporate organization and roles of the Facility Management profession. (ways of knowing)						
Competency 2.1 The student can manage project initiation, planning, execution, control and closeout (ways of knowing), using scope, quality, schedule, budget, resources and risk (ways of understanding).						
Competency 3.1 Using principles of acquisition, installation, operations, maintenance, outsourcing, renovation and disposition of building systems, structure, interiors, exterior and grounds, the student can demonstrate the phases of facility management from design/acquisition to final disposition. (ways of understanding)						
Competency 3.2 As a foundation for operations, maintenance and energy management, the student can recognize the systems, services and functions thereof, and the software applications that support them. (ways of knowing)						
Competency 3.3 The student can assess the condition of the facility including its systems, structure, interiors, exteriors and grounds to establish a long term facility plan for the organization. (ways of applying)						
Competency 3.4 The student can demonstrate a method to plan, measure and evaluate the facility's operational performance. (ways of applying)						
Competency 3.5 The student can interpret, apply, and recommend quality improvement programs. (ways of applying)						
Competency 3.6 The student align facility management technology with organizational information technology. (ways of understanding)						
Competency 3.7 The student can comprehend and prepare emergency preparedness and business continuity strategies. (ways of understanding)						
Competency 3.8 The student can demonstrate awareness of sustainable stewardship principles applied to the built environment. (ways of applying)						
Competency 4.1 The student can identify the skills needed to strategically lead process, the organization, stakeholders and technologies in an ethically responsible way. (ways of knowing)						
Competency 5.1 The student uses analysis, budgeting, accounting, risk management, and reporting to demonstrate applications of facility financial management. (ways of understanding)						
Competency 5.2 The student can demonstrate applications of corporate real estate finance, management and transactional execution. (ways of applying)						
Competency 6.1 Using factors around health, safety, welfare, comfort, safety and security within the organization, the student can practice applications of human resource management. (ways of applying)						
Competency 7.1 The student demonstrates written, oral, aural, and graphic communication skills through repetitive assessment and evaluation of industry appropriate genre. (ways of applying)						

In the following table, each course is shown along with its status (Course Number/Course Name). In the next three columns the IFMA Foundation Accreditation Standard Competencies are listed by number. The column the competency is located in identifies the depth with which the competency is addressed within the course. (Knowing/Understanding/Applying)

- ARCH – indicates that course is typically completed during the Architectural Technology curriculum (years 1 and 2)
- FMAN – indicates that course is typically completed during the Facility Management curriculum (years 3 and 4)
- GenEd- indicates that course fulfills university General Education Requirements. Ce=Cultural Enrichment, C=Communication, M=Math, S=Social Awareness, Sc =Science, G=Global, R=Race/Ethnicity/Gender
- Required – Indicates the course is required for the BS in FM degree. Transfer students MUST have this course or an equivalent.
- Preferred – indicates the course is included in a transfer student’s FM curriculum if it will not delay graduation. These courses are typically part of a Ferris student’ Architectural Technology curriculum.
- Optional – indicates the course is not required for the FM curriculum.

Table 5.2. Ferris State University Curriculum/IFMA Foundation Competencies

Course Number	Course Name	Knowing	Understanding	Applying	Credit Hours	Gen Ed	Required	Preferred	Optional
Architectural Technology Curriculum (first two years of curriculum)									
ARCH 101	Architectural Graphics			7.1	3			X	
ARCH 102	Architectural Digital Graphics			3.6/7.1	4		X		
ARCH 112	Materials and Methods of Construction	6.1	3.2/3.8	7.1	4		X		
ARCH 115	Interior and Exterior Materials	6.1	3.2/3.8	7.1	3		X		
ARCH 203	Architectural Documentation		6.1	3.2/3.8/7.1	4		X		
ARCH 204	Architectural Detailing		6.1	3.2/3.8/7.1	4		X		
ARCH 223	Statics and Strength of Materials		3.2/3.3/3.4/3.7		3			X	
ARCH 241	Design Principles	3.3		6.1/7.1	3		X		
ARCH 244	Architectural History 1		3.3/6.1	7.1	3	Ce		X	
ARCH 245	Architectural History 2		3.3/6.1	7.1	3	Ce		X	
ARCH 250	Systems Cost Estimating			2.1/3.1/5.1	3			X	
ARCH 270	Building Information Modeling				3				X
ARTS 101	Basic Art				3	Ce			X
ARTS 120	3D Design				3	Ce			X
COMM	105 – Interpersonal Communication OR 121 – Fundamentals of Public Speaking			7.1	3	C	X		

Course Number	Course Name	Knowing	Understanding	Applying	Credit Hours	Gen Ed	Required	Preferred	Optional
ENGL 150	English 1			7.1	3	C	X		
ENGL 250	English 2			7.1	3	C	X		
HVAC 337	Mechanical and Electrical Systems		3.2/6.1		3		X		
MATH	115 - Intermediate Algebra OR 116 – Intermediate Algebra and Numerical Trigonometry				3/4	M	X		
PHYS 211	Introductory Physics 1	3.2		7.1	4	Sc	X		
SOCY 121	Introduction to Sociology	4.1	3.1	7.1	3	S/R		X	
Facility Management Curriculum (second two years of curriculum)									
BLAW 221	Elementary Business Law	4.1	6.1	5.2/7.1	3		X		
ECON 221	Principles of Economics 1		4.1/5.1		3	S	X		
ECON 222	Principles of Economics 2		3.4/3.5/3.7/4.1/5.2		3	S	X		
ENGL 311	Advanced Technical Writing			7.1	3	C	X		
FMAN 321	Principles of Facility Management	3.8	1.1/2.1/3.1/3.6/3.7	7.1	3		X		
FMAN 322	Project Management	1.1		2.1/3.6/4.1/7.1	3		X		
FMAN 331	Facility Programming and the Design Process		1.1	2.1/3.3/3.4/5.1/7.1	3		X		
FMAN 393	Facility Management Internship (experiences vary with internship location)	1.1/1.4	2.1/3.1/5.1/6.1	3.2/3.3/3.4/3.6/7.1	4		X		
FMAN 431	Principles of Space Planning	1.1/3.1/3.3/3.4/3.6/6.1	2.1/3.8	3.5/7.1	3		X		
FMAN 432	Principles of Interior Architecture	1.1/2.1/3.1/6.1	3.3/3.4	3.5/3.8/7.1	3		X		
FMAN 441	Property Development and Planning	5.1/6.1	1.1/2.1/3.1/3.8/5.2	7.1	3		X		
FMAN 451	Planning and Budgeting for Operations	1.1/3.6/3.7	3.8/5.1	3.1/3.2/3.3/3.4/3.5/7.1	3		X		
FMAN 489	Capstone Research (experiences vary with project)	1.1		2.1/3.3/3.4/5.1/7.1	1		X		
FMAN 499	Capstone Thesis (experiences vary with project)	1.1		2.1/3.3/3.4/3.5/7.1	3		X		
GLOBAL CONSCIOUSNESS REQUIREMENT (students must take a course with this designation)					3	G	X		
HVAC 483	HVACR Building Systems	3.6	3.2/3.8/6.1	3.1/3.4/3.5/5.1	3		X		
MGMT 301	Applied Management		3.4/3.5/4.1/5.1	6.1/7.1	3		X		
MGMT 350	Tools for Decision Making			2.1/3.4/3.5/3.7/5.1/5.2	3		X		
MANAGEMENT ELECTIVE (students select 1 of the following courses)					3		X		
MGMT 302	Organizational Behavior		4.1/6.1						
MGMT 305	Supervision and Leadership		4.1/6.1						
MGMT 373	Human Resources Management		4.1/6.1						
MGMT 447	Business Ethics and Social Responsibility		4.1/6.1						

Course Number	Course Name	Knowing	Understanding	Applying	Credit Hours	Gen Ed	Required	Preferred	Optional
SCIENCE ELECTIVE (students select 1 of the following courses)					¾	Sc	X		
BIOL 111	Environmental Biology	3.2/3.8							
BIOL 116	Nature Study	3.2/3.8							
GEOG 121	Weather and Climate	3.2/3.8							
GEOL 121	Physical Geology	3.2/3.8							
STQM 260	Introduction to Statistics	5.1		7.1	3		X		

The Course Level Map aligns with the curriculum for Ferris' Bachelor of Science in Facility Management degree. Only courses which directly contribute to acquiring the competencies identified in the IFMA Foundation Standard are mapped. Note that the curriculum at times relies on service courses such as Management (MGMT), Heating Ventilation, and Air Conditioning (HVAC) for areas outside the primary discipline area of the program faculty members, whose degrees and work experience is primarily architecture, and in the case of the lead faculty member, Joe Samson, architecture and project management within a facility management environment.

Color and codes have been added in the attached map to better communicate the level and depth of learning. The following table is a key to understanding the information on the Program Level Map.

Level of Learning	General	Moderate	Intense
Knowing			
Understanding			
Application			

For Competency 7.1, which deals with presentation, the following letters have been added to indicate the type of presentation that takes place in each course. A=Architectural and Design Documentation/Presentation; O=Oral Presentation; W=Written Presentation

Table 5.3. Course Level Map (only shows courses that include FM Competencies)

	Arch Graphics	Arch Dig Graphics	Mat/Meth Const	Int/Ext Materials	Arch Documentation	Arch Detailing	Statics/Strength Matls	Design Principles	Arch History 1&2	Systems Cost Estimating	Principles of FM	Project Management	Fac Prog/Design	FM Internship	Prin of Space Planning	Prin of Int Architecture	Prop Development	Plng/Budget for Ops	Capstone Research	Capstone Thesis	Mech/Electrical Syst	HVACR Building Syst	Communications	English 1	English 2	Adv Technical Writing	Elementary Bus Law	Economics (Macro)	Economics (Micro)	Applied Mgmt	Tools Decision Making	Intro Physics 1	Intro Sociology	Intro to Statistics						
IFMA Standard Competency Blue Text indicates the IFMA Competencies as they appear in the Standard.	ARCH 101	ARCH 102	ARCH 112	ARCH 115	ARCH 203	ARCH 204	ARCH 223	ARCH 241	ARCH244/	ARCH 250	FMAN 321	FMAN 322	FMAN 331	FMAN 393	FMAN 431	FMAN 432	FMAN 441	FMAN 451	FMAN 489	FMAN 499	HVAC 337	HVAC 483	COMM	ENGL 150	ENGL 250	ENGL 311	BLAW 221	ECON 221	ECON 222	MGMT 301	MGMT 350	MGMTEle	PHYS 211	Scflective	SOCY 121	STQM 260				
Competency 1.1 The student can explain the history, international practices, corporate organization and roles of the Facility Management profession. (ways of knowing)																																								
Competency 2.1 The student can manage project initiation, planning, execution, control and closeout (ways of knowing), using scope, quality, schedule, budget, resources and risk (ways of understanding).																																								
Competency 3.1 Using principles of acquisition, installation, operations, maintenance, outsourcing, renovation and disposition of building systems, structure, interiors, exterior and grounds, the student can demonstrate the phases of facility management from design/acquisition to final disposition. (ways of understanding)																																								
Competency 3.2 As a foundation for operations, maintenance and energy management, the student can recognize the systems, services and functions thereof, and the software applications that support them. (ways of knowing)																																								
Competency 3.3 The student can assess the condition of the facility including its systems, structure, interiors, exteriors and grounds to establish a long term facility plan for the organization. (ways of applying)																																								
Competency 3.4 The student can demonstrate a method to plan, measure and evaluate the facility's operational performance. (ways of applying)																																								
Competency 3.5 The student can interpret, apply, and recommend quality improvement programs. (ways of applying)																																								
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Competency 3.7 The student can comprehend and prepare emergency preparedness and business continuity strategies. (ways of understanding)																																								
Competency 3.8 The student can demonstrate awareness of sustainable stewardship principles applied to the built environment. (ways of applying)																																								

ARCH 101: Architectural Graphics (Preferred)

IFMA Foundation Competencies	Course Objectives			
Blue Text indicates the IFMA Competencies as they appear in the Standard.	Apply theory and techniques of digital visual communication graphics to create professional architectural presentations.	Explain and apply fundamental concepts, commands and tools of a variety of two dimensional and three dimensional software.	Create architectural drawings for each of the following project phases: schematic design, design development, and working drawings.	Create architectural models utilizing digital fabrication technology and techniques.
Competency 7.1 The student demonstrates written, oral, aural, and graphic communication skills through repetitive assessment and evaluation of industry appropriate genre. (ways of applying)				

ARCH 102: Architectural Digital Graphics (Required)

IFMA Foundation Competencies	Course Objectives			
Blue Text indicates the IFMA Competencies as they appear in the Standard.	Apply theory and techniques of digital visual communication graphics to create professional architectural presentations.	Explain and apply fundamental concepts, commands and tools of a variety of two dimensional and three dimensional software.	Create architectural drawings for each of the following project phases: schematic design, design development, and working drawings.	Create architectural models utilizing digital fabrication technology and techniques.
Competency 3.6 The student align facility management technology with organizational information technology. (ways of understanding)				
Competency 7.1 The student demonstrates written, oral, aural, and graphic communication skills through repetitive assessment and evaluation of industry appropriate genre. (ways of applying)				

ARCH 112: Structural Materials, Systems and Codes (Required)

IFMA Foundation Competencies	Course Objectives			
Blue Text indicates the IFMA Competencies as they appear in the Standard.	Describe attributes (sustainability, performance, aesthetics, and economics) of building systems and their components, building codes, and material classification systems.	Graphically assemble structural building components.	Evaluate and apply building codes and material classification systems.	Demonstrate effective written and verbal communication skills.
Competency 3.2 As a foundation for operations, maintenance and energy management, the student can recognize the systems, services and functions thereof, and the software applications that support them. (ways of knowing)				
Competency 3.8 The student can demonstrate awareness of sustainable stewardship principles applied to the built environment. (ways of applying)				
Competency 6.1 Using factors around health, safety, welfare, comfort, safety and security within the organization, the student can practice applications of human resource management. (ways of applying)				
Competency 7.1 The student demonstrates written, oral, aural, and graphic communication skills through repetitive assessment and evaluation of industry appropriate genre. (ways of applying)				

ARCH 115: Interior and Exterior Finishes and Systems (Required)

IFMA Foundation Competencies	Course Objectives			
Blue Text indicates the IFMA Competencies as they appear in the Standard.	Describe attributes (sustainability, performance, aesthetics, and economics) of building systems and their components, building codes, and material classification systems.	Graphically assemble interior and exterior building components.	Evaluate and apply building codes and material classification systems.	Demonstrate effective written and verbal communication skills.
Competency 3.2 As a foundation for operations, maintenance and energy management, the student can recognize the systems, services and functions thereof, and the software applications that support them. (ways of knowing)				
Competency 3.8 The student can demonstrate awareness of sustainable stewardship principles applied to the built environment. (ways of applying)				
Competency 6.1 Using factors around health, safety, welfare, comfort, safety and security within the organization, the student can practice applications of human resource management. (ways of applying)				
Competency 7.1 The student demonstrates written, oral, aural, and graphic communication skills through repetitive assessment and evaluation of industry appropriate genre. (ways of applying)				

ARCH 203: Architectural Documentation (Required)

IFMA Foundation Competencies	Course Objectives					
Blue Text indicates the IFMA Competencies as they appear in the Standard.	Apply techniques of construction documentation to interpret and create professional working drawings and graphic presentations.	Use Building Information Modeling to document architectural design principles and materials and methods of construction.	Integrate the content of commonly used building codes into working drawings.	Illustrate the relationships of major building components through plan and section views.	Coordinate and cross-reference drawing components to illustrate component relationships.	Demonstrate effective communication in the following areas: speaking, presentations and small-group interaction.
Competency 3.2 As a foundation for operations, maintenance and energy management, the student can recognize the systems, services and functions thereof, and the software applications that support them. (ways of knowing)						
Competency 3.8 The student can demonstrate awareness of sustainable stewardship principles applied to the built environment. (ways of applying)						
Competency 6.1 Using factors around health, safety, welfare, comfort, safety and security within the organization, the student can practice applications of human resource management. (ways of applying)						
Competency 7.1 The student demonstrates written, oral, aural, and graphic communication skills through repetitive assessment and evaluation of industry appropriate genre. (ways of applying)						

ARCH 204: Architectural Detailing (Required)

IFMA Foundation Competencies	Course Objectives					
Blue Text indicates the IFMA Competencies as they appear in the Standard.	Develop architectural construction details that demonstrate best professional practices, including integration of sustainable technologies.	Develop architectural construction details that fulfill the goals of architectural design principles.	Develop architectural construction details that demonstrate understanding of physical and aesthetic qualities of building materials.	Integrate architectural construction details in to professional working drawings.	Demonstrate effective communication in the following areas: speaking, presentations and small-group interactions.	
Competency 3.2 As a foundation for operations, maintenance and energy management, the student can recognize the systems, services and functions thereof, and the software applications that support them. (ways of knowing)						
Competency 3.8 The student can demonstrate awareness of sustainable stewardship principles applied to the built environment. (ways of applying)						
Competency 6.1 Using factors around health, safety, welfare, comfort, safety and security within the organization, the student can practice applications of human resource management. (ways of applying)						
Competency 7.1 The student demonstrates written, oral, aural, and graphic communication skills through repetitive assessment and evaluation of industry appropriate genre. (ways of applying)						

ARCH 223: Statics and Strength of Materials (Preferred)

IFMA Foundation Competencies	Course Objectives		
Blue Text indicates the IFMA Competencies as they appear in the Standard.	Acquire a practical understanding of structural behavior in withstanding gravity and lateral forces.	Understand the relationship between external forces and the resulting actions of structural members and systems.	Achieve a practical ability to select and size basic structural members and components.
Competency 3.2 As a foundation for operations, maintenance and energy management, the student can recognize the systems, services and functions thereof, and the software applications that support them. (ways of knowing)			
Competency 3.3 The student can assess the condition of the facility including its systems, structure, interiors, exteriors and grounds to establish a long term facility plan for the organization. (ways of applying)			
Competency 3.4 The student can demonstrate a method to plan, measure and evaluate the facility's operational performance. (ways of applying)			
Competency 3.7 The student can comprehend and prepare emergency preparedness and business continuity strategies. (ways of understanding)			

ARCH 241: Design Principles (Required)

IFMA Foundation Competencies	Course Objectives				
Blue Text indicates the IFMA Competencies as they appear in the Standard.	Critically appraise buildings and other designed objects in terms of the principles and components of design.	Apply the primary elements of design in the creation of two-dimensional and three-dimensional projects.	Create presentations that demonstrate knowledge of color theory and the emotional impact of color.	Develop conceptual frameworks for design projects and give physical form to those concepts.	Present design projects using appropriate professional design vocabulary; offer and accept critical commentary in a professional manner.
Competency 3.3 The student can assess the condition of the facility including its systems, structure, interiors, exteriors and grounds to establish a long term facility plan for the organization. (ways of applying)					
Competency 6.1 Using factors around health, safety, welfare, comfort, safety and security within the organization, the student can practice applications of human resource management. (ways of applying)					
Competency 7.1 The student demonstrates written, oral, aural, and graphic communication skills through repetitive assessment and evaluation of industry appropriate genre. (ways of applying)					

ARCH 244: Architectural History 1 (Preferred)

IFMA Foundation Competencies	Course Objectives				
Blue Text indicates the IFMA Competencies as they appear in the Standard.	Demonstrate an ability to express in writing the conceptual and factual framework of architectural history.	Achieve an understanding of the historical connections and distinctions between western and non-western traditions in architectural history.	Achieve an understanding of the political, cultural, and technological forces that shaped architecture from pre-history through the Middle Ages.	Demonstrate effective research skills.	Demonstrate effective written communication skills.
Competency 3.3 The student can assess the condition of the facility including its systems, structure, interiors, exteriors and grounds to establish a long term facility plan for the organization. (ways of applying)					
Competency 6.1 Using factors around health, safety, welfare, comfort, safety and security within the organization, the student can practice applications of human resource management. (ways of applying)					
Competency 7.1 The student demonstrates written, oral, aural, and graphic communication skills through repetitive assessment and evaluation of industry appropriate genre. (ways of applying)					

ARCH 245: Architectural History 2 (Preferred)

IFMA Foundation Competencies	Course Objectives				
Blue Text indicates the IFMA Competencies as they appear in the Standard.	Demonstrate an ability to express in writing the conceptual and factual framework of architectural history.	Achieve an understanding of the historical connections and distinctions between western and non-western traditions in architectural history.	Achieve an understanding of the political, cultural, and technological forces that shaped architecture from pre-history through the Middle Ages.	Demonstrate effective research skills.	Demonstrate effective written communication skills.
Competency 3.3 The student can assess the condition of the facility including its systems, structure, interiors, exteriors and grounds to establish a long term facility plan for the organization. (ways of applying)					
Competency 6.1 Using factors around health, safety, welfare, comfort, safety and security within the organization, the student can practice applications of human resource management. (ways of applying)					
Competency 7.1 The student demonstrates written, oral, aural, and graphic communication skills through repetitive assessment and evaluation of industry appropriate genre. (ways of applying)					

ARCH 250: Systems Cost Estimating (Preferred – Required as of Fall 2014)

IFMA Foundation Competencies	Course Objectives			
Blue Text indicates the IFMA Competencies as they appear in the Standard.	Estimate and document the cost of various architectural building types in various locations throughout the US and Canada.	Review working drawings and specifications to generate an estimation of building material quantity costs and quality standards.	Utilize various estimating methods and select an estimating method that is appropriate for the building type and phase of project (schematic design, Design development and working drawings)	Utilize electronic and printed cost estimating methods in material/system selection during the design development and working drawing phase.
Competency 2.1 The student can manage project initiation, planning, execution, control and closeout (ways of knowing), using scope, quality, schedule, budget, resources and risk (ways of understanding).				
Competency 3.1 Using principles of acquisition, installation, operations, maintenance, outsourcing, renovation and disposition of building systems, structure, interiors, exterior and grounds, the student can demonstrate the phases of facility management from design/acquisition to final disposition. (ways of understanding)				
Competency 5.1 The student uses analysis, budgeting, accounting, risk management, and reporting to demonstrate applications of facility financial management. (ways of understanding)				

FMAN 321: Principles of Facility Management (Required)

IFMA Foundation Competencies	Course Objectives						
Blue Text indicates the IFMA Competencies as they appear in the Standard.	Understanding the evolution of Facility Management as a profession and the role of Facility Managers as stewards of the corporate environment.	Understanding the relationships between the various competency areas that define the Facility Management profession.	Understanding the Facility Management Life Cycle from planning through facility disposal.	Developing simple budgets from historic data and anticipated trends and needs.	Evaluating simple bids and proposals for value and compliance with organization expectations.	Identifying needs and developing spatial solutions to meet facility requirements as identified in	Demonstrating effective communication in the following areas: writing, speaking, presentations, and
Competency 1.1 The student can explain the history, international practices, corporate organization and roles of the Facility Management profession. (ways of knowing)							
Competency 2.1 The student can manage project initiation, planning, execution, control and closeout (ways of knowing), using scope, quality, schedule, budget, resources and risk (ways of understanding).							
Competency 3.1 Using principles of acquisition, installation, operations, maintenance, outsourcing, renovation and disposition of building systems, structure, interiors, exterior and grounds, the student can demonstrate the phases of facility management from design/acquisition to final disposition. (ways of understanding)							
Competency 3.6 The student align facility management technology with organizational information technology. (ways of understanding)							
Competency 3.7 The student can comprehend and prepare emergency preparedness and business continuity strategies. (ways of understanding)							
Competency 7.1 The student demonstrates written, oral, aural, and graphic communication skills through repetitive assessment and evaluation of industry appropriate genre. (ways of applying)							

FMAN 322: Project Management (Required)

IFMA Foundation Competencies	Course Objectives					
Blue Text indicates the IFMA Competencies as they appear in the Standard.	Explain in professional terms the definitions, objectives and processes of the various life cycle phases of projects.	Create and write project plans that include: project concept initiation, project scope, and project schedule.	Explain in professional terms the definitions, objectives and processes of team development, team leadership and the coordination and monitoring phases of a project.	Explain in professional terms the definitions, objectives and processes of the coordination of construction and relocation projects.	Demonstrate effective communication in the following areas: writing, speaking, presentations, and small group interaction.	Compute and produce project plans using various facility management and project management software.
Competency 1.1 The student can explain the history, international practices, corporate organization and roles of the Facility Management profession. (ways of knowing)						
Competency 2.1 The student can manage project initiation, planning, execution, control and closeout (ways of knowing), using scope, quality, schedule, budget, resources and risk (ways of understanding).						
Competency 3.6 The student align facility management technology with organizational information technology. (ways of understanding)						
Competency 4.1 The student can identify the skills needed to strategically lead process, the organization, stakeholders and technologies in an ethically responsible way. (ways of knowing)						
Competency 7.1 The student demonstrates written, oral, aural, and graphic communication skills through repetitive assessment and evaluation of industry appropriate genre. (ways of applying)						

FMAN 331: Facility Programming and the Design Process (Required)

IFMA Foundation Competencies	Course Objectives					
Blue Text indicates the IFMA Competencies as they appear in the Standard.	Understanding the purpose of facility programming, how it differs from architectural programming, and its role in enabling the development of successful spaces	Understanding how facility programming supports the organization's business goals.	Performing the research and data collection necessary to identify the issues and goals necessary for successful space development	Organizing the facility program into a cohesive and operational design tool.	Utilizing the facility and architectural programs to evaluate design options as well as functioning spaces.	Demonstrating effective communication in the following areas: writing, speaking, presentations, and small group interaction.
Competency 1.1 The student can explain the history, international practices, corporate organization and roles of the Facility Management profession. (ways of knowing)						
Competency 2.1 The student can manage project initiation, planning, execution, control and closeout (ways of knowing), using scope, quality, schedule, budget, resources and risk (ways of understanding).						
Competency 3.3 The student can assess the condition of the facility including its systems, structure, interiors, exteriors and grounds to establish a long term facility plan for the organization. (ways of applying)						
Competency 3.4 The student can demonstrate a method to plan, measure and evaluate the facility's operational performance. (ways of applying)						
Competency 5.1 The student uses analysis, budgeting, accounting, risk management, and reporting to demonstrate applications of facility financial management. (ways of understanding)						
Competency 7.1 The student demonstrates written, oral, aural, and graphic communication skills through repetitive assessment and evaluation of industry appropriate genre. (ways of applying)						

FMAN 393: Facility Management Internship (Required)

IFMA Foundation Competencies	Course Objectives				
<p>Blue Text indicates the IFMA Competencies as they appear in the Standard.</p> <p>Note: The Course Objectives are from the course syllabus. The competencies shown here are considered essential to the internship experience and would be part of the vast majority of internships. Depending on the internship, the student may develop other IFMA Foundation Competencies.</p>	<p>To provide opportunities for practical experience in testing theories, concepts, and philosophies developed and acquired through classroom experiences. Ideally, practical experience in as many of the following areas as feasible would constitute an internship: Long Range Planning, Space Management, Interior Planning, Interior Installation, Maintenance and Operations, Architecture and Engineering Services, Budgeting, Real Estate, CAD/BIM/FM software.</p>	<p>To provide the student an opportunity to expand knowledge of the Facility Management profession through the utilization of personal evaluation instruments, company evaluations, and discussions with faculty of Ferris State University.</p>	<p>To provide the student an opportunity to establish positive interpersonal relationships and to achieve personal fulfillment and growth.</p>	<p>To provide the student an opportunity to begin the transition from student to Facility Management Professional.</p>	<p>To provide an opportunity for facility management program to strengthen and maintain relationships with professional Facility Management departments.</p>
<p>Competency 1.1 The student can explain the history, international practices, corporate organization and roles of the Facility Management profession. (ways of knowing)</p>					
<p>Competency 2.1 The student can manage project initiation, planning, execution, control and closeout (ways of knowing), using scope, quality, schedule, budget, resources and risk (ways of understanding).</p>					
<p>Competency 3.1 Using principles of acquisition, installation, operations, maintenance, outsourcing, renovation and disposition of building systems, structure, interiors, exterior and grounds, the student can demonstrate the phases of facility management from design/acquisition to final disposition. (ways of understanding)</p>					
<p>Competency 3.2 As a foundation for operations, maintenance and energy management, the student can recognize the systems, services and functions thereof, and the software applications that support them. (ways of knowing)</p>					
<p>Competency 3.3 The student can assess the condition of the facility including its systems, structure, interiors, exteriors and grounds to establish a long term facility plan for the organization. (ways of applying)</p>					
<p>Competency 3.4 The student can demonstrate a method to plan, measure and evaluate the facility's operational performance. (ways of applying)</p>					
<p>Competency 3.6 The student align facility management technology with organizational information technology. (ways of understanding)</p>					
<p>Competency 4.1 The student can identify the skills needed to strategically lead process, the organization, stakeholders and technologies in an ethically responsible way. (ways of knowing)</p>					
<p>Competency 5.1 The student uses analysis, budgeting, accounting, risk management, and reporting to demonstrate applications of facility financial management. (ways of understanding)</p>					
<p>Competency 6.1 Using factors around health, safety, welfare, comfort, safety and security within the organization, the student can practice applications of human resource management. (ways of applying)</p>					
<p>Competency 7.1 The student demonstrates written, oral, aural, and graphic communication skills through repetitive assessment and evaluation of industry appropriate genre. (ways of applying)</p>					

FMAN 431: Principles of Space Planning (Required)

IFMA Foundation Competencies	Course Objectives					
Blue Text indicates the IFMA Competencies as they appear in the Standard.	Describe the history and current trends of the American Office environment.	Identification of employee work styles.	Defining, analyzing, and planning office projects using varied methodologies.	Differentiating between space inventories, space forecasting, adjacencies, and programming.	Using furniture systems to serve complex functional needs	Demonstrating effective communication in the following areas: writing, speaking, presentations, and small group interaction.
Competency 1.1 The student can explain the history, international practices, corporate organization and roles of the Facility Management profession. (ways of knowing)						
Competency 2.1 The student can manage project initiation, planning, execution, control and closeout (ways of knowing), using scope, quality, schedule, budget, resources and risk (ways of understanding).						
Competency 3.1 Using principles of acquisition, installation, operations, maintenance, outsourcing, renovation and disposition of building systems, structure, interiors, exterior and grounds, the student can demonstrate the phases of facility management from design/acquisition to final disposition. (ways of understanding)						
Competency 3.3 The student can assess the condition of the facility including its systems, structure, interiors, exteriors and grounds to establish a long term facility plan for the organization. (ways of applying)						
Competency 3.4 The student can demonstrate a method to plan, measure and evaluate the facility's operational performance. (ways of applying)						
Competency 3.5 The student can interpret, apply, and recommend quality improvement programs. (ways of applying)						
Competency 3.6 The student align facility management technology with organizational information technology. (ways of understanding)						
Competency 3.8 The student can demonstrate awareness of sustainable stewardship principles applied to the built environment. (ways of applying)						
Competency 6.1 Using factors around health, safety, welfare, comfort, safety and security within the organization, the student can practice applications of human resource management. (ways of applying)						
Competency 7.1 The student demonstrates written, oral, aural, and graphic communication skills through repetitive assessment and evaluation of industry appropriate genre. (ways of applying)						

FMAN 432: Principles of Interior Architecture (Required)

IFMA Foundation Competencies	Course Objectives				
Blue Text indicates the IFMA Competencies as they appear in the Standard.	Understanding the theories, approaches and processes of interior design.	Developing solutions and supporting documentation for design problems within the context of interior environments.	Identifying and utilizing evaluation criteria in the selection of interior finishes, systems and furniture.	Performing research involving materials, furniture and systems utilized in building interiors.	Demonstrating effective communication in the following areas: writing, speaking, presentations, and small group interaction.
Competency 1.1 The student can explain the history, international practices, corporate organization and roles of the Facility Management profession. (ways of knowing)					
Competency 2.1 The student can manage project initiation, planning, execution, control and closeout (ways of knowing), using scope, quality, schedule, budget, resources and risk (ways of understanding).					
Competency 3.1 Using principles of acquisition, installation, operations, maintenance, outsourcing, renovation and disposition of building systems, structure, interiors, exterior and grounds, the student can demonstrate the phases of facility management from design/acquisition to final disposition. (ways of understanding)					
Competency 3.3 The student can assess the condition of the facility including its systems, structure, interiors, exteriors and grounds to establish a long term facility plan for the organization. (ways of applying)					
Competency 3.4 The student can demonstrate a method to plan, measure and evaluate the facility's operational performance. (ways of applying)					
Competency 3.5 The student can interpret, apply, and recommend quality improvement programs. (ways of applying)					
Competency 3.8 The student can demonstrate awareness of sustainable stewardship principles applied to the built environment. (ways of applying)					
Competency 6.1 Using factors around health, safety, welfare, comfort, safety and security within the organization, the student can practice applications of human resource management. (ways of applying)					
Competency 7.1 The student demonstrates written, oral, aural, and graphic communication skills through repetitive assessment and evaluation of industry appropriate genre. (ways of applying)					

FMAN 441: Property Development and Planning (Required)

IFMA Foundation Competencies	Course Objectives				
Blue Text indicates the IFMA Competencies as they appear in the Standard.	Understanding the history, processes and practices of real estate development.	Understanding the roles of the development team and the public sector.	Understanding the driving forces of real estate development.	Understanding responsible development and management of natural and built resources.	Demonstrating effective communication in the following areas: writing, speaking, presentations, and small group interaction.
Competency 1.1 The student can explain the history, international practices, corporate organization and roles of the Facility Management profession. (ways of knowing)					
Competency 2.1 The student can manage project initiation, planning, execution, control and closeout (ways of knowing), using scope, quality, schedule, budget, resources and risk (ways of understanding).					
Competency 3.1 Using principles of acquisition, installation, operations, maintenance, outsourcing, renovation and disposition of building systems, structure, interiors, exterior and grounds, the student can demonstrate the phases of facility management from design/acquisition to final disposition. (ways of understanding)					
Competency 3.8 The student can demonstrate awareness of sustainable stewardship principles applied to the built environment. (ways of applying)					
Competency 5.1 The student uses analysis, budgeting, accounting, risk management, and reporting to demonstrate applications of facility financial management. (ways of understanding)					
Competency 5.2 The student can demonstrate applications of corporate real estate finance, management and transactional execution. (ways of applying)					
Competency 6.1 Using factors around health, safety, welfare, comfort, safety and security within the organization, the student can practice applications of human resource management. (ways of applying)					
Competency 7.1 The student demonstrates written, oral, aural, and graphic communication skills through repetitive assessment and evaluation of industry appropriate genre. (ways of applying)					

FMAN 451: Planning and Budgeting for Operations (Required)

IFMA Foundation Competencies	Course Objectives					
Blue Text indicates the IFMA Competencies as they appear in the Standard.	Understanding the impact of operations and maintenance costs on the organization's budget and how efficient and cost effective practices contribute to an organization's success.	Identifying common problems associated with building systems through the building diagnostics process and using this analysis as the basis for remedial action.	Developing building maintenance schedules and budgets by identifying and scheduling tasks and frequencies and using this information to build a staffing plan and budget.	Performing comparative analysis to determine most cost efficient course of action.	Understanding common operations and maintenance management software and their application.	Demonstrating effective communication in the following areas: writing, speaking, presentations, and small group interaction.
Competency 1.1 The student can explain the history, international practices, corporate organization and roles of the Facility Management profession. (ways of knowing)						
Competency 3.1 Using principles of acquisition, installation, operations, maintenance, outsourcing, renovation and disposition of building systems, structure, interiors, exterior and grounds, the student can demonstrate the phases of facility management from design/acquisition to final disposition. (ways of understanding)						
Competency 3.2 As a foundation for operations, maintenance and energy management, the student can recognize the systems, services and functions thereof, and the software applications that support them. (ways of knowing)						
Competency 3.3 The student can assess the condition of the facility including its systems, structure, interiors, exteriors and grounds to establish a long term facility plan for the organization. (ways of applying)						
Competency 3.4 The student can demonstrate a method to plan, measure and evaluate the facility's operational performance. (ways of applying)						
Competency 3.5 The student can interpret, apply, and recommend quality improvement programs. (ways of applying)						
Competency 5.1 The student uses analysis, budgeting, accounting, risk management, and reporting to demonstrate applications of facility financial management. (ways of understanding)						
Competency 7.1 The student demonstrates written, oral, aural, and graphic communication skills through repetitive assessment and evaluation of industry appropriate genre. (ways of applying)						

FMAN 489: Capstone Research (Required)

IFMA Foundation Competencies	Course Objectives				
<p>Blue Text indicates the IFMA Competencies as they appear in the Standard.</p> <p>The actual competencies addressed in each project may vary in breadth and depth depending on the project the student or team of students pursue in any given semester.</p>	Creating individualized or group research proposals that correspond to the core competencies of Facility Management as defined by the International Facility Management Association.	Developing hypotheses and research questions that comply with the standard framework of qualitative and quantitative research methodologies.	Creating individualized or group thesis proposals that are structured based on accepted qualitative or quantitative research methodologies.	Conducting literature review pertaining to individualized or group projects that demonstrates breadth and currency of research.	Demonstrating effective communication in the following areas: writing, speaking, presentations, and small group interaction.
Competency 1.1 The student can explain the history, international practices, corporate organization and roles of the Facility Management profession. (ways of knowing)					
Competency 2.1 The student can manage project initiation, planning, execution, control and closeout (ways of knowing), using scope, quality, schedule, budget, resources and risk (ways of understanding).					
Competency 3.3 The student can assess the condition of the facility including its systems, structure, interiors, exteriors and grounds to establish a long term facility plan for the organization. (ways of applying)					
Competency 3.4 The student can demonstrate a method to plan, measure and evaluate the facility's operational performance. (ways of applying)					
Competency 5.1 The student uses analysis, budgeting, accounting, risk management, and reporting to demonstrate applications of facility financial management. (ways of understanding)					
Competency 7.1 The student demonstrates written, oral, aural, and graphic communication skills through repetitive assessment and evaluation of industry appropriate genre. (ways of applying)					

FMAN 499: Capstone Thesis (Required)

IFMA Foundation Competencies	Course Objectives			
<p>Blue Text indicates the IFMA Competencies as they appear in the Standard.</p>	Applying and analyzing the core competencies of facility management as defined by the International Facility Management Association.	Implementing individualized or group research methodologies.	Demonstrating proper technique of qualitative or quantitative research methodologies.	Demonstrating effective communication in the following areas: writing, speaking, presentations, and small group interactions.
Competency 1.1 The student can explain the history, international practices, corporate organization and roles of the Facility Management profession. (ways of knowing)				
Competency 2.1 The student can manage project initiation, planning, execution, control and closeout (ways of knowing), using scope, quality, schedule, budget, resources and risk (ways of understanding).				
Competency 3.3 The student can assess the condition of the facility including its systems, structure, interiors, exteriors and grounds to establish a long term facility plan for the organization. (ways of applying)				
Competency 3.4 The student can demonstrate a method to plan, measure and evaluate the facility's operational performance. (ways of applying)				
Competency 3.5 The student can interpret, apply, and recommend quality improvement programs. (ways of applying)				
Competency 7.1 The student demonstrates written, oral, aural, and graphic communication skills through repetitive assessment and evaluation of industry appropriate genre. (ways of applying)				

HVAC 337: Mechanical and Electrical Systems for Buildings (Required)

IFMA Foundation Competencies	Course Objectives				
<p>Blue Text indicates the IFMA Competencies as they appear in the Standard.</p> <p>This course is taught by the HVACR faculty for students in the Architectural Technology and Construction Management programs. The HVACR faculty have not developed Learning Objectives for this course. The Learning Objectives shown are adapted from the Course Description.</p>	<p>Awareness of HVACR, water supply, sanitary and storm sewers, fire protection, electrical distribution, lighting and acoustical systems for buildings.</p>	<p>Understanding of system integration, energy considerations and their effect on building planning, detailing and construction.</p>	<p>Understanding of building equipment.</p>	<p>Knowledge of codes.</p>	<p>Knowledge of appropriate building application.</p>
<p>Competency 3.2 As a foundation for operations, maintenance and energy management, the student can recognize the systems, services and functions thereof, and the software applications that support them. (ways of knowing)</p>					
<p>Competency 6.1 Using factors around health, safety, welfare, comfort, safety and security within the organization, the student can practice applications of human resource management. (ways of applying)</p>					

HVAC 483: HVACR Building Systems (Required)

IFMA Foundation Competencies	Course Objectives																	
<p>Blue Text indicates the IFMA Competencies as they appear in the Standard.</p>	Describe energy sources available and benefits and limitations of each.	Analyze/understand utility billing, effects of various changes on energy budgets and the importance of working with utilities.	Select energy sources from calculated economic analysis, including annual cost of operation.	Describe types of cogeneration systems, their application and economic advantages (payback rate structure and buy back of power).	Tour power plant/report on efficiency and rationale for the type of energy used/produced.	Qualify and quantify "human comfort" and describe the implication on HVAC systems.	Identify problems, solutions and regulations relative to indoor air quality and influence on HVAC systems, the indoor environment and SBS.	Develop working knowledge of Psychrometrics as applied to HVAC and human comfort.	Perform economic analysis on energy costs of building application through heat loss/gain load calculations, and relate energy saving to envelope, ventilation and temp settings.	ID/describe major components in HVAC system.	ID/describe different types of HVAC systems, advantages/disadvantages/special needs, applic.	Describe control sequences, components and loops in HVAC systems.	Describe energy cons/energy mgmt. strategies	Describe strategies, programs, and the short/long term economic impact of prev mant of HVAC syst.	Describe/locate info on codes/ ordinances/ regs that affect the inst, operation/maint of bldg. syst.	Describe criteria (license/certification reqs to hire contractors/vendors/staff for HVACR installation/operation/maint.		
<p>Competency 3.1 Using principles of acquisition, installation, operations, maintenance, outsourcing, renovation and disposition of building systems, structure, interiors, exterior and grounds, the student can demonstrate the phases of facility management from design/acquisition to final disposition. (ways of understanding)</p>																		
<p>Competency 3.2 As a foundation for operations, maintenance and energy management, the student can recognize the systems, services and functions thereof, and the software applications that support them. (ways of knowing)</p>																		
<p>Competency 3.4 The student can demonstrate a method to plan, measure and evaluate the facility's operational performance. (ways of applying)</p>																		
<p>Competency 3.5 The student can interpret, apply, and recommend quality improvement programs. (ways of applying)</p>																		
<p>Competency 3.6 The student align facility management technology with organizational information technology. (ways of understanding)</p>																		
<p>Competency 3.8 The student can demonstrate awareness of sustainable stewardship principles applied to the built environment. (ways of applying)</p>																		
<p>Competency 5.1 The student uses analysis, budgeting, accounting, risk management, and reporting to demonstrate applications of facility financial management. (ways of understanding)</p>																		
<p>Competency 6.1 Using factors around health, safety, welfare, comfort, safety and security within the organization, the student can practice applications of human resource management. (ways of applying)</p>																		
<p>Competency 7.1 The student demonstrates written, oral, aural, and graphic communication skills through repetitive assessment and evaluation of industry appropriate genre. (ways of applying)</p>																		

COMM 105: Interpersonal Communication or COMM 121: Fundamentals of Public Speaking (One Required)

IFMA Foundation Competencies	Course Objectives			
Blue Text indicates the IFMA Competencies as they appear in the Standard.	Identify and describe components of the human communication process.	Identify and describe the literal message content and the relationship variables between communicators, in interpersonal, small group or presentational contexts.	Select, present, interpret and respond appropriately and effectively to verbal and nonverbal messages in interpersonal, small group or presentational contexts.	Use verbal and nonverbal messages to achieve personal, interpersonal, small group or presentational goals, while developing and maintaining relationships with others.
Competency 7.1 The student demonstrates written, oral, aural, and graphic communication skills through repetitive assessment and evaluation of industry appropriate genre. (ways of applying)				

ENGL 150: English 1 (Required)

IFMA Foundation Competencies	Course Objectives								
Blue Text indicates the IFMA Competencies as they appear in the Standard.	Understand audience's values, attitudes, and goals and choose words and tone appropriate to audience.	Develop, analyze, and define purpose of writing and the multiple goals of their writing.	Analyze the context of the writing problem, develop ideas for their writing, locate and analyze reliable information and resources for their writing, and assess and evaluate information.	State an assertion and support it; choose appropriate methods of organization for their ideas and audiences, maintain connections that link key points within a paper.	Improve content and style through revisions and use feedback to improve their own writing	Use standard grammar, syntax, punctuation, and spelling while maintaining a consistent point of view.	Read and critique others' drafts and work with others to improve ideas and approaches for writing.		
Competency 7.1 The student demonstrates written, oral, aural, and graphic communication skills through repetitive assessment and evaluation of industry appropriate genre. (ways of applying)									

ENGL 250: English 2 (Required)

IFMA Foundation Competencies	Course Objectives						
Blue Text indicates the IFMA Competencies as they appear in the Standard.	Be able to analyze and define the purpose of their writing.	Be able to locate information appropriate to their writing and know how to document it.	Be able to analyze and define the needs of their intended audience.	Be able to analyze the writing task and choose appropriate methods of organization.	Be able to produce effective written communication, demonstrating appropriate use of language, sentence structure, grammar and mechanics.	Be able to work effectively with others to produce and/or revise written materials.	
Competency 7.1 The student demonstrates written, oral, aural, and graphic communication skills through repetitive assessment and evaluation of industry appropriate genre. (ways of applying)							

ENGL 311: Advanced Technical Writing (Required)

IFMA Foundation Competencies	Course Objectives				
Blue Text indicates the IFMA Competencies as they appear in the Standard.	Effectively communicate their specialized technical knowledge to specific audiences.	Effectively organize content utilizing headings and visual cues, and create and label tables, illustrations and graphs.	Write concisely and clearly, recognize and correct common mechanical errors in their writing and that of others.	Be able to work in small groups with others, utilize specific criteria to critique drafts of others, engage in small group peer review.	Write primarily for the executive audience utilizing reader centered techniques.
Competency 7.1 The student demonstrates written, oral, aural, and graphic communication skills through repetitive assessment and evaluation of industry appropriate genre. (ways of applying)					

BLAW 221: Elementary Business Law (Required)

IFMA Foundation Competencies	Course Objectives				
Blue Text indicates the IFMA Competencies as they appear in the Standard.	Identify the major components of the American Judicial System.	Identify how ethical considerations impact legal decisions.	Recognize and explain the legal issues arising in a particular fact situation.	Apply the law and reach a conclusion about the legal issues arising in a particular fact situation.	Recognize and synthesize new business law issues in the media.
Competency 4.1 The student can identify the skills needed to strategically lead process, the organization, stakeholders and technologies in an ethically responsible way. (ways of knowing)					
Competency 5.2 The student can demonstrate applications of corporate real estate finance, management and transactional execution. (ways of applying)					
Competency 6.1 Using factors around health, safety, welfare, comfort, safety and security within the organization, the student can practice applications of human resource management. (ways of applying)					
Competency 7.1 The student demonstrates written, oral, aural, and graphic communication skills through repetitive assessment and evaluation of industry appropriate genre. (ways of applying)					

ECON 221: Principles of Macroeconomics (Required)

IFMA Foundation Competencies	Course Objectives				
Blue Text indicates the IFMA Competencies as they appear in the Standard.	Distinguish the concepts of economic allocation, possibility, efficiency, and growth.	Apply the Supply and Demand model to determine market equilibrium and changes in equilibrium.	Identify the major components of the economy's circular flow model.	Identify the meaning, measurement, and causes of unemployment and inflation.	Distinguish the major types of economic stabilization policies.
Competency 4.1 The student can identify the skills needed to strategically lead process, the organization, stakeholders and technologies in an ethically responsible way. (ways of knowing)					
Competency 5.1 The student uses analysis, budgeting, accounting, risk management, and reporting to demonstrate applications of facility financial management. (ways of understanding)					

ECON 222: Principles of Microeconomics (Required)

IFMA Foundation Competencies	Course Objectives				
Blue Text indicates the IFMA Competencies as they appear in the Standard.	Be able to apply the supply and demand model using the tool of elasticity.	Be able to apply the theory of consumer choice.	Be able to use cost theory to distinguish between the various types of a firm's costs.	Be able to apply the principle of profit maximization to determine the firm's output and price decision.	Be able to distinguish the characteristics of various market structures and their major implications on the firm's output and price decision.
Competency 3.4 The student can demonstrate a method to plan, measure and evaluate the facility's operational performance. (ways of applying)					
Competency 3.5 The student can interpret, apply, and recommend quality improvement programs. (ways of applying)					
Competency 3.7 The student can comprehend and prepare emergency preparedness and business continuity strategies. (ways of understanding)					
Competency 4.1 The student can identify the skills needed to strategically lead process, the organization, stakeholders and technologies in an ethically responsible way. (ways of knowing)					
Competency 5.1 The student uses analysis, budgeting, accounting, risk management, and reporting to demonstrate applications of facility financial management. (ways of understanding)					

MGMT 301: Applied Management (Required)

IFMA Foundation Competencies	Course Objectives							
Blue Text indicates the IFMA Competencies as they appear in the Standard.	Compare and contrast the complexities of management and leadership.	Demonstrate the ability to gather and analyze critical information necessary for decision making.	Work in teams to complete research and projects.	Present ideas clearly, concisely, and professionally before an audience.	Analyze a diverse array of organizational components and recommend improvements.	Assess the styles and motivators of themselves and others.	Explain change and its impact on individuals and groups.	Evaluate the strengths of diversity culture, and globalization and their impact on organizations.
Competency 3.4 The student can demonstrate a method to plan, measure and evaluate the facility's operational performance. (ways of applying)								
Competency 3.5 The student can interpret, apply, and recommend quality improvement programs. (ways of applying)								
Competency 4.1 The student can identify the skills needed to strategically lead process, the organization, stakeholders and technologies in an ethically responsible way. (ways of knowing)								
Competency 5.1 The student uses analysis, budgeting, accounting, risk management, and reporting to demonstrate applications of facility financial management. (ways of understanding)								
Competency 6.1 Using factors around health, safety, welfare, comfort, safety and security within the organization, the student can practice applications of human resource management. (ways of applying)								
Competency 7.1 The student demonstrates written, oral, aural, and graphic communication skills through repetitive assessment and evaluation of industry appropriate genre. (ways of applying)								

MGMT 350: Tools for Decision Making (Required)

IFMA Foundation Competencies	Course Objectives													
<p>Blue Text indicates the IFMA Competencies as they appear in the Standard.</p>	Develop understanding of bookkeeping basics.	Develop competency in assessing a firm's financial statements ...	Develop competency in contextually benchmarking a firm's financial performance.	Develop understanding of corporate level capital and expense budgeting processes.	Develop appreciation for cash flow management issues.	Develop appreciation for determining working capital requirements.	Develop understanding of forecasting, monitoring and controlling capital and expense budgets.	Develop understanding of demand based and cost based considerations for Pricing Strategy	Develop understanding of Cost Analysis.	Develop understanding of pro forma development.	Develop appreciation of avenues of corporate finance.	Develop appreciation of the principles and application of Risk Analysis/Management.	Develop appreciation of methods of project and corporate level valuations.	Develop awareness of international finance issues.
Competency 2.1 The student can manage project initiation, planning, execution, control and closeout (ways of knowing), using scope, quality, schedule, budget, resources and risk (ways of understanding).														
Competency 3.4 The student can demonstrate a method to plan, measure and evaluate the facility's operational performance. (ways of applying)														
Competency 3.5 The student can interpret, apply, and recommend quality improvement programs. (ways of applying)														
Competency 3.7 The student can comprehend and prepare emergency preparedness and business continuity strategies. (ways of understanding)														
Competency 5.1 The student uses analysis, budgeting, accounting, risk management, and reporting to demonstrate applications of facility financial management. (ways of understanding)														
Competency 5.2 The student can demonstrate applications of corporate real estate finance, management and transactional execution. (ways of applying)														

Management Elective (One Required)

MGMT 302: Organizational Behavior

MGMT 305: Supervision and Leadership

MGMT 373: Human Resource Management

MGMT 447: Business Ethics and Social Responsibility

Competency 4.1 The student can identify the skills needed to strategically lead process, the organization, stakeholders and technologies in an ethically responsible way. (ways of knowing)
Competency 6.1 Using factors around health, safety, welfare, comfort, safety and security within the organization, the student can practice applications of human resource management. (ways of applying)

All of the Management Elective courses deal with various aspects of Competencies 4.1 and 6.1. Course Outlines and syllabi for each course can be found in **Appendix 1e**.

PHYS 211: Introductory Physics 1 (Required)

IFMA Foundation Competencies	Course Objectives				
Blue Text indicates the IFMA Competencies as they appear in the Standard.	Student will develop a good functional understanding of mechanics, thermodynamics and wave motion (including sound).	Students will begin developing expert like problem solving skills.	Students will develop lab skills.	Student will improve their communications, interpersonal, and question in skills.	Students will develop attitudes and beliefs that are favorable to learning physics.
Competency 3.2 As a foundation for operations, maintenance and energy management, the student can recognize the systems, services and functions thereof, and the software applications that support them. (ways of knowing)					
Competency 7.1 The student demonstrates written, oral, aural, and graphic communication skills through repetitive assessment and evaluation of industry appropriate genre. (ways of applying)					

Science Elective (1 Required)

BIOL 111: Environmental Biology

BIOL 116: Nature Study

GEOG 121: Weather and Climate

GEOG 121: Physical Geology

Competency 3.2 As a foundation for operations, maintenance and energy management, the student can recognize the systems, services and functions thereof, and the software applications that support them. (ways of knowing)
Competency 3.8 The student can demonstrate awareness of sustainable stewardship principles applied to the built environment. (ways of applying)

All Science Elective options deal with various aspects of Competencies 3.2 and 3.8. Two science courses are required as General Elective courses at Ferris State University. These courses have been chosen as they broaden the Facility Manager's understanding of the environment and the effect of the Built Environment on the Natural Environment.

STQM 260: Introduction to Statistics (Required)

IFMA Foundation Competencies	Course Objectives						
Blue Text indicates the IFMA Competencies as they appear in the Standard.	Describe and apply data collection strategies appropriate to specified information objectives.	Characterize and interpret numeric data both numerically and visually in terms of location, dispersion, shape, and exception.	Characterize and interpret categorical data both numerically and visually in terms of classes, frequencies, proportions, and other importance measures.	Discuss and apply basic concepts of probability to random variables, probability distributions, and sampling distributions.	Identify, construct, and interpret confidence intervals for means and proportions.	Characterize and interpret relationships between two numeric variables and two categorical variables.	Communicate effectively through written and/or oral presentations using appropriate technologies or other resources.
Competency 5.1 The student uses analysis, budgeting, accounting, risk management, and reporting to demonstrate applications of facility financial management. (ways of understanding)							
Competency 7.1 The student demonstrates written, oral, aural, and graphic communication skills through repetitive assessment and evaluation of industry appropriate genre. (ways of applying)							

SOCY 121: Introduction to Sociology (Preferred)

IFMA Foundation Competencies	Course Objectives						
Blue Text indicates the IFMA Competencies as they appear in the Standard.	View and discuss social complexity as a sociologist.	Demonstrate knowledge of modern societies and what shapes them.	Explore the importance of race, ethnicity, gender, and more as traits which can significantly affect status and well-being in life.	Understand how life experiences can greatly vary for minorities.	Understand the great importance of self-examination, societal awareness, and an open minded approach to understanding people.	Improve your critical thinking and problem solving skills, which are very useful for all college courses.	
Competency 4.1 The student can identify the skills needed to strategically lead process, the organization, stakeholders and technologies in an ethically responsible way. (ways of knowing)							
Competency 6.1 Using factors around health, safety, welfare, comfort, safety and security within the organization, the student can practice applications of human resource management. (ways of applying)							
Competency 7.1 The student demonstrates written, oral, aural, and graphic communication skills through repetitive assessment and evaluation of industry appropriate genre. (ways of applying)							

Appendix 1a: Architectural Technology Check Sheets and Course Outlines

FERRIS STATE UNIVERSITY

Architectural Technology

Associate in Applied Science Degree

For students laddering into Facility Management

Curriculum Guide Sheet

Total credit hours = 66

Student Name: _____ Student ID: _____

Faculty Advisor: _____

Year 1 – Fall Semester (17 credits)

	Credits	Grade	Notes
ARCH 101 Architectural Graphics	3	_____	
ARCH 112 Materials & Methods of Construction	4	_____	
ARTS 101 Basic Art	3	_____	
ENGL 150 English 1	3	_____	
FSUS 100 FSU Seminar	1	_____	
MATH 116 Intermediate Algebra & Numerical Trigonometry	3/4	_____	
OR			
MATH 120 Trigonometry			

Year 1 – Spring Semester (16 credits)

ARCH 102 Architectural Digital Graphics (ARCH 101)	4	_____	
ARCH 115 Interior & Exterior Materials (ARCH 112)	3	_____	
COMM 121 Fundamentals of Public Speaking OR	3	_____	
COMM 105 Interpersonal Communication			
SOCY 121 Introduction to Sociology (F)	3	_____	
_____ Architectural Elective (see below)	3	_____	

Year 2 – Fall Semester (17 credits)

ARCH 203 Architectural Documentation (ARCH 102, 112, 115)	4	_____	
ARCH 241 Design Principles (ARCH 102 or permission)	3	_____	
ARCH 244 Architectural History 1 (ENGL 150)	3	_____	
ENGL 250 English 2 (ENGL 150)	3	_____	
PHYS 211 Introductory Physics 1 (Z) (MATH 116 or 120)	4	_____	

Graduation Application Submitted

Year 2 – Spring Semester (16 credits)

ARCH 204 Architectural Detailing (ARCH 203)	4	_____	
ARCH 223 Statics & Strength of Materials (ARCH 112, PHYS 211)	3	_____	
ARCH 245 Architectural History 2 (ARCH 244)	3	_____	
HVAC 337 Mechanical & Electrical Systems	3	_____	
_____ Architectural Elective (see below)	3	_____	

Note: The sequence of courses, listed above, should be completed by students who plan to apply for admission into the BS in Facility Management program. Consult with program advisor for appropriate course selections.

Architectural Electives:

ARCH 216 Professional Practice (ARCH 203)	(2+0)	2 credits
ARCH 250 Systems Cost Estimating (ARCH 102, MATH 115)	(2+2)	3 credits
ARCH 270 Building Information Modeling (ARCH 102)	(2+2)	3 credits
CONM 211 Construction Quantity Estimating (ARCH 102, MATH 120)	(2+2)	3 credits
CONM 222 Construction Administration (ARCH 102, CONM 211, MATH 120)	(3+0)	3 credits

Architectural Technology

For students laddering into Facility Management
Admission & Graduation Requirements

Admission Requirements:

1. Application for admission should be submitted by February 1 prior to fall semester requested
2. High School GPA of 2.75
3. Composite ACT 19, Math ACT 24, or MATH 120 ready, English and Reading ACT 17

General Education Requirements:

1. 6 credit hours of Communication
2. 3 credit hours of each: Cultural enrichment, Social Awareness, and Science

Graduation Requirements:

1. Minimum of 60 credit hours
2. 2.0 GPA

Major	Credits	Grade	Transfer School	Notes
ARCH 101 Architectural Graphics	3	_____	_____	_____
ARCH 102 Architectural Digital Graphics	4	_____	_____	_____
ARCH 112 Materials & Methods of Construction	4	_____	_____	_____
ARCH 115 Interior & Exterior Materials	3	_____	_____	_____
ARCH 203 Architectural Documentation	4	_____	_____	_____
ARCH 204 Architectural Detailing	4	_____	_____	_____
ARCH 223 Statics & Strength of Materials	3	_____	_____	_____
ARCH 241 Design Principles	3	_____	_____	_____
ARCH 244 Architectural History 1	3	_____	_____	_____
ARCH 245 Architectural History 2	3	_____	_____	_____
Architectural Elective	3	_____	_____	_____
Architectural Elective	3	_____	_____	_____

Technical (Outside Major)	Credits	Grade	Transfer School	Notes
ARTS 101 Basic Art	3	_____	_____	_____
HVAC 337 Mechanical & Electrical Systems	3	_____	_____	_____

Communication Competence	Credits	Grade	Transfer School	Notes
ENGL 150 English 1	3	_____	_____	_____
ENGL 250 English 2	3	_____	_____	_____
COMM 105 or 121	3	_____	_____	_____

Cultural Enrichment	Credits	Grade	Transfer School	Notes
ARCH 244 Cultural Enrichment Elective	_____	_____	_____	_____

Quantitative Skills	Credits	Grade	Transfer School	Notes
_____ Mathematics	3/4	_____	_____	_____

Scientific Understanding	Credits	Grade	Transfer School	Notes
PHYS 211 Scientific Understanding Elective 3/4	_____	_____	_____	_____

Social Awareness	Credits	Grade	Transfer School	Notes
SOCY 121 Social Awareness (foundation)	3	_____	_____	<input type="checkbox"/> REG

Unofficial Performance Statistics:

Major Total Credits/ Earned Credits/Honor Points 40 GPA Major _____
 Degree Total Credits/Earned Credits/Honor Points 66 GPA Degree _____

Revised 11.5.2010

FERRIS STATE UNIVERSITY
Architectural Technology
 Associate in Applied Science Degree
 Curriculum Guide Sheet
 Total credit hours = 67

Student Name: _____ Student ID: _____

Faculty Advisor: _____

Highlighted courses or suitable equivalents/substitutions are required for FM transfer students.

Year 1 – Fall Semester (17 credits)		Credits	Grade	Notes
ARCH 101	Architectural Graphics	3	_____	
ARCH 112	Materials & Methods of Construction	4	_____	
ARTS 101	Basic Art	3	_____	
ENGL 150	English 1	3	_____	
FSUS 100	FSU Seminar	1	_____	
MATH 116	Intermediate Algebra/Numerical Trigonometry * OR	4/3	_____	
MATH 120	Trigonometry **		_____	

Year 1 – Spring Semester (16 credits)		Credits	Grade	Notes
ARCH 102	Architectural Digital Graphics (ARCH 101, 112 or permission)	4	_____	
ARCH 115	Interior & Exterior Materials (ARCH 112)	3	_____	
ARTS 120	3D Design	3	_____	
COMM 121	Fundamentals of Public Speaking OR	3	_____	
COMM 105	Interpersonal Communication		_____	
SOCY 121	Introduction to Sociology (F)	3	_____	

Year 2 – Fall Semester (17 credits)		Credits	Grade	Notes
ARCH 203	Architectural Documentation (ARCH 102, 112, 115)	4	_____	
ARCH 241	Design Principles (ARCH 102 or permission)	3	_____	
ARCH 244	Architectural History 1 (ENGL 150)	3	_____	
HVAC 337	Mechanical & Electrical Systems	3	_____	
PHYS 211	Introductory Physics 1 (Z) (MATH 116 or 120 or 26 Math ACT)	4	_____	

Graduation Application Submitted

Year 2 – Spring Semester (17 credits)		Credits	Grade	Notes
ARCH 204	Architectural Detailing (ARCH 203)	4	_____	
ARCH 223	Statics & Strength of Materials (ARCH 112, PHYS 211)	3	_____	
ARCH 245	Architectural History 2 (ARCH 244)	3	_____	
ENGL 250	English 2 (ENGL 150)	3	_____	
PHYS 212	Introductory Physics 2 (Z) (PHYS 211)	4	_____	

Note:

The above sequence of courses should be completed by students laddering into the BS in Architecture and Sustainability program. Students laddering into the BS in Construction Management or the BS in Facility Management program should consult with their program advisor for admission requirements, appropriate curriculum guide sheet and course modifications.

* Recommended math for students laddering into BS in Facility Management.

** Recommended math for students laddering into BS in Architecture & Sustainability or BS in Construction Management.

Architectural Technology

Admission & Graduation Requirements

Admission Requirements:

1. Application for admission should be submitted by February 1 prior to fall semester requested
2. High School GPA of 2.75
3. Composite ACT 19, Math ACT 19, and Reading ACT 17

General Education Requirements:

1. 6 credit hours of Communication
2. 3 credit hours of each: Cultural enrichment, Social Awareness, and Science

Graduation Requirements:

1. Minimum of 60 credit hours
2. 2.0 GPA

Major	Credits	Grade	Transfer School	Notes
ARCH 101 Architectural Graphics	3	_____	_____	_____
ARCH 102 Architectural Digital Graphics	4	_____	_____	_____
ARCH 112 Materials & Methods of Construction	4	_____	_____	_____
ARCH 115 Interior & Exterior Materials	3	_____	_____	_____
ARCH 203 Architectural Documentation	4	_____	_____	_____
ARCH 204 Architectural Detailing	4	_____	_____	_____
ARCH 223 Statics & Strength of Materials	3	_____	_____	_____
ARCH 241 Design Principles	3	_____	_____	_____
ARCH 244 Architectural History 1	3	_____	_____	_____
ARCH 245 Architectural History 2	3	_____	_____	_____

Technical (Outside Major)	Credits	Grade	Transfer School	Notes
ARTS 101 Basic Art	3	_____	_____	_____
ARTS 120 3D Design	3	_____	_____	_____
HVAC 337 Mechanical & Electrical Systems	3	_____	_____	_____
PHYS 212 Introductory Physics 2	4	_____	_____	_____

Communication Competence	Credits	Grade	Transfer School	Notes
ENGL 150 English 1	3	_____	_____	_____
ENGL 250 English 2	3	_____	_____	_____
COMM 105 or 121	3	_____	_____	_____

Cultural Enrichment	Credits	Grade	Transfer School	Notes
ARCH 244 Cultural Enrichment Elective		_____	_____	_____

Quantitative Skills	Credits	Grade	Transfer School	Notes
_____ Mathematics	3/4	_____	_____	_____

Scientific Understanding	Credits	Grade	Transfer School	Notes
PHYS 211 Scientific Understanding Elective	4	_____	_____	_____

Social Awareness	Credits	Grade	Transfer School	Notes
SOCY 121 Social Awareness (foundation)	3	_____	_____	<input type="checkbox"/> REG

Unofficial Performance Statistics:

Major Total Credits/ Earned Credits/Honor Points 34 GPA Major _____
 Degree Total Credits/Earned Credits/Honor Points 67 GPA Degree _____

Revised –10.21.2011

Architectural Technology Program
 Telephone: (231) 591-3100
 Email: atfm@ferris.edu
 www.ferris.edu/atfm

Ferris State University
College of Engineering Technology
School of Built Environment
Course Outline

Course Title: ARCH 101 Architectural Graphics

Credits: 3 Hours

Contacts: 2 Lecture Hours + 4 Studio Hours

Course Description: A foundation in the graphic methods used to plan and present buildings. Hard line and sketching techniques will be used to develop orthographic, axonometric, pictorial, and modeled representations of buildings. Emphasis will be placed on drawing layout, graphic communication, and visual enhancement.

Course Prerequisites: Admission into architecture program

Student Learning Outcomes

Students satisfactorily completing this course will:

1. Demonstrate and apply freehand techniques of visual communication.
2. Demonstrate and apply hard line techniques of visual communication.
3. Construct precise architectural models.
4. Create and visually communicate effective use of color and entourage in presentation graphics.
5. Demonstrate understanding of and apply basic digital presentation techniques.
6. Create an architectural presentation demonstrating effective visual communication graphics.

Instructional Unit Description and Time Allocation			
	Unit Description Summary	Lecture Hours	Studio Hours
I.	Course Introduction	1	0
II.	Equipment Use	2	2
III.	Lettering	2	2
IV.	Graphic Theory and Techniques	2	4
V.	Orthographic Projection	2	8
VI.	Axonometric	2	6
VII.	Pictorial/Perspective	2	6
VIII.	Model Making	2	6
IX.	Color Studies	2	4
X.	Entourage	2	4

XI.	Architectural Sketching	2	6
XII.	Presentation Drawing Theory and Techniques	2	2
XIII.	Digital Presentation Theory and Techniques	5	10
XIV.	Evaluation	2	0
	Subtotals	30	60
	Total Hours	90	

Learning Outcomes for each Instructional Unit	
	Upon Completion of each instructional unit, the learner will be able to satisfactorily:
I.	<p>Course Introduction</p> <p>A. State course format, course objectives, instructor expectations and student responsibilities.</p> <p>B. Identify relationship of course content with concurrent and future coursework.</p> <p>C. Describe the role of architect within the integrated building team.</p>
II.	<p>Equipment Use</p> <p>A. Demonstrate the proper use of drawing equipment.</p> <p>B. Demonstrate the use of architectural scale.</p>
III.	<p>Lettering</p> <p>A. Identify acceptable "architectural lettering" principles.</p> <p>B. Demonstrate proper use of lettering: size, weight, style, and spacing.</p> <p>C. Develop an acceptable architectural lettering style.</p>
IV.	<p>Graphic Theory and Techniques</p> <p>A. Organize and compose drawings.</p> <p>B. Draw lines of appropriate weight, tone, and of a consistent thickness.</p> <p>C. Poche' drawings appropriately.</p> <p>D. Label drawings appropriately.</p> <p>E. Define the theory related to sheet and set organization.</p> <p>F. Describe the various types of drawings and their strengths and weaknesses as architectural communication tools: orthographic projection, axonometric, and perspectives.</p> <p>G. Explain the difference between presentation and working drawings and the purpose of each.</p>
V.	<p>Orthographic Projection</p> <p>A. Describe orthographic projection: true size, true shape, and true proportion.</p> <p>B. Utilize the principles of projection in developing plans, elevations, and sections of objects presented in 3-dimensional views.</p> <p>C. Visualize and draw 3-dimensional architectural objects.</p>
VI.	<p>Axonometric</p> <p>A. Describe the techniques of isometric drawing: angular setup, true scale preserved, distortion.</p>

	<ul style="list-style-type: none"> B. Draw oblique drawings. C. Draw isometric drawings from multi-view drawings. D. Visualize and draw 3-dimensional architectural objects.
VII.	<p>Pictorial/Perspective</p> <ul style="list-style-type: none"> A. Describe the steps required to set up a one point perspective. B. Describe the steps required to set up a two point perspective. C. Develop a sketch utilizing the principles of one point perspective. D. Develop a sketch utilizing the principles of two point perspective.
VIII.	<p>Model Making</p> <ul style="list-style-type: none"> A. Demonstrate proper use of tools. B. Create mass models. C. Create simple finish models.
IX.	<p>Color Studies</p> <ul style="list-style-type: none"> A. Define the theory and use of color in presentation drawings. B. Demonstrate the use of color in presentation drawings.
X.	<p>Entourage</p> <ul style="list-style-type: none"> A. Define the theory of entourage in presentation drawings. B. Produce and draw effective entourage. C. Develop presentation drawings using entourage.
XI.	<p>Architectural Sketching</p> <ul style="list-style-type: none"> A. Define the purpose of sketching relative to architectural drawing. B. Demonstrate the use of sketching to organize drawings and communicate architectural concepts. C. Demonstrate the use of construction sketching in the field. D. Explain the role of perspective sketching as an architectural graphic tool. E. Define the theory of one and two point perspective and demonstrate these methods in sketch format. F. Describe the various terms used in perspective drawing: vanishing point, picture plane, horizon line, ground line, etc.
XII.	<p>Presentation Drawing Theory and Techniques</p> <ul style="list-style-type: none"> A. Integrate entourage, poche' techniques, and color in orthographic and axonometric drawings. B. Produce a professional quality presentation.
XIII.	<p>Digital Presentation Theory and Techniques</p> <ul style="list-style-type: none"> A. Utilize a variety of 3D software. B. Produce digital models. C. Develop digital presentations. D. Produce a professional quality architectural presentation.
XIV.	<p>Evaluation</p>

Ferris State University
College of Engineering Technology
School of Built Environment
Course Outline

Course Title: ARCH 102 Architectural Digital Graphics

Credits: 4 Hours

Contacts: 2 Lecture Hours + 6 Studio Hours

Course Description: Introduction to the use of digital graphic media as tools of architectural design, representation and documentation. Includes 2-D documentation and 3-D modeling and rendering techniques.

Course Prerequisites: ARCH 101, ARCH 112 or permission

Student Learning Outcomes

Students satisfactorily completing this course will:

1. Apply theory and techniques of digital visual communication graphics to create professional architectural presentations.
2. Explain and apply fundamental concepts, commands and tools of a variety of two-dimensional and three-dimensional software.
3. Create architectural drawings for each of the following project phases: schematic design, design development, and working drawings.
4. Create architectural models utilizing digital fabrication technology and techniques.

Instructional Unit Description and Time Allocation			
	Unit Description Summary	Lecture Hours	Studio Hours
I.	Introduction	1	0
II.	Principles of Digital Computing	1	0
III.	Advancement of 3D Digital Modeling	4	15
IV.	Presentation Theory and Techniques	5	15
V.	Concepts of Digital Image Manipulation	6	18
VI.	Concepts of Digital Architectural Documentation	1	3
VII.	Drawing Commands & Settings	1	6
VIII.	Managing Object Properties	1	3
IX.	Editing Commands & Techniques	1	6
X.	Fill Regions and Components	1	3
XI.	Annotating Drawings	1	3
XII.	Dimensioning Drawings	1	3

XIII.	Managing Layouts for Presentation and Printing	1	0
XIV.	Plotting and Printing	1	0
XV.	Digital Fabrication and Model Making	4	12
XVI.	Evaluation and Critique		3
	Subtotals	30	90
	Total Hours	120	

Learning Outcomes for each Instructional Unit	
	Upon Completion of each instructional unit, the learner will be able to satisfactorily:
I.	<p>Introduction</p> <ol style="list-style-type: none"> 1. State course format, course objectives, instructor expectations and student responsibilities. 2. Identify relationship of course content with concurrent and future coursework. 3. Recognize the role of digital technology in all phases of the design process.
II.	<p>Principles of Digital Computing</p> <ol style="list-style-type: none"> 1. Discuss digital vs. traditional architectural graphic tools and techniques and how both may be utilized and overlapped in the design process. 2. Explain raster vs. vector images.
III.	<p>Advancement of 3D Digital Modeling</p> <ol style="list-style-type: none"> 1. Utilize basic and advanced modeling tools and techniques in the creation of 3d digital models. 2. Utilize cameras and other tools to create and establish scenes/views within a 3d model. 3. Create and apply textures and materials to digital 3d models. 4. Export models and 2D images to create realistic or stylized renderings.
IV.	<p>Presentation Theory and Techniques</p> <ol style="list-style-type: none"> 1. Organize sheet content (text and graphics) per architectural drawing standards. 2. Create presentation quality page layouts utilizing basic graphic design concepts. 3. Apply proper line types, line weights, material symbols, entourage, etc. per architectural drawing standards. 4. Create stylized and realistic renderings of 2D and 3D architectural drawings.
V.	<p>Concepts of Digital Image Manipulation</p> <ol style="list-style-type: none"> 1. Apply basic image manipulation tools and techniques to enhance photographs, 2D drawings and 3D models.
VI.	<p>Concepts of Digital Architectural Documentation</p> <ol style="list-style-type: none"> 1. Explain concept of drawing in actual size. 2. Explain Cartesian coordinate system.

VII.	<p>Drawing Commands & Settings</p> <ol style="list-style-type: none"> 1. Utilize drawing setup options. 2. Draw lines and shapes using a variety of data entry methods. 3. Utilize inference and other navigation aides to facilitate drawing creation and accuracy.
VIII.	<p>Managing Object Properties</p> <ol style="list-style-type: none"> 1. Identify and manipulate object properties. 2. Utilize line weights and line types in the creation of architectural drawings.
IX.	<p>Editing Commands & Techniques</p> <ol style="list-style-type: none"> 1. Utilize commands and tools for editing drawing elements. 2. Utilize match properties and properties dialog options to edit drawing elements.
X.	<p>Fill Regions and Components</p> <ol style="list-style-type: none"> 1. Identify and apply fill regions. 2. Create and insert components. 3. Edit and manage components.
XI.	<p>Annotating Drawings</p> <ol style="list-style-type: none"> 1. Create and manage text styles. 2. Manipulate and edit text.
XII.	<p>Dimensioning Drawings</p> <ol style="list-style-type: none"> 1. Create and manage dimension styles. 2. Apply architectural dimension and notation theories and techniques.
XIII.	<p>Managing Layouts for Presentation and Printing</p> <ol style="list-style-type: none"> 1. Create and manage page layouts and title blocks.
XIV.	<p>Plotting and Printing</p> <ol style="list-style-type: none"> 1. Create and manage plot settings to produce clear and legible architectural drawings with varied line weights. 2. Demonstrate the ability to print and plot to multiple printing devices.
XV.	<p>Digital Fabrication and Model Making</p> <ol style="list-style-type: none"> 1. Utilize digital fabrication technology to create and build physical models.
XVI.	<p>Evaluation and Critique</p>

Ferris State University
 College of Engineering Technology
 School of Built Environment
 Course Outline

Course Title: ARCH 112 Structural Materials, Systems and Codes

Credit Hours: 4 Hours
Contact Hours: 3 lecture hours, 2 lab hours

Course Description: Survey of properties, characteristics, limitations, selection criteria, and graphic interpretation of concrete, steel, masonry and wood used in foundation, substructure, and superstructure building systems. Includes aesthetic, performance, maintainability, and cost/benefit aspects. Introduces major building codes, material and industry standards, and utilization of manufacturers' catalogs.

Course Prerequisite: Admission into architecture program or permission

Student Learning Outcomes

Students satisfactorily completing this course will:

1. Describe attributes (sustainability, performance, aesthetics, and economics) of building systems and their components, building codes, and material classification systems.
2. Graphically assemble structural building components.
3. Evaluate and apply building codes and material classification systems.
4. Demonstrate effective written and verbal communication skills.

UNITS OF INSTRUCTION:		TIME WEIGHT:	
		Lecture	Lab
I.	Introduction to course	1	
II.	Making buildings	4	2
III.	Foundations	5	2
IV.	Concrete Construction	3	2
V.	Site-cast Concrete Framing Systems	2	2
VI.	Pre-cast Concrete Framing Systems	3	2
VII.	Brick Masonry	3	2
VIII.	Stone and Concrete Masonry	2	2
IX.	Masonry load-bearing wall construction	2	2
X.	Steel Frame Construction	4	2
XI.	Light Gauge Steel Frame Construction	3	2
XII.	Wood	3	2
XIII.	Heavy Timber Frame Construction	2	2
XIV.	Wood Light Frame Construction	4	2
XV.	Term Project		4
XVI.	Evaluation	4	
Subtotals:		45	30
Total Contact Hours:		75	

TOPICAL OUTLINE OF MAJOR UNITS OF INSTRUCTION:		TIME WEIGHT:	
		Lecture	Lab
I.	Introduction to course	1	
II.	Making buildings: <ul style="list-style-type: none"> • Design Process • Building codes/standards • Master format • Construction documents • Cost Analysis • Lab time/field trip 	4	2
III.	Foundations: <ul style="list-style-type: none"> • Design Theory • "Deep" vs. "Shallow" • Soils investigation • Building codes interpretation • Lab time/field trip 	5	2
IV.	Concrete Construction: <ul style="list-style-type: none"> • History and background • Concrete placement • Formwork • Simple beam reinforcement • Lab time/field trip 	3	2
V.	Site-cast Concrete Framing Systems <ul style="list-style-type: none"> • Site-cast framing systems • One-way systems • Two-way systems • Building code interpretation • Lab time/field trip 	2	2
VI.	Pre-cast Concrete Framing Systems: <ul style="list-style-type: none"> • Pre-cast, pre-stressed concrete • Assembly concepts • Pre-cast concrete and Building Codes • Lab time/field trip 	3	2
VII.	Brick Masonry <ul style="list-style-type: none"> • History and background • Mortar • Brick Masonry • Lab time/field trip 	3	2
VIII.	Stone and Concrete Masonry <ul style="list-style-type: none"> • Concrete Masonry • Stone Masonry • Other types of Masonry Units • Lab time/field trip 	2	2
IX.	Masonry load-bearing wall construction <ul style="list-style-type: none"> • Wall types • Flashing • Expansion and control joints (movement joints) • Building code interpretation • Lab time/field trip 	2	2
X.	Steel Frame Construction <ul style="list-style-type: none"> • History and background • Structural shapes 	4	2

	<ul style="list-style-type: none"> • AISC interpretation • Steel connections • Steel innovations • Fireproofing • Building code interpretation • Lab time/field trip 		
XI.	<p>Light Gauge Steel Frame Construction</p> <ul style="list-style-type: none"> • Concepts • Framing procedures • Building Code interpretation • Lab time/field trip 	3	2
XII.	<p>Wood</p> <ul style="list-style-type: none"> • History and background • Grading • Wood products • "E" and "Fb"/spans/sizing • Floor framing • Wall framing • Roof framing • Building code interpretation • Cost analysis • Lab time/field trip 	3	2
XIII.	<p>Heavy Timber Frame Construction</p> <ul style="list-style-type: none"> • Heavy Timber Construction • Building Code interpretation • Lab time/field trip 	2	2
XIV.	<p>Wood Light Frame Construction</p> <ul style="list-style-type: none"> • History • Building the frame • Building code interpretation • Lab time/field trip 	4	2
XV.	<p>Term Project</p> <ul style="list-style-type: none"> • Project work days • Project presentations 		4
XVI.	<p>Evaluation</p> <ul style="list-style-type: none"> • 3 tests • Final examination 	3 1	
Subtotals:		45	30
Total Contact Hours:		75	

Ferris State University
 College of Engineering Technology
 School of Built Environment
 Course Outline

Course Title: ARCH 115 Interior and Exterior Finishes and Systems

Credit Hours: 3 Hours
Contact Hours: 3 lecture hours

Course Description: Survey of properties, characteristics, limitations, selection criteria, and graphic interpretation of common interior and exterior finish materials and systems used in exterior closure, roofing, and interior construction. Includes aesthetic, performance, maintainability, and cost/benefit aspects.

Prerequisite: ARCH 112

Student Learning Outcomes

Students satisfactorily completing this course will:

1. Describe attributes (sustainability, performance, aesthetics, and economics) of building systems and their components, building codes, and material classification systems.
2. Graphically assemble interior and exterior building components.
3. Evaluate and apply building codes and material classification systems.
4. Demonstrate effective written and verbal communication skills.

UNITS OF INSTRUCTION:		TIME WEIGHT:
		Lecture
I.	Introduction to course	1
II.	Exterior finishes for wood light frame construction	4
III.	Interior finishes for wood light frame construction	4
IV.	Roofing	4
V.	Glass and Glazing	4
VI.	Doors and Windows	3
VII.	Designing Cladding Systems	2
VIII.	Cladding with Masonry and concrete	2
IX.	Cladding with Metal and Glass	3
X.	Selecting Interior Finishes	3
XI.	Interior Walls and Partitions	3
XII.	Finish Ceilings and Floors	5
XIII.	Term project presentations	3
XIV.	Testing	4
Total Hours:		45

TOPICAL OUTLINE OF MAJOR UNITS OF INSTRUCTION:		TIME WEIGHT:
		Lecture
I.	Introduction to course	1
II.	Exterior finishes for wood light frame construction <ul style="list-style-type: none"> • Roofing • Windows and Doors • Siding and Exterior Construction • Exterior painting and coating materials 	4
III.	Interior finishes for wood light frame construction <ul style="list-style-type: none"> • Insulation and Vapor Barrier • Wall and Ceiling finishes • Millwork and Finish Carpentry • Flooring and Ceramic Tile work • Finish Touches 	4
IV.	Roofing <ul style="list-style-type: none"> • Low slope • Steep slope • Roofing and Building Codes 	4
V.	Glass and Glazing <ul style="list-style-type: none"> • Materials • Glazing • Glass • Energy and Building Codes 	4
VI.	Doors and Windows <ul style="list-style-type: none"> • Windows • Doors 	3
VII.	Designing Cladding Systems <ul style="list-style-type: none"> • Concepts • Sealants • Curtain Wall • Building Codes 	2
VIII.	Cladding with Masonry and concrete <ul style="list-style-type: none"> • Masonry and Stone Curtain walls • Pre-cast Concrete Curtain walls 	2
IX.	Cladding with Metal and Glass <ul style="list-style-type: none"> • Aluminum Extrusion Curtain Wall system • Rainscreen Principle • Expansion Joints • Glazing 	3
X.	Selecting Interior Finishes <ul style="list-style-type: none"> • Installation of Mechanical and Electrical Systems • Sequence of Interior Finishing Operations • Selecting systems • Trends 	3
XI.	Interior Walls and Partitions <ul style="list-style-type: none"> • Types of Walls • Framed Systems • Masonry Systems • Wall and Partition facings 	3
XII.	Finish Ceilings and Floors <ul style="list-style-type: none"> • Attached Ceilings • Suspended Ceilings • Hard and Resilient Flooring 	5

	<ul style="list-style-type: none"> • Carpeting • Underfloor Services • Acoustics 	
XIII.	Term Project <ul style="list-style-type: none"> • Project presentations 	3
XIV.	Tests <ul style="list-style-type: none"> • 3 tests • Final examination 	3 1
Total Hours:		45

Ferris State University
College of Engineering Technology
School of Built Environment
Course Outline

Course Title: ARCH 203 Architectural Documentation

Credits: 4 Hours

Contacts: 2 Lecture Hours + 6 Studio Hours

Course Description: Introduction to the graphic language, methods, and organizational principles of construction documents. Emphasis is placed on building materials, processes and assemblies and their graphic depiction in working drawings. Additional emphasis is placed on adaptation of standard practices to increase sustainability. Student projects are created in a digital environment following principles of standard practice in the architectural profession.

Course Prerequisites: ARCH 102, ARCH 112, ARCH 115

Student Learning Outcomes

Students satisfactorily completing this course will:

1. Apply techniques of construction documentation to interpret and create professional working drawings and graphic presentations.
2. Use Building Information Modeling to document architectural design principles and materials and methods of construction.
3. Integrate the content of commonly used building codes into working drawings.
4. Illustrate the relationships of major building components through plan and section views.
5. Coordinate and cross-reference drawing components to illustrate component relationships.
6. Demonstrate effective communication in the following areas: speaking, presentations and small-group interactions.

Instructional Unit Description and Time Allocation			
	Unit Description Summary	Lecture Hours	Studio Hours
I.	Course Introduction and Project Overview	2	0
II.	Building Code Study	2	3
III.	Working Drawing Theory and Organization	2	0
IV.	Principles of Building Information Modeling	6	9

V.	Floor Plan and Schedules	2	9
VI.	Foundation and Framing Plans	2	6
VII.	Building Sections	2	6
VIII.	Wall Sections	2	6
IX.	Exterior Elevations	2	6
X.	Interior Elevations	1	6
XI.	Reflected Ceiling and Lighting Plan	1	6
XII.	Site Plan	1	6
XIII.	Project Set Coordination and Cross Referencing	1	3
XIV.	Architectural Specifications	1	3
XV.	Sketching	2	6
XVI.	Architectural Presentation	1	9
XVII.	Evaluation and Critique		6
	Subtotals	30	90
	Total Hours	120	

Learning Outcomes for each Instructional Unit	
	Upon Completion of each instructional unit, the learner will be able to satisfactorily:
I.	<p>Course Introduction and Project Overview</p> <ol style="list-style-type: none"> 1. State course format, course objectives, instructor expectations and student responsibilities. 2. Identify relationship of course content with concurrent and future coursework. 3. Understand type of project and learning goals.
II.	<p>Building Code Study</p> <ol style="list-style-type: none"> 1. Utilize IBC Code, Michigan Barrier Free Code, and the ADA to determine whether the design and construction of the building for the intended use meets the code. 2. Determine solutions for portions of the building which do not meet code. 3. Develop a written and/or oral report based on this information.
III.	<p>Working Drawing Theory and Organization</p> <ol style="list-style-type: none"> 1. Summarize the general to specific method. 2. Summarize the proper order of documents/drawings. 3. Summarize use of appropriate scale. 4. Summarize the interrelationship between documents/drawings. 5. Summarize the importance of detailing relative to plan development. 6. Summarize the coordination required between disciplines. 7. Summarize the process of preparing a full set of documents.
IV.	<p>Principles of Building Information Modeling</p> <ol style="list-style-type: none"> 1. Explain the principles and potential uses of Building Information Modeling (BIM). 2. Demonstrate understanding of primary command structure of BIM software. 3. Create BIM model to use as the generator of architectural working drawings.
V.	<p>Floor Plan and Schedules</p> <ol style="list-style-type: none"> 1. Prepare floor plan and schedules from schematic and design development information. 2. Demonstrate understanding of building materials and method of construction. 3. Demonstrate the basics of developing floor plans and illustrate the following: proper delineation of construction materials, proper layout with regard to materials and construction methods, composition, dimensioning, noting, labeling, and cross referencing. 4. Demonstrate proper sheet composition, graphics and legibility in drawing sheets.
VI.	<p>Foundation and Framing Plans</p> <ol style="list-style-type: none"> 1. Prepare foundation and framing plans from schematic and design development information as well as from student generated sketches. 2. Demonstrate the basics of developing foundation and framing plans and illustrate the following: proper delineation of construction materials, proper layout with regard to materials and construction methods, composition,

	<p>dimensioning, column lines or structural bays, noting, labeling, and cross referencing.</p> <p>3. Demonstrate proper sheet composition, graphics and legibility in drawing sheets.</p>
VII.	<p>Building Sections</p> <ol style="list-style-type: none"> 1. Prepare building sections from schematic and design development information as well as from student generated sketches. 2. Demonstrate the basics of developing building sections and illustrate the following: proper delineation of construction materials, proper layout with regard to materials and construction methods, composition, dimensioning and target elevations, noting, labeling, and cross referencing. 3. Demonstrate proper sheet composition, graphics and legibility in drawing sheets.
VIII.	<p>Wall Sections</p> <ol style="list-style-type: none"> 1. Prepare wall sections from schematic and design development information as well as from student generated sketches. 2. Demonstrate understanding of building materials and method of construction. 3. Demonstrate the basics of developing wall sections and illustrate the following: proper delineation of construction materials, proper layout with regard to materials and construction methods, composition, dimensioning and target elevations, noting, labeling, and cross referencing. 4. Demonstrate proper sheet composition, graphics and legibility in drawing sheets.
IX.	<p>Exterior Elevations</p> <ol style="list-style-type: none"> 1. Prepare exterior elevations from schematic and design development information as well as from student generated sketches. 2. Demonstrate the basics of developing exterior elevations and illustrate the following: proper delineation of construction materials, proper layout with regard to materials and construction methods, composition, dimensioning and target elevations, noting, labeling, and cross referencing. 3. Demonstrate proper sheet composition, graphics and legibility in drawing sheets.
X.	<p>Interior Elevations</p> <ol style="list-style-type: none"> 1. Prepare interior elevations from schematic & design development information as well as from student generated sketches. 2. Demonstrate the basics of developing interior elevations: proper delineation of construction materials, proper layout with regard to materials, composition, dimensioning and target elevations, noting, labeling, and cross referencing. 3. Demonstrate proper sheet composition, graphics and legibility in drawing sheets.
XI.	<p>Reflected Ceiling and Lighting Plan</p> <ol style="list-style-type: none"> 1. Prepare reflected ceiling and lighting plans from schematic and design development information as well as from student generated sketches. 2. Demonstrate the basics of developing and illustrating reflected ceiling and lighting plans: proper delineation of construction materials, proper layout with

	<p>regard to materials and construction methods, composition, dimensioning, noting, labeling, and cross referencing.</p> <p>3. Demonstrate proper sheet composition, graphics and legibility in drawing sheets.</p>
XII.	<p>Site Plan</p> <ol style="list-style-type: none"> 1. Prepare site plan from schematic and design development information as well as from student generated sketches. 2. Demonstrate the basics of developing and illustrating site plans: proper delineation of building and site related features, paving, walkways, noting, labeling, and dimensions. 3. Demonstrate proper sheet composition, graphics and legibility in drawing sheets.
XIII.	<p>Project Set Coordination and Cross Referencing</p> <ol style="list-style-type: none"> 1. Demonstrate the basics of set coordination: sheet numbers, title block organization, dating drawings, room/door/window numbers, room names, bubbles, target elevations, notes, and consistency of construction methods, proper titles, and north arrows. 2. Demonstrate the accepted method of checking and revising drawings: changes and corrections marked in red and yellowed out when corrected.
XIV.	<p>Architectural Specifications</p> <ol style="list-style-type: none"> 1. Locate material and product specifications and integrate their content as needed into construction documents.
XV.	<p>Sketching</p> <ol style="list-style-type: none"> 1. Locate and apply information and research regarding construction materials and techniques. 2. Use sketches to develop details, wall sections, framing plans, etc. 3. Use freehand sketches to plan and organize digital drawings.
XVI.	<p>Architectural Presentation</p> <ol style="list-style-type: none"> 1. Prepare a rendered architectural presentation. 2. Present architectural drawings, progress reports, team activities, etc.
XVII.	<p>Evaluation and Critique</p>

Ferris State University
College of Engineering Technology
School of Built Environment
Course Outline

Course Title: ARCH 204 Architectural Detailing

Credits: 4 Hours

Contacts: 2 Lecture Hours + 6 Studio Hours

Course Description: Introduction to the process of developing construction details and the assembly of materials that serves both functional and aesthetic requirements of architecture. Emphasis is placed on product research, performance evaluation, cost/benefit studies, and sustainability. Various methods of presentation will be employed to communicate understanding of material relationships and assemblies.

Course Prerequisites: ARCH 203

Student Learning Outcomes

Students satisfactorily completing this course will:

1. Develop architectural construction details that demonstrate best professional practices, including integration of sustainable technologies.
2. Develop architectural construction details that fulfill the goals of architectural design principles.
3. Develop architectural construction details that demonstrate understanding of the physical and aesthetic qualities of building materials.
4. Integrate architectural construction details into professional working drawings.
5. Demonstrate effective communication in the following areas: speaking, presentations and small-group interactions.

Instructional Unit Description and Time Allocation			
	Unit Description Summary	Lecture Hours	Studio Hours
I.	Course Introduction and Project Overview	1	0
II.	Working Drawing Theory and Organization	1	0
III.	Principles of Detailing	2	3
IV.	Site Detailing	3	12
V.	Structural Detailing	2	12
VI.	Exterior Detailing	6	15

VII.	Roof Detailing	6	15
VIII.	Finish Details and Millwork	6	15
IX.	Sketching and Modeling	2	9
X.	Architectural Presentation	1	6
XI.	Evaluation and Critique		3
	Subtotals	30	90
	Total Hours	120	

Learning Outcomes for each Instructional Unit	
	Upon Completion of each instructional unit, the learner will be able to satisfactorily:
I.	<p>Course Introduction and Project Overview</p> <ol style="list-style-type: none"> 1. State course format, course objectives, instructor expectations and student responsibilities. 2. Identify relationship of course content with concurrent and future coursework. 3. Understand type of project and learning goals.
II.	<p>Working Drawing Theory and Organization</p> <ol style="list-style-type: none"> 1. Summarize the general to specific method. 2. Summarize the proper order of drawings. 3. Summarize use of appropriate scale. 4. Summarize the interrelationship between drawings and specifications. 5. Summarize the importance of detailing relative to plan development. 6. Summarize the coordination required between disciplines. 7. Summarize the process of preparing a full set of documents.

III.	<p>Principles of Detailing</p> <ol style="list-style-type: none"> 1. Demonstrate ability to retrieve information from other parts of the construction documents, manufacturer's literature, Architectural Graphic Standards and other resources. 2. Demonstrate an awareness of the principles of: <ul style="list-style-type: none"> • Controlling water leakage • Controlling air leakage • Controlling heat flow • Controlling water vapor • Accommodating movement • Providing passages for mechanical and electrical services 3. Demonstrate an understanding of architectural details as the manifestation of architectural design goals.
IV.	<p>Site Detailing</p> <ol style="list-style-type: none"> 1. Prepare site details from schematic and design development information as well as from student generated sketches. 2. Demonstrate understanding of impact of climate on site elements. 3. Demonstrate understanding of code issues, particularly barrier-free codes. 4. Demonstrate awareness of material characteristics, including aesthetics and finishes. 5. Demonstrate awareness of principles of sustainability pertaining to site development, such as permeable pavements, water conservation, etc.
V.	<p>Structural Detailing</p> <ol style="list-style-type: none"> 1. Prepare structural details from schematic and design development information as well as from student generated sketches. 2. Demonstrate understanding of relationships between major structural components and assemblies. 3. Demonstrate understanding of structural materials and selection. 4. Demonstrate understanding of structural connections. 5. Demonstrate understanding of structural aesthetics.
VI.	<p>Exterior Detailing</p> <ol style="list-style-type: none"> 1. Prepare exterior details from schematic and design development information as well as from student generated sketches. 2. Demonstrate understanding of relationships between major building enclosure components and assemblies. 3. Demonstrate understanding of exterior materials and installation methods. 4. Demonstrate understanding of exterior finishes and the impact of climate. 5. Demonstrate understanding of principles of sustainability pertaining to building enclosures, including heat loss/gain, etc.
VII.	<p>Roof Detailing</p> <ol style="list-style-type: none"> 1. Prepare roof details from schematic and design development information as well as from student generated sketches. 2. Demonstrate understanding of major roof components and assemblies. 3. Demonstrate understanding of roofing materials and installation methods. 4. Demonstrate awareness of the impact of roof penetrations including drainage,

	<p>equipment, hatches, etc.</p> <p>5. Demonstrate understanding of the principles of sustainability pertaining to roofs, including reflectivity, heat loss/gain, etc.</p>
VIII.	<p>Finish Details and Millwork</p> <ol style="list-style-type: none"> 1. Prepare interior finish and millwork details from schematic and design development information as well as from student generated sketches. 2. Demonstrate understanding of basic interior materials and finishes. 3. Demonstrate awareness of custom interior materials and finishes. 4. Demonstrate awareness of millwork finishes, joinery and hardware.
IX.	<p>Sketching</p> <ol style="list-style-type: none"> 1. Find and apply information and research regarding construction materials and techniques. 2. Use sketches to develop details, wall sections, framing plans, etc. 3. Use freehand sketches to plan and organize digital drawings.
X.	<p>Architectural Presentation</p> <ol style="list-style-type: none"> 1. Prepare a rendered architectural presentation. 2. Present architectural drawings, progress reports, team activities, etc.
XI.	<p>Evaluation and Critique</p>

Ferris State University
College of Engineering Technology - School of Built Environment
Short Course Outline

Course Title: ARCH 223 Statics and Structures

Course Description: Provides an awareness of the primary structural systems, including wood, concrete, and steel, and the appropriate use of each material. Basic static and strength of material principles are introduced and students are familiarized with references such as AISC Steel handbook and the ACI code.

Credit Hours: 3

Contact Hours: 3 lecture hours

Prerequisite: ARCH 112, MATH 116, PHYS 211

Student Learning Outcomes

Students satisfactorily completing this course will:

1. Acquire a practical understanding of structural behavior in withstanding gravity and lateral forces.
2. Understand the relationship between external forces and the resulting actions of structural members and systems.
3. Achieve a practical ability to select and size basic structural members and components.

UNITS OF INSTRUCTION:		TIME WEIGHT:
		Lecture
I.	Introduction	1
II.	Force Systems	7
III.	Beam loads	3
IV.	Shear and moment in beams	4
V.	Centroids	3
VI.	Moments of Inertia	3
VII.	Shear and bending stresses and deflections in beams	3
VIII.	Stress-strain, Modulus of Elasticity, thermal stress and expansion	4
IX.	Beam design	4
X.	Column Analysis, AISC and Euler, radius of gyration, slenderness ratio	5
XI.	Truss analysis	3
XII.	Open-web joists	2
XIII.	Examinations	3
Total Hours:		45

Ferris State University
College of Engineering Technology
School of Built Environment
Course Outline

Course Title: ARCH 241 Design Principles

Credits: 3 Hours

Contacts: 2 Lecture Hours + 2 Studio Hours

Course Description: An exploration of the principles underlying architectural design such as shape; form and space; pattern and texture; scale and proportion; function and circulation; color and light; environment, context and meaning. Students will develop a design vocabulary; skills in public presentation; advanced graphic and model-making skills; and an understanding of the integration of architectural form with complementary disciplines.

Course Prerequisites: ARCH 102

Student Learning Outcomes

Students satisfactorily completing this course will:

1. Critically appraise buildings and other designed objects in terms of the principles and components of design.
2. Apply the primary elements of design in the creation of two-dimensional and three-dimensional projects.
3. Create presentations that demonstrate knowledge of color theory and the emotional impact of color.
4. Develop conceptual frameworks for design projects and give physical form to those concepts.
5. Present design projects using appropriate professional design vocabulary; offer and accept critical commentary in a professional manner.

Instructional Unit Description and Time Allocation			
	Unit Description Summary	Lecture Hours	Studio Hours
I.	Course Introduction	1	0
II.	Introduction to the vocabulary of design	3	0
III.	Foundations of Design	3	0
IV.	Pattern and Texture	2	1
V.	Color and Light	3	2

VI.	Principles of Form	2	3
VII.	Form and Meaning	6	4
VIII.	Form and Function	6	4
IX.	Architecture as an integration of design principles	4	4
X.	Evaluation and Critique		12
	Subtotals	30	30
	Total Hours	60	

Learning Outcomes for each Instructional Unit	
	Upon Completion of each instructional unit, the learner will be able to satisfactorily:
I.	<p>Course Introduction</p> <ol style="list-style-type: none"> 1. State course format, course objectives, instructor expectations and student responsibilities. 2. Identify relationship of course content with concurrent and future coursework. 3. Understand types of projects and learning goals.
II.	<p>Introduction to the vocabulary of design</p> <ol style="list-style-type: none"> 1. Define terms such as tension, balance, and composition as they relate to design. 2. Differentiate between visceral, reflective and behavioral design and the ways these terms characterize design intent. 3. Explain design projects using commonly accepted professional terminology.
III.	<p>Foundations of Design</p> <ol style="list-style-type: none"> 1. Define the primary elements of design: point, line, plane and volume. 2. Apply primary elements in creating design projects.
IV.	<p>Pattern and Texture</p> <ol style="list-style-type: none"> 1. Create patterns using the primary elements of design. 2. Apply pattern to augment architectural form. 3. Create texture as a three-dimensional interpretation of pattern. 4. Apply texture to augment architectural form. 5. Craft professional quality design presentations. 6. Explain design projects using a professional affect.

V.	<p>Color and Light</p> <ol style="list-style-type: none"> 1. Explain scientific principles of color theory. 2. Define terms such as monochromatic, primary, secondary, tertiary, complementary, analogous, hue, value and saturation as they relate to color theory. 3. Explain emotional reactions to and interpretations of color. 4. Define terms such as warm, cool, innovative, traditional as they relate to color theory. 5. Craft professional quality design presentations. 6. Explain design projects using a professional affect.
VI.	<p>Principles of Form</p> <ol style="list-style-type: none"> 1. Explain the components of form, including shape and size. 2. Explain perceptions of form including orientation and visual inertia. 3. Differentiate between regular and irregular forms. 4. Explain ways in which forms can be transformed to achieve different design intent. 5. Explain how architects have historically expressed and articulated principles of form in their building design. 6. Craft professional quality design presentations. 7. Explain design projects using a professional affect.
VII.	<p>Form and Meaning</p> <ol style="list-style-type: none"> 1. Design a built environment that gives physical form to abstract ideas through application of the principles of design and form. 2. Explain how scale and proportion moderate emotional impact in built environments. 3. Create architectural environments that demonstrate movement and procession. 4. Craft professional quality design presentations. 5. Explain design projects using a professional affect.
VIII.	<p>Form and Function</p> <ol style="list-style-type: none"> 1. Employ principles of ergonomics and human dimensions in the creation of a designed object. 2. Design an object that balances principles of statics with principles of aesthetics. 3. Employ appropriate finish materials in the design of an object. 4. Craft professional quality design presentations. 5. Explain design projects using a professional affect.
IX.	<p>Architecture as an integration of design principles</p> <ol style="list-style-type: none"> 1. Use freehand or digital sketches to develop architectural or environmental forms. 2. Integrate principles of form and design, color theory, pattern, texture, meaning and function into architectural or environmental projects. 3. Craft professional quality design presentations. 4. Explain design projects using a professional affect.
X.	<p>Evaluation and Critique</p>

Ferris State University
College of Engineering Technology
School of Built Environment
Course Outline

Course: ARCH 244 Architectural History 1

Credits: 3 Hours

Contacts: 3 Lecture Hours

Course Description: An investigation of the primary styles and movements in Western and Non-Western architecture from the prehistoric period through the Middle Ages. The course will examine cultural, architectural and technological developments during the periods of formation of civilizations, expansion of empires, and developments in religious and governmental structure.

Course Prerequisites: ENGL 150

Student Learning Outcomes

Students satisfactorily completing this course will:

1. Demonstrate an ability to express in writing the conceptual and factual framework of architectural history.
2. Achieve an understanding of the historical connections and distinctions between western and non-western traditions in architectural history.
3. Achieve an understanding of the political, cultural, and technological forces that shaped architecture from pre-history through the Middle Ages.
4. Demonstrate effective research skills.
5. Demonstrate effective written communication skills.

Instructional Unit Description and Time Allocation		
	Unit Topic Description Summary	Lecture Hours
I.	Course Introduction	1
II.	Prehistoric Architecture	2
III.	Ancient Near Eastern Architecture	3
IV.	Egyptian Architecture	3
V.	Aegean and Greek Architecture	4
VI.	Roman Architecture	4
VII.	Early Christian Architecture	3
VIII.	Byzantine Architecture	3
IX.	Romanesque Architecture	3
X.	Gothic Architecture	5

XI.	Pre-Columbian Architecture of the Americas	3
XII.	Architecture of China and Japan	3
XIII.	Architecture of India	2
XIV.	Architecture of Scandinavia and Russia	3
XV.	Evaluation	3
	Total Hours	45

Learning Outcomes for each Instructional Unit	
	Upon completion of each instructional unit, the learner will be able to satisfactorily:
I.	<p>Course Introduction:</p> <ul style="list-style-type: none"> • Understand course goals, requirements and student responsibilities • Define in writing the components of the Vitruvian Triad • Understand the construct of the historical timeline of Western culture
II.	<p>Prehistoric Architecture:</p> <ul style="list-style-type: none"> • Recall in writing the timeframe and technology of Neolithic architecture • Demonstrate an understanding of the terminology of Prehistoric architecture
III.	<p>Ancient Near Eastern Architecture:</p> <ul style="list-style-type: none"> • Recall in writing the formation of early cultures in the Ancient Near East • Identify the landmark buildings of the Ancient Near East • Demonstrate an understanding of the terminology of Ancient Near Eastern architecture
IV.	<p>Egyptian Architecture:</p> <ul style="list-style-type: none"> • Recall in writing the concepts of life, death and afterlife that shaped Egyptian architecture • Recall in writing the architectural technology of ancient Egypt and related terminology • Identify the landmark buildings of ancient Egypt
V.	<p>Aegean and Greek Architecture:</p> <ul style="list-style-type: none"> • Recall in writing the concepts of individualism and democracy that shaped Greek architecture • Recall in writing the architectural technology of ancient Greece and related terminology • Identify the landmark buildings of ancient Greece • Describe the characteristics of the Orders of Classical Architecture
VI.	<p>Roman Architecture:</p> <ul style="list-style-type: none"> • Recall in writing the political forces and architectural tools that shaped the Roman Empire • Recall in writing the architectural technology of ancient Rome and related terminology • Identify the landmark buildings of ancient Rome

VII.	<p>Early-Christian Architecture:</p> <ul style="list-style-type: none"> Recall in writing the relationship between Christianity and the fall of the Roman Empire Recall in writing the historical importance of such things as the Period of Persecution and the Edict of Milan Identify the landmark buildings of the early Christian period
VIII.	<p>Byzantine Architecture:</p> <ul style="list-style-type: none"> Recall in writing the political development of the Byzantine Empire Recall in writing Byzantine architectural technology and related terminology Identify the landmark buildings of the Byzantine empire
XIV.	<p>Romanesque Architecture:</p> <ul style="list-style-type: none"> Recall in writing the rise and spread of Church power that shaped the architecture of the Middle Ages Recall in writing such historical events such as the Crusades and barbaric invasions of the Middle Ages Identify the landmark buildings of the early Middle Ages
X.	<p>Gothic Architecture:</p> <ul style="list-style-type: none"> Recall in writing the Church-dominated social structure that shaped the Gothic period Recall in writing the characteristics of Gothic architectural technology and related terminology Identify the landmark Gothic buildings of France and England
XI.	<p>Pre-Columbian Architecture of the Americas:</p> <ul style="list-style-type: none"> Recall in writing the characteristics of the architecture of the Maya, Aztec, and Inca cultures Recall in writing the impact of European exploration on Pre-Columbian culture Identify the landmark buildings of the Pre-Columbian Americas
XII.	<p>Architecture of China and Japan:</p> <ul style="list-style-type: none"> Recall in writing the chronological relationship between developments in eastern and western culture Identify the landmark buildings of pre-modern China and Japan
XIII.	<p>Architecture of India:</p> <ul style="list-style-type: none"> Recall in writing the chronological relationship between development in Europe and India Identify the landmark buildings of pre-Colonial India
XIV.	<p>Architecture of Scandinavia and Russia:</p> <ul style="list-style-type: none"> Recall in writing the chronological relationship between developments in Scandinavia, Russia and Europe Recall in writing the developmental relationship between architecture in Russia and Byzantine architecture Identify the landmark buildings of Russia and Scandinavia
XV.	Evaluation

Ferris State University
College of Engineering Technology
School of Built Environment
Course Outline

Course: ARCH 245 Architectural History 2

Credits: 3 Hours

Contacts: 3 Lecture Hours

Course Description: An investigation of the primary styles and movements in Western and Non-Western architecture from the Renaissance through the 20th Century. The course will examine cultural, architectural and technological developments during the periods of modernization in world history, including the Industrial and Technological revolutions.

Course Prerequisites: ARCH 244

Student Learning Outcomes

Students satisfactorily completing this course will:

1. Demonstrate an ability to express in writing the conceptual and factual framework of architectural history.
2. Achieve an understanding of the historical connections and distinctions between western and non-western traditions in architectural history.
3. Achieve an understanding of the political and cultural forces, and technological developments that shaped architecture from the Renaissance through the 20th century.
4. Demonstrate effective research skills.
5. Demonstrate effective written communication skills.

Instructional Unit Description and Time Allocation		
	Unit Topic Description Summary	Lecture Hours
I.	Course Introduction	1
II.	Renaissance Architecture	4
III.	Baroque and Rococo Architecture	4
IV.	Neo-Classical Architecture	3
V.	Architecture of the early United States	3
VI.	Architecture of the Industrial Revolution	3
VII.	Beaux-Arts Architecture	2
VIII.	Arts and Crafts Architecture and Design	2
IX.	Architecture of Frank Lloyd Wright	3
X.	Chicago School Architecture	3
XI.	International Style Architecture	4
XII.	Modernism	4

XIII.	Post-Modern Architecture	3
XIV.	20 th Century Architecture in Asia	3
XV.	Evaluation	3
	Total Hours	45

Learning Outcomes for each Instructional Unit	
	Upon completion of each instructional unit, the learner will be able to satisfactorily:
I.	Course Introduction: <ul style="list-style-type: none"> Understand course goals, requirements and student responsibilities
II.	Renaissance Architecture: <ul style="list-style-type: none"> Recall in writing the impact of the Age of Exploration on the economy and social structure of Europe Identify the landmark buildings of the Renaissance in Italy, France and England Identify landmark works of Renaissance painting and sculpture
III.	Baroque and Rococo Architecture: <ul style="list-style-type: none"> Recall in writing the impact of the Protestant Reformation and Catholic Counter-Reformation on the religious and social structure of Europe Identify the landmark buildings of the Baroque period in Italy, France, Germany, Austria and England Differentiate between Baroque and Rococo architecture Discuss in writing the rise of monarchical power in France and England
IV.	Neo-Classical Architecture: <ul style="list-style-type: none"> Recall in writing the impact of the Age of Enlightenment on the political and social structure of Europe Identify the landmark buildings of the Neo-Classical style
V.	Architecture of the early United States: <ul style="list-style-type: none"> Recall in writing the relationship between 18th Century European political revolt and the emergence of the United States Identify the landmark buildings of the Colonial era in New England Identify the landmark buildings of the early United States Identify the landmark buildings of the Spanish Colonial period Recall in writing the relationship between the architecture of the early United States and the principles of American democracy
VI.	Architecture of the Industrial Revolution: <ul style="list-style-type: none"> Recall in writing the growth of economic power and the rise of mechanization Identify the landmark buildings of the Industrial Revolution in England, France and the United States Identify the terminology and technology of industrial architecture
VII.	Beaux-Arts Architecture: <ul style="list-style-type: none"> Recall in writing the nature of architectural education at the Ecole des Beaux-Arts in Paris Identify the landmark buildings that represent the Beaux-Arts style Recall in writing the impact of Beaux-Arts training on American architects

Ferris State University
College of Engineering Technology - School of Built Environment
Short Course Outline

Course Title: ARCH 250 Systems Cost Estimating

Course Description: A foundation course in methods of construction cost estimating based on a systems approach. Emphasis is placed on takeoff and preparation of estimates that are appropriate for use during the design phase of a project.

Credit Hours: 3

Contact Hours: 2 lecture hours and 2 lab hours

Prerequisites: ARCH 102 and MATH 116 or Math ACT of 24

Student Learning Outcomes

Students satisfactorily completing this course will:

1. Estimate and document the cost of various architectural building types in various locations throughout the US and Canada.
2. Review working drawings and specifications to generate an estimation of building material quantity costs and quality standards.
3. Utilize various estimating methods and select an estimating method that is appropriate for the building type and phase of project (schematic design, design development and working drawing).
4. Utilize electronic and printed cost estimating methods in material/system selection during the design development and working drawing phase.

UNITS OF INSTRUCTION:		TIME WEIGHT:	
		Lecture	Lab
I.	Course Introduction	1	
II.	Plan Reading Basics	2	4
III.	Preliminary Estimates	1	2
IV.	Means Square Foot Estimates	4	4
V.	Means Square Foot with Assembly Adjustment	2	2
VI.	Means Assembly Estimates	2	2
VII.	Marshall and Stevens Estimates and Means SF & CF	2	2
VIII.	Electronic spreadsheet development	2	2
IX.	Electronic database estimates	2	2
X.	Life Cycle Cost Analysis	2	2
XI.	Unbalanced and balanced bids	2	2
XII.	Specifications, drawings, and estimating	2	2
XIII.	Self check methods and careers in estimating	1	
XIV.	Evaluations	3	
XV.	Research and Reports	2	4
Total Hours:		30	30
Total Contact Hours:		60	

Ferris State University
College of Engineering Technology
School of Built Environment
Course outline

Course Title: **ARCH 270 Building Information Modeling**

Credit Hours: 3 Hours

Contact Hours: 2 lecture hours, 2 lab hours

Course Description: This course will explore the utilization of Building Information Modeling (BIM) to design, present and document buildings. The philosophical implications of BIM methodology will be examined and serve as the basis for the course. Construction documents, quantity and material take-offs, and cost estimates will be generated. Photo realistic presentations in both still and walk-through form will also be explored.

Course Prerequisite: ARCH 102, ARCH 112, ARCH 115

Student Learning Outcomes:

Students satisfactorily completing this course will:

1. Understand the role of BIM relative to the paradigm shift in design.
2. Understand the role of BIM in having the building model generate the construction documents rather than having the construction documents generate the building.
3. Utilize BIM software to create building models.
4. Understand the integration of intelligence such as cost and performance into the BIM model.
5. Understand the interface between BIM and CAD.

Units of Instruction:		Time Weight:	
		Lecture	Lab
I.	Introduction to BIM	1	2
II.	Orientation to BIM software	2	2
III.	Mass modeling	2	2
IV.	Basic building modeling	2	2
V.	Editing tools	2	2
VI.	Creating views of the model	2	2
VII.	Stairs, railings, ramps, curtain walls	2	2
VIII.	Development of custom components	2	2
IX.	Basic site modeling	2	2
X.	Development of construction documents from model	2	2
XI.	Sheets, printing, annotation	2	2
XII.	Detailing and interface with external programs	2	2
XIII.	Development of quantity take-offs and other schedules	2	2
XIV.	Development of photo realistic presentations	2	4
XV.	Evaluation	3	
		30	30
Total Hours:		60	

Learning Outcomes for each Unit of Instruction:

Upon completion of each instructional unit, the learner will:

I.	<p>Introduction to BIM</p> <ul style="list-style-type: none">• <i>Understand the development of BIM</i>• Be aware of the national organizations involved in the development of BIM• Be aware of the paradigm shift in BIM and the integration of all players in the design process• Be aware of the legal issues of BIM• Be aware of interoperability issues of BIM• Be aware of the differences between CAD and BIM
II.	<p>Orientation to BIM software</p> <ul style="list-style-type: none">• Be aware of the major software programs for BIM• <i>Understand the major components of the Revit program</i>• Understand the sequence and timing decisions of material assemblies in BIM• Understand how to use and develop templates• Understand the relationship of views in BIM• Understand how to import and utilize information from cad into BIM
III.	<p>Mass modeling</p> <ul style="list-style-type: none">• Understand the concepts of solid models and voids• Understand how to create solids using extrusions, blends, revolve and sweep• Understand how to use void forms• Understand how to revise solids to material assemblies
IV.	<p>Basic building modeling</p> <ul style="list-style-type: none">• Understand the relationship between levels and wall assemblies• Understand how to create roofs• Understand how to add window and door components
V.	<p>Editing tools</p> <ul style="list-style-type: none">• <i>Understand the basic tools to:</i><ul style="list-style-type: none">○ Move and copy○ Rotate and resize○ Create arrays○ Mirroring objects○ Aligning objects○ Splitting walls and lines○ Offsetting objects○ Trimming and extending
VI.	<p><i>Creating views of the model</i></p> <ul style="list-style-type: none">• Understand how the model generates:<ul style="list-style-type: none">○ Plans○ Sections○ Callouts○ 3d views• How to set the scale of views
VII.	<p>Stairs, railings, ramps, curtain walls</p> <ul style="list-style-type: none">• Understand how to create stairs

	<ul style="list-style-type: none"> • Understand how to add and modify railings • Understand how to create ramps • Understand how to create curtain walls • Understand how to add and modify curtain walls • Understand how to attach mullions to curtain grids
VIII.	<p>Development of custom components</p> <ul style="list-style-type: none"> • Understand how to modify standard assemblies • Understand how to manage assembly views • Understand to add intelligence to components
IX.	<p>Basic site modeling</p> <ul style="list-style-type: none"> • Understand the process of creating a virtual topographic model • Understand how to create building pads • Understand how to create grading of site • Understand how to add site components
X.	<p>Development of construction documents from model</p> <ul style="list-style-type: none"> • Understand how to add annotation • Understand how to develop schedules from model • Understand how to organize information
XI.	<p>Sheets, printing, annotation</p> <ul style="list-style-type: none"> • Understand how to use templates • Understand how to create custom templates • Understand how sheets numbering is done • Understand how to create both electronic and hard copies of sheets
XII.	<p>Detailing and interface with external programs</p> <ul style="list-style-type: none"> • Understand how to import AutoCAD elements into Revit • Understand how to export Revit models to AutoCAD • Understand how to use the web to import model components
XIII.	<p>Development of quantity take-offs and other schedules</p> <ul style="list-style-type: none"> • Understand how to create quantity take-offs directly from the model • Understand how to set phasing of elements • Understand how to export quantity take-offs to excel
XIV.	<p>Development of photo realistic presentations</p> <ul style="list-style-type: none"> • Understand how to assign materials to objects • Understand how to set up lighting • Understand how to set up environment of the model • Understand how to create a walk-through of the model
XV.	<i>Evaluation</i>

FERRIS STATE UNIVERSITY

COURSE OUTLINE AND SYLLABUS
HVAC 337 Mechanical and Electrical Systems for Buildings

Instructor: Professor Mike Feutz, Ph.D.
 Office Hours: Wednesday 8:00 – 11:00 and 12:00 – 2:00
 Office: GRN 213
 Phone: x 2351
 E-mail: feutzm@ferris.edu
 Course Description: Awareness of heating, ventilating and air conditioning systems, water supply, sanitary and storm sewers, fire protection, electrical distribution, lighting and acoustical systems for buildings. Emphasis is placed upon systems integration, energy considerations and their effects upon building planning, detailing and construction. Discusses equipment, code requirements, and building applications.
 Semester Hours: 3 Hours: 3 lecture hours per week
 Prerequisites: None
 Textbook Required: Tao, W. K. Y. & Janis, R. P. (2009). *Mechanical and Electrical Systems in Buildings, 4th ed.* Pearson Education: Upper Saddle River, NJ. ISBN Number 0135130131
 Final Exam: The final exam for this course is scheduled on Wednesday May 4, 2011 from 2:00 – 3:40 PM in GRN 113.
 The final exam schedule for the entire university can be found at:
<http://www.ferris.edu/admissions/registrar/schdbook/page12-13.htm>.

UNITS OF INSTRUCTION AND STUDENT LEARNING GOALS FOR EACH UNIT

	<u>TIME</u> <u>WEIGHT</u>	<u>Lecture /</u> <u>Lab. Hrs.</u>
I. Energy Units, Terms and Psychrometry	4	0
II. Field Trip #1	1	0
III. Load Calculation (HVAC)	6	0
IV. HVAC System and Equipment		0
Air Systems and Ductwork	3	0
Hydronic System and Piping	3	0
Steam and Refrigeration	3	0
V. Field Trip #2	1	
VI. Plumbing	0	0
Water Supply	2	0
Sanitary and Storm Drains	3	0
Fire Protection	2	0
VII. Lighting and Electric Power Distribution	9	0
VIII. Acoustics	3	0
IX. Tests	5	0
Totals	45	0

TOPICAL UNIT OUTLINE OF MAJOR UNITS OF INSTRUCTION

- I. Energy Units, Terms and Psychrometry
 - A. Understand definition of "H.V.A.C."
 - B. Understand basic forms of heat (sensible and latent).
 - C. Use terms and formulas for measurement of heat flow in air and water systems (i.e. BTU, DB and WB temperature, % R.H., spec. heat, and tons).
 - D. Use terms and formulas for measurement of temperature and pressure in air and water systems.
 - E. Understand various factors (DB temperature, air velocity, and % RH) which effect human comfort in a conditioned space.
 - F. Determine seven (7) different parameters for Psychrometric Chart given a minimum of two (2) initial conditions.
- II. Field Trip #1
- III. Load Calculation (HVAC) and Ventilation
 - A. Calculate heat loss by transmission using knowledge of thermal resistance of building material.
 - B. Calculate heat loss by infiltration using "crack-length" method of estimation.
 - C. Calculate fresh air and make-up air requirements and ventilation heat loss for a conditioned space using design tables.
 - D. Determine sources and calculate load of internal heat gain.
 - E. Calculate solar and conduction heat gain through glass.
 - F. Understand solar and design temperature effect upon wall and roof exposures.
- IV. HVAC System and Equipment
 - A. Distinguish HVAC system types, heating system types, cooling system types and their associated major pieces of equipment and basic temperature control methods.
 - B. Identify shapes, materials and gauges of HVAC ductwork.
 - C. Calculate one variable (e.g. CFM of air flow) given other variables (e.g. duct dia., air velocity, etc.) of an HVAC duct system using the air friction chart.
 - D. Identify air terminal units (i.e. grills, registers and diffusers) and their application in conditioned space.
 - E. Read mechanical HVAC design drawing (ductwork).
 - F. Identify categories of steam and hot water boilers, their major components and their application to a commercial building.
 - G. Identify types of hydronic piping systems and terminal units and their applications.
 - H. Calculate heat flow through hydronic system by equation, calculate pressure drop, water velocity, and pipe size using water friction chart.
 - I. Identify components of a steam heating system.
 - J. Calculate pressure drop, velocity and pipe size given steam flow rate through a system.
 - K. Identify major components of an HVAC refrigeration system, fluids, handled and their primary energy requirements.
 - L. Read mechanical HVAC design drawings (piping).
- V. Field Trip #2
- VI. Plumbing and Fire Protection

- A. Identify types of water sources and how they are treated for human consumption.
 - B. Identify components of a water service (e.g. piping materials and joints, meters) and components of utility water bill.
 - C. Calculate size of a water service based upon allowable pressure drop and S.F.U. load.
 - D. Identify water heater components and variables (heater and storage tank) and calculate each for applications.
 - E. Identify difference between pressure pipe and drainage pipe, materials and joining methods.
 - F. Identify key components and principles related to sanitary drainage piping.
 - G. Calculate drainage pipe and vent pipe size per D.F.U. load.
 - H. Size building roof drains and storm drain piping from rainfall intensity and duration tables.
 - I. Read a plumbing design drawing and fire protection design drawing.
 - J. Identify key components (sprinkler heads, pipes, and alarms) of a building fire protection system.
 - K. Calculate number of sprinkler heads for an occupancy using design tables.
- VII. Lighting and Electrical Power Distribution
- A. Use terms and formulas for measurement of electric power and lighting.
 - B. Identify types of lamps and their application.
 - C. Calculate required number of fixtures for an illuminated space.
 - D. Identify main components of building an electric power distribution system (e.g. meter, panel board, and transformer).
 - E. Identify wire types and their uses and advantages, calculate size of main and branch feeders and their protective devices (i.e. fuse or circuit breaker).
 - F. Read a set of building electrical and lighting plans.
- VIII. Acoustics
- A. Use terms and formulas for measurement of sound intensity, absorption, reflection, and transmission.
 - B. Identify noise sources in commercial buildings, and noise control methods and materials.
- IX. Tests

ADDITIONAL COURSE INFORMATION

Scoring:

Final grade is based on test and quiz scores. Homework will be assigned to prepare you for the tests, but will not count toward your grade. Test questions will be based on the homework. If you can do the homework, you will do well on the tests. Short (10 minute) quizzes will be given on the day homework assignments are due. You will be allowed to use your homework paper for the quiz.

Final grade will be based on a percentage. Tests will be worth 80% of your final grade and quizzes will be worth 20%. Each test and quiz will be scored on a percentage basis. In this way, each test carries equal weight with the other tests, and each quiz carries equal weight with the other quizzes. For example, if there are 4 tests, each one will be worth 25% of the test portion of your grade. If there are 5 tests, each one will be worth 20% of the test portion of your grade.

Grading Scale

Letter Grade	Equal to or Greater Than	Below
A	94%	
A-	90%	94%
B+	87%	90%
B	84%	87%
B-	80%	84%
C+	77%	80%
C	74%	77%
C-	70%	74%
D+	68%	70%
D	66%	68%
D-	65%	66%
F	64%	0%

There will be 4 tests, and 13 quizzes. The final exam will count as test #4.

You will have multiple opportunities to learn the material: (1: when you read the book and do the homework, (2: when we discuss and review homework in class, (3: when you study for the test, and (4: when we review the test. During review before the tests, I will review difficult problems upon request if time allows, giving you another opportunity to learn the material. Finally, I am always available during my office hours to provide help outside of the classroom.

This follows the philosophy of a learner-centered rather than a teacher-centered university. I will provide the environment and materials for learning, and the opportunities to apply what you have learned. I will do all I can to help you understand the materials, but you must have the desire to learn, you must put in the effort, and you must study if you want to do well in the class.

As such, homework is optional. However, the quizzes are given as incentive to complete your homework.

Important: Everything on my tests and quizzes is taken directly from homework assignments. If you do the homework and understand what you are doing, you will do fine on the tests and quizzes. If you are interested in learning, you will have every opportunity in this class.

Note: This is a fast moving class. There is a lot of material. If you do not read the assigned readings or complete the assigned homework, your chances for success will be poor.

Attendance: I do not keep attendance in this class as it is a 300 level class. If you have to miss for a test or quiz, you must alert me in advance to make alternate arrangements. You will not be allowed to make up the test or quiz without prior arrangements.

Class Expectations: I expect you to actively engage in the learning process. It is my sincere hope, as you take this course, that you understand that HVACR, though not in your primary field of study, will play a role in your career, and that you see this course as a means to help you prepare more completely for that career. A mentality of trying to earn a grade, with the minimum effort necessary, will be a great disservice to you.

Tentative Schedule for Class

Week	Class activity
1	Introductions, syllabus, HVAC Fundamentals
2	Psychrometrics
3	Load Calculations
4	Test #1, (HVAC Fundamentals, Psychrometrics, Load Calcs)
5	HVAC Delivery Systems
6	HVAC Delivery Systems Cooling Equipment
7	Cooling Equipment Heating Equipment Hydronics
8	Heating Equipment Hydronics Air, Water and Steam Systems
9	Test #2, (HVAC Delivery Systems and Cooling, Air, Water and Steam Systems
10	Air, Water and Steam Systems Plumbing & Fire Protection
11	Plumbing & Fire Protection
12	Test #3 Heating, Air, Water and Steam Systems, Plumbing & Fire Production Basic Electricity
13	Basic Electricity Electrical Power Distribution
14	Electrical Power Distribution Lighting
15	Lighting Acoustics
16	Acoustics
17	Final Exam (Test #4, Electricity, Electrical Power Distribution, Lighting, Acoustics)

4. Interference

- a. A student must not steal, change, destroy, or impede another student's work. Impeding another student's work includes, but is not limited to: the theft, defacement, or mutilation of resources so as to deprive others of the information they contain.
- b. A student must not give or offer a bribe, promise favors, or make threats with the intention of affecting a grade or the evaluation of academic performance.

5. Plagiarism

A student must not adopt or reproduce ideas, words, or statements of another person without appropriate acknowledgment. A student must give credit to the originality of others and acknowledge indebtedness whenever he or she does any of the following:

- a. Quotes another person's actual words, either oral or written;
- b. Paraphrases another person's words, either oral or written;
- c. Uses another person's idea, opinion, or theory; or
- d. Borrows facts, statistics, or other illustrative material, unless the information is common knowledge.

6. Violation of Course Rules

A student must not violate course rules as contained in a course syllabus which are rationally related to the content of the course or to the enhancement of the learning process in the course.

Section IV: Administrative Policies

Student sanctions in the Ferris State University Code of Community Standards Administrative Policies and Procedures specifically include official reprimands, behavioral contracts, disciplinary probation, suspension from the University, or dismissal from the University without opportunity to enroll in the future. In addition, these include the opportunity for other sanctions to be imposed, such as the requirement or reimbursement for damages, loss of special privileges, or participation in campus provided educational programs.

The University considers involvement in the student judicial process to be part of a student's learning experience. Through a system of progressive discipline, it is anticipated that a student will realize the importance of functioning within the University's policies, procedures, and regulations. Though every case involving the violation of University policies or procedures is considered on the basis of the merits in that case, there are some categories of violations for which the anticipated sanction would be suspension or dismissal from the University. Such serious infractions include but are not limited to the distribution of alcohol to minors, distribution of illegal drugs or the use, possession, or distribution of alcohol or illegal drugs that result in a serious safety or health matter for any member of the campus or local community.

Appendix 1b: Facility Management Check Sheets and Course Outlines

FERRIS STATE UNIVERSITY
 Bachelor of Science Degree
Facility Management
 Curriculum Guide Sheet

Student Name: _____

Student ID: _____

Faculty Advisor: _____

Year 3 - Fall Semester (15 Credit Hours)

		Credits	Grade	Notes
FMAN 321	Principles of Facility Management (Enrolled in FM or permission)	3	_____	_____
FMAN 431	Principles of Space Planning	3	_____	_____
ECON 221	Principles of Economics 1 (MATH 110)	3	_____	_____
ENGL 311	Advanced Technical Writing (ENGL 250)	3	_____	_____
MGMT 301	Applied Management (junior status or permission)	3	_____	_____

Year 3 - Spring Semester (15 Credit Hours)

		Credits	Grade	Notes
FMAN 322	Project Management (FMAN 321)	3	_____	_____
FMAN 331	Facility Programming & Design Process (FMAN 321)	3	_____	_____
FMAN 432	Principles of Interior Architecture (FMAN 431)	3	_____	_____
BLAW 221	Elementary Business Law	3	_____	_____
ECON 222	Principles of Economics 2 (ECON 221)	3	_____	_____

Year 3 - Summer Semester (4 Credit Hours)

		Credits	Grade	Notes
FMAN 393	Facility Management Internship (junior status or permission)	4	_____	_____

Year 4 - Fall Semester (16 Credit Hours)

		Credits	Grade	Notes
FMAN 441	Property Development & Planning (FMAN 321, BLAW 221)	3	_____	_____
FMAN 451	Planning & Budgeting for Operations (FMAN 321)	3	_____	_____
FMAN 489	Capstone Research (Senior Status)	1	_____	_____
MGMT 350	Management Metrics & Decision Making	3	_____	_____
STQM 260	Introduction to Statistics (Math 115)	3	_____	_____
_____	Cultural Enrichment Elective	3	_____	_____

Graduation Application Submitted

Year 4 - Spring Semester (15 Credit Hours)

		Credits	Grade	Notes
FMAN 499	Capstone Thesis (FMAN 489)	3	_____	_____
HVAC 483	HVACR Building Systems	3	_____	_____
_____	Cultural Enrichment Elective (200 level or higher and G)	3	_____	_____
_____	Management Elective	3	_____	_____
_____	Science Elective	3	_____	_____

Science Electives: BIOL 111 Environmental Biology
 BIOL 116 Nature Study
 GEOL 121 Physical Geology
 GEOG 121 Weather and Climate

Management Electives: MGMT 302 Organizational Behavior
 MGMT 305 Supervision and Leadership
 MGMT 373 Human Resources Management
 MGMT 447 Business Ethics and Social Responsibility

Bachelor of Science Degree Facility Management Graduation Requirements

Entry Requirements:

1. Application for admission should be submitted by February 15 prior to fall semester requested.
2. Associate Degree in Architectural Technology, equivalent program, or 60 credit hours of approved coursework.
3. A minimum 2.5 honor point average in the AAS degree or approved coursework.
4. English 150, English 250 and Math 115.

General Education Requirements:

1. 9 credit hours of Cultural enrichment (3 credit hours of 200 level or higher).
2. 9 credit hours of Social Awareness (3 credit hours of 200 level or higher).
3. One course (3 credit hours) of Global Consciousness (G).
4. One course (3 credit hours) of Race/Ethnicity/Gender (REG).
5. Students must complete 40 credit hours at or above 300 level courses.

Note: Multiple requirements may be satisfied by a single course.

Major		Credits	Grade	Transfer School	Notes
FMAN 321	Principles of Facility Management	3	_____	_____	_____
FMAN 322	Project Management	3	_____	_____	_____
FMAN 331	Facility Programming & Design Process	3	_____	_____	_____
FMAN 393	Facility Management Internship	4	_____	_____	_____
FMAN 431	Principles of Space Planning	3	_____	_____	_____
FMAN 432	Principles of Interior Architecture	3	_____	_____	_____
FMAN 441	Property Development & Planning	3	_____	_____	_____
FMAN 451	Planning & Budgeting for Operations	3	_____	_____	_____
FMAN 489	Capstone Research	1	_____	_____	_____
FMAN 499	Capstone Thesis	3	_____	_____	_____
Technical (Outside Major)		Credits	Grade	Transfer School	Notes
BLAW 221	Elementary Business Law	3	_____	_____	_____
HVAC 483	HVACR Building Systems	3	_____	_____	_____
MGMT 301	Applied Management	3	_____	_____	_____
MGMT 350	Tools for Decision Making	3	_____	_____	_____
STQM 260	Introductory Statistics	3	_____	_____	_____
_____	Management Elective	3	_____	_____	_____
Communication Competence		Credits	Grade	Transfer School	Notes
COMM 105	Interpersonal Communication	3	_____	_____	_____
OR					
COMM 121	Fundamentals - Public Speaking	3	_____	_____	_____
ENGL 150	English 1	3	_____	_____	_____
ENGL 250	English 2	3	_____	_____	_____
ENGL 311	Advanced Technical Writing	3	_____	_____	_____
Cultural Enrichment		Credits	Grade	Transfer School	Notes
_____	Cultural Enrichment Elective	3	_____	_____	<input type="checkbox"/> Global
_____	Cultural Enrichment Elective	3	_____	_____	_____
_____	Cultural Enrichment Elective	3	_____	_____	_____
Quantitative Skills		Credits	Grade	Transfer School	Notes
_____	Mathematics	3/4	_____	_____	_____
Scientific Understanding		Credits	Grade	Transfer School	Notes
_____	Scientific Understanding Elective	3/4	_____	_____	_____
_____	Scientific Understanding Elective	3/4	_____	_____	_____
Social Awareness		Credits	Grade	Transfer School	Notes
ECON 221	Principles of Economics 1	3	_____	_____	_____
ECON 222	Principles of Economics 2	3	_____	_____	_____
_____	Social Awareness (foundation)	3	_____	_____	<input type="checkbox"/> REG

Unofficial Performance Statistics:

Major Total Credits/ Earned Credits/Honor Points 29 GPA Major _____
 Degree Total Credits/Earned Credits/Honor Points 65 GPA Degree _____

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FERRIS STATE UNIVERSITY
COLLEGE OF ENGINEERING TECHNOLOGY
ARCHITECTURE AND FACILITY MANAGEMENT
COURSE OUTLINE: FMAN 321

Course Title: Principles of Facility Management

Course Description: Introduction to basic methods, concepts and procedures of facility planning, programming, budgeting, project management, office productivity measurements, and operations management. Emphasis is placed on the facility management process, terminology and organizational development.

Credit Hours: 3

Contact Hours: 3 + 0

Prerequisite: Enrollment in a Facility Management program or instructor permission

Student Learning Outcomes:

Students satisfactorily completing this course will achieve proficiency in:

1. Understanding the evolution of Facility Management as a profession and the role of Facility Managers as stewards of the corporate environment.
2. Understanding the relationships between the various competency areas that define the Facility Management profession.
3. Understanding the Facility Management Life Cycle from planning through facility disposal.
4. Developing simple budgets from historic data and anticipated trends and needs.
5. Evaluating simple bids and proposals for value and compliance with organization expectations.
6. Identifying needs and developing spatial solutions to meet facility requirements as identified in organization business plan.
7. Demonstrating effective communication in the following areas: writing, speaking, presentations, and small group interaction.

Units of Instruction:

**Time Weight:
Lecture Hours**

I. Course Introduction	1
II. Overview of Facility Management	2
III. Relationship of Facility Management to Corporate Management	2
IV. Strategic Planning and Financial Management	3
V. Space Planning	3
VI. Real Estate Management	2

VII. Project Management	5
VIII. Programming and Design Management	5
IX. Construction Management	2
X. Operations and Maintenance Management	5
XI. Indoor Air Quality	1
XII. Green Buildings/Sustainable FM	1
XIII. Organization and Management of Facility Management Functions	5
XIV. Budgeting for Facility Management	4
XV. Managing Building Technologies and Services	2
XVI. Evaluation	2
Total Hours:	45

Learning Outcomes for each Unit of Instruction:

Upon completion of each instructional unit, the learner will:

- I. Course Introduction
 - Understand outline of course format.
 - Understand expectations.
 - Know the purpose of Facility Management.
- II. Overview of Facility Management
 - Know history of Facility Management profession.
 - Know the Facility Manager's functions within an organization.
 - Know the competency areas as identified by the International Facility Management Association.
 - Facility Management Life Cycle: Planning, Acquisition, Operations and Maintenance, Disposal.
- III. Relationship of Facility Management to Corporate Management
 - Understand various strategies for organizing FM Functions within an organization.
 - Be able to use Benchmarking in decision making as well as in communicating rationale for Facility Management decisions.
 - Understand when to Outsource and the pros and cons of outsourcing.
 - Know how to appropriately match FM Organizational Models with an organization. (One location/one site, one location/multiple sites, multiple locations, international)
 - Understand how Facility Management staffing levels are determined and the responsibilities of personnel in various job descriptions.
 - Understand importance of applying Leadership skills to: serve internal and external constituencies, advocate for "facility", promotes teamwork and interaction, promote quality, and address present and future.

IV. Strategic Planning and Financial Management

- Be familiar with Business Cycle terminology: mission, business plan, facility plan, strategic plan, and master plan.
- Understand how Facility Planning is driven by the Business Plan.
- Be aware of Planning Techniques and the planning process.
- Know the components of the Facility Plan: Intro, environment, assumptions, constraints, discussion, conclusions, and recommendations.
- Understand the relationship of Budget to Business and Strategic Plans.
- Understand the purpose of Life Cycle Cost Analysis.
- Understand what Financial Forecasting attempts to do and its limitations.
- Understand the various levels of detail at which an estimate may be developed and when each is appropriate: Informal, Generic, Comprehensive.
- Know what a Capital Project is and how Capital Budgets are developed.
- Understand the concept of Chargebacks and when they should be used.

V. Space Planning

- Understand the components of growth: Industry growth, organization growth, internal programs and trends, individual needs.
- Understand the benefits of owned space and leased space and when each is appropriate.
- Know what is addressed in Macro and Micro level planning and when each is appropriate.
- Understand the importance of planning “Swing space” and “growth space” into a space plan.
- Be aware of the contents of a “Facility” vs. an “Architectural” program.
- Understand how the programming process is driven by goals, facts, concepts and needs, and how effective presentation of the program assists in realizing the organization’s needs.

VI. Real Estate Management

- Understand the variables considered when deciding to Purchase or Lease.
- Know what a Sale Leaseback is.
- Know the variables of Lease methods.
- Understand the issues considered when selecting a Site.
- Know strategies for divesting Real Estate.
- Understand the basics of the Administration of the Lease Agreement.
- Know the various techniques of Property Management and their affect on Lease Agreement.
- Understand that Property Development can be done for the organization’s use or as speculation/investment.

VII. Project Management

- Know the definition of a “Project”.
- Be able to identify tasks for which “Project Management” is appropriate.
- Understand how effective Project Management can impact Life Cycle

costs.

- Be aware of the various methods for providing Project Management.
- Know the methods of Design and Construction Delivery: Design-Bid-Build, Design-Build, Fast Track.
- Role of Construction Manager in various Design-Construction Delivery methods.
- Know contract remuneration options and the pros and cons of each: Lump Sum/sequential, CM/cost + fee, guaranteed maximum price, turnkey.

VIII. Programming and Design Management

- Know what a Program is and its three main components: financial requirements, time-frame requirements, facility requirements.
- Understand the relationship between Programming and the Design Process.
- Understand the program as the basis for evaluation of design and construction documents and Post Occupancy Evaluation.
- Understand why programming is important and why Facility Managers must be advocates for the process.
- Understand the role of various categories of designers in the design/construction process.
- Know the benefits of working with "Full Service" firms.
- Be able to develop a Request for Qualifications and use it to select a Design Firm.
- Know the Design-Construction Process and AIA Basic Services.
- Know the Facility Manager's role during each step in Design-Construction Process.
- Know typical documentation for each step of the Design-Construction Process.
- Understand the purpose and application of Design Standards.
- Know what Proprietary and Performance Specifications are and the pros and cons of each.
- Understand the variables used and their application in Space Allocation.

IX. Construction Management

- Understand how construction size and value determines Construction Management method.
- Understand the role of a Construction Manager vs. a General Contractor.
- Know the pros and cons of Construction Management with or without CM managing design.
- Understand the selection process for a contractor.
- Understand various common remuneration methods for construction Contracts and their pros and cons: Traditional (fixed sum), Guaranteed Maximum (G-Max), Cost + Percentage, Cost + Fee, Cost + fee + upset figure, Multiple Contracts.

- Understand how a good programming and design process is the best cost control strategy.
 - Know what a Change Order is and when they are appropriate as well as their dangers.
 - Understand when Payments are typically made and the purpose of the “Schedule of Values”.
 - Understand the importance of Quality control and how documentation is the basis of quality control.
 - Understand the alternate process of using In-House personnel for construction and the pros and cons of this practice.
- X. Operations and Maintenance Management
- Know the relationship of Operations and Maintenance to other Facility Management functions.
 - Know why Operations and Maintenance faces chronic funding challenges.
 - Understand the Service Request process: reception, prioritization, scheduling, evaluation.
 - Understand the role of the Facility Engineer in contrast to a Facility Manager.
 - Understand the benefits of standards to Operations and Maintenance Management.
 - Understand how facility changes may impact Operations and Maintenance.
 - Be aware of the issues addressed and strategies for Move Management.
- XI. Indoor Air Quality
- Understand the interdependence of building systems in maintaining Indoor Air Quality Problems: quality, building layout and design, types of jobs users have, individual differences.
 - Know the benefits of good Indoor Air Quality.
 - Know the history of Indoor Air Quality problems.
 - Understand various sources of pollutants and general strategies for their control.
- XII. Green Buildings/Sustainable FM.
- Know the definition of and rationale for Green Design and FM.
 - Know the criteria for evaluation of Green Design Options: Economy, Durability, Renewable, Biodegradable, Recyclable, Recycled, Reusable, Local, Impact of Fabrication, Impact of Use.
 - Be aware of the LEED System: categories of sustainable practice, certification levels and process.
- XIII. Organization and Management of Facility Management Functions
- Understand main concepts when planning and budgeting for Maintenance and Repair.
 - Understand what Preventive and Predictive Maintenance are and how they can effectively increase organization productivity and reduce

operations costs.

- Understand how less regular maintenance such as Cyclical Maintenance and repair projects are integrated into the maintenance plan.
- Understand why miscellaneous cost center responsibilities are assigned to Facility Managers.

XIV. Budgeting for Facility Management

- Know main methods for procuring goods and services.
- Understand processes used for selection and evaluation of goods and services contracts.
- Understand considerations when disposing of assets.
- Know the following terms: Outsourcing, Partnering, Benchmarking, Chargebacks, RE-engineering.
- Understand typical corporate views of Facility Management and processes associated with the ongoing operation and improvement of the Facility Management Department including: Evaluation of work, Evaluation of department, Annual Facility Report, Long term planning, Capital and Annual Budgeting, Maintaining quality.
- Understand the importance of viewing organization employees and building users as clients.
- Know what is contained in Administrative, Operational, and Capital Budgets.

XV. Managing Building Technologies and Services

- Be aware of the benefits of Facility Management Software and how it assists in the FM process.
- Understand the uses of Generic Software for Facility Management.
- Understand the pros and cons of computerizing FM functions.
- Be aware of considerations for implementation of Facility Management software.

XVI. Evaluation

FERRIS STATE UNIVERSITY
COLLEGE OF ENGINEERING TECHNOLOGY
ARCHITECTURE AND FACILITY MANAGEMENT
COURSE OUTLINE: FMAN 322

Course Title: Project Management

Course Description: Overview of facility project management concepts and methods. Course topics include: development of project plans and teams, sequencing of activities, development of schedules, estimating of resources, coordinating and monitoring of projects, and relocation and move management.

Credit Hours: 3

Contact Hours: 3 lecture hours + 0

Course Prerequisite: FMAN 321

Student Learning Outcomes:

Students satisfactorily completing this course will:

1. Explain in professional terms the definitions, objectives and processes of the various life cycle phases of projects.
2. Create and write project plans that include; project concept initiation, project scope, and project schedule.
3. Explain in professional terms the definitions, objectives and processes of team development, team leadership and the coordination and monitoring phases of a project.
4. Explain in professional terms the definitions, objectives and processes of the coordination of construction and relocation projects.
5. Demonstrate effective communication in the following areas: writing, speaking, presentations, and small group interaction.
6. Compute and produce project plans using various facility management and project management software.

Units of Instruction:

**Time Weight:
Lecture Hours**

I. Course introduction	1
II. Project management concepts	3
III. Management theory	3
IV. Project management skills	3
V. Team development and team building	3
VI. Project planning	3
VII. Project sequencing	3
VIII. Planning and acquiring resources	3
IX. Assessing risk	3
X. Coordination of consultants	3

XI. Estimating and budgeting	3
XII. Purchasing and contract administration	3
XIII. Controlling and monitoring the project	3
XIV. Closing the project	1
XV. Construction and relocation management	3
XVI. Ethical responsibilities	2
XVII. Evaluation	2
Total Hours:	45

Learning Outcomes for each Unit of Instruction:

Upon completion of each instructional unit, the learner will:

- I. Course introduction
 - Understand course format, course objectives, instructor expectations and student responsibilities.
- II. Project management concepts
 - Understand project processes and phases.
 - Understand project management characteristics and definitions.
 - Understand how projects come about.
 - Understand role of stakeholders and project sponsor.
- III. Management theory
 - Understand organizational structures.
 - Be aware of the history of project management from the Industrial Revolution to current theory and practice.
- IV. Project management skills
 - Understand general management & leadership skills.
 - Understand people management skills.
 - Understand communication styles.
- V. Team development and team building
 - Know how to assemble a team, assess personality profiles, and identify skill needs.
 - Understand accountability and responsibility roles of the project team.
 - Understand the PM's leadership role in: negotiation, gaining trust, taking corrective action, and professional responsibility.
- VI. Project planning
 - Develop goal statements, objectives and deliverables.
 - Define requirements, assumptions and constraints.
 - Create a communications plan.
 - Create a project scope statement.
 - Create a work breakdown structure and identify project activities.
- VII. Project sequencing
 - Determine milestones and critical success factors.
 - Determine length of activities and phases.

- Construct a network diagram.
 - Develop a schedule.
- VIII. Planning and acquiring resources
- Understand methods for acquiring resources.
 - Understand methods of estimating activity time.
 - Understand methods of contracting for resources.
 - Understand how to administer purchase orders and contracts.
- IX. Assessing Risk
- Understand types of risks and methods for identifying risks.
 - Understand how to plan for risks.
 - Understand how to respond to risks.
 - Create a risk management plan.
- X. Coordination of consultants
- Understand consultant's role in the project.
 - Understand how to coordinate contracted services.
 - Understand conflict management.
- XI. Estimating and budgeting
- Understand cost considerations of a project.
 - Understand estimating techniques.
 - Understand bid specifications.
 - Understand how to establish a cost baseline.
- XII. Purchasing and contract administration
- Understand procurement processes.
 - Understand request for and awarding of bids.
- XIII. Controlling and monitoring the project
- Understand how to identify, evaluate and implement project change orders.
 - Understand performance reporting tools.
- XIV. Closing the project
- Understand how to evaluate project results.
 - Understand how to document lessons learned.
- XV. Construction and relocation management
- Understand construction phases.
 - Understand key resources and methods involved in relocations.
 - Develop and organize departmental team leaders.
 - Develop and perform relocation meetings.
- XVI. Ethical responsibilities
- VVII. Evaluation

**FERRIS STATE UNIVERSITY
COLLEGE OF ENGINEERING TECHNOLOGY
ARCHITECTURE AND FACILITY MANAGEMENT
COURSE OUTLINE: FMAN 331**

Note: This course was changed from a 3 lecture/0 studio hour lecture to a 2 lecture/2 studio hour configuration.

Course Title: Facility Programming and the Design Process

Course Description: Course will enable students to understand the role of the facility manager in working with organizations and the users of space to identify facility related needs and present them to design professionals. Students will also learn the facility manager's role in strategic planning, facilitating the organization's business plan, and working with outside consultants to develop facilities.

Credit Hours: 3

Contact Hours: 2 lecture hours + 2 studio hours

Prerequisite: FMAN 321 or instructor permission

Student Learning Outcomes:

Students satisfactorily completing this course will achieve proficiency in:

1. Understanding the purpose of facility programming, how it differs from architectural programming, and its role in enabling the development of successful spaces.
2. Understanding how facility programming supports the organization's business goals.
3. Performing the research and data collection necessary to identify the issues and goals necessary for successful space development.
4. Organizing the facility program into a cohesive and operational design tool.
5. Utilizing the facility and architectural programs to evaluate design options as well as functioning spaces.
6. Demonstrating effective communication in the following areas: writing, speaking, presentations, and small group interaction.

Units of Instruction:		Time Weight:	
		Lecture	Studio
I.	Course Introduction	1	
II.	Facility Management Principles & Relationship to Programming and Design Management	1	
III.	Facility Programming and its Relationship to the Organization's Business Goals	1	
IV.	The Facility Programming Process	1	
V.	Facility Programming Goals	1	2
VI.	Human-Environment Relationships	2	2
VII.	Research Principles	3	2
VIII.	Data Sources	2	2
IX.	Data Collection Methodologies	4	4

X.	Post-Occupancy Evaluation	1	
XI.	Statistics	1	2
XII.	Graphic Methodologies	1	2
XIII.	Writing the Facility Program	2	4
XIV.	Presentation	1	2
XV.	Architectural Programming Process	1	
XVI.	Architectural Programming Goals	1	2
XVII.	Writing the Architectural Program	1	6
XVIII.	Site Selection	1	
XIX.	Evaluation of Site Plan	1	
XX.	Evaluation of Architectural Design	1	
XXI.	Evaluation	2	
Subtotals:		30	30
Total Hours:		60	

Learning Outcomes for each Unit of Instruction:	
Upon completion of each instructional unit, the learner will:	
I.	<p>Course Introduction</p> <ul style="list-style-type: none"> Understand course format, grading criteria and methods, class procedures, etc. Understand purpose of programming process.
II.	<p>Facility Management Principles & Relationship to Programming and Design Management</p> <ul style="list-style-type: none"> Explain role of facility manager in planning process. Explain how facility planning process fits into the overall facility management process. Summarize major facility planning functions.
III.	<p>Facility Programming and its Relationship to the Organization's Business Goals</p> <ul style="list-style-type: none"> Explain the role of the facility manager in providing facilities which meet the needs of an organization. Summarize how facility programming relates to general business goals.
IV.	<p>The Facility Programming Process</p> <ul style="list-style-type: none"> Explain the purpose of the facility program: problem identification. Explain the relationship between the facility program and the mission statement, the business plan, and the master plan. Form a facility programming team. Explain the difference between facility programming and architectural programming. Summarize the design process and how the facility programming process relates to it. Explain the relationship and difference between facility programming and design. Explain the relationship between facility programming and post-occupancy evaluation.

V.	<p>Facility Programming Goals</p> <ul style="list-style-type: none"> • Summarize the purpose of the facility programming process: defining the design problem . . . describing the optimal design solution . . . satisfying the needs of client and users. • Analyze the physical needs of the organization and understand the relationship between these needs and budgetary considerations and time constraints faced by the organization. • Organize and communicate information orally and verbally to the design team as well as the organization's management. • Identify sustainability goals at the programming level to ensure an environmentally sensitive facility.
VI.	<p>Human/Environment Relationships</p> <ul style="list-style-type: none"> • Explain how man's environment affects behavior. • Summarize the various aspects of the environment: wants and needs, human factors, perceived vs. actual conditions, territoriality, personalization, proximity, cultural context of space. • Observe and document human/environment relationships.
VII.	<p>Research Principles</p> <ul style="list-style-type: none"> • Apply and adapt research methodology and apply to facility programming. • Explain the difference between hypotheses, theses, and theories. • Understand the purpose and methods of empirical testing and demonstrate its appropriate use. • Know the "players" in environmental research: subject, setting, behavior, and researcher; and design research to solicit input from these groups.
VIII.	<p>Data Sources</p> <ul style="list-style-type: none"> • Understand the difference between hard and soft data and design research to utilize appropriate methodologies to collect such data. <ul style="list-style-type: none"> ○ Hard Data = Measurable: temperature, cost, etc. Business data, location data, facility data ○ Soft Data = Non-measurable: preferences, feelings, etc. Use of space, human factors. • Be able to identify required data and sources of data (existing, pre-existing sample groups).
IX.	<p>Data Collection Methodologies</p> <ul style="list-style-type: none"> • Summarize the various data collection methodologies: observation, interviews, questionnaires, archives, graphics, and simulation. • Explain the advantages and disadvantages of the various methodologies. • Apply these methodologies to a practical space analysis problem.
X.	<p>Post-Occupancy Evaluation</p> <ul style="list-style-type: none"> • Explain the theory of POE. • Explain the relationship between POE and facility programming.
XI.	<p>Statistics</p> <ul style="list-style-type: none"> • Use basic statistical concepts: mean, median, mode, sample, range, probability,

	<p>confidence, correlation; and use them to summarize the results of research.</p> <ul style="list-style-type: none"> • Use statistics to document aspects of the facility program.
XII.	<p>Graphic Methodologies</p> <ul style="list-style-type: none"> • Use graphic methods to communicate facility programming information. • Demonstrate an understanding of the importance of graphic methods such as charts, graphs, and matrices when communicating with designers as well as management,
XIII.	<p>Writing the Facility Program</p> <ul style="list-style-type: none"> • Explain and demonstrate the use of Project Mission Statement, Issues, Goals, Performance Requirements, and Concepts as related to the Facility Program. • Integrate skills developed throughout course to document the needs of an organization and present those needs in a concise manner as a design problem.
XIV.	<p>Presentation</p> <ul style="list-style-type: none"> • Develop professional graphic and verbal presentation skills. • Adapt presentation to provide appropriate content for various groups: management, users, designers, peers. • Demonstrate proper use/non-use of jargon. • Demonstrate methodical program documentation.
XV.	<p>Architectural Programming Process</p> <ul style="list-style-type: none"> • Explain the relationship of architectural programming to facility programming. • Summarize the importance of working closely with designers to insure the architectural program addresses the issues identified in the facility program.
XVI.	<p>Architectural Programming Goals</p> <ul style="list-style-type: none"> • Address the goals of the designer in the architectural programming process: attributes of materials and systems, adjacencies, configurations, etc. which will facilitate achieving the goals set forth in the facility program.
XVII.	<p>Writing the Architectural Program</p> <ul style="list-style-type: none"> • Demonstrate collaborative skills in writing the architectural program. • Integrate skills developed throughout course to document possible design solutions which satisfy the needs of an organization.
XVIII.	<p>Site Selection</p> <ul style="list-style-type: none"> • Explain the basic considerations in site selection: location, utilities, transportation, size, future use development, government and environmental regulations, zoning, building codes, education levels of workers, salaries, geology, geography, investment value, etc. • Summarize of the economics of site selection: own or lease, financial considerations.
XIX.	<p>Evaluation of Site Plan</p> <ul style="list-style-type: none"> • Explain and apply considerations for evaluating site development plans: sensitivity to geographic and climatic features, logical and orderly circulation, views from site, master plan of site, future expansion.
XX.	<p>Evaluation of Architectural Design</p> <ul style="list-style-type: none"> • Develop ability to “read” the drawings and specifications to insure that the

	<p>design is consistent with the facility and architectural programs.</p> <ul style="list-style-type: none"> • Analyze implications of various design options such as materials and systems on maintenance and lifetime costs. • Evaluate aesthetic options, especially as related to the appropriateness of various designs in relationship to corporate image. • Explain limitations in personally evaluating aesthetics.
XXI.	Evaluation

<p>Learning Outcomes for Each Studio: <i>(Note: Roman Numerals correspond with those in Units of Instruction Section)</i> Students will participate in the following studio activities:</p>	
V.	<p>Facility Programming Goals</p> <ul style="list-style-type: none"> • Students will demonstrate understanding of the purpose of the Facility Programming process by designing a programming process that solicits user input. • Students will demonstrate understanding of the purpose of the Facility Program by developing a Facility Program that communicates user needs at a performance level. • Students will select an appropriate Facility Programming model and apply it to the development of a program.
VI.	<p>Human-Environment Relationships</p> <ul style="list-style-type: none"> • Students will know the human factors and base research on them. • Students will develop an understanding of how the Human and Built Environment interact and apply this knowledge in their collection and interpretation of user input. • Students will use appropriate data collection methodologies (IE. Literature search, Observation, Survey, Interview) to explore how people interact in a specific environment.
VII.	<p>Research Principles</p> <ul style="list-style-type: none"> • Students will develop a hypothesis around which to design research methodologies to better understand human/environment interaction in a specific environment. • Students will design a research plan that utilizes appropriate methods to collect the data necessary to define the spatial needs of facility users. • Students will identify data as objective or subjective.
VIII.	<p>Data Sources</p> <ul style="list-style-type: none"> • Students will identify sources of data relevant and necessary to developing a program for a specific space. Sources may include journals, books, websites, comparable facilities, people, etc. • Students will identify appropriate methodologies for the collection of each type of data.

IX.	<p>Data Collection Methodologies</p> <ul style="list-style-type: none"> • Students will develop tools (surveys, focused interviews, behavioral maps) to collect required data from each identified source. • Students will utilize multiple methods to collect subjective data.
XI.	<p>Statistics</p> <ul style="list-style-type: none"> • Students will use appropriate statistical methodologies to present the results of their research. • Students will use statistics to analyze and interpret research results.
XII.	<p>Graphic Methodologies</p> <ul style="list-style-type: none"> • Students will recognize the importance of Graphic Methodologies as communication tools and demonstrate their effective use within the program. • Students will utilize graphic methodologies (charts, graphs, schedules, etc) to communicate the results of their research. • Students will utilize graphic methodologies (plans, elevations, schedules, photos, etc) to document the environment which is the focus of their study.
XIII.	<p>Writing the Program</p> <ul style="list-style-type: none"> • Students will develop a Mission Statement to guide the programming and development of a specific facility at a performance level. • Students will analyze collected data and identify Program Issues based on collected data. • Students will develop Programming Goals based on the analysis of data collected during research of the spatial needs of users of a specific facility. • Students will develop Programming Goals that address organization values such as sustainability, maintainability, etc. • Students will develop Performance Requirements for Goal Statements.
XIV.	<p>Presentation</p> <ul style="list-style-type: none"> • Students will organize and present: documentation of space studied, research methodology, research results, and programming information into a cohesive work.
XVI.	<p>Architectural Program Goals</p> <ul style="list-style-type: none"> • Students will know the purpose of the Architectural Program and be able to translate performance based user needs from the Facility Program to Architectural Attributes of a design solution. IE to identify the square footage required for a classroom, vs. the number of classroom users.
XVII.	<p>Writing Architectural Program</p> <ul style="list-style-type: none"> • Students will demonstrate the ability to develop an Architectural Program from a Facility Program. • Students will organize program into a cohesive, attractive graphic work.

**FERRIS STATE UNIVERSITY
COLLEGE OF ENGINEERING TECHNOLOGY
ARCHITECTURE AND FACILITY MANAGEMENT
COURSE OUTLINE: FMAN 431**

Note: This course was changed from a 3 lecture/0 studio hour lecture to a 2 lecture/2 studio hour configuration.

Course Title: Principles of Space Planning

Course Description: Introduction to space planning concepts; office layouts and furniture systems. Space development and furniture systems will be examined in terms of how they serve the business goals of organizations, including growth and contraction forecasting. The course will include an historical overview of office facilities; development of architectural programs; and teamwork exercises to expose students to multiple roles in the facility development team.

Credit Hours: 3

Contact Hours: 2 lecture hours + 2 studio hours

Course Prerequisite: Enrollment in program

Student Learning Outcomes:

Students satisfactorily completing this course will achieve proficiency in:

1. Describing the history and current trends of the American office environment.
2. Identification of employee working styles.
3. Defining, analyzing and planning office projects using varied methodologies
4. Differentiating between space inventories, space forecasting, adjacencies and programming.
5. Using furniture systems to serve complex functional needs
6. Demonstrating effective communication in the following areas: writing, speaking, presentations, and small group interactions.

Units Of Instruction:		Time Weight:	
		Lecture	Studio
I.	Course Introduction	1	
II.	Review of Facility Management Principles with Regard to Space Planning	1	
III.	Overview of Principles of Space Management	2	
IV.	Review of the history of the American office environment	3	
V.	Understanding Working Styles	2	2
VI.	Planning Methodologies: Definition, Analysis, Interpretation	3	4
VII.	Overview of Space Inventory	2	
VIII.	Overview of Space Forecasting	2	
IX.	Overview of Strategic Planning	2	
X.	Programming	2	4
XI.	Relationship of Space Planning to Design	2	

XII.	Standards	1	
XIII.	Adjacencies / Blocking / Stacking	2	8
XIV.	Furniture Systems	3	
XV.	Presentations		8
XVI.	Field Trips		4
XVII.	Evaluation	2	
Subtotals:		30	30
Total Hours		60	

Learning Outcomes for each Unit of Instruction:	
Upon completion of each instructional unit, the learner will:	
I.	<p>Course Introduction</p> <ul style="list-style-type: none"> Understand course format, course objectives, instructor expectations and student responsibilities.
II.	<p>Review of Facility Management Principles with regard to Space Planning</p> <ul style="list-style-type: none"> Summarize the role of the facility manager in planning processes. Demonstrate how facility planning process fits into the overall facility management process. Identify major facility planning functions.
III.	<p>Overview of Principles of Space Management</p> <ul style="list-style-type: none"> Summarize change in the workplace. Recall trends in buildings in past 25 years. Describe parameters of a facility database. Illustrate the principles of strategic planning. Describe space management tactics.
IV.	<p>Review of the History of the American Office Environment</p> <ul style="list-style-type: none"> Describe the development of work environments, equipment and corporate culture. Explain the relationship between physical environment and work culture through history. Explore changing trends in space planning.
V.	<p>Understanding Working Styles</p> <ul style="list-style-type: none"> Administer the Myers-Briggs Type Indicator Interpret the Myers-Briggs Type Indicator to understand working styles and the complexity of corporate culture and team structure.
VI.	<p>Planning Methodologies: Definition, Analysis, Interpretation</p> <ul style="list-style-type: none"> Identify problems and project requirements. Demonstrate quantitative and qualitative analysis of information. Analyze and interpret data.
VII.	<p>Overview of Space Inventory</p>

	<ul style="list-style-type: none"> • Describe the benefits and reasons for inventory. • Demonstrate the use of a facility database for inventory purposes. • Identify furniture inventory databases.
VIII.	<p>Overview of Space Forecasting</p> <ul style="list-style-type: none"> • Analyze space requirements. • Identify forecasting methods. • Summarize forecasting principles. • Describe strategic space management.
IX.	<p>Overview of Strategic Planning</p> <ul style="list-style-type: none"> • Examine existing space configuration of a real-world client • Develop a strategic plan
X.	<p>Programming</p> <ul style="list-style-type: none"> • Apply interviewing and observation processes. • Develop space planning program.
XI.	<p>Relationship of Space Planning to Design</p> <ul style="list-style-type: none"> • Explore the relationship of the space plan to design. • Demonstrate an understanding of the relationship of the space planning process to the design process. • Describe the interconnectedness of space planning and design responsibilities.
XII.	<p>Standards</p> <ul style="list-style-type: none"> • Differentiate between corporate standards and industry standards. • Describe how to develop standards, the purpose of standards, and how to document standards.
XIII.	<p>Adjacencies / Blocking / Stacking</p> <ul style="list-style-type: none"> • Apply principles of functional adjacencies • Interpret adjacencies in horizontal and vertical relationships • Depict graphically blocking and stacking relationships
XIV.	<p>Furniture Systems</p> <ul style="list-style-type: none"> • Integrate a diversity of furniture systems into space plans. • Visualize the component structure of furniture systems. • Analyze furniture quality vs. cost to demonstrate the value of quality furniture systems to the facility manager. • Explain the relationship between furniture systems and inventories. • Develop furniture layouts using manufacturer websites and CAD files
XV.	<p>Presentations</p> <ul style="list-style-type: none"> • Develop graphic and verbal presentation skills. • Develop appropriate presentations for various groups: management, users, designers, peers. • Demonstrate use/non-use of jargon. • Explain importance of documentation for later use.
XVI.	Field Trips
XVII.	Evaluation

Learning Outcomes for Each Studio:

(Note: Roman Numerals correspond with those in Units of Instruction Section)

Students will participate in the following studio activities:

V.	<p>Understanding Working Styles</p> <ul style="list-style-type: none">• Interact with classmates demonstrating different work styles• Demonstrate problem-solving skills among groups with disparate working styles.
VI.	<p>Planning Methodologies: Definition, Analysis, Interpretation</p> <ul style="list-style-type: none">• Create a model corporate identity• Interview classmate/clients to understand their model corporate identities• Assist classmate/clients in defining corporate culture of corporate identities• Interview classmate/clients to define proposed space planning projects and ascertain needs• Develop space plans to serve needs of classmate/clients• Present space plans demonstrating professional graphic and oral presentation techniques
X.	<p>Programming</p> <ul style="list-style-type: none">• Develop a design program based on classmate/client needs for a model corporate identity that integrates space requirements, furniture requirements and additional amenities• Communicate student/client needs for a model corporate identity to a classmate/designer explaining space requirements, furniture requirements and additional amenities• Document programmatic requirements of client/classmates in written form
XIII.	<p>Adjacencies / Blocking / Stacking</p> <ul style="list-style-type: none">• Evaluate space adjacencies in a real-world building• Create space adjacencies to meet changing needs in a real-world building• Create blocking relationships that comply with client requirements• Create stacking relationships that comply with client requirements
XV.	<p>Presentations</p> <ul style="list-style-type: none">• Produce professional quality graphic presentations the demonstrate understanding of space planning conventions• Present space planning projects orally, demonstrating knowledge of project complexity and standards of professional behavior
XVI.	<p>Field Trips</p> <ul style="list-style-type: none">• Visit furniture manufacturers to retain awareness of current products• Evaluate diverse product lines to determine potential applications• Examine products in detail to understand quality assessment, material use and design options

**FERRIS STATE UNIVERSITY
COLLEGE OF ENGINEERING TECHNOLOGY
ARCHITECTURE AND FACILITY MANAGEMENT
COURSE OUTLINE: FMAN 432**

Note: This course was changed from a 3 lecture/0 studio hour lecture to a 2 lecture/2 studio hour configuration.

Course Title: Principles of Interior Architecture

Course Description: Overview of the elements of interior design and their application. Students apply the principles of interior design with regard to program requirements, context, environment, ergonomics, code and regulatory issues. The visual effects and physical attributes of various components of the interior space are studied.

Credit Hours: 3

Contact Hours: 2 lecture hours + 2 studio hours

Course Prerequisite: FMAN 431

Student Learning Outcomes:

Students satisfactorily completing this course will achieve proficiency in:

1. Understanding the theories, approaches and processes of interior design.
2. Developing solutions and supporting documentation for design problems within the context of interior environments.
3. Identifying and utilizing evaluation criteria in the selection of interior finishes, systems and furniture.
4. Performing research involving materials, furniture and systems utilized in building interiors.
5. Demonstrating effective communication in the following areas: writing, speaking, presentations, and small group interaction.

Units Of Instruction:		Time Weight:	
		Lecture	Studio
I.	Course Introduction	1	
II.	Origins of Interior Design	2	
III.	Basic Theories of Composition	2	2
IV.	Color in Interior Design	2	4
V.	Design as a Process	2	2
VI.	Environmental Concerns, Codes and Regulations of Interior Design	3	2
VII.	Interior Environmental Controls	2	
VIII.	Lighting for Interiors	2	2
IX.	Interior Materials and Components	2	2
X.	Architectural Systems and Interior Finishes	4	8
XI.	Furniture, Furnishings and Equipment	4	8
XII.	Current Trends and Topics	2	
XIII.	Evaluation	2	

Subtotals:	30	30
Total Hours:	60	

Learning Outcomes for each Unit of Instruction:	
Upon completion of each instructional unit, the learner will:	
I.	<p>Course Introduction</p> <ul style="list-style-type: none"> • Understand course format, grading format methods, and class procedures. • Understand the role of the facility manager, introduction to interior design, and interior design as a profession.
II.	<p>Origins of Interior Design</p> <ul style="list-style-type: none"> • Summarize the history of interior design. • Demonstrate a variety of presentation and rendering techniques.
III.	<p>Basic Theories of Composition</p> <ul style="list-style-type: none"> • Apply the underlying principles and guiding forces of a design theory. • Define and describe commonly used design approaches. • Apply and evaluate design elements and principles to meet client and program needs.
IV.	<p>Color in Interior Design</p> <ul style="list-style-type: none"> • Define and create the 12-part color system. • Understand and apply the theories of arranging colors into practical color schemes. • Utilize the theories of perception and use of color and its resulting effects on human behavior. • Demonstrate ability to apply color appropriately to a specific interior environment.
V.	<p>Design as a Process</p> <ul style="list-style-type: none"> • Demonstrate the distinct application of analysis and synthesis processes of design. • Identify and apply the sequence of design steps to a design problem.
VI.	<p>Environmental Concerns, Codes and Regulations of Interior Design</p> <ul style="list-style-type: none"> • Identify the physical features of the site and evaluate their relationship to building interiors. • Identify building codes applicable to interior spaces and use. • Apply building code guidelines to required aspects of the building interior. • Identify and apply barrier free code requirements to specified areas.
VII.	<p>Interior Environmental Controls</p> <ul style="list-style-type: none"> • Be able to define the human comfort zone and identify systems utilized in the control of the interior environment. • Be able to describe a variety of sources of energy used to control thermal microclimates. • Be able to compare and evaluate energy consumption criteria of both building

	<p>performance and interior control systems.</p> <ul style="list-style-type: none"> • Describe the distribution of water, electricity, and fire protection in a building.
VIII.	<p>Lighting for Interiors</p> <ul style="list-style-type: none"> • Know common terms and performance criteria utilized in lighting selection. • Determine appropriate lighting levels required for a variety of tasks. • Analyze the lighting requirements of the user in the selection of an appropriate fixture and lamp. • Describe a variety of light sources and fixture types. • Produce varying degrees of lighting levels and effects through the selection of fixtures and lamps.
IX.	<p>Interior Materials and Components</p> <ul style="list-style-type: none"> • Summarize the performance characteristics, maintenance issues, and sustainability of ceramics, glass, metals, plastics, textiles, window treatments and paints. • Describe how selection of materials contributes to indoor air quality, flamespread and smoke ratings. • Evaluate the impact of material selection on acoustical performance.
X.	<p>Architectural Systems and Interior Finishes</p> <ul style="list-style-type: none"> • Be able to identify a variety of Floor systems, Wall systems, and Ceiling systems. • Utilize standard selection criteria related to these systems in terms of fire protection, acoustical performance and changeability in material selection. • Describe the parameters associated with existing construction and the preservation of historic features.
XI.	<p>Furniture, Furnishings and Equipment</p> <ul style="list-style-type: none"> • Apply the differing ergonomic and psychological considerations involved in furniture selection. • Be able to identify a variety of common furniture types. • Evaluate and select furniture systems utilizing standard selection criteria. • Identify and integrate into overall design, additional items to enhance and personalize space; accessories, artwork, plants, corporate signage.
XII.	Current Trends and Topics
XIII.	Evaluation

Learning Outcomes for Each Studio:

(Note: Roman Numerals correspond with those in Units of Instruction Section)

Students will participate in the following studio activities:

III.	<p>Basic Theories of Composition</p> <ul style="list-style-type: none"> • Define and describe commonly used design approaches. • Select and apply a design approach to a specific program need. • Evaluate design elements and principles to meet client and program needs.
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IV.	<p>Color in Interior Design</p> <ul style="list-style-type: none"> • Create a 12-part color system. • Apply the theories of arranging colors into practical color schemes. • Demonstrate ability to apply color appropriately to a specific interior environment.
V.	<p>Design as a Process</p> <ul style="list-style-type: none"> • Identify and apply the sequence of design steps to a design problem.
VI.	<p>Environmental Concerns, Codes and Regulations of Interior Design</p> <ul style="list-style-type: none"> • Identify and catalog the physical features of the site and evaluate their relationship to building interiors. • Apply building code guidelines to required aspects of the building interior. • Identify and apply barrier free code requirements to specified areas.
VIII.	<p>Lighting for Interiors</p> <ul style="list-style-type: none"> • Select appropriate fixtures and/or lamps based on design criteria and task. • Determine appropriate lighting levels required for a variety of tasks. • Analyze the lighting requirements of the user in the selection of an appropriate fixture and lamp. • Illustrate varying degrees of lighting levels and effects through the selections of fixtures and lamps.
IX.	<p>Interior Materials and Components</p> <ul style="list-style-type: none"> • Compare the performance characteristics, maintenance issues, and sustainability of ceramics, glass, metals, plastics, textiles, window treatments and paints. • Analyze how the selection of materials contributes to indoor air quality, flamespread and smoke ratings. • Evaluate the impact of material selection on acoustical performance. • Construct a professional quality design presentation board.
X.	<p>Architectural Systems and Interior Finishes</p> <ul style="list-style-type: none"> • Compare the performance characteristics related to these systems in terms of fire protection, acoustical qualities, maintenance and changeability.
XI.	<p>Furniture, Furnishings and Equipment</p> <ul style="list-style-type: none"> • Apply the differing ergonomic and psychological considerations involved in furniture selection. • Be able to identify a variety of common furniture types. • Evaluate and select furniture systems utilizing standard selection criteria • Construct a professional quality design presentation board.

**FERRIS STATE UNIVERSITY
COLLEGE OF ENGINEERING TECHNOLOGY
ARCHITECTURE AND FACILITY MANAGEMENT
COURSE OUTLINE: FMAN 441**

Course Title: Property Development and Planning

Course Description: Introduction to principles and processes of real estate development. The public sector's role in approving and regulating development will be examined along with the roles and responsibilities of the development team. Leasing practice from the landlord and tenant perspective is examined. Areas of study also include; history of real estate development, market analysis, demographics, zoning, feasibility studies and finance, and development practices and trends.

Contact Hours: 3

Contact Hours: 3 lecture hours + 0

Course Prerequisites: FMAN 321, BLAW221 or permission

Student Learning Outcomes:

Students satisfactorily completing this course will achieve proficiency in:

1. Understanding the history, processes and practices of real estate development.
2. Understanding the roles of the development team and the public sector.
3. Understanding the driving forces of real estate development.
4. Understanding responsible development and management of natural and built resources.
5. Demonstrating effective communication in the following areas: writing, speaking, presentations, and small group interaction.

Units Of Instruction:		Time Weight:
		Lecture Hours
I.	Introduction	1.5
II.	Real Estate Development Process	1.5
III.	Land and Demographics	3
IV.	Developers and their Partners	3
V.	History of Real Estate Development in the U.S.	6
VI.	Real Estate Finance	3

VII.	Real Estate Development Concepts	3
VIII.	Planning and Analysis: the public role	3
IX.	Planning and Analysis: the market perspective	3
X.	Development Practices	3
XI.	Real Estate Management	3
XII.	Leasing: landlord and tenant perspective	3
XIII.	Current trends, tools and topics in real estate development	3
XIV.	Presentations	3
XV.	Evaluation	3
Total Hours		45

Learning Outcomes For Each Unit Of Instruction:	
Upon completion of each instructional unit, the learner will:	
I.	<p>Introduction</p> <ul style="list-style-type: none"> Understand course format, grading policy, class attendance, and course objectives.
II.	<p>Real Estate Development Process</p> <ul style="list-style-type: none"> Define real estate development Know the eight-stage model of development Understand development teams. Define the public sector. Understand market and feasibility studies.
III.	<p>Land and Demographics</p> <ul style="list-style-type: none"> Understand how real estate development, land and demographics work together. Understand employment growth and economic cycles. Understand land supply. Understand land development & sustainability issues. Understand preservation issues. Understand pitfalls in acquisition of existing buildings.

	<ul style="list-style-type: none"> • Understand land acquisition issues, due diligence issues and zoning issues.
IV.	Developers and their Partners <ul style="list-style-type: none"> • Understand the development team and each team member's role. • Understand different structures, sizes and abilities of the development team based on the project.
V.	History of Real Estate Development in the U.S. <ul style="list-style-type: none"> • Understand how real estate development has progressed in the U.S. • Understand how the development process has become more complex and regulated. • Understand how past real estate development affects the present trends in development.
VI.	Real Estate Finance <ul style="list-style-type: none"> • Understand the relationship between space and capital markets. • Understand the real estate finance cycle. • Understand the logic behind real estate financing decisions. • Understand discounted cash flow and the equity perspective.
VII.	Real Estate Development Concepts <ul style="list-style-type: none"> • Understand inception of an idea. • Understand market research as a tool for generating ideas. • Understand refinement of an idea.
VIII.	Planning and Analysis: the public role <ul style="list-style-type: none"> • Understand the public sector as regulator. • Understand public/private roles in planning and financing infrastructure. • Understand practical problems and policy issues.
IX.	Planning and Analysis: the market perspective <ul style="list-style-type: none"> • Understand the feasibility study. • Know how to initiate a feasibility study. • Understand initial construction estimates and total cost estimates. • Understand how financing relates to market studies. • Understand market analysis—collecting, validating and understanding the data. • Understand data sources supporting market studies.
X.	Development Practices <ul style="list-style-type: none"> • Understand contract negotiation and formal commitment. • Understand construction, completion and formal opening.

XI.	Real Estate Management <ul style="list-style-type: none"> • Understand property, asset and portfolio management. • Understand the challenge of marketing and sales. • Understand property taxes and how they are calculated. • Understand current real estate tax issues.
XII.	Leasing: landlord and tenant perspective <ul style="list-style-type: none"> • Understand commercial lease types. • Understand landlord tenant lease terminology. • Understand that there may be a need for licensing and/or special permits to operate certain businesses and/or machinery.
XIII.	Current trends, tools and topics in real estate development <ul style="list-style-type: none"> • Awareness of real estate property management software. • Understand current trends in real estate development. • Awareness of sources for current market conditions in real estate development.
XIV.	Presentations <ul style="list-style-type: none"> • Rezoning/public hearing presentation. • Final project presentation.
XV.	Evaluation

**FERRIS STATE UNIVERSITY
COLLEGE OF ENGINEERING TECHNOLOGY
ARCHITECTURE AND FACILITY MANAGEMENT
COURSE OUTLINE: FMAN 451**

Course Title: Planning and Budgeting for Operations

Course Description: Survey of the operating systems within facilities, and the methodologies used to keep those systems operational. Introduction to concepts such as life cycle costs and building diagnostics will be introduced along with methods for estimating and planning staff and financial resources. Common problems associated with selected systems will also be discussed.

Credit Hours: 3

Contact Hours: 3 lecture hours + 0

Course Prerequisite: FMAN 321 or instructor permission

Student Learning Outcomes:

Students satisfactorily completing this course will achieve proficiency in:

1. Understanding the impact of operations and maintenance costs on the organization's budget and how efficient and cost effective practices contribute to an organization's success.
2. Identifying common problems associated with building systems through the building diagnostics process and using this analysis as the basis for remedial action.
3. Developing building maintenance schedules and budgets by identifying and scheduling tasks and frequencies and using this information to build a staffing plan and budget.
4. Performing comparative analysis to determine most cost efficient course of action.
5. Demonstrating effective communication in the following areas: writing, speaking, presentations, and small group interaction.
6. Understanding common operations and maintenance management software and their application.

Units of Instruction:		Time Weight:
		Lecture Hours
I.	Course introduction	1
II.	How building maintenance fits into the proforma	1
III.	Audits and deferred maintenance	2
IV.	Benchmarking	2
V.	Outsourcing	2
VI.	Developing schedules	2
VII.	Computer Integrated Facility Management and Operations (CIFM)	1
VIII.	General concepts of maintenance estimating and budgeting	2
IX.	Maintenance and repair estimating	2

X.	Preventive and predictive maintenance estimating	2
XI.	General maintenance estimating	1
XII.	Reserve Funding	2
XIII.	Value engineering	2
XIV.	Site maintenance	2
XV.	Roofing maintenance	2
XVI.	Exterior finish maintenance	2
XVII.	Interior finish maintenance	2
XVIII.	Acoustics and lighting	2
XIX.	Electrical systems	1
XX.	Indoor air quality	2
XXI.	Hazardous materials	2
XXII.	Green buildings and intelligent buildings	2
XXIII.	Security, signage, and wayfinding	1
XXIV.	Americans with Disabilities Act (ADA)	1
XXV.	Evaluation	2
Total Hours:		45

Learning Outcomes for each Unit of Instruction:	
Upon completion of each instructional unit, the learner will:	
I.	<p>Course Introduction</p> <ul style="list-style-type: none"> Understand course format, grading format methods, and class procedures. Understand the purpose of operations management. Be conversant utilizing appropriate terms associated with operations management: Predictive, preventive, unscheduled, scheduled, deferred, etc.
II.	<p>How building maintenance fits into the proforma</p> <ul style="list-style-type: none"> Know what a proforma is. Understand the impact of maintenance and operations costs on the proforma.
III.	<p>Audits and deferred maintenance</p> <ul style="list-style-type: none"> Know what audits are. Be able to design an audit for a specific operations and maintenance goal. Use audits to evaluate and prioritize work as well as to identify items for deferred maintenance.
IV.	<p>Benchmarking</p> <ul style="list-style-type: none"> Understand the concepts and practices of benchmarking. Understand the benefits of the benchmarking process. Apply benchmarking practices to maintenance and operations problems.

V.	<p>Outsourcing</p> <ul style="list-style-type: none"> • Understand the concepts and practices of outsourcing. • Know the advantages and disadvantages of outsourcing. • Know how to assure quality when work is outsourced and in particular the benefits of well written specifications for the work. • Be able to identify tasks appropriate for outsourcing.
VI.	<p>Developing schedules</p> <ul style="list-style-type: none"> • Understand the relationship between expectations, core business work cycles, resources, and the development of schedules. • Understand the interrelationships between schedules for various types of maintenance: Predictive, Preventive, Scheduled, etc. • Be able to use various types of information to develop schedules.
VII.	<p>Computer Integrated Facility Management and Operations (CIFM)</p> <ul style="list-style-type: none"> • Be aware of benefits and challenges associated with adopting CIFM. • Understand how CIFM can assist with common operations and maintenance tasks and tracking.
VIII.	<p>General concepts of maintenance estimating and budgeting</p> <ul style="list-style-type: none"> • Be aware of materials available to assist in estimating and budgeting. • Understand the limitations of various sources of data, especially third party data. • Understand the process and benefits of building a facility data base.
IX.	<p>Maintenance and repair estimating</p> <ul style="list-style-type: none"> • Be able to utilize third party data to specific problems and develop estimates for maintenance and repair projects.
X.	<p>Preventive and predictive maintenance estimating</p> <ul style="list-style-type: none"> • Be able to utilize third party data and organization resources and expectations to develop estimates for preventive and predictive maintenance.
XI.	<p>General maintenance estimating</p> <ul style="list-style-type: none"> • Be able to utilize third party data and organization resources and expectations to develop estimates for general maintenance.
XII.	<p>Reserve Funding</p> <ul style="list-style-type: none"> • Understand the theory and practices associated with reserve funding. • Understand the challenges in getting top management to accept the necessity of a reserve fund. • Be able to calculate a schedule for reserve funding.
XIII.	<p>Value engineering</p> <ul style="list-style-type: none"> • Understand the variables considered in the value engineering process. • Know the benefits value engineering offers the organization. • Be able to select between various operations and maintenance options utilizing value engineering practices. • Be aware of the relationship between long term cost savings and sustainability.

XIV.	<p>Site maintenance</p> <ul style="list-style-type: none"> • Know the building systems addressed by site maintenance. • Be able to identify common problems associated with the maintenance of various site features. • Be able to effectively diagnose common site problems and select a course of action. • Be aware of sustainable site and site maintenance options.
XV.	<p>Roofing maintenance</p> <ul style="list-style-type: none"> • Know common roof systems: built up, membrane, metal, green. • Be able to identify common problems associated with the maintenance of various roof types. • Be able to effectively diagnose common roof problems and select a course of action. • Be aware of sustainable roof system and maintenance options.
XVI.	<p>Exterior finish maintenance</p> <ul style="list-style-type: none"> • Know common exterior finish systems: brick, curtain wall, windows. • Be able to identify common problems associated with the maintenance of various finish types. • Be able to effectively diagnose common finish problems and select a course of action. • Be aware of sustainable maintenance options.
XVII.	<p>Interior finish maintenance</p> <ul style="list-style-type: none"> • Know common interior finish systems: carpet, hard floor, ceiling, walls. • Be able to identify common problems associated with the maintenance of various interior finishes. • Be able to effectively diagnose common problems and select a course of action. • Be aware of sustainable material and maintenance options.
XVIII.	<p>Acoustics and lighting</p> <ul style="list-style-type: none"> • Understand common acoustic issues in the workplace and design practices that minimize these problems. • Understand common issues with regard to lighting and design practices that minimize these problems. • Be able to identify energy efficient lighting options; new and retrofit.
XIX.	<p>Electrical systems</p> <ul style="list-style-type: none"> • Understand principles for electrical and communication distribution.
XX.	<p>Indoor air quality</p> <ul style="list-style-type: none"> • Know the definitions of Sick Building Syndrome, Building Related Illness, and Indoor Air Pollution. • Be able to develop a strategy to diagnose and remedy various indoor air quality problems. • Understand the affect of Green Design on improved Indoor Air Quality.

XXI.	Hazardous materials <ul style="list-style-type: none"> ● Know common hazardous materials encountered in buildings. ● Understand processes to identify suspicious materials and determine if they are indeed hazardous. ● Understand strategies to deal with common hazardous materials.
XXII.	Green buildings and intelligent buildings <ul style="list-style-type: none"> ● Understand the relationship between human and natural ecosystems and the building's impact on both. ● Know the attributes of a green building. ● Know the attributes of an intelligent building. ● Understand how building intelligence can compliment green technologies. ● Understand the process of utilizing LEED certification in planning a renovation or developing an operations and maintenance plan.
XXIII.	Security, signage, and wayfinding <ul style="list-style-type: none"> ● Understand concepts of security and how security must be an integral part of building design and operation. ● Understand the theories of wayfinding. ● Understand how signage relates to wayfinding as well as building security. ● Be able to evaluate various security, signage and wayfinding schemes.
XXIV.	Americans with Disabilities Act (ADA) <ul style="list-style-type: none"> ● Know what ADA decrees. ● Know facility manager's responsibilities to ensure facility compliance with ADA. ● Understand benefits of ADA compliance to organization.
XXV.	Evaluation

FERRIS STATE UNIVERSITY
COLLEGE OF ENGINEERING TECHNOLOGY
ARCHITECTURE AND FACILITY MANAGEMENT
COURSE OUTLINE: FMAN 489

Course Title: Capstone Research

Course Description: Development of proposal and preliminary research for Capstone Thesis project. The course will include an introduction to and review of research methods.

Credit Hours: 1

Contact Hours: 1 lecture hour

Course Prerequisite: Senior standing in FM program

Student Learning Outcomes:

Students satisfactorily completing this course will achieve proficiency in:

1. Creating individualized or group research proposals that correspond to the core competencies of Facility Management as defined by the International Facility Management Association
2. Developing hypotheses and research questions that comply with the standard framework of qualitative and quantitative research methodologies.
3. Creating individualized or group thesis proposals that are structured based on accepted qualitative or quantitative research methodologies.
4. Conducting a literature review pertaining to individualized or group projects that demonstrates breadth and currency of research.
5. Demonstrating effective communication in the following areas: writing, speaking, presentations and small group interactions.

Units of Instruction:	Time Weight: Lecture Hours
I. Introduction	1
II. Review of research methods and campus resources	3
III. Review of IFMA core competencies	1
IV. Determine intention to develop group or individual Capstone Thesis project	2
V. Individual / Group discussions	5
VI. Presentation of project abstracts	3
Total Hours:	15

Learning Outcomes for each Unit of Instruction: Upon completion of each instructional unit, the learner will:		Lecture Hours
I.	<p>Course Introduction</p> <ul style="list-style-type: none"> Understand course format, course objectives, instructor expectations and student responsibilities. 	1
II.	<p>Review of research methods and campus resources</p> <ul style="list-style-type: none"> Demonstrate effective research exploration and documentation Demonstrate effective utilization of library resources Develop an APA-formatted bibliography of research sources to be used in preparation of the Capstone Thesis project 	3
III.	<p>Review of IFMA core competencies</p> <ul style="list-style-type: none"> Understand and address the following IFMA competencies: <ul style="list-style-type: none"> Leadership and Management Operations and Maintenance Planning and Project Management Communication Finance Human and Environmental Factors Quality Assessment and Innovation Real Estate Technology Integrative and Problem Solving Skills Integrate relevant core competencies into thesis proposal 	1
IV.	Determine intention to develop group or individual Capstone Thesis proposal/project	2
V.	<p>Individual / Group discussions</p> <ul style="list-style-type: none"> Develop research plan Develop project schedule and benchmarks Review progress on development of thesis proposal 	5
VI.	<p>Presentation of project abstracts</p> <ul style="list-style-type: none"> Prepare professional quality written abstract Deliver oral presentation of project concept and goals 	3
Total Hours		15

**FERRIS STATE UNIVERSITY
COLLEGE OF ENGINEERING TECHNOLOGY
ARCHITECTURE AND FACILITY MANAGEMENT
COURSE OUTLINE: FMAN 499**

Course Title: Capstone Thesis

Course Description: Development and completion of individual or group thesis projects that reflect understanding of the core competencies of facility management: leadership and management; operation and maintenance; planning and project management; communication; finance; human and environmental factors; quality management and assessment; and real estate.

Credit Hours: 3

Contact Hours: 2 lecture hours + 2 studio hours

Course Prerequisite: FMAN 489

Student Learning Outcomes:

Students satisfactorily completing this course will achieve proficiency in:

1. Applying **and analyzing** the core competencies of facility management **as defined by the International Facility Management Association**.
2. Implementing individualized or group research methodologies.
3. **Demonstrating proper techniques of qualitative or quantitative research methodologies**.
4. Demonstrating effective communication in the following areas: writing, speaking, presentations, and small group interactions.

Units of Instruction:

Time Weight:

	Lecture	Studio
I. Introduction	2	
II. Review of project abstracts and relevance to core competencies of FM program	4	
III. Review of professional documentation	4	
IV. Review of professional graphic presentation techniques	4	
V. Review of professional oral presentation techniques	4	
VI. Faculty / Student work sessions	2	30
VII. Public presentations	10	
Subtotals	30	30
Total Hours	60	

Learning Outcomes for each Unit of Instruction:	
Upon completion of each instructional unit, the learner will:	
I.	<p>Course Introduction</p> <ul style="list-style-type: none"> • Understand course format, course objectives, instructor expectations and student responsibilities.
II.	<p>Review project abstracts and relevance to core competencies of FM program:</p> <ul style="list-style-type: none"> • Leadership and Management • Operations and Maintenance • Planning and Project Management • Communication • Finance • Human and Environmental Factors • Quality Assessment and Innovation • Real Estate • Technology • Integrative and Problem Solving Skills
III.	<p>Review professional documentation:</p> <ul style="list-style-type: none"> • Maintain project files • Maintain reference lists, source lists, etc. • Apply standards of professional correspondence
IV.	<p>Review professional graphic presentation techniques:</p> <ul style="list-style-type: none"> • Organize information • Create boards, models, slide shows
V.	<p>Review professional oral presentation techniques:</p> <ul style="list-style-type: none"> • Demonstrate professional public speaking methodologies • Present a professional appearance • Apply principles of time management
VI.	<p>Review student progress:</p> <ul style="list-style-type: none"> • Demonstrate regular project progress in meetings with instructor • Adhere to schedules, benchmarks, etc.
VII.	<p>Public presentations:</p> <ul style="list-style-type: none"> • Implement a preliminary presentation • Implement a final presentation



COURSE TITLE:

HVAC 337, Mechanical and Electrical Systems for Buildings

COURSE DESCRIPTION:

Awareness of heating, ventilating and air conditioning systems, water supply, sanitary and storm sewers, fire protection, electrical distribution, lighting and acoustical systems for buildings. Emphasis is placed upon systems integration, energy considerations and their effects upon building planning, detailing and construction. Discusses equipment, code requirements, and building applications.

SEMESTER HOURS:

3

CONTACT HOURS:

Fall 2013
Sec. 002: Tuesday & Thursday, 12:00pm - 1:15pm, Room: GRN 113

PREREQUISITES:

None

TEXTBOOK REQUIRED:

Mechanical & Electrical Systems in Buildings, 5rd Ed., by William K.Y. Tao and Richard R. Janis, (2013, 2009, 2005, 2001, 1997 Pearson Prentice Hall). ISBN-13: 978-0-13-801562-6 **OR**
Mechanical & Electrical Systems in Buildings, 4rd Ed., by William K.Y. Tao and Richard R. Janis, (2009, 2005, 2001, 1997 Pearson Prentice Hall). ISBN-13: 978-0-13-801562-6

NOTE: You need one of the above editions, what ever is available.

Units of Instruction - (Time / Weight):

	Areas of Instruction	Time
I	Energy Units, Terms & Psychrometry	4
II	Field Trip 1	1
III	Load Calculation (HVAC)	6
IV	HVAC Systems & Equipment	
	Air Systems & Ductwork	3
	Hydronic Systems & Piping	3
	Steam & Refrigeration	3
V	Field Trip 2	1

	Areas of Instruction	Time
VI	Control, Lighting & Electrical Power Dist.	9
VII	Acoustics	3
VIII	Plumbing	
	Water Supply	2
	Sanitary & Storm Drains	3
	Fire Protection	2
IX	EXAMS	5
	Total	45

Topic Unit Outline of Major Units of Instruction:

- I. Energy Units, Terms & Psychrometry
 - A. Understand definition of HVAC
 - B. Understand basic forms of heat (sensible & latent)
 - C. Use terms and formulas for measurement of heat flow in air and water systems.
 - D. Use terms and formulas for measurement of temperature and pressure in air and water systems.
 - E. Understand various factors which effect human comfort in a conditioned space.
 - F. Determine 7 different parameters for a psychrometric chart given a minimum of 2 conditions.

- II. Field Trip 1

- III. Load Calculation (HVAC) and Ventilation
 - A. Calculate heat loss by transmission using knowledge of thermal resistance of building material.
 - B. Calculate heat loss by infiltration using “foot of crack” method of estimation.
 - C. Calculate fresh air and make-up air requirements and ventilation heat loss for a conditioned space using design tables.
 - D. Determine sources and calculate load of internal heat gain
 - E. Calculate solar and conduction heat gain through glass
 - F. Understand solar and design temperature effect upon wall and roof exposures.

- IV. HVAC Systems and Equipment
 - A. Distinguish HVAC system types, heating system types, cooling system types and their associated major pieces of equipment and basic temperature control methods.
 - B. Identify shapes, materials and gauges of HVAC ductwork.
 - C. Calculate one variable (e.g. CFM of air flow) given other variables (e.g. duct dia., air velocity, etc.) of an HVAC duct system using the air friction chart.
 - D. Identify air terminal units (i.e. grills, registers and diffusers) and their application in conditioned space.
 - E. Read mechanical HVAC design drawing (ductwork).
 - F. Identify categories of steam and hot water boilers, their major components and their application to a commercial building.
 - G. Identify types of hydronic piping systems and terminal units and their applications.
 - H. Calculate heat flow through hydronic system by equation, calculate pressure drop, water velocity, and pipe size using water friction chart.
 - I. Identify components of a steam heating system.
 - J. Calculate pressure drop, velocity and pipe size given steam flow rate through a system.
 - K. Identify major components of an HVAC refrigeration system, fluids, handled and their primary energy requirements.
 - L. Read mechanical HVAC design drawings (piping).

- V. Field Trip 2

Topic Unit Outline of Major Units of Instruction - cont.:

VI. Control, Lighting and Electrical Power Distribution

- A. Types of Control (manual, automatic, DDC).
- B. Control system features.
- C. Use terms and formulas for measurement of electric power and lighting.
- D. Identify types of lamps and their application.
- E. Calculate required number of fixtures for an illuminated space.
- F. Identify main components of building an electric power distribution system (e.g. meter, panel board, and transformer).
- G. Identify wire types and their uses and advantages, calculate size of main and branch feeders and their protective devices (i.e. fuse or circuit breaker).
- H. Read a set of building electrical and lighting plans.

VII. Acoustics

- A. Use terms and formulas for measurement of sound intensity, absorption, reflection, and transmission.
- B. Identify noise sources in commercial buildings, and noise control methods and materials.

VIII. Plumbing and Fire Protection

- A. Identify types of water sources and how they are treated for human consumption.
- B. Identify components of a water service (e.g. piping materials and joints, meters) and components of utility water bill.
- C. Calculate size of a water service based upon allowable pressure drop and S.F.U. load.
- D. Identify water heater components and variables (heater and storage tank) and calculate each for applications.
- E. Identify difference between pressure pipe and drainage pipe, materials and joining methods.
- F. Identify key components and principles related to sanitary drainage piping.
- G. Calculate drainage pipe and vent pipe size per D.F.U. load.
- H. Size building roof drains and storm drain piping from rainfall intensity and duration tables.
- I. Read a plumbing design drawing and fire protection design drawing.
- J. Identify key components (sprinkler heads, pipes, and alarms) of a building fire protection system.
- K. Calculate number of sprinkler heads for an occupancy using design tables.

IX. Exams

Additional Course Information:**INSTRUCTOR:** Michael J. Korcal, C.E.M., MT (ASCP), Associate Professor**OFFICE:** GRN 203**OFFICE HOURS:** Tuesday: 7:00am - 7:50am

Wednesday: 7:00am - 7:50am & 11:00am - 11:50am

Thursday: 7:00am - 7:50am

By appointment

PHONE: 2626**E-mail:** use message function in Ferrisconnect Learn (Blackboard)!

EXAM 1	12.5 %
EXAM 2	12.5%
EXAM 3	12.5%
FINAL	25.0%
ASSIGN.	37.5%

Total = 100%

General Grading Policy:

PERCENT	HP	GRADE
100 - 94	4.0	A
93 - 90	3.7	A-
89 - 87	3.3	B+
86 - 84	3.0	B
83 - 81	2.7	B-
80 - 78	2.3	C+
77 - 75	2.0	C
74 - 73	1.7	C-
72 - 71	1.3	D+
70 - 69	1.0	D
68-67	0.7	D-
66 - below	0.0	F

Assignment No.	Description	% of total gr.
1	Terms	3.125
2	Psychrometrics	3.125
3	Load Calculations - Part 1	3.125
4	Load Calculations - Part 2	3.125
5	HVAC Delivery Systems - Air	3.125
6	HVAC Delivery Systems - Water	3.125
7	HVAC Systems - Steam / Refrigeration	3.125
8	Electrical / Controls	3.125
9	Lighting	3.125
10	Energy / Power	3.125
11	Acoustics	3.125
12	Plumbing	3.125

Fall 2013, Tentative Class Schedule:

Week	Day	Date	Class Topic for that Day (tentative, subject to change)
1	Tue	8/27/2013	Introduction, Syallabus, Overview, Energy Units
	Thur	8/29/2013	Terms, Psychrometrics
2	Tue	9/3/2013	Load Calculations
	Thur	9/5/2013	Load Calculations
3	Tue	9/10/2013	Load Calculations
	Thur	9/12/2013	Load Calculations
4	Tue	9/17/2013	HVAC: Air Systems and ductwork
	Thur	9/19/2013	HVAC: Air Systems and ductwork
5	Tue	9/24/2013	EXAM 1
	Thur	9/26/2013	HVAC: Hydronic Systems and piping
6	Tue	10/1/2013	HVAC: Hydronic Systems and piping
	Thur	10/3/2013	Field Trip 1
7	Tue	10/8/2013	HVAC: Steam / Refrigeration
	Thur	10/10/2013	HVAC: Steam / Refrigeration
8	Tue	10/15/2013	Electrical: Terms / Lighting
	Thur	10/17/2013	Electrical: Lighting (Also, Career Fair)
9	Tue	10/22/2013	EXAM 2
	Thur	10/24/2013	Electrical: Lighting
10	Tue	10/29/2013	Electrical: Control / Power Distribution
	Thur	10/31/2013	Electrical: Energy / Power Distribution
11	Tue	11/5/2013	Acoustics
	Thur	11/7/2013	Acoustics
12	Tue	11/12/2013	Plumbing: Supply
	Thur	11/14/2013	Plumbing: Supply / Waste
13	Tue	11/19/2013	EXAM 3
	Thur	11/21/2013	Field Trip 2
14	Tue	11/26/2013	Plumbing: Waste / Storm
	Thur	11/28/2013	THANKSGIVING RECESS - NO CLASS
15	Tue	12/3/2013	Plumbing: Fire
	Thur	12/5/2013	Course Overview & Review
16	Tue	12/10/2013	Final Exam - 12:00pm - 1:40pm

Note: Professor reserves the right to make changes to this syllabus during the semester as necessary.

FERRIS STATE UNIVERSITY

**COURSE OUTLINE AND SYLLABUS
HVAC 483 HVACR Building Systems**

Instructor:.....Professor Mike Feutz, Ph.D.
Office Hours:Tuesday and Thursday, 12:00 – 2:00 pm
Office:GRN 213
Phone:x 2351
E-mail:feutzm@ferris.edu

COURSE DESCRIPTION: ...HVACR systems and controls found in commercial and industrial buildings for facility managers: energy utilization, utility rates, and building management systems that optimize comfort and reduce energy costs for buildings. Includes site visitations and reports.

Credit Hours:3: Lecture, 3 hours/week

Prerequisites:.....None

Textbooks Required:None

Final Exam:.....The final exam for this course is scheduled according to normal meeting time as follows:

9:30 or 10:00 am	T combinations	Mon, May 5	10-11:40 am
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The final exam schedule for the entire university can be found at:

<http://www.ferris.edu/admissions/registrar/schdbook/page12-13.htm>.

MINIMUM REQUIRED STUDENT LEARNING ACTIVITIES:

Given lecture notes, reading assignments, handouts and field trip experience, students will:

- A. describe the energy sources that are available to buildings and identify the benefits and limitations of each energy source discussed.
- B. breakdown and understand utility billing, the effects of various charges on energy budgets and the importance of working with utilities to ensure minimum charges.
- C. select energy sources from calculated economic analysis, including annual cost of operation.
- D. describe the types of co-generation systems, their application and economic advantages including payback relative to utility billings, rate structure and buy-back of power.
- E. tour a power plant and file a report on the efficiency of the plant and rationale for the type of energy used and produced.
- F. qualify and quantify “human comfort” and describe the implication on HVAC systems.
- G. identify some problems, solutions and regulations relative to indoor air quality (IAQ) and the describe influence of IAQ on the HVAC building systems, the office environment and sick building syndrome.
- H. develop a working knowledge of Psychrometrics as applied to HVAC processes and human comfort.

- I. perform an economic analysis on energy costs of building applications through heat loss/gain load calculations, and relate energy savings to envelope, ventilation and temperature setting standards.
- J. identify the major components found in an HVAC system and describe the function of the components in relationship to the entire HVAC system.
- K. identify the different types of HVAC systems found in buildings and describe the advantages/disadvantages/special needs in reference to selected applications such as open office plan flexibility, clean rooms, etc.
- L. describe control sequences, components and loops of HVAC systems.
- M. describe energy conservation and management strategies, their application and economic advantages (payback) relative to utility billings and rate structure.
- N. describe strategies, programs, and the short- and long-term economic impact of preventative maintenance related to HVAC building systems.
- O. describe and be able to locate information on codes, ordinances and regulations that effect the installation, operation and maintenance of HVACR building systems.
- P. describe criteria, including licensure/certification requirements used to hire contractors/vendors/staff for HVACR building system installation, operation and maintenance.

TOPICAL OUTLINE OF UNITS OF INSTRUCTION:

- A. Develop a working knowledge of energy sources that are available to buildings and identify the benefits and limitations of energy sources.
 - A-1. Develop a working knowledge of electrical energy sources.
 - A-1-1. Explain electrical generation by inductance.
 - A-1-2. Describe methods of generating electricity including hydroelectric, solar, nuclear, fossil fuel and co-generation.
 - A-1-3. Compare and contrast single phase verses three-phase electricity.
 - A-1-4. Calculate values for amperage, voltage and ohms using Ohm's Law.
 - A-1-5. Calculate values for watts, volts and amps using Watt's Law.
 - A-1-6. Describe the application/advantage of various voltages of electrical supply.
 - A-1-7. Differentiate between voltage, amperage, resistance, real power (watts), apparent power (volt-amps), reactive power (volt-amps reactive), watt-hour, capacitance and inductance.
 - A-1-8. Calculate power factor.
 - A-1-9. Calculate transmission losses using Ohm's and Watt's Law.
 - A-1-10. Convert electrical power (watt) to btu.
 - A-1-11. Differentiate between energy and power.
 - A-1-12. List safety concerns relating to the use of electricity.
 - A-2. Develop a working knowledge of natural gas.
 - A-2-1. Explain the origin of natural gas (methane).
 - A-2-2. Describe the method of producing usable natural gas.
 - A-2-3. Detail the distribution of natural gas.
 - A-2-4. List typical applications for natural gas.

- A-2-5. List advantages and disadvantages of natural gas.
- A-2-6. List safety concerns relating to the use of natural gas.

A-3. Develop a working knowledge of fuel oil.

- A-3-1. Explain the origin of fuel oil.
- A-3-2. Describe the method of producing usable fuel oil.
- A-3-3. List applications for various weights of fuel oil.
- A-3-4. Detail the distribution of fuel oil.
- A-3-5. Define fuel oil terms such as grade, weight, gallon and heat rate.
- A-3-6. List advantages and disadvantages of fuel oil.
- A-3-7. List safety concerns relating to the use of fuel oil.

A-4. Develop a working knowledge of liquefied petroleum gas.

- A-4-1. Explain the origin of liquefied petroleum gas.
- A-4-2. Describe the method of producing usable liquefied petroleum gas.
- A-4-3. Detail the distribution of liquefied petroleum gas.
- A-4-4. Define liquefied petroleum gas terms such as pound, gallon and heat rate.
- A-4-5. List typical applications for liquefied petroleum gas.
- A-4-6. List advantages and disadvantages of liquefied petroleum gas.
- A-4-7. List safety concerns relating to the use of liquefied petroleum gas.

A-5. Develop a working knowledge of biomass fuel.

- A-5-1. Define biomass fuels.
- A-5-2. List applications for biomass fuels.

A-6. Develop a working knowledge of coal as a fuel

- A-6-1. Explain the origin of coal.
- A-6-2. Describe the method of producing usable coal.
- A-6-3. Define coal terms such as pound, ton and heat rate.
- A-6-4. List typical applications for coal.
- A-6-5. List advantages and disadvantages of coal.
- A-6-6. List safety concerns relating to the use of coal.

B. Develop a working knowledge of utility billing and charges from utilities for building usage.

B-1. Analyze electrical utility billing and charges.

- B-1-1. Recognize electrical utility billing terms such as energy charge, capacity charge (billing demand), on-peak, off-peak, cost recovery factor (base rate adjustment), surcharge, customer charge, industrial, commercial, demand management, power factor, ratchet clause, time of day, primary voltage, secondary voltage, and rate codes.

B-2. Analyze Consumers Energy electrical bills for the following rates:

- B-2-1. General Service Secondary Rate B & B-1 (020 & 042).
- B-2-2. General Service Secondary Rate C (021 & 721).
- B-2-3. General Service Primary Rate D (028).

B-3. Predict the optimum electrical rate given historical energy consumption and power demand for a one year time period.

- B-4. Analyze natural gas utility billing and charges
 - B-4-1. Define natural gas terms such as cf, ccf, mcf, therm and heat rate.
- C. Select energy sources from calculated economic analysis.
 - C-1. Calculate annual cost of operation given load calculations, cost per unit of energy, equipment efficiency and hours of operation for electricity, natural gas, propane and fuel oil using steady state and bin load methods.
- D. Describe the types of co-generation systems, their application and economic advantages including payback relative to utility billings, rate structure and buy-back of power (see Economic Analysis).
- E. Field Trip: Students will have the opportunity to visit site installations of energy sources and report why it was used for that particular installation (FSU Co-generation site)
 - E-1. Calculate life cycle cost of operation given load calculations, cost per unit of energy, equipment efficiency, equipment cost, equipment life expectancy, equipment maintenance costs and hours of operation for electricity and natural gas using the FSU Co-generation site.
- F. Qualify and quantify “Human Comfort”. Describe the impact of human comfort on the type of HVAC system chosen and identify the limitations of the systems for various installations, particularly in terms of IAQ.
 - F-1. Qualify and quantify human comfort relative to
 - F-1-1. Human physiology
 - F-1-2. Human heat balance
 - F-1-3. Metabolism, quantified in met units
 - F-1-4. Clothing, quantified in clo value
 - F-1-5. Mean radiant temperature
 - F-1-6. Thermal Comfort Standards
- G. Understand Indoor Air Quality problems, sources and solutions.
 - G-1. History:
 - G-2. Agents effecting indoor air quality:
 - G-3. Biological
 - G-3-1. By-products of respiration
 - G-3-2. Bacterial / fungal
 - G-4. Chemical
 - G-4-1. Volatile organic compounds (VOC's)
 - G-4-2. By-products of combustion
 - G-4-3. Radon
 - G-5. Particulates
 - G-5-1. Smoke

- G-5-2. Dust
- G-5-3. Allergens
- G-5-4. Fibers

G-6. Current building evaluation for baseline:

H. Describe environmental factors affecting human comfort.

- H-1-1. Psychrometric conditions
 - H.1.1.1. Temperature (dry bulb)
 - H.1.1.2. Wet bulb
 - H.1.1.3. Humidity (relative humidity)
 - H.1.1.4. Enthalpy
 - H.1.1.5. Specific volume
 - H.1.1.6. Comfort zone
- H-1-2. Rate of change

I. Analyze energy costs of building applications.

I-1. Develop a working knowledge of HVACR terms, nomenclature and basic thermodynamic principles

- I-1-1. Definition of terms
- I-1-2. Abbreviations & acronyms
- I-1-3. Heat transfer formulae for convection and conduction used by the energy engineer
 - I.1.3.1. Conduction through building envelope materials
 - I.1.3.2. Energy quantity calculation
 - I.1.3.3. Energy transportation by air
 - I.1.3.4. Energy transportation by water

I-2. Calculate

- I-2-1. Building heat loss and heat gain.
- I-2-2. Sensible and latent heat loads using Psychrometric charts.
- I-2-3. Building lighting load based on hours of occupancy and type of lights used.

I-3. Compare the cost of lighting using various types of lamps as the light source.

I-4. Relate energy savings to temperature setting standards.

I-5. Relate energy savings to building envelope standards.

I-6. Relate energy savings to various maintenance strategies.

- I-6-1. Filter changes
- I-6-2. Equipment lubrication
- I-6-3. Equipment cleaning
- I-6-4. Belt inspection and replacement
- I-6-5. Variable speed fan/pump motors

J. Identify the major components found in an HVAC system and describe the function of the components in relationship to the entire HVAC system.

J-1. Cooling Equipment

- J-1-1. Define a ton of cooling
- J-1-2. Understand and describe the vapor compression cycle.
- J-1-3. Understand and describe the adsorption refrigeration cycle
 - J.1.3.1. Ammonia-Water Systems
 - J.1.3.2. Water-Lithium Bromide Systems
- J-1-4. Identify and describe the operation of DX systems
- J-1-5. Identify and describe the operation of chillers
- J-1-6. Identify and describe the operation of various compressors used in air conditioning applications:
 - J.1.6.1. Reciprocating
 - J.1.6.2. Screw
 - J.1.6.3. Scroll
 - J.1.6.4. Centrifugal
 - J.1.6.5. Hermetic
 - J.1.6.6. Semi-hermetic
 - J.1.6.7. Open drive
- J-1-7. Identify and describe the operation of various condensers used in air conditioning applications:
 - J.1.7.1. Air-cooled
 - J.1.7.2. Water-cooled
 - J.1.7.2.1. Shell and tube
 - J.1.7.2.2. Shell and coil
 - J.1.7.2.3. Tube in tube
 - J.1.7.2.4. Brazed plate
 - J.1.7.3. Evaporative condensers
 - J.1.7.4. Cooling towers

J-2. Heating Equipment

- J-2-1. Identify and describe the operation of various heating devices used in air conditioning applications:
 - J.2.1.1. Furnaces
 - J.2.1.2. Boilers
 - J.2.1.2.1. Steam
 - J.2.1.2.2. Low-medium-high pressure systems
 - J.2.1.2.3. Water tube verses fire tube steel boilers
 - J.2.1.2.4. Cast iron sectional boilers

K. Identify the different types of HVAC systems found in buildings and describe the advantages and disadvantages of selected applications.

K-1. Air Systems. Identify and describe the operation of various air systems used in air conditioning applications

- K-1-1. Single path/double path systems
 - K.1.1.1. Single zone
 - K.1.1.2. Terminal reheat
 - K.1.1.3. Multi-zone

- K.1.1.4. Dual-duct
 - K.1.1.5. Variable volume
 - K.1.1.6. Induction
- K-2. Piping Systems. Identify and describe the operation of various piping systems used in air conditioning applications
- K-2-1. Open/closed loop
 - K.2.1.1. One-pipe
 - K.2.1.2. Two-pipe
 - K.2.1.2.1. Direct/indirect return
 - K.2.1.3. Three-pipe
 - K.2.1.4. Four-pipe
 - K-2-2. Primary-secondary pumping systems
 - K-2-3. Steam piping
- K-3. Describe the advantages and disadvantages of various systems in selected applications with special needs:
- K-3-1. Flexible open office plan layout
 - K.3.1.1. large, flexible zone serving many people
 - K.3.1.2. perimeter and interior adjacencies
 - K.3.1.3. HVAC acoustic considerations
 - K.3.1.4. infrequent renovations
 - K-3-2. Office building
 - K.3.2.1. potential for many small zones
 - K.3.2.2. space may be perimeter or interior
 - K.3.2.3. relatively inflexible design
 - K.3.2.4. frequent renovations
 - K.3.2.5. need for acoustical treatment in ducting between offices
 - K-3-3. Professional office building
 - K.3.3.1. multiple clients with various levels of demand on HVAC systems
 - K.3.3.2. special ventilation/exhaust requirements
 - K.3.3.3. special acoustical needs
 - K-3-4. Clean room
 - K.3.4.1. ultra-high level of filtration
 - K.3.4.2. ultra-low velocities required
 - K.3.4.3. large impact of HVAC on building volume/structure
 - K-3-5. Hospital
 - K.3.5.1. multiple clients with various levels of demand on HVAC systems
 - K.3.5.2. multiple systems with multiple zones
 - K.3.5.2.1. isolation wards
 - K.3.5.2.2. surgical suites
 - K.3.5.2.3. office/administration areas
 - K.3.5.2.4. emergency
 - K.3.5.2.5. patient rooms
 - K.3.5.2.6. cafeterias/kitchens
 - K.3.5.2.7. loading docks
 - K.3.5.2.8. helicopter pads

- K.3.5.3. high level of control
- K.3.5.4. special ventilation/exhaust requirements
- K.3.5.5. different pressure requirements between zones (positive and negative)
- K.3.5.6. special acoustical needs

K-3-6. School

- K.3.6.1. ventilation needs, CO₂ levels critical
- K.3.6.2. different requirements for various parts of the building (classrooms, offices, athletic facilities, shops, etc)
- K.3.6.3. high day time occupancy, low evening occupancy

K-3-7. Restaurant

- K.3.7.1. special ventilation needs, various zones
 - K.3.7.1.1. smokers/non smokers
 - K.3.7.1.2. kitchen
 - K.3.7.1.3. bathroom

K-3-8. Hotel

- K.3.8.1. various special needs
 - K.3.8.1.1. pools, high humidity
 - K.3.8.1.2. restaurants, odors
 - K.3.8.1.3. guest rooms, individual control
 - K.3.8.1.4. conference/banquet facilities, ventilation, high occupancy

L. Understand and describe control sequences and control loops of HVAC systems and identify individual components.

L-1. Define control terms

- L-1-1. Control, control purpose
- L-1-2. Three main components
 - L.1.2.1. Sensor, controller, final control device
- L-1-3. Identify and describe types of control loops
 - L.1.3.1. Open/closed
- L-1-4. Define types of control points
 - L.1.4.1. Analog input & output
 - L.1.4.2. Digital input & output
- L-1-5. Describe features of energy management systems
 - L.1.5.1. Optimal start/stop
 - L.1.5.2. Demand limiting/load shedding
 - L.1.5.3. Duty cycling

M. Describe energy conservation and management strategies, their application and economic advantages (payback) relative to utility billings and rate structure

M-1. Demand leveling

M-2. Demand limiting/load shedding

M-3. Power factor control

M-4. Co-generation/on site generation

M-5. Thermal storage systems

M-5-1. Water/chemical

M-5-2. Phase change (ice)

N. Describe strategies, programs, and the short- and long-term economic impact of preventative maintenance related to HVAC building systems.

N-1. Strategy

N-1-1. RTF (run to fail)

N-1-2. PM (preventative maintenance)

N-1-3. PPM (predictive preventative maintenance)

N-1-4. Scheduled Overhaul

N-1-5. Redundancy

N-2. Equipment

N-2-1. Air handlers

N-2-2. Rooftop units

N-2-3. Compressors

N-2-4. Boilers

N-2-5. Chillers

N-2-6. Controls

N-2-7. Pumps

N-2-8. Make up air Units

N-2-9. Production burners, and other heat sources

N-2-10. Water side systems

N.2.10.1. closed loop

N.2.10.2. open loop

N.2.10.3. Cooling towers

N.2.10.4. chilled water

N.2.10.5. Humidifiers

N-2-11. Dehumidifiers

N-2-12. Direct expansion

N.2.12.1. Coil cleaning

N-2-13. Desiccant (chemical)

N-2-14. Steam traps

N-2-15. exhaust fans, belts, fasteners, connections

N-2-16.

O. Describe and be able to locate information on codes, ordinances and regulations that effect the installation, operation and maintenance of HVA-CR building systems.

O-1. Unions

O-2. Codes/ordinances

O-2-1. local

- O-2-2. state
- O-2-3. national
- O-2-4. international

O-3. Codes/Standards

- O-3-1. ADA (Americans with Disabilities Act)
- O-3-2. ASHRAE (American Society of Heating Refrigeration and Air Conditioning Engineers)
- O-3-3. BOCA (Building Officials Code Administrators International)
- O-3-4. EPA (Environmental Protection Agency)
- O-3-5. IBC (International Building Code)
- O-3-6. ICC (International Code Council)
 - O.3.6.1. Code Requirements for Housing Accessibility
 - O.3.6.2. ICC Electrical Code
 - O.3.6.3. International Energy Conservation Code
 - O.3.6.4. International Fire Code
 - O.3.6.5. International Fuel Gas Code
 - O.3.6.6. International Mechanical Code
 - O.3.6.7. International Plumbing Code
 - O.3.6.8. International Private Sewage Disposal Code
 - O.3.6.9. International Property Maintenance Code
 - O.3.6.10. International Residential Code
 - O.3.6.11. International Zoning Code
- O-3-7. NEC (National Electrical Code)
- O-3-8. NEMA (National Electrical Manufacturers Association)
- O-3-9. NFPA (formerly the National Fire Protection Association)
- O-3-10. NSPC (National Standard Plumbing Code)
- O-3-11. OSHA (Occupational Safety and Health Act)
- O-3-12. SMACNA (Sheet Metal and Air Conditioning National Association)

P. Describe criteria, including licensure/certification/insurance requirements, used to hire contractors/vendors/staff for HVACR building system installation, operation and maintenance.

P-1. How to find

- P-1-1. advertise/interview
- P-1-2. open bid
- P-1-3. network of friends, peers, word of mouth
- P-1-4. invite to bid (requires prior knowledge)

P-2. Qualification for job

- P-2-1. Years in business/of experience
- P-2-2. Familiarity with type of work
- P-2-3. Connections within industry, networking
- P-2-4. Ability to work with others
- P-2-5. Quality of work/workmanship

P-3. Scope of work

- P-3-1. Size and duration of project/job
- P-3-2. Reputation and experience of contractor to match
- P-3-3. Ability to finance work, working capital, bonding

- P-4. Union/Jurisdiction issues

- P-5. Race/gender/ethnicity issues

- P-6. Funding issues, state/federal money involved

- P-7. International issues
 - P.7.1.1. ISO required?
 - P.7.1.2. Product/technology compatible overseas?
 - P.7.1.3. Language barriers?
 - P.7.1.4. Time zone
 - P.7.1.5. Cultural differences/barriers?

- P-8. License/certificate/insurance required
 - P-8-1. CFC
 - P-8-2. Plumbing
 - P-8-3. Electrical
 - P-8-4. Building Engineer
 - P-8-5. Professional Engineer
 - P-8-6. Boiler Operator
 - P-8-7. Mechanical
 - P-8-8. Workers Comp
 - P-8-9. Liability insurance/bonding

ADDITIONAL COURSE INFORMATION

Scoring:

Exams	50%
Homework	30%
<u>Cumulative Final</u>	<u>20%</u>
Total	100%

Grading Scale

Letter Grade	Equal to or Greater Than	Below
A	94%	
A-	90%	94%
B+	87%	90%
B	84%	87%
B-	80%	84%
C+	77%	80%
C	74%	77%
C-	70%	74%
D+	68%	70%
D	66%	68%
D-	65%	66%
F	64%	0%

Attendance: I do not keep attendance in this class as it is a 400 level class.

Test Taking: If you have to miss for a test or quiz, you must alert me in advance to make alternate arrangements. You will not be allowed to make up the test or quiz without prior arrangements.

Homework Due Date: all homework must be submitted on the due date at the time due. No late work will be accepted.

Class Expectations: I expect you to actively engage in the learning process. It is my sincere hope, as you take this course, that you understand that HVACR, though not in your primary field of study, will play a role in your career, and that you see this course as a means to help you prepare more completely for that career. A mentality of trying to earn a grade, with the minimum effort necessary, will be a great disservice to you.

<http://www.ferris.edu/htmls/administration/StudentAffairs/Studenthandbook/06HandbookMaster.pdf>

20 Section III: General University and Housing Policies Regarding Misconduct

A. Academic Misconduct

The university may discipline a student for academic misconduct, which is defined as any activity that tends to undermine the academic integrity of the institution. Academic misconduct includes, but is not limited to, the following:

1. Cheating

A student may not use unauthorized assistance, materials, information, or study aids in any academic exercise, neither should they give assistance, materials, information, or study aids in any academic exercise, including but not limited to the following:

- a. A student must not use or give external assistance on any “in-class” or “take-home” examination, unless the instructor has specifically authorized external assistance. This prohibition includes, but is not limited to, the use of tutors, books, notes, and calculators.
- b. A student must not use another person as a substitute in the taking of an examination or quiz.
- c. A student must not steal examinations or other course materials.
- d. A student must not allow others, offer to conduct research, or to prepare work for him/her without advance authorization from the instructor for whom the work is being submitted. Under this prohibition, a student must not make any unauthorized use of materials obtained from commercial term paper companies or from files of papers prepared by other persons.
- e. A student must not collaborate with other persons on a particular project and submit a copy of a written report, which is represented explicitly or implicitly as the student’s individual work.
- f. A student must not use or give any unauthorized assistance in a laboratory, at a computer terminal, or on fieldwork.
- g. A student must not submit substantial portions of the same academic work for credit or honors more than once without permission of the instructor to whom the work is being submitted.
- h. A student must not alter a grade or score in any way.

2. Fabrication

A student must not falsify or invent any information or data in an academic exercise including, but not limited to, records or reports, laboratory results, and citations of the sources of information.

3. Facilitating Academic Dishonesty

A student must not intentionally or knowingly help or attempt to help another student to commit an act of academic misconduct.

A student is responsible for taking reasonable precautions to ensure his or her work is not accessed by or transferred to another individual wherein it may then be used to commit an act of academic misconduct.

4. Interference

- a. A student must not steal, change, destroy, or impede another student's work. Impeding another student's work includes, but is not limited to: the theft, defacement, or mutilation of resources so as to deprive others of the information they contain.
- b. A student must not give or offer a bribe, promise favors, or make threats with the intention of affecting a grade or the evaluation of academic performance.

5. Plagiarism

A student must not adopt or reproduce ideas, words, or statements of another person without appropriate acknowledgment. A student must give credit to the originality of others and acknowledge indebtedness whenever he or she does any of the following:

- a. Quotes another person's actual words, either oral or written;
- b. Paraphrases another person's words, either oral or written;
- c. Uses another person's idea, opinion, or theory; or
- d. Borrows facts, statistics, or other illustrative material, unless the information is common knowledge.

6. Violation of Course Rules

A student must not violate course rules as contained in a course syllabus which are rationally related to the content of the course or to the enhancement of the learning process in the course.

Section IV: Administrative Policies

Student sanctions in the Ferris State University Code of Community Standards Administrative Policies and Procedures specifically include official reprimands, behavioral contracts, disciplinary probation, suspension from the University, or dismissal from the University without opportunity to enroll in the future. In addition, these include the opportunity for other sanctions to be imposed, such as the requirement or reimbursement for damages, loss of special privileges, or participation in campus provided educational programs.

The University considers involvement in the student judicial process to be part of a student's learning experience. Through a system of progressive discipline, it is anticipated that a student will realize the importance of functioning within the University's policies, procedures, and regulations. Though every case involving the violation of University policies or procedures is considered on the basis of the merits in that case, there are some categories of violations for which the anticipated sanction would be suspension or dismissal from the University. Such serious infractions include but are not limited to the distribution of alcohol to minors, distribution of illegal drugs or the use, possession, or distribution of alcohol or illegal drugs that result in a serious safety or health matter for any member of the campus or local community.

Appendix 1c: Architectural Technology and HVACR Course Syllabi

digital arch Graphics

Ferris State University
College of Engineering Technology
Department of Architecture and Facility Management
Arch 102: Digital Architectural Graphics – Section 221, Spring 2014

00.0 General Course Info

00.1 Credits: 4 Hours

00.2 Contacts: 2 Lecture, 6 Studio Hours per Week

00.3 Meeting Time / Location: Swan 212 / Section 221 / M 9:00 – 10:50 , W 8:00 – 10:50, F 8:00 – 10:50

00.4 Faculty: Paul Long

Office: Johnson Hall – Room 220

Phone: (231) 591-2370

Email: paullong@ferris.edu (Paul W Long/FSU)

Office Hours: Monday 15:00 – 16:00 / Wednesday 11:00 – 12:00 / Friday 11:00 – 12:50

The calendar found at the following link, lists when I am generally available to meet for office hours. For your convenience, you can directly book an office hour time slot using this link. I will also use the calendar below to cancel and reschedule office hours as necessary. longp2.youcanbook.me

00.5 Course Prerequisites: ARCH 101, ARCH 112

00.6 Course Description: Introduction to the use of digital graphic media as tools of architectural design, representation and documentation. Includes 2-D documentation and 3-D modeling and rendering techniques

00.7 Student Learning Outcomes: Students satisfactorily completing this course will:

1. Apply digital graphic techniques and theories of visual communication to create professional architectural presentations.
2. Demonstrate the application of fundamental concepts, commands and tools of varied two-dimensional and three-dimensional software packages.
3. Create architectural drawings using a variety of digital techniques and methods.
4. Create architectural models utilizing digital fabrication technology and techniques.

00.8 Course Format: This course will be a combination of lecture and studio/lab time. Each class period will typically begin with a lecture to present technical knowledge and skills through a computer presentation. Following the lecture the students will be asked to complete a brief in-class exercise which will cover the skills and topics discussed in class that week. These pass/fail exercises will allow the student to learn, experiment, and make mistakes while the instructor is present to answer questions. Following the in-class exercises a homework assignment will be given which will allow the student to develop further the skills learned in each class or over the course of the semester.

00.9 Course Website: We will be using Ferris Connect for this course. It has an email function within the course site that allows me to easily and readily contact members of the class and for you to communicate with me. I check my email regularly during the week and it is generally the best way to contact me. Please get in the habit of checking your email regularly also as I will send you notices and reminders, etc via Ferris Connect and email.

Reference materials, mandatory supplemental readings, assignments, professor messages and other information will be provided in class and/or via Ferris Connect. Additional course materials may, at my discretion, also be provided on the on the network L: Drive folder for this course.

During the semester I will maintain a **Tumblr** page, a **Google+** Community, and multiple **Pinterest** pages associated with the course. On these pages I will post inspirational and example images associated with the course content and architecture in general. These sites can be found at the following:

Google+ Community - <https://plus.google.com/u/0/communities/105949205405483234231>
General Inspiration - <http://arch102.tumblr.com/>
Digital Arch - http://pinterest.com/long_pw/arch102-digital-arch-graphics-inspiration/
Architectural Models - http://pinterest.com/long_pw/arch-models-inspiration/
Laser Cutter Inspiration - http://pinterest.com/long_pw/laser-cutter-inspiration/

01.0 Course Materials

01.1 Required Textbooks:

1. GYNCILD, B. (2012). *Adobe Photoshop CS6: classroom in a book*. Berkeley, Calif, Adobe Press/Peachpit.
2. (2012). *Adobe indesign cs6 classroom in a book*. Indianapolis, Adobe press.
3. EIDLER, D. R. (2010). *Digital drawing for designers: a visual guide to autocad 2011*. New York, Fairchild Books
4. WILLIAMS, R. (2008). *The non-designer's design book: design and typographic principles for the visual novice*. Berkeley, Peachpit Press.

01.2 Additional References / Readings: Additional course references and required readings will be provided as necessary.

01.3 Required Materials and Supplies: Access to: Adobe Photoshop CS6, Adobe IndDesign CS6, Adobe Illustrator CS6, AutoCAD 2013, Sketchup 8, and Rhino 3d v4.

USB flash drive, backup storage device, note taking material, digital camera, sketchbook, drafting equipment from ARCH 101, and model making supplies.

Materials provided by the Architecture and Facility Management Department may include, but are not limited to, plotters, printers, scanners, laser cutters, foam cutters, digital camera, digital video cameras, and basic model making tools.

01.4 Additional Required Supplies: During the course of the semester students will be required to acquire additional model making supplies which may include, but are not limited to, the following:

- Sketchbook and drawing materials
- Model making supplies and tools – Plexiglass, Taskboard, Basswood, Foam core, Chipboard, Illustration board, Small saws, Scissors, Push pins, Casting resin, additional glue(s), plaster, molding rubber, concrete, etc.
- Drawing tube, etc.
- Access to digital camera

02.0 Assessment

02.1 Grades: Student evaluation in a creative discipline is subjective by definition. In this course student performance will be evaluated on both process and product. Both improvement and growth are important and in many cases the process a student undertakes in developing a creative work is seen as equally important, or perhaps more important, than the end result. In this syllabus I have established a general indication of my expectations for the class, but ultimately much of the course assessment will be based on my professional experience and opinion as a licensed architect and professor (Pastre, 2012). In a class such as this, assessment is not a quantifiable, exact, mathematical measure. **It is based on experienced judgment of a student's work with the following general criteria taken in to consideration: (1) strength of idea; (2) articulation and development; (3) technical competency, clarity, and craft; (4) concise verbal/written presentation; (5) passion, commitment, dedication and work ethic (Tsubaki 2007).**

Most assignments will be assigned a point value and generally grades will be determined according to a point system. The final grade will be based on the % of the total possible points attainable in the course. We will not know the total points possible until the end of the course; however, you can calculate your % score on each assignment and have a sense of your performance.

02.2 Point Breakdown:

EVALUATION ACTIVITIES	% of Final Grade
Participation/Attitude/Attendance	10%
Excessive absences will result in failure of class (See attendance policy below)	0 to -100%
In-Class Exercises (Missed In-Class Exercises cannot be made up)	10%
Homework Assignments	20%
Class Projects	60%
TOTAL	100%

02.3 Assignment Weighing: Grades for this course will be proportionally weighted across the term in accordance with the chart above. It will be beneficial to get off to a good start and to work consistently throughout the course. As long as all assignments are completed on time, it is not possible to ruin, or save, one's course grade on any single project. The grade will reflect a whole semester's work (Pastre, 2012).

02.4 Grievance Procedure: If students feel that an awarded grade is not accurate, they may dispute it by submitting a written explanation together with any marked material, as applicable, to the instructor within two weeks of receiving a grade for the work in dispute.

02.5 Grading Criteria: The following may be some of the methods of assessment for this course: class projects, assignments, in-class exercises, critiques, exams, homework, participation, class presentations, term project and quizzes. The professor reserves the right to utilize other methods of assessment at his/her discretion.

Grade consideration will be based on the completion of all assignments, class participation, and studio/lab time. Assessment of assignments, projects and papers will take into consideration the following:

- Technical Accuracy (i.e. drawn accurately, meets project objectives, follows written and oral instructions)
- Graphic Criteria (i.e. professional appearance, sheet layout and composition, legibility – definition and contrast of lineweights, linework and lettering quality)
- Aesthetics (i.e. artistic quality)
- Attention to Detail and Adherence to Assignment Parameters
- Concept Development
- Craftsmanship
- Development of Ideas
- Originality and Creativity
- Professional Presentation of Materials (i.e. spelling, punctuation, cleanliness, presentation)
- Satisfaction of Learning Objectives
- Technical Accuracy/Technique

02.6 Effort vs Product: Assessments will be based primarily on student's work, rather than effort expended. Students are expected to acquire knowledge and skill, not merely endeavor to do so. Furthermore, each student will be measured against a common standard, meaning that students entering the course with lesser skill or knowledge may have to work harder to achieve the same grades as their more accomplished colleagues. Since grades will not be internally regulated by a performance standard (e.g., a bell-curve grade distribution), there is no predetermined grade pattern for the course: there may, for example, be no A's—or all A's (Pastre, 2012).

02.7 Grading Sheets: The purpose of grading is to measure student accomplishment against the purpose and requirements of the course. Evaluations will be distributed at intervals during the semester and will indicate performance according to the stated criteria of evaluation. Students are expected to use this system to monitor and adjust their performance and to seek additional support from the professor, as appropriate.

In some cases, but not all, grades will be calculated using a grade sheet that shows the assignments, the criteria of evaluation, their respective weight, and each student's performance. These will be periodically available to students. Students who do not understand the grade sheet, or who take issue with the grades as posted, should consult with the professor within one week of the respective posting, after which time it is agreed that students are in accord with the professor's evaluation (Pastre, 2012).

02.8 Breakthrough Factor: By stating the grading criteria, by delineating the weight accorded to each criterion, and by making regular evaluations available to the student, the professor endeavors to make the evaluation process as open and objective as possible. However an additional '**breakthrough factor**' may be applied to the final grade, the purpose of which is to reward students who demonstrate remarkable improvement in their work over the course of the term, which would not otherwise be recognized by this system. The breakthrough factor is awarded at the discretion of the professor, allowing a half-letter grade modification, and is thus weighted at 5% of the final grade. It is typically awarded to only a small percentage of the participants and is effective in changing a grade only in borderline situations (Pastre, 2012).

- 02.9 Final Grades:** Your final grade will be based on an evaluation of three primary categories: (1) Your attendance and full participation in all classes, assignments and activities, (2) the consistency, intensity and depth of your effort, level of investigation and development and the continual refinement of your ideas and the projects, and (3) your comprehension of all material and design concepts presented and the quality (technical proficiency) and craft of your work (Tinucci, 2012).

Other factors contributing to grading include daily progress and ability to manage time, sketchbooks, student-professor dialogue, participation in class-wide critiques and discussion, and individual growth. Computer issues and output problems will not be accepted as a valid excuse for failure to submit digital work or to pin-up. Your work will be evaluated on an on-going basis throughout the semester so if you have any questions concerning your progress, grade, or other course issue please feel free to ask for a meeting with your professor (Tinucci, 2012).

- 02.10 Grading Systems Adjustments:** The purpose of articulating a detailed evaluation process is to make grading as objective as possible; thus to empower students to understand and earn the grades to which they aspire. It is not the intention of such a system to be used against learning or fairness. Consequently, the professor reserves the right to make adjustments to the stated course structure to account for circumstances that were unforeseen when the course was designed. It may, for example, be advantageous to add or alter assignments or their criteria, or to modify criteria or project-weights, if it becomes evident that it is in the best interest of learning and fairness to do so (Pastre, 2012).

02.11 Grade Breakdown:

A (90 – 100): Excellent – work of excellent quality, energy, and intense involvement, outstanding. Excellence shown in most areas of evaluation, high competence in others. This is superior work that goes beyond the professor's requirements and shows the student's initiative. It demonstrates the student's commitment to learning with mastery of the course concepts, communicated in a flawless, professional manner. A conscientious, energetic, sustained work effort is required for an "A."

B (80 - 89): Above Average – most work of high quality, energy, and involvement. High competence shown in most areas of evaluation, competence in others. This work is above average. This work is complete, well written, and shows good understanding with few shortcomings. This is good work in many ways and the student should be encouraged by this grade. Mastery of the student learning goals in the syllabus represents "B" work.

C (70 - 79): Average – minimum work completed and submitted on time, but without distinction. Failure to fulfill all course requirements with competence. (Competence: the answering of all requirements; adequate fitness, ability, capacity; sufficient for the purpose.) This work is average work. It meets the assigned requirements but shows a need for improvement in several areas of the course. It indicates a moderate basis upon which the student is encouraged to improve upon all subsequent work.

D (60 - 69): Below Average – Minimal effort with minimal results, poor but passing. Less than competent work shown in one or more areas of evaluation. One or more requirements lacking and/or sub-standard quality. This work typically does not meet the assigned requirements and shows a need for improvement in a majority of categories. Often poor communication and presentation performance will reduce acceptably prepared technical work to this level. The student should respond to a "D" status as a need to significantly increase work performance and graded elements, which is almost always possible.

F (Below 60): Substantially incomplete work and/or work of an unsatisfactory quality. This work is failing work. It does not respond to the assignment needs. It is often incomplete; ill prepared, poorly organized, and violates the rules of grammar and presentation. Plagiarized work, no matter how impeccable, is failing work and will be so judged. The student should respond to an "F" status as an immediate need to improve course work drastically.

INCOMPLETE: Passing but incomplete for reasons deemed acceptable by the professor. Work is left incomplete at the end of the semester due to circumstances BEYOND the student's control. Incomplete work will be awarded at the sole discretion of the professor and only in rare and specific circumstances. Additional information regarding the policy covering incomplete work can be found at the following:

<http://www.Terris.edu/HTMLS/administration/academicaffairs/policyletters/01-6-Incomplete-Grade.pdf>

03.0 Course Policies

03.1 Attendance: College work proceeds at such a pace that regular attendance is necessary for each student to obtain maximum benefits for instruction. Regular and punctual attendance at all class and studio/laboratory sessions is a student obligation, and each student is responsible for all the work, including tests and written work, in all class and studio/laboratory sessions. No right or privilege exists that permits a students to be absent from any given number of class or laboratory sessions; however, it is recognized that at times students have valid reasons for missing classes (Pastre 2012).

Attendance is mandatory at all course meetings (including any classes meeting in the field) for the full duration of the session. It will be your responsibility to satisfactorily complete any and all studio assignments. Active participation in any class discussions, critiques, or reviews is required. Full participation in studio discussions is essential and therefore will be considered in final evaluations. The ATFM Film and Lecture series is considered an extension of the course offerings and attendance at certain events will also be mandatory (Tinucci, 2012).

It is expected that you attend class for the entire class period. Appropriate class attendance includes being on time, taking notes, coming prepared, and being attentive (See Ferris State University – Code of Student Community Standards, 2010-2011).

Attendance is a primary requirement of this course. Since the majority of course information is delivered in lectures and studio sessions, absence from class meetings will place the student at a significant disadvantage in this course. **Two unexcused absences will result in a full letter grade reduction of the semester's final grade, and each additional unexcused absence, after the first two, will result in an additional letter grade reduction. Students missing more than 15% of the course will automatically fail the course.**

Attendance will be taken at the beginning and the end of class. **Late arrivals or early departures will be counted as absences i.e., students who are tardy or leave early may be marked absent.** Anyone arriving late for scheduled pin-ups or critiques will be considered absent and may not be allowed to present (Tinucci, 2012). Students will be asked to sign-in on the attendance sheet at the beginning of class and sign-out when they leave. This sign-in sheet will constitute the attendance and if a student fails to sign-in while attending class they may still be considered absent. Only medical, university institutional travel, and prearranged absences with the professor's prior approval will be accepted as an excused absence.

In this class, preparing yourself for your chosen profession is expected to be your number one priority. In addition to educating yourself about your profession, you should be developing professional work habits. **Missed in class work such as in-class exercises and quizzes will not be allowed to be made up.** Absent students are responsible first, for contacting fellow students for missed homework assignments, notes, handouts, etc and second, the professor during posted office hours. Work from a missed class will be due as assigned in class unless noted otherwise. The professor will be available during office hours to answer questions but will generally not take time away from other students during class to re-teach material from a previous course for those who have missed.

Much of the grade for this course, up to 20%, is primarily based on attendance in class, i.e. In-Class Exercises – 10% and Participation – 10%. This is a very hands-on course and If you are not in class you will not be learning the required course material. If you are to succeed and be successful in this class it is essential that you attend.

- 03.2 Assignments/Late Work:** There will be a lot of work to do in this course. It is strongly suggested that you do not get behind. We will be learning multiple computer programs and skills and moving very quickly. You will have very little if any time to catch up if you get behind. Make sure your priorities allow you to keep up with your work. If you cannot keep up and are spending sufficient productive time outside of class and within class, and are still falling behind, discuss this matter with your professor.

Assignments and exercises (including desk crits and pinups) are due at the beginning of the class period. If you miss class for any reason, assignments are still due as schedule unless prior arrangements are made with the professor. In case of an excused absence, you may need to arrange to turn your assignment in early. Bring your work to class complete **ON THE DATE IT IS DUE**. Generally, there will not be time during the class period when the work is due to complete it unless announced otherwise by the professor. Work turned in after the beginning of class or improperly prepared work will be considered late.

You are to turn your assignments via Ferris Connect or as noted by the instructor. Specific procedures for turning in digital files will be discussed on the first day of class. Assignments are to be named per the following:

- Homework Assignments: Last_First_HA#x_XXX
- In-Class Exercise: Last_First_IE#x_XXX

Example for Sketchup In-Class Exercise #1 and AutoCAD Assignment #1:

- Long_Paul_IE#1_Intro to Sketchup
- Long_Paul_HA#1_CAD Chpt#1

Assignments not turned in using the proper protocol and naming procedures will **NOT** be accepted until turned in correctly and will be considered late. It is very important that you follow this naming procedure exactly.

Deadlines must be maintained. Late work will receive one full letter grade deduction. **All late work is due no later than one week after it was originally due, after which point it will NOT be accepted. Midterm and Final Project deadlines are mandatory – no exceptions.**

Assignments will typically be given in class and may, at my discretion, be available on Ferris Connect or the L: Drive in the Professor's folder. **In many cases assignments will be written on the board at the end of each class period. In such cases, it is the student's responsibility to write down each assignment for their own use or get them from a fellow student.**

- 03.3 Class Behavior:** Students are expected to assist in maintaining a classroom environment (during or after hours within the studio environment) that is conducive to learning. In order to assure that all students have the opportunity to gain from time spent in class. Unless approved by the professor, students are prohibited from engaging in activities unrelated to the course in lab/studio (Tsubaki, 2007).

Disruptive behavior, vulgar language, profanity, sexual innuendo and/or harassment, safety violations, horseplay, use of any tobacco products, etc. will not be tolerated in the classroom or laboratory/studio. In the lab/studio students are not permitted to wander about the lab/studio or compare their results with others without prior permission from the professor. Work only with your partner(s) if assigned. No eating or drinking is permitted in classrooms or laboratories per college and department policies. All cell phones must be turned off during lecture and lab periods.

Classroom policy is structured to mirror and anticipate expected professional conduct and the students' appearance and conduct will be expected to meet these standards. As professor I take very serious what we are learning and will expect the same of you. We are here to learn and work. We are not here to play. Much of your architectural education is learning to be a professional and I will expect you to act accordingly at all times as if you were in a professional work place or firm.

03.4 Collaboration: While a majority of the work completed for this course will be done individually, students will at times be asked to collaborate with other, including the professor. To collaborate in the highest sense means to put the collective ahead of individual self interests. Collaborators strive to achieve a work that results from synchronized group effort, where each member contributes, not the same work as others, but according to each person's best attributes (Pastre, 2012)

03.5 Course Communication: Learning to communicate effectively and appropriately is an important aspect of a professional architectural education. Outside of scheduled class and office hours, email will be the most effective method for you to communicate with me as I am rarely in my office to answer my phone. I will primarily respond to emails during my scheduled office hours, and while I may occasionally respond to emails outside these times or on weekends, it should not be considered expected nor the norm. I will not respond to emails that do not include a proper greeting and salutation ex. 'Dear Professor Long,' and 'Thank you, John Doe.' Failure to include a proper greeting and salutation is both unprofessional and disrespectful.

Texting is likewise not an appropriate form of professional communication. While I may release my personal phone number in rare circumstances, I will not respond to texts related to course material.

03.6 Course Schedule: Over the course of the semester long investigation, we will explore the ideas of visual communication, architectural language, and the design process. As a truly rigorous design process investigates any and all options," the nature of this course will be iterative as well as we investigate architectural design and visual communication. To facilitate this investigation, the schedule for this course is purposefully left vague and open. This provides great freedom to explore and further investigate a variety of topics we may find interesting over the course of the semester. In general the course will include a number of key milestones including a Midterm Project, a Final Project, and a special project related to an exhibition at the Rankin Gallery showcasing student work (October 22th – 27th).

This course will include open studio, lectures, desk critiques, field trips, regular assignments, periodic presentations, etc. In many cases, the schedule will be day to day, based on the progress of the class as a whole. Research components are conducted simultaneously with design development. Expect to spend a significant amount of time working on your assignments outside of class time. If class contact time is 8 hours per week, the outside of class work time expected is an average of 3 times contact time or 24 hours per week. It is strongly suggested that you get into the habit of working in the studio after hours. Experience has shown that students who work in studio after class hours on a regular basis have a greater degree of success in the course because they can discuss, clarify, and exchange ideas and methods with colleagues (Tsubaki, 2007).

03.7 Digital Technology: Use of cell phones for calls and text messaging during class is NOT allowed. **If the professor sees a cell phone being used or hears a cell phone during class you will receive a deduction of 2 participation points i.e., 2% of your grade.** In extenuating circumstances, it may be acceptable with prior permission to have your phone set to vibrate and in an emergency quietly get up and walk out of the classroom to answer the phone. If cell phones are abused in class the professor reserves the right to have all students turn their phones in, at the beginning of class at a designated location, to have them returned after class is over. If a student repeatedly abuses the course cell phone policy they will be asked to leave class.

IPADs, tablet computers, e-readers, laptop computers, gaming devices, etc. are not allowed except in extenuating circumstances and at the professor's discretion. iPods or other digital music players will only be allowed during lab/studio periods at the professor's discretion. Anyone using a digital device during lectures will be asked to leave class. All note-taking during lectures is to be done by hand only.

- 03.8 Exams and Quizzes:** Exams will be given at times listed in the class schedule or as announced in class. All exams are cumulative. The final exam will be given at the time determined by the University during finals week. Quizzes may be given at any time during the course as required by the professor. No advanced notice will be given for pop quizzes and all quizzes will be given during a regularly scheduled lecture period.
- 03.9 Saving Work:** It is the Student's responsibility to save his or her own work. If computer related, multiple copies should be saved and verified prior to leaving the classroom. The teacher is in no way responsible for the work saved on the hard drives, nor is he/she bound to give an extension on work improperly saved. The computer hard drives may be purged regularly or without warning. It is strongly recommended that you do not work directly from a flash/jump drive on your computer. Rather, you should copy your files directly to the computer you are working on and work on them directly from the computer itself. Working directly from a flash/jump drive is unstable and in doing so you run the risk of corrupting or losing files. It is also the Students' responsibility to regularly save and back up their work. Lost or corrupted files are not an acceptable excuse for not turning work in on time.
- 03.10 Studio Culture:** The studio pedagogy is built around a collaborative approach to the project: the collaborative effort is between faculty and students, and among the students themselves. Desk crits, pin-ups, and impromptu discussions are part and parcel of the studio work and require active participation from everyone in the studio. The development of the student's project may involve all of the following: hand drawing, sketching, a slew of software applications, and extensive physical model-making. We will spend a lot of time talking about projects, ideas, and architecture in general. This on-going discussion is one of the key components of the studio pedagogy and we will expend real effort to develop an atmosphere that is conducive to the enthusiastic exchange of ideas. The objective is to create and sustain a studio atmosphere that encourages inquiry, investigation, exploration and experimentation. But inquiry, investigation, exploration and experimentation that is backed up by rigor, discipline and hard work.

The most important teaching space is the studio. The learning that happens there only takes place when the student is present and actively participating in the daily exchange of ideas. Faculty are present in the studio for 8 contact hours per week and in order to take advantage of their instruction the student must be available and paying attention to the studio discussions.

Class hours are time for working at your desk. Run errands and take care of personal business outside of studio time. This includes taking care of university business. Buy the supplies needed for work before you come to studio. During studio is not the time to check your email, send text messages, or chat on the phone. You should be in your seat and working on your projects.

The studio environment should be supportive of serious work. Concentration and focus are absolutely necessary for the work done there so each of you should respect the others' right to a positive studio atmosphere. Any device at odds with this mandate is forbidden. Simply, work together and respect each other (Tinuci, 2012).

For further discussion of architecture studio pedagogy, students are asked to please read the following:

<http://www.arch.calpoly.edu/programs/documents/syllabi/first-year-syllabus.pdf>

03.11 Studio Format: Studio will be taught, primarily in individual studios, with the largest portion of class time dedicated to individual desk critiques. In addition to one on one studio critiques, there will be frequent workshops, reviews, group pin-ups, and group discussions treating various topics as needed (including any required readings). There will be site visits and area field trips that are a required component of the studio work. Although based in the studio space, instruction may also be given in the ATFM model shop, digital center, Flite Library, various other buildings on campus, museums, on-site, in the field, and/or other relevant venues (Tinuci, 2012).

Students are expected to come prepared to discuss their work at the beginning of class. On days dedicated to desk crits, a meeting schedule will be developed and made known to the students at the beginning of class. If students are not ready or prepared at their scheduled time, they will be skipped and will lose points for the day. It will not be acceptable for students to be away from their desks gathering their work, plotting, etc. during class. It is the student's responsibility to be prepared at the beginning of class, not sometime during class.

03.12 Studio Maintenance: The appearance of the studio tells of the attitudes of those who use it. While studios are inherently spaces of energy, creativity, and some form of chaos, they also represent professional workplaces. It is expected that the studio be maintained with level of professionalism at all times which would be found acceptable by visiting critics, administration, or members of the public. It is NOT ACCEPTABLE for there to be trash strewn about the studio, discarded food, empty soda containers, material from other courses, etc. Abuse of the studio will result in loss of the privilege of using the studio i.e., there will be shorter hours the studios are open after classes. The condition of the studio will be regularly evaluated by the professor. **Failure to maintain the studio will result in a loss of one or more letter grades on your final grade.** To help maintain the studio please follow these guidelines:

- Clean up after yourself
- Wash your drafting table
- Place all trash in the waste baskets
- No food or drink at computers
- Put reference materials, samples etc. away
- Inform professor of broken equipment or malfunctioning computers.
- Protect drafting table cover with a piece of cardboard or masonite prior to using colored markers or glue
- Protect drafting table cover with a cutting board prior to using an X-acto blade.
- Aerosol paints, spray glues, super-glues, or fixatives, etc. must not be used in the studio. **Violators will lose a minimum of one letter grade on the overall grade and the student may FAIL the course at the professor's discretion depending on the level of infraction.**
- **Cutting on, or damaging, the Borco and/or desks will result in a minimum of one letter grade deduction on the final grade and the student may FAIL the course at the professors discretion depending on the level of infraction**

03.13 Syllabus Changes: Reading the Syllabus is the student's responsibility. Changes to the Syllabus are at the discretion of the professor and can be made at any time. Students will be made aware of changes to the course syllabus through email, Ferris Connect or announced in class. Missing class is not an acceptable excuse for being unaware of changes made to the syllabus.

04.0 Other

- 04.1 Accommodations for Students with Disabilities:** Reasonable accommodations will be made for students with documented disabilities. In order to receive accommodations, students must obtain a letter of accommodation from the office of Disability Services. Disability Services is located in Starr 313, (231) 591-3057, or disabilities@ferris.edu. Additional information can also be found at:

<http://www.ferris.edu/HTMLS/colleges/university/disability/homepage.htm>

- 04.2 Integrity / Academic Honesty:** Ferris State expects students to maintain high standards of academic integrity. "Students preparing for the practice of a profession are expected to conform to a code of integrity and ethical standards commensurate with the high expectations society places on practitioners of a learned profession." Students are required to develop their own work independently unless allowed to work together by the professor. Copying of another person's work, in whole or in part, or cheating in any form will deprive the student of a proper learning experience and will not be tolerated. All reference sources must be properly cited using APA Style guidelines. Tracing of drawings or parts of drawings, and copying of papers, computer graphics, etc. from others (including the internet) is strictly prohibited unless approved by the professor. If a student does copy or cheat, at the professor's discretion, automatic failure of the assignment, test, or of the course will occur. More information can be found in the student handbook and at:

http://www.ferris.edu/htmls/colleges/artsands/DeptLink_desc.cfm?DeptLinkID=53&DepartmentID=3miscconduct

- 04.3 Other Resources:** Students should familiarize themselves with the University regulations and academic requirements in the Code of Student Community Standards which can be found at:

<http://www.ferris.edu/HTMLS/administration/studentaffairs/studenthandbook/>

- 04.4 Religious Holidays:** It is the responsibility of the student to notify the faculty in writing during the first week of the semester of their intention to be absent from class on their day(s) of religious observance. Requests for absence to participate in religious activities, other than recognized religious holidays, are not recognized by the University as excused absences. Upon formal notification, the faculty will excuse the student from class, labs, clinics for the holiday(s) and allow the student to make up missed exams; however, the student is responsible for completion of all missed work within a reasonable time as determined by the faculty. If a student disagrees with the faculty member's determination, the student may make a written appeal to the dean of the student's college. The decision of the dean is final.

Please see Ferris State University Academic Affairs Policy Letter regarding religious holidays dated November 12, 1999.

<http://www.ferris.edu/HTMLS/administration/academicaffairs/policyLetters/religHol.htm>

- 04.5 Safety:** This class will rely heavily on model fabrication at various scales. Student safety is a primary concern of both mine and the University and as such the smart use of all tools is imperative. Students are to review and follow the safety procedures below. If a student has a concern or question regarding the use of a tool or general safety of the lab, please inquire of the professor or other University official immediately.

Lifting—Safe Work Procedures: Lifting heavy loads requires techniques for which the simple tasks of daily life do not prepare us. Poor lifting techniques frequently produce injuries ranging from smashed fingers to crushed toes to debilitating back injuries. Avoid these by:

1. Considering the lift before you make it.
 - a. Is the lift within your capability?
 - b. Would you do better with a helper, a lever or a dolly?
 - c. Can you stage the lift to occur in the zone between your knees and your shoulders, the zone where you will have the most strength?
 - d. If two or more people are lifting a load together, they must coordinate their movements in advance!
 - e. Will you need to prepare blocks or skids on which to set the load in order to avoid crushing your fingers?
 - f. If the load proves to be too great, can you set it back down without harming the object or yourself?
 - g. Do you have appropriate shoes for the task? (Hint: not flip-flops!)
2. Be sure you have a firm surface to stand on and remove any clutter from the path you will be traveling.
3. Lift with your legs, because your strongest muscles are in your legs.
4. Keep your back as straight as possible during the lift. Tucking your chin towards your chest is a good way to insure this.
5. Keep the load close to your body during the lift. Carrying a weight away from your body puts great strain on your back.
6. Lift with your feet spread apart and one slightly behind the other, so you can maintain your balance.
7. If you must turn while carrying a load, turn with your feet, never by twisting your back!

Gluing—Safe Work Practices: Because super glue, and other adhesives, are so effective, it is essential that you do not apply them to the wrong surfaces!

1. Do not squeeze on a bottle that is sealed shut! The bottle could burst open and spray glue everywhere. Instead open the nozzle with a pin.
2. Keep glue spatter out of your eyes: wear goggles!
3. If you get super glue in your eyes flush them immediately with water, then see a doctor. You may need antibiotic eye drops to prevent infection.
4. If you glue your skin to itself or to another material, do not tear the glue seam apart. Instead, dissolve the super glue with acetone (or lacquer thinner).
5. Super glue that dries on the skin will naturally wear away over a period of days.
6. Clean up spills by dabbing with a rag. If you wipe aggressively the rag may become bonded to the surface!
7. Work in a well ventilated area. Super glue and many other adhesives give off solvent fumes.

X-acto and Utility Knife Work Practices: The tricky part of using X-acto knives and utility knives is to avoid cutting yourself. These simple tools are frequently misused and many emergency room visits result.

1. Rest the piece being cut on a firm hard surface, never on your lap or in the palm of your left hand.
 - a. Always work with a sharp knife.
 - b. Keep the blade covered when not in use or when in storage. This will protect both you and the sharpness of the cutting edge.
 - c. Always have extra blades on hand. You will typically need them in the middle of the night.

- d. Preserve your blade's sharpness by cutting on soft, sacrificial surfaces, like plywood, chipboard or vinyl cutting mats, never on the Borco or hard melamine work table surfaces. **Cutting on, or damaging, the Borco and drafting tables will result in a minimum of one letter grade deduction on the final grade and the student may FAIL the course at the professors discretion depending on the level of infraction.**
2. *On thick or resistant material, cut with multiple passes or switch from an X-acto knife to the heavier duty utility knife.*
3. Remember: the more force you use pushing the knife, the less control you have over the cut. Rather than applying excessive force to your knife, cut your material with a saw.
4. When cutting along a straight edge, take care that the knife blade remains parallel to the straight edge for the entire length of the cut. This is not a natural motion; the hand would prefer to travel in an arc. If the knife is allowed to tilt towards the straight edge, it can deflect the straight edge or even skip up over the straight edge!
5. When cutting, the left hand is normally used to secure the work piece. Just take care to keep your left hand out of the path of the cut!
 - a. Before making a cut, it often helps to "rehearse" your cut to both confirm that you have enough room to make the cut, and give your hand eye coordination a chance to prepare.
6. Discarded/used blades are just as dangerous as blades in use.
7. Discarded blades should be wrapped/contained in such a way as to not have the blades exposed once they are placed in the garbage can.

(Adapted from: <http://iitcoa3rdyr.wordpress.com/safety-procedures/>)

04.6 Student Complaints: Ferris State University is committed to assuring a supportive process that invites student feedback in a manner that promotes a positive learning environment. Students should follow established policies and procedures to resolve their complaints. Students should first express a concern to the individual closest to the problem who has the ability to remedy the situation. For example, if the concern relates to a course, the professor is the appropriate first step. If the concern relates to advising, then the advisor should be contacted. If the student does not know who to contact, s/he may contact the Dean's office of the college to get guidance on where to express the concern. The process for resolving student complaints is as follows:

Step 1 – Direct discussion with professor, advisor, or other appropriate individual

The first step is for the student to discuss the concern/complaint directly with the individual who is closest to the issue or with whom the student has a concern. Students are encouraged to talk with this person as early as possible. The complaint does not need to be in writing at this stage of the process. Many situations can be satisfactorily addressed, or misunderstandings clarified, at this level. When this occurs, no further action is required. The student is advised to record the date when s/he approached the individual with whom there is a concern to resolve the problem, as this information will be required at later stages of the process.

Step 2 – Department Head/Director Review

This step must involve the first level of administration above the individual against whom the complaint is filed, hereinafter referred to as the Department Representative. In the event that a concern/complaint cannot be adequately addressed through direct discussion at step 1, the student may take another step by contacting the department head or director of the program area. At this step, the student must submit a written statement to the Department Representative. Whenever the complaint is received, the Department Representative is expected to assure that the student has made an effort to resolve the problem with the individual with whom s/he has a concern. Additional, and more detailed, information may be found at the following:

<http://www.ferris.edu/HTMLS/administration/academicaffairs/policyletters/Student-Complaint-Policy.pdf>

04.7 Student Responsibilities: Students are responsible for adhering to university policies including, but not limited to those found in the Ferris State University's Code of Student Community Standards (Student Handbook) 2011-2012 and the Ferris Course Catalog 2011-2012.

As a Ferris State University student, you will be an active learner:

- It is expected that you attend class. Appropriate class attendance includes being on time, coming prepared, being attentive and actively participating in class discussions.
- It is expected that you study. Studying is an intentional, deliberate act requiring hard work. This includes seeking out the various resources designed to help you be academically successful.
- It is expected that you will treat your professors and fellow classmates with courtesy and respect.
- It is expected that you will be ethical in your scholarship and will practice academic integrity. This includes properly crediting others for their ideas that you may find useful.

(Ferris State University – Code of Student Community Standards, 2010-2011)

Assistance in this course is available to help you with academic and other difficulties you may be experiencing. It is your responsibility to seek help. There are a variety of options available to the students who wish to improve their academic skills; the Collegiate Skills Center, the Writing Center, and Student Development Services can all provide information and assistance to you throughout the year. You are encouraged to seek out these resources if you have problems. You are also encouraged to discuss any problems with the Professor as soon as possible. The last week of the semester is not the time to reveal serious learning/writing problems. Other resources for seeking help may include:

- Office hours – I will be happy to work with you during regularly scheduled office hours.
- Pre-scheduled assistance outside of normal office hours (as my schedule permits).
- Meet with your Academic advisor.
- Meet with an educational counselor. College Educational Counselor – Mike Ropele, 231-591-2890 - JOH 200
- The Academic Support Services Center offers free tutoring and assistance for test anxiety, study skills, writing skills, exam preparation, content reading, personal growth, and classroom skills. The Center is located in Room 1017 of the Arts and Sciences Commons Buildings and they can be reached at 591-3543.

04.8 Student Work: Ferris State University, the College of Engineering Technology, and the Department of Architecture and Facility Management reserve the right to retain, exhibit, and reproduce work submitted by students. Work submitted for grading as part of a course is the property of the College and will remain so until it is returned to the student.

**FERRIS STATE UNIVERSITY
COLLEGE OF ENGINEERING TECHNOLOGY
ARCHITECTURE AND FACILITY MANAGEMENT
COURSE SYLLABUS**

FALL 2013

COURSE: ARCH 112 - STRUCTURAL MATERIALS, SYSTEMS, & CODES

INSTRUCTOR: Mary Brayton
OFFICE: 302 Johnson Hall
PHONE: (231) 591-3584
HOME PHONE: (231) 592-0570
E-MAIL: braytonm@ferris.edu
OFFICE HOURS: MF 1:00 - 1:50 PM, TR 3:00 – 3:50 PM, other times available by appointment.

COURSE DESCRIPTION:

Study of properties, characteristics, limitations, selection criteria and graphical interpretation of concrete, steel, masonry, and wood used in foundation, substructure, and super-structure building systems. Considers aesthetic, performance, code requirements, maintainability and cost/benefit aspects. Introduces major building codes, material and industry standards, and utilization of manufacturer's catalogs.

REQUIRED TEXTBOOKS:

Fundamentals Of Building Construction Materials And Methods,

Edward Allen, Fifth Edition.

Exercises In Building Construction, Edward Allen, Fifth Edition – **New**, if you purchase a “used” copy it will be your responsibility to replace the missing pages.

ADDITIONAL REFERENCES: (available on Campus)

International Building Code

Sweets Catalogs (on line)

Manufacturer's Catalogs (on line)

Selected building Plans and Specifications on reserve at the Ferris Library (FLITE), FSU General Services Building, and FerrisConnect.

ADDITIONAL EQUIPMENT/SUPPLIES:

- Sketch pad (5 ½ x 9)
- Colored markers or pencils
- Calculator
- Scissors
- Scale
- Triangles
- Bamboo skewers
- Graph paper (4 or 5 squares per inch)
- Transparent tape
- Craft wire
- Needle nose pliers
- Foam core
- Bass wood
- Glue

STUDENT LEARNING GOALS:

The students will be expected to accomplish the following:

1. To become familiar with the materials studied in each chapter of the text.
2. To do research involving these materials.
3. To analyze alternatives.
4. To develop conclusions regarding the best material(s) to use in a given application.
5. To be able to identify and extract applicable building drawings from a construction document set.
6. To be able to identify and extract applicable information from a project specification.
7. To be able to identify and conform to code requirements.
8. To be able to accurately draw materials and assemblies studied in the course.

Course work will consist of lectures, individual study, material resource research, exercise assignments, field sketches, video summaries, guest presentation summaries, reading quizzes, term project, and tests. Students are expected to read the assigned text prior to the lecture.

Everyone is required to have their own exercise book in which exercises will be completed. Exercises completed on anything else (lined paper, sketch paper, etc.) will not be accepted.

ATTENDANCE POLICY:

Consistent attendance is as important in class as it is in a career job. Lack of consistent attendance will affect your quality of learning and your final grade. Announcements and instructions will be given at the start of each class. Anyone missing more than 2 class periods (5% of the course) will start to lose points. Each day missed beyond 2 days will result in 15 points being deducted from your point total for each unexcused day missed. Only medical and other official university excuses will be accepted as an excused absence. Students who are late will lose points 7 ½ points each time.

Students with a perfect attendance will receive an additional 15 points.

Presentations, quizzes, tests, etc. cannot be made up without a university accepted excuse. Students are responsible for obtaining lecture notes from other students and not the instructor.

An unexcused test absence will result in a "0" for the test. Tests will be returned during class for review and questions. The test will be collected during the class period. Failure to return the test will result in a "0" for the test.

For those with a "University accepted excuse", a test may be taken ahead of time. It is your responsibility to notify the instructor and establish an acceptable time to take the test. No test will be allowed to be made up after it has been reviewed in class.

LATE ASSIGNMENTS:

Exercises are due at the beginning of class. Unexcused late exercises will result in the forfeit of one (1) point per day after the time and date due. (This does not include weekends or holidays). Any work received after the fifth day beyond the due date will not be accepted and will receive a zero (0). Exercises will be returned and reviewed in class and correct solutions discussed.

All other work (assignments, research papers) are due at the beginning of class. 5% of the total points of the assignment will be deducted for each day late. Any unexcused work received after the fifth day beyond the due date will not be accepted and will receive a zero (0).

INDEPENDENT WORK & PLAGIARISM:

All work shall be done on an independent basis, unless specifically assigned as a team project. Copy of another student's work will result in no grade for the assignment.

Integrity of scholarship requires that all academic work be completed by the student to whom it is assigned, for the course in which it is assigned, without unauthorized aid of any kind. (Retrieved June 15, 2010 from University of California, San Diego website, titled *Suggested Academic Integrity Statements for Syllabi*). Students are expected to be ethical in their scholarship and practice academic integrity. This includes properly crediting others for their ideas they may find useful.

By taking this class you indicate that you agree to submit your research papers to an electronic media which will help determine the originality of your work with a report being provided to the professor on plagiarism. (Brayton, E. (2010) CONM 412 *Syllabus*) Papers over 15% matching content will not be accepted.

ACADEMIC DISHONESTY:

Academic dishonesty will result in a grade of no points for the quiz, paper or assignment that it relates to and may result in dismissal of the student from the class with a failing grade and possible expulsion from the University. (See the Honesty Policy in the University Catalog – page 332) Cases of academic dishonesty will be reported in writing to the program coordinator, the college dean, and a referral will be made to the Office of Student Conduct. These policies and procedures will not supersede Board of Trustees policy on student conduct and university disciplinary procedures.

GRADING SCALE:

A	94-100	B+	87-89	C+	77-79	D+	67-69
A-	90-93	B	84-86	C	74-76	D	64-66
		B-	80-83	C-	70-73	D-	60-63
						F	0-59

FINAL TERM GRADE BASED ON:*

10 Reading and Video Quizzes @ 5 Points	=	50 points
Lab assignments and Exercise book review #1	=	90
Lab assignments and Exercise book review #2	=	90
Architectural Resource Assignment	=	20
Product Research Report	=	35
Building Research Term Project	=	160
Field Sketchbook	=	25
4 Tests @ 70 Points	=	280
Final Test	=	100
Total possible points	=	+/- 855 points

*Instructor may add or delete assignments through the course of the semester at her discretion.

Grading Substance:

- A** “A” work is superior work. It goes beyond the Instructor’s requirements and shows the student’s initiative. It demonstrates the student’s commitment to learning with mastery of the course concepts communicated in a flawless, professional manner. A conscientious, energetic, sustained work effort is required for an “A” grade.
- B** “B” work is above average work (contrary to the believers in “grade inflation”). This work is complete, well written, and shows good understanding with few shortcomings. This is good work in many ways and the student should be encouraged by this grade. Mastery of the student learning goals in this syllabus represents “B” work.
- C** “C” work is average work. It meets the assigned requirements but shows a need for improvement in several areas of the course. It indicates a moderate basis upon which the student is encouraged to improve all subsequent work.
- D** “D” work is below average work. It typically does not meet the assigned requirements and shows a need for improvement in a majority of categories. Often poor communications and presentation performance will reduce acceptably prepared technical work to this level. The student should respond to a “D” status as a need to significantly increase work preparation and delivery to improve class performance and graded elements, which is almost always possible.
- F** “F” work is failing work. It does not respond to the assignment needs. It is often incomplete, ill prepared, poorly organized, and violates the rules of grammar and presentation. Plagiarized work, no matter how impeccable, is failing work and will be so judged. The student should respond to an “F” status as an immediate need to improve course work drastically. The Instructor is available to assist the student in developing his or her own personal plan to respond to this status, improve your work, and salvage your course grade.

STUDENT RESPONSIBILITIES:

Your commitment to being a student at Ferris State University begins with a fundamental understanding of and appreciation for the core values of the institution. Ferris recognizes the inherent dignity of each member of the university community and treats everyone with respect. Our actions are guided by integrity, fairness, honesty, and trust. A component vital to the university community is academic integrity, which acknowledges the inherent worth of individual learning (Bulldog values, Ferris State University *Code of Student Community Standards (Student Handbook) 2009-2010*).

1. Attendance is required and will be taken as a source of grading and student interest. A doctor's written excuse or prior arrangement justifies absences with the Instructor only. No makeup tests, quizzes, etc. will be offered for any absence not justified as stated above.
2. Each student will be treated with respect. Each student is expected to respect all others in the classroom. It is the students' responsibility, as a member of the Ferris State University's learning community, to access and abide by the university's policies regarding academic conduct (See Ferris State University's *Code of Student Community Standards (Student Handbook) 2009-2010*). Disruptive students will be removed and only allowed to return at the discretion of the instructor.
3. Uses of profanity or tobacco products in the classroom are not allowed nor are inappropriate messages or graphics on clothing. Inappropriate messages or graphics taken off the Internet are not allowed. This course is designed to introduce the student to the professional world, *and the classroom is the first work environment.*
4. The use of cell phones is not permitted in the classroom. If instructor sees a cell phone being utilized or hears a cell phone during class you will receive a deduction of 10 points. Should it happen a second time, you will receive a deduction of 20 points. If it happens a third time, your cell phone will be taken away, locked up, and returned to you at the end of the semester. If you must have a cell phone for emergency purposes please notify instructor. Calls are to be taken and answered after exiting the classroom.
5. There are a variety of options available to the students who wish to improve their academic skills; the Collegiate Skills Center, the Writing Center, and Student Development Services can all provide information and assistance to you throughout the year. You are encouraged to seek out these resources if you have problems. You are also encouraged to discuss any problems with the Instructor as soon as possible. The last week of the semester is not the time to reveal serious learning/writing problems.

OTHER POLICIES:

RELIGIOUS HOLIDAYS (University):

Ferris State University will make reasonable accommodations for students who are absent from the University in observance of religious holidays. It is the responsibility of the student to notify the faculty in writing during the first week of the semester of their intention to be absent from class on the day(s) of religious observance. Upon formal notification, the faculty will excuse the student from class, labs, clinics for the holiday(s) and allow the student to make up missed exams; however, the student is responsible for completion of all missed work within a reasonable time as determined by the faculty.

Requests for absence to participate in religious activities, other than recognized religious holidays are not excused absences. The student may present such a request to the faculty during the first week of the semester and the faculty may approve such an absence at this or her discretion. If the instructor approves such an absence, the student is responsible for completion of all missed work within a reasonable time as determined by the faculty.

If a student disagrees with the faculty member's determination, the student may make a written appeal to the dean of the student's college. The decision of the Dean is final.

These policies and procedures will not supersede Board of Trustees policy on student conduct and university disciplinary procedures.

AMERICANS WITH DISABILITIES ACT:

Ferris State University is committed to following the requirements of the Americans with Disabilities Act Amendments Act and Section 504 of the Rehabilitation Act. If you are a student with a disability or think you may have a disability, contact the Disabilities Services office at 231-591-3057 (voice), or email ecds@ferris.edu to discuss your request further. More information can be found on the web at <http://www.ferris.edu/htmls/colleges/university/disability/>.

Any student registered with Disabilities Services should contact the instructor as soon as possible for assistance with classroom accommodations.

FERRIS STATE UNIVERSITY
COLLEGE OF TECHNOLOGY
ARCHITECTURAL TECHNOLOGY AND FACILITY MANAGEMENT
COURSE SYLLABUS

Winter 2014

COURSE: ARCH 115 - INTERIOR & EXTERIOR FINISHES & SYSTEMS

INSTRUCTOR: Mary Brayton
OFFICE: 302 Johnson
OFFICE HOURS: MW 1:00 – 1:50pm, TR 10:00 – 10:50 am
OFFICE PHONE: (231) 591-3584
HOME PHONE: (231) 592-0570 (no calls after 10:00pm please)
E-MAIL ADDRESS: braytonm@ferris.edu

COURSE DESCRIPTION:

Study of properties, characteristics, limitations, selection criteria and graphical interpretation of common interior and exterior finish materials and systems utilized in exterior closure, roofing, interior construction and conveying systems of buildings. Considers aesthetic, performance, code requirements, maintainability, and cost/benefit aspects.

COURSE PREREQUISITES: ARCH 112 - Structural Materials and Systems

REQUIRED TEXTBOOKS:

FUNDAMENTALS OF BUILDING CONSTRUCTION MATERIALS AND METHODS, Edward Allen (Fifth Edition)

EXERCISES IN BUILDING CONSTRUCTION, Edward Allen (Fifth Edition) –if you purchase a “used” copy it will be your responsibility to replace the missing pages.

ADDITIONAL REFERENCES:

Building Construction Illustrated & Building Codes Illustrated, Francis D.K. Ching
Sweets and Manufacturer’s Catalogs (on-line)

ADDITIONAL MATERIALS:

Calculator
Stapler with staples
Triangles and scale
Sketchbook and Graph paper

STUDENT LEARNING GOALS:

The students will be expected to accomplish the following:

1. To become familiar with the materials studied in each chapter of the text.
2. To do research involving these materials.
3. To analyze alternatives and develop conclusions regarding the best material(s) to use in a given application.
4. To be able to accurately draw materials and assemblies studied in the course.

PROCEDURE:

The class will be conducted through a combination of any of the following; lectures, individual study, guest speakers, hands-on material samples, videos, workbook exercises, reading quizzes, calculations, sketches, research and presentations, and chapter tests.

ATTENDANCE POLICY:

Attendance will be taken. Anyone missing more than 2 class periods (5% of the course) will start to lose points. Each day missed beyond 2 days will result in 15 points being deducted from your point total for each unexcused day missed. Only medical and other official university excuses will be accepted as an excused absence. Students who are late will lose points 7 ½ points each time.

Periodic quizzes will be given at the start of the class period. If you are late you will not be given additional time without an official university excuse.

Only medical and other official university excuses will be accepted as an excused absence. An absence will be excused when it is accompanied with a written explanation of why the absence occurred and a copy of the excuse. The written explanation and excuse must be submitted within a week of the absence.

Presentations, quizzes, tests, etc. cannot be made up without a documented official university excuse. Students are responsible for any missed class content or assignments.

Students are required and expected to take the tests and quizzes at scheduled times. In the event of a time conflict due to a "university recognized excuse" you will need to schedule a time to take the test prior to the date and time that it was originally scheduled for. In the case of illness or extenuating circumstances, you must inform me as soon as possible to schedule a time to take the test. An unexcused test absence will result in a "0" for the test.

Tests will be returned during class for review and questions. The test will be collected at the end of the class period. Failure to return the test will result in a "0" for the test.

ATTITUDE POINTS:

Consistent attendance, timeliness to class, respectful attitude toward instructor and classmates, *attentiveness in class*, *participation in class discussions*, *completion of exercise book*, sketches and discussion questions, all impact a potential of 150 attitude points.

ASSIGNMENTS:

Exercise books will be collected for review of completeness twice during the semester, once at mid-term and again on the last day of class.

LATE ASSIGNMENTS:

Assignments and papers are due at the beginning of class. Assignments will be collected and reviewed for completeness and accuracy.

Any work received after the fifth day beyond the due date will not be accepted and no credit will be given for the work. Assignments will be returned and reviewed in class and correct solutions discussed.

FINAL TERM GRADE BASED ON:

Reading Quizzes +/- 14 @ 5pts	=	+/- 70 points
Ventilation calculations	=	10
APA Product Research Report	=	35
Workbook Exercises + attitude	=	150
Term Project and Presentation	=	275
5 Tests	=	285
Total possible points	=	+/- 800 points

Note: This is a tentative outline of assignments and tests. The instructor may @ her discretion add or delete assignments.

GRADING SCALE:

A	94-100	B+	87-89	C+	77-79	D+	67-69
A-	90-93	B	84-86	C	74-76	D	64-66
		B-	80-83	C-	70-73	D-	60-63
						F	0-59

GRADING SUBSTANCE:

- A** "A" work is superior work. It goes beyond the Instructor's requirements and shows the student's initiative. It demonstrates the student's commitment to learning with mastery of the course concepts communicated in a flawless, professional manner. A conscientious, energetic, sustained work effort is required for an "A" grade.

- B** "B" work is above average work (contrary to the believers in "grade inflation"). This work is complete, well written, and shows good understanding with few shortcomings. This is good work in many ways and the student should be encouraged by this grade. Mastery of the student learning goals in this syllabus represents "B" work.

- C** "C" work is average work. It meets the assigned requirements but shows a need for improvement in several areas of the course. It indicates a moderate basis upon which the student is encouraged to improve all subsequent work.

- D** "D" work is below average work. It typically does not meet the assigned requirements and shows a need for improvement in a majority of categories. Often poor communications and presentation performance will reduce acceptably prepared technical work to this level. The student should respond to a "D" status as a need to significantly increase work preparation and delivery to improve class performance and graded elements, which is almost always possible.

- F** "F" work is failing work. It does not respond to the assignment needs. It is often incomplete, ill prepared, poorly organized, and violates the rules of grammar and presentation. Plagiarized work, no matter how impeccable, is failing work and will be so judged. The student should respond to an "F" status as an immediate need to improve course work drastically. The Instructor is available to assist the student in developing his or her own personal plan to respond to this status, improve your work, and salvage your course grade.

INDEPENDENT WORK:

Students are encouraged to work on an independent basis; similar exercises will show up on the tests so it is in each student's best interest to be able to execute each exercise on their own. Blatant copying of another student's work will result in no credit for the assignment. Cheating on a test will result in a "0" for that test.

Integrity of scholarship requires that all academic work be completed by the student to whom it is assigned, for the course in which it is assigned, without unauthorized aid of any kind. (Retrieved June 15, 2010 from University of California, San Diego website, titled *Suggested Academic Integrity Statements for Syllabi*). Students are expected to be ethical in their scholarship and practice academic integrity. This includes properly crediting others for their ideas they may find useful.

PLAGIARISM:

Plagiarism is presenting another person's works or ideas – either accidentally or intentionally – as though they are your own. In general, you must provide documentation for all direct quotations, as well as for every opinion, judgment, and insight of someone else that you summarize or paraphrase. You must also document tables, graphs, charts, and statistics taken from a source. (Laurie G. Kirszner, 2003)

By taking this class you indicate that you agree to submit your research papers to an electronic media which will help determine the originality of your work with a report being provided to the professor on plagiarism. (Brayton, E. (2010) CONM 412 *Syllabus*) Papers over 15% matching content will not be accepted.

ACADEMIC DISHONESTY:

Academic dishonesty will result in a grade of no points for the quiz, paper or assignment that it relates to and may result in dismissal of the student from the class with a failing grade and possible expulsion from the University. (See the Honesty Policy in the University Catalog – page 332) Cases of academic dishonesty will be reported in writing to the program coordinator, the college dean, and a referral will be made to the Office of Student Conduct. These policies and procedures will not supersede Board of Trustees policy on student conduct and university disciplinary procedures.

STUDENT RESPONSIBILITIES:

Your commitment to being a student at Ferris State University begins with a fundamental understanding of and appreciation for the core values of the institution. Ferris recognizes the inherent dignity of each member of the university community and treats everyone with respect. Our actions are guided by integrity, fairness, honesty, and trust. A component vital to the university community is academic integrity, which acknowledges the inherent worth of individual learning (Bulldog values, Ferris State University *Code of Student Community Standards (Student Handbook) 2009-2010*).

1. Attendance is required and will be taken as a source of grading and student interest. A doctor's written excuse or prior arrangement justifies absences with the Instructor only. No makeup tests, quizzes, etc. will be offered for any absence not justified as stated above.
2. Each student will be treated with respect. Each student is expected to respect all others in the classroom. It is the students' responsibility, as a member of the Ferris State University's learning community, to access and abide by the university's policies regarding academic conduct (See Ferris State University's *Code of Student Community Standards (Student Handbook) 2009-2010*). Disruptive students will be removed and only allowed to return at the discretion of the instructor.
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5. There are a variety of options available to the students who wish to improve their academic skills; the Collegiate Skills Center, the Writing Center, and Student Development Services can all provide information and assistance to you throughout the year. You are encouraged to seek out these resources if you have problems. You are also encouraged to discuss any problems with the Instructor as soon as possible. The last week of the semester is not the time to reveal serious learning/writing problems.

References

Laurie G. Kirszner, S. R. (2003). *The Pocket handbook*. Boston: Thomson.

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Requests for absence to participate in religious activities, other than recognized religious holidays are not excused absences. The student may present such a request to the faculty during the first week of the semester and the faculty may approve such an absence at this or her discretion. If the instructor approves such an absence, the student is responsible for completion of all missed work within a reasonable time as determined by the faculty.

If a student disagrees with the faculty member's determination, the student may make a written appeal to the dean of the student's college. The decision of the dean is final.

Units of Instruction and Student Learning goals:

AMERICANS WITH DISABILITIES ACT:

Ferris State University is committed to following the requirements of the Americans with Disabilities Act Amendments Act and Section 504 of the Rehabilitation Act. If you are a student with a disability or think you may have a disability, contact the Disabilities Services office at 231-591-3057 (voice), or email ecds@ferris.edu to discuss your request further. More information can be found on the web at <http://www.ferris.edu/htmls/colleges/university/disability/>.

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**FERRIS STATE UNIVERSITY
COLLEGE OF TECHNOLOGY
AT/FM DEPARTMENT**

SYLLABUS: COURSE ARCH 203 Fall 2013

INSTRUCTOR: Gary Gerber
OFFICE: 208 Johnson Hall
PHONE: Office: 231 591-2631; Home: 1 616-363-6805
E-mail: gerberg@ferris.edu

OFFICE HOURS: Posted on JHN 208 and SWN 213, (Individual appointments available)

COURSE TITLE: ARCHITECTURAL DOCUMENTATION

PREREQUISITE: ARCH102, ARCH112, ARCH 115 or permission of instructor

COURSE DESCRIPTION: Introduction to the graphic language, methods, and organizational principles of construction documents. Emphasis is placed on building materials, processes and assemblies and their graphic depiction in working drawings. Additional emphasis is placed on adaptation of standard practices to increase sustainability. Student projects are created in a digital environment following principles of standard practices in the architectural profession.

COURSE FORMAT: Primarily a digitally based drawing lab course in which the student spends the major portion of his/her time drafting and developing a skill base. A team format will be used for some parts of the class work. Lectures will be used to impart technical knowledge on the theory of Working Drawings and software usage. If you miss a class, you are responsible for obtaining the information covered in it.

CREDIT HOURS: 4

CONTACT HOURS: 2 hours lecture and 6 hours of lab per week

TEXT BOOK:

COMMERCIAL DESIGN USING AUTODESK REVIT 2013, Daniel John Stine

REFERENCES:

"ARCHITECTURAL GRAPHIC STANDARDS", Ramsey and Sleeper latest Ed.
"MICHIGAN PLUMBING CODE 2009"
"MICHIGAN BUILDING CODE 2009" or use the International Building Code version accessible on line through FLITE
ANSI "Accessible and Usable Buildings and Facilities" 1998
"BUILDING CONSTRUCTION ILLUSTRATED" 2nd edition, 1991, Francis D.K. Ching
Sweets Catalogs
Manufacturer's Catalogs
Selected building plans and specifications in the classroom
Miscellaneous web sites

ADDITIONAL MATERIALS:

- Instructor prepared handouts
- Hi-lighter
- Small three ring binder with dividers for project manual
- Roll of sketch (onion skin, bumwad, flimsy) paper
- Two thumb drives for storing your work

ATTENDANCE: Students are expected to be in class, ready to work, at the start of each class just as you will be expected when you get a job. It is anticipated that all students will participate 100% in all labs and lectures. Lack of attendance will affect the quality of work and the final evaluation in the course. Announcements and instructions will be given at the start of each class. Anyone missing more than 2 class periods (5% of the course) will start to lose points. Each day missed beyond 2 days will result in 40 points being deducted from your point total for each unexcused day missed. The instructor monitors class attendance twice daily. If you aren't there during one of the monitoring points you will be considered missing ½ a day. Students are expected to be in class for the entire lab period. Only medical and other official university excuses will be accepted as an excused absence. Students who miss class, are late, or leave early, will lose points. Any students absent more the 25% of the course (30 hours) will automatically fail the course. If you come to class and sleep or chose not to engage in class work, you will be counted as being absent.

USE OF COMPUTERS AND THE INTERNET DURING CLASS: Classroom computers are to be used for project research and project development only. This is similar to what an employer will expect in a professional office. Playing games, writing e-mails and use of web sites not related to this class is not permitted. If you are observed using classroom resources in a prohibited manner you will be considered absent for that day and have 20 points deducted from your point total.

COURSE REQUIREMENTS:

CONSTRUCTION DRAWINGS: A small commercial type project will be presented to the students in schematic design format. The students will apply the knowledge and skills learned in previous courses plus the basics of working drawings developed in this course to prepare a set of construction drawings.

FINAL SUBMISSION: The instructor will be giving changes and corrections to the drawings as the semester progresses. Each student shall be responsible for incorporating these changes into their final set of drawings. The final set submitted should be 11 x 17 bond copies bound and organized into a working drawing set. The last marked up sets of drawings shall also be bound and organized and submitted with the final set of drawings. **MAKE SURE YOUR DRAWINGS ARE PRINTED TO AN ARCHITECTUREAL SCALE.**

GRADING:	%	Grade	%	Grade
	100-93	---A	76-73	---C
	92-90	---A-	72-70	---C-
	89-87	---B+	69-67	---D+
	86-83	---B	66-63	---D
	82-80	---B-	62-60	---D-
	79-77	---C+	59- 0	---F

GRADING CRITERIA: Construction Drawings will be evaluated on the following general criteria:

- Appropriate application of Working Drawing Theory
- Technical Accuracy
- Compliance with project objectives
- Following written and oral instructions
- Sheet layout and composition
- Line work and lettering technique
- Coordination of drawing set
- Use of CAD drafting techniques
- Correction of previously marked up problems
- Creativity of solution
- Architectural appeal of project solution
- Compliance to green building standards

LATE ASSIGNMENTS: It is important to complete assignments on schedule. The farther you fall behind, the harder it will be to catch up. You will lose 5% each class day of the total points for each assignment that is late without an excused absence. Only class days count in the penalty calculation.

COMMUNICATION: Problems can only be solved if I am aware of them. If you are having problems, let me know. The longer you wait, the harder it becomes to solve them. If you miss class and have a written excuse you must present it on your 1st day back to class.

OUTSIDE TIME: It is likely that most students will spend 15 to 20 hours per week beyond those spent in the lab on assignments and readings. Doing a good job takes time and requires thinking as well as doing. Often, the person who takes time to think out an assignment will actually have a better product in less time than the person who works without thinking.

COPYING: Copying of another's work is totally unacceptable. Plagiarizing an author is also copying. Each student is urged to place their work in their secure directory and also keep two backup copies on thumb drives. At the instructor's discretion, copying of another student's work may result in failure of the course for both students. Minimum penalty for copying is a failing grade for the guilty student on the assignment(s).

LAB EQUIPMENT: There are many people using the computers in this lab. You are expected to take care of this equipment and not abuse it. Students are not allowed to load your own software on the computers. *Be prepared for problems--expect the unexpected.* Back up your files every 15 minutes and keep two copies of your files on separate storage devices. Check your disks for viruses daily. Lab time is to be used for development of documents for your final project. Any person using the computers to play computer games, write e-mails, or surf the web (for non class related work) during lab time will be considered absent for ½ of that class period. Computers are to be used for their intended use, which is a professional tool to develop professional projects. You are welcome to use the printing equipment provided by the program but you are responsible for obtaining final output on the due date no matter what condition the equipment is in on project due date. Plan ahead and have a back up plan for output should something happen to the printer or plotter when you have to submit drawings. (You can e-mail your CAD drawings to Grand Rapids and they will be plotted quite expediently when needed). You are encouraged to contact Service Reproduction at 616 451 2901 or e-mail them at (printroom@servicereproduction.com) and discuss how you can plot your project using them.

FINAL GRADE BASED ON:

Article review (6 @20)	120
Attitude and class participation	150
Lesson Drawings	
Lesson 2 & 3	100
Lesson 4 & 5	100
Lesson 6 & 7	100
Lesson 8 & 9	100
Lesson 10 & 11	100
Lesson 12 & Title block	100
Project 1	300
Project 2	600
Total Points	1770

Article Reviews:

Every other week, each student is expected to read the assigned article and write a summary based on the format given to you. This work must be done prior to coming to class on Wednesdays so that we can have a discussion of the material. Any one missing a Wednesday will be allowed to turn in their report but will lose 5% unless they have an excused absence. Articles will not be accepted that are more than 1 week late. The first article is "Zeroing in on Net-Zero Energy", Architectural Record, December 2010. Most articles will be available on-line. You are encouraged to read the articles on-line and not print off the article to save paper. Articles that are not available on-line will be posted on the shared drive.

Week	Monday	Wednesday	Friday
1	26-Aug	28-Aug	30-Aug
	Introduction to course-- Read chapter 1-3	Revit Lecture LAB SESSION on lesson 1, 2 & 3	Revit lecture and LAB SESSION on Lesson 1, 2 & 3
2	2-Sep	4-Sep	6-Sep
	LABOR DAY	Revit lecture and LAB SESSION on Lesson 4 & 5, Lesson 1, 2 & 3 Due	Lab Session on 4 & 5
3	9-Sep	11-Sep	13-Sep
	Revit Lecture and LAB SESSION on Lesson 6, Lesson 4 & 5 Due	Revit Lecture, ARTICLE REVIEW 1 , LAB SESSION on Lesson 7	LAB SESSION on Lesson 6 & 7
4	16-Sep	18-Sep	20-Sep
	Revit lecture and LAB SESSION on Lesson 8, Lesson 6 & 7 due	Revit lecture and LAB SESSION on Lesson 9	LAB SESSION on Lesson 8 & 9
5	23-Sep	25-Sep	27-Sep
	Revit Lecture and LAB SESSION on Lesson 10, Lesson 8 & 9 due	Revit Lecture, ARTICLE REVIEW 2 , LAB SESSION on Lesson 11	LAB SESSION on Lesson 10 & 11
6	30-Sep	2-Oct	4-Oct
	Revit Lecture and LAB SESSION on Lesson 12, Lesson 10 & 11 due	Revit Lecture on title blocks and LAB SESSION on Lesson 12 & creating a custom titleblock	LAB SESSION on Lesson 12
7	7-Oct	9-Oct	11-Oct
	Revit Lecture and LAB SESSION on Lesson 13, Lesson 12 & custom titleblock due	ARTICLE REVIEW 3 , Introduction to project 1, LAB SESSION on lesson 12 and project 1	LAB SESSION on Lesson 13 and project 1
8	14-Oct	16-Oct	18-Oct
	Lecture and Lab session on Project 1, Lesson 13 due	Lecture and Lab session on Project 1	Lab session on Project 1
9	21-Oct	23-Oct	25-Oct
	Lecture and LAB SESSION on Project 1	Introduction to project 1, ARTICLE REVIEW 4 , LAB SESSION on project 2	LAB SESSION on Project 1
10	28-Oct	30-Oct	1-Nov
	Lecture and introduction to Project 2. Project 1 Due , LAB SESSION on Project 2	Lecture and LAB SESSION on Project 2	LAB SESSION on Project 2
11	4-Nov	6-Nov	8-Nov
	Lecture and LAB SESSION on Project 2	ARTICLE REVIEW 5 , LAB SESSION on Project 2	LAB SESSION on Project 2
12	11-Nov	13-Nov	15-Nov
	Lecture and LAB SESSION on Project 2, Project 2 50% Submission Due	Lecture and LAB SESSION on Project 2	LAB SESSION on Project 2
13	18-Nov	20-Nov	22-Nov
	Lecture and LAB SESSION on Project 2	ARTICLE REVIEW 6 , LAB SESSION on Project 2	THANKSGIVING BREAK
14	25-Nov	27-Nov	29-Nov
	Lecture and LAB SESSION on Project 2	Lecture and LAB SESSION on Project 2	LAB SESSION on Project 2
15	2-Dec	4-Dec	6-Dec
	Lecture and LAB SESSION on Project 2	Lecture and LAB SESSION on Project 2	LAB SESSION on project 2, Project 2 Due at final exam session
16	December 11, 8:00 to 9:40 FINAL EXAM PROJECTS DUE		

arch Detailing

Ferris State University
College of Engineering Technology
Department of Architecture and Facility Management
Arch 204: Architectural Detailing – Section 221, Spring 2014

00.0 General Course Info

00.1 Credits: 4 Hours

00.2 Contacts: 2 Lecture, 6 Studio Hours per Week

00.3 Meeting Time / Location: Swan 212 / Section 221 / M 1:00 – 2:50 , W 1:00 – 3:50, F 1:00 – 3:50

00.4 Faculty: Paul Long

Office: Johnson Hall – Room 220

Phone: (231) 591-2370

Email: paullong@ferris.edu (Paul W Long/FSU)

Office Hours: Monday 15:00 – 16:00 / Wednesday 11:00 – 12:00 / Friday 11:00 – 12:50

The calendar found at the following link, lists when I am generally available to meet for office hours. For your convenience, you can directly book an office hour time slot using this link. I will also use the calendar below to cancel and reschedule office hours as necessary. longp2.youcanbook.me

00.5 Course Prerequisites: ARCH 203

00.6 Course Description: Introduction to the process of developing construction details and the assembly of materials that serves both functional and aesthetic requirements of architecture. Emphasis is placed on product research, performance evaluation, cost/benefit studies, and sustainability. Various methods of presentation will be employed to communicate understanding of material relationships and assemblies.

00.7 Student Learning Outcomes: Students satisfactorily completing this course will:

1. Develop architectural construction details that demonstrate best professional practices, including integration of sustainable technologies.
2. Develop architectural construction details that fulfill the goals of architectural design principles.
3. Develop architectural construction details that demonstrate understanding of the physical and aesthetic qualities of building materials.
4. Integrate architectural construction details into professional working drawings.
5. Demonstrate effective communication in the following areas: speaking, presentations and small-group interactions.

00.8 Course Format: This course is based on a project based learning approach to education. Students will engage in acquiring knowledge and skills through an extended inquiry process structured around complex, authentic questions. Through the act of solving real architectural detailing problems, students will be asked to direct their own inquiry process under the guidance of the instructor. In this sense, the instructor acts as a mentor with the individual student being responsible for his/her own education.

00.9 Course Website: We will be using Ferris Connect for this course. It has an email function within the course site that allows me to easily and readily contact members of the class and for you to communicate with me. I check my email regularly during the week and it is generally the best way to contact me. Please get in the habit of checking your email regularly also as I will send you notices and reminders, etc via Ferris Connect and email.

Reference materials, mandatory supplemental readings, assignments, professor messages and other information will be provided in class and/or via Ferris Connect. Additional course materials may, at my discretion, also be provided on the on the network L: Drive folder for this course.

During the semester I will maintain a **Tumblr** page, a **Google+** Community, and multiple **Pinterest** pages associated with the course. On these pages I will post inspirational and example images associated with the course content and architecture in general. These sites can be found at the following:

Google+ Community - <https://plus.google.com/communities/105949205405483234231>
Detail Inspiration - <http://arch204.tumblr.com/>
Detail Inspiration - http://www.pinterest.com/long_pw/details/

01.0 Course Materials

01.1 Required Textbooks:

1. BASSLER, B. L. (2008). *Architectural graphic standards: student edition*. Hoboken, N.J., John Wiley & Sons.
2. POLLAN, M. (2008). *A place of my own: the architecture of daydreams*. New York, Penguin Books.
3. CHING, F. (2014). *Building construction illustrated*. New York, Wiley

01.2 Additional References / Readings: Additional course references and required readings will be provided as necessary.

01.3 Required Materials and Supplies: Access to: Revit Architecture, Adobe Photoshop CS6, Adobe IndDesign CS6, Adobe Illustrator CS6, AutoCAD 2013, Sketchup 8, and Rhino 3d v4.

USB flash drive, backup storage device, note taking material, digital camera, sketchbook, drafting equipment from ARCH 101, and **model making supplies**.

Materials provided by the Architecture and Facility Management Department may include, but are not limited to, plotters, printers, scanners, laser cutters, foam cutters, digital camera, digital video cameras, and basic model making tools.

01.4 Additional Required Supplies: During the course of the semester students will be required to acquire additional model making supplies which may include, but are not limited to, the following:

- Sketchbook and drawing materials
- Model making supplies and tools – Plexiglass, Taskboard, Basswood, Foam core, Chipboard, Illustration board, Small saws, Scissors, Push pins, Casting resin, additional glue(s), plaster, molding rubber, concrete, etc.
- Drawing tube, etc.
- Access to digital camera

02.0 Assessment

02.1 Grades: Student evaluation in a creative discipline is subjective by definition. In this course student performance will be evaluated on both process and product. Both improvement and growth are important and in many cases the process a student undertakes in developing a creative work is seen as equally important, or perhaps more important, than the end result. In this syllabus I have established a general indication of my expectations for the class, but ultimately much of the course assessment will be based on my professional experience and opinion as a licensed architect and professor (Pastre, 2012). In a class such as this, assessment is not a quantifiable, exact, mathematical measure. **It is based on experienced judgment of a student's work with the following general criteria taken in to consideration: (1) strength of idea; (2) articulation and development; (3) technical competency, clarity, and craft; (4) concise verbal/written presentation; (5) passion, commitment, dedication and work ethic (Tsubaki 2007).**

Most assignments will be assigned a point value and generally grades will be determined according to a point system. The final grade will be based on the % of the total possible points attainable in the course. We will not know the total points possible until the end of the course; however, you can calculate your % score on each assignment and have a sense of your performance.

02.2 Point Breakdown:

EVALUATION ACTIVITIES	% of Final Grade
Participation/Attitude/Attendance	10%
Excessive absences will result in failure of class (See attendance policy below)	0 to -100%
In-Class Exercises (Missed In-Class Exercises cannot be made up)	10%
Homework Assignments	30%
Class Projects	50%
TOTAL	100%

02.3 Assignment Weighing: Grades for this course will be proportionally weighted across the term in accordance with the chart above. It will be beneficial to get off to a good start and to work consistently throughout the course. As long as all assignments are completed on time, it is not possible to ruin, or save, one's course grade on any single project. The grade will reflect a whole semester's work (Pastre, 2012).

02.4 Grievance Procedure: If students feel that an awarded grade is not accurate, they may dispute it by submitting a written explanation together with any marked material, as applicable, to the instructor within two weeks of receiving a grade for the work in dispute.

02.5 Grading Criteria: The following may be some of the methods of assessment for this course: class projects, assignments, in-class exercises, critiques, exams, homework, participation, class presentations, term project and quizzes. The professor reserves the right to utilize other methods of assessment at his/her discretion.

Grade consideration will be based on the completion of all assignments, class participation, and studio/lab time. Assessment of assignments, projects and papers will take into consideration the following:

- Technical Accuracy (i.e. drawn accurately, meets project objectives, follows written and oral instructions)
- Graphic Criteria (i.e. professional appearance, sheet layout and composition, legibility – definition and contrast of lineweights, linework and lettering quality)
- Aesthetics (i.e. artistic quality)
- Attention to Detail and Adherence to Assignment Parameters
- Concept Development
- Craftsmanship
- Development of Ideas
- Originality and Creativity
- Professional Presentation of Materials (i.e. spelling, punctuation, cleanliness, presentation)
- Satisfaction of Learning Objectives
- Technical Accuracy/Technique

02.6 Effort vs Product: Assessments will be based primarily on student's work, rather than effort expended. Students are expected to acquire knowledge and skill, not merely endeavor to do so. Furthermore, each student will be measured against a common standard, meaning that students entering the course with lesser skill or knowledge may have to work harder to achieve the same grades as their more accomplished colleagues. Since grades will not be internally regulated by a performance standard (e.g., a bell-curve grade distribution), there is no predetermined grade pattern for the course: there may, for example, be no A's—or all A's (Pastre, 2012).

02.7 Grading Sheets: The purpose of grading is to measure student accomplishment against the purpose and requirements of the course. Evaluations will be distributed at intervals during the semester and will indicate performance according to the stated criteria of evaluation. Students are expected to use this system to monitor and adjust their performance and to seek additional support from the professor, as appropriate.

In some cases, but not all, grades will be calculated using a grade sheet that shows the assignments, the criteria of evaluation, their respective weight, and each student's performance. These will be periodically available to students. Students who do not understand the grade sheet, or who take issue with the grades as posted, should consult with the professor within one week of the respective posting, after which time it is agreed that students are in accord with the professor's evaluation (Pastre, 2012).

02.8 Breakthrough Factor: By stating the grading criteria, by delineating the weight accorded to each criterion, and by making regular evaluations available to the student, the professor endeavors to make the evaluation process as open and objective as possible. However an additional '**breakthrough factor**' may be applied to the final grade, the purpose of which is to reward students who demonstrate remarkable improvement in their work over the course of the term, which would not otherwise be recognized by this system. The breakthrough factor is awarded at the discretion of the professor, allowing a half-letter grade modification, and is thus weighted at 5% of the final grade. It is typically awarded to only a small percentage of the participants and is effective in changing a grade only in borderline situations (Pastre, 2012).

- 02.9 Final Grades:** Your final grade will be based on an evaluation of three primary categories: (1) Your attendance and full participation in all classes, assignments and activities, (2) the consistency, intensity and depth of your effort, level of investigation and development and the continual refinement of your ideas and the projects, and (3) your comprehension of all material and design concepts presented and the quality (technical proficiency) and craft of your work (Tinucci, 2012).

Other factors contributing to grading include daily progress and ability to manage time, sketchbooks, student-professor dialogue, participation in class-wide critiques and discussion, and individual growth. Computer issues and output problems will not be accepted as a valid excuse for failure to submit digital work or to pin-up. Your work will be evaluated on an on-going basis throughout the semester so if you have any questions concerning your progress, grade, or other course issue please feel free to ask for a meeting with your professor (Tinucci, 2012).

- 02.10 Grading Systems Adjustments:** The purpose of articulating a detailed evaluation process is to make grading as objective as possible; thus to empower students to understand and earn the grades to which they aspire. It is not the intention of such a system to be used against learning or fairness. Consequently, the professor reserves the right to make adjustments to the stated course structure to account for circumstances that were unforeseen when the course was designed. It may, for example, be advantageous to add or alter assignments or their criteria, or to modify criteria or project-weights, if it becomes evident that it is in the best interest of learning and fairness to do so (Pastre, 2012).

02.11 Grade Breakdown:

A (90 – 100): Excellent – work of excellent quality, energy, and intense involvement, outstanding. Excellence shown in most areas of evaluation, high competence in others. This is superior work that goes beyond the professor's requirements and shows the student's initiative. It demonstrates the student's commitment to learning with mastery of the course concepts, communicated in a flawless, professional manner. A conscientious, energetic, sustained work effort is required for an "A."

B (80 - 89): Above Average – most work of high quality, energy, and involvement. High competence shown in most areas of evaluation, competence in others. This work is above average. This work is complete, well written, and shows good understanding with few shortcomings. This is good work in many ways and the student should be encouraged by this grade. Mastery of the student learning goals in the syllabus represents "B" work.

C (70 - 79): Average – minimum work completed and submitted on time, but without distinction. Failure to fulfill all course requirements with competence. (Competence: the answering of all requirements; adequate fitness, ability, capacity; sufficient for the purpose.) This work is average work. It meets the assigned requirements but shows a need for improvement in several areas of the course. It indicates a moderate basis upon which the student is encouraged to improve upon all subsequent work.

D (60 - 69): Below Average – Minimal effort with minimal results, poor but passing. Less than competent work shown in one or more areas of evaluation. One or more requirements lacking and/or sub-standard quality. This work typically does not meet the assigned requirements and shows a need for improvement in a majority of categories. Often poor communication and presentation performance will reduce acceptably prepared technical work to this level. The student should respond to a "D" status as a need to significantly increase work performance and graded elements, which is almost always possible.

F (Below 60): Substantially incomplete work and/or work of an unsatisfactory quality. This work is failing work. It does not respond to the assignment needs. It is often incomplete; ill prepared, poorly organized, and violates the rules of grammar and presentation. Plagiarized work, no matter how impeccable, is failing work and will be so judged. The student should respond to an "F" status as an immediate need to improve course work drastically.

INCOMPLETE: Passing but incomplete for reasons deemed acceptable by the professor. Work is left incomplete at the end of the semester due to circumstances BEYOND the student's control. Incomplete work will be awarded at the sole discretion of the professor and only in rare and specific circumstances. Additional information regarding the policy covering incomplete work can be found at the following:

<http://www.ferris.edu/HTMLS/administration/academicaffairs/policyletters/01-6-Incomplete-Grade.pdf>

03.0 Course Policies

03.1 Attendance: College work proceeds at such a pace that regular attendance is necessary for each student to obtain maximum benefits for instruction. Regular and punctual attendance at all class and studio/laboratory sessions is a student obligation, and each student is responsible for all the work, including tests and written work, in all class and studio/laboratory sessions. No right or privilege exists that permits a students to be absent from any given number of class or laboratory sessions; however, it is recognized that at times students have valid reasons for missing classes (Pastre 2012).

Attendance is mandatory at all course meetings (including any classes meeting in the field) for the full duration of the session. It will be your responsibility to satisfactorily complete any and all studio assignments. Active participation in any class discussions, critiques, or reviews is required. Full participation in studio discussions is essential and therefore will be considered in final evaluations. The ATFM Film and Lecture series is considered an extension of the course offerings and attendance at certain events will also be mandatory (Tinucci, 2012).

It is expected that you attend class for the entire class period. Appropriate class attendance includes being on time, taking notes, coming prepared, and being attentive (See Ferris State University – Code of Student Community Standards, 2010-2011).

Attendance is a primary requirement of this course. Since the majority of course information is delivered in lectures and studio sessions, absence from class meetings will place the student at a significant disadvantage in this course. **Two unexcused absences will result in a full letter grade reduction of the semester's final grade, and each additional unexcused absence, after the first two, will result in an additional letter grade reduction. Students missing more than 15% of the course will automatically fail the course.**

Attendance will be taken at the beginning and the end of class. **Late arrivals or early departures will be counted as absences i.e., students who are tardy or leave early may be marked absent.** Anyone arriving late for scheduled pin-ups or critiques will be considered absent and may not be allowed to present (Tinucci, 2012). Students will be asked to sign-in on the attendance sheet at the beginning of class and sign-out when they leave. This sign-in sheet will constitute the attendance and if a student fails to sign-in while attending class they may still be considered absent. Only medical, university institutional travel, and prearranged absences with the professor's prior approval will be accepted as an excused absence.

In this class, preparing yourself for your chosen profession is expected to be your number one priority. In addition to educating yourself about your profession, you should be developing professional work habits. **Missed in class work such as in-class exercises and quizzes will not be allowed to be made up.** Absent students are responsible first, for contacting fellow students for missed homework assignments, notes, handouts, etc and second, the professor during posted office hours. Work from a missed class will be due as assigned in class unless noted otherwise. The professor will be available during office hours to answer questions but will generally not take time away from other students during class to re-teach material from a previous course for those who have missed.

Much of the grade for this course, up to 20%, is primarily based on attendance in class, i.e. In-Class Exercises – 10% and Participation – 10%. This is a very hands-on course and if you are not in class you will not be learning the required course material. If you are to succeed and be successful in this class it is essential that you attend.

- 03.2 Assignments/Late Work:** There will be a lot of work to do in this course. It is strongly suggested that you do not get behind. We will be learning multiple computer programs and skills and moving very quickly. You will have very little if any time to catch up if you get behind. Make sure your priorities allow you to keep up with your work. If you cannot keep up and are spending sufficient productive time outside of class and within class, and are still falling behind, discuss this matter with your professor.

Assignments and exercises (including desk crits and pinups) are due at the beginning of the class period. If you miss class for any reason, assignments are still due as schedule unless prior arrangements are made with the professor. In case of an excused absence, you may need to arrange to turn your assignment in early. Bring your work to class complete **ON THE DATE IT IS DUE**. Generally, there will not be time during the class period when the work is due to complete it unless announced otherwise by the professor. Work turned in after the beginning of class or improperly prepared work will be considered late.

You are to turn your assignments via Ferris Connect or as noted by the instructor. Specific procedures for turning in digital files will be discussed on the first day of class. Assignments are to be named per the following:

- Homework Assignments: LastFirstInitial_HA#x_XXX
- In-Class Exercise: LastFirstInitial_IE#x_XXX

Example for Sketchup In-Class Exercise #1 and Detail Assignment #1:

- LongP_IE#1_Roof Detail
- LongP_HA#1_Detail1

Assignments not turned in using the proper protocol and naming procedures will **NOT** be accepted until turned in correctly and will be considered late. It is very important that you follow this naming procedure exactly.

Deadlines must be maintained. Late work will receive one full letter grade deduction. **All late work is due no later than one week after it was originally due, after which point it will NOT be accepted. Midterm and Final Project deadlines are mandatory – no exceptions.**

Assignments will typically be given in class and may, at my discretion, be available on Ferris Connect or the L: Drive in the Professor's folder. **In many cases assignments will be written on the board at the end of each class period. In such cases, it is the student's responsibility to write down each assignment for their own use or get them from a fellow student.**

- 03.3 Class Behavior:** Students are expected to assist in maintaining a classroom environment (during or after hours within the studio environment) that is conducive to learning. In order to assure that all students have the opportunity to gain from time spent in class. Unless approved by the professor, students are prohibited from engaging in activities unrelated to the course in lab/studio (Tsubaki, 2007).

Disruptive behavior, vulgar language, profanity, sexual innuendo and/or harassment, safety violations, horseplay, use of any tobacco products, etc. will not be tolerated in the classroom or laboratory/studio. In the lab/studio students are not permitted to wander about the lab/studio or compare their results with others without prior permission from the professor. Work only with your partner(s) if assigned. No eating or drinking is permitted in classrooms or laboratories per college and department policies. All cell phones must be turned off during lecture and lab periods.

Classroom policy is structured to mirror and anticipate expected professional conduct and the students' appearance and conduct will be expected to meet these standards. As professor I take very serious what we are learning and will expect the same of you. We are here to learn and work. We are not here to play. Much of your architectural education is learning to be a professional and I will expect you to act accordingly at all times as if you were in a professional work place or firm.

03.4 Collaboration: While a majority of the work completed for this course will be done individually, students will at times be asked to collaborate with other, including the professor. To collaborate in the highest sense means to put the collective ahead of individual self interests. Collaborators strive to achieve a work that results from synchronized group effort, where each member contributes, not the same work as others, but according to each person's best attributes (Pastre, 2012)

03.5 Course Communication: Learning to communicate effectively and appropriately is an important aspect of a professional architectural education. Outside of scheduled class and office hours, email will be the most effective method for you to communicate with me as I am rarely in my office to answer my phone. I will primarily respond to emails during my scheduled office hours, and while I may occasionally respond to emails outside these times or on weekends, it should not be considered expected nor the norm. I will not respond to emails that do not include a proper greeting and salutation ex. 'Dear Professor Long,' and 'Thank you, John Doe.' Failure to include a proper greeting and salutation is both unprofessional and disrespectful.

Texting is likewise not an appropriate form of professional communication. While I may release my personal phone number in rare circumstances, I will not respond to texts related to course material.

03.6 Course Schedule: Over the course of the semester long investigation, we will explore the ideas of visual communication, architectural language, and the design process. As a truly rigorous design process investigates any and all options," the nature of this course will be iterative as well as we investigate architectural design and visual communication. To facilitate this investigation, the schedule for this course is purposefully left vague and open. This provides great freedom to explore and further investigate a variety of topics we may find interesting over the course of the semester. In general the course will include a number of key milestones including a Midterm Project, a Final Project, and a special project related to an exhibition at the Rankin Gallery showcasing student work (October 22th – 27th).

This course will include open studio, lectures, desk critiques, field trips, regular assignments, periodic presentations, etc. In many cases, the schedule will be day to day, based on the progress of the class as a whole. Research components are conducted simultaneously with design development. Expect to spend a significant amount of time working on your assignments outside of class time. If class contact time is 8 hours per week, the outside of class work time expected is an average of 3 times contact time or 24 hours per week. It is strongly suggested that you get into the habit of working in the studio after hours. Experience has shown that students who work in studio after class hours on a regular basis have a greater degree of success in the course because they can discuss, clarify, and exchange ideas and methods with colleagues (Tsubaki, 2007).

03.7 Digital Technology: Use of cell phones for calls and text messaging during class is NOT allowed. **If the professor sees a cell phone being used or hears a cell phone during class you will receive a deduction of 2 participation points i.e., 2% of your grade.** In extenuating circumstances, it may be acceptable with prior permission to have your phone set to vibrate and in an emergency quietly get up and walk out of the classroom to answer the phone. If cell phones are abused in class the professor reserves the right to have all students turn their phones in, at the beginning of class at a designated location, to have them returned after class is over. If a student repeatedly abuses the course cell phone policy they will be asked to leave class.

IPADs, tablet computers, e-readers, laptop computers, gaming devices, etc. are not allowed except in extenuating circumstances and at the professor's discretion. iPods or other digital music players will only be allowed during lab/studio periods at the professor's discretion. Anyone using a digital device during lectures will be asked to leave class. All note-taking during lectures is to be done by hand only.

03.8 Exams and Quizzes: Exams will be given at times listed in the class schedule or as announced in class. All exams are cumulative. The final exam will be given at the time determined by the University during finals week. Quizzes may be given at any time during the course as required by the professor. No advanced notice will be given for pop quizzes and all quizzes will be given during a regularly scheduled lecture period.

03.9 Saving Work: It is the Student's responsibility to save his or her own work. If computer related, multiple copies should be saved and verified prior to leaving the classroom. The teacher is in no way responsible for the work saved on the hard drives, nor is he/she bound to give an extension on work improperly saved. The computer hard drives may be purged regularly or without warning. It is strongly recommended that you do not work directly from a flash/jump drive on your computer. Rather, you should copy your files directly to the computer you are working on and work on them directly from the computer itself. Working directly from a flash/jump drive is unstable and in doing so you run the risk of corrupting or losing files. It is also the Students' responsibility to regularly save and back up their work. Lost or corrupted files are not an acceptable excuse for not turning work in on time.

03.10 Studio Culture: The studio pedagogy is built around a collaborative approach to the project: the collaborative effort is between faculty and students, and among the students themselves. Desk crits, pin-ups, and impromptu discussions are part and parcel of the studio work and require active participation from everyone in the studio. The development of the student's project may involve all of the following: hand drawing, sketching, a slew of software applications, and extensive physical model-making. We will spend a lot of time talking about projects, ideas, and architecture in general. This on-going discussion is one of the key components of the studio pedagogy and we will expend real effort to develop an atmosphere that is conducive to the enthusiastic exchange of ideas. The objective is to create and sustain a studio atmosphere that encourages inquiry, investigation, exploration and experimentation. But inquiry, investigation, exploration and experimentation that is backed up by rigor, discipline and hard work.

The most important teaching space is the studio. The learning that happens there only takes place when the student is present and actively participating in the daily exchange of ideas. Faculty are present in the studio for 8 contact hours per week and in order to take advantage of their instruction the student must be available and paying attention to the studio discussions.

Class hours are time for working at your desk. Run errands and take care of personal business outside of studio time. This includes taking care of university business. Buy the supplies needed for work before you come to studio. During studio is not the time to check your email, send text messages, or chat on the phone. You should be in your seat and working on your projects.

The studio environment should be supportive of serious work. Concentration and focus are absolutely necessary for the work done there so each of you should respect the others' right to a positive studio atmosphere. Any device at odds with this mandate is forbidden. Simply, work together and respect each other (Tinuci, 2012).

For further discussion of architecture studio pedagogy, students are asked to please read the following:

<http://www.arch.calpoly.edu/programs/documents/syllabi/first-year-syllabus.pdf>

03.11 Studio Format: Studio will be taught, primarily in individual studios, with the largest portion of class time dedicated to individual desk critiques. In addition to one on one studio critiques, there will be frequent workshops, reviews, group pin-ups, and group discussions treating various topics as needed (including any required readings). There will be site visits and area field trips that are a required component of the studio work. Although based in the studio space, instruction may also be given in the ATFM model shop, digital center, Flite Library, various other buildings on campus, museums, on-site, in the field, and/or other relevant venues (Tinuci, 2012).

Students are expected to come prepared to discuss their work at the beginning of class. On days dedicated to desk crits, a meeting schedule will be developed and made known to the students at the beginning of class. If students are not ready or prepared at their scheduled time, they will be skipped and will lose points for the day. It will not be acceptable for students to be away from their desks gathering their work, plotting, etc. during class. It is the student's responsibility to be prepared at the beginning of class, not sometime during class.

03.12 Studio Maintenance: The appearance of the studio tells of the attitudes of those who use it. While studios are inherently spaces of energy, creativity, and some form of chaos, they also represent professional workplaces. It is expected that the studio be maintained with level of professionalism at all times which would be found acceptable by visiting critics, administration, or members of the public. It is NOT ACCEPTABLE for there to be trash strewn about the studio, discarded food, empty soda containers, material from other courses, etc. Abuse of the studio will result in loss of the privilege of using the studio i.e., there will be shorter hours the studios are open after classes. The condition of the studio will be regularly evaluated by the professor. **Failure to maintain the studio will result in a loss of one or more letter grades on your final grade.** To help maintain the studio please follow these guidelines:

- Clean up after yourself
- Wash your drafting table
- Place all trash in the waste baskets
- No food or drink at computers
- Put reference materials, samples etc. away
- Inform professor of broken equipment or malfunctioning computers.
- Protect drafting table cover with a piece of cardboard or masonite prior to using colored markers or glue
- Protect drafting table cover with a cutting board prior to using an X-acto blade.
- Aerosol paints, spray glues, super-glues, or fixatives, etc. must not be used in the studio. **Violators will lose a minimum of one letter grade on the overall grade and the student may FAIL the course at the professor's discretion depending on the level of infraction.**
- **Cutting on, or damaging, the Borco and/or desks will result in a minimum of one letter grade deduction on the final grade and the student may FAIL the course at the professors discretion depending on the level of infraction**

03.13 Syllabus Changes: Reading the Syllabus is the student's responsibility. Changes to the Syllabus are at the discretion of the professor and can be made at any time. Students will be made aware of changes to the course syllabus through email, Ferris Connect or announced in class. Missing class is not an acceptable excuse for being unaware of changes made to the syllabus.

04.0 Other

- 04.1 Accommodations for Students with Disabilities:** Reasonable accommodations will be made for students with documented disabilities. In order to receive accommodations, students must obtain a letter of accommodation from the office of Disability Services. Disability Services is located in Starr 313, (231) 591-3057, or disabilities@ferris.edu. Additional information can also be found at:

<http://www.ferris.edu/HTMLS/colleges/university/disability/homepage.htm>

- 04.2 Integrity / Academic Honesty:** Ferris State expects students to maintain high standards of academic integrity. "Students preparing for the practice of a profession are expected to conform to a code of integrity and ethical standards commensurate with the high expectations society places on practitioners of a learned profession." Students are required to develop their own work independently unless allowed to work together by the professor. Copying of another person's work, in whole or in part, or cheating in any form will deprive the student of a proper learning experience and will not be tolerated. All reference sources must be properly cited using APA Style guidelines. Tracing of drawings or parts of drawings, and copying of papers, computer graphics, etc. from others (including the internet) is strictly prohibited unless approved by the professor. If a student does copy or cheat, at the professor's discretion, automatic failure of the assignment, test, or of the course will occur. More information can be found in the student handbook and at:

http://www.ferris.edu/htmls/colleges/artsands/DeptLink_desc.cfm?DeptLinkID=53&DepartmentID=3misconduct

- 04.3 Other Resources:** Students should familiarize themselves with the University regulations and academic requirements in the Code of Student Community Standards which can be found at:

<http://www.ferris.edu/HTMLS/administration/studentaffairs/studenthandbook/>

- 04.4 Religious Holidays:** It is the responsibility of the student to notify the faculty in writing during the first week of the semester of their intention to be absent from class on their day(s) of religious observance. Requests for absence to participate in religious activities, other than recognized religious holidays, are not recognized by the University as excused absences. Upon formal notification, the faculty will excuse the student from class, labs, clinics for the holiday(s) and allow the student to make up missed exams; however, the student is responsible for completion of all missed work within a reasonable time as determined by the faculty. If a student disagrees with the faculty member's determination, the student may make a written appeal to the dean of the student's college. The decision of the dean is final.

Please see Ferris State University Academic Affairs Policy Letter regarding religious holidays dated November 12, 1999.

<http://www.ferris.edu/HTMLS/administration/academicaffairs/policyLetters/religHol.htm>

- 04.5 Safety:** This class will rely heavily on model fabrication at various scales. Student safety is a primary concern of both mine and the University and as such the smart use of all tools is imperative. Students are to review and follow the safety procedures below. If a student has a concern or question regarding the use of a tool or general safety of the lab, please inquire of the professor or other University official immediately.

Lifting—Safe Work Procedures: Lifting heavy loads requires techniques for which the simple tasks of daily life do not prepare us. Poor lifting techniques frequently produce injuries ranging from smashed fingers to crushed toes to debilitating back injuries. Avoid these by:

1. Considering the lift before you make it.
 - a. Is the lift within your capability?
 - b. Would you do better with a helper, a lever or a dolly?
 - c. Can you stage the lift to occur in the zone between your knees and your shoulders, the zone where you will have the most strength?
 - d. If two or more people are lifting a load together, they must coordinate their movements in advance!
 - e. Will you need to prepare blocks or skids on which to set the load in order to avoid crushing your fingers?
 - f. If the load proves to be too great, can you set it back down without harming the object or yourself?
 - g. Do you have appropriate shoes for the task? (Hint: not flip-flops!)
2. Be sure you have a firm surface to stand on and remove any clutter from the path you will be traveling.
3. Lift with your legs, because your strongest muscles are in your legs.
4. Keep your back as straight as possible during the lift. Tucking your chin towards your chest is a good way to insure this.
5. Keep the load close to your body during the lift. Carrying a weight away from your body puts great strain on your back.
6. Lift with your feet spread apart and one slightly behind the other, so you can maintain your balance.
7. If you must turn while carrying a load, turn with your feet, never by twisting your back!

Gluing—Safe Work Practices: Because super glue, and other adhesives, are so effective, it is essential that you do not apply them to the wrong surfaces!

1. Do not squeeze on a bottle that is sealed shut! The bottle could burst open and spray glue everywhere. Instead open the nozzle with a pin.
2. Keep glue spatter out of your eyes: wear goggles!
3. If you get super glue in your eyes flush them immediately with water, then see a doctor. You may need antibiotic eye drops to prevent infection.
4. If you glue your skin to itself or to another material, do not tear the glue seam apart. Instead, dissolve the super glue with acetone (or lacquer thinner).
5. Super glue that dries on the skin will naturally wear away over a period of days.
6. Clean up spills by dabbing with a rag. If you wipe aggressively the rag may become bonded to the surface!
7. Work in a well ventilated area. Super glue and many other adhesives give off solvent fumes.

X-acto and Utility Knife Work Practices: The tricky part of using X-acto knives and utility knives is to avoid cutting yourself. These simple tools are frequently misused and many emergency room visits result.

1. Rest the piece being cut on a firm hard surface, never on your lap or in the palm of your left hand.
 - a. Always work with a sharp knife.
 - b. Keep the blade covered when not in use or when in storage. This will protect both you and the sharpness of the cutting edge.
 - c. Always have extra blades on hand. You will typically need them in the middle of the night.

- d. Preserve your blade's sharpness by cutting on soft, sacrificial surfaces, like plywood, chipboard or vinyl cutting mats, never on the Borco or hard melamine work table surfaces. **Cutting on, or damaging, the Borco and drafting tables will result in a minimum of one letter grade deduction on the final grade and the student may FAIL the course at the professors discretion depending on the level of infraction.**
2. On thick or resistant material, cut with multiple passes or switch from an X-acto knife to the heavier duty utility knife.
3. Remember: the more force you use pushing the knife, the less control you have over the cut. Rather than applying excessive force to your knife, cut your material with a saw.
4. When cutting along a straight edge, take care that the knife blade remains parallel to the straight edge for the entire length of the cut. This is not a natural motion; the hand would prefer to travel in an arc. If the knife is allowed to tilt towards the straight edge, it can deflect the straight edge or even skip up over the straight edge!
5. When cutting, the left hand is normally used to secure the work piece. Just take care to keep your left hand out of the path of the cut!
 - a. Before making a cut, it often helps to "rehearse" your cut to both confirm that you have enough room to make the cut, and give your hand eye coordination a chance to prepare.
6. Discarded/used blades are just as dangerous as blades in use.
7. Discarded blades should be wrapped/contained in such a way as to not have the blades exposed once they are placed in the garbage can.

(Adapted from: <http://iitcoa3rdyr.wordpress.com/safety-procedures/>)

04.6 Student Complaints: Ferris State University is committed to assuring a supportive process that invites student feedback in a manner that promotes a positive learning environment. Students should follow established policies and procedures to resolve their complaints. Students should first express a concern to the individual closest to the problem who has the ability to remedy the situation. For example, if the concern relates to a course, the professor is the appropriate first step. If the concern relates to advising, then the advisor should be contacted. If the student does not know who to contact, s/he may contact the Dean's office of the college to get guidance on where to express the concern. The process for resolving student complaints is as follows:

Step 1 – Direct discussion with professor, advisor, or other appropriate individual

The first step is for the student to discuss the concern/complaint directly with the individual who is closest to the issue or with whom the student has a concern. Students are encouraged to talk with this person as early as possible. The complaint does not need to be in writing at this stage of the process. Many situations can be satisfactorily addressed, or misunderstandings clarified, at this level. When this occurs, no further action is required. The student is advised to record the date when s/he approached the individual with whom there is a concern to resolve the problem, as this information will be required at later stages of the process.

Step 2 – Department Head/Director Review

This step must involve the first level of administration above the individual against whom the complaint is filed, hereinafter referred to as the Department Representative. In the event that a concern/complaint cannot be adequately addressed through direct discussion at step 1, the student may take another step by contacting the department head or director of the program area. At this step, the student must submit a written statement to the Department Representative. Whenever the complaint is received, the Department Representative is expected to assure that the student has made an effort to resolve the problem with the individual with whom s/he has a concern. Additional, and more detailed, information may be found at the following:

<http://www.ferris.edu/HTML5/administration/academicaffairs/policyletters/Student-Complaint-Policy.pdf>

- 04.7 Student Responsibilities:** Students are responsible for adhering to university policies including, but not limited to those found in the Ferris State University's Code of Student Community Standards (Student Handbook) 2011-2012 and the Ferris Course Catalog 2011-2012.

As a Ferris State University student, you will be an active learner:

- It is expected that you attend class. Appropriate class attendance includes being on time, coming prepared, being attentive and actively participating in class discussions.
- It is expected that you study. Studying is an intentional, deliberate act requiring hard work. This includes seeking out the various resources designed to help you be academically successful.
- It is expected that you will treat your professors and fellow classmates with courtesy and respect.
- It is expected that you will be ethical in your scholarship and will practice academic integrity. This includes properly crediting others for their ideas that you may find useful.

(Ferris State University – Code of Student Community Standards, 2010-201)

Assistance in this course is available to help you with academic and other difficulties you may be experiencing. It is your responsibility to seek help. There are a variety of options available to the students who wish to improve their academic skills; the Collegiate Skills Center, the Writing Center, and Student Development Services can all provide information and assistance to you throughout the year. You are encouraged to seek out these resources if you have problems. You are also encouraged to discuss any problems with the Professor as soon as possible. The last week of the semester is not the time to reveal serious learning/writing problems. Other resources for seeking help may include:

- Office hours – I will be happy to work with you during regularly scheduled office hours.
- Pre-scheduled assistance outside of normal office hours (as my schedule permits).
- Meet with your Academic advisor.
- Meet with an educational counselor. College Educational Counselor – Mike Ropele, 231-591-2890 - JOH 200
- The Academic Support Services Center offers free tutoring and assistance for test anxiety, study skills, writing skills, exam preparation, content reading, personal growth, and classroom skills. The Center is located in Room 1017 of the Arts and Sciences Commons Buildings and they can be reached at 591-3543.

- 04.8 Student Work:** Ferris State University, the College of Engineering Technology, and the Department of Architecture and Facility Management reserve the right to retain, exhibit, and reproduce work submitted by students. Work submitted for grading as part of a course is the property of the College and will remain so until it is returned to the student.

Ferris State University - ARCH 241 – Design Principles - Fall 2013

Dane Archer Johnson, Associate Professor
danejohnson@ferris.edu

Johnson Hall 209
231-591-2625

Introduction to the course

Design is all-encompassing. Everything on earth that has not occurred naturally has occurred as a conscious act: it has been designed. Some things, however, are designed better than others. How do we know that? Is it a matter of how things look? Is it a matter of how things function? Is it a matter of taste; of cultural difference; of changes over time?

Regardless of what a thing is, what it does, who makes it, where it was made, when it was made, that thing—be it a building or a hair dryer—represents some sort of response to the principles of design. This course will explore those principles, the fundamental issues that guide designers toward their goal. The elements of this course will form a vocabulary that every designer should be comfortable with, even though the language each designer speaks will be different. The elements of this course will shape themselves into a process that every designer should be familiar with, even though the way each designer follows that process will be different.

Much of the work of this course will be synthesizing the vocabulary and process elements into your own method of designing. You will need to think, and think critically, about what you see before you, the choices offered to you. You will be exposed to principles—the facts—but how you put them to work—the ideas—will be what makes you a designer.

Structure of the course

This course will be divided between lectures, studios and crit sessions. The principles of design will be introduced with a lecture; each will be explored during in-class studio work and projects. Each project will be critiqued by the instructor and your peers in a public presentation format. It is expected that students come to class on studio days prepared to work. This means that they should bring whatever tools are needed to complete the tasks before them on any given day. It is further expected that on crit days, students come prepared with a finished product and with whatever ideas or notes are needed to explain and defend their design decisions to their peers. Even if your work is incomplete, you should bring it to class for review on crit days. It is also expected that as a member of the audience, each student will comment on the work being presented, so that the presenter can learn from shared experience and different perspectives. Suggestions made by peers in crit sessions are often of great value in developing your design vocabulary. Students will be graded not only on their presentations, but on the degree to which they participate as critics.

The dates for lectures, studios and crits are listed in the course schedule.

Requirements of the course

Required Text: Ching, Francis D.K. *Architecture: Form, Space and Order*. (2007). Hoboken, NJ: John Wiley & Sons.

Readings: Instructor handouts will be provided, and additional readings assigned as needed.

Equipment: Student will make use of equipment purchased for ARCH 101. Additional equipment requirements will be announced as needed.

Grades: Grades will be calculated based on a course total of 1,000 points, based on the following formula:

Projects -	1 at 50 points each	50 points
	3 at 100 points each	300 points
	1 at 400 points	400 points
Participation -		150 points
Attendance -		100 points

Course Grades:	A	925 – 1000 points	C	725 – 774 points
	A-	900 – 924 points	C-	700 – 724 points
	B+	875 – 899 points	D+	675 – 699 points
	B	825 – 874 points	D	625 – 674 points
	B-	800 – 824 points	D-	600 – 624 points
	C+	775 – 799 points	F	below 600 points

Attendance: Attendance at class meetings is a primary requirement of this course. Since the majority of course information will be delivered in lectures and studio sessions, absence from class meetings will place the student at a significant disadvantage in this course. As an adult, however, the choice of attending is yours. However, a price will be paid for frequent absences, in the form of a lowered grade in the course. More specifically, if you are absent 17 percent of the time, your attendance grade will be lowered 17 percent, allowing you a maximum of 83 out of 100 points possible for this portion of your grade.

Missed deadlines and Excused Absences:

Students are not immune to the circumstances of life. It should also be understood that during your years as a student, school is your primary occupation, and adherence to deadlines is mandatory. Projects that are turned in late will be marked down ten percent (10%) for each calendar day late. All projects must be turned in to receive credit for the course.

It is important that students adhere to deadlines. There is a great deal of work to be produced in this class on a tight schedule. If you fall behind there will be little opportunity to catch up. Make up work must be done on your own time.

Students will be granted an excused absence if extenuating circumstances prevent them from attending class. To receive an excused absence for a

non-medical reason, the student must notify the instructor **BEFORE** the class session in question. In the case of illness, the student must provide evidence of a doctor visit to receive an excused absence. A maximum of two excused absences will be permitted. Students will be responsible for all course material covered in their absence, and will be responsible for finding notes, getting handouts, etc.

Electronics:

Cell phone use is not allowed in the classroom. Students are asked to turn their cell phones off when they are in class. A ringing cell phone is a disruption to the room and demonstrates a lack of respect for your classmates and the instructor. I-Pods, MP3 players, etc., will be allowed during studio sessions, but students may be asked to curtail their use if the flow of information between instructor and student becomes difficult. Surfing the web, reading or sending e-mails or texts, tweeting and other such personal work will not be allowed during class time.

Principles of the course

Academic Dishonesty:

Trust between student and instructor is critical to the success of any course. In the larger sense, it is critical to the ongoing development of a culture. When the trust is violated by either party, the progress of the course is nullified, and whatever potential existed for positive impact on the culture is therefore lost. That is why each instructor must pledge to each student that he or she will conduct themselves with honesty, integrity and respect.

Each student must, in turn, pledge the same to each instructor. In this spirit, it should be understood that dishonesty in any form will not be considered acceptable in this course. If cheating in an examination environment is discovered, the result will be, at a minimum, no credit for the examination in question. More insidious forms of cheating, including but not limited to those involving plagiarism, have resulted in the instituting of zero-tolerance policies regarding acts of academic dishonesty.

Drawings which are submitted for credit and deemed not original will not be acceptable. Such materials will be considered as plagiarized and no credit will be given for the work. No opportunity to make-up the work will be afforded.

If deemed appropriate, issues of dishonesty will be referred to Student Judicial Services for further action.

	DATE	ACTIVITY	READING
Week 1	Aug 26	Introduction to the course Video: <i>Inspiration</i>	Norman Essay
	Aug 28	Lecture: Good Design?	
Week 2	Sep 02	NO CLASS – LABOR DAY	
	Sep 04	Project 1 due - CRIT	
Week 3	Sep 09	Lecture: Primary Elements and Form	pps. 33-91
	Sep 11	Studio: Transformation of Form	
Week 4	Sep 16	Studio: Transformation of Form	
	Sep 18	Studio: Transformation of Form	
Week 5	Sep 23	Project 2 due – CRIT	
	Sep 25	Lecture: Form and Meaning	pps. 239-291
Week 6	Sep 30	Studio: Form and Meaning	
	Oct 02	NO CLASS – FIELD TRIP	
Week 7	Oct 07	Studio: Form and Meaning	
	Oct 09	Studio: Form and Meaning	
Week 8	Oct 14	Project 3 due – CRIT	
	Oct 16	NO CLASS MEETING	
Week 9	Oct 21	Video - <i>Objectified</i>	
	Oct 23	Lecture: Form and Function	pps. 293-33
Week 10	Oct 28	Studio: Form and Function	
	Oct 30	Studio: Form and Function	
Week 11	Nov 04	Studio: Form and Function	
	Nov 06	Project 4 due - CRIT	
Week 12	Nov 11	Lecture: Harmony	pps. 337-407
	Nov 13	Studio: Harmony	
Week 13	Nov 18	Studio: Harmony	
	Nov 20	Studio: Harmony	
Week 14	Nov 25	Studio: Harmony	
	Nov 27	NO CLASS – THANKSGIVING BREAK	
Week 15	Dec 02	Studio: Harmony	
	Dec 04	Studio: Harmony	
FINALS	Dec 12	Project 5 due – CRIT – 2:00 pm	

The course syllabus for HVAC 337 is combined with its course outline. It can be found at the end of Appendix 1a.

The course syllabus for HVAC 483 is combined with its course outline. It can be found at the end of Appendix 1b.

Appendix 1d: Facility Management Course Syllabi

**FERRIS STATE UNIVERSITY
COLLEGE OF ENGINEERING TECHNOLOGY
ARCHITECTURE AND FACILITY MANAGEMENT**

**COURSE: FMAN
321TERM: FALL'13
INSTRUCTOR: SAMSON**

COURSE SYLLABUS: FMAN 321: Principles of Facility Management.

Instructor: Joe M. Samson, CFM

Office: 202 Johnson Hall

Phone: 231.591.2517

E-Mail: samsonj@ferris.edu

Office Hours: As posted.

Course Title: Principles of Facility Management.

Prerequisite: Enrollment in FM program or permission. (Permission to Recreation Management students)

Course Description:

An introduction to basic methods, concepts and procedures of facility planning, programming, budgeting, project management, office productivity measurements, and operations management. Emphasis is placed on the facility management process, terminology and organizational development.

Course Format:

The class consists of three lecture hours per week. The lecture portion focuses on developing a working background in facilities management. Students are expected to be familiar with the content for the day through the lecture notes, Power Points, and text. Most class time will be used to discuss and clarify the content and to apply the content through projects. There will also be a series of guest speakers and/or field trips.

Credit/Hours: Credit Hours = 3; Contact Hours: 3 Lecture

Required Text:

The Facility Management Handbook; David Cotts et al, AMACOM, 3rd edition, 2010.

Additional Material:

Instructor prepared handouts distributed in class.

Student Learning Outcomes:

Students satisfactorily completing this course will achieve proficiency in:

1. Understanding the evolution of Facility Management as a profession and the role of Facility Managers as stewards of the corporate environment.
2. Understanding the relationships between the various competency areas that define the Facility Management profession.
3. Understanding the Facility Management Life Cycle from planning through facility disposal.
4. Developing simple budgets from historic data and anticipated trends and needs.
5. Evaluating simple bids and proposals for value and compliance with organization expectations.
6. Identifying needs and developing spatial solutions to meet facility requirements as identified in organization business plan.
7. Demonstrating effective communication in the following areas: writing, speaking, presentations, and small group interaction.

<u>UNITS OF INSTRUCTION:</u>	<u>TIME ALLOCATION:</u>
I. Course Introduction.	1
II. Overview of Facility Management.	2
III. Relationship of FM to Corporate Management	2
IV. Strategic Planning and Financial Management.	3
V. Space Planning.	3
VI. Real Estate Management.	2
VII. Project Management.	5
VIII. Programming and Design Management.	5
IX. Construction Management.	2
X. Operations and Maintenance Management.	5
XI. Indoor Air Quality.	1
XII. Green Buildings/Sustainable FM	1
XIII. Organization and Management of FM Functions.	5
XIV. Budgeting for FM.	4
XV. Managing Building Technologies and Services	2
XVI. Evaluation.	2
Total Contact Hours:	45

Required Access:

This course is "web-enhanced". The following information may be accessed using LEARN.

- Power Points for each topic.
- Review sheets for each Power Point.
- Class Syllabus.
- Class Calendar.
- Review Sheets for exams.
- Each Assignment. Note: Some assignments will not be submitted via LEARN. Either hand in a hard copy or email those assignments to samsonj@ferris.edu

Facility Management Websites for FM Information:

- www.informedesign.umn.edu – summarizes research.
- www.fmlink.com – news and current developments.
- www.ijfm.net – online journal.
- www.ifmafoundation.org – sustainability "how to" guides.
- www.todaysfacilitymanager.com – magazine/journal.
- www.buildings.com – magazine/journal.

Course Procedures:

The course is structured in the following manner.

1. The text, Power Points, and Discussion Questions are intended to help you learn the material. You should familiarize yourself with the topic prior to coming to class. This content will comprise the information students are expected to know for the tests. The tests focus on theory and facts about facility management as well as terminology.
2. In most cases you will be reviewing the PowerPoints on your own and we will discuss them in class. All content will not be covered in class. PowerPoints may be accessed through LEARN.
3. The Course Calendar identifies the content for each class period.
4. The class periods may be used to present the topic through discussion, lecture, or other method.
5. Use the Discussion Questions (these can be found online in the Modules with the Power Points) to learn the material and review for the tests (Test reviews online in separate area).

6. Most projects are short ones...the intent is to give you an overview of many different FM topics in a hands on manner. The shorter projects focus on methods and concepts, while the longer ones typically focus on developing research and communication skills.
7. There will also be a series of guest speakers. They are invited to share areas of expertise. In this course the main speakers will help prepare you to seek internships and jobs; resources available at Career Services, Resume content and format, interviewing techniques.
8. Tests will be based on Discussion Questions as well as other course information. Refer to the exam review sheets periodically to take notes so you will be ready for the test. All materials on the tests may not be covered in the class.

Class Policies:

Respect:

In order to develop a comfortable class environment, please refrain from clothing/activities/actions that may upset or offend other members of our class. **No use of cell phones (texting and photos included) is permitted in the class. Cell phones are to be TURNED OFF prior to class. If you are expecting some emergency call, please advise the instructor, turn the phone to vibrate, and leave the room when responding. Failure to follow these policies will result in a reduction in participation points and a revised cell phone policy. IE. offending students placing cell phone on a table during class.**

Attendance:

Attendance is expected. Students are responsible for all information discussed at lectures as well as in the text. It is the student's responsibility to obtain information regarding content of class periods that they miss. Students missing tests, presentations, etc. will not be given an opportunity to make the work up without a medical excuse. In unusual circumstances other arrangements may be made. These arrangements should be made with the instructor prior to the class period if possible. **Poor attendance, generally missing more than two classes will affect your final course grade.**

Participation:

Students are expected to be prepared and to participate in class discussions and show an interest and be attentive to topics discussed. **Attentiveness and participation will affect the student's "Participation" points.**

Participation Points:

These are calculated by taking the student's average grade as represented as a percentage of the attendance and participation points. Points may also be added or deducted based on participation, attitude, attendance, etc.

Readings:

Since the class period will be primarily devoted to applying the information, it is essential that the student read the text and notes prior to the class. Information from readings and notes may be included on the tests even if not presented in the lectures.

Projects:

A series of projects will be done to apply the course material in a concrete manner. The assignments are designed to be relatively short and to quickly expose the student to issues associated with the topic.

The instructor may choose to keep assignments after they have been returned for student review. The instructor WILL KEEP all tests after they have been returned for student review.

Effort:

Many organizations have strict policies about the grade point averages of students they can consider for internships and permanent jobs. Putting your best effort into everything related to their education is not only beneficial, it is essential to your future success.

While Facility Management is overall a well paid profession, it is also true that those who perform get the well paid and interesting jobs.

Students are expected to apply their best effort in the execution of projects. This means to review the projects to allow sufficient time to understand what is expected and to thoughtfully develop a quality product. Individual effort is expected. ***Those who plagiarize, copy, or otherwise submit work which is misrepresented as their own will receive a grade of 0 for that project.***

Late Work:

Work is due at the **START** of the class period unless otherwise stated. Work that is handed in after the time it is due will be penalized 5%. After the second class period it is due it will be penalized 10%. ***Work handed in after the second class period will be worth 50% of its graded points.***

Calendar:

A tentative class calendar is provided to help students plan their work schedules. If there are any major changes due to student or instructor needs, they will be announced in class.

Communications:

If you have any questions or concerns, please let me know. I cannot make adjustments or correct problems if I don't know about them.

Dropping The Class:

If you plan to drop the class, be sure to discuss the matter with the instructor AND your advisor. Dropping the course may impact future progress toward a degree.

Mid-Term Grades:

Mid term grades will be reported during the 8th week of class and will be available on the internet. Generally, all work due up to mid-term will be included in the grade. Work that is due but not received will receive a grade of 0 points. The points will be added in when the work is handed in.

Meaning of Grades:

For assignments that are of the template format, you start with the full number of points and deductions are made for errors. For assignments that require creativity, thought, organization, etc, you start with a C and your grade is adjusted up for exceptional performance in some areas and down for sub-standard performance in others.

"A" Work: Superior work which exceeds expectations in substance and presentation.

"B" Work: Work which is above average in substance and presentation, which demonstrates understanding and ability to apply concepts consistently.

"C" Work: Work of average quality in substance and presentation, which meets the requirements of the assignments but does not demonstrate innovation, creativity, or consistency.

"D" Work: Below average work which does not meet the expectations for substance and/or presentation as identified in the assignment.

"F" Work: Poorly prepared work which does not address the substance or presentation expectations as communicated in the assignment as well as plagiarized work.

The following will be taken into account when grading all work if relevant:

- professional appearance
- grammar and spelling

- clarity (understandable writing style; organization, word usage, formatting, etc)
- explanations of:
 - what you did
 - how you did it
 - why you did it the way you did
 - what you found out
- following directions (doing what was requested)
- creativity (being creative, or going beyond project requirements)
- research of similar projects and the results (IE. Research in the library, an organization, etc.)
- documentation of sources (footnotes and bibliography)

Grading:	A- 90-92%	A 93-100%	B+ 87-89%
	B- 80-82%	B 83-86%	C+ 77-79%
	C- 70-72%	C 73-76%	D+ 67%-69%
	D- 60-62%	D 63%-66%	F < 60%

Points:	Projects	600 points
	Mid Term Exam	200 points
	Final Exam	200 points
	Participation	100 points
	Total Points	1,100 points

University and College Policies:

Tobacco:

It is a policy of the College of Technology that tobacco products (including chewing tobacco and snuff) will not be permitted within classrooms.

Religious Holidays:

Ferris State University will make reasonable accommodations for students who are absent from the University in observance of religious holidays. It is the responsibility of the student to notify the faculty in writing during the first week of the semester of their intention to be absent from class on their day(s) of religious observance. Upon formal notification, the faculty will excuse the student from the class or studio for the holiday(s) and allow the student to make up missed exams; however, the student is responsible for completion of all missed work within a reasonable time as determined by the faculty.

Requests for absence to participate in religious activities, other than recognized religious holidays, are not recognized by the University as excused absences. The student may present such a request to the faculty during the first week of the semester and the faculty may approve such an absence at his or her discretion. If the instructor approves the absence, the student is responsible for completion of all missed work within a reasonable time as determined by the faculty.

If a student disagrees with the faculty member's determination, the student may make a written appeal to the dean of the student's college. The decision of the dean is final.

Disability Policy:

Ferris State University is committed to following the requirements of the Americans with Disabilities Act Amendments Act and Section 504 of the Rehabilitation Act. If you are a student with a disability or think you may have a disability, contact the Disabilities Services office at 231.591.3057 (voice), or email ecds@ferris.edu to discuss your request further. More information can be found on the web at <http://www.ferris.edu/htmls/colleges/university/disability/>.

Any student registered with Disabilities Services should contact the instructor as soon as possible for assistance with classroom accommodations.

Tentative Course Calendar/FMAN 321: Principles of Facility Management/Fall '13

Tuesday	Thursday
<p>27 August Introduction to course. Discuss Professionalism. <i>Assign Core Competency Presentation Project (150 pts)</i> <i>Core Competency Presentation Project Visible</i></p>	<p>29 August (Note: M=Module) Introduction to FM. READ CHAP 1 (M 1.1) Organizing the FM Department. READ CHAP 2 (M1.2) Facility Management Leadership. READ CHAP 3 (M2)</p>
<p>3 September Damon Gonzales – Haworth and Ferris Grad. Career Path/Professional Development. Department Organization Project Visible</p>	<p>5 September Strategic and Annual Planning. READ CHAP 4 (M3.1) Financial Management. READ CHAP 5 (M 3.2) <i>Assign Departmental Organization Project (50 pts)</i></p>
<p>10 September Tentative???????????????????? Mike Hughes – Ferris State University VP of “FM” at Ferris State will discuss his career as FMer, how FSU organizes FM services, and how it relates to the university as a whole. Space Planning Project Visible</p>	<p>12 September Space Planning and Management READ CHAP 6 (M3.3) READ Supplemental Articles on Design <i>Assign Space Planning Project (50 pts)</i> DEPARTMENT ORGANIZATION PROJECT DUE</p>
<p>17 September STUDENT PRESENTATIONS (Leadership/Strategy)1.1, 1.2, 4.1 <i>In class work time for Space Planning Project.</i></p>	<p>19 September Real Estate Options READ CHAP 7 (M4.1) Lease Admin/ Property Mgmt READ CHAP 8 (M4.2) Resume Assignment Visible</p>
<p>24 September Mickey Albright – Ferris Career Services Opportunities Resume Writing. <i>Assign Resume (50 pts)</i></p>	<p>26 September SPACE PLANNING PROJECT DUE STUDENT PRESENTATIONS 8.1, 8.2</p>
<p>1 October World Workplace</p>	<p>3 October World Workplace Project Management Project Visible</p>
<p>8 October Project Management READ CHAP 12 (M5.1) <i>Assign Project Management Project (50 pts)</i> STUDENT PRESENTATION 3.1, 3.2</p>	<p>10 October Matt Larsen-Wolverine Group and Ferris Grad. Career Path/Project Management</p>
<p>15 October Programming/Project Develop’t READ CHAP 13 (M6.1) The Design Process READ CHAP 14 (M6.2) PROJECT MANGEMENT PROJECT DUE Programming Project Visible</p>	<p>17 October <i>Assign Programming Project (50 pts)</i> Work time Programming Project STUDENT PRESENTATIONS 6.1, 6.2, 6.3, 7.1</p>
<p>22 October <i>Review for Mid Term Exam</i> LAST DATE TO HAND IN FINAL RESUME FOR GRADE.</p>	<p>24 October Mid Term Exam (200 pts)</p>
<p>29 October Tentative???????????????????? Mickey Albright - Interviewing</p>	<p>31 October Return and review Mid Term Exams Project Budget Project Visible</p>
<p>5 November The Construction Phase READ CHAP 15 (M7.1) <i>Assign Project Budget (50 pts)</i> STUDENT PRESENTATIONS 5.1, 9.2</p>	<p>7 November Zach MacIntosh & Patrick McKown – Spectrum – Health Ferris Grads (35m) Bid Evaluation Project Visible</p>
<p>12 November Contracting & Types of Contracts READ CHAP 23 (NO PP) Work Coordination READ CHAP 24 (M8.1) Facility Operations READ CHAP 25 (M8.2) PROJECT BUDGET PROJECT DUE <i>Assign Bid Evaluation Project (50 pts)</i> STUDENT PRESENTATION 7.2,7.3,7.4,7.5</p>	<p>14 November Indoor Air Quality/Green Building READ CHAPS 9-11 (M9.1, M9.2) READ Supplemental Articles on Green Buildings STUDENT PRESENTATION 11.1, 11.2, 11.3 Operations and Maintenance Budget Project Visible</p>

<p>19 November John Hohman – MI Society of Hospital Engineers (35m) BID EVALUATION PROJECT DUE <i>Assign Operations & Maint Budget Project (50 pts)</i></p>	<p>21 November Emergency Preparedness/Security READ CHAPS 16-22 (M10,M11) READ Supplemental Articles on Risk Management STUDENT PRESENTATIONS 10.1, 10.2 <i>Benchmarking Project Visible</i></p>
<p>26 November Maintenance & Repair READ CHAP 26 (M12.1) Facility Services READ CHAP 27 (M12.2) OPERATIONS & MAINT PROJECT DUE <i>Assign Benchmarking Project (50 pts)</i> STUDENT PRESENTATIONS 2.1, 2.2,2.3</p>	<p>28 November Thanksgiving Day – No Class</p>
<p>3 December Administering the Department READ CHAP 28 (M13.1) Managing Quality Facilities READ CHAP 29 (M13.2) Managing the Budget READ CHAP 30 (M14.1) BENCHMARKING PROJECT DUE. STUDENT PRESENTATIONS 2.4, 2.5, 5.2, 9.1</p>	<p>5 December Communications READ CHAP 31 (no PowerPoint) Info Systems/Other Technologies READ CHAP 32 (M14.2) Future of FM READ CHAP 33 (M14.3) <i>Review for Final Exam.</i></p>
<p>Final Exam (200 Points) At time designated in Final Exam Schedule.</p>	

1. Textbook Chapters, LEARN Modules are listed in the calendar. You should stay on track with this schedule, familiarizing yourself with the material PRIOR to the class where they are listed. These materials may not be specifically discussed in class, but students are responsible for the content and should ask questions if necessary.
2. All materials are "fair game" for exams whether covered in class or not.
3. All projects handed in after the start of the class on the date due will be considered late unless otherwise announced in class. See syllabus for penalties and policies.
4. All Chapters refer to the 3rd edition Cotts textbook.

FERRIS STATE UNIVERSITY
College of Engineering Technology
School of Built Environment
Architecture and Facility Management Department

FMAN 322 SYLLABUS
Spring 2014

Instructor: Diane Nagelkirk
Office: Swan 314
Office phone: (231) 591-2630
Email: nagelkid@ferris.edu
Office hours: M & W 9:00-11:00 or by appointment

Course Title: Project Management

Course Description: Study of the methods, concepts and procedures of project management. Considers team development, accountability, sequencing of events, scheduling, coordinating consultants, budgeting, contract administration, purchasing, and estimating. Relocations and move management will also be reviewed.

Credit Hours: 3
Contact Hours: 3 lecture hours
Prerequisite: FMAN 321
Required Text: Heldman, Kim; Project Management: Jump Start, 3rd Edition; Wiley Publishing, 2011.

Units of Instruction:

Time Weight:
Lecture Hours

I.	Course introduction	1
II.	Defining project management	2
III.	Team development and team building	3
IV.	Organizational requirement of successful projects	3
V.	Setting goals of the project	3
VI.	Project sequencing of events	3
VII.	Reviewing resource requirements	3
VIII.	Development of schedules	3
IX.	Coordination of consultants	3
X.	Estimating and budgeting	3
XI.	Purchasing and contract administration	3
XII.	Relocations and move management	3
XIII.	Evaluation	3
XIV.	Student Presentations	9
Total Hours:		45

Course Objectives:

We will accomplish the goals of this course through weekly lectures, small-group discussions, videos, and student research and presentations; a schedule of which may be found on the last sheet. The lectures and discussions will be supported by *readings from the text and instructor handouts, which are noted in the course schedule.*

Student Responsibilities:

Assignments are due at the beginning of the designated class. Likewise, the student is expected to have read the assigned readings BEFORE the class begins and to bring text and additional readings to class. No late assignments will be accepted without prior arrangement with the instructor.

Attendance is required and will be taken as a source of grading and student interest. Class participation points will be based on attendance and active involvement in class activities. Missing a class, arriving late or leaving early without an excused absence will result in a deduction of 5 points for each absence. Absences are justified by an official university function, a doctor's written excuse or prior arrangement with the instructor.

Coping of another person's work, in whole or in part, or cheating in any form will deprive the student of a proper learning experience and will not be tolerated. If a student does copy or cheat, automatic failure of the assignment, test or of the course will occur.

All writing assignments will follow the APA Handbook for Writers of Research Papers.

Electronics:

Cell phone use is not allowed in the classroom. Students are asked to turn their cell phones off and place on front counter when they are in class. A ringing cell phone and texting is a disruption to the class and demonstrates a lack of respect for your classmates and the instructor.

Grading:

Assignments, projects, presentations and papers will be graded on technical accuracy, ability to follow the instructions, professional appearance, quality of writing (grammar, clarity, expression of ideas, etc.), quality of speaking skills, critical thinking skills and creativity.

Tests (2 @ 100 points)	200 points
Quizzes (10 @ 25 points)	250 points
Assignments	400 points
Final Project	150 points
Student presentations	100 points
Attendance/participation/effort	100 points
Total	1200 points

Grading Substance:

"A" work is superior work. It goes beyond the instructor's requirements and shows the student's initiative. It demonstrates the student's commitment to learning with *mastery of the course concepts, communicated in a flawless, professional manner*. A conscientious, energetic, sustained work effort is required for an "A" grade.

"B" work is above average work (contrary to the believers in "grade inflation"). This work is complete, well written, and shows good understanding with few shortcomings. This is good work in many ways and the student should be encouraged by this grade. Mastery of the student learning goals in the syllabus represents "B" work.

"C" work is average work. It meets the assigned requirements but shows a need for improvement in several areas of the course content. It indicates a moderate basis upon which the student is encouraged to improve upon all subsequent work.

"D" work is below average work. It typically does not meet the assigned requirements and shows a need for improvement in a majority of categories. Often poor communication and presentation performance will reduce acceptably prepared technical work to this level. The student should respond to a "D" status as a need to significantly increase work performance and graded elements, which is almost always possible.

"F" work is failing work. It does not respond to the assignment needs. It is often incomplete, ill prepared, poorly organized, and violates the rules of grammar and presentation. Plagiarized work, no matter how impeccable is failing work and will be so judged. The student should respond to an "F" status as an immediate need to improve course work drastically. The instructor is available to assist the student in developing their own personal plan to respond to this status, improve your work, and salvage your course grade.

Office Hours:

Please visit me during my office hours whenever you like. Office hours are intended to help students, so use this time to ask questions or discuss problems we don't have time for in class. Informal meetings provide a good opportunity for us to know each other better. Stop by whenever you would like to discuss your progress in the class, or any other topic. These interactions are often beneficial to us both. If you are unable to see me during my office hours, using e-mail may be a good way for you to ask questions or express concerns.

FERRIS STATE UNIVERSITY
College of Engineering Technology- School of Built
Environment – Architecture and Facility Management

COURSE: FMAN 331
TERM: SPRING 2013
INSTRUCTOR: SAMSON

COURSE SYLLABUS:

FMAN 331: Facility Programming and the Design Process

INSTRUCTOR: Joe M. Samson, CFM

OFFICE: 202 Johnson Hall

PHONE: 231-591-2517

E-MAIL: samsonj@ferris.edu

OFFICE HOURS: As posted.

COURSE TITLE: Facility Programming and the Design Process

PREREQUISITE: FMAN 321

COURSE DESCRIPTION:

Course will enable students to understand the role of the facility manager in working with organizations and the users of space to identify facility related needs and present them to design professionals. Students will also learn the facility manager's role in strategic planning, facilitating the organization's business plan, and working with outside consultants to develop facilities.

COURSE FORMAT:

The class consists of two lecture hours per week plus two studio hours. The lecture portion focuses on developing an understanding of the methodologies necessary to be a skilled and sensitive programmer. The students will be evaluated based on a series of projects with the goal of applying the theory presented in the lectures as well as through tests.

CREDIT/HOURS: Credit Hours = 3; Contact Hours: 2 Lecture/2 Studio

REQUIRED TEXT:

Architectural Programming: Information Management for Design; Donna Duerk, Van Nostrand Reinhold, 1993 or 1997.

Facility Management Websites for FM Information.

- www.buildings.com – monthly magazine
- www.informedesign.umn.edu – summarizes research.
- www.fmlink.com – news and current developments.
- www.ijfm.net – online journal.
- www.ifmafoundation.org – sustainability “how to” guides.
- www.todaysfacilitymanager.com – magazine/journal.

REFERENCES:

- The Hidden Dimension; Edward T. Hall, Anchor Press, 1966.
- Designing Interiors; Rosemary and Otie Kilmer; Harcourt Brace Jovanovich, 1992.
- Facilities Planning and Relocation; David D. Owen, R. S. Means, 1993.
- Problem Seeking: An Architectural Programming Primer, 4th Edition; William Pena et al; John Wiley and Sons, 2001.
- Professional Practice in Facility Programming; Wolfgang Preiser; Van Nostrand Reinhold, 1993.
- Office Planning and Design Desk Reference; James E. Rappaport et al; Wiley, 1992.

- Social Design: Creating Buildings with People in Mind; Robert Sommer; Prentice Hall, 1983.
- Inquiry by Design: Tools for Environmental Behavior Research; John Ziesel; Brooks-Cole, 1981.
- Programming for Design: From Theory to Practice; Edith Cherry; Wiley, 1999.
- Programming and Research Skills for Interior Designers; Rose Mary Botti-Salitsky; Fairchild Books, 2009.
- Informing Design; Joan Dickinson and John Marsden, editors; Fairchild Books, 2009.

ADDITIONAL MATERIAL:

Instructor prepared handouts.

ATTENDANCE:

This course integrates concepts from business, architecture, sociology, and facility management. Some lectures are supplemental to the readings. Students are responsible for all information discussed at lectures as well as in the text. It is the student's responsibility to obtain information regarding content of class periods that they miss. Students missing tests, presentations, etc. will not be given an opportunity to make the work up without a medical excuse. In unusual circumstances other arrangements may be made. These arrangements should be made with the instructor prior to the class period if possible.

Students are expected to attend class, prepare themselves by reviewing text and power points prior to the class, and participating in activities and discussions.

Excused and Unexcused absences affect the student's performance in class. Excused absences are: excuses with doctor's excuse, absences pre-arranged by student with instructor, excused absences due to field trips and other university activities. ALL absences will affect the student's final grade. Generally, 2-3 absences will not affect a student's grade. Excessive absences will affect the student's grade. Students missing more than 8 class periods (regardless of the reason) may fail the course. (See Performance Grade)

CELL PHONES:

It is rude and distracting to all for students to be fiddling with cell phones during class. Cell phones are to be OFF during class unless the student has an important reason such as illness in family, etc and informs the instructor and receives permission prior to the class to keep the cell phone on. Abuse of this policy/request will affect the student's course grade. See Performance Grade)

LATE WORK:

Work is due at the START of the class period unless otherwise stated. *Work is not to be done during class unless it is done during an in class work session.* Work that is handed in after the time it is due will be penalized 5%. After the second class period it is due it will be penalized 10%. Work handed in after the second class period will be worth 50% of its graded points.

READINGS:

The readings are in many cases intended to supplement or reinforce the lectures. They are also intended as a source of direction when doing projects. Information from required readings may be included on the tests even if not presented in the lectures. It is a good idea to complete the readings prior to the date shown on the class calendar.

TOBACCO:

It is a policy of the College of Technology that tobacco products (including chewing tobacco and snuff) will not be permitted within classrooms.

FSU RELIGIOUS HOLIDAY POLICY:

Ferris State University will make reasonable accommodations for students who are absent from the University in observance of religious holidays. It is the responsibility of the student to notify the faculty in writing during the first week of the semester of their intention to be absent from class on their day(s) of religious observance. Upon formal notification, the faculty will excuse the student from the class or studio for the holiday(s) and allow the student to make up missed exams; however, the student is responsible for completion of all missed work within a reasonable time as determined by the faculty.

Requests for absence to participate in religious activities, other than recognized religious holidays, are not recognized by the University as excused absences. The student may present such a request to the faculty during the first week of the semester and the faculty may approve such an absence at his or her discretion. If the instructor approves the absence, the student is responsible for completion of all missed work within a reasonable time as determined by the faculty.

If a student disagrees with the faculty member's determination, the student may make a written appeal to the dean of the student's college. The decision of the dean is final.

FSU DISABILITY POLICY:

Ferris State University is committed to following the requirements of the Americans with Disabilities Act Amendments Act and Section 504 of the Rehabilitation Act. If you are a student with a disability or think you may have a disability, contact the Disabilities Services office at 231.591.3057 (voice), or email ecds@ferris.edu to discuss your request further. More information can be found on the web at <http://www.ferris.edu/htmls/colleges/university/disability/>.

Any student registered with Disabilities Services should contact the instructor as soon as possible for assistance with classroom accommodations.

CALENDAR:

A tentative class calendar is provided to help students plan their work schedules. If there are any major changes due to student or instructor needs, they will be announced in class.

COMMUNICATIONS:

If you have any questions or concerns, please let me know. I cannot make adjustments or correct problems if I don't know about them.

DROPPING THE CLASS:

If you plan to drop the class, be sure to discuss the matter with the instructor AND your advisor. Dropping the course may impact future progress toward a degree.

GRADING :

A- 90-92%	A 93-100%	
B- 80-82%	B 83-86%	B+ 87-89%
C- 70-72%	C 73-76%	B+ 77-79%
D- 60-62%	D 63%-66%	D+ 67%-69% F < 60%

Meaning of Grades:

“A” Work: Superior work which exceeds expectations in substance and presentation.

“B” Work: Work which is above average in substance and presentation, which demonstrates understanding and ability to apply concepts consistently.

“C” Work: Work of average quality in substance and presentation, which meets the requirements of the assignments but does not demonstrate innovation, creativity, or consistency.

“D” Work: Below average work which does not meet the expectations for substance and/or presentation as identified in the assignment.

“F” Work: Poorly prepared work which does not address the substance or presentation expectations as communicated in the assignment as well as plagiarized work.

The following will be taken into account when grading all work:

- professional appearance
- grammar and spelling
- clarity (understandable writing style)
- explanations of:
 - what you did
 - how you did it
 - why you did it the way you did
 - what you found out
- following directions (doing what was requested)
- creativity (being creative, or going beyond project requirements)
- research of similar projects and the results (IE. Research in the library, an organization, etc.)
- documentation of sources (footnotes and bibliography)

<u>POINTS:</u>	Projects	800 points
	Tests (2@ 200 pts.)	400 points
	Performance*	200 points
	Total Points	1,400 points

Performance Points will be calculated as such.

1. Normal preparation/participation and attendance; grade will be a percentage of the total possible reflecting the student's grade on course work.
2. Exceptional preparation/participation and attendance; grade will be higher than the percentage of the total possible reflecting the student's grade on course work.
3. Less than expected preparation/participation and attendance; grade will be lower than the percentage of the total possible reflecting the student's grade on course work.

MID-TERM GRADES:

Mid term grades will be reported during the 8th week of class and will be available on the internet. Generally, all work due up to mid-term will be included in the grade. Work that is due but not received will receive a grade of 0 points. If it is submitted later the grade will be reflected in the final grade.

STUDENT LEARNING OUTCOMES:

Students satisfactorily completing this course will achieve proficiency in:

1. Understanding the purpose of facility programming and how it differs from architectural programming, and its role in enabling the development of successful spaces.
2. Understanding how facility programming supports the organization's business goals.
3. Performing the research and data collection necessary to identify the issues and goals necessary for successful space development.
4. Organizing the facility program into a comprehensive and operational design tool.
5. Utilizing the facility and architectural programs to evaluate design options as well as the function of spaces.
6. Demonstrating effective communication in the following areas: writing, speaking, presentations, and small group interaction.

UNITS OF INSTRUCTION:

**TIME WEIGHT:
Lecture Hours**

I.	Course Introduction.	1
II.	Facility Management Principles & relationship to programming and design management.	2
III.	Facility Programming and its relationship to the organization's business goals.	1
IV.	The Facility Programming Process.	3
V.	Facility Programming Goals.	1
VI.	Human-Environment Relationships.	2
VII.	Research Principles.	3
VIII.	Data Sources.	3
IX.	Data Collection Methodologies.	4
X.	Post-Occupancy Evaluation.	3
XI.	Statistics.	2
XII.	Graphic Methodologies.	2
XIII.	Writing the Program.	4
XIV.	Presentation.	3
XV.	Architectural Programming Process.	1
XVI.	Architectural Programming Goals.	2
XVII.	Writing Architectural Program.	2
XVIII.	Site Selection.	1
XIX.	Evaluation of Site Plan.	1
XX.	Evaluation of Architectural Design.	2
XXI.	Evaluation.	2
Total Contact Hours:		45

Tentative Course Calendar FMAN 331, FSU: Spring 2013

Tuesday	Thursday
15 jan Review syllabus introduction to course (Module 1.1) definition of terms READ CHAPTER 1 (Module1.2) Exercise: Describe Attributes/Guess Object-25 Pts	17 jan existing conditions as a starting point (Module2.3) Explain Term Project/Form Teams ASSIGN AUDIT – 100 Points
22 jan Exercise: Programming Info/How to Organize -25 Pts Intro to Duerk's Programming Model (Module1.3)	24 jan facility programming and the design process (Module2.1) facility programming and the business plan (Module2.2) Review Project Progress.
29 jan environmental behavior (Module3.1) user needs analysis (Module3.2) Exercise: Human Factors and Wants/Needs/Priority of Designer-Client-User-25 Pts	31 jan research theory READ CHAPTER 6 (Module4.1) basic research methods READ CHAPTER 7 (Module4.2) AUDIT DUE ASSIGN DEVELOP BEHAVIORAL MAP – 50 Points
5 feb Behavioral Map Review – Come with draft of Behavioral Map/Criteria for Categorization/Code System/Plan for Execution.	7 feb advanced research READ CHAPTERS 8 & 9 (Module5.1) BEHAVIORAL MAP DUE ASSIGN DEVELOP SURVEY – 50 Points
12 feb Survey Review – Come with draft of survey.	14 feb data organization READ CHAPTER 10 (Module6.1) SURVEY DUE ASSIGN EXECUTE AND PRESENT – 100 Points
19 feb Review Behavioral Map Findings – Come with mock up of how you will present findings from behavioral map.	21 feb Review Survey Findings – Come with mock up of how you will present findings from survey.
26 feb Review ALL Execute and Present – Complete work from previous week and look at concurrence and contradiction. How will you present this...how will you use graphics.	28 feb REVIEW FOR MIDTERM EXAM. EXECUTE AND PRESENT DUE
5 mar MIDTERM EXAM SPRING BREAK THIS WEEK!!!!	7 mar (mtw) Return Mid Term Exam HAVE FUN!!!!
19 mar issues READ CHAPTER 2 (Module7.1) goals READ CHAPTER 3 (Module8.1) Review Remainder of Semester Project ASSIGN WRITE MISSION STATEMENT – 25 Points EMAIL BY THIS EVENING	21 mar ASSIGN WRITE "GENERAL" GOALS – 25 Points EMAIL BY THIS EVENING
26 mar ASSIGN WRITE "SPECIFIC" GOALS – 25 Points EMAIL BY THIS EVENING	28 mar Easter Break
2 apr performance requirements READ CHAPTER 4 (Module9.1) ASSIGN WRITE PERFORMANCE REQUIREMENTS	4 apr Work/Help Session – Performance Requirements EMAIL GOAL/PERFORMANCE REQUIREMENT GROUPS BY THIS EVENING – 100 Points
9 apr concepts READ CHAPTER 5 (Module10.1) ASSIGN ADD ARCHITECTURAL ATTRIBUTES TO GOAL/PERFORMANCE REQUIREMENT GROUPS (AREA/SIZE/DISTANCE/ETC) – 50 Points	11 apr ASSIGN FINAL PRESENTATION OF PROGRAM – 200 Points EMAIL ARCH ATTRIBUTES BY THIS EVENING
16 apr design concept evaluation (Module12.1) post occupancy evaluation (Module12.2)	18 apr budgeting (Module12.3) ASSIGN BUDGET PROJECT (50 Points)
23 apr information management, formats, cases (on your own) READ CHAPTERS 11 & 12 (Module11.1) Work/Help Session – Final Program & Presentation BUDGET PROJECT DUE	25 apr Work/Help Session – Final Program & Presentation
30 apr REVIEW FOR FINAL EXAM.	2 may FINAL EXAM
Final Project (Presentations and Written Portion) due during Finals Week at appointed time.	

All projects to be due at the start of the class where due date is shown.

Ferris State University - FMAN 431 – Fall 2013
Principles of Space Planning

Dane Archer Johnson, Associate Professor
danejohnson@ferris.edu

Johnson Hall 209
231-591-2625

Introduction to the course

In the world of facilities management, the management of space equates to the management of people. Proper physical management of people relates directly to productivity. Productivity can translate into either money or service, depending on the nature of the business at hand. Therefore, the task of properly planning space directly correlates to the viability of any organization, be it for profit or not.

In this course, we will explore the interior environment as a functional, cultural and design problem. We will explore client / designer relationships through the development of spatial programs and office layouts. We will explore the office and the classroom and how they shape our work and school lives. We will explore tools that help the facility manager manage the space under his or her control. We will learn about forecasting space, allocating space, and managing space at the macro and micro scales. We will hopefully come away from this course with an understanding of the different roles that are played in the creation of successful workspaces.

Structure of the course

This course will consist of lecture / discussion sessions, and separate planning sessions. During planning sessions discussion will take place between student and instructor, and between student teams. Students should come prepared with whatever tools they need to progress on their work during these sessions. Students should always be prepared to take notes during lectures, as lecture content will be reflected in project expectations. The dates for lectures and work sessions are listed in the course schedule.

Requirements of the course

Required Text: Rengel, Roberto J. *The Interior Plan: Concepts and Exercises*. Fairchild, 2012.

Grades: Grades will be calculated based on a course total of 1,000 points, based on the following formula:

Projects -	2 projects at 50	100 points
	2 projects at 150 points	300 points
	1 project at 300 points	300 points
Deep Dive -		150 points
Myers-Briggs Type Indicator test -		50 points

Attendance -

100 points

Course Grades:	A	925 – 1000 points	C	725 – 774 points
	A-	900 – 924 points	C-	700 – 724 points
	B+	875 – 899 points	D+	675 – 699 points
	B	825 – 874 points	D	625 – 674 points
	B-	800 – 824 points	D-	600 – 624 points
	C+	775 – 799 points	F	below 600 points

Missed deadlines and Excused Absences:

It is understood that students are not immune to the circumstances of life. It should also be understood that during your years as a student, school is your primary occupation, and adherence to deadlines, attendance at lectures, etc. is mandatory. Therefore, projects that are turned in late will be marked down ten percent (10%) for each business day late. All projects must be turned in to receive credit for the course.

Students will be granted an excused absence if extenuating circumstances prevent them from attending class. To receive an excused absence for a non-medical reason, the student must notify the instructor **BEFORE** the class session in question. In the case of illness, the student must provide evidence of a doctor visit to receive an excused absence. A maximum of two excused absences will be permitted. Students will be responsible for all course material covered in their absence, and will be responsible for finding notes, getting handouts, etc.

Attendance:

Attendance is a primary requirement of this course. Since the majority of course information will be delivered in lectures, absence from lectures will place the student at a significant disadvantage. As an adult, however, the choice of attending is yours. However, a price will be paid for frequent absences, in the form of a lowered grade in the course. More specifically, if you are absent seventeen percent of the time, your attendance grade will be lowered 17 percent, allowing you a maximum of 83 out of 100 points possible for this portion of your grade.

Electronics:

Cell phone use is not allowed in the classroom. Students are asked to turn their cell phones off when they are in class. A ringing cell phone is a disruption to the room and demonstrates a lack of respect for your classmates and the instructor. I-Pods, MP3 players, texting, tweeting, etc., are not allowed in class except during work sessions. .

Principles of the course

Academic Dishonesty:

Trust between student and instructor is critical to the success of any course. In the larger sense, it is critical to the ongoing development of a culture.

When the trust is violated by either party, the progress of the course is nullified, and whatever potential existed for positive impact on the culture is therefore lost. That is why each instructor must pledge to each student that he or she will conduct themselves with honesty, integrity and respect.

Each student must, in turn, pledge the same to each instructor. In this spirit, it should be understood that dishonesty in any form will not be tolerated in this course. If cheating in an examination environment is discovered, the result will be, at a minimum, no credit for the examination in question. More insidious forms of cheating, including but not limited to those involving plagiarism, have resulted in the instituting of zero-tolerance policies regarding acts of academic dishonesty.

Written or graphic work produced out of the classroom setting will be examined in detail to discover acts of plagiarism, and discovery and confirmation of such, will result, at a minimum, in a failing grade for that work.

If deemed appropriate, issues of dishonesty will be referred to Student Judicial Services for further action.

Week 1	Aug 27 Aug 29	Introduction to the course Introduction to Space Planning Video: <i>IDEO – the deep dive</i> Work session: Deep Dive	Chapters 1-3
Week 2	Sep 03 Sep 05	Lecture: History of the American Office Work session: Deep Dive	Chapter4
Week 3	Sep 10 Sep 12	DEEP DIVE PRESENTATIONS Myers-Briggs Type Indicator Discussion: Corporate Culture	Chapter 3 P1A handout
Week 4	Sep 17 Sep 19	Lecture: Planning Methodology PROJECT 1A Due Project 1B: Planning Session	Chapter5 P1B handout
Week 5	Sep 24 Sep 26	FIELD TRIP: STEELCASE Project 1B: Planning Session	
Week 6	Oct 01 Oct 03	PROJECT #1B DUE Lecture: The First Planning Steps Project 2: Planning Session	Chapter 6 P2 handout Chapter 8
Week 7	Oct 08 Oct 10	Project 2: Planning Session Project 2: Planning Session	
Week 8	Oct 15 Oct 17	PROJECT #2 PRESENTATIONS NO CLASS MEETING	
Week 9	Oct 22 Oct 24	Lecture: The Building Shell Project 3: Planning Session	P3 handout
Week 10	Oct 29 Oct 31	Lecture: Important Influencing Factors Project 3: Planning Session	
Week 11	Nov 05 Nov 07	Project 3: Planning Session Project 3: Planning Session	
Week 12	Nov 12 Nov 14	Project 3: Planning Session PROJECT #3 PRESENTATIONS	
Week 13	Nov 19 Nov 21	Lecture: Adjacencies, Stacking Project 4: Planning Session	P4 handout
Week 14	Nov 26 Nov 28	Project 4: Planning Session NO CLASS – THANKSGIVING	

Week 15

Dec 03

Dec 05

Project 4: Planning Session

Project 4: Planning Session

FINALS

Dec 11

PROJECT #4 DUE - 2:00

**FERRIS STATE UNIVERSITY
COLLEGE OF ENGINEERING TECHNOLOGY
ARCHITECTURE AND FACILITY MANAGMENT**

**FMAN 432
COURSE SYLLABUS**

COURSE TITLE:	Principles of Interior Architecture
DESCRIPTION:	An overview of the elements of interior design and their application. Students apply the principles of interior design with regard to program requirements, context, environment, ergonomics, code and regulatory issues. The visual effects and physical attributes of various components of the interior space are studied.
CREDIT HOURS:	3
CONTACT HOURS:	2 + 2 (Total Semester Contact - 60 + Final Exam)
PREREQUISITES:	FMAN 431
INSTRUCTOR:	Professor: Mary Brayton Office: Johnson Hall 302 Office Hours: Monday & Wednesday 1:00 – 1:50 pm, Tuesday & Thursday 10:00 -10:50 am, Other times available by appointment. Telephone: Office: 591-3584 Home: 231-592-0570 (until 10:00 PM only) Email: braytonm@ferris.edu
SUGGESTED TEXT:	<u>Interior Design, 4th Edition</u> ; Pile; Pearson/Prentice Hall; 2007 <u>Foundations of Interior Design, 2nd Edition</u> , Slotkis; Fairchild Books, 2013 <u>Sustainable Design for Interior Environments, 2nd Edition</u> , Windchip, Fairchild Books, 2011
REFERENCES:	<u>Cradle to Cradle</u> ; McDonough & Braungart; North Point Press; 2002 <u>Human Dimensions and Interior Space</u> ; Punero & Zelnik
ADDITIONAL MATERIALS:	Instructor prepared handouts. Drafting Equipment <ul style="list-style-type: none">• Architectural scale and triangles• Colored pencils/ markers• Black fine point & medium point markers• Tracing paper• Spray mount• Black foam core presentation boards (20 x 30)• Other materials per project requirements
CLASS PROCEDURE:	The class will be conducted through a combination of lectures, guest speakers, reading assignments, reading quizzes, student research, problem solving exercises, discussions, and student presentations. Students will work both in teams and independently.

Student Learning Outcomes:

Students satisfactorily completing this course will achieve proficiency in:

1. Understanding the theories, approaches and processes of interior design.
2. Developing solutions and supporting documentation for design problems within the *context of interior environments*.
3. Identifying and utilizing evaluation criteria in the selection of interior finishes, systems and furniture.
4. Performing research involving materials, furniture and systems utilized in building interiors.
5. Demonstrating effective communication in the following areas: writing, speaking, presentations, and small group interaction.

Units Of Instruction:**Time Weight:**

	Lecture	Lab
I. Course introduction	1	
II. Design History	2	
III. Design Quality and Basics	2	2
IV. Color in interior design	2	4
V. The Design process	2	2
VI. Human factors, social responsibility, special needs, and codes of Interior Design	3	2
VII. Interior environmental controls	2	
VIII. <i>Lighting for interiors</i>	2	2
IX. Interior materials and components	2	2
X. Architectural systems and interior finishes	4	8
XI. Furniture, furnishings and equipment	4	8
XII. Current trends and topics	2	
XIII. Evaluation	2	
Total Hours	30	30

Learning Outcomes for each Unit of Instruction:

Upon completion of each instructional unit, the learner will:

- I. Course Introduction
 - Understand course format, grading format methods, and class procedures.
 - Understand the relationship of interior design to facility management.
- II. Design History
 - Understand the definition and origins of interior design.
 - Summarize the history of interior design.
 - Understand professional presentation expectations.
- III. Design Quality and Basics
 - Define design and the terms used to evaluate design.
 - Define and describe commonly used design approaches.

- Apply and evaluate design elements and principles to meet client and program needs.
- IV. Color in Interior Design
- Define and create the 12-part color system.
 - Apply the theories of arranging colors into practical color schemes.
 - Utilize the theories of perception and use of color and its resulting effects on human behavior.
 - Demonstrate ability to apply color appropriately to a specific interior environment.
- V. The Design Process
- Demonstrate the distinct application of analysis and synthesis processes of design.
 - Identify and apply the sequence of design steps to a design problem.
- VI. Human factors, social responsibility, special needs, and codes of Interior Design
- Understand that people are directly affected by their environments.
 - Define the issues that embody the elements of social responsibility.
 - Identify building codes applicable to interior spaces and use.
 - Apply building code guidelines to required aspects of the building interior.
 - Identify and apply barrier free requirements to specified areas.
- VII. Interior Environmental Controls
- *Define the human comfort zone and identify systems utilized in the control of the interior environment.*
 - Be able to describe a variety of heating and cooling systems used to control thermal microclimates.
 - Be able to compare and evaluate interior control systems.
 - Explain methods of achieving acoustical privacy in offices.
- VIII. Lighting for Interiors
- Know common terms and performance criteria utilized in lighting selection.
 - Determine appropriate lighting levels required for a variety of tasks.
 - Analyze the lighting requirements of the user in the selection of an appropriate fixture and lamp.
 - Describe a variety of light sources and fixture types.
 - Produce varying degrees of lighting levels and effects through the selections of fixtures and lamps.
- IX. Interior Materials and Components
- Summarize the performance characteristics, maintenance issues, and sustainability concerns of ceramics, glass, metals, plastics, textiles, window treatments, carpets, ceiling systems, and paints.
 - Describe how selection of materials contributes to indoor air quality, flame spread ratings, and smoke developed ratings.
 - Evaluate the impact of material selection on acoustical performance.
- X. Architectural Systems and Interior Finishes
- Be able to define a variety of Floor systems, Wall systems, and Ceiling systems.

- Utilize standard selection criteria related to these systems in terms of sustainability, fire protection, acoustical performance and changeability.
- Describe the parameters associated with existing construction and the preservation of historic features.

XI. Furniture, Furnishings and Equipment

- Apply the differing ergonomic and psychological considerations involved in furniture selection.
- Be able to identify a variety of common furniture types.
- Evaluate and select furniture systems utilizing standard selection criteria.
- Identify and integrate into overall design, additional items utilized to enhance and personalize space; Accessories, Artwork, Plants, Corporate Signage.

XII. Current trends and topics

XIII. Evaluation

COURSE EVALUATION: The course grade will be based on the total accumulation of points earned from the assigned student activities. The following is a tentative breakdown of the assignments and probable points:

Research paper, product and presentation	100 Points
Color Exercise	100 Points
Assignment 1	100 Points
Sustainability Exercise	30 Points
Assignment 2	100 Points
Assignment 3	100 Points
Code Research	30 Points
Assignment 4	100 Points
Assignment 5	25 Points
Assignment 6	100 Points
Assignment 7	100 Points
Article readings and Guest speaker papers	65 Points
Reading Quizzes	50 Points
Tests	100 Points
Total	+/- 1100 Points

GRADING SCALE:

A	93 – 100
A-	90 – 93
B+	87 – 90
B	83 – 87
B-	80 – 83
C+	77 – 80
C	73 – 77
C-	70 – 73
D+	67 – 70
D	63 – 67
D-	60 – 63
F	0 – 60

(Based upon average of above)

CLASSROOM POLICY:

- Your commitment to being a student at Ferris State University begins with a fundamental understanding of and appreciation for the core values of the institution. Ferris recognizes the inherent dignity of each member of the university community and treats everyone with respect. Our actions are guided by integrity, fairness, honesty, and trust. A component vital to the university community is academic integrity, which acknowledges the inherent worth of individual learning (Bulldog values, Ferris State University *Code of Student Community Standards (Student Handbook) 2009-2010*).
- Each student will be treated with respect. Each student is expected to respect all others in the classroom. It is the students' responsibility, as a member of the Ferris State University's learning community, to access and abide by the university's policies regarding academic conduct (See Ferris State University's *Code of Student Community Standards (Student Handbook) 2009-2010*). Disruptive students will be removed and only allowed to return at the discretion of the instructor.
- Integrity of scholarship requires that all academic work be completed by the student to whom it is assigned, for the course in which it is assigned, without unauthorized aid of any kind. (Retrieved June 15, 2010 from University of California, San Diego website, titled *Suggested Academic Integrity Statements for Syllabi*). Students are expected to be ethical in their scholarship and practice academic integrity. This includes properly crediting others for their ideas they may find useful.
- Use of profanity, tobacco products (any), or sexually suggestive or profane clothing in the classroom is not allowed.
- Use of cell phones for calls and text messaging during class is not allowed. If instructor sees a cell phone being utilized or hears a cell phone during class you will receive a deduction of 10 points. Should it happen a second time, you will receive a deduction of 20 points. If it happens a third time, your cell phone will be taken away, locked up, and returned to you at the end of the semester. If you must have a cell phone for emergency purposes please notify instructor. *Calls are to be taken and answered after exiting the classroom.*
- iPods will only be allowed during lab periods or at the instructor's discretion.
- Laptop computers will only be allowed at the instructor's discretion.
- Classroom policy is structured to mirror and anticipate expected professional conduct and the students' appearance and conduct will also be expected to meet these standards.
- Each student is expected to attend classes on a regular basis. Lack of attendance or lateness will reflect on the student's attitude and on their final grade in the course.
 - ❖ Each unexcused absence may result in the lowering of a student's final average by one point per unexcused absence.
 - ❖ It shall be the student's responsibility to notify the instructor with regards to an excuse for a missed class. If this is not done prior to or immediately upon returning to the next class it will be assumed that the absence is unexcused.
 - ❖ An excused absence is a medical excuse issued by a physician, university approved activity or funeral with proper documentation. It will be the option of the instructor whether to accept any other reason for an absence as an excused absence.

8 or more unexcused absences during the semester will result in failure of the course. No

exceptions.

PLAGIARISM:

By taking this class you indicate that you agree to submit your research papers to an electronic media which will help determine the originality of your work with a report being provided to the professor on plagiarism. (Brayton, E. (2010) CONM 412 *Syllabus*) Papers over 15% matching content will not be accepted.

ACADEMIC DISHONESTY:

Academic dishonesty will result in a grade of no points for the quiz, paper or assignment that it relates to and may result in dismissal of the student from the class with a failing grade and possible expulsion from the University. (See the Honesty Policy in the University Catalog – page 332) Cases of academic dishonesty will be reported in writing to the program coordinator, college dean, and a referral will be made to the Office of Student Conduct. These policies and procedures will not supersede Board of Trustees policy on student conduct and university disciplinary procedures.

GUIDELINES AND POLICY:

The following are general guidelines and course policies:

- When required, the assignments are to be professionally presented, hand-drafted or CAD drafted.
 - Student will be responsible for all assigned readings (text & handouts) and information included in lectures. Quizzes will include information from class lectures, guest speakers, discussions and readings.
- Late assignments will only be accepted for one week after the assignment is due, and will be penalized up to 20 points (based upon a 100 point assignment). Late projects more than a week late will receive a “0”.

RELIGIOUS HOLIDAYS (University):

Ferris State University will make reasonable accommodations for students who are absent from the University in observance of religious holidays. It is the responsibility of the student to notify the faculty in writing during the first week of the semester of their intention to be absent from class on the day(s) of religious observance. Upon formal notification, the faculty will excuse the student from class, labs, clinics for the holiday(s) and allow the student to make up missed exams; however, the student is responsible for completion of all missed work within a reasonable time as determined by the faculty.

Requests for absence to participate in religious activities, other than recognized religious holidays are not excused absences. The student may present such a request to the faculty during the first week of the semester and the faculty may approve such an absence at this or her discretion. If the instructor approves such an absence, the student is responsible for completion of all missed work within a reasonable time as determined by the faculty.

If a student disagrees with the faculty member's determination, the student may make a written appeal to the dean of the student's college. The decision of the dean is final.
Units of Instruction and Student Learning goals:

AMERICANS WITH DISABILITIES ACT:

Ferris State University is committed to following the requirements of the Americans with Disabilities Act Amendments Act and Section 504 of the Rehabilitation Act. If you are a student with a disability or think you may have a disability, contact the Disabilities Services office at 231-591-3057 (voice), or email ecds@ferris.edu to discuss your request further. More information can be found on the web at <http://www.ferris.edu/htmls/colleges/university/disability/>.

Any student registered with Disabilities Services should contact the instructor as soon as possible for assistance with classroom accommodations.

FERRIS STATE UNIVERSITY
COLLEGE OF ENGINEERING TECHNOLOGY
ARCHITECTURE AND FACILITY MANAGEMENT DEPARTMENT
COLLEGE OF BUILT ENVIRONMENT

SYLLABUS: COURSE FMAN 441 FALL 2013

INSTRUCTOR: ASSOCIATE PROFESSOR Gary Gerber
OFFICE: 208 Johnson Hall
PHONE: Office: 231 591-2631; Home: 1-616-363-6805
E-mail: Gerberg@ferris.edu

OFFICE HOURS: M 1:00-1:50pm, MW 2:00-2:50pm, W 11:00-11:50am, (Individual appointments available)

COURSE TITLE: Property Development & Planning

PREREQUISITE: FMAN 321, BLAW 221

COURSE DESCRIPTION: Methods of acquisition, ownership, and disposal of properties. Examination of leasing practices and lease management; real estate marketing and market analysis; feasibility analysis; financing development trends; site evaluations and selection; occupancy and use constraints; regulations and incentives; calculation and determining variations of rental space

CREDIT HOURS: 3

REQUIRED TEXT: "REAL ESTATE DEVELOPMENT—PRINCIPLES AND PROCESS", Miles, Berens, Weiss, Fourth Edition

ATTENDANCE: Attendance is required for all classes, unless otherwise excused by the instructor. More than 6 unexcused absences is cause for immediate failure of the course. Attendance is more than being physically present in class. If you are playing electronic games, surfing the web on your computer, cell phone or other device, you aren't actively engaged in the class discussion. You will be considered absent if seen engaged in electronic distractions.

% GRADING SCALE:

96.8-100=A 86.8-89.9=B+ 76.8-79.9=C+ 66.8-69.9=D+
93.4-96.7=A 83.4-86.7=B 73.4-76.7=C 63.4-66.7=D
90-93.3=A- 80-83.3=B- 70.0-73.3=C- 60.0-63.3=D- <60.0=F

SEMESTER EVALUATION:

Research Project		200 points
Written report	100	
Oral report	100	
Article Reviews (6) @ 25 pts (individual)		150 points
Projects (3) @ 150 pts (individual)		300 points
Class Participation		150 points
Midterm exam		200 points

Final exam
TOTAL POINTS

200 points
1200 points

LATE ASSIGNMENTS: It is important to complete assignments on schedule. The farther you fall behind, the harder it will be to catch up. You will lose 5% of the total points of the project for each class day a project is late without an excused absence. Any project submitted after 1 week (2 class days) from the due date will not be graded and receive a "0". Any person missing a scheduled presentation for their team will get a "0" for the presentation.

COMMUNICATION: Problems can only be solved if I am aware of them. If you are having problems, let me know. The longer you wait, the harder it becomes to solve them. Don't quit coming to class for a period of time and then come ask for help.

CLASS PARTICIPATION AND READING ASSIGNMENTS: Each student is expected to read the chapter in the textbook prior to the lecture on that topic. For example, on the Thursday September 2, you are to have already read chapter 1. There will be class discussion and participation of every student is expected. You should be able to answer the review questions at the end of each chapter and understand the terms listed. How you answer questions and participate in class discussions will directly affect the number of points you get for class participation. If you tune out and play on your computer, cell phone etc., you will undoubtedly receive little or no points for class participation. Students that skip class when guest speakers visit will get little or no class participation points. Guest speakers are selected for their expertise in real estate development and offer a very special insight into the field.

ARTICLE REVIEWS: Each student is expected to read the article handout and write a summary based on the format given to you. This work must be done prior to coming to class on Thursdays so that we can have a discussion of the material. Anyone with an unexcused absence on an article review day will be allowed to turn in their report but will lose 5 points. Any article review later than 1 week will not be graded and will receive 0 points.

PROJECTS: There are three projects, one that will start to be due Thursday the 2nd week of class. The PowerPoint project and Planning Commission Public Hearing are group projects that have varying dates of completion (see class schedule). Tax Assessment Appeal project is an individual project that has a common due date for the entire class. If your group misses the due date, your group will receive a maximum of 50% of the possible points available.

COPYING: Anyone caught copying another person's work will be given **0 points** for the assignment as well as the person allowing the copying of their work.

FMAN 441 FALL 13--PROPERTY DEVELOPMENT AND PLANNING			
Week	Beginning	Monday	Wednesday
1	26-Aug	Introduction Assign Planning Commission Project, Assign Project 1	Reserve Planning Commission Projects, Discuss Chapter 1, Read Chapter 2
2	2-Sep	Labor Day	Discuss Chapter 3
3	9-Sep	Discuss Chapter 4, Assign Property Tax Assessment Appeal, Article 1 Due	Guest Speaker
4	16-Sep	Discuss Chapter 5	Discuss Chapter 6
5	23-Sep	Discuss Chapter 7, Article 2 Due	Discuss Chapter 8, GSA Office Presentation Team 1-5
6	30-Sep	Discuss Chapter 9, GSA Office Presentation Team 5-10	Discuss Chapter 10
7	7-Oct	Review, Article 3 Due	MIDTERM EXAM
8	14-Oct	Discuss Chapter 11	Discuss Chapter 12, Property Tax Assessment Appeal Project Due
9	21-Oct	Discuss Chapter 13, Article 4 Due	Discuss Chapter 14, Team 1 & 2 Planning Commission Mtg Presentation
10	28-Oct	Discuss Chapter 15, Team 3 & 4 Planning Commission Mtg Presentation	Leasing & BOMA, World Work Place, Team 5 & 6 Planning Commission Mtg Presentation
11	4-Nov	Discuss Chapter 16, Article 5 Due	Discuss Chapter 17, Team 7& 8 Planning Commission Mtg Presentation
12	11-Nov	Discuss Chapter 18, Team 9 & 10 Planning Commission Mtg Presentation	Discuss Chapter 19, Team 11 & 12 Planning Commission Mtg Presentation
13	18-Nov	Guest Speaker, Article 6 Due	Discuss Chapter 20,
14	25-Nov	Discuss Chapter 21,	Thanksgiving--NO CLASS
15	2-Dec	Final Project Presentations	Final Project Presentations
16	10-Dec	Final Exam 2:00 PM TO 3:40 PM	

**FERRIS STATE UNIVERSITY
COLLEGE OF ENGINEERING TECHNOLOGY
ARCHITECTURE AND FACILITY MANAGEMENT**

**COURSE: FMAN 451
TERM: FALL'13
INSTRUCTOR: SAMSON**

COURSE SYLLABUS: FMAN 451: Planning and Budgeting for Operations.

Instructor: Joe M. Samson, CFM
Office: 202 Johnson Hall
Phone: 231.591.2517
E-Mail: samsonj@ferris.edu
Office Hours: As posted.

Course Title: Planning and Budgeting for Operations.
Prerequisite: FMAN 321 or permission.

Course Description:

Survey of the operating systems within facilities, and the methodologies used to keep those systems operational. Introduction to concepts such as life cycle costs and building diagnostics will be introduced along with methods for estimating and planning staff and financial resources. Common problems associated with selected systems will also be discussed.

Course Format:

A combination of lectures, discussions, and assignments in which students learn to observe and analyze how buildings wear and what can be done to control and manage the cost of maintaining buildings.

Credit/Hours: Credit Hours = 3; Contact Hours: 3 Lecture

Required Text:

Building Maintenance; Brian Wood, Wiley-Blackwell, West Sussex, UK; 2009.

Required Access:

This course is "web-enhanced". The following information is to be accessed using LEARN.

- Power Points for each topic.
- Review sheets for each Power Point.
- Class Syllabus.
- Class Calendar.
- Review Sheets for Exams.
- Each Assignment. Note: Some assignments will be submitted in LEARN and others within class.
- Note: Mail/Discussion/Exams and other features of LEARN will not be used.

Additional Material:

Instructor prepared handouts as needed.

Facility Management Websites for FM Information:

- www.informedesign.umn.edu – summarizes research.
- www.fmlink.com – news and current developments.
- www.ijfm.net – online journal.
- www.ifmafoundation.org – sustainability "how to" guides.
- www.todaysfacilitymanager.com – magazine/journal.
- www.buildings.com – magazine/journal.

References (much of Power Point materials based on these books):

- Cost Planning and Estimating for Facilities Maintenance; R. S. Means Company, Kingston, MA; 1996.
- Facilities Maintenance and Repair Cost Data; R. S. Means Company, Kingston, MA; current.
- Facilities Construction Cost Data; R. S. Means Company, Kingston, MA; current.
- The Facilities Audit; Harvey Kaiser, APPA, Alexandria, VA, 1993.
- Facilities Maintenance Management; Gregory H. Magee, PE; R. S. Means Company, Kingston, MA, 1988.
- Means Facilities Maintenance Standards; Roger W. Liska, PE AIC; R. S. Means Company, Kingston, MA, 1988.
- The New ADA: Compliance and Costs; Deborah S. Kearney; R. S. Means Company, Kingston, MA, 1992.
- Preventive Maintenance of Buildings; Edited by Raymond C. Matulionis and Joan C. Freitag; Van Nostrand Reinhold, New York, 1991.

Course Procedures:

The course is structured in the following manner.

1. ***This course assumes a basic understanding of building systems.***
2. The text, Power Points, and Discussion Questions are intended to help you learn the material. ***You should familiarize yourself with the topic prior to coming to class.***
3. In some cases you will be reviewing the Power Points on your own and we will discuss them in class. ***All content on exams may not be covered in class.*** The main content will be covered in class. *Power Points may be accessed through LEARN.*
4. The Course Calendar identifies the content for each class period. The calendar is tentative since it is dependent on availability of guest speakers and other factors.
5. The class periods may be used to present the topic through discussion, lecture, guest lectures or other methods.
6. Use the Discussion Questions (in the LEARN Modules) to learn the material and review for the tests. These are for your use and will not be handed in.
7. Some class periods will also be used to introduce or work on projects. These projects are designed to simulate FM tasks that apply the concepts covered.
8. Tests will be based on Discussion Questions as well as other course information. Refer to the exam review sheets (available through LEARN) periodically to take notes so you will be ready for the test.

Class Policies:

Attendance:

Attendance is expected. Students are responsible for all information discussed at lectures as well as in the text and PowerPoints. It is the student's responsibility to obtain information regarding content of class periods that they miss. Students missing tests, presentations, etc. will not be given an opportunity to make the work up without a medical excuse. In unusual circumstances other arrangements may be made. These arrangements should be made with the instructor prior to the class period if possible. ***Excessive unexcused absences will affect the student's "Participation" points.***

Participation:

Students are expected to be prepared and to participate in class discussions and show an interest and be attentive to topics discussed. ***Attentiveness and participation will affect the student's "Participation" points.***

Respect:

In order to develop a comfortable class environment, please refrain from clothing/activities/actions that may upset or offend other members of our class. ***No use of cell phones (texting and photos included) is permitted in the class. Cell phones are to be TURNED OFF prior to***

class. If you are expecting some emergency call, please advise the instructor, turn the phone to vibrate, and leave the room when responding. Failure to follow these policies will result in a reduction in participation points and a revised cell phone policy. IE. offending students placing cell phone on a table during class.

Attendance and Participation Points:

These are calculated by taking the student's average grade on assignments, exams, etc. Points are added to or subtracted from this base to reflect meaningful participation, preparation for discussions, etc., attitude, attendance, control of media (IE. cell phones, laptops, etc.)

Readings:

Since the class period will be primarily devoted to applying the information, it is essential that the student read the text and notes prior to the class. Information from readings and notes may be included on the tests even if not presented in the lectures.

The textbook is a supplement to the Power Points. It is intended to give additional context as well as help make you aware of some of the conceptual issues in building maintenance. There are not many books on this topic. Ideally an American-centric book would be used. However, this book does a good job of communicating the theories associated with building maintenance and emphasize the international aspects of facility management.

You will note some interesting things in this book:

1. Spellings are UK standard, not American standard.
2. Unusual photos and examples. IE. Castles.

Projects:

A series of projects will be done to apply the course material in a concrete manner. Most assignments are designed to be relatively short and to quickly expose the student to issues associated with the topic. Other projects are more involved and will require substantial out of class work. Individual and team projects will be done.

The instructor believes that timely grading and return of projects is important feedback to students. The instructor will make every attempt to return all projects and exams in a timely manner...ie. Within a week.

The instructor may choose to keep assignments after they have been returned for student review. The instructor WILL KEEP all tests after they have been returned for student review.

Effort:

Students are expected to apply their best effort in the execution of projects. This means to review the projects to allow sufficient time to understand what is expected and to thoughtfully develop a quality product. Individual effort is expected. ***Those who plagiarize, copy, or otherwise submit work which is misrepresented as their own will receive a grade of 0 for that project. Repeated abuse will result in failure of the course.***

Late Work:

Work is due at the **START** of the class period unless otherwise stated. Work that is handed in after the time it is due will be penalized 5%. After the second class period it is due it will be penalized 10%. ***Work handed in after the second class period will be worth 50% of its graded points.***

Calendar:

A tentative class calendar is provided to help students plan their work schedules. If there are any major changes due to student or instructor needs, they will be announced.

Communications and Dropping the Class:

If you have any questions or concerns, please let me know. I cannot make adjustments or correct problems if I don't know about them.

If you plan to drop the class, be sure to discuss the matter with the instructor AND your advisor. Dropping the course may impact future progress toward a degree.

Mid-Term Grades:

Mid term grades will be reported during the 8th week of class and will be available on the internet. Generally, all work due up to mid-term will be included in the grade. Work that is due but not received will receive a grade of 0 points. Mid-Term grades do not reflect participation/attitude. The points will be added in when the work is handed in. The Mid-Term Grade will NOT affect your final grade.

Meaning of Grades:

"A" Work: Superior work which exceeds expectations in substance and presentation.

"B" Work: Work which is above average in substance and presentation, which demonstrates understanding and ability to apply concepts consistently.

"C" Work: Work of average quality in substance and presentation, which meets the requirements of the assignments but does not demonstrate innovation, creativity, or consistency.

"D" Work: Below average work which does not meet the expectations for substance and/or presentation as identified in the assignment.

"F" Work: Poorly prepared work which does not address the substance or presentation expectations as communicated in the assignment as well as plagiarized work.

The following will be taken into account when grading all work if relevant:

- professional appearance
- grammar and spelling
- clarity (understandable writing style)
- explanations of:
 - what you did
 - how you did it
 - why you did it the way you did
 - what you found out
- following directions (doing what was requested)
- creativity (being creative, or going beyond project requirements)
- research of similar projects and the results (IE. Research in the library, an organization, etc.)
- documentation of sources (footnotes and bibliography)

<u>Grading:</u>	A- 90-92%	A 93-100%		
	B- 80-82%	B 83-86%	B+ 87-89%	
	C- 70-72%	C 73-76%	C+ 77-79%	
	D- 60-62%	D 63%-66%	D+ 67%-69%	F < 60%

<u>Points:</u>	Projects	650 points
	Mid Term Exam	200 points
	Final Exam	200 points
	Attendance/Participation	150 points
	Total Points	1200 points

UNITS OF INSTRUCTION:

	<u>TIME ALLOCATION:</u>
I. Course Introduction.	1
II. How building maintenance fits into the building Proforma.	1
III. Audits and Deferred Maintenance.	2
IV. Benchmarking.	2
V. Outsourcing.	2
VI. Developing Schedules.	2
VII. Computer Integrated Facility Management and Operations.	1
VIII. General concepts of Maintenance Estimating and Budgeting.	2
IX. Maintenance and Repair Estimating.	2
X. Preventive and Predictive Maintenance Estimating.	2
XI. General Maintenance Estimating.	1
XII. Reserve Funding	2
XIII. Value Engineering.	2
XIV. Putting Operations Maintenance Concepts Together.	2
XV. Site Maintenance.	2
XVI. Roofing Maintenance.	2
XVII. Exterior Finish Maintenance.	2
XVIII. Interior Finish Maintenance.	2
XIX. Acoustics and Lighting.	2
XX. Electrical Systems.	1
XXI. Indoor Air Quality.	2
XXII. Hazardous Materials.	2
XXIII. Green Buildings and Intelligent Buildings.	2
XXIV. Security, Signage, and Wayfinding.	1
XXV. Americans with Disabilities Act.	1
Evaluation.	2
Total Contact Hours:	45

University and College Policies:**Tobacco:**

It is a policy of the College of Technology that tobacco products (including chewing tobacco and snuff) will not be permitted within classrooms.

Religious Holidays:

Ferris State University will make reasonable accommodations for students who are absent from the University in observance of religious holidays. It is the responsibility of the student to notify the faculty in writing during the first week of the semester of their intention to be absent from class on their day(s) of religious observance. Upon formal notification, the faculty will excuse the student from the class or studio for the holiday(s) and allow the student to make up missed exams; however, the student is responsible for completion of all missed work within a reasonable time as determined by the faculty.

Requests for absence to participate in religious activities, other than recognized religious holidays, are not recognized by the University as excused absences. The student may present such a request to the faculty during the first week of the semester and the faculty may approve such an absence at his or her discretion. If the instructor approves the absence, the student is responsible for completion of all missed work within a reasonable time as determined by the faculty.

If a student disagrees with the faculty member's determination, the student may make a written appeal to the dean of the student's college. The decision of the dean is final.

Disability Policy:

Ferris State University is committed to following the requirements of the Americans with Disabilities Act Amendments Act and Section 504 of the Rehabilitation Act. If you are a student with a disability or think you may have a disability, contact the Disabilities Services office at 231.591.3057 (voice), or email ecds@ferris.edu to discuss your request further. More information can be found on the web at <http://www.ferris.edu/htmls/colleges/university/disability/>.

Any student registered with Disabilities Services should contact the instructor as soon as possible for assistance with classroom accommodations.

Tentative Course Calendar/FMAN 451: Planning & Budgeting for Operations/Fall'13

Tuesday	Thursday
<p>27 August Introduction to course/Intro - Definitions (Module 1.1) Proforma (Module 1.2) Read "Management" Readings Walk Around Project Visible on LEARN</p>	<p>29 August Building Diagnosis. (Module 1.3) DISCUSS CHAPTERS 1 and 2 (Design) & "Management" Readings DO WALK AROUND.</p>
<p>3 September Maintenance Types. (Module 2.1) Audits. (Module 2.2) DISCUSS CHAPTERS 3 and 4 (Mt Plan/Client). Assign Walk Around. (50 pts) Maintenance & Repair Project Visible on LEARN</p>	<p>5 September Estimating Methods. (Module 7.1) Maint & Repair Est (Module 7.2) DISCUSS CHAPTERS 5 and 6 (Expectations/ Prioritization). Assign Maintenance and Repair Project. (50 pts) Read "Site" Readings</p>
<p>10 September Guest Speaker/Building Audits-Maint Plan Sergio Pages, Structure-Tec</p>	<p>12 September Site Maintenance. (Module 3.1) Roof Maintenance. (Module 3.2) DISCUSS CHAPTER 13 (Roofs) & "Site" & "Roofing" Readings DISCUSS CHAPTERS 11 and 12 (Building Exteriors) Read "Interior Finishes" Readings MAINTENANCE AND REPAIR PROJECT DUE</p>
<p>17 September Exterior Finishes. (Module 4.1) Interior Finishes. (Module 4.2) DISCUSS CHAPTER 14 (Interiors) & "Interior Finishes" Readings Maint Plan Project Part A Visible on LEARN</p>	<p>19 September PRESENT WALK AROUND PROJECT Assign Maintenance Plan Part A Cost Tables. (25 pts) Gen'l Maint Est (Module 8.1)/Prev&Pred Maint Est (Module 8.2) Read "Acoustics/Light/Electrical" Readings</p>
<p>24 September Acoustics. (Module 5.1) Lighting (Module 5.2), Electrical Systems. (Module 5.3) DISCUSS CHAPTER 15 (Building Services) & "Acoustics/Light/Electrical" Readings Read "Indoor Environmental Quality" Readings</p>	<p>26 September Indoor Air Quality. (Module 6.1) Hazardous Materials. (Module 6.2) DISCUSS "Indoor Environmental Quality" Readings MAINTENANCE PLAN COST TABLES DUE Maint Plan Project Part B Visible on LEARN</p>
<p>1 October World Workplace 2013</p>	<p>3 October World Workplace 2013</p>
<p>8 October Assign Maintenance Plan Part B. (125 pts) Read "Green Buildings" Readings</p>	<p>10 October Green Buildings/Intelligent Buildings. (Module 6.3) DISCUSS "Green Buildings" Readings</p>
<p>15 October Review for Midterm Exam.</p>	<p>17 October Guest Speaker/OSHA/Brad McCormick, Faculty, FSU</p>
<p>22 October MIDTERM EXAM (200 points) Building Diagnostics Project Visible on LEARN</p>	<p>24 October Guest Speaker/OSHA/Anne Hawkins, Faculty, FSU</p>
<p>29 October Return Midterm Exam. MAINTENANCE PLAN PROJECT DUE. Assign Building Diagnostics Project (300 pts) Value Engineering Project Visible on LEARN Read "Value Engineering" Readings</p>	<p>31 October Value Engineering. (Module 10) DISCUSS "Value Engineering" Readings Assign Value Engineering Project. (50 pts) Read "Using Technology to Benchmark" Readings</p>
<p>5 November Guest Speaker/Environmental Assessment Doug Workman, Faculty, FSU Reserve Funding Project Visible on LEARN</p>	<p>7 November Benchmarking. (Module 9.1) Outsourcing. (Module 9.2) DISCUSS "Using Technology to Benchmark" Readings</p>
<p>12 November Reserve Funding. (Module 12) DISCUSS CHAPTERS 16, 17, 18 (Keeping Building Relevant). Assign Reserve Funding Project. (50 Pts).</p>	<p>14 November Scheduling and CMMS. (Module 11) VALUE ENGINEERING PROJECT DUE</p>
<p>19 November Individual Meetings for Building Diagnostics Project</p>	<p>21 November Individual Meetings for Building Diagnostics Project RESERVE FUNDING PROJECT DUE</p>
<p>26 November BUILDING DIAGNOSTICS PROJECT PRESENTATIONS-10min/DUE</p>	<p>28 November THANKSGIVING BREAK – NO CLASS</p>
<p>3 December BUILDING DIAGNOSTICS PROJECT PRESENTATIONS-10min/DUE</p>	<p>5 December Recap. (Module 13) Review for Final Exam.</p>

Final Exam (200 Points) At time designated in Final Exam Schedule.

All projects handed in after the start of the class following the date the project is listed on the calendar will be considered late unless otherwise announced in class. All Chapters refer to the textbook.

FERRIS STATE UNIVERSITY
COLLEGE OF ENGINEERING TECHNOLOGY
ARCHITECTURE AND FACILITY MANAGEMENT

COURSE: FMAN 489
TERM: Fall 2013
INSTRUCTOR: Joe M. Samson

COURSE SYLLABUS: FMAN 489: Capstone Research.

Instructor: Joe M. Samson, CFM

Office: 202 Johnson Hall

Phone: 231.591.2517

E-Mail: samsonj@ferris.edu

Office Hours: As posted.

Course Title: Capstone Research.

Prerequisite: Senior status within Facility Management program.

Credit/Hours: Credit Hours = 1; Contact Hours: 1 Lecture.

Optional Texts:

There are many texts written to guide you through your research. Since your projects vary in scope and focus, a common text would not be appropriate. It is suggested that you consult some research text. The following two are options. The first one is more general, the second would be more appropriate for design/planning types of projects.

- Practical Research, Ninth Edition; Paul D Leedy and Jeanne Ellis Ormrod; Pearson, Boston, MA; 2010.
- Architectural Research Methods; Linda Groat and David Wang; John Wiley & Sons, 2002.

Course Description:

Development of proposal and preliminary research for Capstone Thesis project. The course will include an introduction to and review of research methods.

Course Format:

This course forms a basis for your capstone project. It is an opportunity to help you to: Clearly define your project; identify the resources necessary to execute the project; identify availability and/or source of resources needed; define roles and responsibilities within each team; develop a methodology to follow during the project which will guide your activities and organization as you present the materials; develop a schedule to assist you in staying on track and completing the project.

The above preparatory work will free up your time in FMAN 499, allowing you to focus on the execution and presentation of your capstone.

This is an opportunity to develop management skills and independently apply what you have learned in previous courses. Remember, managers "make" the work, simply doing a good job of "executing" the work does not make you more than a good staff member.

Effort:

Individual effort is expected. It represents your professionalism and competence. IN this type of a course this is even more true since YOU are generating your own success or failure. ***Those who plagiarize, copy, or otherwise submit work which is misrepresented as their own will receive a grade of 0 for that project or fail the course at the instructor's discretion.***

Communications:

If you have any questions or concerns, please let me know. I cannot make adjustments or correct problems if I don't know about them. *It is helpful to know ahead of time, rather than after the fact.*

University and College Policies:**Tobacco:**

It is a policy of the College of Engineering Technology that tobacco products (including chewing tobacco and snuff) will not be permitted within classrooms.

Religious Holidays:

Ferris State University will make reasonable accommodations for students who are absent from the University in observance of religious holidays. It is the responsibility of the student to notify the faculty in writing during the first week of the semester of their intention to be absent from class on their day(s) of religious observance. Upon formal notification, the faculty will excuse the student from the class or studio for the holiday(s) and allow the student to make up missed exams; however, the student is responsible for completion of all missed work within a reasonable time as determined by the faculty.

Requests for absence to participate in religious activities, other than recognized religious holidays, are not recognized by the University as excused absences. The student may present such a request to the faculty during the first week of the semester and the faculty may approve such an absence at his or her discretion. If the instructor approves the absence, the student is responsible for completion of all missed work within a reasonable time as determined by the faculty.

If a student disagrees with the faculty member's determination, the student may make a written appeal to the dean of the student's college. The decision of the dean is final.

Disability Policy:

Ferris State University is committed to following the requirements of the Americans with Disabilities Act Amendments Act and Section 504 of the Rehabilitation Act. If you are a student with a disability or think you may have a disability, contact the Disabilities Services office at 231.591.3057 (voice), or email ecds@ferris.edu to discuss your request further. More information can be found on the web at

<http://www.ferris.edu/htmls/colleges/university/disability/>.

Any student registered with Disabilities Services should contact the instructor as soon as possible for assistance with classroom accommodations.

Each student will need to be self motivated and disciplined to independently complete this course. The instructor's role is to serve as a mentor/guide/critic. This is especially necessary due to the individual nature of each project.

Grading:	A- 90-92%	A 93-100%	B+ 87-89%
	B- 80-82%	B 83-86%	C+ 77-79%
	C- 70-72%	C 73-76%	D+ 67%-69%
	D- 60-62%	D 63%-66%	F < 60%

Points:	Project Identification/Tentative Schedule	100 points
	Presentation 1 (Comparables)	100 points
	Paper 1 (Comparables)	100 points
	DRAFT Identification of resources/sources, etc	100 points
	Presentation 2 (Methodology/Revised Schedule)	100 points
	Paper 2 (Methodology/Revised Schedule)	100 points
	Final Comprehensive Schedule through FMAN 499	100 points
	Development of comprehensive and appropriate methodology	150 points
	Participation/commitment	150 points
	Total Points	1000 points

Points may be deducted for lack of attendance or participation in class critiques.

Class Policies:

Attendance:

Students are expected to attend all required group and individual meetings as identified on the course calendar. If the calendar changes, you will be alerted to the change.

*Quality work is the result of individual effort as well as integrating feedback from others. This feedback helps us to understand what is lacking or unclear in our projects. It contributes to a more complete and audience friendly result. **Class members are expected to be present for all presentations and to contribute meaningful feedback.***

Late Work:

While you are a student, your education is expected to be your highest priority. In short, work is expected to be complete when due. This includes materials to review at interim meetings.

- All components of course requirements must be successfully demonstrated to receive a grade for the course.
- Missed deadlines will result in a 20% deduction from the total point value and a 10% deduction from the total point value for each subsequent day late.

Respect:

In order to develop a comfortable class environment, please refrain from clothing/activities/actions that may upset or offend other members of our class. **No use of cell phones (texting and photos included) is permitted in the class.**

FMAN 489 – Capstone Research – Fall 2013 – Tentative Schedule

Date	Activities/Goals/Tasks
Monday 26 August	Introduction to Course Assign “Identify Project and Develop Tentative Schedule” Formation of Teams
Monday 2 September	Labour Day
Monday 9 September	Meet and discuss
Monday 16 September	Develop Tentative Schedule for FMAN 489 -Comparables/Resources/Methods and Dates/Responsibilities for each
Monday 23 September	Assign Comparables and Best Practices -Approaches/Methods/Options, etc. Tentative FMAN 489 Schedule DUE (1 per team)
Monday 30 September	Work Day (Meetings)
Monday 7 October	Work Day (Meetings)
Monday 14 October	Presentation 1: Orientation to Project; Comparables and Best Practices (Oral Presentation by Team – Written Draft by Team) ALL PAPERS DUE
Monday 21 October	Presentation 1: Orientation to Project; Comparables and Best Practices (Oral Presentation by Team) if needed Assign Identify Resources and Sources
Monday 28 October	Work Day (Meetings)
Monday 4 November	Assign Develop Methodologies Assign Develop Project Schedule through FMAN 499 Draft Identify Resources and Sources DUE
Monday 11 November	Work Day (Meetings)
Monday 18 November	Work Day (Meetings)
Monday 25 November	Work Day (Meetings)
Monday 2 December	Work Day (Meetings)
Tuesday 10 December	Presentation 2: Orientation to Project; Resources Overview; Methodologies; Tentative Schedule and Responsibilities; Preview of Thesis (Oral Presentation by Team – Written Report by Team) ALL PAPERS DUE

FERRIS STATE UNIVERSITY
COLLEGE OF ENGINEERING TECHNOLOGY
ARCHITECTURE AND FACILITY MANAGEMENT

COURSE: FMAN 499
TERM: Spring 2014
INSTRUCTOR: Joe M. Samson

COURSE SYLLABUS: FMAN 499: Capstone Thesis Assessment.

Instructor: Joe M. Samson, CFM

Office: 202 Johnson Hall

Phone: 231.591.2517

E-Mail: samsonj@ferris.edu

Office Hours: As posted.

Course Title: Capstone Thesis Assessment.

Prerequisite: FMAN 489.

Credit/Hours: Credit Hours = 3; Contact Hours: 2 Lecture; 2 studio.

Recommended Text:

Practical Research, Ninth Edition; Paul D Leedy and Jeanne Ellis Ormrod; Pearson, Boston, MA; 2010. *(use Parts 3, 4 and 5 as you collect and present data and write your report)*

Course Description:

Development and completion of individual or group thesis projects that reflect understanding of the core competencies of facility management: leadership and management; operation and maintenance; planning and project management; communication; finance; human and environmental factors; quality management and assessment; and real estate.

Course Format:

This course is a continuation of FMAN 489: Capstone Research. The focus of this course is the execution and presentation of the plan developed in FMAN 489. Specifically, the identification of relevant data, further development of methodologies to collect and analyze data sources identified in FMAN 489, the presentation of the data and its meaning, and the application of collected data to a specific problem.

This course is a sort of bridge between the academic world and the "working" world. While most projects are "academic studies", they focus on real world places, the people who use them and the activities and behaviors that are carried out within them. This course also is a bridge to be a *manager* vs. an *employee*. A manager takes initiative by identifying projects/problems and responsibility for the methods and the means used to address them. An employee simply does what the manager tells them to do...even though in many cases the execution may require high level skills.

The student will need to be self motivated and disciplined to independently complete this course. The instructor's role is to serve as a mentor/guide/critic. This is especially necessary due to the individual nature of each project.

COURSE POLICIES

Attendance:

Students are expected to attend all required group and individual meetings as identified on the course calendar. If the calendar changes, you will be alerted to the change.

*Quality work is the result of individual effort as well as integrating feedback from others. This feedback helps us to understand what is lacking or unclear in our projects. It contributes to a more complete and audience friendly result. **Class members are expected to be present for all presentations and to contribute meaningful feedback.***

Cell Phones and other “smart” Technologies:

It is rude and distracting to all for students to be fiddling with cell phones during class. Cell phones are to be OFF during class unless the student has an important reason such as illness in family, etc and informs the instructor and receives permission prior to the class to keep the cell phone on. Abuse of this policy/request will affect the student's course grade whether you are verbally informed or not.

The same goes for searching the web, facebooking, etc with tablets, etc.

Late Work:

While you are a student, your education is expected to be your highest priority. In short, work is expected to be complete when due. This includes materials to review at interim meetings.

- All components of course requirements must be successfully demonstrated to receive a grade for the course.
- Missed deadlines will result in a 20% deduction from the total point value and a 10% deduction from the total point value for each subsequent day (not class day) late.

Respect:

In order to develop a comfortable class environment, please refrain from clothing/activities/actions that may upset or offend other members of our class.

Effort:

Individual effort is expected. It represents your professionalism and competence. ***Those who plagiarize, copy, or otherwise submit work which is misrepresented as their own will receive a grade of 0 for that project or fail the course at the instructor's discretion.***

Communications:

If you have any questions or concerns, please let me know. I cannot make adjustments or correct problems if I don't know about them. *It is helpful to know ahead of time, rather than after the fact.*

Calendar:

A tentative class calendar is provided to help students plan their work schedules. If there are any major changes due to student or instructor needs, they will be announced in class.

COLLEGE AND UNIVERSITY POLICES:

Tobacco:

It is a policy of the College of Engineering Technology that tobacco products (including chewing tobacco and snuff) will not be permitted within classrooms.

FSU RELIGIOUS HOLIDAY POLICY:

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Requests for absence to participate in religious activities, other than recognized religious holidays, are not recognized by the University as excused absences. The student may present such a request to the faculty during the first week of the semester and the faculty may approve such an absence at his or her discretion. If the instructor approves the absence, the student is responsible for completion of all missed work within a reasonable time as determined by the faculty.

If a student disagrees with the faculty member's determination, the student may make a written appeal to the dean of the student's college. The decision of the dean is final.

FSU DISABILITY POLICY:

Ferris State University is committed to following the requirements of the Americans with Disabilities Act Amendments Act and Section 504 of the Rehabilitation Act. If you are a student with a disability or think you may have a disability, contact the Disabilities Services office at 231.591.3057 (voice), or email ecds@ferris.edu to discuss your request further. More information can be found on the web at <http://www.ferris.edu/htmls/colleges/university/disability/>.

Any student registered with Disabilities Services should contact the instructor as soon as possible for assistance with classroom accommodations.

DROPPING THE CLASS:

If you plan to drop the class, be sure to discuss the matter with the instructor AND your advisor. Dropping the course may impact future progress toward a degree.

<u>GRADING :</u>	A- 90-92%	A 93-100%	
	B- 80-82%	B 83-86%	B+ 87-89%
	C- 70-72%	C 73-76%	B+ 77-79%
	D- 60-62%	D 63%-66%	D+ 67%-69% F < 60%

Meaning of Grades:

"A" Work: Superior work which exceeds expectations in substance and presentation.

"B" Work: Work which is above average in substance and presentation, which demonstrates understanding and ability to apply concepts consistently.

"C" Work: Work of average quality in substance and presentation, which meets the requirements of the assignments but does not demonstrate innovation, creativity, or consistency.

"D" Work: Below average work which does not meet the expectations for substance and/or presentation as identified in the assignment.

"F" Work: Poorly prepared work which does not address the substance or presentation expectations as communicated in the assignment as well as plagiarized work.

The following will be taken into account when grading all work:

- professional appearance
- grammar and spelling
- clarity (understandable writing style)
- explanations of:

- what you did
- how you did it
- why you did it the way you did
- what you found out
- following directions (doing what was requested)
- creativity (being creative, or going beyond project requirements)
- research of similar projects and the results (IE. Research in the library, an organization, etc.)
- documentation of sources (footnotes and bibliography)

Points:

Oral Presentation of Research Methodology and Findings	100 points
Written Presentation of Research Methodology and Findings	200 points
Oral Presentation of Capstone/Thesis	200 points
Written Presentation of Research Methodology and Findings	400 points
Attendance at classes and meetings	100 points
Contributions at meetings and presentations	100 points
<u>Preparedness for meetings</u>	<u>100 points</u>
Total Points	1,200 Points

FMAN 499: Capstone Thesis – Course Schedule

Spring 2014

Monday	Wednesday	Current Phase/Topic
13 Jan in classroom Course Introduction/Citing Sources Discuss Meeting 1: Self Critique of Progress to Date/Instructor Feedback Assign: Develop Research Tools	15 Jan in Johnson 202 9:00am Sustainability 9:30am Zoo Lighting 10:00am Rebranding	Develop/Finalize Research Tools...Meetings for Research Tool Feedback
20 Jan Martin Luther King Day...no class	22 Jan in Johnson 202 9:00am Outsourcing 9:30am SBE Facility 10:00am Zoo Retrofit	
27 Jan in classroom Present/Submit Research Tools Discuss Meeting 2: Self Critique of Research Tools/Instructor Feedback Assign: Collect Data/Develop Mock Ups of Data Presentation	29 Jan in Johnson 202 9:00am Sustainability 9:30am Zoo Lighting 10:00am Rebranding	Present/Submit Research Tools for Feedback...Meetings for Research Tool Feedback..Start Collecting Data and Develop Mock Ups for Presentation of Data
3 Feb in Johnson 202 9:00am Outsourcing 9:30am SBE Facility 10:00am Zoo Retrofit	5 Feb Dr Appt Instructor not available Work Time	
10 Feb in Johnson 202 Work Time	12 Feb Dr Appointment Instructor not available Work Time	
17 Feb in classroom Present/Submit Mock Ups of Data Presentation Meeting 3: Self Critique of Data Collected and Mock Up Presentation Plans/Instructor Feedback Assign: Paper/Presentation of Methodology and Research Findings	19 Feb in Johnson 202 9:00am Sustainability 9:30am Zoo Lighting 10:00am Rebranding	Present/Submit Mock Ups of Data Presentation for Feedback... Meetings for Feedback on Data Presentation Mock Ups... Start Paper/Presentation of Methodology and Research Findings
24 Feb in Johnson 202 9:00am Outsourcing 9:30am SBE Facility 10:00am Zoo Retrofit	26 Feb in Johnson 202 Work Time	
3 March in classroom Presentation 1: 9:00am Sustainability 9:30am Zoo Lighting 10:00am Rebranding	5 March in classroom Presentation 1: 9:00am Outsourcing 9:30am SBE Facility 10:00am Zoo Retrofit Submit Papers/Both Groups	Present/Submit Paper for Methodology and Research Findings
Spring Break -----		

<p>17 Mar in classroom Meeting 4: Discuss Challenges/Schedule/Methodology and Research Paper/Presentation Assign: Develop Capstone Thesis – Apply Research Results to Solve Thesis Problem</p>	<p>19 Mar in Johnson 202 9:00am Sustainability 9:30am Zoo Lighting 10:00am Rebranding</p>	<p>Apply Research Results to Solve Thesis Problem... Meetings for Feedback on Methodology and Research Papers</p>
<p>24 Mar in Johnson 202 9:00am Outsourcing 9:30am SBE Facility 10:00am Zoo Retrofit</p>	<p>26 Mar in Johnson 202 Work Day</p>	
<p>31 Mar in Johnson 202 Work Day</p>	<p>2 Apr in Johnson 202 Work Day</p>	
<p>7 Apr in Johnson 202 Meeting 5: 9:00am Sustainability 9:30am Zoo Lighting 10:00am Rebranding</p>	<p>8 Apr in Johnson 202 Meeting 5: 9:00am Outsourcing 9:30am SBE Facility 10:00am Zoo Retrofit</p>	<p>Progress Meetings</p>
<p>14 Apr in Johnson 202 Work Day</p>	<p>16 Apr in Johnson 202 Work Day</p>	
<p>21 Apr in Johnson 202 Work Day</p>	<p>23 Apr in Johnson 202 Work Day</p>	
<p>28 Apr in Johnson 202 Work Day</p>	<p>30 Apr in classroom Presentation 2: 9:00am Sustainability 9:30am Outsourcing 10:00am Rebranding ALL FINAL PAPERS DUE!</p>	<p>Presentations and Papers Due!</p>
<p>5 May (Tentative) in classroom Presentation 2: 8:00am SBE Facility 8:30am Zoo Lighting 9:00am Zoo Retrofit</p>	<p>Finals Week.</p>	

Notes:

1. All students are to attend class on the days shaded on this schedule.
2. The text after the date indicates where the instructor can be found on this day.
3. Times WILL be adhered to. Be sure to rehearse your presentations so they fit within the allotted time.
4. The only presentations that are “formal” are Presentation 1 and Presentation 2. The other “presentations” 27 January and 17 February are informal. Their purpose is for you to see what other students are doing and to hopefully share ideas and comments.

Appendix 1e: General Education and Service Course
Syllabi and/or Course Outlines

Spring 2013 COMM105: Interpersonal Communication 3 Credit hours

Section 001, CRN #10339, Tuesday and Thursday 9:30—10:45 a.m., JOH101, January 14-May 3, May 6

Section 008, CRN #10345, Monday and Wednesday 3:00—4:15 p.m., JOH101, January 14-May 3, May 7

Section 012, CRN #10349, Tuesday and Thursday 3:00—4:15 p.m., STR126, January 14-May 3, May 6

Instructor:	Dr. Stephanie J. Thomson	Office Hours:
Office:	Johnson Hall Room 120	Monday & Wednesday 10:00—12:00
Office Phone:	231.591.3504	Tuesday & Thursday 1:30-2:30
Email:	thomsos@ferris.edu	Other meetings by appointment

I. COURSE DESCRIPTION

COMM 105 – Face-to-face communication and how it affects interpersonal relationships. Topics include perception, self-concept, listening, and conflict management. No prerequisite.

This course operates from the perspective that relationships are created and maintained through communication. Relationships rely on communication activities. We will also consider the concepts listed above within the contexts of friendships, romantic relationships and the workplace.

II. REQUIRED TEXTS AND MATERIALS -- you will need the following items:

- A. Floyd, Kory. (2009). *Interpersonal Communication: The Whole Story*. Boston: McGraw Hill.
- B. CPS clicker and clicker registration

III. FerrisConnect -- This course will use FerrisConnect as a means of organizing course materials, communicating, and making materials available 24/7. This also allows us to avoid the costs of a course packet.

- A. To find our course and download the entire syllabus on FerrisConnect follow these links:
 1. Start at the Ferris homepage -- <http://www.ferris.edu>
 2. Select the MyFSU link (located toward the top right) and login
 3. Select FerrisConnect (located toward the top right of the page), login and select the class, COMM105
- B. For technical support you can contact fellow students, the professor or TAC (x4822).

IV. COURSE OUTCOMES – There are multiple levels of outcomes or goals for learning in this course.

A. Communication Competence Outcomes – This course is a general education course in the communication area. By the end of the course students will:

1. identify and describe the components of the human communication process.
2. identify and describe the literal message content and the relationship variables between communicators, in interpersonal, small group or presentational contexts.
3. select, present, interpret and respond appropriately and effectively to verbal and nonverbal messages in interpersonal, small group or presentational contexts.
4. use verbal and nonverbal messages to achieve personal, interpersonal, small group or presentational goals, while developing and maintaining relationships with others.

B. Departmental COMM105 course outcomes

1. Students should be able to demonstrate understanding of and skill in:
 - a. Verbal: language
 - b. Nonverbal: paralanguage, eye behavior, etc.

2. Students should be able to demonstrate understanding of the following and apply this knowledge appropriately and effectively in interpersonal situations:

- a. Characteristics of effective interpersonal communicators:
 - i. Positive self-concept/identity
 - ii. Assertiveness
 - iii. Self-disclosure
 - iv. Supportiveness
 - v. Ethical choices
- b. Effective interpersonal behaviors:
 - i. Active listening
 - ii. "I" statements
 - iii. Perception checking
 - iv. Immediacy behaviors
- c. Relational factors affecting interpersonal communication
 - i. Trust
 - ii. Power
 - iii. Attraction
 - iv. Conflict

*Students should be able to demonstrate understanding of research and theories that guide appropriate and effective interpersonal communication choices.

V. COURSE REQUIREMENTS

A. Assignments

1. There will be a variety of *classroom activities and quizzes*. Some of these activities may require out-of-class preparation and/or written work.

- a. Be sure to bring your CPS clicker to class each discussion day for the quiz. There will be both a regular and bonus quiz for each chapter. If you miss a quiz you will have the opportunity to still earn some of the quiz points by taking the bonus quiz.
- b. All classroom activities and quizzes can **NOT** be made up OR turned in late for points.

2. You will be asked to write *journal of interpersonal situations* this semester. You will need to submit one journal entry each week for a total of 10 journal entries. There will be two additional opportunities for journal entries – you may use them for makeup journals or for bonus points. For each journal, you will choose any 2 concepts from the chapter and then illustrate how they are reflected in life situations (yours, family, friend). Feel free to use the text to define the concepts you choose and then be specific as to why these life situations illustrate the various aspects of those concepts. The life situations must be yours (not the text or mine) and need to be fully developed (entries should be no less than 500 words). The goal of the journal is to connect this class to your life situations, and help you prepare for application questions on the test.

3. There will be four *exams* that will allow you to present your knowledge in a written format. Exams will be briefly reviewed in class, and all exams will be kept on file to increase fairness to present and future classes. The exams will cover readings, lectures, discussions, and activities. Knowledge is generated in a variety of forms and you are responsible for all of that information. The exams will be multiple choice.

During the final exam period you will take a test over Ch 10-12. During that final exam period, you will have the option of taking an additional test that covers Ch 1-9. If you choose to take the optional test, you can use that score to replace any one of your Test 1, 2, 3 scores.

B. Grading

1. Midterm and final grades will be based on points earned up to that time.
2. The grading scale is indicated below.

A =	100-93%	Excellent work that far exceeds the minimum requirements
A- =	92-90%	
B+ =	89-87%	
B =	86-83%	Above average work that exceeds the minimum requirements
B- =	82-80%	
C+ =	79-77%	
C =	76-73%	Average work that meets the minimum requirements
C- =	72-70%	
D =	69-60%	Below average work meets some, but not all, of the minimum requirements
F =	59% and below	Failing work does not meet the minimum requirements

3. You can calculate your grade at any point in the semester by adding the points that you have earned and dividing that number by the number of possible points up to that date. The grades will be posted on FerrisConnect as soon as each assignment has been completed and graded.

C. Assignments will be weighted as follows:

<u>Assignment(s)</u>	<u>Points possible</u>	<u>Points earned</u>
First ½ assignments/quizzes	30	_____
Exam #1	100	_____
Exam #2	100	_____
Second ½ assignments/quizzes	30	_____
10 journal entries	100	_____
Exam #3	100	_____
Exam #4	100	_____
Grand Total	560	_____

VI. COURSE POLICIES

A. Our general responsibilities for class include the following--

1. We should all be prepared and ready to put forth our best effort during class time and on all assignments.
2. We should all ask questions, and give comments and feedback. Questions, compliments, comments, and suggestions are not only encouraged but also essential because we are all part of the communication process.
3. Our ability to give respectful comments is important because we will all aid in the learning process. In order to play a productive role in the feedback process, please concentrate on structuring any comments in a constructive form. First, take responsibility for your feelings and comments. Second, respond immediately to things that cause concern. And, third always focus on the act not the person when making comments or suggestions.
4. Practice good listening skills regardless of the task at hand, so that we are active listeners and gain from the listening experience. Quality interpersonal communication requires both “speaking” and listening from all communicators.

5. We want to minimize disruptions. If disruptive behavior occurs, we will warn you. If the behavior continues, the College of Arts & Sciences outlines a variety of consequences. See the syllabus attachment—disruptive behavior.

- a. No food or drink (with the exception of water) will be allowed in the classroom.
- b. Cell phones and pagers are to be turned off prior to class time and **put away**.

B. Attendance

1. Attendance is necessary to complete assignments and activities. Attendance is necessary to learn from our daily discussions, to present your understanding of information in multiple written and oral formats each day and to submit assignments. I ask that you treat this class like you would a good job—be here on time ready to work.

2. A roll sheet will be circulated at the beginning of class each day. If you enter after roll has been taken, you are tardy and you should see me **after** class to make sure that you sign the roll sheet. Absences are considered excessive when the number of absences exceeds four. Your grade will be lowered by half a letter grade or 32 points for each absence over 4. (For example you have 550 points but had five absences, you would finish with 518 points for your final grade. If you have 550 points but had six absences, you would finish with 486 points for your final grade.) Keep in mind that the four absences that are allowed are for times when the car won't start, there is a family emergency, you are very ill, university sanctioned activities, etc. I recommend that you use these absences wisely.

C. Office hours -- I really work to maintain an open door policy. Please feel free to stop by or call the office at any time. If I am unavailable, please leave a message on the door or on voice mail and I will get back to you as soon as possible. I am happy to schedule other appointments as needed.

D. Privacy -- There are university rules and federal laws regarding student grades and privacy. Because of these rules and laws, I will not discuss grades via regular email, but will via FerrisConnect, where your grades are posted in a secure location. I will discuss grades with you at any time in person, but I respect your right to grade privacy and I will work very hard to preserve those rights.

E. Assignment deadlines

1. When you miss class due to **university sanctioned activities** (i.e. volleyball, debate team) you are required to notify me in advance and turn in appropriate university documentation of the activity. Any assignments must be completed in advance or turned in at the assigned deadline.
2. If you believe that an unexpected dire emergency will prevent you from taking a **test**, you must contact me immediately--prior to the time of the test. If you can not contact me, have someone contact me on your behalf. Contacting me does not guarantee that you will be able to make up the test, but it does increase the possibility. The dire emergency must be documented and a phone call from a family member or note from the health center is NOT sufficient. If a makeup is deemed appropriate then an alternate exam must be completed within one week.
4. When in doubt, call me, email me, or talk to me AS SOON AS POSSIBLE. Communication is key. ☺

F. Academic Integrity — Academic dishonesty, including any form of plagiarism and/or cheating will not be permitted. DO NOT present materials that you did not author or complete. DO NOT present information without including accurate sources. All cases of academic dishonesty will be handled according to Ferris State University policy.

1. When I refer to plagiarism, I am referring to any of the following:
 - taking a paper entirely from a single source and calling/implying that it is your own;
 - taking language or ideas from multiple (i.e. two or three) sources and calling/implying that it is your own;
 - failing to give sources credit for particular parts of a paper that come from other people, including quotations and paraphrases not attributed to an outside source (Lucas, 2006, 43-45).
2. SafeAssign (inside FerrisConnect) will be used as a tool to teach and ensure fairness.

3. The commitment of any of the above acts within the course will result in failure of the assignment and may result in failure in the course and possibly further sanctions. See syllabus attachment on academic misconduct or the FSU handbook for policies on academic misconduct.

G. Disability Services -- Ferris State University is committed to following the requirements of the Americans with Disabilities Act Amendments Act and Section 504 of the Rehabilitation Act. If you are a student with a disability or think you may have a disability, contact the Disabilities Services office at 231.591.3057 (voice), or email ecds@ferris.edu to discuss any issues. For this class, you must contact me in the first two weeks, so that appropriate steps can be taken to assist you.

I _____ have received and read the course syllabus for COMM105 Interpersonal Communication. I understand the course outcomes, assignments, and policies, and I agree to follow the policies stated within the course syllabus. I especially understand the policies for late work, attendance, academic honesty, and disrupting the classroom, and recognize how those policies will apply to this course. I understand that my work may be used as samples for future students and teaching research. If my work is shared, I understand that anonymity will be ensured. Prior to signing this contract, I have had my questions regarding the course syllabus and policies answered by the instructor.

Signature _____

Date _____

Spring 2013 COMM105 Tentative Schedule

Monday	Tuesday	Wednesday	Thursday
January 14 FC; Syllabus; Intro; Assign CPS registration, reading & syll sig sheet	January 15	January 16 Discuss Intro pages x-xii & Ch 1--About comm Due: CPS Registered, syll sig	January 17
January 21 MLK Jr. Day	January 22	January 23 Discuss Ch 1	January 24
January 28 Discuss Ch 2 Culture & Gender; Due: Journal Ch 2	January 29	January 30 Discuss Ch 2	January 31
February 4 Discuss Ch 3 Comm & Self Due: Journal Ch 3	February 5	February 6 Discuss Ch 3 Prepare for exam	February 7
February 11 Exam #1 (Ch 1-3)	February 12	February 13 Review exam results; Discuss Ch 4 Perception	February 14
February 18 Discuss Ch 4 Due: Journal Ch 4	February 19	February 20 Discuss Ch 5 Language	February 21
February 25 Discuss Ch 5 Due: Journal Ch 5	February 26	February 27 Discuss Ch 6 Nonverbal	February 28
March 4 Discuss Ch 6; Prepare for exam Due: Journal Ch 6	March 5	March 6 Exam #2 (Ch 4-6)	March 7
March 11 <i>Midterm Grades Due</i>	March 12	March 13 Spring Break	March 14
March 18 Review exam results Discuss Ch 7 Listening Due: Journal Ch 7	March 19	March 20 SGID Discuss Ch 7 Listening	March 21 <i>Chavez</i> <i>March</i>
March 25 Discuss Ch 8 Social relationships Due: Journal Ch 8	March 26	March 27 Discuss Ch 8	March 28 <i>W Deadline</i> Easter Break
April 1 Discuss Ch 9 Intimate Relationships	April 2	April 3 Discuss Ch 9 Due: Journal Ch 9	April 4 <i>CSCA</i>
April 8 Review for exam	April 9	April 10 Exam #3 (Ch 7-9)	April 11
April 15 Discuss Ch 10 Conflict	April 16	April 17 Course feedback Discuss Ch 10 Due: Journal Ch 10	April 18
April 22 Discuss Ch 11 Deception	April 23	April 24 Discuss Ch 11 Due: Journal Ch 11	April 25
April 29 Discuss Ch 12 Emotion	April 30	May 1 Discuss Ch 12 Prepare for exam Due: Journal Ch 12	May 2
May 6 Final Exams	May 7 Exams	May 8 Final Exams	May 9 Exams

Final Exam

Section 008, CRN #10345, Monday and Wednesday 3:00—4:15 p.m., JOH101, EXAM May 7, 2-3:40

****Bring your CPS clicker to class on every day that we have a discussion.****

Spring 2013 COMM105 Tentative Schedule

Monday	Tuesday	Wednesday	Thursday
January 14	January 15 FC; Syllabus; Intro; Assign CPS registration, reading & syll sig sheet	January 16	January 17 Discuss Intro pages x-xii & Ch 1--About communication Due: CPS Registered, syll sig
January 21 MLK Jr. Day	January 22 Discuss Ch 1	January 23	January 24 Discuss Ch 2 Culture & Gender; Due: Journal Ch 2
January 28	January 29 Discuss Ch 2	January 30	January 31 Discuss Ch 3 Comm & Self; Due: Journal Ch 3
February 4	February 5 Discuss Ch 3 Prepare for exam	February 6	February 7 Exam #1 (Ch 1-3)
February 11	February 12 Review exam results; Discuss Ch 4 Perception	February 13	February 14 Discuss Ch 4 Due: Journal Ch 4
February 18	February 19 Discuss Ch 5 Language	February 20	February 21 Discuss Ch 5 Due: Journal Ch 5
February 25	February 26 Discuss Ch 6 Nonverbal	February 27	February 28 Discuss Ch 6; Prepare for exam; Course feedback Due: Journal Ch 6
March 4	March 5 Exam #2 (Ch 4-6)	March 6	March 7 Review exam results Discuss Ch 7 Listening Due: Journal Ch 7
March 11 <i>Midterm Grades Due</i>	March 12	March 13 Spring Break	March 14
March 18	March 19 Discuss Ch 7 Listening	March 20	March 21 Chavez March SGID Discuss Ch 8 Social relationships Due: Journal Ch 8
March 25	March 26 Discuss Ch 8	March 27	March 28 <i>W Deadline</i> Easter Break
April 1	April 2 Discuss Ch 9 Intimate Relationships	April 3	April 4 <i>CSCA</i> ; Discuss Ch 9 Due: Journal Ch 9
April 8	April 9 Prep for exam	April 10	April 11 Exam #3 (Ch 7-9)
April 15	April 16 Discuss Ch 10 Conflict	April 17	April 18 Course feedback Discuss Ch 10 Due: Journal Ch 10
April 22	April 23 Discuss Ch 11 Deception	April 24	April 25 Course feedback Discuss Ch 11 Due: Journal Ch 11
April 29	April 30 Discuss Ch 12 Emotion	May 1	May 2 Discuss Ch 12 Prepare for exam Due: Journal Ch 12
May 6 Final Exams	May 7 Final Exams	May 8 Final Exams	May 9 Final Exams

Final Exams

Section 001, CRN #10339, Tuesday and Thursday 9:30—10:45 a.m., JOH101, EXAM May 6, 10-11:40
Section 012, CRN #10349, Tuesday and Thursday 3:00—4:15 p.m., STR126, EXAM May 6, 2-3:40

****Bring your CPS clicker to class on every day that we have a discussion.****

Fall 2013 Syllabus
COMM 121: Fundamentals of Public Speaking
Instructor: Dave Schrock, M.A.

Office Hours (Johnson 420):

Monday 1:30-2:30pm	Tuesday 3:00-4:00pm	Wednesday 1:30-2:30pm	Thursday 3:00-4:00pm	Friday By Appointment
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(Or by appointment for another time)

E-mail: DavidSchrock@ferris.edu (Don't forget the "c" in my last name!)

Cell Phone: 231-679-0290 (please call between 9AM and 11PM, no texts please)

Office phone: 231-591-3506

Required Materials:

1. Textbook: Valenzano, J. M., Braden, S. W., & Broeckelman-Post, M. (2013). *The speaker's primer* (1st ed.). Southlake, TX: Fountainhead Press. ISBN: 978-1-59871-620-7
2. Writing materials (Paper, pen, #2 pencil)
3. Note cards (approx. 40 – 4"x6" size)

Course Description:

COMH/COMM 121 is a 3-credit, general education course aiming to build public communication skills. Speaking opportunities, instructor, peer, and self-evaluation, textbook reading, instructor lecture, class discussion, and class activities accomplish this goal. Informative, persuasive and special occasion speech construction, continual improvement of speech delivery, and audience adaptation are the main focus of study considering such communication elements as empathy, cultural awareness, perception, communication context, and ethics.

General Education Speech Communication Outcomes:

Students should be able to:

1. Identify and describe the components of the human communication process.
(*Classroom Discussion, Quizzes, Cumulative Exam*)
2. Identify and describe the literal message content and the relationship variables between communicators in interpersonal, small group or presentational contexts.
(*Classroom Discussion, Quizzes, Cumulative Exam, All Speeches and Outlines, Informative Speech Video Self-Analysis*)
3. Select, present, interpret and respond appropriately and effectively to verbal and nonverbal messages in interpersonal, small group or presentational contexts.
(*Classroom Discussion, Quizzes, Cumulative Exam, All Speeches, Informative Speech Video Self-Analysis*)
4. Use verbal and nonverbal messages to achieve personal, interpersonal, small group, or presentational goals, while developing and maintaining relationships with others.
(*Classroom Discussion, Quizzes, Cumulative Exam, All Speeches, Informative Speech Video Self-Analysis*)

Public Speaking Outcomes:

Students should be able to:

5. Choose and narrow a topic appropriately for the audience and occasion.
(*Classroom Discussion, Quizzes, Cumulative Exam, All Speeches, Speech Worksheets*)
6. Communicate the thesis in a manner appropriate for audience and occasion.
(*Classroom Discussion, Quizzes, Cumulative Exam, All Speeches, Speech Worksheets and Outlines*)
7. Provide effective supporting material based on the audience and occasion.

- (Classroom Discussion, Quizzes, Cumulative Exam, All Speeches, Speech Worksheets and Outlines, Library Research Instruction, Peer Speech Evaluations)*
8. Use an organizational pattern appropriate to topic, audience, occasion and purpose.
(Classroom Discussion, Quizzes, Cumulative Exam, All Speeches, Speech Worksheets and Outlines, Peer Speech Evaluations)
 9. Use language that is appropriate to the audience, occasion, and purpose.
(Classroom Discussion, Quizzes, Cumulative Exam, All Speeches, Speech Outlines, Informative Speech Video Self-Analysis, Peer Speech Evaluations)
 10. Use vocal variety in rate, pitch and intensity to heighten and maintain interest.
(Classroom Discussion, Quizzes, Cumulative Exam, All Speeches, Informative Speech Video Self-Analysis, Articulation Exercises, Peer Speech Evaluations)
 11. Use pronunciation, grammar, and articulation appropriate to the designated audience.
(Classroom Discussion, Quizzes, Cumulative Exam, All Speeches, Speech Outlines, Informative Speech Video Self-Analysis, Articulation Exercises, Peer Speech Evaluations)
 12. Use physical behaviors that support the verbal message.
(Classroom Discussion, Quizzes, Cumulative Exam, All Speeches, Informative Speech Video Self-Analysis, Peer Speech Evaluations)

Students should also:

13. Know the criteria for an effective public speech.
(Classroom Discussion, Quizzes, Cumulative Exam, All Speeches, Speech Worksheets and Outlines, Peer Speech Evaluations)
14. Know and demonstrate appropriate communication anxiety management strategies.
(Classroom Discussion, Quizzes, Cumulative Exam, PRPSA Instrument, All Speeches, Informative Speech Video Self-Analysis, Peer Speech Evaluations)
15. Know several ways to organize a public speech.
(Classroom Discussion, Quizzes, Cumulative Exam, Speech Worksheets and Outlines, Informative Speech Video Self-Analysis, Informative Speech Rough Outline)
16. Know and demonstrate appropriate and effective use of visual aids.
(Classroom Discussion, Quizzes, Cumulative Exam, All Speeches, Speech Worksheets, Peer Speech Evaluations)
17. Know and demonstrate ability to build a persuasive argument, using appropriate and effective evidence.
(Classroom Discussion, Cumulative Exam, Persuasive Speech, Speech Worksheets and Outlines, Peer Speech Evaluations)
18. Know and demonstrate critical listening.
(Classroom Discussion, Quizzes, Cumulative Exam, Peer Speech Evaluations, Informative Speech Video Self-Analysis)

Specific Course Outcomes:

All students completing introductory Public Speaking courses will have:

19. Presented at least 3 prepared speeches, including at least one informative speech and one persuasive speech at least 4 minutes 30 seconds long.
20. Written assessed outlines for each 5 to 7 minute prepared speech.
21. At least one prepared speech will require the use of a visual aid.
22. Skills outcomes assessment will be based on standards established by the National Communication Association.

Attendance:

1. Attendance will be taken at the beginning of every class by means of a sign up sheet. If you are not on the sign up sheet you are considered absent. *Make sure you sign in.*

2. You are allowed 3 unexcused absences without penalty. *But*, for every absence after that, 50 points will be subtracted off of your semester point total. *Save your absences*. If you are not sure how many absences you have during the semester, schedule an appointment during office hours.
3. If you miss a class period, contact me as soon as possible to find out what you missed. In the case of an emergency, notify me as soon as you're able.
4. If you have upcoming military duty or any university-related activities that conflict with class time, please notify me as soon as possible and the absence will most likely be excused.
5. If you think your absence can be excused, please notify me within one week of the absence to discuss whether it will be excused or not. If you have not attempted to get your absence excused within one week of its occurrence, you will not be able to get it excused later on.
6. If you're less than 15 minutes late for class, it counts as being late (and 3 "lates" equal one absence). If you're more than 15 minutes late for class, you will be marked absent. (The same rules apply if you leave class early).
7. If you are being disruptive in the classroom, you may be asked to leave with or without warning. If you are asked to leave, you will be marked as being absent that class period.
8. Texting is not allowed during class. If you text during class, you will be asked to leave with or without warning and will be marked absent. If you are expecting an important call, please notify me before class and take the call outside of the classroom.
9. The use of a laptop for note taking purposes is allowed, but if it becomes a distraction for students around you or if you are not engaged in class activities, you will be asked to leave with or without warning and will be marked absent.
10. mp3 players are not to be used during class. If you are using one during class, you'll be asked to leave with or without warning and will be marked absent.
11. Doing work for other classes during our class time is not allowed. If you do this, you will be asked to leave with or without warning and will be marked absent.
12. You must participate (i.e. communicate) in discussions as much as you feel comfortable.

Policies:

1. ALL assignments and speeches must be completed to pass this class (excluding extra credit).
2. You should read the book material before class. In this course, it helps to know the material beforehand so that we can discuss and apply the material in class.
3. Students are expected to follow public speaking guidelines and techniques as explained by the instructor. In-class discussion of different techniques learned in earlier schooling is certainly encouraged.
4. ALL assignments must be typed. Handwritten work will not be accepted unless specified. All typed assignments must have 1-inch margins all around, double-spacing, and 12 point Arial font. Do not use emoticons ☺ as they are not appropriate for college-level writing.
5. All papers must follow proper guidelines of writing. This means you spell words correctly, use correct grammar, etc. If you need help, feel free to discuss the issue with me. You might want to call the Writing Center (231-591-2534) or the Academic Support Center (231-591-3543). Both are located in ASC 1017. If I refer you to the Writing Center and you do not go, point deductions for poor writing in future writing assignments will increase significantly.
6. Papers and assignments (in complete form) are due on the date scheduled within the first 15 minutes of class. Anything turned in after that is late. *Speeches and outlines will be deducted one letter grade for every class period they are late*. Other late or missed assignments may face severe grade reductions or a total loss of points. A minimum of 5 points will be deducted for any late assignment.
7. Assignments may be turned in via e-mail only in emergencies.
8. In some cases, a grade of "NC" (No Credit) may be assigned when a student displays a significant lack of performance. In such cases, the student should immediately schedule an office meeting with the instructor. In the case of an "NC" grade, the student will most likely be allowed to do the assignment over for half credit if a satisfactory level of performance is achieved.

9. All speeches given in this class require some form of dress code (specifics to be discussed in class). Make sure you have some dress-casual clothes on hand so you can be prepared for speeches in this class and for any event during your college life that necessitates such clothing. Visit First Lady's Attic in HFE 125 if you need dress-casual clothes.
10. It is your responsibility to keep a copy of all assignments (computer file and paper copy).
11. Students cannot ask for grades, absence totals, or other confidential information in the classroom on behalf of another student (as per FERPA guidelines).
12. Any discussion of grade or absence information should take place during office hours.
13. Students are expected to take the final exam during the time period assigned by FSU.
14. Make sure you know what grade you need to receive credit for this class. Check with your advisor at Ferris or, if you plan on transferring to another institution, check with their admissions office.

What you can expect from me:

- To motivate and guide you.
- To be a good listener.
- To be honest and unbiased.
- To be enthusiastic.
- To be a person you feel comfortable with.
- To respect you and your ideas.
- To be open-minded.
- To answer any questions you may have.
- To help you succeed and have fun!

(If you feel that I am not performing in one of these areas, tactfully let me know).

What I can expect from you:

- To have a positive attitude and an open mind.
- To be a good listener.
- To be honest.
- To be enthusiastic.
- To respect others (One person talks at a time and respect other's opinions).
- To actively participate in group activities.
- To be on time and prepared for class.
- To show hard work and responsibility.
- To do your best.
- To leave this class as a more effective and confident communicator and public speaker.

Academic Dishonesty and Plagiarism:

Cheating on tests or exams is a serious offense. Stealing another's ideas without giving them credit (plagiarism) is an equally serious offense, whether it is intentional or unintentional, spoken or written. Any student caught cheating or committing plagiarism will face one or more of the following: Severe point reduction on the assignment, total loss of points on the assignment, course failure, and/or disciplinary action against the student through FSU. Refer to Section III "Academic Dishonesty" of your student handbook for more information, or visit:

<http://www.ferris.edu/htmls/academics/Departments/WritingCenter/plagiarism.htm>

Students with Disabilities/Special Needs:

Please let me know if you have a disability or any special needs. I will do all that I can to accommodate your needs as best as possible both inside and outside of the classroom. I can also help you get acquainted with the helpful resources available to you at FSU.

Official Disabilities Statement from FSU:

"Ferris State University is committed to following the requirements of the Americans with Disabilities Act Amendments Act and Section 504 of the Rehabilitation Act. If you are a student with a disability or think you may have a disability, contact the Disabilities Services office at 231.591.3057 (voice), or email ecds@ferris.edu to discuss your request further. More information can be found on the web at <http://www.ferris.edu/htmls/colleges/university/disability/>.

Any student registered with Disabilities Services should contact the instructor as soon as possible for assistance with classroom accommodations."

Finally...

Please feel free to visit, call, or e-mail me if you have any questions, concerns, or comments. I am excited to work with and get to know all of you! Communication skills are important to learn and let's have some fun while we do it!

Assignment Descriptions:

Weekly Quizzes (20 Points Each, 200 Points Total)

One or two quizzes (or equivalent assignments) each week. Details to be announced in class prior to each quiz/assignment.

Cumulative Exam (125 Points)

A 50-question exam including multiple-choice, matching, and true/false questions over all chapters and material covered in class.

Self-Introduction Speech Outline (25 Points)

A full-sentence outline including topic, specific purpose, visual aid description, thesis, speech content, and any references used.

Self-Introduction Speech (50 Points)

A 2-3 minute speech of self-introduction. One artifact (or 3 artifacts) will be used to describe 3 characteristics of the speaker.

Informative Speech Worksheet (25 Points)

A list of speech elements including proposed topic, purpose, thesis statement, main points, sources, and visual aid.

Informative Speech Outline (50 Points)

A full-sentence outline including topic, specific purpose, visual aid description, thesis, speech content, and references.

Informative Speech (150 Points)

A 5-7 minute speech informing the audience on a topic of your choice. Topic should be ethical, relevant, interesting, and most of the audience should learn information they didn't already know.

Informative Speech Video Self-Analysis (50 Points)

A 2-page paper evaluating informative speech performance including specific elements of speech delivery and content. Paper will also focus on strategies for improvement.

Persuasive Speech Worksheet (50 Points)

Speech Info (First side of worksheet - 20 points)

A list of speech elements including proposed topic, specific purpose, thesis statement, main points, sources, and visual aid.

Audience Analysis and Adaptation (Second side of worksheet - 30 Points)

A description of the audience using demographical information such as age, sex, occupation, etc. (Analysis). Also, a description of how the characteristics will affect the construction and delivery of the speech (Adaptation).

**Persuasive Speech Outline
(50 Points)**

A full-sentence outline including topic, specific purpose, audience description and position, visual aid description, thesis, speech content, and references.

**Persuasive Speech
(150 Points)**

A 5-7 minute persuasive speech on an ethical, socially significant topic encouraging action. Speech must be designed for a specific audience and have a practical and clear call to action.

**Special Occasion Speech Outline
(20 Points)**

A key-word outline including a description of speech type, audience, thesis, speech content, and references.

**Special Occasion Speech
(50 Points)**

A 2-4 minute speech designed for a realistic special occasion (a wedding toast, anniversary toast or a retirement toast). Speech must include clear elements, inclusion of 2 sources, logical organization and smooth delivery.

**Extra Credit
"Elevator Speeches" OR Speech Competition Attendance
(30 Points)**

Two written "Elevator Speeches" for mock-job interview situations **OR** a brief paper reflecting on the best speaker you saw in a speech competition (dates, times, and places to be announced).

GRADE WORKSHEET

Assignment	Attained	Available	Group Total
Weekly Quizzes	_____	200	
Cumulative Exam	_____	125	(325)
<hr/>			
Self-Introduction Speech Outline	_____	25	
Self-Introduction Speech	_____	50	(75)
<hr/>			
Informative Speech Worksheet	_____	25	
Informative Speech Outline	_____	50	
Informative Speech	_____	150	
Informative Speech Video Self-Analysis	_____	50	(275)
<hr/>			
Persuasive Speech Worksheet	_____	50	
Persuasive Speech Outline	_____	50	
Persuasive Speech	_____	150	(250)
<hr/>			
Special Occasion Speech Outline	_____	25	
Special Occasion Speech	_____	50	(75)
<hr/>			
Extra Credit (Attending Speech Competition or Elevator Speeches)	_____	30	(30)
<hr/>			
Total Points Available (Excluding Extra Credit)	_____	1000	

Grading Scale		
A = 100 - 93%	B- = 82 - 80%	D+ = 69 - 67%
A- = 92 - 90%	C+ = 79 - 77%	D = 66 - 63%
B+ = 89 - 87%	C = 76 - 73%	D- = 62 - 60%
B = 86 - 83%	C- = 72 - 70%	F = 59 - 0%

ENGLISH 150 OUTCOMES

Semester Catalog Description:

Prerequisites: ENGL 074 or English ACT minimum score of 14.

Students will organize and develop papers for diverse audiences and purposes, including how to discover and focus on a topic, develop ideas, provide support, and draft and revise papers effectively. Fundamental language skills will be covered and library research and argumentation will be introduced.

Upon completion of English 150, students will demonstrate competence in the areas listed below.

Awareness and Knowledge of Audience

Students will

- understand their audience's values, attitudes, and goals.
- choose words that their audience will understand.
- use an appropriate tone of voice.

Purposes for Writing

Students will

- develop, analyze, and define the purpose of their writing.
- be aware of the multiple purposes and goals they are acting on when they write.

Problem Solving and Researching

Students will

- analyze the context of the writing problem.
- develop ideas for their writing.
- locate and analyze reliable information and resources for their writing.
- assess and evaluate information.

Developing and Organizing

Students will

- state an assertion and support it.
- choose appropriate methods of organization for their ideas and audiences.
- maintain connections that link key points within a paper.

Revising

Students will

- improve content and style through revisions.
- use feedback to improve their own writing.

Editing

Students will

- use standard grammar, syntax, punctuation, and spelling.
- maintain a consistent point of view and voice.

Collaborating

Students will

- read and critique others' drafts.
- work with others to improve ideas and approaches for writing.

NOTE:

English 150 is intended to be a freshman level course.

English 250 is intended to be a sophomore level course.

A grade of C- or higher is a prerequisite for English 250.

"Writing is like a contact sport, like football. Why do kids play football? They can get hurt on any play, can't they? Yet they can't wait until Saturday comes around so they can play on the high-school team, or the college team, and get smashed around. Writing is like that. You can get hurt, but you enjoy it."— Irwin Shaw

ENG 150 Syllabus: Fall 2013

Sections and Locations:

150-003 TR 8-9:20 a.m., Starr 130
150-042 TR 12 to 1:15 p.m., Starr 109
150-031 TR 1:30 to 2:45 p.m., Swan 218
150-047 TR 3 to 4:15 p.m., Starr 109
Office: ASC 3075

Instructor: Linda Sherwood

Physical Office Hours:
Tues. & Thurs: 9:30 to 11 a.m.

Virtual Office Hours:
Mon. & Wed: 9:30 to 11 a.m.

Office Phone: 231-846-3094

E-mail: lindasherwood@ferris.edu

"Write with the door closed,
rewrite with the door open."
— Stephen King (On
Writing)

Course Catalog Description: Students will organize and develop papers for diverse audiences and purposes, including how to discover and focus on a topic, develop ideas, provide support, and draft and revise papers effectively. Fundamental language skills will be covered and library research and argumentation will be introduced. Credits: 3. Prerequisites: ENGL 074 or English ACT minimum score of 14 or 370 SAT.

Course Outcomes: Upon successful completion of English 150, students will be able to:

- analyze the context and purpose of a writing problem;
- develop ideas and find reliable resources for their writing;
- state and support assertions;
- assess sources and information;
- organize their ideas effectively;
- choose words and tone of voice appropriate to a given audience;
- improve their content and style using feedback and revision;
- critique other's drafts and work collaboratively on a writing problem;
- edit a document for consistent point of view, standard grammar usage, mechanics and punctuation.

Required Text and Materials (*Bring to every class):

- *Writing Matters* (2nd edition), by Rebecca Moore Howard
- Paper folder with pockets used exclusively for this course;*
- A jump drive (electronic storage device);*
- Writing Utensils (pens, pencils, paper);*
- Access to course through FerrisConnect; and
- Access to computer/internet for assignments.

I reserve to make reserve the right to make needed and appropriate adjustments to this syllabus.

*"For me and most other writers I know, writing is not rapturous. In fact, the only way I can get anything written at all is to write really, really shitty first drafts."
– Anne Lamott, Bird by Bird*

Course Requirements:

- You must attend class regularly, read assigned reading on time, and participate actively in class activities (especially writer workshop activities) and discussions;
- You must keep a writing/learning journal;
- You must write five drafts: one about every two to three weeks;
- You must revise essays on a regular basis;
- You must submit a portfolio of revised work with a reflective letter and other supporting materials.

Nature of the Course: Primarily discussion, workshop and activities with extensive utilization of Ferris Connect. Lecture is minimal. Most handouts including the syllabus will be made available through Ferris Connect rather than printed and handed out. If you prefer printed materials, you are responsible for printing out your own copies.

Attendance and Participation: This is a hands-on course. You will be doing something almost every class including writing and talking about writing. There are NO excused absences. You are expected to attend.

If you miss more than 10 percent of class, you must make an appointment with me to review your ability to successfully complete the class. For a course meeting twice a week, 10 percent is 3 classes. If you must miss a class, it is your responsibility to find out what you missed. This should take place **before** the next class. You are still responsible for submitting any work (*on time*) that is due.

It is courteous to e-mail me to let me know about the absence, but I do not need lengthy explanations. If you have a major incident occur that is going to cause a prolonged absence or caused you to miss a due date, please contact me about the possibility of providing possible substitutions. Be aware that you will have to provide evidence of the incident.

Submitting Work: Assignments are to be submitted electronically through Ferris Connect. Assignments should be submitted utilizing Microsoft Word (.doc, .docx or .rtf files). For handwritten work completed in class, you should double-space using lined paper with a smooth edge. Any work submitted by e-mail will NOT be accepted.

Late Assignments: Late work is NOT accepted. Work must be submitted by midnight on the date due. If you submit work and there is an electronic error (wrong format/file corrupt), it will be considered late. If you submit work late, you cannot revise it. Portfolios MUST be turned in at the date and time they are due or they will NOT be accepted.

Electronic Errors: Problems with computers and jump drives or other electronic equipment is NOT an acceptable excuse for late work. Due to the nature of technology, it is in your best interest to save an electronic copy of your work in multiple locations. Because this is a portfolio course, be sure to clearly identify the various drafts for all of your work. Save often. Develop a habit of simultaneously hitting "CONTROL" + "S" buttons frequently (this is a shortcut to save your work).

*"Read over your compositions and, when you meet a passage
which you think is particularly fine, strike it out."
— Samuel Johnson*

Communication: With e-mail and voicemail, you can contact me 24 hours a day, but you **MUST** leave a message in order for these tools to work. When you do leave a message, be sure to share some basic information: your first and last name, the specific course you are contacting me about including the time your class meets and be sure to leave a way for me to contact you. For voicemail messages, please talk slowly and clearly. It doesn't hurt to repeat your contact information and name twice. For e-mail, this is an English course, so please use complete sentences (this is not the time to practice your text-speak).

For questions about an assignment or class policy, please use the "Ask Linda" forum located in the discussion area online. For questions about your grade or other concerns about your personal information, contact me directly through text, email or phone. Be sure to leave your full name and class time when contacting me.

"Any word you have to hunt for in a
thesaurus is the wrong word. There
are no exceptions to this rule."
— Stephen King

Expectations for response: I won't always be able to respond immediately (primarily because I sometimes require sleep). However, I will make every effort to respond within 24 hours although it may take me longer during the weekends (I do try to take a day off once in a while). If you do not receive a response within 24 hours, you should contact me again.

Class Behavior: Ferris State University has a disruptive student policy available in the student handbook. Any student whose actions or attitudes disrupt the class will be asked to leave. A student who is disruptive twice will fail the class and be banned from the classroom. In the computer lab, you are expected to work on class-related content. This means you should not be utilizing the computers for personal or social reasons nor should you be completing work for another course.

Cell phones should be in "vibrate" or "silent" mode. Be courteous. If you are actively discussing a course topic with other students or the class, you should not stop to answer your phone. If you must answer your phone, please do it in the least disruptive manner. You should leave the classroom before you begin talking on your cell phone.

Plagiarism Policy: Plagiarism is not acceptable in this or any other course, and it may affect your course grade as well as your overall status at the college. Plagiarism is using another person's words or ideas without giving credit to the other person. When you use someone else's words, you must put quotation marks around them and give the writer or speaker credit by revealing the source in a citation. Even if you revise or paraphrase the words of someone else or just use that person's ideas, you still must give the author credit in a note. Not giving due credit of an idea or writing is very much like lying. Plagiarism is also buying assignments online or from another student. Words cannot be purchased and represented as your own.

For more information about Ferris State University's stance on plagiarism, refer to the Student Handbook, Academic Misconduct. A student who has been found in violation of academic misconduct may receive a failing grade in the course and any of the disciplinary sanctions outlined in the Board of Trustees policy of student responsibilities, including suspension or dismissal from the university.

*"Grammar is not just a pain
in the ass; it's the pole you
grab to get your thoughts up
on their feet and walking."
—Stephen King, On Writing*

Writing Workshop: You will be expected to give and receive feedback on written drafts. All work submitted to the instructor must first go through a writer's workshop. In the writer's workshop, you will have responsibilities as both an author and a reader. As the author, you are expected to submit polished drafts – this means you should have already done some editing and revision. As the reader, you are expected to give quality feedback that uses examples from the paper and/or the course reading/discussion to support your points. Specific guidelines and expectations for the writer workshop will be provided. We will be utilizing a mix of online and face-to-face feedback for the writing workshops.

“Do not remove a fly from your friend's forehead with a hatchet.”
— Chinese Proverb

“Technology does not necessarily improve education. Take a simple innovation like the pencil: One can use it to write a superlative essay, to drum away the time, or to poke out someone's eye.” — Howard Gardner

Revision: Revision is essential for writing. You will be writing multiple drafts of your assignments, and you must keep track of each stage of drafting and keep copies of each stage. Although you will be required to turn-in the writer's workshop draft and the revised draft, there may be other drafts that you work on outside of class that still might work well for your portfolio. Before each essay is due, you will participate in a writer's workshop. After the workshop, you are expected to again revise your paper before submitting the revised draft to me for evaluation.

If you receive a grade lower than a C on a revised draft, you do have the option of revising the draft and resubmitting it. If you do this, the highest grade you can receive on the resubmitted revision is a C. If you receive a C or higher, you cannot resubmit a revised draft because you have received a passing grade. *Late work cannot be revised.*

“I do a lot of rewriting. It's very painful. You know it's finished when you can't do anything more to it, though it's never exactly the way you want it.... Most of the rewrite is cleaning. Don't describe it, show it. That's what I try to teach all young writers – take it out! Don't describe a purple sunset, make me see that it is purple. The hardest thing in the world is simplicity. And the most fearful thing, too. You have to strip yourself of disguises, some of which you didn't know you had. You want to write a sentence as clean as a bone. That is the goal.” — James Baldwin

Grading: The grades for this class are broken into four categories:

In-Class Work (In-Class Exercises, Quizzes, Attendance)	30 percent
Drafts	30 percent
Writing Portfolio	40 percent

Category Definitions:

In-Class Work: This includes any in-class writing activities that I ask you to complete as well as active participation and attendance.

Drafts: There are two types of drafts: workshop drafts and revised drafts. Workshop drafts receive O, A or C based on completeness of the draft you bring to class as well as the quality of your feedback to others. After receiving feedback through a workshop, you are expected to revise your paper. This revised draft is submitted to the instructor and graded. If after the revision, your grade is a D or below, you can revise and resubmit this revised draft, however, the highest grade you can receive for this second revision is a C.

Portfolio: Throughout the semester, you will be compiling material to present as part of your final portfolio. The portfolio is intended to display your process and growth as a writer and to showcase your best products. Your portfolio will utilize evidence from throughout the class to illustrate your growth. You need to retain all material you produce in this class including all early drafts as well as comments you receive from classmates and your instructor as well as self-assessment and reflection. The portfolio is NOT submitted electronically.

"The story itself, the true story, is the one that the audience members create in their minds, guided and shaped by my text, but then transformed, elucidated, expanded, edited, and clarified by their own experience, their own desires, their own hopes and fears." — Orson Scott Card (Ender's Game)	Grading Scale:
	950-1000 = A
	900-940 = A-
	880-890 = B+
	850-870 = B
	800-840 = B-
	780-790 = C+
	750-770 = C
	700-740 = C-
	680-690 = D+
650-670 = D	
600-640 = D-	
0-590 = E	

ADA: Students with Disabilities: You do not need to self-identify to your instructor. The policy of the Ferris State University requires students to self-identify and provide proper documentation to Eunice Merwin, Counselor, Disability Services, (231) 591-3772, located in Starr 317, who will contact me regarding appropriate accommodations.

"A scrupulous writer, in every sentence that he writes, will ask himself at least four questions, thus: 1. What am I trying to say? 2. What words will express it? 3. What image or idiom will make it clearer? 4. Is this image fresh enough to have an effect?" — George Orwell

SYLLABUS ATTACHMENT
COLLEGE OF ARTS AND SCIENCES – FERRIS STATE UNIVERSITY
FALL 2013

ARE YOU CONSIDERING ADDING A MINOR OR MAJOR TO YOUR CURRENT PROGRAM?
 Use **My Degree** to see what classes may already apply.
 For more information, stop by the Arts and Sciences Dean's Office!

IMPORTANT DATES		
Late registration	Wed. – Fri.	Aug. 21 – 23
First day of classes	Monday	Aug. 26
Last day for Drop/Add	Thursday	Aug. 29
Labor Day (no classes)	Monday	Sept. 2
Mid-term grades due	Monday	Oct. 21
Last day for "W" grades	Thursday	Oct. 31
Thanksgiving recess begins (no classes)	Wed (noon)	Nov. 27
Thanksgiving recess ends (classes resume)	Monday	Dec. 2
Last day of classes	Friday	Dec. 6
Examination Week	Mon – Fri	Dec. 9 - 13
Commencement	Saturday	Dec. 14
Final grades due by 1:00 pm	Monday	Dec. 16
Grades available to students on MyFSU	Tuesday (after 8AM)	Dec. 17

Sessions	Dates	Last Day to Withdraw
Full Session	Aug. 26 – Dec. 6	Oct. 31
Session A	Aug. 26 – Oct. 15	Sept. 26
Session B	Oct. 16 – Dec. 6	Nov. 15
Session D	Aug. 26 – Sept. 27	Sept. 16
Session E	Sept. 30 – Oct. 31	Oct. 18
Session F	Nov. 1 – Dec. 6	Nov. 21

DEPARTMENT OFFICES		
Biology	ASC 2004	591-2550
Humanities	JOH 119	591-3675
Languages & Literature	ASC 3080	591-3988
Mathematics	ASC 2021	591-2565
Physical Sciences	ASC 3021	591-2580
Social Sciences	ASC 2108	591-2735
Dean's Office	ASC 3052	591-3660

WHAT YOU NEED TO KNOW

E-MAIL

All registered FSU students have a Ferris Gmail account. This is the only e-mail to which all official University information about registration, financial aid, student activities, and class cancellations will be sent. Please check your account at least once a week. E-mail is our primary communication resource for students.

CLASS ATTENDANCE IS IMPORTANT!

Attendance usually has a high correlation with how well you do in a course. Many instructors have mandatory attendance policies by which your grade will be affected by absences. Some instructors also have policies about class tardiness to encourage students to be present for the full class period. Check your course syllabus or talk to your instructor about his/her policies.

HOW TO CONTACT A FACULTY MEMBER OR ADVISOR

If you have questions or need help, talk to your instructor. Faculty office locations, phone numbers, and office hours may be obtained from the class syllabus or department office, through the College of Arts and Sciences web page at <http://www.ferris.edu/htmls/colleges/artsands/>, or through the Directories & Maps link on the FSU home page.

DROPPING CLASSES OR WITHDRAWING */**

Dropping and adding only occurs during the first four days of the term. You can adjust your schedule **online during the first four days** or in person at the Timme Center (from 8-5 except for the last day when it is 12-5). *If you add a class you must pay for your additional charges by the fourth day or your schedule will be dropped.*

If you need to withdraw from a class after the official drop/add period, you must do so **OFFICIALLY**, through your dean's office, in order to avoid

receiving an "F" grade in the course. **You may not withdraw online after the first four days of the term.** You will receive a "W" for the course. *You will not receive a refund.* If you need to totally withdraw from the University, you must do so **officially** at Admissions and Records in CSS 101. The last day to withdraw or drop a class may be different for different classes. **CHECK THE SESSIONS DATES SECTION ABOVE OR THE REGISTRATION AND ACADEMIC GUIDE FOR THE WITHDRAWAL DEADLINES FOR THE SEMESTER.**

In cases of extenuating circumstances (e.g., a serious illness requiring you to withdraw from school), contact Birkam Health Center at 591-2614.

INCOMPLETES

The "I" is only considered for extenuating circumstances that have led to a student missing a portion of the course. The intent and appropriate use of the "I" grade is NOT to avoid student probation, dismissal, or unacceptable grades, nor should it be considered as an extended alternative to withdraw from a class (W). Extenuating circumstances are generally defined as those situations over which a student has little or no control—e.g., illness, birth, jury duty, death of a parent, serious injury. Instructors may require suitable documentation.

Students must have completed at least 75% of the coursework at passing levels before an "I" will be considered, and they may be required to sign an agreement regarding course completion. An "I" grade automatically changes to an "F" after one semester (not counting summer) unless the faculty member files another grade or extends the incomplete.

GRADUATION

Students should apply for graduation the semester prior to their last semester of completion. For associates in arts or associates in science degrees, this needs to be completed at the Dean's Office. For bachelor degrees, this needs to be completed with your program coordinator. Be aware of deadlines for participation in commencement.

INCLEMENT WEATHER CONDITIONS

Only during the most severe weather conditions – which could potentially endanger the safety of students or staff – will the Big Rapids campus consider cancelling classes. The decision to cancel classes due to weather conditions at the Big Rapids site will be made as early as possible. In the event it is necessary to cancel classes, periodic announcements will be made on area radio and television stations. It is the student's responsibility to listen for these announcements. A student may also call the Ferris Information Line at 231-591-5602 to obtain information or check the Ferris website.

ACADEMIC MISCONDUCT

Academic misconduct refers to dishonesty or misrepresentation with respect to assignments, tests, quizzes, written work, oral presentations, class projects, internship experience, or computer usage; violation of computer licenses, programs, or data bases; or unauthorized acquisition or distribution of tests or other academic material belonging to someone else. It includes such behaviors as cheating, copying materials from the internet without documentation, presenting another person's ideas or work as your own, taking someone else's exam for them, violating computer software licenses or program/data ownership, etc. It is the expectation of the College of Arts and Sciences that all work you turn in is your own and is original for the course in which it is being submitted. If you are uncertain about whether a particular behavior might represent academic misconduct, be sure to ask your professor for clarification.

Penalties for academic misconduct can include **FAILURE** of the assignment or the course, and/or disciplinary action up to and including probation or dismissal from the University.

DISRUPTIVE BEHAVIOR

The College of Arts and Sciences strives to maintain a positive learning environment and educational opportunity for all students. Consequently, patterns of behaviors which obstruct or disrupt the teaching/learning environment will be addressed. The instructor is in charge of his or her course (e.g., assignments, due dates, attendance policy) and classroom (e.g., behaviors allowed, tardiness). Harassment, in any form, will not be tolerated.

Penalties for disruptive behavior can include involuntary withdrawal from the course and/or disciplinary action up to and including probation or dismissal from the University. The full Disruptive Behavior Policy is available on the College of Arts and Sciences website at <http://www.ferris.edu/htmls/colleges/artsands/student-resources/disruptive-behavior.htm>

For additional policies and helpful information, check out the College of Arts & Sciences Student Resources page at <http://www.ferris.edu/HTMLS/colleges/artsands/student-resources/>

WHERE TO GO FOR HELP

The following services are available to any Ferris student, free of charge. They are designed to help you succeed in your courses, in your career planning, and in meeting the challenges of university life. Don't hesitate to explore and use these services at Ferris.

ACADEMIC ADVISING

All students have an assigned advisor and should confer with that advisor regularly. Students who have declared a major should see an advisor in that major. To find out who your advisor is, login to MyFSU and click on the Academics and Services tab, then Registration Status / Advisor Information link.

ACADEMIC SUPPORT CENTER.....ASC 1017 – 591-3543

THE WRITING CENTER.....ASC 1017 – 591-2534

The Academic Support Center, Tutoring Services, and Writing Center join together to offer FSU students an array of academic support services. Tutors are available to answer questions for many courses. The Writing Center helps writers individually and in workshops with skills and assignments. There is also study skills assistance to help with note-taking, test-taking, memory and reading strategies, and time management.

DISABILITIES SERVICES.....STR 313 – 591-3057

According to the Americans with Disabilities Act, each student with a disability is responsible for notifying the University of his/her disability and requesting accommodations. Students requiring a classroom accommodation due to a physical, learning, mental or emotional disability should contact the Disabilities Services Office.

SCHOLAR PROGRAM.....ASC 1021 – 591-5976

SCHOLAR is an academic support program that aids in the student's successful progression by offering a Peer Mentor Program, a Student Retention Program, and an Academic Student Advisory Committee.

PERSONAL COUNSELING, SEXUAL ASSAULT, SUBSTANCE ABUSE BIRKAM HEALTH CENTER 2nd Floor - 591-5968

Personal counseling is available confidentially and free of charge. Counselors are available to assist with personal and stress-related problems, family and relationship issues, substance abuse, sexual assault, depression, or other similar problems. Call or stop by to obtain an appointment.

If you or a friend is in immediate crisis, call 911.

EDUCATIONAL & CAREER COUNSELINGSTR 313 – 591-3057

Students wanting to examine their choice of major or career choice, learning styles or strategies can make one-on-one appointments with licensed counselors.

SAFETY

Please observe the posted shelter and evacuation routes in the hallway nearest your classroom.

OTHER RESOURCES

BIRKAM HEALTH CENTER.....1st Floor - 591-2614

The Birkam Health Center provides fee-for-service medical care including evaluation and treatment for illness and injury anytime during the year. Patients are seen on a walk-in and by appointment basis.

FLITE LIBRARY.....591-2669

Regular hours for FLITE:

Monday – Thursday 7:30 a.m. – MIDNIGHT

Friday 7:30 a.m. – 6:00 pm

Saturday NOON – 5:00 pm

Sunday 1:00 p.m. – MIDNIGHT

(Extended Studies Court will begin late night hours September 17, 2013

*Sunday-Thursday/MIDNIGHT to 7:30 a.m. *Friday/6 p.m. to MIDNIGHT

*Saturday/5 p.m. to MIDNIGHT)

FSU BOOKSTORE.....14265 NORTHLAND DR. 231 591-2607

Regular on-campus hours for the Bookstore **:

Monday – Thursday 9:00 a.m. – 6:00 p.m.

Friday 9:00 a.m. – 5:00 p.m.

Saturday 11:00 a.m. – 4:00 p.m.

Sunday CLOSED

New location is at the Save-A-Lot Shopping Center Plaza.

HELPFUL NUMBERS

Admissions	2100	Inst. Testing	3628
Business Office	2125	Public Safety	5000
Financial Aid	2110	Records	2792
Housing	3745	TAC	4822

When calling from off campus, extensions can be called by using the prefix 231-591-_____.

ENGLISH 250 OUTCOMES

Semester Catalog Description:

The second of a two course sequence, this course focuses on research. Students will learn how to use informational resources to produce a documented paper, to evaluate conflicting claims and evidence, to write an extended argument. The course will stress problem solving, reasoning skills, as well as accepted English usage appropriate to academic writing situations.

Purposes for Writing

Upon completion of English 250, students should be able to analyze and define the purpose of their writing:

- understand the context for academic research writing
- inform a reader about a chosen topic using a synthesis of supporting material
- argue a position or make an evaluation with supporting reasons and evidence

Problem Solving/Researching/Documenting

Upon completion of English 250, students should be able to locate information appropriate to their writing and know how to document it:

- generate a focused and workable research thesis
- retrieve information from various sources, including the library
- recognize primary and secondary sources of information and to use both correctly
- evaluate information found in sources
- identify and evaluate the arguments/positions of others
- document sources appropriately

Awareness and Knowledge of Audience

Upon completion of English 250, students should be able to analyze and define the needs of their intended audience:

- adapt their writing to their readers' level of knowledge on the topic
- adapt their writing to their readers' values, attitudes, and needs
- anticipate and answer readers' questions and/or objections
- use vocabulary and tone appropriate for their readers

Organizing

Upon completion of English 250, students should be able to analyze the writing task and choose appropriate methods of organization:

- produce an outline for an extended document
- demonstrate appropriate and effective organization for an extended document
- provide appropriate contexts for material from sources
- insert visuals where appropriate

Editing

Upon completion of English 250, students should be able to produce effective written communication, demonstrating appropriate use of language, sentence structure, grammar, and mechanics:

- avoid common grammatical errors of standard English
- quote accurately
- vary sentence length and style for rhetorical purposes
- use concise language
- use correct grammar, syntax, punctuation, and spelling
- maintain a consistent point of view

Collaborating

Upon completion of English 250, students should be able to work effectively with others to produce and/or revise written materials:

- collaborate with instructor and others
- critique others' drafts
- use peer review to revise their own writing

NOTE:

English 250 is intended to be a sophomore level course

English 250

Syllabus

Professor: John Caserta
Office: ASC 3072
Phone: 231-591-3604
Office Hours: Monday and Wednesday 8-10 AM (other hours by appointment)
E-mail: casertaj@ferris.edu

Prerequisite -- English 150

COURSE DESCRIPTION AND OBJECTIVES

English 250 is a continuation of English 150 and is designed to teach students to write well-defined and effectively developed multi-paragraphed papers in which individual paragraphs are unified and coherent and individual sentences are clear, varied, skillfully constructed, and grammatically correct. Students will learn to write papers with logical and rhetorical development so that the theme set forth progresses by clearly ordered and necessary stages. In the second half of the course, students will learn the essential elements of the research paper following MLA (Modern Language Association) format.

COURSE TEXTS

<i>Writing Research Papers</i>	Lester
<i>Fiction 100</i>	Pickering

COURSE INTRODUCTION

Writing Assessment	Writing sample	No grade: evaluation and comment
Paper 1	Analysis	100 points

FRAME 1 **THE ELEMENTS OF FICTION.** Students will read and discuss a number of short stories giving careful attention to the development of theme, character, setting, plot, narrative technique, point of view, conflict, action and symbol.

SHORT STORIES

"A Rose for Emily"	Faulkner
"A&P"	Updike
"The Lottery"	Jackson
"Hills Like white Elephants"	Hemingway
"The Cask of Amontillado"	Poe
"Big Blonde"	Parker
"A Good Man Is Hard to Find"	O'Connor
"Lust"	Minot
"The Girls in Their Summer Dresses"	Shaw
"The Necklace"	De Maupassant

COURSE CALENDAR

Week 1	Writing assessment
Week 4	Narrative assignment
Week 6	Film assignment
Weeks 8-14	Research paper assignments/speech

ATTENDANCE POLICY. Regular attendance is strongly recommended but not mandatory. However, a student with excessive absences will be asked to drop the course. It is up to the student to exercise maturity and responsibility in satisfying the course requirements. A student, whether present or not, is responsible for all work assigned in class. **NO LATE PAPERS OR MAKE-UP EXAMS WILL BE ACCEPTED OR ALLOWED.**

Exceptions: The last two class days are scheduled for speeches. Any student not in attendance for these two days will be failed for the course. The speech days serve as the final for the course.

Any student missing library days will have 100 points deducted from grade course total.

PLAGIARISM Plagiarism is the unauthorized use of another individual's materials without properly citing the source or use of that work as one's own. Any student plagiarizing will fail the course.

GENERAL EDUCATION OUTCOMES

Upon successful completion of this course, students will demonstrate through their writing:

- Awareness and knowledge of audience
- Purpose for writing
- Problem solving and research
- Organization and editing
- Editing

ENGLISH 250 OUTCOMES

Upon successful completion of English 250, students will be able to write an argument, narrative or evaluation using supporting reasons and evidence and detail. They also will be able to generate a focused, workable research thesis, recognize and evaluate primary and secondary sources, synthesize supporting materials and document sources appropriately. In addition students will be able to use vocabulary and tone appropriate to a given audience and to organize an extended document effectively. They will be experienced in critiquing drafts and working collaboratively on a writing problem and improving content and style using feedback and revision. They will be able to produce effective written communication demonstrating appropriate use of language, sentence structure, grammar usage, and mechanics.

SYLLABUS CHANGES: The instructor may make changes to the syllabus to meet course objectives. **NO MIDTERM GRADES WILL BE GIVEN IN THIS CLASS.**
NO TAPING OF LECTURES IS PERMITTED.
NO CELL PHONES, TEXTING, ELECTRONIC MESSAGING, ETC. IS PERMITTED.

ENGL 250: English 2 Fall 2013

Instructor: Dr. Debbie Courtright-Nash

Email: court@d@ferris.edu (I check regularly on weekdays at 9am and 4pm, intermittently on evenings and weekends)

Office hours: Mondays and Wednesdays 2:10-3 pm IRC connector near Starbucks; Tuesdays 9-11 in ASC 3064,

Office phone: 591-2532 (I will check voicemails MTW mornings by 11 am, I check intermittently on other days; please leave a call back number with latest time I can call)

Required Materials:

- ISBN-13: 978-0205742011 Badke, William Research Strategies: Finding Your Way through the Information Fog iUniverse.com: 4th Edition. ISBN: 978-1-46201-017-2.
 - Additional Reading Materials: others TBA , posted online
 - Software: Microsoft Word, PowerPoint, Adobe Acrobat Reader
-

Course Description: The second of a two-course sequence, this course focuses on research. Students will learn how to use informational (incl. library) resources to produce a documented paper, to evaluate conflicting claims and evidence, to write an extended argument, and to write papers based on primary research. The course will stress problem solving, reasoning skills, as well as accepted English usage (grammar, structure, diction, style) appropriate to academic writing situations. Method of Delivery: On line discussion, assignments, chats, some video/presentations.

Learning Outcomes: Upon completion of ENGL 250, students should be able to:

- analyze and define the PURPOSES of their writing. They will understand rhetorical CONTEXTS; analyze and apply rhetorical features; ARGUE positions with support; use writing as critical reflection and communication
- locate, integrate, and document information appropriate to their writing. They will use advanced RESEARCH sources ethically; use research-based computer applications; EVALUATE information; develop problem-solving skills; document sources using formats from a variety of disciplines
- analyze and define the needs of their intended AUDIENCE. They will adapt to readers' level of knowledge; anticipate and adapt to readers' responses and expectations; use rhetorical strategies to engage readers and establish credibility; choose appropriate formats for professional communication and field-specific texts
- analyze the writing tasks and choose appropriate methods of ORGANIZATION. They will organize extended documents; design a variety of informational GRAPHICS for professional writing; integrate complex content and ideas into a text
- demonstrate appropriate use of language, sentence structure, GRAMMAR and MECHANICS. They will vary sentence length and style; use conventions of standard American English; maintain a consistent point of view; use appropriate FORMATS for academic and professional documents
- work effectively with others to produce and/or revise written materials. They will use instructor feedback for COLLABORATIVE REVISION; respond to others' written texts; cooperate with peers in carrying out team roles and tasks.

Assignments and Grading:

Journals	5%
Discussions and Preparation to Participate	5%
Unit A:	25%
• Summaries	
• 2 Essays	
Unit B:	30%
• Memo	
• Annotated Bibliography	
• Summary and Response	
Unit C	25%
• Memo on choice of product	
• Working Bibliography	
• Consumer Search article	
Portfolio	10%

Break down of Unit Grades Will Be Provided At the Beginning of Each Unit

Grading Scale:

A 94 - 100
A- 90 - 93
B+ 89
B 85 - 88
B- 80 - 83
C+ 79
C 75 - 78
C- 80 - 83
D+ 69
D 65 - 68
D- 60 - 63
F 59 and below

Definitions of Terms in Items to be graded:

Discussions, and Reading Journal: For each chapter, section, or article that we read, you will participate in a discussion and/or will journal on it . Your grade for the discussion will be based upon your integration of what you read in the text and your responses to others in the discussion.

Unit A: Dealing With Difference: You will write two essays, one narrative and one persuasive/argument, dealing with the subject of difference as it arises from our conversations in class and online during the first three weeks.

Unit B: Sequenced Assignment: You will start by identifying a research question in a memo, you will then proceed to gather at least 20 sources in a running bibliography, then you will summarize and respond to the four strongest articles. You will also conduct primary research in the form of an interview, survey or observation. From those sources, you will write an article.

Annotated bibliography: You will create a bibliography on the most reliable and current articles on your topic and annotate (write a short evaluative summary) for each entry. This will consist of at least 15 items and be in APA or MLA format

Review article: You will write a short article in which you relate the most pertinent information that you learned from your annotated bibliography to a particular audience, offering a solution to a problem or at least a sense of specific direction. It should include direct citation of at least 5 references. This will be accompanied by a memo describing the audience, context and purpose of your article.

Unit C: *Consumer Search Article:* This short report will present, analyze, and evaluate articles and information from articles designed to assist someone in making a purchasing decision

Portfolio: In a portfolio, you will collect all of your writing and then highlight one piece that think is your best writing and revising. The best writing sample(s) can be anything you have written this semester, from discussion board entries to sample entries from your annotated bibliography. You may also revise other work in the class in order to improve their quality. In order to prepare for it, please keep track of your revisions. I will offer a brief video on how to track changes in the course.

Overall Course Policies:

“Attendance” and Participation:

Regular participation on the site is mandatory. More than 7 consecutive days without checking the site will result in a reduced grade; more than 21 consecutive days without logging in will result in failure of the class. You are expected to participate in online discussions honestly, thoughtfully, respectfully and to be informed by the assigned readings when you do.

Rough drafts and peer reviews:

Your rough drafts and peer reviews are due on the designated dates by midnight. You begin with 100% on your rough draft grade; if you always turn your drafts in on time, your rough draft grade will be 100%. If you submit your draft for review by me or your peers more than 24 hours late, then I will deduct 10 points from your rough draft grade. In addition, if you do not provide a review for a classmate 48 hours prior to the due date of the final draft, I will deduct 10 points from your rough draft grade. (This policy is out of consideration for those classmates who are under huge time constraints and need time to review and revise.)

Final Draft Due Dates

Revised Essays: For revised essays, I allow for one “free” late assignment with no reduction in grade (I understand that things happen). After the “free” late assignment, I will deduct 5% from each late assignment. I will take late essays up to five (5) business days (weekdays) after the due date.

Submitting Assignments:

All submitted documents should be in APA or MLA format. Unless otherwise designated, final drafts of assignments should be submitted as Word (.doc) files or Adobe (.pdf) files through the assignment dropbox.

The standard format for naming documents to email, post or drop in the drop-box should include the first word of the assignment title, the first five letters of your last name, your first initial, and the number of the draft in the name.

EXAMPLE: Joan Smith's first and second Annotated Bibliography drafts would be "AnnotatedSmithJ1.doc" and "AnnotatedSmithJ2.doc")

Plagiarism: A student must not adopt or reproduce ideas, words, or statements of another person without appropriate acknowledgment. A student must give credit to the originality of others and acknowledge indebtedness whenever he or she does any of the following:

- a) Quotes another person's actual words, either oral or written;
- b) Paraphrases another person's words, either oral or written;
- c) Uses another person's idea, opinion, or theory; or
- d) Borrows facts, statistics, or other illustrative material, unless the information is common knowledge.

... A student who has been found to be in violation of academic misconduct may receive a failing grade in the course and any of the disciplinary sanctions outlined in the Board of Trustees policy of student responsibilities, including suspension or dismissal from the university. ~ Ferris State University Student Handbook, Academic Misconduct

Other Important Notes:

If FerrisConnect (FC) is not available when an assignment is due or if you need to contact me and cannot access FC, please feel free to use the phone number or email at the top of the syllabus to contact me.

I try to respond to emails within 24 and 36 hours of their reception. Please be patient. However, if you do not have a response within 36 hours, feel free to email me a second time, just in case your email was lost in the mix.

There will be a "Students Helping Students" discussion board topic that you can use to post questions about the class and receive answers from your peers. Please feel free to use it to ask any questions... sometimes your classmates can answer questions more clearly and quickly than I might.

Useful phone numbers

TAC/technical assistance: 877.779.4822 (4TAC) or 231.591.4822 (4TAC)

Student Service Office: 231.591.2340 or toll-free 800.562.9130

Languages and Literature office: 231-796-3988

Library Reference Assistance: 231-591-3602

I reserve the right to make needed and appropriate adjustments in this syllabus.

ENGL 311 OUTCOMES

Course Description

English 311 is an advanced writing course designed to give juniors and seniors in technology an opportunity to write exclusively in their fields. The writing requires specialized technical knowledge and is, therefore, most beneficial for students who have taken a significant number of credits in their core curriculum. Unlike ENGL 211, a sophomore-level course that typically requires shorter reports, ENGL 311 involves a sophisticated multi-part project that includes industry-based research and analysis of technical data for specific audiences.

Technical Content and Research

Students will be able to:

Effectively communicate their specialized technical knowledge to specific audiences.

Accurately interpret and evaluate data from outside sources.

Draw logical conclusions based on presented data.

Convey technical information objectively and without bias.

Understand the role and importance of rationale, purpose, and thesis in each document and adapting these to an audience's needs.

Implement industry-appropriate methods of in-text documentation and Works Cited pages.

Provide textual commentary on graphical elements.

Understand the technique of frontloading information for reader access.

Discuss the implications of ethical situations and examine the ethical decision-making process.

Document Layout and Design

Students will be able to:

Create and label tables, illustrations, and graphs

Utilize information mapping (i.e., breaking large chunks of information into smaller, more manageable parts)

Incorporate headings and subheadings for organization and visual cues for the reader.

Implement highlighting strategies (italics, bold, underlining, bullets) with consistency and purpose.

Understand the effective use of “white space” and spatial arrangements with relation to text.

Editing

Students should be able to:

Recognize and correct common mechanical errors in their own writing and that of others.

Write concisely and clearly.

Create documents with precise spelling, punctuation, and grammar.

Collaborating

Students will:

Work in small groups to complete various projects.

Utilize specific criteria while critiquing each others’ drafts.

Engage in small-group peer review.

Audience and Tone

Students will:

Write primarily for the executive audience (sometimes the technician or layperson)

Present their documents as reader-centered writing.

Adapt their technical content to the *needs* of their audience.

Utilize a professional tone that is appropriate to the designated audience.

Explore the relationship between audience and ethics in technical writing

Possible Assignments

Major Project: Multi-Part Technical Study with full documentation and visuals (min. 10 pages)

Memorandum or Short Reports: Proposals, technical descriptions, process descriptions, case-study responses.

Ethics memo or paper

Oral Presentation

User-Focused Document (e.g., tri-fold product brochure, technical instructions)

Dr. Andrew Kantar
1017-F ASC, x5869
kantara@ferris.edu
Office: M/W, 12-1

ENGL 311: ADVANCED TECHNICAL WRITING

- "Course Materials for Advanced Technical Writing" (course packet)

COURSE DESCRIPTION

English 311 is an advanced writing course designed to give juniors and seniors in technology an opportunity to write exclusively in their fields. The writing requires specialized technical knowledge and is, therefore, most beneficial for students who have taken a significant number of credits in their core curriculum. Unlike ENGL 211, a sophomore-level course that typically requires shorter reports, ENGL 311 involves a sophisticated multi-part project that includes industry-based research and analysis of technical data for specific audiences. (Prerequisites: ENGL 250 or 211 and junior/senior status)

GRADED WRITING ASSIGNMENTS

Technical Description	50 pts.
Feasibility Proposal	50
Feasibility Annexes	100
Other Parts of Feasibility Report	50
Oral/Written Presentation (Group)	50
Ethics Case Study (Group)	<u>50</u>
	350 pts.

Grade Range:

A	93-100	C+	77-79	D-	60-62
A-	90-92	C	73-76	F	Below 60
B+	87-89	C-	70-72		
B	83-86	D+	67-69		
B-	80-82	D	63-66		

POLICIES

Manuscript Format: All written work you do outside of class must be typed. Your papers must be carefully proofread and corrected. **Mechanics will count.** I don't assume you are an expert typist, but I do assume that you will go over your work carefully and, with a pen, neatly fix up any mechanical or typographical errors you find.

Presenters' Papers: Every student will prepare one of the assigned papers for small-group discussion. On the day that you are scheduled to present, **bring four copies of your complete paper.** You will probably want to revise your paper after it has been discussed. **Ten points will be subtracted from the point totals of those students who do not present a complete paper.**

Mechanical Corrections: One week after the non-group projects are returned, you may make mechanical corrections **on the original draft** and resubmit. A **maximum** of 50% of the mechanical deduction points may be returned. Mechanical points and deductions for absences will be applied to group projects. These deductions cannot be recouped.

Late Papers: Any work turned in late in this course will be penalized ten percent of the assignment's value (e.g., 10 pts for any 100-pt. assignment). **Papers not handed in during class on the due date are late.** Mechanical corrections will not be allowed on late papers. Also, written comments will not be provided on late papers. Assignments more than seven days late will not be accepted.

Attendance: Attendance is required. I understand that emergencies arise; therefore, each student is allowed only four absences of any kind. They are only for emergencies. All students will be responsible for work missed and work that is due on days missed. **Five absences or more will lead to a course grade of "F."** Additionally, any tardiness of ten minutes or more translates into an absence.

Small-group absences count the same as classroom absences. In addition, for these absences that occur in conjunction with small-group projects (written and oral), one absence will mean a 10-point deduction, and two absences result in a project grade of "0."

OUTCOMES FOR ENGL 311

STUDENT LEARNING OUTCOMES

1. Students will demonstrate the ability to compose an extended written project for a specific audience in the workplace.
2. Students will demonstrate the ability to integrate visuals into text.
3. Students will demonstrate the ability to use information design strategies to help design their professional documents.
4. Students will demonstrate the ability to write a variety of support documents intended for different audiences.
5. Students will demonstrate the ability to write effectively by using Standard English.
6. Students will, where appropriate, work collaboratively to produce professional documents.
7. Students will demonstrate ability to apply ethical principles in responding to professional communication situations.
8. Students will, where appropriate, present information orally.

EVALUATION OF STUDENT ACHIEVEMENT

1. Students may write an extended document that helps a problem in the workplace.
2. Students may integrate visuals into their written projects.
3. Students may design their documents by applying the information design principles.
4. Students may write short support papers such as memos, proposals, and progress reports.
5. Students may write memos, proposals, progress reports, and complete editing and proofreading exercises.
6. Students may work in small groups to work on a professional project.
7. Students may write memos, proposals, progress reports, and expended projects to apply ethical principles.
8. Students may orally present their projects to their peers.

COURSE EVALUATION STRATEGIES (How will course successes be measured?)

1. Instructors may evaluate students' short papers.
 2. Instructors may evaluate students' extended projects.
 3. Professionals from outside the class may evaluate course content.
 4. Instructors may analyze students' oral presentations.
 5. Instructors may analyze aggregate performance on individual or group situation.
 6. Instructors may review end-of-semester portfolios.
-

COURSE OUTLINE

Week 1	8/27	Course introduction.
	8/29	Discuss Dynatronix memo and discuss Technical Description Memo.
Week 2	9/3	Critique student technical descriptions.
	9/5	No class. Out of town.
Week 3	9/10	<i>Presenters' day for Technical Description.</i>
	9/12	Lecture: Feasibility Report and Proposal. <u>Technical Descriptions due.</u>
Week 4	9/17	Feasibility proposal exercise.
	9/19	Critique feasibility proposals in Course Packet.
Week 5	9/24	Optional conferences on feasibility topics (ASC 1017-F).
	9/26	Presentation: Résumé/Job Letters (attendance optional)
Week 6	10/1	<i>Presenters' day for Feasibility Proposals.</i>
	10/3	Begin discussion of feasibility report annexes (body). <u>Feasibility Report Proposals are due.</u>
Week 7	10/6	Sample feasibility annexes. Evaluated Feasibility Proposals returned.
	10/10	Optional: Individual Conferences on annexes (ASC 1017-F).
Week 8	10/15	Begin on annexes—write Definiton sections for subparts, including rating scales.
	10/17	No class. Career Fair. Continue working on annexes—due in two weeks.
Week 9	10/22	Discuss formal feasibility Introduction.
	10/24	Discuss Factual Summaries, Conclusions and Recommendations.
Week 10	10/29	<i>Presenters' day for Feasibility Annexes.</i>
	10/31	Introduction to Oral Presentations/Product Brochures. <u>Feasibility Annexes are due.</u>

- Week 11 11/5 *Presenters' day for Feasibility Intros, Factual Summaries, Conclusions, and Recommendations.*
- 11/7 Begin small-group, in-class preparation.
Feasibility Report Introductions, Factual Summaries, Conclusions, and Recommendation are due.
-
- Week 12 11/12-14 Continue preparing for oral presentations and brochures.
-
- Week 13 11/19 **Oral Presentations.**
Due: Product brochures for groups presenting.
- 11/21 **Oral Presentations.**
Due: Product brochures for groups presenting.
-
- Week 14 11/26 Introduce Ethics Assignment: Rail-Car Rhetoric.
- 11/28 **THANKSGIVING.**
-
- Week 15 12/3 Open conferences on ethics assignment.
- 12/5 **Ethics Memos are due.**
-

Syllabus

Part 1: General Course Information

Course: English 311, Sections 003, 007, and 008

Advanced Technical Writing

(3 credit hours)

Term: Fall, 2013

Professor: Dr. Elaine McCullough

My three sections of this course are web-based, mixed-delivery, and meet both face-to-face and online.

Class Meets Face-to-Face in STR 109 on MW:

Section 007 meets from 9:00 am to 9:50 am

Section 008 meets from 10:00 am to 10:50 am

Section 003 meets from 1:00 pm to 1:50 pm

Office: ASC 3077

Office Hours: MW 11:00-1:00

Office Phone: 231-591-5875

Class Meets Online:

On the first day of each week, go to the course website and read the information in "Week 1," "Week 2," etc. A link to the current week will be near the top of the home page and previous weeks will be near the bottom of the home page. You should also check the course at least twice more during the week for emails, announcements, and additional information.

Home Office Hours:

You may email me any time of the day or night and I will try to respond within 48 hours, usually sooner. Also, during the week, you are welcome to call me at home between 10:00 am and 9:00 pm; please don't expect me to be available on the weekends or holidays.

Home Phone: 231-679-2971

Alternate E-Mail Address: I prefer you email me inside FerrisConnect, but If you're having problems with the FerrisConnect email program, email me at mcculloe@ferris.edu.

Required Text and Resources:

- *Technical Communication: Situations and Strategies*, 10th ed. (other editions won't do), by Mike Markel
- Access to an up-to-date computer with high-speed Internet. FerrisConnect is too large a program to operate successfully with dial-up.
- Microsoft Word or the ability to save files as Word files and to read Word files. You will send me your assignments as either .doc or .docx (Word) or .rtf (rich text) files. You can purchase Microsoft Office (which includes Word) from Ferris at a greatly reduced rate. If you're interested, please call TAC at 231 591 4822. **Also, please close your Word files before you upload them or you may upload a .lnk file, which can be opened only on your computer.**
- Adobe Acrobat Reader version 8 or later, downloaded on your computer. This is a free download. Occasionally you will have to read .pdf files, which require Adobe Acrobat for opening.

• Course Description

All components of this web-based, mixed delivery course are available online. Face-to-face meetings are designed to clarify and support your online learning.

English 311 is an advanced course designed to train you as a technical communicator. You are taught to present technical concepts, facts, data analysis and evaluation to a professional, technical, and lay audience. Included are skills in editing, organizing, and developing proposals, memorandum reports, project/progress reports, and technical descriptions and instructions, manuals, and brochures as well as practice in creating effective page layouts and podcasting.

Course Prerequisites:

- English 250, 211, or equivalent, with a grade of C or better
- Professionalism, courtesy, and maturity
- Prior knowledge of computers, word processing, and the Internet
- Good grammar/mechanics skills

Course Outcomes:

At the end of the course, you should be able to

Audience

- Effectively communicate your specialized technical knowledge to specific audiences
- Write for executives, technicians, and laypersons, such as product users.
- Present your documents as reader-centered writing
- Adapt your technical content to the needs of your audience
- Use a professional tone that is appropriate to the designated audience
- Understand the role and importance of rationale, purpose, and thesis in each document, and then adapt these to an audience's needs
- Understand the technique of frontloading information for reader access

Ethics

- Explore the relationship between audience and ethics in technical writing
- Discuss the implications of ethical situations and examine the ethical decision-making process

Information

- Accurately interpret and evaluate data from outside sources
- Draw logical conclusions based on presented data
- Convey technical information objectively and without bias
- Organize information effectively

Visual Presentation of Information

- Provide textual commentary on graphical elements
- Create and label tables, illustrations, and graphs
- Use information mapping (i.e., breaking large chunks of information into smaller, more manageable parts)
- Incorporate headings and subheadings for organization and visual cues for the reader
- Implement highlighting strategies (italics, bold, underlining, bullets) with consistency and purpose
- Understand the effective use of “white space” and spatial arrangements with relation to text

Sources

- Implement industry-appropriate methods of in-text documentation and bibliography pages
- Avoid all instances of plagiarism

Correctness, Conciseness, and Clarity

- Create documents with correct grammar, punctuation, and spelling
- Recognize and correct common mechanical errors in your own writing and that of others
- Write concisely and clearly

Collaboration

- Work in a small group to complete a major project

Course Work:

You will

- Complete 5 Major Writing Assignments (MWA's)
The MWA's are each worth 100 points.
- Complete 15 Short Assignments: 4 assignments related to a diagnostic grammar/writing skills quiz, 6 chapter quizzes, and 5 grammar/writing skills quizzes. *The Short Assignments are each worth 20 points.*

The total points possible in the course are 800.

Grades

Grading Scale with 800 Points Possible

740-800 points (92.5-100%) = A

716-739 points (89.5-92.4%) = A-

700-715 points (87.5-89.4%) = B+

660-699 points (82.5-87.4%) = B

636-659 points (79.5—82.4%) = B-

620-635 points (77.5-79.4%) = C+

580-619 points (72.5-77.4%) = C

556-579 points (69.5-72.4%) = C-

540-555 points (67.5-69.4%) = D+

500-539 points (62.5-67.4%) = D

476-499 points (59.5-62.4%) = D-

Below 476 points (Below 59.9) = F

Part II: Internet-Related Information

If this is your first internet class, be prepared to soak up a lot of computer-related information; if this isn't your first, you'll probably find some differences between mine and the others you've taken--so read carefully.

You'll be reading and writing A LOT. You will be completing the following short assignments: 4 assignments related to a diagnostic quiz you will take, 6 quizzes over chapters in the textbook, and 5 grammar quizzes; and you will complete five MWA's (major writing assignments).

You'll have from one to three assignments due almost every week, so please don't get behind.

In this web-based class, you will be able to ask me questions during our two weekly class sessions, but those are short classes and they're sure to be filled with activities. Since we won't have as many opportunities for the give-and-take of a regular classroom, you must READ.

Please do your very best to understand what I've written; then, if you have questions, you must ask me. Of course, if we're not in class, you can't just raise your hand; you must ask me by email in FerrisConnect (or at my alternate address mcculloe@ferris.edu or by telephone (231 679-2917). Please don't think you're bothering me if you email or call to ask a question or just to talk. I expect, and want, to hear from you.

Here is a list of other important points to remember:

1. On the first day of every week, go to the Home Page and click on the **Link of the Week**: For instance, on August 26 (or before), you will click on "Week 1." (You will also find all the Links of the Week near the bottom of the home page.) There you'll find a Table of Contents with a list of files. Begin with "Week 1 Overview," which will give you an expanded overview of the syllabus entry for the week, plus any special instructions or information. If assignments and/or related information are given for the week, links to those files will be listed in the Table of Contents.
2. This web-based class is not completed at your own pace: Quizzes and Assignments have strict due dates.
3. In either the Quizzes Folder or the Assignments folder, you will find directions for graded class work. You will also submit and receive your graded work in these folders. **Occasionally an assignment will be due in class, and I'll ask you to bring a hard copy with you. Since ordinarily quizzes and assignments are due at midnight on their due dates, make a special note of any assignment that will be due in class, as it will be due earlier on that day.**

Quizzes

1. In the Quizzes folder, you will complete a grammar diagnostic quiz, 6 quizzes over chapters in the textbook, and 5 grammar quizzes over grammar information that is also in the quizzes folder.
2. The FerrisConnect program grades all quizzes, which are in the form of multiple-choice and true-false questions.
3. You will know your grade after you take your quiz—look for it in the Quizzes folder, where you took the quiz.
4. You may rewrite the grammar quizzes, but not the chapter quizzes. (See **Rewrites**, below.)

Assignments

1. In the Assignments folder, you will find directions for completing 3 assignments related to the diagnostic quiz and 5 Major Writing Assignments (MWA's)
2. You will also submit your completed Assignments in the Assignments folder.
3. Assignments must be saved as Word (.doc or .docx), or .rtf files.
4. **You will attach your file in the Assignments folder. (DO NOT insert your Assignment in the Submissions box.** If you do, the formatting will be distorted; also, I will have to copy and paste it into a Word file before I can grade it.)
5. I grade all Assignments, which are extended written documents, often in memo format.
6. Expect your graded Assignments to appear as .pdf attachments in the Assignments folder within seven to ten days after their due dates. When you see your grade in My Grades, you'll know to search for your graded Assignment, in the same place where you attached it for grading.
7. You may rewrite the f MWA's. (See **Rewrites**, below.)

Rewrites

8. You may rewrite the following **Assignments**: The 5 MWA's. And you may rewrite the following **Assessments**: the 5 grammar quizzes. Rewriting will help you learn the material and will raise your grade, but you are NOT required to rewrite anything.
9. **If you decide to rewrite an Assignment, please submit your rewrite as an attachment to a FerrisConnect email to me within about a week after you receive the graded assignment.** Your rewrite should address all of the marks I made on your Assignment. If you don't understand any of my marks, please email or call me. **I reserve the right to return, ungraded, a rewrite that has not addressed all the marks I made on the original assignment.**
10. **If you decide to rewrite a grammar quiz, please submit your rewrite as an attachment to a FerrisConnect email to me within about a week after you receive your grade on the grammar quiz.** Since your graded grammar quiz will tell you the correct answers, your rewrite must explain, in detail, WHY the correct answer is indeed correct. In your explanations, use information from the quiz "section" information I give you to study. Also, realize that your purpose is to convince me that you now understand the grammar issue involved in the question you missed. **I**

reserve the right to return, ungraded, a rewrite that has not satisfactorily explained most or all of the incorrect answers on a grammar quiz.

11. Your rewrite points (or new grade on the assignment/quiz) are half way between the first points you earned and the points you would have earned if the rewrite had been your first submission. For example, if the points on your first submission were 70, and points on your second submission were 90, your new points on the rewrite would be 80. I encourage rewrites!

Due Dates

1. Quizzes and Assignments are due at midnight of the due date.
2. Due dates of Quizzes and Assignments will be available to you in three places: here in the Syllabus, on the quiz or assignment itself, and in the Link of the Week.
3. If the due date has arrived and for some reason you cannot submit an assignment in the Assignments folder, please email me the assignment as an attachment, either in the FerrisConnect email or at my alternate email address mcculloe@ferris.edu.
4. If you're having technical problems that prevent you from accessing a quiz in the Quizzes folder, call me or call TAC at 231 591 4822.

Late Assignments

1. **You may be as much as one week late on three Quizzes and/or Assignments.**
25. To get a one-week "extension" on a quiz or assignment, please send me an email requesting one.
26. If you request an extension on an Assignment, please email me your completed assignment, as an attachment, within a week of the original due date.
27. If you request an extension on a quiz, I will give you instructions on how I want you to complete that quiz, within a week.

Emails

28. At the beginning of the semester, when students have a lot of questions, I check my email quite often. When we've settled into a routine, You will almost always get a response to your email within 48 hours.
29. In addition to my on-campus office hours, I am required to set "home office hours" for my online courses. But the concept doesn't seem to work well for my students nor for me. My online courses are almost 24/7, and I expect you to email me whenever you like and to call me any day between 10:00 am and 10:00 pm. (I do reserve the right to take a couple of days off now and then, especially weekends and holidays!)
30. **Please regard your emails in this class as business messages.** Email used for class, business, and professional purposes should not disregard punctuation, grammar, spelling and other language conventions. When you get your textbook, please read pages 388-390, especially the Guideline called "Following Netiquette." Also, please read "FerrisConnetiquette," on the course home page.

Don't forget: email me or call me at 231 679-2971 with any questions you may have.

Welcome to the class!

Part III: Schedule

(Activities and due dates are subject to change.)

Week 1. August 26-30

Remember: On the first day of each week, go to the course home page and click on the Link of the Week, which this week is "Week 1."

That is where you'll find the overview of the week's activities, plus links to any lectures, documents, assessments and assignments mentioned in this schedule.

NEW:

- 1. Read "Start Here," sections 1 and 2 of the syllabus, and at least the first few weeks of this schedule.**
- 2. We'll introduce ourselves to each other in class on Monday, but to help us remember each other, by Friday of this week, write out an introduction of yourself in the Discussions module.**
- 3. Email me with your answers to these questions:**
 - What is the best phone number for me to use if I need to call you this summer?
 - What is your experience with online courses and your ability to use FerrisConnect?
 - Have you taken the new Ferris online tutorial? Were you exempt from it? Do you feel you need help with any of the online aspects of the course?
 - Do you have any questions about the course at this time?
- 4. Receive the Diagnostic Quiz Assignment (DQA). Parts 1 and 2 are both due by class time on Wednesday, September 4.** Complete Part 1, which

diagnoses your understanding of grammar, before the 4th, because Part 2 is a grammar improvement plan that you will create based on the results of your diagnostic grammar quiz.

Part 1 is a quiz, so it is available in the Quizzes folder.

Part 2 is writing that I will grade, so it is available (and submitted) in the Assignments folder. Please bring a copy with you to class next Wednesday.

The DQA has two more parts: Parts 3 and 4 are progress reports (I'll assign these later in the semester) in which you will tell me how well you are doing on your grammar improvement plan.

4. By Friday, September 6, read Chapter 1 and take Chapter Quiz 1, over the chapter. (Chapter 1 introduces you to technical writing.)

Remember: quizzes (which the FerrisConnect program grades) are available and submitted in the Quizzes folder; all other written work (which I grade) will be explained, submitted, and returned to you in the Assignments folder.

DUE:

- 1. Your introduction in the Discussions module is due by Friday.**
- 2. Your email to me, in which you answer four questions, is also due by Friday.**

Week 2. September 3-6

September 2 is Labor Day—No Class

Remember: On the first day of each week, go to the course home page and click on the Link for the Week, which this week is "Week 2."

DUE: **1. Parts 1 and 2 of the Diagnostic Quiz Assignment are due by Wednesday. Please bring a copy of part 2 (your grammar improvement plan) with you to class on Wednesday.**

Remember: Part 1, which is a quiz you must take before you can complete Part 2, is submitted in the Quizzes folder; Part 2, which is writing that I will grade, is submitted in the Assignments folder.

2. Chapter Quiz 1, over Chapter 1, is due on Friday.

NEW:

1. In the Weekly Overview, I review and emphasize certain parts of the syllabus.
2. Receive MWA 1 (Major Writing Assignment 1), due on Monday, September 16. In MWA 1, you will tell me what you want to do for your final project.
3. Receive an overview of the final project assignment, due in three parts: on Wednesday, October 23 (MWA 3); on Friday, November 8 (MWA 4); and on Monday, November 25 (MWA 5). (You will complete MWA 2, a group assignment on a different topic, while you research and prepare to write your final project.)
4. By Wednesday, September 11, read Chapter 2 and take Chapter Quiz 2 over the chapter. (Chapter 2 explains the ethical and legal considerations related to technical writing.)

Week 3. September 9-13

DUE:

1. Chapter Quiz 2 is due on Wednesday.
2. Talk to me this week if you have any questions about your final project options or about MWA 1, which is due on Monday, September 16.

NEW:

1. By Wednesday, September 18, read "Information for Grammar Quiz A," available in the Quizzes folder, and complete Grammar Quiz A, also available in the Quizzes folder.

Week 4. September 16-20

- DUE:**
1. MWA 1 is due on Monday.
 2. Grammar Quiz A is due on Wednesday.

Remember: Grammar quizzes and MWA's may be rewritten for a higher grade (rewrites are not required). Submit a rewrite as an attachment to an email to me, within about a week of the day you receive the graded grammar quiz or MWA. In your grammar quiz rewrites, you must explain, using information from the lab lectures, **WHY** the correct answer is correct. In your MWA rewrites, you must address **ALL** the marks I make. If you have any questions about a mark, please email or call me about it.

- NEW:**
1. By **Wednesday, September 25**, read **Chapter 4 and pages 618-625 of Chapter 22 (beginning with "Podcasts")**, and take **Chapter Quiz 3 over all these assigned pages**. (Since Chapter 4 will help you organize your groups for MWA 2, please read it ASAP.)
 2. Receive MWA 2, a group project, due **Wednesday, October 9**.
 3. Groups get acquainted in the Discussion module, and by **Monday, September 23**, begin working on MWA 2. (Students not reporting to groups by Friday, September 20, may be given an individual assignment at a loss of 10 points/100.)

Week 5. September 23-27

- DUE:**
1. By Monday, all group members should be working on MWA 2.
 2. Group leaders: By Monday, please email me a brief progress report about how your group is doing. If anyone assigned to your group has not checked in, let me know. (This is not a formal, graded assignment, but I need to know whether each group is progressing well, or is having problems.)
 3. Quiz 3 is due on Wednesday.

- NEW:**
1. By **Wednesday, October 2**, read "Information for Grammar Quiz B" and complete Grammar Quiz B.

3. Receive Diagnostic Quiz Assignment, Part 3 (the first progress report on your grammar plan), due Friday, October 4.

Week 6. September 30-October 4

- DUE:**
- 1. Informal email progress reports from all MWA 2 groups are due on Monday.** (This is not a graded assignment, but I need to know whether each group is progressing well, or is having problems.)
 - 2. Grammar Quiz B is due on Wednesday.**
 - 3. Diagnostic Quiz Assignment, Part 3, is due on Friday.**

NEW:

- 1. Receive MWA 3, a proposal related to your final project, due Wednesday, October 23.**

Week 7. October 7-11

- DUE:**
- 1. MWA 2 is due by class time on Wednesday:**
 - Each group presents its visual to the class.
 - In the Assignments module: a representative of each group submits 3 documents: the memo to me, the memo to the employees of the company, and the memo to the class.
 - In the Discussions module: a representative of each group posts 2 documents: the memo to the employees of the company, and the memo to the class, which includes a link to the visual presentation. Students may earn extra credit by commenting on the presentations of other groups.

NEW:

- 1. By Wednesday, October 16, read Chapter 16 and take Chapter Quiz 4 over the chapter. Chapter 16 is about proposals.**
- 2. By Friday, October 18, read “Information for Grammar Quiz C” and take Grammar Quiz C.**

Week 8, October 14-18

- DUE:**
1. Chapter Quiz 4 is due Wednesday.
 2. Grammar Quiz C is due on Friday.

- NEW:**
1. By Monday, October 21, read “Information for Grammar Quiz D,” and take Grammar Quiz D.

Week 9, October 21-25

- DUE:**
1. Grammar Quiz D is due on Monday.
 2. MWA 3 is due on Wednesday.

- NEW:**
1. By Wednesday, October 30, read Chapter 22, up to “Podcasts,” and take Chapter Quiz 5 over these pages, which are about newsletters, brochures, and white papers.
 2. Receive MWA 4, due Friday, November 8.

Week 10, October 28-November 1

- DUE:**
1. Chapter Quiz 5 is due on Wednesday.

- NEW:**
1. By Wednesday November 6, read “Information for Grammar Quiz E” and take Grammar Quiz E.

Week 11. November 4-8

- DUE:**
1. Grammar Quiz E is due on Wednesday.
 2. MWA 4 is due on Friday.

- NEW:**
1. Receive MWA 5, due Monday, November 25.

Week 12. November 11-15

- NEW:**
1. By Monday, November 18, read Chapter 20 and take Chapter Quiz 6 over the chapter. Chapter 20 is about writing definitions, descriptions, and instructions.

Week 13. November 18-22

- DUE:**
1. Chapter Quiz 6 is due Monday.

- NEW:**
1. Receive Diagnostic Quiz Assignment, Part 4, due Wednesday, December 4.

Week 14. November 25-27

November 27 (noon)-December 1 is Thanksgiving—No class all day Wednesday.

- DUE:**
1. MWA 5 is due on Monday.

Week 15, December 2-6

DUE: 1. Diagnostic Quiz Assignment, Part 4, is due in class on Monday. Discuss. Complete a course evaluation.

2. Discuss final grades and submit rewrites of Final Project (MWA's 3, 4, and/or 5) on Wednesday. (You may also submit those rewrites online or at my office through noon on December 11.) Ask any final questions you may have about the course.

Week 16, December 9-13

Finals Week

All rewrites are due by Wednesday at noon in my office or on online.

Monday, December 16: I submit your final grades to the university.

Learning Outcomes for Math 115:

1. Solving Equations: Students will be able to solve a variety of equations (e.g. linear, quadratic, rational, radical, absolute value, exponential, logarithmic, and systems).
2. Solving Inequalities: Students will be able to solve a variety of inequalities (e.g. linear, absolute value, compound).
3. Graphing: Students will be able to graph a variety of functions (e.g. linear, quadratic, exponential, logarithmic).
4. Notation: Students will be able to use standard function notation.
5. Factoring: Students will be able to factor algebraic expressions.
6. Slope: Students will be able to find the slope of any line.
7. Linear Equations: Students will be able to write equations of lines.
8. Parallel & Perpendicular Lines: Students will be able to determine whether lines are parallel or perpendicular.
9. Simplifying Expressions: Students will be able to simplify radical expressions.
10. Operations with Radical Expressions: Students will be able to perform addition, subtraction, multiplication, division of radical expressions.
11. Operations with Complex Numbers: Students will be able to perform arithmetic operations with complex numbers.
12. Evaluation of Logarithmic & Exponential Expressions: Students will be able to evaluate logarithmic and exponential expressions.
13. Properties of Logarithms: Students will be able to use the properties of logarithms.
14. Application: Students will be able to solve application problems using a variety of equations (e.g. linear, quadratic, radical, exponential, logarithmic).

Course syllabus for Math 115 Intermediate Algebra 3 credit hours
Fall 2013 Section: 005 Class time: MWF 9:00-9:50 AM Room: STR 137

Instructor: Mr. Foos
 Office: ASC2055
 Phone: x3683
 fooss@ferris.edu

Office Hours:
 MWF 1:00—1:50 PM
 Plus other times by mutual arrangement.

Course Materials Required:

Text: Beginning and Intermediate Algebra 6th edition, Gustafson & Frisk, Brooks/Cole
 Scientific Calculator (graphing calc. not required), Notebook, Pencils, and Paper.

Topics Discussed: Equations, Inequalities, Factoring, Equations of Lines, Variation, Radicals, Rational exponents, Quadratic, Exponential, and Logarithmic Functions, Systems of Equations, and Inequalities.

Prerequisites: A minimum grade of C- in Math 110 or equivalent, or an adequate ACT score.

Tentative schedule:

Chapter	Course Content: Topic	Week	Chapter
7.1—7.5	Equations, Inequalities and Factoring	Aug 26—Aug 30	7.1—7.3
8.1—8.6	Equations of Lines, Variation (Omit 8.5)	Sep 3—Sep 6	7.4—7.5
9.1—9.7	Radicals and Rational Exponents	Test I Chapter 7	
10.1—10.4	Quadratic Functions Inequalities, and Algebra of Functions	Sep 9—Sep 13	8.1—8.2
11.1—11.6	Exponential and Logarithmic Functions	Sep 16—Sep 20	8.3—8.4
13.1—13.2	Systems of Equations and Inequalities	Sep 23—Sep 27	8.6
		Test II Chapter 8	
		Sep 30—Oct 4	9.1—9.2
		Oct 7—Oct 11	9.3—9.4
		Oct 14—Oct 18	9.5—9.6
		Test III Chapter 9	
		Oct 21—Oct 25	9.7—10.1
		Oct 28—Nov 1	10.2—10.4
		Nov 4—Nov 8	11.1—11.2
		Test IV Chapter 9/10/11	
		Nov 11—Nov 15	11.3—11.4
		Nov 18—Nov 22	11.5—11.6
		Nov 25—Nov 27	13.1—13.2
		Dec 2—Dec 6	Review
		Test V Chapter 11/13	
		Final Exam	
		Monday, Dec 9th 8:00 - 9:40 PM	

Grading:
 10—15 quizzes(NO MAKEUPS) 100pts
 5 tests (100pts each) 500pts
 1 final (comprehensive) 100pts
 Total 700pts
 Students absent from class for a test must make arrangements to take the test prior to the next class.

FYI: Expect a quiz about once a week, with or without prior notification. There will be no makeup quizzes for any reason. I will grade your 10 highest quizzes only. It is the student's responsibility to call me to set up a time to make up a test before the next class meeting.

Class Attendance: Excessive absence is the primary reason for students dropping this course. For each class missed you lose out on vital information used on tests and quizzes that you will not receive in the same manner again. It is your responsibility to inform me (at the end of class) if you arrived late. Excused absences are of the following nature (not all inclusive) - Ferris sanctioned events, death in immediate family, or serious illness. Students should make every attempt to contact me before missing a class to discuss making up any missed graded work. *If you do not have more than two unexcused absences for the entire semester, then the comprehensive final exam is optional for you.*

Homework: Merely attending class will not in itself assure a passing grade. Come prepared to learn and be an asset to the classroom as well as yourself. Doing the assigned homework is an extremely important component of what it takes to be successful in this course. I will be assigning homework everyday. Do your **best** to complete that portion of the assignment that gets covered in class that day.

Disruptive behavior: Students have the right to expect that classmates will not disrupt or be detrimental to their ability to learn and receive information. Thus, talking, loud outbursts, phones, pagers, cd players, or any other thing else that interferes with others ability to receive information is not permitted. If you cannot behave in this manner, then you must leave the room. See student handbook for further details.

Grading scale

100%--93%	A	85%--83%	B	74%--70%	C	64%--62%	D
92%--90%	A-	82%--80%	B-	69%--67%	C-	61%--60%	D-
89%--86%	B+	79%--75%	C+	66%--65%	D+	59%--0%	F

You must show correct supporting work at all times to receive full credit on any test or quiz problem. Grading is not done on any curve. It is possible for everyone to earn an A.

THIS COURSE PROVIDES THE QUANTITATIVE REASONING SKILLS THAT MEET THE GENERAL EDUCATION OUTCOMES FOR STUDENTS CONSIDERING A WIDE VARIETY OF CAREERS AND EMPHASIZES THE MATHEMATICAL CONCEPTS THAT STUDENTS NEED TO BE SUCCESSFUL. (THOSE SPECIFIC QUANTITATIVE SKILLS AND LEARNING OUTCOMES ARE ATTACHED.) ***YOU MUST EARN AT LEAST A C- IN THIS COURSE IN ORDER TO GO ON TO ANY MATH COURSE FOR WHICH THIS COURSE IS A PREREQUISITE.*** THAT'S UNIVERSITY POLICY FOR ALL 100 (OR LOWER) LEVEL MATH COURSES. FAILURE TO ABIDE BY THIS POLICY WILL LEAD TO YOUR NAME BEING DROPPED FROM THE CLASS LIST OF THAT NEXT COURSE.

Tutoring Policy:

If you are having problems in this course and need tutoring, then you should use the services provided by the Academic Support Center (ASC).

I reserve the right to revise the syllabus as needed whenever I judge that the adjusted syllabus will better serve the overall learning needs of the class. If you have any questions or concerns regarding this course, see me.

Seek help early if you need it. GOOD LUCK !!!

Mathematics Department Quantitative Literacy Syllabus Attachment

Mathematics serves as a context for the development of quantitative literacy by facilitating the development of students' abilities to solve real world problems, make intelligent (more informed) decisions, evaluate quantitative information, and reason more effectively. Quantitative Literacy Learning Outcomes for all students at Ferris State University are listed below. Successful completion of Math 110 or equivalent fulfills the minimum level of these outcomes required for Associate Degree General Education. Successful completion of Math 115, its equivalent, or above fulfills deeper and broader levels of these outcomes required for Bachelor Degree General Education.

Quantitative Literacy Learning Outcomes for General Education:

Students who have completed the quantitative literacy requirement should be able to:

1. Interpret mathematical models such as formulas, graphs, tables, and schematics, and draw inferences from them.
2. Represent mathematical information symbolically, visually, numerically, and verbally.
3. Use arithmetical, algebraic, and geometric methods to solve problems.
4. Estimate and check answers to mathematical problems in order to determine reasonableness, identify alternatives, and select optimal results.

MATH 115 Intermediate Algebra Student Learning Outcomes

Students who have completed MATH 115 are expected to be able to:

1. Solve a variety of equations (e.g. linear, quadratic, rational, radical, absolute value, exponential, logarithmic, and systems)
2. Solve a variety of inequalities (e.g. linear, absolute value, compound)
3. Graph a variety of functions (e.g. linear, quadratic, exponential, logarithmic)
4. Use standard function notation.
5. Factor algebraic expressions.
6. Find the slope of any line.
7. Write equations of lines.
8. Determine whether lines are parallel or perpendicular.
9. Simplify radical expressions.
10. Perform addition, subtraction, multiplication, division of radical expressions
11. Perform arithmetic operations with complex numbers.
12. Evaluate logarithmic and exponential expressions.
13. Use the properties of logarithms.
14. Solve application problems using a variety of equations (e.g. linear, quadratic, radical, exponential, logarithmic)

SYLLABUS ATTACHMENT
COLLEGE OF ARTS AND SCIENCES – FERRIS STATE UNIVERSITY
FALL 2013

ARE YOU CONSIDERING ADDING A MINOR OR MAJOR TO YOUR CURRENT PROGRAM?

Use My Degree to see what classes may already apply.

For more information, stop by the Arts and Sciences Dean's Office!

IMPORTANT DATES		
Late registration	Wed. – Fri.	Aug. 21 – 23
First day of classes	Monday	Aug. 26
Last day for Drop/Add	Thursday	Aug. 29
Labor Day (no classes)	Monday	Sept. 2
Mid-term grades due	Monday	Oct. 21
Last day for "W" grades	Thursday	Oct. 31
Thanksgiving recess begins (no classes)	Wed (noon)	Nov. 27
Thanksgiving recess ends (classes resume)	Monday	Dec. 2
Last day of classes	Friday	Dec. 6
Examination Week	Mon – Fri	Dec. 9 - 13
Commencement	Saturday	Dec. 14
Final grades due by 1:00 pm	Monday	Dec. 16
Grades available to students on MyFSU	Tuesday (after 8AM)	Dec. 17

Sessions	Dates	Last Day to Withdraw
Full Session	Aug. 26 – Dec. 6	Oct. 31
Session A	Aug. 26 – Oct. 15	Sept. 26
Session B	Oct. 16 – Dec. 6	Nov. 15
Session D	Aug. 26 – Sept. 27	Sept. 16
Session E	Sept. 30 – Oct. 31	Oct. 18
Session F	Nov. 1 – Dec. 6	Nov. 21

DEPARTMENT OFFICES		
Biology	ASC 2004	591-2550
Humanities	JOH 119	591-3675
Languages & Literature	ASC 3080	591-3988
Mathematics	ASC 2021	591-2565
Physical Sciences	ASC 3021	591-2580
Social Sciences	ASC 2108	591-2735
Dean's Office	ASC 3052	591-3660

WHAT YOU NEED TO KNOW

E-MAIL

All registered FSU students have a Ferris Gmail account. This is the only e-mail to which all official University information about registration, financial aid, student activities, and class cancellations will be sent. Please check your account at least once a week. E-mail is our primary communication resource for students.

CLASS ATTENDANCE IS IMPORTANT!

Attendance usually has a high correlation with how well you do in a course. Many instructors have mandatory attendance policies by which your grade will be affected by absences. Some instructors also have policies about class tardiness to encourage students to be present for the full class period. Check your course syllabus or talk to your instructor about his/her policies.

HOW TO CONTACT A FACULTY MEMBER OR ADVISOR

If you have questions or need help, talk to your instructor. Faculty office locations, phone numbers, and office hours may be obtained from the class syllabus or department office, through the College of Arts and Sciences web page at <http://www.ferris.edu/htmls/colleges/artsands/>, or through the Directories & Maps link on the FSU home page.

DROPPING CLASSES OR WITHDRAWING */**

Dropping and adding only occurs during the first four days of the term. You can adjust your schedule **online during the first four days** or in person at the Timme Center (from 8-5 except for the last day when it is 12-5). *If you add a class you must pay for your additional charges by the fourth day or your schedule will be dropped.*

If you need to withdraw from a class after the official drop/add period, you must do so **OFFICIALLY**, through your dean's office, in order to avoid

receiving an "F" grade in the course. **You may not withdraw online after the first four days of the term.** You will receive a "W" for the course. *You will not receive a refund.* If you need to totally withdraw from the University, you must do so **officially** at Admissions and Records in CSS 101. The last day to withdraw or drop a class may be different for different classes. **CHECK THE SESSIONS DATES SECTION ABOVE OR THE REGISTRATION AND ACADEMIC GUIDE FOR THE WITHDRAWAL DEADLINES FOR THE SEMESTER.**

In cases of extenuating circumstances (e.g., a serious illness requiring you to withdraw from school), contact Birkam Health Center at 591-2614.

INCOMPLETES

The "I" is only considered for extenuating circumstances that have led to a student missing a portion of the course. The intent and appropriate use of the "I" grade is **NOT** to avoid student probation, dismissal, or unacceptable grades, nor should it be considered as an extended alternative to withdraw from a class (W). Extenuating circumstances are generally defined as those situations over which a student has little or no control—e.g., illness, birth, jury duty, death of a parent, serious injury. Instructors may require suitable documentation.

Students must have completed at least 75% of the coursework at passing levels before an "I" will be considered, and they may be required to sign an agreement regarding course completion. An "I" grade automatically changes to an "F" after one semester (not counting summer) unless the faculty member files another grade or extends the incomplete.

GRADUATION

Students should apply for graduation the semester prior to their last semester of completion. For associates in arts or associates in science degrees, this needs to be completed at the Dean's Office. For bachelor degrees, this needs to be completed with your program coordinator. Be aware of deadlines for participation in commencement.

INCLEMENT WEATHER CONDITIONS

Only during the most severe weather conditions – which could potentially endanger the safety of students or staff – will the Big Rapids campus consider cancelling classes. The decision to cancel classes due to weather conditions at the Big Rapids site will be made as early as possible. In the event it is necessary to cancel classes, periodic announcements will be made on area radio and television stations. It is the student's responsibility to listen for these announcements. A student may also call the Ferris Information Line at 231-591-5602 to obtain information or check the Ferris website.

ACADEMIC MISCONDUCT

Academic misconduct refers to dishonesty or misrepresentation with respect to assignments, tests, quizzes, written work, oral presentations, class projects, internship experience, or computer usage; violation of computer licenses, programs, or data bases; or unauthorized acquisition or distribution of tests or other academic material belonging to someone else. It includes such behaviors as cheating, copying materials from the internet without documentation, presenting another person's ideas or work as your own, taking someone else's exam for them, violating computer software licenses or program/data ownership, etc. It is the expectation of the College of Arts and Sciences that all work you turn in is your own and is original for the course in which it is being submitted. If you are uncertain about whether a particular behavior might represent academic misconduct, be sure to ask your professor for clarification.

Penalties for academic misconduct can include **FAILURE** of the assignment or the course, and/or disciplinary action up to and including probation or dismissal from the University.

DISRUPTIVE BEHAVIOR

The College of Arts and Sciences strives to maintain a positive learning environment and educational opportunity for all students. Consequently, patterns of behaviors which obstruct or disrupt the teaching/learning environment will be addressed. The instructor is in charge of his or her course (e.g., assignments, due dates, attendance policy) and classroom (e.g., behaviors allowed, tardiness). Harassment, in any form, will not be tolerated.

Penalties for disruptive behavior can include involuntary withdrawal from the course and/or disciplinary action up to and including probation or dismissal from the University. The full Disruptive Behavior Policy is available on the College of Arts and Sciences website at <http://www.ferris.edu/htmls/colleges/artsands/student-resources/disruptive-behavior.htm>

For additional policies and helpful information, check out the College of Arts & Sciences Student Resources page at <http://www.ferris.edu/HTMLS/colleges/artsands/student-resources/>

WHERE TO GO FOR HELP

The following services are available to any Ferris student, free of charge. They are designed to help you succeed in your courses, in your career planning, and in meeting the challenges of university life. Don't hesitate to explore and use these services at Ferris.

ACADEMIC ADVISING

All students have an assigned advisor and should confer with that advisor regularly. Students who have declared a major should see an advisor in that major. To find out who your advisor is, login to MyFSU and click on the Academics and Services tab, then Registration Status / Advisor Information link.

ACADEMIC SUPPORT CENTER.....ASC 1017 – 591-3543

THE WRITING CENTER.....ASC 1017 – 591-2534

The Academic Support Center, Tutoring Services, and Writing Center join together to offer FSU students an array of academic support services. Tutors are available to answer questions for many courses. The Writing Center helps writers individually and in workshops with skills and assignments. There is also study skills assistance to help with note-taking, test-taking, memory and reading strategies, and time management.

DISABILITIES SERVICES.....STR 313 – 591-3057

According to the Americans with Disabilities Act, each student with a disability is responsible for notifying the University of his/her disability and requesting accommodations. Students requiring a classroom accommodation due to a physical, learning, mental or emotional disability should contact the Disabilities Services Office.

SCHOLAR PROGRAM.....ASC 1021 – 591-5976

SCHOLAR is an academic support program that aids in the student's successful progression by offering a Peer Mentor Program, a Student Retention Program, and an Academic Student Advisory Committee.

PERSONAL COUNSELING, SEXUAL ASSAULT, SUBSTANCE ABUSE BIRKAM

HEALTH CENTER 2nd Floor - 591-5968 Personal counseling is available confidentially and free of charge. Counselors are available to assist with personal and stress-related problems, family and relationship issues, substance abuse, sexual assault, depression, or other similar problems. Call or stop by to obtain an appointment.

If you or a friend is in immediate crisis, call 911.

EDUCATIONAL & CAREER COUNSELINGSTR 313 – 591-3057

Students wanting to examine their choice of major or career choice, learning styles or strategies can make one-on-one appointments with licensed counselors.

SAFETY

Please observe the posted shelter and evacuation routes in the hallway nearest your classroom.

OTHER RESOURCES

BIRKAM HEALTH CENTER.....1st Floor - 591-2614

The Birkam Health Center provides fee-for-service medical care including evaluation and treatment for illness and injury anytime during the year. Patients are seen on a walk-in and by appointment basis.

FLITE LIBRARY.....591-2669

Regular hours for FLITE:

Monday – Thursday 7:30 a.m. – MIDNIGHT

Friday 7:30 a.m. – 6:00 p.m.

Saturday NOON – 4:00 p.m.

Sunday 1:00 p.m. – MIDNIGHT

(Extended Studies Court will begin late night hours September 17, 2013

*Sunday-Thursday/MIDNIGHT to 7:30 a.m. *Friday/6 p.m. to MIDNIGHT

*Saturday/5 p.m. to MIDNIGHT)

FSU BOOKSTORE.....14265 NORTHLAND DR. 231 591-2607

Regular on-campus hours for the Bookstore **:

Monday – Thursday 9:00 a.m. – 6:00 p.m.

Friday 9:00 a.m. – 5:00 p.m.

Saturday 12:00 p.m. – 4:00 p.m.

Sunday CLOSED

New location is at the Save-A-Lot Shopping Center Plaza.

HELPFUL NUMBERS

Admissions	2100	Inst. Testing	3628
Business Office	2125	Public Safety	5000
Financial Aid	2110	Records	2792
Housing	3745	TAC	4822

When calling from off campus, extensions can be called by using the prefix 231-591-_____.

Learning Outcomes for Math 116:

1. **Performing Basic Operations:** Students will be able to perform basic operations (e.g. addition, subtraction, multiplication, and division) on quantities that result from taking measurements and determine their accuracy and precision in the context of both algebra and trigonometry.
2. **Knowledge & Application of Trigonometric Ratios:** Students will be able to demonstrate a knowledge of the trigonometric ratios and apply them to solving right triangles in the context of both real world and trigonometric problems.
3. **Graphing:** Students will be able to graph linear and quadratic functions.
4. **Parallel & Perpendicular Lines:** Students will be able to determine whether given lines are parallel or perpendicular by using the slopes.
5. **Distance & Midpoint:** Students will be able to find the distance between two points and the midpoint of the segment joining two points.
6. **Factoring:** Students will be able to apply factoring techniques to simplify algebraic expressions and solve a variety of equations (e.g. linear, quadratic, rational, radical, absolute value, and a system of linear equations).
7. **Modeling Quadratic Problems:** Students will be able to model real world quadratic problems and solve them.
8. **Exponentials & Radicals:** Students will be able to perform operations with exponential and radical expressions, and solve equations involving radicals.
9. **Computing Values of Trigonometric Functions:** Students will be able to compute the values of trigonometric functions of any angle in degree and radian mode.
10. **Solving Oblique Triangles:** Students will be able to solve oblique triangles using the Law of Sines and the Law of Cosines.

MATH 116(002) 4 Credits
Intermediate Algebra & Numerical Trigonometry
FALL 2013

- Instructor: Mrs. Dharma Shetty OFFICE: ASC 1015-C
- Telephone: 231 591 2676 E-MAIL: shettyd@ferris.edu
- Office Hours: R: 9:00-9:50 AM, MW: 11:00-11:30 AM, TR: 1:00-1:20 PM, MW: 2:00-2:45p.m.,
(Others by appointment)
- Class Time & Room: MTWR: 10:00-10:50 P.M. STR 202.
- Prerequisite: Math 110 with C- or better or satisfactory score on placement test.
- Textbook : Basic Technical Mathematics with Calculus, Washington, 9th edition,
Pearson/Prentice Hall.
- Calculators : A scientific calculator maybe useful for this course. **Graphing and programmable calculators are not allowed. You will not be allowed to use the calculator on your cell phone.**
- Course Content: Chapter 1 (1.3&1.5), Chapter 3 (3.1 -3.3), Chapter 5 (5.1-5.2),
Chapter 21 (21.1- 21.2), Chapter 5 (5.3-5.7), Chapter 6 (6.1- 6.8),
Chapter 7 (7.1- 7.4), Chapter 11 (11.1-11.5), Chapter 4 (4.1-4.5),
Chapter 8 (8.1-8.4), Chapter 9 (9.1-9.6)
- Methodology: Lecture and discussion format is the norm.
- Graded Work: 1. There will be four tests during the semester, each worth 100 points.
Tentative dates: Test #1: 09/12/13, Test#2: 10/03/13, Test #3: 10/24/13, Test #4 :11/14/13, Final Exam on 12/10/13 from 10:00 - 11:40 PM.
2. There will be at least one quiz every week (excluding the weeks when a test is scheduled). Quiz will be based on homework assignments.
3. Homework will be assigned on MyMathLab: <http://mymathlab.com>.
The assignment will be graded by the system when you submit the homework.
- Grades: 11 quizzes (10 pts. each, I will drop the lowest quiz score) 100 points
Homework (web assignment) 75 points
4 in class tests 400 points
Final exam 150 points
Attendance points 25 points
Your final grade for the course will be based on your total score out of 750 points.

No makeup quizzes or tests except when it is a university excused absence or absence due to severe illness. Students with an excused absence must make arrangements to take the test/quiz prior to the next class.

Attendance: You should plan on attending every class. I will take attendance during each class session. You have three free absences; you will lose 5 attendance points for each subsequent absence. After the first quiz students scoring below 70% are required to attend every day that the class is in session. Students scoring 70% or higher are encouraged to attend but are not required. Students who are required to attend and who accrue more than four unexcused absences in class must withdraw ('W') from the course if possible or receive an 'F' as a final grade. Students will have the opportunity, with each quiz/test, to change their attendance status, and it is the students' responsibility to know their attendance status. If you come to class, please stay for the entire class or you will be marked absent for the day. If you leave the class early after taking the quiz, you will earn a zero on the quiz. Every two times you are tardy for class it will be counted as one absence.

Behavior: Behavior that obstructs the learning and teaching process will not be tolerated. This includes excessive laughing, talking, and eating in class. Important note: turn off your cell phone before you enter the class.

GRADING SCALE:	92.5 - 100 %	A	89.5- 92.4 %	A-	86.5- 89.4 %	B+
	82.5 - 86.4 %	B	79.5- 82.4 %	B-	76.5- 79.4 %	C+
	72.5 - 76.4 %	C	69.5- 72.4 %	C-	66.5- 69.4 %	D+
	62.5- 66.4 %	D	59.5- 62.4 %	D-		

Students with documented special needs should speak with me as soon as possible so that I can provide the proper accommodation.

This is a Structured Learning Assistance (SLA) supported course. SLA enhances student learning by combining successful learning strategies with activities designed to review lecture and printed materials. On average, SLA supported sections have lower rates of failure and withdrawal than non-SLA sections and students who participate believe they score at least one half to one full letter grade higher in the course as a result of SLA.

The SLA meets at 5:00 PM - 6:15 pm TR Starr Educational Center 322. Attendance at SLA workshops is mandatory until the first quiz on, at which time only students scoring below 80% will be required to attend. Students scoring 70% or higher are encouraged to attend but are not required. Students who are required to attend who accrue more than four unexcused absences in SLA must withdraw ('W') from the course if possible or receive an 'F' as a final grade. Students will have the opportunity, with each quiz/test, to change their SLA attendance status, and it is the students' responsibility to know their SLA attendance status. Your facilitator will provide you with a copy of the SLA Attendance and Workshop Policies the first day of workshop. The SLA facilitator will thoroughly review this document, and students must sign the statement of understanding before participating. I fully support the SLA Attendance and Workshop Policies.

Learning Outcomes for Math 116:

1. Performing Basic Operations: Students will be able to perform basic operations (e.g. addition, subtraction, multiplication, and division) on quantities that result from taking measurements and determine their accuracy and precision in the context of both algebra and trigonometry.
2. Knowledge & Application of Trigonometric Ratios: Students will be able to demonstrate a knowledge of the trigonometric ratios and apply them to solving right triangles in the context of both real world and trigonometric problems.
3. Graphing: Students will be able to graph linear and quadratic functions.
4. Parallel & Perpendicular Lines: Students will be able to determine whether given lines are parallel or perpendicular by using the slopes.
5. Distance & Midpoint: Students will be able to find the distance between two points and the midpoint of the segment joining two points.
6. Factoring: Students will be able to apply factoring techniques to simplify algebraic expressions and solve a variety of equations (e.g. linear, quadratic, rational, radical, absolute value, and a system of linear equations).
7. Modeling Quadratic Problems: Students will be able to model real world quadratic problems and solve them.
8. Exponentials & Radicals: Students will be able to perform operations with exponential and radical expressions, and solve equations involving radicals.
9. Computing Values of Trigonometric Functions: Students will be able to compute the values of trigonometric functions of any angle in degree and radian mode.
10. Solving Oblique Triangles: Students will be able to solve oblique triangles using the Law of Sines and the Law of Cosines.

SYLLABUS ATTACHMENT
COLLEGE OF ARTS AND SCIENCES – FERRIS STATE UNIVERSITY
FALL 2013

ARE YOU CONSIDERING ADDING A MINOR OR MAJOR TO YOUR CURRENT PROGRAM?

Use My Degree to see what classes may already apply.

For more information, stop by the Arts and Sciences Dean's Office!

IMPORTANT DATES		
Late registration	Wed. – Fri.	Aug. 21 – 23
First day of classes	Monday	Aug. 26
Last day for Drop/Add	Thursday	Aug. 29
Labor Day (no classes)	Monday	Sept. 2
Mid-term grades due	Monday	Oct. 21
Last day for "W" grades	Thursday	Oct. 31
Thanksgiving recess begins (no classes)	Wed (noon)	Nov. 27
Thanksgiving recess ends (classes resume)	Monday	Dec. 2
Last day of classes	Friday	Dec. 6
Examination Week	Mon – Fri	Dec. 9 – 13
Commencement	Saturday	Dec. 14
Final grades due by 1:00 pm	Monday	Dec. 16
Grades available to students on MyFSU	Tuesday (after 8AM)	Dec. 17

Sessions	Dates	Last Day to Withdraw
Full Session	Aug. 26 – Dec. 6	Oct. 31
Session A	Aug. 26 – Oct. 15	Sept. 26
Session B	Oct. 16 – Dec. 6	Nov. 15
Session D	Aug. 26 – Sept. 27	Sept. 16
Session E	Sept. 30 – Oct. 31	Oct. 18
Session F	Nov. 1 – Dec. 6	Nov. 21

DEPARTMENT OFFICES		
Biology	ASC 2004	591-2550
Humanities	JOH 119	591-3675
Languages & Literature	ASC 3080	591-3988
Mathematics	ASC 2021	591-2565
Physical Sciences	ASC 3021	591-2580
Social Sciences	ASC 2108	591-2735
Dean's Office	ASC 3052	591-3660

WHAT YOU NEED TO KNOW

E-MAIL

All registered FSU students have a Ferris Gmail account. This is the only e-mail to which all official University information about registration, financial aid, student activities, and class cancellations will be sent. Please check your account at least once a week. E-mail is our primary communication resource for students.

CLASS ATTENDANCE IS IMPORTANT!

Attendance usually has a high correlation with how well you do in a course. Many instructors have mandatory attendance policies by which your grade will be affected by absences. Some instructors also have policies about class tardiness to encourage students to be present for the full class period. Check your course syllabus or talk to your instructor about his/her policies.

HOW TO CONTACT A FACULTY MEMBER OR ADVISOR

If you have questions or need help, talk to your instructor. Faculty office locations, phone numbers, and office hours may be obtained from the class syllabus or department office, through the College of Arts and Sciences web page at <http://www.ferris.edu/htmls/colleges/artsands/>, or through the Directories & Maps link on the FSU home page.

DROPPING CLASSES OR WITHDRAWING */**

Dropping and adding only occurs during the first four days of the term. You can adjust your schedule online during the first four days or in person at the Timme Center (from 8-5 except for the last day when it is 12-5). *If you add a class you must pay for your additional charges by the fourth day or your schedule will be dropped.*

If you need to withdraw from a class after the official drop/add period, you must do so OFFICIALLY, through your dean's office, in order to avoid

receiving an "F" grade in the course. You may not withdraw online after the first four days of the term. You will receive a "W" for the course. *You will not receive a refund.* If you need to totally withdraw from the University, you must do so officially at Admissions and Records in CSS 101. The last day to withdraw or drop a class may be different for different classes. **CHECK THE SESSIONS DATES SECTION ABOVE OR THE REGISTRATION AND ACADEMIC GUIDE FOR THE WITHDRAWAL DEADLINES FOR THE SEMESTER.**

In cases of extenuating circumstances (e.g., a serious illness requiring you to withdraw from school), contact Birkam Health Center at 591-2614.

INCOMPLETES

The "I" is only considered for extenuating circumstances that have led to a student missing a portion of the course. The intent and appropriate use of the "I" grade is NOT to avoid student probation, dismissal, or unacceptable grades, nor should it be considered as an extended alternative to withdraw from a class (W). Extenuating circumstances are generally defined as those situations over which a student has little or no control—e.g., illness, birth, jury duty, death of a parent, serious injury. Instructors may require suitable documentation.

Students must have completed at least 75% of the coursework at passing levels before an "I" will be considered, and they may be required to sign an agreement regarding course completion. An "I" grade automatically changes to an "F" after one semester (not counting summer) unless the faculty member files another grade or extends the incomplete.

GRADUATION

Students should apply for graduation the semester prior to their last semester of completion. For associates in arts or associates in science degrees, this needs to be completed at the Dean's Office. For bachelor degrees, this needs to be completed with your program coordinator. Be aware of deadlines for participation in commencement.

CLEMENT WEATHER CONDITIONS

Only during the most severe weather conditions – which could potentially endanger the safety of students or staff – will the Big Rapids campus consider cancelling classes. The decision to cancel classes due to weather conditions at the Big Rapids site will be made as early as possible. In the event it is necessary to cancel classes, periodic announcements will be made on area radio and television stations. It is the student's responsibility to listen for these announcements. A student may also call the Ferris Information Line at 231-591-5602 to obtain information or check the Ferris website.

ACADEMIC MISCONDUCT

Academic misconduct refers to dishonesty or misrepresentation with respect to assignments, tests, quizzes, written work, oral presentations, class projects, internship experience, or computer usage; violation of computer licenses, programs, or data bases; or unauthorized acquisition or distribution of tests or other academic material belonging to someone else. It includes such behaviors as cheating, copying materials from the Internet without documentation, presenting another person's ideas or work as your own, taking someone else's exam for them, violating computer software licenses or program/data ownership, etc. It is the expectation of the College of Arts and Sciences that all work you turn in is your own and is original for the course in which it is being submitted. If you are uncertain about whether a particular behavior might represent academic misconduct, be sure to ask your professor for clarification.

Penalties for academic misconduct can include **FAILURE** of the assignment for the course, and/or disciplinary action up to and including probation or dismissal from the University.

DISRUPTIVE BEHAVIOR

The College of Arts and Sciences strives to maintain a positive learning environment and educational opportunity for all students. Consequently, patterns of behaviors which obstruct or disrupt the teaching/learning environment will be addressed. The instructor is in charge of his or her course (e.g., assignments, due dates, attendance policy) and classroom management (e.g., behaviors allowed, tardiness). Harassment, in any form, will not be tolerated.

Penalties for disruptive behavior can include involuntary withdrawal from the course and/or disciplinary action up to and including probation or dismissal from the University. The full Disruptive Behavior Policy is available on the College of Arts and Sciences website at <http://www.ferris.edu/htmls/colleges/artsands/student-resources/disruptive-behavior.htm>

For additional policies and helpful information, check out the College of Arts & Sciences Student Resources page at <http://www.ferris.edu/HTMLS/colleges/artsands/student-resources/>

WHERE TO GO FOR HELP

The following services are available to any Ferris student, free of charge. They are designed to help you succeed in your courses, in your career planning, and in meeting the challenges of university life. Don't hesitate to explore and use these services at Ferris.

ACADEMIC ADVISING

All students have an assigned advisor and should confer with that advisor regularly. Students who have declared a major should see an advisor in that major. To find out who your advisor is, login to MyFSU and click on the academics and services tab, then Registration Status / Advisor Information link.

ACADEMIC SUPPORT CENTER.....ASC 1017 – 591-3543

THE WRITING CENTER.....ASC 1017 – 591-2534

The Academic Support Center, Tutoring Services, and Writing Center join together to offer FSU students an array of academic support services. Tutors are available to answer questions for many courses. The Writing Center helps writers individually and in workshops with skills and assignments. There is also study skills assistance to help with note-taking, test-taking, memory and reading strategies, and time management.

DISABILITIES SERVICES.....STR 313 – 591-3057

According to the Americans with Disabilities Act, each student with a disability is responsible for notifying the University of his/her disability and requesting accommodations. Students requiring a classroom accommodation due to a physical, learning, mental or emotional disability should contact the Disabilities Services Office.

SCHOLAR PROGRAM.....ASC 1021 – 591-5976

SCHOLAR is an academic support program that aids in the student's successful progression by offering a Peer Mentor Program, a Student Retention Program, and an Academic Student Advisory Committee.

PERSONAL COUNSELING, SEXUAL ASSAULT, SUBSTANCE ABUSE BIRKAM

HEALTH CENTER 2nd Floor - 591-5968 Personal counseling is available confidentially and free of charge. Counselors are available to assist with personal and stress-related problems, family and relationship issues, substance abuse, sexual assault, depression, or other similar problems. Call or stop by to obtain an appointment.

If you or a friend is in immediate crisis, call 911.

EDUCATIONAL & CAREER COUNSELINGSTR 313 – 591-3057

Students wanting to examine their choice of major or career choice, learning styles or strategies can make one-on-one appointments with licensed counselors.

SAFETY

Please observe the posted shelter and evacuation routes in the hallway nearest your classroom.

OTHER RESOURCES

BIRKAM HEALTH CENTER.....1st Floor - 591-2614

The Birkam Health Center provides fee-for-service medical care including evaluation and treatment for illness and injury anytime during the year. Patients are seen on a walk-in and by appointment basis.

FLITE LIBRARY.....591-2669

Regular hours for FLITE:

Monday – Thursday 7:30 a.m. – MIDNIGHT

Friday 7:30 a.m. – 6:00 pm

Saturday NOON – 5:00 pm

Sunday 1:00 p.m. – MIDNIGHT

(Extended Studies Court will begin late night hours September 17, 2013

*Sunday-Thursday/MIDNIGHT to 7:30 a.m. *Friday/6 p.m. to MIDNIGHT

*Saturday/5 p.m. to MIDNIGHT)

FSU BOOKSTORE.....14265 NORTHLAND DR. 231 591-2607

Regular on-campus hours for the Bookstore **:

Monday – Thursday 9:00 a.m. – 6:00 p.m.

Friday 9:00 a.m. – 5:00 p.m.

Saturday 11:00 a.m. – 4:00 p.m.

Sunday CLOSED

New location is at the Save-A-Lot Shopping Center Plaza.

HELPFUL NUMBERS

Admissions	2100	Inst. Testing	3628
Business Office	2125	Public Safety	5000
Financial Aid	2110	Records	2792
Housing	3745	TAC	4822

When calling from off campus, extensions can be called by using the prefix 231-591-_____.

MASTER COURSE OUTLINE

Course Identification:

Prefix:	Number	Title
STQM	260	Intro to Statistics

Course Description:

Practical aspects of sampling, data presentation, measures of central tendency and dispersion, basic probability theory, the normal probability distribution, the sampling distribution of sample means and sample proportions, confidence intervals and hypothesis tests for one-sample designs, simple linear regression and correlation.

Credits: 3

Pre-Requisites: MATH 115, 116, 120, 126, 130, 132, or 135 with a grade of C- or better or 24 on ACT or 560 on SAT.

Typically Offered Fall, Spring, Summer (face to face) and Summers (online) – other terms online if needed

Course Outcomes and Assessment Plan:

- Describe and apply data collection strategies appropriate to specified information objectives
Assessment: Objective testing, case study analysis, or project assessment.
- Characterize and interpret numeric data both numerically and visually in terms of location, dispersion, shape, and exception
Assessment: Objective testing, case study analysis, or project assessment.
- Characterize and interpret categorical data both numerically and visually in terms of classes, frequencies, proportions, and other importance measures
Assessment: Objective testing, case study analysis, or project assessment.
- Discuss and apply basic concepts of probability to random variables, probability distributions, and sampling distributions
Assessment: Objective testing, case study analysis, or project assessment.
- Identify, construct, and interpret confidence intervals for means and proportions
Assessment: Objective testing, case study analysis, or project assessment.
- Characterize and interpret relationships between two numeric variables (through scatter plots, correlation, and regression) and two categorical variables (through two-way tables and related percents)
Assessment: Objective testing, case study analysis, or project assessment.
- Communicate effectively through written and/or oral presentations using appropriate technologies or other resources.
Assessment: Objective testing, case study analysis, or project assessment.

Course Outline including Time Allocation:

- I. Introduction (4 hours)**
(a) descriptive vs. inferential statistics
(b) enumerative vs. analytic studies
(c) types of variables
(d) measurement scales,
(e) operational definitions,
(f) types of samples
- II. Total Quality Management: The Process Approach to Management (2 hours)**
(a) quality of design, conformance and performance
(b) history of quality
(c) statistics as a management tool
(d) special vs. common causes
(e) Deming's 14 points for management,
(f) comparison of traditional management and total quality management
- III. Tables and Charts - Variable Measures (2 hours)**
(a) time order plot
(b) stem-and-leaf displays
(c) frequency distributions, relative frequency and percentage distributions
(d) cumulative distributions
(e) histograms, polygons and ogives
- IV. Tables and Charts - Attribute Measures (2 hours)**
(a) checksheets and summary tables
(b) bar charts and pareto diagrams
(c) pie and dot charts
(d) cross tabulation tables
- V. Descriptive Summary Measures (4 hours)**
(a) mean, median and mode
(b) quartiles
(c) range, interquartile range, variance and standard deviation
(d) symmetry and kurtosis
(e) box and whisker plot
- VI. Probability and Probability Distributions (13 hours)**
(a) addition, multiplication and complement rule
(b) discrete vs. continuous probability distribution
(c) binomial distribution
(d) normal distribution
(e) the normal probability plot
(f) sampling distribution of the mean
(g) sampling distribution of the proportion

VII. Attribute Confidence Intervals and Control Charts (5 hours)

- (a) confidence interval for a population proportion
- (b) theory of control charts
- (c) np charts
- (d) p charts
- (e) sample sizes for p charts and np charts

VIII. Variables Confidence Intervals and Control Charts: (5 hours)

- (a) confidence interval for a population mean
- (b) rational subgroups
- (c) X-bar and R charts,
- (d) X-bar and s charts
- (e) (e) X charts

IX. Regression and Correlation (3 hours)

- (a) the scatter diagram
- (b) the simple linear regression equation
- (c) the standard error of estimate
- (d) correlation

Textbook Information:

Discovering Statistics - bundled with Minitab, 2nd edition, Hawkes/Marsh, Hawkes Learning Systems, ISBN# 978-1-932628-71-5

STQM 260 - Introduction to Statistics Syllabus

Course Description

Practical aspects of sampling, data presentation, measures of central tendency and dispersion, basic probability theory, the normal probability distribution, the sampling distribution of sample means and sample proportions, confidence intervals and hypothesis tests for one-sample designs, simple linear regression and correlation.

Note: Course addresses ethical and global issues in connection with various topics including sampling (e.g. random versus non-random sampling) and data presentation (e.g. distorting the data story through charts and graphs)

Pre-Requisites

[MATH 115](#), 116, 120, 126, 130, 132, or 135 with a grade of C- or better or 24 on ACT or 560 on SAT. Typically Offered Fall, Spring, Summer

Student Learning Outcomes

By course end, students who have mastered the course material will be able to:

1. Describe and apply data collection strategies appropriate to specified information objectives
2. Characterize and interpret categorical data both numerically and visually in terms of classes, frequencies, proportions and other importance measures
3. Characterize and interpret numeric data both numerically and visually in terms of location, dispersion, shape and exception
4. Discuss and apply basic concepts of probability to random variables, probability distributions, and sampling distributions
5. Characterize and interpret relationships between two numeric variables (through scatterplots, correlation, and regression) and two categorical variables (through two tables and related percentage)
6. Communicate statistical concepts, methods, and results effectively and ethically through written and/or oral presentations

Instructor

- Michael Craig Cooper, Ph.D., Statistics Faculty, COB
- Ph.D., Applied Statistics, University of Wyoming, Laramie, Wyoming 1992

Contact and Access

- Email: Email me at cooperm@ferris.edu, to ask me a question or request an appointment. Before seeking my assistance with class related material or homework - first receive assistance from two of your learning partners.

Specify the subject as: 'STQM 260' followed by your class day/time e.g. MWF 9am. A proper subject line will help assure I take note of your email; otherwise I may not. I generally check my email once each workday and will normally reply during regular business hours - within 2 working Monday through Thursday.

- **Office:** Visit me in IRC 212 C either during my posted office hours or by appointment. Before seeking my assistance with class related material or homework - first receive assistance from two of your learning partners. To each office visit bring your class text, assignment notes and work, and your prepared questions.

To arrange an appointment during office hours or outside of office hours contact me in person, by email, or by phone. I typically check phone and email messages once during days I have class. To assure the likelihood of a timely appointment - contact me well in advance.

My posted office hours are open to any student. Those with an appointment will be served at the appointment time ahead of those without an appointment. Otherwise, my students will be served ahead of other students on a first-come first-serve basis.

Major Resources

- Required Textbook: Business Statistics (2013) by Donnelly, Jr.: ISBN 978-0-13-214539-8 (required as of the first day of classes).
- Materials posted to DropBox
- Required tutorial: By the end of first week submit evidence you have completed the free Excel tutorial offered by GCF LearnFree.org and found at <http://www.gcflearnfree.org/excel>. GCF is a program of Goodwill Industries of Eastern NC, Inc.
- Optional tutoring and study-skills assistance may be available through the Student Academic Support Center. Call X3543 or stopping by ASC 1017.

Student Course Advising

Students who are experiencing any difficulty with the course should promptly inform me during posted office hours, by appointment, or via e-mail.

Special Needs

If you have special needs of which you think I should be aware, please inform me before or during the first week of classes.

For more information or assistance, contact the FSU Disabilities Services office at 231-591-3057 (voice) or ecds@ferris.edu (email). You can also visit the FSU website: <http://www.ferris.edu/htmls/colleges/university/disability/>.

Learning Community and Environment

Today's world of business demands individual initiative as well as skillful cooperation, collaboration, and teamwork. An engaging learning community and classroom environment offers an arena within which to acquire, test, and refine these attitudes and skills. Interestingly, effective college level learning environments also demand individual and collaborative effort.

During this semester we will work together to create and sustain a semester long learning community – working together to achieve our student learning outcomes.

In support of achieving this goal, we will create a challenging and supportive learning environment. Sometimes you will be asked to actively listen; sometimes to participate in relevant conversation; other times to engage problems and assignments or to offer good humor. You will likely be asked to do independent and group work, as well as, participate in mastery learning (where in sometimes you will be helping a classmate learn and other times receiving help from a classmate).

My primary lead-learner role is to provide direction, guidance, support, and knowledge. Your primary role is to promote your own learning and that of your class mates by actively engaging course material as well as individual and group learning activities during class.

Avoid behaviors that either overtly or subtly distract or disrupt our collective learning environment: for example, off task conversation or use of technology, rude comments or gestures, sleeping, or tardiness. I will respectfully call out distracting or disrespectful behavior that occurs during class. Continued disruption may lead to removal from class and, where necessary, referral to judicial services.

Learning Teams

- You will be asked to join with one to three or four classmates to form a learning team.
- Your team is expected to connect outside of class in order to study, work on projects, evaluate progress, and address questions. Please conduct team business regularly using f2f meeting, social media, phone, and/or email.
- Pre-arrange your regular meetings including at least two 50 minute f2f sessions per week outside of class - in a public place. If you are uncomfortable exchanging contact information please let me know.
- If you miss class - get your assignments, handouts, announcements or other class-relevant material from someone in your learning team. Where possible, plan ahead for this exchange. If your team mate unexpectedly misses class, plan to provide her/him w/ these materials. This exchange should be a comfortable and respectful give-and-take.

- You may be asked to complete group work during class or as an outside assignment – in which case your group may not be the same as your learning team.

Class Preparation

- In order to enhance your learning and contribute positively to our learning community, prepare carefully before class by reviewing related course materials before class. The perceived quality of your preparation may be factored into your final course grade.
- Study course content as topics are assigned and/or covered in class.
- When studying with your learning team be sure to engage with assignments in ways that assure your own learning while supporting your team mates' learning.
- When addressing questions requiring narrative, write clear, concise, and complete sentences. Include relevant charts, diagrams, or pictures.
- When addressing yes/no or true/false items, give the direct answer to the question (e.g. yes/no or true/false) as well as a thoughtful rationale for your direct answer. For example, when addressing a yes/no question, state your direct response (yes or no) and write a sentence or paragraph clearly stating the reason you believe your response is correct.
- When working quantitative problems, show complete solutions including formula with proper notation; correct major substitutions; major intermediate steps with correct arithmetic, and your final numeric answer with proper units and notation.
- After working through an assignment, check your solution against examples, answer keys, those of at least two learning partners, or other sources. You are then welcome to ask clarifying questions during class or an office visit.

Class Attendance

- You are expected to attend all class sessions from start to finish - excepting cases of medical emergency, FSU approved activities, family death, jury duty, court subpoena, official class cancellation, or by prior permission of your instructor.
- Unless you have prior permission from your instructor - keep your cell phone and other technology off during class.
- Leave **ALL** opened food and drinks outside our classroom (lab).
- You are expected to arrive to class in time to engage in class activities from the beginning of class through the end of class.
- Bring to each class session your own (1) textbook; (2) up-to-date course portfolio; (3) dedicated calculator (e.g. not cell phone); (4) writing supplies and other required materials.

Class Participation

- You are expected to engage in class learning activities in ways that promote your own learning as well that of your fellow class mates.

- You may be asked to participate in mastery teaching/learning i.e. give assistance to classmates or receive assistance from others. When so asked, your respectful cooperation will be expected.

Missing Class

- Present or absent, you are responsible to master covered material, acquire class announcements, and complete/submit assignments on time.
- If you miss a class:
 - Coordinate with your learning team
 - Obtain class notes, assignments, handouts, and announcements from your learning team – prior to the next scheduled class meeting
 - You may be asked to submit a written report demonstrating mastery of the course material covered during your absence
- If for some reason, you decide to withdraw from class, do so through the official means for dropping a course. If you withdraw after the official withdrawal date, you will receive a grade based on work completed compared to work required for the completed course. **Make sure to check with a Financial Aid counselor before you do to avoid any financial aid problems or consequences.**

Attendance Log

- Maintain an on-going log of your own class sessions (use provided Excel Template).
- For each class session note the day of week, date, and your attendance status (present or absent).
- Bring your up-to-date log to class as well as any class related office visit.

Assignment Log

- Maintain an on-going list of assigned problems or projects (text book and handouts).
- For each assignment include: source, exercise number, completion status, completion date, annotated notes and questions
- Bring your updated log to class as well as any class related office visit

Assessment Activities

- Expect graded homework assignments or quizzes. Quizzes and homework collection may be announced or unannounced. All collected homework is due upon request or at the start of class. **No** make-up quiz will be given. Late submitted homework may or may not be graded for credit – at the discretion of your instructor.
- Your single lowest quiz/home-work score will be dropped.
- Expect at least one Excel project. To receive a passing grade for the course, all Excel projects must be completed to my satisfaction. Projects are due upon request (typically at the start of class on the date due). Late submitted projects may or may not be graded for credit – at the discretion of your instructor.

- Expect at least two tests - specific dates to be announced. Make-ups will be available for excused absences only - requiring prior arrangements excepting medical emergencies. Make-ups may not be graded until final's week. I may choose to substitute your comprehensive final exam as your test make-up.
- Plan for a comprehensive final exam given according to the FSU final exam schedule. Though I will retain your final exam papers, you may review them (by appointment) during the first three weeks of following regular semester. **A grade of 70% or higher must be earned on the final exam in order to earn a grade of A, B, or C.**
- If for some reason you cannot make a final exam, one final exam makeup session may be scheduled during final exam week.
- Other assessment activities may be applied at the discretion of your instructor.

Grades

Your course grade will be assigned by applying the following straight scale to your final weighted percent score:

	B+ ≥ 87%	C+ ≥ 77%	D+ ≥ 67%	F < 60%
A ≥ 93%	B ≥ 83%	C ≥ 73%	D ≥ 63%	
A- ≥ 90%	B- ≥ 80%	C- ≥ 70%	D- ≥ 60%	

Unless otherwise indicated during the semester, your final weighted score will be computed from five uniformly weighted components: four exams and the collection of graded assignments.

Appealing Grades

Grading typically involves judgments and arithmetic. I may make an arithmetic error or a judgment with which you disagree. You have one calendar week from the date the graded assignment or exam is returned to the class to appeal your grade.

- Arithmetic Error: Demonstrate the error and the correction. I will change the recorded score or grade.
- Judgment Call: Submit in person a written grade appeal making the case for a change in your grade. Describe what you believe to be a better judgment (based on evidence/facts) and what remedy to your score you believe most fair. I will review your appeal and render a decision within one week of receiving your appeal.
- If you disagree with my decision you may follow the formal COB appeal process (see Dean's office for details of the COB appeal procedure).

Academic Integrity

Enjoying, learning from, and contributing to the body of work associated with any discipline are a privilege and responsibility of participants. Honesty and respect are both required to build mutual trust, effective learning community, and ethical business practice.

In the spirit of learning community, in this class, you are generally encouraged to study and learn together - unless otherwise specified for particular assignments. When asked to work together on an assignment, submit your joint work; when asked to work alone on an assignment or exam, submit your own work.

In either case, when you incorporate the work or ideas of others, you are expected to provide accurate and complete attribution of that work. Otherwise would be considered plagiarism or cheating. Evidence demonstrating plagiarism or cheating may result in assignment failure, course failure, and/or referral to judicial services. Of course, the due process related to academic integrity will be followed.

Plagiarism refers to use of someone else's ideas or words w/o clear, accurate, and complete attribution. Your responsibility is to provide this attribution wherever applicable - and ask your instructor for timely clarification if you are uncertain about how or when to apply this principle.

Cheating refers to the use of someone else's academic work or knowledge in a way that represents that work or knowledge as your own, or, when you've been asked to "do your own work" or "do your work without assistance or benefit of outside sources".

Syllabus Changes

I reserve the right to make adjustments to this syllabus whenever I judge that the adjusted syllabus will better serve the overall learning needs of the class.

MASTER COURSE OUTLINE

Course Identification:

Prefix:	Number:	Title:
BLAW	221	Elementary Business Law

Course Description:

A survey course in business law; covers contracts and sales, business organizations, real, personal and intellectual property, employment and agency law, products liability and torts, debtors and creditors and environmental law. Typically Offered Fall, Spring, Summer

Course Outcomes and Assessment Plan:

Learning Outcomes:

- 1) To identify the major components of the American Judicial System.
- 2) To identify how ethical considerations impact legal decisions.
- 3) To recognize and explain the legal issues arising in a particular fact situation.
- 4) To apply the law and reach a conclusion about the legal issues arising in a particular fact situation.
- 5) To recognize and synthesize new business law issues in the media.

Assessment Methods:

Course Outline Including Time Allocation:

- | | |
|---|---|
| a. The legal system and the legal environment of business.
Introduction to law. Courts and court procedures. | 3 |
| b. Ethics and business law. | 2 |
| c. Criminal and tort law. Administrative law. | 4 |
| d. Contracts. Nature and classes. Offer and acceptance.
Defective agreements. Consideration. | 7 |
| e. Capacity to contract. Illegal agreements. The written
contract. Third parties and contracts. Termination and remedies. | 6 |
| f. Sales. Transfer of title and risk of loss in sales contracts.
Remedies under Art. 2. | 5 |
| g. Agency and employment law. Nature and creation of agency.
Operation and termination. Employee vs. independent contractor.
Employment discrimination and other employment laws. | 3 |
| h. Warranties and products liability: negligence, breach of
warranty and strict liability in tort. | 2 |
| i. Real and personal property. Forms of intellectual property. | 2 |
| j. Business organizations. | 2 |
| k. Debtors and creditors. Bankruptcy. | 3 |
| l. Computer privacy and speech. Conducting business in
cyberspace. | 3 |
| m. Environmental law and international law. | 3 |

Total 45

BLAW 221: ELEMENTARY BUSINESS LAW

Spring Semester 2012 Syllabus

Course Description

This course is a survey of American business law for **non-business majors**. The American system of business law protects and preserves our capitalist market-based economy, by making contracts enforceable and protecting private property rights. We will look at real-world case problems, and learn how legal problems can be avoided. This class will be fast-paced and demanding.

Instructor Data

Professor Karen G. Nash. You can reach me at my Big Rapids office or at my home office, as follows:

Big Rapids Office

College of Business #342

Tel: 591-2462

Email: nashk1@ferris.edu

Home Office

Tel: (616) 296-0765

You can also reach me via FerrisConnect email. I will respond within 24 hours on weekdays and most weekends.

Office Hours

My office hours are **1-3pm, Mondays and Wednesdays**. If these times are inconvenient for you, please make an appointment with me for another mutually convenient time. I especially urge you to come and see me if you receive a C- or lower on a Quiz or an Exam—the earlier in the semester, the better. On Tuesdays and Thursdays, the fastest way to reach me is to call me at my home office.

Course Objectives

- to identify the major components of the American judicial system.
- to describe how ethical considerations impact legal decisions.
- to recognize and explain the legal issues arising in a particular fact situation.
- to apply the law and reach a conclusion about the legal issues arising in a particular fact situation.
- to recognize and synthesize new business law issues in the media.

Textbook

Liuzzo, **Essentials of Business Law**, 7th edition, McGraw Hill, 2010, ISBN 978-0-07-337705-6. Softcover. This is a very basic textbook. I will often be adding material in class lectures or handouts. **You are responsible for printing out copies of the handouts posted on FerrisConnect.** There is an online learning center with online quizzes at www.mhhe.com/liuzzo7e.

TENTATIVE Assignments

1. **Assigned Reading**. Read the chapters specified below before the scheduled class discussion of those pages. At the end of each Chapter, the Chapter Summary is a helpful

- review. You should answer all of the Assessment questions and problems at the end of each chapter, and be ready to discuss them in class.
2. Group Work. I will assign permanent groups at the beginning of the semester, and will assign specific questions to groups to answer as a group. Occasionally I will collect the answers and grade them. Group work assignments will be worth approximately 10 points each.
 3. Executive Summaries. Two Executive Summaries will be due on the dates specified below. You should start keeping a file of news articles about business law topics. You can then choose a recent article to do an Executive Summary on. Use your own words to accurately summarize the article, and add your personal opinion/point of view as to how the article impacts business law. Each one is worth 30 points. The Executive Summary must be word-processed, double-spaced, no more than 2 pages long, and free of spelling and grammar errors. Attach a copy of the article to your Executive Summary. The article should be dated no earlier than the first day of this semester.
 4. Quizzes. There will be a Quiz most weeks covering the assigned reading and class discussions. In other words, any material in the assigned reading is fair game, even if we have not discussed it in class. Most Quizzes will be worth 10 to 20+ points each. All Quizzes will take place promptly at the beginning of the class period.
 5. Examinations. There will be 3 Exams consisting of multiple choice and essay questions based on the assigned reading (whether or not we have discussed it in class) and class discussions. Each Exam will be worth 50 points.
 6. Final Examination. A comprehensive Final Exam will take place during the scheduled final exam period for this class worth approximately 120 points. I will provide more details later in the semester.

Participation

To encourage meaningful participation and regular attendance in this class, I will **grade your participation** at the end of each week for a maximum of 4 points, with 60 points total possible during the semester. *This may be painful for some of you, but learning to think and talk "on your feet" is an important business skill.* Please note: I do not deduct participation points for wrong answers or "stupid" questions (my prevailing philosophy is that there is no such thing as a stupid question).

Attendance

You must be present to earn participation points. If you are absent, you are responsible for obtaining copies of class notes, handouts and assignments from classmates. I take attendance at the beginning of each class period, so if you are tardy, you may be marked as absent. See below for my policies regarding make-ups. Tardiness is very disruptive in this class; therefore, I reserve the right to lock the door and refuse entry to late students.

Grading

I calculate grades based on a straight percentage, and then apply the Ferris Standard Grading System to translate the percentage into a letter grade, as follows:

93+=A

90-92=A-

88-89=B+

83-87=B
80-82=B-
78-79=C+
73-77=C
70-72=C-
68-69=D+
63-67=D
60-62=D-
<60=F

The approximate number of available points for the semester can be broken down as follows:

Participation	60
Group Work	50
Quizzes	155
Executive Summaries	60
Exams	150
Final	<u>120</u>
Approximate Total:	595 points

Your current grade will be available on FerrisConnect as a percentage.

Absences; Make-ups

I will not accept any late written assignments nor allow any Quiz or Exam make-ups without a written excuse documenting your severe personal emergency presented to me before or on the day you return to class. If I accept your excuse as legitimate, then all missed work must be made up or turned in within one week after you return to class. This also applies to University-excused activities such as sports team travel, class field trips or military service. There are no make-ups allowed for missed participation points.

Extra Credit

I will offer several extra credit opportunities to the entire class, at my discretion. I do not accept student-generated extra credit. All extra credit must be turned in on time. There is a limit on the total extra credit points that can be earned in this semester of 35.

Academic Honesty

I expect all students to uphold the highest standards of academic honesty. This includes but is not limited to cheating on the Quizzes and Exams, and plagiarism in the Executive Summary. Your dishonesty will mean zero points for the assignment in question, and possible failure in this course, at my discretion. You also may be referred to Student Judicial Services for further disciplinary action.

Class Conduct

I expect all students to conduct themselves with courtesy and proper decorum in this classroom. Please no cell phones, texting, mp3 players, talking out of turn, sleeping, waving to friends in the hall, working on assignments for other classes or any other behavior that disrupts the learning environment.

TENTATIVE Syllabus

We may go faster or slower than this outline indicates, depending on class participation. Please note that YOU ARE RESPONSIBLE FOR ALL CHANGES WHETHER OR NOT YOU ARE IN CLASS. I reserve the right to make any changes in this Syllabus I deem necessary, in my discretion.

Week #1 (Jan. 9, 11 & 13)

Chapter 1 Our System of Law
Litigation (no textbook assignment)

Week #2 (Jan. 16, 18 & 20)

NO CLASS Mon., Jan. 16; Martin Luther King Day
Chapter 2 Ethics and the Law

Week #3 (Jan. 23, 25 & 27)

Chapter 3 Criminal Law
Chapter 4 Tort Law

Week #4 (Jan. 30, Feb. 1 & 3)

Chapter 5 Administrative Law
FIRST EXAM on Wed., Feb. 1 covering Chaps. 1 – 5
Chapter 6 Introduction to Contracts

Week #5 (Feb. 6, 8 & 10)

Chapter 7 Offer and Acceptance
Chapter 8 Mutual Agreement
Chapter 9 Consideration

Week #6 (Feb. 13, 15 & 17)

Chapter 10 Competent Parties
Chapter 11 Legal Purpose of Contracts
EXECUTIVE SUMMARY #1 due Fri., Feb. 17

Week #7 (Feb. 20, 22 & 24)

Chapter 12 Form of Contracts
Chapter 13 Operation of Contracts

Week #8 (Feb. 27 & 29, March 2)

Chapter 14 Discharge of Contracts
SECOND EXAM on Fri., March 2 covering Chaps. 6 – 14

SPRING BREAK

Week #9 (March 12, 14 & 16)

Chapter 15 Transfer of Title
Chapter 16 Sales

Week #10 (March 19, 21 & 23)

Chapter 17 Warranties

Chapter 31 Product Liability

EXECUTIVE SUMMARY #2 due Fri., March 23

Week #11 (March 26, 28 & 30)

Chapter 18 Agency

Chapter 29 The Employer-Employee Relationship

Chapter 30 Employment Law

Week #12 (April 2, 4 & 6)

Chapter 22 Real and Personal Property

Chapter 26 Intellectual Property

NO CLASS Fri., April 6 Good Friday

Week #13 (April 9, 11 & 13)

Chapter 19 Business Organizations

Debtors and Creditors (handout; no textbook assignment)

Bankruptcy (handout; no textbook assignment)

NO CLASS Fri., April 13 Conference

Week #14 (April 16, 18 & 20)

Continue Bankruptcy

THIRD EXAM on Wed., April 18 covering Chaps. 15-19, 22, 26 and 29-31 & handouts

Week #15 (April 23, 25 & 27)

Chapter 27 Computer Privacy and Speech

Chapter 28 Conducting Business in Cyberspace

Finals Week (April 30 - May 4)

COMPREHENSIVE FINAL EXAM

MASTER COURSE OUTLINE

Course Identification:

Prefix: **Number:** **Title:**
ECON 221 Principles of Macroeconomics

Course Description:

Scope and meaning of economic principles basic to a free market economy. Equilibrium price formation and the efficiency of resource allocation in a market economy. National income accounting; determination of equilibrium national income, recession, and expansion. Government policy toward economic fluctuation; unemployment and inflation. The role of money and banking in recession and inflation.

Course Outcomes and Assessment Plan:

The student will be able to:

1. Distinguish the concepts of economic allocation, possibility, efficiency, and growth

Evaluation: Class participation, quizzes, tests, and feedback

2. Apply the Supply & Demand model to determine market equilibrium and changes in equilibrium

Evaluation: Class participation, quizzes, tests, and feedback

3. Identify the major components of the economy's circular flow model

Evaluation: Class participation, quizzes, tests, and feedback

4. Identify the meaning, measurement, and causes of unemployment and inflation

Evaluation: Class participation, quizzes, tests, and feedback

5. Distinguish the major types of economic stabilization policies

Evaluation: Class participation, quizzes, tests, and feedback

Course Outline Including Time Allocation:

- Scope and meaning of economic principles basic to understanding how an economy works, with special focus on the market economy model. Various applications. 12 hours
- The private sector, the theory of price determination and its implications. Various applications. 13 hours
- The measurement of national income, unemployment and price instability. Various applications. 10 hours
- National income and economic fluctuation; recessions and expansions, inflation and deflation. Government stabilization policy, and the role of money and banking in the economy. Various applications. 10 hours

Total 45

PRINCIPLES OF MACROECONOMICS

ECONOMICS 221

Dr. Ferdowsi
Office: Business 346
Office Hours: M-W-F 11:00-11:50 am
 W 12:00-12:50
Other times by appointment

Fall 2013
Phone: 591-2465
ferdowsa@ferris.edu

Course Description: Economics 221 is the first course of a two-semester course in principles of economics. This course is designed to equip students with the basic knowledge needed to understand the operation of modern macroeconomics. This course deals with the determination of prices in a market economy, national income, causes of economic problems such as unemployment, inflation, and deficit spending and how fiscal policy and monetary policy are used to achieve economic goals.

Course Objectives: This course is intended to help students achieve basic knowledge in the following categories:

1. Fundamental information regarding basic economic concepts.
2. Understanding and interpretation of the terminology used in economics.
3. The ability to develop simple economic models to discuss causes and cures for macroeconomic problems, such as unemployment, inflation and budget deficit.
4. The ability to recognize and evaluate different points of view used by economists regarding macroeconomic controversies.
5. The ability to apply course materials to understand and to interpret economic events.

Required Texts:

1. Macroeconomics, by Campbell R. McConnell and Stanley L. Brue, 19th Edition. For more information and resources, please visit www.mcconnell19e.com
2. Study Guide to accompany McConnell and Brue.

Course Requirements:

1. Exams: There will be eight examinations. They will be given as indicated on your syllabus. Points allocated for each exam are also indicated.

Make-up Exams: There will be **no** make-up exams. In the case of medical emergency, it is your responsibility to notify me before the exam is given out. If the medical excuse is found valid, a comprehensive **essay** make-up will be given at the end of the term. **No more than one make-up will be given.**

2. Economic Project: (extra credit for 10 points) To do your project you need to do the following:
- Follow the economic events by reading The Wall Street Journal.
 - Clip articles relevant to material discussed in class. Write a summary of the articles and analyze the events.
 - After finishing each article, show your summary to me.
 - Keep all your articles in a folder and resubmit them to me on the last day of class.
 - If you intend to do the project, you have to let me know no later than _____.

Grading: Your final letter grade will be based on total points of your eight exams. For this term the grades will be based on the following distribution:

135 - 119 = A	91 - 86 = C
118 - 113 = A-	85 - 83 = C-
112 - 108 = B+	82 - 78 = D+
107 - 102 = B	77 - 75 = D
101 - 97 = B-	74 - 71 = D-
96 - 92 = C+	70 - 67 = F+
	66 - 0 = F

3. Attendance Policy: Numerous research studies have shown attending the class is the most effective way of learning the course materials. I highly recommend the attendance in this class. As an incentive, if a student has perfect attendance, his/her letter grade will be raised to the next higher bracket. More than six absences will result in a failing grade in this course. Absences, including excused absences, do not constitute perfect attendance. You are expected to be on time and to remain in class for the entire class period to become eligible for perfect attendance. **A student who arrives more than 10 minutes late or leaves the class during the lecture will be marked as absent.**

Course Outline & Reading List: At the end of each lecture, I will announce the topics to be covered in the next lecture. Students are encouraged to do the required reading in advance of each lecture.

	Tentative Lecture Days
I. <u>INTRODUCTION TO ECONOMICS</u>	
a. What is Economics, Scarcity and Choice - Chapters 1	3 days
II. <u>Fundamental Tools</u>	
a. Supply and Demand - Chapter 3	3 days

***** WAKE-UP EXAMINATION *** 15 point**

Tentative
Lecture Days

- III. National Income Accounting and Price Indexes
a. Definition and Measurement of GDP - Chapter 7 3 days
- IV. Major Economic Problems
a. Unemployment and Inflation - Chapter 9 2 days

***** SECOND EXAMINATION *** 20 points**

- V. Basic Macroeconomic relationships
a. Equilibrium Level of GDP and Employment: Basic Macroeconomic Relationships - Chapter 10 4 days

***** THIRD EXAMINATION *** 15 points**

- Aggregate Demand and Aggregate Supply - Chapter 12 2 days

***** FOURTH EXAMINATION *** 15 points**

- VI. Stabilization Policies
a. Introduction to Fiscal Policy - Chapter 13 4 days

***** FIFTH EXAMINATION *** 15 points**

Tentative

Lecture Days

- VII. Money and Monetary Policy
a. Money and Banking System - Chapter 14 3 days
b. How Banks Create Money - Chapter 15 2 days

***** SIXTH EXAMINATION *** 20 points**

- c. The Fed and Monetary Policy - Chapter 16 2 days

***** SEVENTH EXAMINATION *** 10 points**

VIII. Long-Run Perspective and Macroeconomic Controversies

- | | | |
|----|---|--------|
| a. | Inflation, unemployment, and supply-side Economics - Chapter 18 | 3 days |
| b. | Economic Growth in the U.S. - Chapter 8 | 1 day |
| c. | Current Issues in Macro Theory and Policy | |

***** EIGHTH EXAMINATION *** 25 points Date**

MASTER COURSE OUTLINE

Course Identification:

Prefix:

ECON

Number:

222

Title:

Principles of Microeconomics

Course Description:

Markets and equilibrium price formation. The theory of consumer demand, price elasticity of demand, productivity and the firm's costs of production. Market structure, price and output determination. Market structure, resource allocation, and economic efficiency. Resource demand, supply and pricing. The functional distribution of income.

Course Outcomes and Assessment Plan:

1. The student will be able to apply the supply and demand model using the tool of elasticity.

Evaluation: Class participation, quizzes, tests, and feedback

2. The student will be able to apply the theory of consumer choice.

Evaluation: Class participation, quizzes, tests, and feedback

3. The student will be able to use cost theory to distinguish between the various types of a firm's costs.

Evaluation: Class participation, quizzes, tests, and feedback

4. The student will be able to apply the principle of profit maximization to determine the firm's output and price decision.

Evaluation: Class participation, quizzes, tests, and feedback

5. The student will be able to distinguish the characteristics of various market structures and their major implications on the firm's output and price decision.

Evaluation: Class participation, quizzes, tests, and feedback

Course Outline Including Time Allocation:

- Supply and demand analysis, including the implications of price elasticity 8 hours
- Applications, including global applications, of supply and demand analysis 12 hours
- Cost theory of the firm 5 hours
- The firm's profit maximization decision 8 hours
- Analysis of various market structures and the effects of the market structure on the firm's price and output decision 12 hours

Total 45 Hours

Principles of Microeconomics

ECON 222-002: 10:00-10:50, MWF, BUS 316, 3 credits

ECON 222-004: 2:00-2:50, MWF, BUS 316, 3 credits

Fall 2013

Instructor: Mark Brandly. I have a Ph.D. in economics from Auburn University, specializing in public finance, international trade, industrial organization, and energy and resource economics. I have published articles in *Public Finance Review*, *The Quarterly Journal of Austrian Economics*, *The Wall Street Journal*, National Review Online, *The Free Market*, and other publications. Also, I am an adjunct scholar of the Ludwig von Mises Institute and the Cornwall Alliance. I have been teaching at Ferris State University since 2003 and I have also taught economics at Ball State University, Taylor University, and Auburn University.

Some of the topics in this class focus on the issue of economic freedom. We will consider arguments in favor of freedom and private property and arguments in favor of government aggression against private property. For the record, I agree with arguments that conclude that economic freedom is superior to government aggression. Government aggression is immoral and economically destructive. Your grade will not be affected by whether or not you agree with me on this issue.

Office: BUS 370

Phone: 591-2433

Email: brandlym@ferris.edu (all email correspondence should include your class and section number)

Office hours: 4:15-5:15pm, MW and 1:00-3:00T. (If you want to discuss the course content during office hours, please bring your textbook with you.)

Course Description

This course is a three credit introductory survey of the field of microeconomics. The course analyzes how monetary prices are determined in a market economy and how different institutional settings affect market situations. The course is designed to help you understand a broad spectrum of issues which you will face in your personal, family, and business activities.

Here is the Ferris State University catalog description of this course: Markets and equilibrium price formation. The theory of consumer demand, price elasticity of demand, productivity and the firm's costs of production. Market structure, price and output determination. Market structure, resource allocation, and economic efficiency. Resource demand, supply and pricing. The functional distribution of income.

Prerequisite: ECON 221. Students should note that algebra (e.g., calculating the price elasticity of demand, the area of a triangle, and present value) and graphical techniques (e.g., long run supply curve) are used to develop some of the concepts in the course.

Course Objectives

To give the students an opportunity to gain an understanding of

1. basic economic terminology and methodology.
2. how a free market economy would operate (e.g., how resources would be allocated and how markets would react to changes in consumer preferences, technology, and the availability of resources).
3. how consumers and producers react to changes in variables such as prices and consumers' incomes.
4. how government intervention (e.g., price controls and taxes) affects market prices and resource allocation.
5. introductory economic arguments in favor of government intervention and against economic freedom.
6. the economic analysis of political decision making.
7. how government trade policies affect market prices and resource allocation.
8. the economic view of production costs.
9. firms' economic decisions in various market structures (e.g., purely competitive markets, monopolistic markets, and monopolistically competitive markets).

Readings

The following textbook is required for this course: Gwartney, Stroup, Sobel, and Macpherson, *Microeconomics: Private and Public Choice*, 13e, Mason, OH: South-Western Cengage Learning, 2011.

In addition, students may be required to read readings from other sources. It is important to do the required readings before the class periods. Class time is structured assuming that the students have read the assigned readings.

Course Requirements

Blackboard Learn: Class information is available online in the Blackboard Learn system. You can access the Blackboard Learn system in MyFSU (sign into MyFSU and click the FerrisConnect icon) or you may go directly to your Blackboard courses by signing in at <http://fsulearn.ferris.edu/>. It's important to note that if MyFSU is down, you can still access the course by using this link. I recommend that you check the online announcements frequently.

Attendance: Regular class attendance and punctuality is necessary in order to keep up with the course work. Students are responsible for any material covered in class. Absences do not excuse you from the work covered on that day. In order to receive any handouts, the student needs to be in class. If you are

going to miss class, I recommend that you arrange to get class notes and a copy of any handouts from another student.

Valid excuses for missing a class include, but are not limited to 1. Ferris State University approved events, 2. a doctor's orders (the doctor orders you not to go to class), and 3. a court order.

Excuses for missing class that are not valid include, but are not limited to: 1. car problems, 2. alarm clock problems (i.e., you slept through my class), 3. going to or returning from home or vacation, and 4. work requirements.

Also, any misbehavior in class (e.g., talking, cell phones ringing) may result in points deducted, at the discretion of the instructor, from your point total. Keep your cell phones, iPods, etc. turned off and put away. The maximum penalty for having your cell phone or other devices out is a zero on the next exam.

Grading

Exams: The exam questions will focus on understanding the concepts and applying the theory taught in the course. Exams will cover the lectures and the assigned readings. Bring a #2 pencil to every exam. You may use a calculator whose memory and programming are cleared. Calculator sharing during exams is not allowed. Cell phones are not allowed. During exams, there may be assigned seating. Note that the failure to follow the instructions on the exams will result in a loss of points. Also, be on time for the exams. If you arrive more than 5 minutes after the scheduled starting time for an exam, it will cost you 50 points on that exam. You must take the exam at the scheduled time with your section of the class. If you receive permission to take the exam with a different section of the class, it will cost you 300 points.

Regarding excused absences, you must notify the instructor about a missed exam ahead of time if at all possible.

Towards the end of the semester, you will have the opportunity to take a make-up exam. This exam covers the material on the first four exams. You may take this exam to replace any of the first four exams. You may replace a low exam score or you may replace an exam that you missed for any reason.

If you miss two exams, you may replace both exams by taking the make-up exam only if you have a valid excuse for missing both of the exams. If you only have a valid excuse for missing one of the exams, then you may only replace the exam for which you have a valid excuse. **(Don't miss two exams, unless you have a valid excuse for missing both exams.)**

If you have a valid excuse for missing more than two exams, you may take the make-up exam to replace the first two scores, but you will need to make up the other exams by taking the exams before the class is scheduled to take the exam.

Each class is scheduled to take the final exam at a particular time. According to Ferris State University policy, if you have three final exams in one day and your ECON 222 exam is the middle exam of the day, then you may reschedule your ECON 222 exam for another day. Such a request to reschedule a final exam must be made no later than two weeks prior to the exam date. Otherwise, you should take the

final exam when it's scheduled. If you want to reschedule your final exam for any other reason, you may, but it will cost you 400 points.

Other assignments: Quizzes and other assignments may be given randomly and unannounced throughout the semester.

If there are contentions about any score on any exam please talk to me within three business days after the material is handed back to the class. After three days, I will not change any score. In addition, after three business days, I dispose of any exam or quiz information that is still in my possession. I recommend that you keep all of the documents regarding your exam and quiz scores. You may need this information at the end of the semester.

Students are responsible for keeping track of their scores. You must be in class to pick up your grade information. If you are not in class to receive your grade information, you have three business days to pick up this information from the instructor's office. You will begin the semester with 50 extra credit points. Each time you request a grade after the three day grace period, it will cost you 25 points.

Your letter grade will be no lower than that indicated by the following scale:

A \geq 92% > A- \geq 90% > B+ \geq 88% > B \geq 82% > B- \geq 80% > C+ \geq 78% > C \geq 73% > C- \geq 71% > D \geq 61% > F

I have noticed that grade appeals tend to be need based (e.g., "I need a B in order to keep my scholarship" or "I need C in order to graduate") or for other inappropriate reasons (e.g., "I've never failed a class before" or my favorite "I don't do well on exams.") For the record, the grades in this course are performance based. Your performance on the exams and assignments determines your grade in the class.

Honesty Policy: Ferris State University expects students to pursue their academic work with honesty and integrity. Any student caught cheating will receive a zero for that assignment and/or an F in the class.

Disability Statement: Ferris State University is committed to following the requirements of the Americans with Disabilities Act Amendments Act and Section 504 of the Rehabilitation Act. If you are a student with a disability or think you may have a disability, contact the Disabilities Services office at 231.591.3057 (voice), or email ecds@ferris.edu to discuss your request further. More information can be found on the web at <http://www.ferris.edu/htmls/colleges/university/disability/>. Any student registered with Disabilities Services should contact the instructor as soon as possible for assistance with classroom accommodations.

Student Assessment

At the end of the course, you will be invited to participate in a University evaluation of this course. Your feedback is important to me as an instructor. I encourage you to participate in the evaluation process.

Course Schedule

Topic	Readings from Gwartney, Stroup, Sobel, and Macpherson	Additional Readings
The Economic Approach	Ch.1 and pp.28-37, 45-47	
Supply, Demand, and the Market Process	Ch.3 and pp.81-82,106-107,148, 160-61, 264-70, 289-93	
Exam 1	1000 points	
Elasticity	Ch.7 and pp.57-8, 65-6, 210-11, 268, 275-9	
Price controls	Ch.4 (only pp.80-91)	
Economics of Taxation	Ch.4 (only pp.91-102) and pp.366-9	
Exam 2	1000 points	
Difficult Cases for the Market, and the Role of Government	Ch.5 and pp.37,489-95	“Negative Externality” ¹ “Positive Externality” ² “Taxing Externalities” ³ “Illustration of the Coase Theorem” ⁴
The Economics of Collective Decision Making	Ch.6	Shughart, “Public Choice” ⁵ Bohannon and Van Cott, “Now More Than Ever, Your Vote Doesn’t Matter” ⁶ “Voting Paradox” ⁷ Brandyly, “How to Win an Election” ⁸
Exam 3	1000 points	

¹ This article is available at <http://economics.fundamentalfinance.com/negative-externality.php>.

² This article is available at <http://economics.fundamentalfinance.com/positive-externality.php>.

³ This article is available at <http://www.bized.co.uk/virtual/economy/policy/tools/vat/vatth4.htm>.

⁴ This article is available at <http://www.sjsu.edu/faculty/watkins/coasetheorem.htm>.

⁵ This article is available at <http://www.econlib.org/library/Enc/PublicChoice.html>.

⁶ This article is available at http://www.independent.org/pdf/tir/tir_06_4_bohanon.pdf.

⁷ This article is available at http://en.wikipedia.org/wiki/Voting_paradox.

⁸ This article is available at <http://mises.org/daily/5036/How-to-Win-an-Election>.

Gaining from International Trade	Ch.16 and pp.36-45, 49-50	Bastiat, "The Candlemakers' Petition" ⁹ Brandly, "A Primer on Trade" ¹⁰
Costs and the Supply of Goods	Ch.8, and pp.270-3, 302-308	
Exam 4	1000 points	
Price Takers and the Competitive Process	Ch.9	"Economic Efficiency" ¹¹ "Allocative Efficiency" ¹² "Productive Efficiency" ¹³ "Efficiency of Perfect Competition" ¹⁴ "Economies of Scale" ¹⁵ "Diseconomies of Scale" ¹⁶
Price-Searcher Markets with Low Entry Barriers	Ch.10	
Price-Searcher Markets with High Entry Barriers	Ch.11	"Diagram of Monopoly" ¹⁷
Exam 5 (during finals week)	1500 points	

I reserve the right to make adjustments in this syllabus whenever I judge that the adjusted syllabus will better serve the overall learning needs of the class.

⁹ This article is available at <http://mises.org/daily/3831>.

¹⁰ This article is available at <http://www.mises.org/story/1084>.

¹¹ This article is available at <http://www.economicshelp.org/microessays/costs/efficiency.html>.

¹² This article is available at <http://www.economicshelp.org/dictionary/a/allocative-efficiency.html>.

¹³ This article is available at <http://www.economicshelp.org/microessays/costs/productive-efficiency.html>.

¹⁴ This article is available at <http://www.economicshelp.org/microessays/markets/efficiency-pc.html>.

¹⁵ This article is available at <http://www.economicshelp.org/microessays/costs/economies-scale.html>.

¹⁶ This article is available at <http://www.economicshelp.org/microessays/costs/diseconomies-scale.html>.

¹⁷ This article is available at <http://www.economicshelp.org/microessays/markets/monopoly-diagram.html>.

MASTER COURSE OUTLINE

Course Identification:

Prefix:	Number:	Title:
MGMT	301	Applied Management

Course Description:

A description and analysis of business activities designed to manage an organization to efficiently serve employees, customers, and the community. Topics studied include planning, organizing, leading, and controlling; the business environment, business institutions, government regulations, organizational structure, human resources, human behavior, and current practices. Designed to meet the needs of graduates and employers in the global economy. Typically Offered Fall, Spring, Summer

Course Outcomes and Assessment Plan:

Learning Outcome Students will be able to:	Assessment Methods					
	Exam / Quiz	Project	Paper	Case Study	Presentat ion	Discussio n
Compare and contrast the complexities of management and leadership.	X			X		X
Demonstrate the ability to gather and analyze critical information necessary for decision making.		X	X	X	X	X
Work in teams to complete research and assignments.		X	X		X	X
Present ideas clearly, concisely, and professionally before an audience.		X		X	X	
Analyze a diverse array of organizational components and recommend improvements.	X	X	X	X	X	X
Assess the styles and motivators of themselves and others.	X	X	X	X	X	X
Explain change and its impact on individuals and groups.	X	X	X	X	X	X
Evaluate the strengths of diversity, culture, and globalization and their impact on organizations.	X	X	X	X	X	X

Course Outline Including Time Allocation:

Topic Outline

Contact Hours

I. Introduction	5
A. Managing organizations and people	
1) Opportunities and rewards for management	
2) Demands of managing an organization	
B. Managing organizational change	
II. Decision and Monitoring Systems	6
A. Decision making	
B. Assessing the environment	
C. Planning	
D. Evaluating	
III. Organizational Structure	15
A. Organizational Design	
B. Design of work processes	
C. Human resource development	

1) Recruiting personnel/legal requirements	
2) Training employees	
3) Evaluation of employees	
4) Disciplining employees/firing employees	
D. Group behavior	
E. Organizational culture	
IV. Leading and Empowering	12
A. Human behavior	
1) Cultural differences among persons	
2) Cultural differences relative to global management	
B. Motivation and rewards	
1) Compensation methods	
2) Fringe benefits	
a) Evaluation of different programs	
b) Competition and affordability	
C. Leadership types	
D. Leadership issues	
E. Interpersonal skills	
V. Organizational Change	07
A. Concepts of change	
B. Setting goals	

Total Contact Hours 45



MGMT 301: Applied Management

Knowing and Doing: Plan, Do, Check, Act—and Interact
Syllabus updated: August 26, 2013

I. IDENTIFYING INFORMATION

Course	Time	CRN	Location
MGMT 301 005	9:30 to 10:45 a.m.	81894	BR
MGMT 301 006	12:00 to 1:15 p.m.	81902	BR

Spence Tower, PhD, is in his eighth year at Ferris State University. For the last twenty-three years he has been teaching graduate and undergraduate organizational behavior, strategic management, human resources, and numerous other management classes at Michigan State University, Central Michigan University, and Ferris.

For Ferris and CMU, he has also taught in the following locations:

- Alexandria, Egypt
- Guadalajara (6 times) and Mexico City (3), Mexico
- Traverse City, Michigan (18)
- Grand Rapids, Michigan (6)
- Lansing, Michigan
- Midland, Michigan (3)
- Naval Air Station, Jacksonville, Florida (3)
- Hickam Air Force Base (6) & Schofield Army Barracks (15), Hawaii
- Camp Pendleton (Marines), California (6)
- Vancouver (9) and Winnipeg (6), Canada
- Fort Bragg (Army), North Carolina (3)

His Ph.D. is from Michigan State University in Organizational Behavior with a minor in Human Resource Management.

He has also worked and taught at the University of California at Santa Barbara, Western Illinois University, Aquinas College, Michigan State University, and the University of Pittsburgh's Semester at Sea Program. He has consulted with organizations such as Health Canada, Independent Bank, Aetna, Tenneco, the National Charter School Institute, and the Girl Scouts of America.

Instructor Contact Information:

Questions are welcome.

Office: 212L IRC Building, Big Rapids Campus

Office Hours: Tuesday & Thursday, 7:30 to 9:30 a.m.

Telephone: 231.591.3163

E-Mail: FerrisConnect (If unable to access that, use towers@ferris.edu)

Academic Website: Go to your MyFSU **Ferrisconnect** site:

<http://myfsu.ferris.edu/cp/home/loginf>

II. TEXTBOOKS AND INSTRUCTIONAL MATERIALS

Required Materials:

- ***Fundamentals of Management, Kinicki, McGraw-Hill, 2013.*** This is an affordable, customized textbook specifically created for Ferris State University. It should cost less than \$60.
- ISBN 9781121950610
- License to Use simulation software: Capstone Foundation, Management Simulations, Inc. (purchased online with credit card at www.capsim.com at an approximate cost of \$56). Registration is self-explanatory at the website but is also listed in the initial letter sent to you.

Computer Requirements:

- You and your co-managers ***can access all aspects of the Capsim simulation at any time from any PC*** connected to the Internet.
- When you exit a session, you need to adequately save your decision entries are saved and transferred back to the Capsim server. ***The last decisions saved to the server at the time of the decision deadline are the ones used to generate the results. Be careful of how you save; don't override your teammates' decisions.***
- **A high speed internet connection is highly recommended. Dial up will work but is very slow due to amount of data transferred.**
- Students should be prepared for the expense of downloading and printing of business reports for analysis of the business simulation.

III. COURSE DESCRIPTION

The official Ferris State University description: This is an introductory class for students receiving a Bachelor's Degree from the College of Business at Ferris State University. This course is intended to logically extend from the Mission of the College of Business:

... A description and analysis of business activities designed to manage an organization to efficiently serve employees, customers, and the community. Topics studied include planning, organizing, leading, and controlling; the business

environment, business institutions, government regulations, organizational structure, human resources, human behavior, and current practices.

More specifically, this course will . . .

- ❖ Introduce you to many of the historically important as well as currently trending issues regarding effective management and leadership of organizations.
- ❖ Expose you to the various basic disciplines of business and allow you to successfully and unsuccessfully attempt to integrate these functions as part of a robust, competitive computer simulation.
- ❖ Promote a senior management point of view to foster a broad understanding of real-world, critical decision-making affecting a firm's short- and long-term competitiveness.

By incorporating online lecture material, discussion, competitive simulations, simulation de-briefings, and report writing, this course gives students an opportunity to improve managerially related technical and collaborative skills.

Moreover, grading standards reflect that **teamwork** is a major success factor in the workplace, hence in this course.

My, less official, description: This course is not stand-alone in nature, rather, it is derived from *Core Courses* and other courses required for this degree. Through the simulation, students enrolling in this course will get a taste of the core courses' relevance on an organization's success. Ideally, this experience will promote greater appreciation of these future core classes (e.g., operations management, human resources, accounting, finance, marketing).

MGMT 301 will expose you to the foundational concepts necessary to effectively understand your firm's external and internal environments. With this introductory understanding of the general, industry, and competitor environments (external) as well as your firm's resources and capabilities (internal), you can better position your firm to gain a **sustainable competitive advantage** and earn **above-average returns**. These are good things—for both your firm and for you.

We are truly in some exciting, dynamic, and complicated times.

IV. COURSE OBJECTIVES

The official Ferris State University objectives: By the end of this course, student awareness is required in several key areas of organizational and individual success. Collectively, the various assignments for this course are intended both to develop as well as to demonstrate student's key competencies as follows:

- Compare and contrast the complexities of management and

leadership.
• Demonstrate the ability to gather and analyze critical information necessary for decision making.
• Work in teams to complete research and assignments.
• Present ideas clearly, concisely, and professionally before an audience.
• Analyze a diverse array of organizational components and recommend improvements.
• Assess the styles and motivators of themselves and others.
• Explain change and its impact on individuals and groups.
• Evaluate the strengths of diversity, culture, and globalization and their impact on organizations.

My, less official, objectives: At a very general level, I want you to . . .

- ❖ pull together your accumulated knowledge from previous courses and experiences;
- ❖ add valuable concepts promoting organizational and individual success;
- ❖ apply all of this wisdom in making strategic decisions that will lead to a firm's (and your career's) blazing success—or floundering failure.

In brief, this class introduces numerous concepts and analytical processes that enables executives to analyze situations, create well-rounded decisions, and execute reasoned plans.

I want you to know stuff—and do stuff. You can show me what you *know* through completing your chapter quizzes, chapter-related presentations, as well as our ongoing discussions. The *doing* part will occur through your efforts on the Capsim Foundation business simulation. In this simulation, you will be teamed up with two to four other students to gain hands-on experience through this internet-based experiential simulation (which is called 'Foundation').

In the simulation, you and your teammates will make up the top decision makers of a firm that is competing with other MGMT 301 teams (of fellow students). You will analyze information, create and implement a business strategy, and make appropriate adjustments based on your understanding of the new situation your firm encounters after each round of decisions and outcomes. **Be forewarned, you will be working hard in this class.**

IV. CLASS ASSIGNMENTS AND GRADING: Subject to change!

Grades:

Chapter quizzes (4 @ 30 pts) 120

Topical presentations (1 @ 5 pts; 1 @ 10 pts) 15

Career Projects Total of 80 total pts

- CareerLink registration + 25
 - (mock interview or career counseling session)
- STAR interviewing preparation 15
- Internship/International preparation project 10
- Professional Contact: early information 5
- Professional Contact 25

Capsim Simulation Total of 300 total pts

- Introductory online quiz 10
- Rehearsal simulation (2 rounds & 1 quiz) 10
- Situational analysis 10
- Human Resources Quiz 5
- TQM Quiz 5
- Strategy statement 5
- Expertise area quiz 10
- Completed peer evaluations (4 @ 10 pts) 40
- Team dynamics analysis (4 @ 5 pts) 20
- SWOT analysis fact packs (3 per team @ 20 pt) 60
- Security Analysts' Meeting 15
- Summary analysis 10
- Final Capsim team performance (ph1=15, ph2=85) 100

Participation, effective teamwork, & final evaluation

25

TOTAL POSSIBLE

540 POINTS

Note: All assignments need to be done with word processing. For your protection, keep computer copies of your work. There have been times where a student has claimed an assignment was turned in, but I never saw it--

Chapter Quizzes (120 points): Your main tool for understanding the course information will be through completing the chapter quizzes. There are two main types of questions: 'what is the information' as well as 'how have you, or could you, use this information.' Each quiz is worth 40 points and may consist of multiple choice questions as well as essay questions with numerous requests for you to find relevant material beyond the text and relate the material to your past, current, or future work situations.

X1 _____ /30 X2 _____ /30 X3 _____ /30 X3 _____ /30

"The best way for students to really learn the material is for them to apply it to real life situations and that is exactly what the chapter quizzes did. Long quizzes but learned a lot."

Topical Presentations (15 points): You will do two presentations on assigned topics. This should focus on topics that are of interest and value to you and your future. Options will be clarified in future classes.

#1 _____ /10 #2 _____ /5

Professional Contact (30 total points): Completion of this assignment can heighten familiarity with valuable information as well as assist you with your career network. This is NOT a job interview! Specifically, you will interview a professional and ask a series of questions based on one of the following topics:

- Career focused

PC _____ /25

PC: early info _____ /5

"I would recommend suggesting to student to interview with as many higher-ups within companies that they are interested in as they can. I have interviewed seven different individuals at different companies and have received interview and referrals from two of them. Running with this assignment is going to be what lands my first full-time job."

"Thank you for having this assignment be a part of this class. I was hesitant to do it at first, but I am so glad that I did now."

I am extremely glad this assignment is used. It would have been very easy for me to interview my brother because he is an accountant, but I wanted to get the most out of this assignment I could. I could not be happier with the outcome of this interview because now I have a better understanding about what it is I want to be. It also was beneficial to me because it got me motivated to get my name out there and to start talking with other professionals in my future area of work. This was quite possibly the most beneficial assignment, in regards to my career choice, that I have ever done.

Sorina 2011 Students

Foundation Simulation and Grid Analysis Fact Packs (305 total points): You will be assigned to a team that is in control of a 100 million-dollar firm that makes electronic sensors. Your team will manage the firm by entering strategic decisions into an interactive computer simulation. Over the non-graded practice rounds and the graded real rounds (each round represents a year), you will discover the strategic implications of cross-functional coordination between:

- ❖ Research and Development,
 - ❖ Marketing,
 - ❖ Production, and
 - ❖ Finance
- ❖ As the rounds progress, HR, TQM, and advanced marketing decisions will be expected

You will quickly learn the value of strategic planning and execution since your team's competitive position—and grade—is determined by the set of decisions entered in each round. This is a comment from one student's Capsim summary: "Have fun with it. It is not a real life situation and this is the time to mess up."

Other relevant quotes as related to the goals of this class:

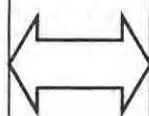
1. "No matter where you go and what you want to do, you are going to find yourself working in groups of people that you don't like, don't agree with, or simply can't stand to be around. Expect this in the workplace, be a leader take charge of the situation, communicate effectively with these people, use Dale Carnegies ideas of how to get people to like and work with you and your ideas. Getting people to work for you successfully is the key to good business."
2. "I thoroughly enjoyed being in the class and getting to run a Capsim company. It was a great way to apply everything I have learned in the last several years. Group work is something that I think every class needs to concentrate on more, as well as presentations and being able to get in front of a group of people and sound half way intelligent."
3. "Capsim gave me a crash course in financing which I did not take during my college career and this helped me tremendously by giving me insight into decisions that finance departments have to make. I also found

that you are constantly dealing with a changing dynamic and forced to make decisions in a potentially insecure environment.”

4. “It is so important to review the FAQ’s and Guide that is provided, and not just once. It is an important continual resource to help guide the decisions to be made. Understanding the different functions and measurements sooner rather than later is important. Communication, communication and more communication. Make individuals responsible for a section, and have overall decisions agreed to.”
5. “Getting everyone to participate at the same level is difficult in a team setting. Some individuals are okay with getting a passing grade and moving on, others want to get all they can for their money and achieve the very best they can. In one aspect, I wish I could have been on a really successful team. I think it would have been a really great experience. However, you learn from difficult times, as well as you do good times. I’m not saying I had an awful group, but I feel the volume of participation/drive could have been better balanced.”
6. “Finance is a critical piece of the equation. Without a strong finance department all the hopes and ideas of the company may fall apart because of lack of financing and under funding. Working with the finance department is very important.”
7. “What can I say about X, she never came to any of the group meetings, we offered to accommodate her schedule and make ourselves available when it was convenient for her, she would not work with us. She went in and changed our entire first round without talking to anyone which set us behind right out of the gate. She was extremely combative and had no teamwork attributes. If it was my company I would have fired her and replaced her with someone that wanted to be part of the team. I feel bad for the company that ends up with her; she has a real chip on her shoulder.”
8. “Research is even more crucial. We made a lot of mistakes and most of them could have been avoided if we had just put more effort into what we needed to do. If you don’t prepare for your work then it shows in the results.”
9. “I learned the importance of truly understanding what drives the performance of a company. There were multiple layers within the Capsim simulation that required us to pour through data in order to make an educated decision.”
10. “I learned that it is especially important to pay attention to every little detail all of the time. It is easy to only concentrate on your own team’s decisions and try to make sure you are doing everything right while losing focus on your competition and what is happening in the overall market. If you forget or lose touch with what your competition is doing or fail to recognize market trends, it does not matter what your team’s decisions are because your company will most likely not succeed to its fullest or even worse, lose sales and profits as a result.”
11. “Out of all of the team-oriented work I performed in college my Capsim experience taught me the importance of communication the best. Capsim showed me how not communicating can prevent company objectives from being met. Communication must be timely and in a professional manner, and Capsim forced me to do both.”
12. “I would rather learn these mistakes with fake money than real money.”

Here are dramatically different comments and reactions to the Capsim experience:

“Don’t really think that I learned much from the Capsim process at all. I thought it was more like busy work and doesn’t do much for anyone in the X Career. I will forget it all by the end of the week.”



“I learned that there’s more to understand than just my role. My role in finance and accounting will impact other aspects of the company, and those other parts of the company will impact my role in accounting. It’s a circle and we all have to work together.”

Assignments (Content, Structure, Appearance, and Timeliness):

Assignments are to be turned in on the due date. Prior approval is required to receive credit for any assignment turned in after the due date. The substantive content, structure, and appearance of these materials must conform to high-quality business standards.

Clarity on point allocations of Capsim assignments are given above. I do want to clarify, **however, your teammates' evaluation of your contributions are VERY influential in your final CAPSIM points' total.**

Participation, Team Effectiveness & Final Evaluation (25 points): A significant portion of this class is devoted to interaction with other classmates. In order to reward you for participating, points are set aside. These points will come from my assessment of your involvement as well as the peer evaluations from your peers. I reserve the right to subtract more points if participation and group contributions are clearly deficient—based on both my and/or peer evaluations.

GRADE CALCULATION: There are two methods for grade calculation. In this procedure, the total number of points you earn this term will be matched against the following scale:

(94 - 100%) = A	(73 - 76.9%) = C
(91 - 93.9%) = A -	(70 - 72.9%) = C -
(88 - 90.9%) = B+	(67 - 69.9%) = D +
(84 - 87.9%) = B	(63 - 66.9%) = D
(80 - 83.9%) = B -	(60 - 62.9%) = D -
(77 - 79.9%) = C +	(00 - 59.9%) = E

You will receive this grade on your report card unless the second procedure, described next, yields a higher grade.

A -	The top 10% of the class	
B+	The second 10%	
B	The third 10%	
B -	The fourth 10%	
C +	The fifth 10%	<u>You can not be hurt by this.</u>
C -	The sixth 10%	
D +	The seventh 10%	
D	The eighth 10%	
E	Remaining students	

These grades appear on the report card only if they are better than the straight scale grade.

VI. **OTHER IMPORTANT STUFF**

- ❖ **Availability:** It is very important for you to clarify questions you may have about course material, grading, or any other course-related topic. Please feel free to contact me by phone, email, or in person.
- ❖ **Group Work:** Social loafing will not be tolerated. You have probably experienced a group project in which one or two people contributed near zilch. We will work to keep this from happening. With your help I can give them a grade more reflective of their contribution. Please take the peer evaluations done during the semester seriously. If your group is having trouble with a member, let me know. **I will work with you to effectively deal with the situation.**
- ❖ **Attendance & Class Participation:** Active class participation is required to enrich this discussion and to demonstrate personal understanding of course subject matter. **You**

are expected to be at each class; you do, however, have two 'freebie' misses. After this, five points will be deducted for the first miss, then ten points for each after that.

- ❖ **Late Assignments:** Points will be deducted for late assignments
- ❖ **Make-Ups and Rewrites:** These will be based on individual consultation.
- ❖ **Copies of Assignments:** For your protection, it is your responsibility to retain a copy of any materials that you email or hand in to me.

VII. More Student Comments on Assignments

Grid Analysis/Fact Pack

- I found the grid analyses to be very helpful when making Capsim decisions. I always made grids for each round even if we didn't have a fact pack due. Having grids helped eliminate flipping between the Courier and the decisions page.
- The grid analysis is essential when working in Capsim.
- The analysis grid is key to your success!!!!
- They didn't make much sense at first. Wasn't sure why we were doing them until I did one. Then it made sense.
- These sucked, but were good for us to determine our own strength and weaknesses.

Teamwork

- Teammates or prison mates? Either way, we were forced to work together and survive together. With the competitive nature of the game, we forced ourselves to find common ground and work together. I think that this was as much or more important than other areas of the course because it teaches you life lessons about working as a team in your future employment opportunities. If you can not fit in and find common ground, you will be voted off the island and the team will survive without you. To not become shark bate, you need to work as a contributing member of whatever team you are put into.

Professional Contact Interview

- Was very helpful and opened a door for me. Thank You!!
- It was very helpful to me. I am a quiet individual, so it allowed me to get some experience in a more relaxed environment.

Presentations

- As most of us will shortly be entering the professional work force I think it is a good idea to bring presenting into the mix.
- The amount of presentations we had was good and the discussions we had about them was also good. We were taught a lot of good presentation tips and the feedback from them immediately following always helped a good amount.

Quizzes

- The quizzes were in depth enough to make us understand the textbook and made us relate every concept to a real life situation that we have been or could be in.

MASTER COURSE OUTLINE

Course Identification:

Prefix:	Number:	Title:
MGMT	302	Team Dynamics –Organizational Behavior

Course Description:

Explores the fundamental processes and skills essential for the success of individual and group/team behavior in contemporary organizational settings. MGMT 302 emphasizes the importance of team formation and decision making, effective conflict management, and the impact of diverse individual personality and cultural backgrounds on team and organizational success. Pre-Requisites: Sophomore Standing. Typically Offered Fall, Spring, Summer. 3.000 Credit Hours, 3.000 Lecture Hours.

Course Outcomes and Assessment Plan:

Outcomes	Assessment Method
Explain the complexities and nuances of teams, management, and leadership	Discussion, Exams, Quizzes
Form and manage teams, resolve inter-group conflict, provide feedback, and evaluate team member performance	Report/Presentation, Project, Peer evaluation
Demonstrate the ability to function as a member of a high performing team	Project, Peer evaluation
Work in teams to gather and analyze information	Project, Report/Presentation, Peer evaluation
Present ideas clearly and concisely before an audience	Discussion, Report/Presentation, Project, Peer evaluation

Course Outline Including Time Allocation:

I.	The role of groups/teams in dynamic organizations	3
	Differences between groups and teams	
II.	Personality differences	9
	Capitalizing on group/team diversity	
III.	Forming effective groups/teams	6
	Contributions of differing team roles	
IV.	Stages of group/team development within organization's	3
V.	Creating environments that support high-performing individuals and groups/teams	6
VI.	Leading and motivating individuals and groups/teams within organizational structure's and cultures	6
VII.	Individual and group/team decision making	6
VIII.	Handling intra- and inter-group conflict	6
		<u>45 hours</u>

INSTRUCTOR: Dr. Carol Rewers

OFFICE: **Office Phone: 231- 591- 2447**
E-mail: please use FerrisConnect Email 1st
Alternative Email: rewersc@ferris.edu

OFFICE HOURS: Monday and Wednesday's 11:00 am -1:00pm

COURSE TITLE: MGMT 302: **Team Dynamics and Organizational Behavior**

TEXTBOOK: Group Dynamics for Teams, 3rd ed., by Daniel Levi. Sage Publications, Inc. ISBN 978-1-4129-7762-3.

COURSE DESCRIPTION

This course explores the fundamentals of group/team behavior in organizational settings, and the processes and skills essential for the success of individuals as members of groups/teams in contemporary organizations.

COURSE OBJECTIVES

- Understand the complexities and nuances of teams, management, and leadership.
- Form and manage teams, resolve inter-group conflict, provide feedback, and evaluate team member performance.
- Demonstrate the ability to function as a member of a high performing team.
- Work in teams to gather and analyze information.
- Present ideas clearly and concisely.

Grading Scale (these are percentages)

A	94-100	B-	80-83	D+	67-69
A-	90-93	C+	77-79	D	64-66
B+	87-89	C	74-76	D-	60-63
B	84-86	C-	70-73	F	0 - 59

Materials for Grading

Quizzes/Tests: 3 at 50 points per test	150
Reflection Surveys (5 at 5pts each)	25
Subject Matter Expert Team Presentation	50
Team Proposed Topic and Organization Form	5
Team Contract	10
Team Research Paper Outline	10
Team Research Paper/Analysis	100
Team Member Evaluations (2 at 10 each)	20
Total points	370

Quizzes/Exams

Tests will typically cover five-seven chapters at a time. Each test will be available on-line and will be located under the learning module during the designated week the test is scheduled. Please note, any articles or video content that is contained within the weekly learning modules may also be included on the tests. Students may do their test "open book" but remember there is a time limitation. Once you start a test you must finish! You can't stop and come back later. Tests have time limits usually between 45-60 minutes. Tests may only be attempted once. No late or make-up test will be accepted – unless there is an extenuating circumstance (ie., death, illness, etc).

Reflection Surveys:

Periodically throughout the course, surveys will be posted within the learning modules for you to complete. These surveys have been incorporated to help students reflect on their attitude associated with the various roles and responsibilities of being a team member. Students are to complete the survey and submit results to their instructor for credit.

Subject Matter Expert Team Presentations:

Students will form small teams of 2-3 members who will be responsible for leading an assigned class discussion. The student group will be responsible for reading the assigned chapter in advance; researching the topic for inclusion of supplemental material that demonstrates application of the topic, and developing the corresponding week's presentation to include: topic learning objectives, agenda, handouts, and/or exercises.

TEAM RESEARCH PAPER/ANALYSIS:

The Team Research/Analysis paper is one of the major assignments required for MGMT 302. This assignment consists of two parts: a written report and presentation. The faculty member will randomly select teams (usually consisting of 5-6 members). The teams will ultimately be responsible for identifying an organization and selecting an appropriate, mutually agreeable, business related topic that will serve as the basis for their research. Each team will then be responsible for the following: 1) contacting the organization, 2) conducting primary interviews with the organization's employees/representative(s) related to the topic, 3) securing specific, relevant data and information related to the topic and company, 4) conducting an in-depth analysis of the information gathered, 5) identifying 3-4 potential alternatives or solutions that address the core problem, and 6) developing a final, team "recommendation".

Note: the organization and topic must be approved by your instructor. It is highly recommended that a team choose, for example, a team member's current or past employer/organization). The team research paper should be at least 10 pages, but not more than 15 typewritten double-spaced pages, excluding the bibliography, title page, table of contents, references, and applicable appendices, page. **A minimum of ten (10) references are required.** Note, Wikipedia reference is not an acceptable source to use. Points will be deducted if it is used as a reference. The project will be graded based on content, grammar, spelling, and punctuation... **as well as APA format.** The team will submit an original typed written copy of the research paper to the instructor the day of their presentation and must also submit a copy through the SafeAssign tool which is located within our Ferris Connect course.

Research Paper Format:

- I. **Introduction** (Organization)
- II. **Problem Statement:** (Reason for selecting the research topic)
- III. **Research Findings** (Specific, relevant, detailed facts that support a situation analysis)
- IV. **Alternatives** (Identify 3-4 alternatives; keep in mind, the first alternative could be "no change". Also include any advantages/disadvantages and associated costs with respect to available resources, culture, etc.)
- V. **Recommendation** (Select the most viable alternative)
- VI. **Conclusion**

TEAM MEMBER CONTRACTS:

Each team will be responsible for developing their own team contract. The team contract should include the following information: Team Name, Members, Contact Information, Team Research Topic, Company, Project Learning Outcomes, Member Assignment of Duties, and Project Schedule.

TEAM MEMBER EVALUATIONS

Peer evaluations provide an opportunity for each group member to assess and report the effectiveness of his or her group/team peers in critical performance areas (attendance, cooperation, dependability, etc.). A self and team member written report of learning related to group and team processes will be required for the chapter subject matter expert facilitation and team research analysis assignments. Information listed below should be included in your report.

- The strengths and/or weaknesses of each team member
- Your strength and/or weaknesses as a team member and/or leader
- What you did specifically to enhance your value as a team member
- The suggested grade that you would give to each team member based on the evaluation guide given in class.

TEAM POLICY- "FIRING A TEAM MEMBER".

All team members are expected to fully and equally contribute to the Team Research Assignment. If a member is not contributing, the team is expected to communicate in writing the team's expectations as described in the team contract regarding missed assignments or deadlines. If after notice, the team member fails to adequately respond, your team can recommend firing the non-performing team member. In order to make this recommendation, your group must reach consensus on this decision and send me your recommendation along with the supporting documentation and rationale. I will make the final decision regarding the "firing" of the non-performing team member and communicate my decision to your entire team. Please note, failure to communicate that a team is having problems with a member on a timely basis could potentially jeopardize the entire team's grade.

Academic Integrity/Dishonesty:

Each student is expected to present his or her own work. All papers, examinations, and other assignments must be original or explicit acknowledgment must be given for the use of other person's ideas or language. Students must cite their sources using the publication manual of the American Psychological Association (APA) for information that is not their original thought. **A zero will be given if plagiarism is detected for an assignment. There will be no exceptions for this policy. Additionally, an assignment that exceeds the 15-20% amount of directly quoted information (word-for-word information), even though properly cited using the APA format, will receive substantial deductions. Papers that are submitted should be written professionally. This can be accomplished by using the student's original thoughts and appropriately paraphrasing, using the APA format, for all assignments (paper, discussion questions, exams, etc.).**

Examples of plagiarism as it might occur in term papers or research projects, and other written assignments are listed below:

- Failure to use quotation marks: All work which is quoted directly from a source should be enclosed in quotation marks and followed by a proper reference giving the exact page or pages from which the quote is taken.
- Failure to use the quotation marks, even if a footnote is provided, is plagiarism.
- Failure to document ideas: When a student uses one or more ideas from and/or paraphrases a source, he or she must give the exact page or pages from which the ideas or paraphrasing were taken.
- Failure to provide an exact reference is plagiarism. False documentation: Falsifying or inventing sources or page references is plagiarism.

Academic dishonesty includes plagiarism, cheating, forgery, or other acts. Cases of academic dishonesty may be referred to the Student Discipline Committee. The usual penalty for academic dishonesty can include failing the course through expulsion from the University.

COURSE CALENDAR

WEEK	CHAPTER MATERIAL	ASSIGNMENTS DUE
Beginning		
Week 1 August 26	Course Introduction Ch 1: Understanding Teams Ch 2: Defining Team Success	Form "subject matter expert" teams
Week 2 Sept 2	Ch 3: Team Beginnings Ch 4: Understanding the Basic Team Process	*Form "Research Project" Teams
Week 3 Sept 9	Ch 5: Cooperation and Competition	Submit proposed research topic and company.
Week 4 Sept 16	Ch 6: Communication	
Week 5 Sept 23	Ch 7: Managing Conflict	Complete Quiz 1 (Chpt 1-7)
Week 6 Sept 30	Ch 8: Power & Social Influence Ch 9: Decision Making	*Research Team Time Submit Team Research Member Contract
Week 7 Oct 7	Ch 10: Leadership	
Week 8 Oct 14	Ch 11: Problem Solving	
Week 9 Oct 21	Ch 12: Creativity	Quiz 2 (Chpt 8-12)
Week 10 Oct 28	Ch 13: Diversity	
Week 11 Nov. 4	Ch 14: Team, Organizational, and International Culture	Submit Detailed Team Research Paper Outline
Week 12 Nov. 11	Ch 15: Virtual Teams	
Week 13 Nov 18	Ch 16: Evaluating and Rewarding Teams Ch 17: Team Building and Team Training	Quiz 3: (Chpt 13-17)
Week 14 Nov 25	Work on Completing Team Research Paper - No Class Thursday, November 28 (Thanksgiving)	*Virtual Research Team Time
Week 15 Dec 2	Team Research Presentations	Team Research Paper and Evaluations Due Day of Scheduled Presentation.
Week 16 Dec 9	Team Research Presentations	Team Research Paper and Evaluations Due Day of Scheduled Presentation

*Schedule subject to changes as determined and deemed appropriate by the instructor.

MASTER COURSE OUTLINE

Course Identification:

Prefix:	Number:	Title:
MGMT	305	Supervision & Leadership

Course Description:

Provides an opportunity to review and understand the characteristics and qualities required for effective leadership in contemporary organizations; complements traditional teaching methods with role playing, case studies, and exercises. Pre-Requisites: Second Semester Sophomore Status. Typically Offered Fall, Spring, Summer

Course Outcomes and Assessment Plan:

Students will demonstrate familiarity with:

- Learning Outcome 1: Assess and create a plan to develop individual leadership skills and behaviors to improve personal and professional performance.
- Learning Outcome 2: Analyze and identify leadership concepts and styles, discipline, emotional intelligence, expectations and rewards.
- Learning Outcome 3: Increase the student's awareness in terms of their own strengths (or areas needing improvement) as a leader.
- Learning Outcome 4: Determine plans for the leadership and management functions by applying critical thinking and problem solving skills through qualitative analysis.
- Learning Outcome 5: Exhibit a high level of communication capabilities, including oral, written and non-verbal.

Course Outline Including Time Allocation:

Topic Outline	Contact Hours
I. Supervisors Special Role	4
II. Management Concepts	4
III. Management Functions	4
IV. Communications	4
V. Change and Stress	4
VI. Motivation	4
VII. Groups	4
VIII. Leaderships and Selection	4
IX. Training and Appraisal	4
X. Union and Discipline	4
XI. Intro/Review/ Exams	5
	Total 45 hours

individual assignments. This effort will total at least 90 hours over the course of the semester.

- You should organize your remaining time to roughly correspond with the point value of each major assignment.

These guidelines may not reflect the actual amount of outside time that you – as a unique individual with your own learning style – will need to complete the course requirements. The number of hours each week will vary based on assignment due dates, so please plan ahead to ensure that you schedule your academic, work, and personal time effectively.

LEARNING METHODOLOGIES

Each class participant is expected to read materials and chapter assignments prior to class. All course related materials – syllabus, notes, etc. – will be available on the FerrisConnect course page. Please familiarize yourself with the system as each student will be responsible for obtaining the electronic notes through that system. Applications of the concepts will include, case studies, exercises (in-class and online) and videos.

WRITTEN WORK EXPECTATIONS

All written work for MGMT 305 must be presented in professional style, and follow basic principles of effective written communication. Assignments:

1. Must be typed and the length should be at least the page requirement stated, but no more than the assignment states.
2. Typed in Arial or Times New Roman 12 point font with 1" margins on all pages. Assignments that contain extra spacing, within the document, will be penalized.
3. Your name must be on the first page along with the assignment number.
4. Each student needs to supply the instructor with a printed copy and electronic copy of each individual assignment. One copy per team is needed for the team assignments. All assignments are due prior to or at the beginning of class (not during class). Assignments submitted during class will automatically receive a 20% deduction in the score. See the late policy below. The electronic copy of the same assignment needs to be submitted via the Safe Assignment link provided in the Ferris Connect system on the date the assignment is due.

CLASSROOM COURTESY

The instructors intend to give full, uninterrupted attention to student questions, answers, opinions and comments. Students are expected to give the same courtesy to the instructor and their fellow students. Cell phones, PDA's, IPODS, MP3's, etc. devices should be turned off so as to not to create a distraction. Ringing, beeping, buzzing, vibrating, singing electronic devices are a distraction in class (not to mention rude). Please drop the course, if you think you cannot be away from your phone or iPod for 3 hours per week. Texting, checking your phone, or answering your phone (this includes leaving class to check them) will result in you being asked to leave for the day.

If disruptive classroom behavior (coming in and out of class, side-conversations, rude remarks, disrespectful behavior to fellow students or instructor) is observed, you will be asked to leave the classroom for these types of situations as well.

SANCTIONS

Academic dishonesty includes plagiarism, cheating, forgery, or other acts that deceive or defraud in regard to a student's own academic work or that of others. Questions of academic dishonesty are reviewed by the Dean of the College responsible for the courses in which they occur. When necessary, cases of academic dishonesty may be referred to the Student Discipline Committee. The usual penalty for academic dishonesty is failure in the course on the first offense and expulsion from the University on the second offense.

PLAGIARISM

Each student is expected to present his or her own work. All papers, examinations, and other assignments must be original or explicit acknowledgment must be given for the use of other person's ideas or language. Students must cite their sources using the publication manual of the American Psychological Association (APA) for information that is not their original thought. **A zero will be given if plagiarism is detected for an assignment. There will be no exceptions for this policy. Additionally, an assignment that exceeds the 15-20% amount of directly quoted information (word-for-for information), even though properly cited using the APA format, will receive substantial deductions. Papers that are submitted in both the undergraduate level courses should be written professionally. This can be accomplished by using the student's original thoughts and appropriately paraphrasing, using the APA format, for all assignments (paper, discussion questions, exams, etc.).**

Examples of plagiarism as it might occur in term papers, research projects, laboratory reports, and other written assignments are listed below.

Failure to use quotation marks: All work which is quoted directly from a source should be enclosed in quotation marks and followed by a proper reference giving the exact page or pages from which the quote is taken.

Failure to use the quotation marks, even if a footnote is provided, is plagiarism.

Failure to document ideas: When a student uses one or more ideas from and/or paraphrases a source, he or she must give the exact page or pages from which the ideas or paraphrasing were taken.

Failure to provide an exact reference is plagiarism. False documentation: Falsifying or inventing sources or page references is plagiarism.

LATE ASSIGNMENTS

All assignments must be submitted on schedule. The assignments need to be submitted in class and in Blackboard using the Safe Assignment link. The assignments need to be completed using Microsoft Office-compatible software. Assignments that are not received on the due date and without an approved extension, will receive a reduction of 20% each day for three days. After three days they will no longer be accepted for credit. Students should use proper time management to ensure assignments are submitted on the specified due date. **An assignment is considered one day late if it is turned in after the start of the class period.**

PARTICIPATION AND ATTENDANCE

Regular attendance and punctuality are expected and necessary to attain maximum success in your studies and course grade. Regular class attendance is the obligation of each student, and, due to the lecture/discussion format of the class, attendance is highly recommended. Participation points will be based on the student's overall contribution to the class through discussions and in-class exercises. Please see the instructor in the event of extenuating circumstances.

When participating in this course, it is essential that we maintain a professional demeanor that is consistent with what is expected in the corporate workplace. Disagreeing with another's opinion is fine – it's okay to "agree to disagree" - however, the professionalism of the conversation tone and manner needs to be upheld. It is my objective that you not only learn the principles presented in the class, but you learn from each other.

TEAM POLICIES - FIRING A TEAM MEMBER

All team members are expected to fully and equally contribute to group assignments. If at any time, your team members are experiencing problems with a member of your group who is not contributing, you can recommend firing that member. In order to make this recommendation, your group must reach consensus on this decision and send me your recommendation along with the supporting rationale. I will make final decisions and communicate my decision to your team in a timely manner.

Once a team member is fired from a group, he/she must interview with other teams to find a new group to work with for the rest of the semester. This must be done quickly since the team should be concentrating on completing portions of the project weekly. If no other teams want to hire the new group member, than he/she will work independently for the remainder of the semester. If I do not hear from teams regarding a termination request, I will assume your teams are performing effectively.

CLASS CONTINGENCY PLAN

The class will continue to meet online through the FerrisConnect system in the event of a university declared emergency. It is highly advised that students familiarize themselves with the system features and functionality to assist in preparation for an occurrence of this type of situation.

ASSIGNMENTS

Your final grade will be determined using the following weights with no rounding of the final average.

Points are deducted for late assignments. See Late Assignment Policy.

Assignments	Percent
Team Case Analysis Report	10%
Team Case Analysis Presentation	10%
Leadership Interview	10%
Individual Development Plan	5%
Individual Development Plan and Report	15%
Discussion Questions and Online Participation	22.5%

Class Points	Letter Grade
95 -100	A
90 – 94	A-
87 – 89	B+
83 – 86	B
80 – 82	B-
77 – 79	C+

Each student will complete the self-quiz that will be provided in class. The IDP will be developed by selecting your top three development areas (your lowest scoring items) and submitted to the instructor per the syllabus schedule. You may view the sample IDP that is posted in FerrisConnect for reference.

INDIVIDUAL DEVELOPMENT REPORT

The student will complete an IDP report stating how he/she addressed and subsequently worked on and/or accomplished the outlined developmental goals in the initial IDP during the semester that they are enrolled in the MGMT 305 course. Each student needs to provide a copy of the initial IDP with the 5-7 double spaced pages. The report needs to be typed in 12 point times new roman font and 1" margins describing their continuous improvement initiatives and/or success in the three specific areas. The initial IDP does not count as one of the 5-7 pages of the report requirement. The IDP report is due per the syllabus schedule.

DISCUSSION QUESTIONS

The student is required to respond to the topic-related discussion questions that are given each week in Ferris Connect. The responses to the questions are due no later than **Sunday, at 11:59 p.m.** of each week. Each student is required to submit the weekly discussion question response(s) via the discussion board forum. A textbook definition is not an adequate, complete response for the questions proposed. Also, The Wikipedia reference is not an acceptable source to use. Grading of responses will be based on supporting and substantiating your claims through personal experiences, content, grammar, and punctuation. A specific length is not required however, good responses are usually at least two –three paragraphs per question, are well thought out and add value to the class discussion.

PARTICIPATION

Online Participation Points: The following guidelines will be employed when grading online or Ferris Connect participation points. All students will be expected to provide noteworthy responses to two (2) of their peer’s responses. The post should include what the student learned and where he/she saw or heard similar principles applied. All participation is due no later than **Sunday, at 11:59 p.m.** of each week.

Based upon the individual student’s participation, a grade will be awarded to each student by the instructor at the end of each week following the grade scale discussed below. The participation grade will be based on the quality and quantity of the individual responses to the online FerrisConnect discussions (see criteria below).

Posting Quality Rating	Examples
High	Original thoughts not already contained in the threaded discussion Cited examples/ideas from the Professional sources/Personal experience – please list the URL that you have referenced

	Agreement/Disagreement with other postings and including a strong reason why
Fair	Some original thoughts/some repeat of what has already been listed in the threaded discussion.
Weak	I agree/disagree with no reason/explanation/etc.

In Class Participation: Sharing your personal and/or professional work experiences will enhance class sessions and is necessary for the practical skills we will apply in class. Therefore, attendance is essential. You are advised to withdraw from the class if you anticipate missing more than two classes, especially if they occur on days that we will be discussing the cases. The in-class participation grade will be based upon the individual student's in-class participation - quality and quantity of the individual participation during class sessions.

Peer Review Participation: The peer review participation grade will be based on your performance within your team by your teammates

In Class Participation: Sharing your personal and/or professional work experiences will enhance class sessions and is necessary for the practical skills we will apply in class. Therefore, attendance is essential. You are advised to withdraw from the class if you anticipate missing more than two classes, especially if they occur on days that we will be discussing the cases. The in-class participation grade will be based upon the individual student's in-class participation - quality and quantity of the individual participation during class sessions.

Peer Review Participation: The peer review participation grade will be based on your performance within your team by your teammates

TEAM RESEARCH COMMUNITY SERVICE PROJECT

Each team or individual will choose an organization to conduct their team research community service project. Each student will be expected to work a minimum of 5 hours on a community service project. A form signed by the project sponsor (member of the community service organization) needs to be included and turned in with the presentation. Please see FerrisConnect for more information regarding the assignment requirements.

MAKE-UP PROJECTS, ASSIGNMENTS, PRESENTATIONS, etc.

There will be no make-up projects or presentations, unless the absence has been approved by the instructor prior to the exam. In case of emergency, you must, **prior to any assignment, presentation, etc.**, contact the instructor or leave a message with the department. There will be no make-ups for "no shows".

COURSE CALENDAR – TENTATIVE SCHEDULE . The instructor reserves the right to adjust the syllabus to better serve the overall learning needs of the class.

WEEK	CHAPTER MATERIAL	ASSIGNMENTS DUE
Week 1	Introduction to the Course	
Aug. 26	Chapter 1: What Does It Mean to Be a Leader?	Online Discussion Questions and Participation Due Sept. 1

Week 2	NO CLASS: Sept. 2 – UNIVERSITY HOLIDAY	
Sept. 2	Team Formations	Online Discussion Questions and Participation Due Sept. 8
Week 3	Chapter 10: Leading Teams	Online Discussion Questions and Participation Due Sept. 15
Sept. 9		
Week 4	Chapter 2: Traits, Behaviors, and Relationships	
Sept. 16	Chapter 4: The Leader as an Individual	Online Discussion Questions and Participation Due Sept. 22
	Case Analysis – Devereaux-Dering Group (Chapter 10)	Case Analysis Paper and Presentation Due Sept. 18
Week 5	Chapter 3: Contingency Approaches	Online Discussion Questions and Participation Due Sept. 29
Sept. 23	Case Analysis – Environmental Designs International (Chapter 4)	Case Analysis Paper and Presentation Due Sept. 25
		IDP Due Sept. 25
Week 6	Chapter 5: Leadership Mind and Heart	Online Discussion Questions and Participation Due Oct. 6
Sept. 30	Chapter 6: Courage and Moral Leadership	
	Case Analysis – Alvis Corporation (Chapter 3)	Case Analysis Paper and Presentation Due Oct. 2
Week 7	Chapter 7: Followership	Leadership Interview Due Oct. 9
Oct. 7	Employee Recruitment, Selection, Orientation and Training (See notes in Blackboard)	Online Discussion Questions and Participation Due Oct. 13
Week 8	Employee Recruitment, Selection, Orientation and Training (See notes in Blackboard)	Online Discussion Questions and Participation Due Oct. 20
Oct. 14	Case Analysis – Sycamore Pharmaceuticals (Chapter 6)	Case Analysis Paper and Presentation Due Oct. 14
	NO Face to Face CLASS Oct. 16 (Wed.)– NACRA Conference – Use Virtual recordings in Week 8 Learning Modules	
Week 9	NO Face to Face CLASS Oct. 21 (Mon.) – NACRA Conference – Use Virtual recordings in Week 9 Learning Modules	Online Discussion Questions and Participation Due Oct. 27
Oct. 21	Chapter 9: Leadership Communication	
Week 10	Chapter 8: Motivation and Empowerment	Online Discussion Questions and Participation Due Nov. 3
Oct. 28	Case Analysis: Saddle Creek Deli (Chapter 9)	Case Analysis Paper and Presentation Due Oct. 30
Week 11	Chapter 11: Developing Leadership Diversity	Online Discussion Questions and Participation Due Nov. 10
Nov. 4	Case Analysis: Montego Bay (Chapter 8)	Case Analysis Paper and Presentation Due Nov. 6
Week 12	Chapter 12: Leadership Power and Influence	Online Discussion Questions and Participation Due Nov. 17

Nov. 11	Case Analysis: The Trouble with Bangles (Chapter 11)	Case Analysis Paper and Presentation Due Nov. 13
Week 13	Chapter 13: Creating Vision and Strategic Direction	Online Discussion Questions and Participation Due Nov. 24
Nov. 18		
Week 14	Chapter 15: Leading Change	Individual Development Plan Report Due: Nov. 27
Nov. 25	Case Analysis: Riverside Pediatric Associates (Chapter 15)	Case Analysis Paper and Presentation Due Nov. 27
	Catch up	No Online Discussion Questions or Participation - prepare for presentations
Week 15	Team Community Service Research Presentations start December 2nd	No Online Discussion Questions or Participation - prepare for presentations
Dec. 2		
Week 16	Team Community Service Research Presentations (cont'd) per University Schedule	Presentations: December 12, 2013 10:00-11:40 a.m.
Dec. 9		

Final Note

Subject to changes as determined and deemed appropriate by the instructor.

Appendix A – Assessment of MGMT 305 Outcomes

Outcome				Online Discussion Questions	Case Analysis Report	Case Analysis Presentation	Team Research Community Service Project and Presentation	Leadership Interview	IDP & IDP Report	Participation In -class	Peer Review
Learning Outcome 1: Assess and create a plan to develop individual leadership skills and behaviors to improve personal and professional performance.							X		X		
Learning Outcome 2: Analyze and identify leadership concepts and styles, discipline, emotional intelligence, expectations and rewards.	X	X	X				X	X		X	
Learning Outcome 3: Develop plans for the leadership and management functions by applying critical thinking and problem solving skills through qualitative analysis.	X	X	X				X	X	X		
Learning Outcome 4: Exhibit a high level of communication capabilities, including oral, written and non-verbal.	X	X	X				X	X	X	X	X

SYLLABUS ATTACHMENT
COLLEGE OF BUSINESS – FERRIS STATE UNIVERSITY

COB VALUES
Learning—Excellence—Respect—Change—Diversity—Integrity—Continuous Improvement

2013 Fall Semester		
Late registration	Wednesday-Friday	August 21, 22, 23
First day of classes	Monday	August 26
Drop/Add (closes at 5:00 PM Thursday)	Monday-Thursday	August 26-29
Labor Day (no classes)	Monday	September 2
Mid-term grades due	Monday	October 21
Last day for "W" grades (full semester)	Thursday	October 31
Thanksgiving recess begins (classes dismiss at noon)	Wed. (noon)	November 27
Thanksgiving recess ends (classes resume)	Monday	December 2
Last day of classes	Friday	December 6
Examination week begins	Monday	December 9
Examination week ends	Friday	December 13
Commencement	Saturday	December 14

CLASS ATTENDANCE IS IMPORTANT!

Many instructors have mandatory attendance policies by which grades will be affected by student absences. To encourage students to be present for the full class period, some instructors have policies about class tardiness. Check your course syllabus or talk to your instructor about their policies.

your course syllabus or talk to your instructor about their policies.

TO CONTACT A FACULTY MEMBER/ADVISOR

If you have questions or need help, talk to your instructor. Faculty office locations, phone numbers, and office hours may be obtained from the class syllabus, department office, MyFSU, or through the College of Business web page at <http://www.ferris.edu/cob>. A faculty directory is also located outside of the dean's office (BUS 200).

DROP/ADD CLASSES (first four days of classes)

Use MyFSU to drop and add classes only during the add/drop time period (ends the 4th day at 5:00 pm). Tuition reimbursement is issued **ONLY** during the first four days of classes.

WITHDRAWING FROM CLASSES-(after 4th day.)

To withdraw from a class, go to your Dean's Office for the **OFFICIAL** paperwork. A "W" grade in the course will go on your transcript. To totally withdraw from the University, **OFFICIAL** paperwork must be filled out at Admissions and Records in CSS

101. The last day to withdraw or drop a class may be different (please review the above dates in chart). In case of medical reasons requiring a complete withdrawal from school, contact Birkam Health Center at 591-2614.

INCOMPLETES

The "I" is only considered for extenuating circumstances that have led to a student's missing a portion of the course. Extenuating circumstances are generally defined as those situations over which the student has little or no control—e.g., illness, birth, jury duty, death of a parent, serious injury. Instructors may require suitable documentation. Please contact your Dean's Office as soon as possible at 591-2420 to keep us informed.

Students must complete at least 75% of the coursework at passing levels before an "I" will be considered. A signed agreement regarding course completion may be required. An "I" grade automatically changes to an "F" after one semester (not counting summer) unless the faculty member files another grade change or extends the incomplete.

The intent and appropriate use of the "I" grade is NOT to avoid student probation, dismissal, or unacceptable grades, nor should it be considered as an extended alternative to withdraw from a class (W).

WHERE TO GO FOR HELP

The following services are available to any Ferris student, free of charge. They are designed to help students succeed in courses, in career planning, and in meeting the challenges of college life. Don't hesitate to explore and use these services at Ferris.

Academic Support Center...ASC 1017 – 591-3543

The Writing Center.....ASC 1017 – 591-2534

The Writing Center, Tutorial Services and Academic Skills Center offer FSU students an array of academic support services, e.g.

- tutoring for many Ferris courses
- individual help and workshops with writing skills and writing assignments for English or other courses
- help in developing better reading and study strategies
- workshops to help you meet the challenges of college life

Scholar Program.....ASC 1025 – 591-5976

SCHOLAR is an academic support program that aids in the student's successful progression by offering a Peer Mentor Program, a Student Retention Program, and an Academic Student Advisory Committee.

Disabilities Service.....STR 313 – 591-3057

Ferris State University is committed to following the requirements of the Americans with Disabilities Act Amendments Act and Section 504 of the Rehabilitation Act. If you are a student with a disability or think you may have a disability, contact the Disabilities Services office at 231.591.3057 (voice), or email ecds@ferris.edu to discuss your request further. More information can be found on the web at <http://www.ferris.edu/htmls/colleges/university/disability/>. Any student registered with Disabilities Services should contact the instructor as soon as possible for assistance with classroom accommodations.

Personal Counseling, Sexual Assault, Substance Abuse

Birkam Health Center - 2nd Floor.....591-5968

Personal counseling is available confidentially and free of charge. Counselors are available to assist with personal and stress-related problems, family and relationship issues, substance abuse, sexual assault, depression, or other similar problems. Call or stop by to obtain an appointment.

Career Counseling.....STR-313 - 591-3057

Educational & Career Counseling Center

Change Academic Programs:

COB Dean's OfficeBUS 200 - 591-2420

Safety

Please observe the posted shelter and evacuation routes in the hallway nearest your classroom.

LIBRARY (FLITE) / COMPUTER LAB HOURS

Please check on MyFSU and click on the FLITE tab.

COMPUTER LAB HOURS (College of Business)

Please call 591-2291 or go to BUS 104 for posted hours.

ACADEMIC MISCONDUCT

Academic misconduct refers to dishonesty or misrepresentation with respect to assignments, tests, quizzes, written work, oral presentations, class projects, internship experience, or computer usage; violation of computer licenses, programs, or data bases; or unauthorized acquisition or distribution of tests or other academic material belonging to someone else.

It includes such behaviors as cheating, copying materials from the internet without documentation, presenting another person's ideas or work as your own, resubmitting work done for previous class without permission, taking someone else's exam for them, violating computer software licenses or program/data ownership, etc. If you are uncertain about whether a particular behavior might represent academic misconduct, be sure to ask your professor for clarification.

Penalties for academic misconduct can include **FAILURE** of the assignment or the course, and/or disciplinary action up to and including probation or dismissal from the University.

DISRUPTIVE BEHAVIOR

The College of Business strives to maintain a positive learning environment and educational opportunity for all students. Consequently, patterns of behaviors which obstruct or disrupt the teaching/learning environment will be addressed. The instructor is in charge of his or her course (e.g., assignments, due dates, attendance policy) and classroom (e.g., behaviors allowed, tardiness). Harassment, in any form, will not be tolerated.

Penalties for disruptive behavior can include involuntary withdrawal from the course and/or disciplinary action up to and including probation or dismissal from the University.

College of Business Department Offices

Acct/Finc and		
Computer Inf. System	BUS 212	591-2434
Management	BUS 212	591-2427
Marketing	BUS 212	591-2426
Sport, Hospitality,		
Entertainment Mgt.	KNO	591-2380
Dean's Office	BUS 200	591-2420
Graduation Secretary	BUS 200	591-2420
Internship Programs	BUS 324	591-3049
Graduate Programs	BUS 200	591-2168

F13 MGMT350-2&3 Syllabus

Nature of the Course

This course is intended to logically relate to the Mission of the College of Business: ...to offer students a diverse array of specialized business programs, involving the latest technologies, in order to create an educated workforce able to contribute to the economic vitality of the state of Michigan and the Nation. .

More specifically, this course will focus on managerial metrics topics; including interpreting financial statements, cost analysis, cash flow analysis, performance benchmarking, capital budgeting, cash management, pricing strategies, cost analysis, raising corporate finance, risk analysis, and corporate valuations. By incorporating text readings, e-discussion, exams, and hands-on numerical problem solving, this course will afford students an opportunity to expand their knowledge of managerial metrics.

Recommended Study Process

Having now a couple years experience with this course, a study process has emerged that reportedly has worked well for many students. It begins with reading over the Key Issues embodied in the relevant section of the course e-Discussions (see course menu button) before undertaking the corresponding reading/study of text materials. These key issues will assist in stratifying the importance of text materials. Then concurrent with your text study, engage in the relevant eDiscussion forum, contributing insights based on your readings and/or professional experiences (see posting guidelines under the e-Discussion menu button). The e-Discussion forums are also a great place to raise questions to clarify any aspect of your studies.

Now... since the Key Issues within the e-Discussions represent the critical technical aspects of the course, it stands to reason that these issues should correspond to the course quiz and exam questions. And indeed they do. To the extent that students' e-Discussion postings collectively and comprehensively address the Key Issues, the resulting discussion threads will form an excellent study guide for the four, 10-question quizzes and the two, 25-question exams.

Finally it should be noted that eDiscussion #1 ties directly to Quiz #1, eDiscussion #2 to Quiz #2, and so on. In turn, Quiz #1 and Quiz #2 tie directly to the Midterm Exam. And it logically follows then that the Final Exam arises out of the four eDiscussions, the four Quizzes, along with the Midterm Exam. And please note that on the rare occasion it has proven necessary to point out that all quizzes and exams are open-book, and open-resource (except for another person, that is!!!)

I hope and trust that this recommended study process, along with the relationship

mapping of the discussions, quizzes, and exams prove helpful in successfully navigating through this course. But... if I've overlooked something and/or there otherwise remain some open issues, please feel free to bring these forward and I will do my best to resolve them.

Course Competencies

By the end of this course, student competence is expected in several key areas of managerial metrics. The readings, discussion and examinations that comprise this course are intended both to develop as well as to demonstrate a student's key competencies as follows:

- 1) Understanding of bookkeeping basics, including key accounts, tax and legal requirements.
- 2) Competency in assessing firm's financial statements to identify, profit levels, cost structure, and liquidity.
- 3) Competency in benchmarking firm's performance against rivals.
- 4) Understanding of developing and controlling capital/expense budgeting processes.
- 5) Understanding of cash management issues.
- 6) Understanding of working capital issues.
- 7) Awareness of cost- and demand-based pricing strategies
- 8) Basic understanding of cost analysis
- 9) Understanding of pro forma development and utilization
- 10) Basic understanding of avenues of corporate finance
- 11) Basic understanding of risk analysis/management
- 12) Basic understanding of corporate valuations
- 13) Basic understanding of key international finance issues

Textbook

Tools for Managerial Decision-Making

Instructor: Dr. C. J. Bolling

Ferris State University

McGraw-Hill/Irwin

ISBN-13: 978-0-390-58358-1

ISBN-10: 0-390-58358-8

Assessment

Assessment will include individual contribution to (4) e-discussions, (4) quizzes, a midterm exam, and a final exam. The quizzes and exams will be in multiple choice form, and they will likely prove of atypical complexity. Collaboration of any form is not permitted!!! From the beginning of the course to its end, students are required to fully participate, and failure to do so may result in dismissal.

Grade Weighting:

Contribution to e-Discussions...	15%
Quizzes.....	20%
Mid-Term Exam	25%
Final Exam	40%

Assignment Schedule

Week 1 (Beginning Aug 26)

Discussion

- Course Administrative Issues
- Introduction to Managerial Metrics

Assignment

- Review Key Issues tied to Quiz 1
- Read Interpreting Financial Statements... p1

Week 2 (Beginning Sept 2)

Discussion

- Interpreting Financial Statements

Assignment

- Read Evaluating Financial Performance... p29

Week 3 (Beginning Sept 9)

Discussion

- Evaluating Financial Performance

Assignment

- Read Cost Behavior... p78
- Quiz #1... Open Sept 13 from 9am to 9pm

Week 4 (Beginning Sept 16)

Discussion

- Cost Behavior

Assignment

- Review Key Issues tied to Quiz #2
- Read Standard Cost & Balanced Scorecard... p124
- Read Budgets & Overhead Analysis... p188

Week 5 (Beginning Sept 23)

Discussion

- Standard Cost & Balanced Scorecard
- Budgets & Overhead Analysis

Assignment

- Read Pricing Products and Services... p267

- Read Pricing to Optimize Revenues... p283
- Quiz #2... Open Sept 27 from 9am to 9pm

Week 6 (Beginning Sept 30)

Discussion

- Pricing
- Capital Investment Decisions

Assignment

- Review Key Issues tied to Quiz #3
- Read Capital Investment Decisions... p235

Week 7 (Beginning Oct 7)

- Capital Investment Exercises & Breakout Session
- Read Capital Budgeting Decisions... p308

Week 8 (Beginning Oct 14)

- Oct 15... Midterm Review
- Oct 17... No Class owing to Midterm Exam

Assignment:

- Midterm Exam... Open Oct 17 @ 9am thru Oct 19 @ 9pm

Week 9 (Beginning Oct 21)

Discussion

- Capital Investment Decisions
- Capital Budgeting Decisions

Assignment

- Read Discounted Cash Flow... p371

Week 10 (Beginning Oct 28)

Discussion

- Discounted Cash Flow

Assignment:

- Read Financial Forecasting... p411
- Read Financial Instruments & Markets... p442
- Quiz #3 Open Nov 1 from 9am to 9pm

Week 11 (Beginning Nov 4)

Discussion

- Financial Forecasting
- Financial Instruments & Markets

Assignment

- Review Key Issues tied to Quiz #4
- Read Risk Analysis... p487

Week 12 (Beginning Nov 11)

Discussion

- Risk Analysis

Assignment

- Read Business Valuation... p536
- Quiz #4 Open Nov 15 from 9am to 9pm

Week 13 (Beginning Nov 18)

Discussion

- Business Valuation

Assignment

- Read International Finance... p581

Week 14 (Beginning Nov 25)

Discussion

- Nov 26... International Finance
- Nov 28... No class owing to Thanksgiving

Assignment

- Study for Final Exam

Week 15 (Beginning Dec 2)

Discussion

- Dec 3... Final Exam Review
- Dec 5... No Class owing to Final Exam Opening

Assignment

- Final Exam Open Dec 5 @ 9am thru Dec 10 @ 9pm

MASTER COURSE OUTLINE

Course Identification:

Prefix: MGMT Number: 373 Title: Human Resource Management

Course Description:

Covers the objectives, functions, and organization of personnel programs; discusses such topics as selection training and development, job analysis, wage and salary administration, performance appraisal, disciplinary systems, employee safety and health, and the collective bargaining process. Pre-Requisites: Sophomore Standing. Typically Offered Fall, Spring, Summer

Course Outcomes and Assessment Plan:

Learning Outcomes:

- Outcome 1 Discuss the evolution of human resource management in organizations.
Assessment Methods: Examinations and class participation, a combined average of 75% or above on all assignments and examinations.
- Outcome 2 Assess the effectiveness of and apply the laws affecting the employment relationship.
Assessment Methods: Examinations, written assignments and class participation all require a combined average of 75% or above.
- Outcome 3 Understand the process of job analysis in creating legal job descriptions/specifications.
Assessment Methods: Examinations, written assignments and class participation all require a combined average of 75% or above.
- Outcome 4 Assess and select various methods of recruiting a pool of qualified applicants.
Assessment Methods: Examinations, written assignments and class participation all require a combined average of 75% or above.
- Outcome 5 Evaluate and select reliable and valid selection devices (e.g. employment tests, interviews, etc.).
Assessment Methods: Examinations, written assignments and class participation all require a combined average of 75% or above.
- Outcome 6 Evaluate various methods of training and development.
Assessment Methods: Examinations, written assignments and class participation all require a combined average of 75% or above.
- Outcome 7 Apply the concepts of reliability and validity to the methods and process of performance appraisal.
Assessment Methods: Examinations, written assignments and class participation all require a combined average of 75% or above.
- Outcome 8 Understand the various methods of compensation and the advantages and disadvantages of each.
Assessment Methods: Examinations, written assignments and class participation all require a combined average of 75% or above.
- Outcome 9 Analyze various employee benefit options and articulate the advantages and disadvantages of each from both the employee and employer perspectives.
Assessment Methods: Examinations, written assignments and class participation all require a combined average of 75% or above.
- Outcome 10 Understand the function and importance of safety and health issues in today's workplace.
Assessment Methods: Examinations, written assignments and class participation all require a combined average of 75% or above.

Course Outline Including Time Allocation:

Introduction to Personnel: An Overview	4
The External and Internal Environment	4
Job Analysis	4
Human Resource Planning, Personnel Recruitment	4
Selection Process	4
Training and Development: Macro and Micro Level	4
Performance Appraisal	4
Compensation	4
The Labor Union: Collective Bargaining & Discipline and the Grievance Process	4
Nonunion Organizations & Personnel Research	4
Review/Exams	5
Total Hours	45

HUMAN RESOURCE MANAGEMENT
MGMT 373 Section 002
Fall 2013

Professor: Carol Rewers, Ph.D.

Campus Office Location: BUS 358

Campus Office Phone: (231) 591-2447

E-Mail: FerrisConnect Course

Campus Office Hours – M & W 11:00-1:00pm

Other hours are available by appointment at a mutually convenient time, although most questions can be handled via email or phone.

Text:

Bohlander, G., & Snell, S. (2013). Managing Human Resources (16th ed.). Cincinnati, OH: South-Western.

Course Description:

This course provides an overview of the functional roles and responsibilities associated with Human Resource Management. Topics covered include: Strategic Human Resource Management, review of EEOC Laws, recruitment and selection, job analysis, training and development, compensation and benefits, performance appraisal, disciplinary systems, employee safety and health, and the collective bargaining process.

Learning Objectives and Outcomes:

By the end of this course the student should be able to demonstrate an understanding of the course outcomes described below as evidenced by regularly engaging in class discussions, completion of examinations, and through their submission of written cases/research assignments.

1. Discuss the evolution of human resource management in organizations.
2. Identify relevant laws affecting the employment relationship.
3. Understand the process of job analysis in creating legal job descriptions/specifications.
4. Assess and select various methods of recruiting a pool of qualified applicants.
5. Describe various employment tests, interviews, etc.
6. Identify various methods of training and development.
7. Understand the various methods of compensation and the advantages and disadvantages of each.
8. Analyze various employee benefit options and articulate the advantages and disadvantages of each from both the employee and employer perspectives.
9. Understand the function and importance of safety and health issues in today's workplace.
10. Evaluate the impact of unionization on both union and nonunion organizations.
11. Understand the role and process of synthesizing the various human resources systems in support of the organization's objectives.

Grading:

Final grades in this course will be calculated based on the total points earned as a percentage of the total possible points. This also allows students to calculate their standing at any given point in time by dividing the points earned to date by the total possible points to date (Example: 550 points earned / 730 total possible points = 75.3% = "C"). The total points available are allocated as follows:

Weekly Quizzes (14 x 20)	280
Exam(s) (3 *100pts/exam)	300
Assignments:	30
Resume Writing – 10 pts	
Cases –TBD– 20 pts	
Activities –	
Job Fair –Thurs. Oct. 17	10
Team Research Project:	
Team Contract	5
Research Paper Outline	5
Final Research Paper & Presentation	100
In-Class Extra Credit (1-10)	<u> ?</u>
Estimated -Total Possible Points	730*

Letter grades are assigned as follows:

94 – 100	A	74 – 76	C
90 – 93	A-	70 – 73	C-
87 – 89	B+	67 – 69	D+
84 – 86	B	64 – 66	D
80 – 83	B-	60 – 63	D-
77 – 79	C+	0 – 59	F

Exam/Quizzes:

Quizzes are administered on line via FerrisConnect. A total of 14 quizzes will be taken throughout the semester plus three (3) exams to be administered in seat. Each online quiz will cover a chapter. The three in-class exams will be drawn from material covered in the text, articles distributed, videos, guest speakers, and/or any other materials covered throughout the course. Each exam will typically cover approximately 5 or 6 chapters. Tests normally will consist of T/F, multiple choice, and/or short essay.

****Please Note:** If you know you will absent from class when an assignment or exam is due, please make arrangements to complete the assignment or exam in advance of the original due date. Make-up quizzes/exams will only be given with prior approval from the professor and only in the most extenuating circumstances (e.g., death in the immediate family, hospitalization, etc.) -otherwise no late or make-up quizzes/exams or assignments will be accepted.

Assignments/Cases:

Throughout the semester, you will be given assignments and/or cases. The exact length of written response to each assignment or case will vary. The format for assignment/case submissions is as followed:

- All assignments or cases must be **typed**: single spaced, using standard 12 point font. **Points will be docked for all non-typed written submissions.**
- Include a cover sheet for the case: identifying the course, assignment or case title, date submitted, and list of student names (first and last) who participated in the assignment or case.
- Type out the question # and complete question. Your response to case questions should be well reasoned and defensible from both a legal and/or logical standpoint.
- A hardcopy of your assignment/case is due at the beginning of the hour based on the due date given in class.

TEAM RESEARCH PAPER/PROJECT:

The Team Research Project is one of the major assignments required for this course. The team (usually consisting of 5-6 members) will be responsible for contacting an organization and through interviews and/or a site visit analysis how the organization applies the HR topic selected. The organization and topic must be approved by the instructor. This project is designed to provide students the opportunity to explore in further detail topics related to chapter readings. Topics may include, but are not limited to:

- Recruitment/Retention
- Employee Selection
- Staffing and Scheduling
- Training and Development
- Employee Performance Appraisals
- Compensation
- Employee Benefits
- Layoffs/Unemployment
- Workers Comp.
- Health and Safety –OSHA, MIOSHA
- Discipline and Employee Rights
- Labor Relations

The team research paper will consist of a well crafted 10-15 page typewritten report, excluding the bibliography, title, table of contents, etc. page. A minimum of five references is required. Wikipedia references are not an acceptable source to use. Points will be deducted if it is used as a reference. The paper must be typed according to APA guidelines. The Publication Manual of the American Psychological Association (APA) should be consulted for specific APA rules. The project will be graded based on content, grammar, spelling, and punctuation...**as well as APA format. The team will submit a hard copy of the research report to the instructor and also through the Ferris Connect's Safe Assignment course link.** The report must be written to include the following:

I. **Group Report** – Written analysis prepared and edited based on gp. input and consensus.

General format: APA

1. Cover Page –
 - a. Topic/Company – Title
 - b. Group members names
 - c. Course Name/Section Number
 - d. Instructor's Name
2. Double spaced, Times New Roman 12 font, 1 inch margins
3. Page numbered

Report Content:

1. Company Introduction – brief overview, size, scope, products and services provided, number of employees, size of HR department.
2. Reason for selecting the particular HR topic chosen.
3. Interview and Research Findings -specific company related findings on the subject selected. In-depth analysis of findings. Provide written company documentation to support your research findings.
 - a. Policies, Procedures
 - b. Charts, Graphs
 - c. Sample Materials – (i.e., training materials, videos, etc.)
4. Based on the team's research, are there problems or issues that have been identified? If so, what are they, identify potential alternatives, and any specific recommendation(s) your team has to improve the company's HR department/policies/practices? Be specific.

II. **Presentation** - Each team should develop a 15 minute presentation that outlines and describes the team's research findings pertaining to their topic and company. The group presentation must be professional, including appropriate attire and visuals aides (PowerPoints). Keep in mind, time should be allotted to respond to audience questions.

TEAM MEMBER CONTRACTS:

Each team will be responsible for developing their own team contract. The team contract should include the following information: Team Name, Members, Contact Information, Team Research Topic, Company, Team Member expectations (norms), Member Assignment of Duties –Section(s) assigned, Project Schedule.

TEAM POLICY- "FIRING A TEAM MEMBER".

All team members are expected to fully and equally contribute to the Team Research Assignment. If a member is not contributing, the team is expected to communicate in writing the team's expectations as described in the team contract regarding missed assignments or deadlines. If after notice, the team member fails to adequately respond, your team can recommend firing the non-performing team member. In order to make this recommendation, your group must reach consensus on this decision and send me your recommendation along with the supporting documentation and rationale. I will make the final decision regarding the "firing" of the non-performing team member and communicate my decision to your entire team. **Non-performing team members will receive a zero on the assignment.** Please note, failure to communicate that a team is having problems with a member on a timely basis, and in advance of the research projects due date, could potentially jeopardize the **entire** team's grade.

Academic Integrity/Dishonesty:

Each student is expected to present his or her own work. All papers, examinations, and other assignments must be original. Students must cite their sources (another person's ideas, language, materials) using the publication manual of the American Psychological Association (APA) for information that is not their original thought. **A zero will be given if plagiarism is detected for an assignment. There will be no exceptions for this policy. Additionally, an assignment that exceeds the 15-20% amount of directly quoted information (word-for-word information), even though properly cited using the APA format, will receive substantial deductions.**

Examples of plagiarism as it might occur in term papers or research projects, and other written assignments are listed below.

Failure to use quotation marks: All work which is quoted directly from a source should be enclosed in quotation marks and followed by a proper reference giving the exact page or pages from which the quote is taken.

Failure to use the quotation marks, even if a footnote is provided, is plagiarism.

Failure to document ideas: When a student uses one or more ideas and/or paraphrases a source, he or she must give the exact page or pages from which the ideas or paraphrasing were taken.

Failure to provide an exact reference is plagiarism. False documentation: Falsifying or inventing sources or page references is plagiarism.

Academic dishonesty includes plagiarism, cheating, forgery, or other acts. Such cases of academic dishonesty may be referred to the Student Discipline Committee. The usual penalty for academic dishonesty can include failing the assignment, the course, through expulsion from the University.

Classroom Expectations:

It is my hope that we can develop a classroom environment that is interactive and fosters meaningful dialogues. To promote such a learning environment, individuals will be held accountable for complying with the following course expectations and classroom behaviors. I expect everyone to arrive on time and be fully prepared for class discussions. This means having read all assigned materials. As a courtesy to others, use of cell phones, ipods, ipads, or other electronic devices is not permitted during class time. Socializing while class is in session; wandering in and out of the classroom; talking while others are speaking or presenting an idea; or arguing in a way that is rude or disrespectful to the instructor or other students will not be tolerated.

Tentative Draft Schedule:

Week #	Week Beginning	Topics:
1	8/26	Syllabus/Orientation CH 1: The Challenge of Human Resources Management
2	9/2	CH 2: Strategy and Human Resource Planning
3	9/9	CH 3: Equal Employment Opportunity and Human Resources Management
4	9/16	CH 4: Job Analysis, Employee Involvement, and Flexible Work Schedules
5	9/23	CH 5: Expanding the Talent Pool: Recruitment and Careers
6	9/30	Exam I (Ch 1-5) Team member Contract Due
7	10/7	CH 6: Employee Selection CH 7: Training and Development
8	10/14	CH 8: Appraising and Improving Performance *Career Fair – Thursday, Oct. 17th – 11am- 3pm Wink Sports Complex
9	10/21	CH 9: Managing Compensation CH 10: Pay-for-Performance: Incentive Rewards
10	10/28	Exam 2 (Ch 6-10) Team Research Paper Outline Due
11	11/4	CH 11: Employee Benefits
12	11/11	CH 12: Safety and Health
13	11/18	CH 13: Employee Rights and Discipline
14	11/25	CH 14: The Dynamics of Labor Relations Note: No class after Noon on Wed. 11/27 – Thanksgiving Holiday
15	12/2	Team Research Paper & Presentations
16	12/9	Exam 3 (Ch 11-14)-TBD

*****Professor reserves the right to make needed and appropriate adjustments to this syllabus

MASTER COURSE OUTLINE

Course Identification:

Prefix: MGMT **Number:** 447 **Title:** Business Ethics-Social Responsibility

Course Description:

The course focuses on two emergent issues for businesses, business ethics and corporate social responsibility, and especially upon those situations that require moral reflection, judgment, and decision; examines contemporary concepts of business ethics and social responsibility; explores current problems that require moral and ethical reasoning. Pre-Requisites: Junior or Senior status. Typically Offered Fall, Spring, Summer

Course Outcomes and Assessment Plan:

Students will demonstrate familiarity with:

Students will be able to identify situations, analyze opinions and or actions, and appraise the situation in an ethical and socially responsible format. The main purpose of the class is to have the students take these steps by recognizing the events and taking the time to evaluate the issue or action.

Assessment Method:

Students will engage in discussions of ethical dilemmas, from a business perspective through the use of videos and articles. Consideration will be given to the economic, legal, moral and philanthropic aspects of decision criteria. Discussions in an on-line environment will provide different points of view for students and they are required to support their contentions with outside material from what is assigned.

Criterion for Success:

Students must achieve a score of 75 on a scale of 100 for the sum of all graded discussions. Rubrics will be given for all written assignments, which will be submitted through Ferris Connect. These discussions are identified as postings and comments. A posting is their feeling concerning the concept and the comments are in reply to other students. Participation is mandatory to achieve a passing grade.

Course Outline Including Time Allocation:

Topic Outline

Contact Hours

Week 1. Introduction to business ethics and social responsibility; identification of the forces in the internal and external environment.	3
Weeks 2-7. Concentration on the concept of ethical decision making; integration of cases and exercises; test and quizzes (1.5 hours)	18
Weeks 8-13. Concentration on the concept of social responsibility; integration of cases and exercises; test and quizzes (1.5 hours)	18
Weeks 14-15. Student presentations of research and/or cases	6
Total Hours	45

Management 447 @ Ferris State University

Business Ethics and Social Responsibility

Professor: David M. Marion, PhD, PMP

Office: BUS 342, appointments can be made if required

Cell Phone: 616-951-1299, please be conscious of the time when calling

E-mail: mariond@ferris.edu (email me here rather than online for fastest response)

Pre-Requisites: *junior or senior status*

Text: Business Ethics 12/13 by Richardson and Kehoe; ISBN: 978-0-07-352872-4

Course Description: The course focuses on two eminent issues concerning business, ethics and corporate social responsibility. There will be a focus on situations that require moral reflection, personal judgment and decision. Throughout this class you will review contemporary cases of business ethics and social responsibility that explore the depths of moral and ethical reasoning.

Learning Outcome: The students will identify, communicate and critique the various stakeholders in a moral or ethical situation, in reference to a business situation. Each stakeholder will be examined for their interest in the matter, their strength of conviction, their influence and ability to affect the outcome of the situation. A student will compare and/or contrast the various decision criteria used to make moral or ethical decisions, defending the student's specific conclusions.

Learning Outcome Assessment: conducted through class discussion and online discussions of cases, videos, and articles. Students will create postings concerning ethical and social occurrences.

Grading: This will be based the discussions carried out within Blackboard. The discussions will be posted each week and a certain level of work is expected as called out in the following rubric.

Rubric: A grading rubric and an example are posted on the homepage online to guide you. You do not have to copy the example letter by letter, but the format should be used. This is not a writing class, but a professional business student should be able to reach a basic level at least.

Syllabus Alterations: There will be no hard and fast rule for this class in terms of a deadline other than the weekly postings and some in class assignments since this is a somewhat class designed outline. The professor will make alterations to remain flexible to the class's pace.

Course Policies: Each student will be expected to put forth their own effort in completion of the assigned tasks. This will somewhat be a class designed by the students and their learning as we progress. Therefore, participation will play a large role in the student's final outcome both in terms of grade and learning of the concepts. Failure to notify the professor ahead of time concerning late or overlooked work or will result in missed opportunities for points that may result in an unsuccessful class. ASK if at all in doubt as I have not yet mastered reading minds.

Class Expectations: Students need to have access to the Internet outside of the classroom, as this is an online class. It is expected that a student will submit their work online in the proper folder on a weekly basis.

Course Calendar: The course dates and expectations are put forth in the weekly deliverable sheets.

A Short Bio: Dr. Marion has only recently, within the past five years, switched to being a professor. He is a graduate of the University of Toledo in all of his degrees. As an undergrad, he is a mechanical engineer. Both his graduate degrees, Masters and PhD, are in Manufacturing Management with Engineering. Some of the classes used in obtaining the graduate degrees were taken from Kettering University while working for General Motors.

Previously he had worked primarily as a contract engineer. Within this realm he had designed plastic bottles for Coke, Graham Products, and Lever Brothers. This position entailed fitting the requesting company's constraints into a specified area and creating a new design that would not only be functional but aesthetically pleasing. He also spent time at Mazda where he worked with aftermarket accessory design. A notable project would have been the tenth anniversary Miata. This project required a new gearshift knob, fog lamps, spoiler, and floor mats to name a few. These accessories required working with suppliers from around the globe such as Blazer and Bosch. Another position entailed the designing of interiors for service vans as a ship-through for the big three automakers (at that time). Also, he worked at a design facility that built secondary tooling for large manufacturers. Secondary tooling is typically a secondary operation performed to a product just after it is created. For example, when a fiberglass box for a pickup truck comes down the assembly line just after it is formed, a secondary operation would be to attach the dually fenders to it. This was a project undertaken by the company in conjunction with Dodge Trucks. Just prior to coming to academia, Dr. Marion had spent time working for General Motors in a Powertrain facility.

Environmental Biology
BIOL 111 – Spring 2013

Instructor: Ms. Arlene Westhoven

Office: SCI 141 Phone – (231) 591 5842 e-mail westhova@ferris.edu

Office Hours:

Monday 1:00 – 4:00 PM
Wednesday 3:00 – 4:00 PM
Thursday 11:00 AM – noon
Or by appointment

CHECK THE BIOL 111 HOMEPAGE AT LEAST ONCE DAILY!!!

Questions can be addressed to me any time by Ferris Connect e-mail or westhova@ferris.edu

Lecture: Monday, Wednesday 4:00 – 5:15 PM in SCI 126

Labs:

Section 211	Wednesday	11:00 AM – 12:50 PM	SCI 227
Section 212:	Wednesday	1:00 PM – 2:50 PM	SCI 227
Section 213:	Thursday	9:00 AM – 10:50 AM	SCI 227
Section 214:	Thursday	Noon - 1:50 PM	SCI 227
Section 215	Thursday	2:00 PM – 3:50 PM	SCI 227

Textbook: Essential Environment, Withgott and Scott Brennan, Third Edition
Reference textbooks are available in the Reitz Reading Room, SCI 1st floor

Lab Manual: Environmental Science by Rodabaugh, Westhoven

Review Questions: Will be available on Ferris Connect

The catalog description for this course states that BIOL 111 provides the “fundamental principles of biology as they apply to people, their health, as individual organisms, and as part of a functioning ecosystem. BIOL 111 is designed for non-science majors; and is not applicable to the applied biology major. This course meets General Education requirements: Scientific Understanding, Lab.”

At the completion of BIOL 111, students will know the “difference between a dog and dirt”. that is, between what is living and non-living. Basic principles of chemistry and physics will be applied to the cycling of nutrients and energy through earth’s ecosystem. Students will gain an understanding of the five needs of organisms and the condition of each at the present. Major problems discussed will be human population, overconsumption and waste production, air, water, and soil pollution exacerbated by human activities, agricultural practices, sustainable economics, renewable and non-renewable energy, maintaining biodiversity, and urban sprawl. Sustainable solutions to these problems will conclude the course.

An exam, counted as a quiz, will provide a baseline assessment of incoming students’ knowledge. The same exam will be given at the semester’s end to asses the learning which has taken place.

Office Assistant: Candace Shane - e-mail TBA _____

Welcome to BIOL 111 Environmental Biology. This may be the most important course you will ever take. It can benefit your life and that of the environment. The ECOLOGY of the course is outlined in this syllabus. Your FITNESS in this class will be assured if you follow these PRINCIPLES.

Attendance:

1. I expect you to be in your lecture and lab at your scheduled time. Requests to be excused must be documented in writing beforehand. If there is an emergency have someone e-mail me.
2. During the second week of lecture I will circulate a seating chart. I expect you to be in that seat everyday so that I can learn your name. Remember , "A" students sit in the front row!
3. Attendance will be taken in lecture. Points will be taken off as follows:
First unexcused absence – 1 point
Second " " - 5 points
Third " " - 10 points
3. Missing two labs will result in failing the course.

Class Procedure:

1. Talking or disruptive behavior will result in a request for you to leave the class. It is rude and unfair to the serious student.
2. There is no need to cheat. I reserve the right to isolate persons suspected of cheating. Incidences of cheating could result in a failing grade for the class.
3. I will not discuss individual problems during either lecture or lab. If you have a question, make an appointment during office hours.
4. Every assignment turned in to me must be written with pencil or erasable pen. Bring those to lecture and lab with you.
5. If you must leave lecture or lab early, please let me know prior to beginning the class. IT IS RUDE TO WALK OUT IN THE MIDDLE OF CLASS.
6. Computers are NOT allowed in class. Please silence cell phones when you come to lecture or lab.

Review Materials: Available on Ferris Connect.

Extra Credit – Extra credit opportunities will be announced throughout the semester.

DO NOT ASK FOR EXTRA CREDIT BEYOND THESE
ANNOUNCED OPPORTUNITIES.

Exam, Quiz, and Laboratory Policy:

1. There will be four lecture exams and one comprehensive final exam YOU MUST TAKE ALL FOUR REGULAR EXAMS. You do not have to take the final if you have 85% or more on each scheduled exam (not 85% in the whole course).
2. There will be no exams given early. Requests for make-up exams must be accompanied by written documentation.
3. If you take the comprehensive final, that grade will be substituted for your lowest regular exam grade.
4. At least six unannounced quizzes will be given throughout the course, either in lecture or in lab.

Quizzes cannot be made up, no matter what.

5. You must attend and turn in all lab assignments. You must bring your lab manual with you. No lab manual, no lab for you!
6. Bring a calculator to lab. Lab exercises must be written in pencil.
7. If you have written documentation that you cannot attend your scheduled lab, you must make arrangements to attend another lab.
8. Missing labs will result in failure for the course.

Labs must be made up during the same week as the missed lab.

Exam Points and Grading Scale:

Exams	4 @ 50 pts	200 pts
Labs	13 @ 10 pts	130 pts
Quizzes	6 @ 10 pts	60 pts
Comprehensive final (replaces lowest exam) 50 pts _____		

400 pts (total for course)

A = 93-100 %, A- = 90-92%, B+ = 87-89%, B = 83-86%, B- = 80-82%, C+ = 77-79 %, C = 73-76%, C- = 70-72%, D+ = 67-69%, D = 63 - 66 %, D- = 60-62%

To calculate your grade, enter your scores. Divide your total points by the total possible points at that point.

Exams _____	Labs: 1.Metrics (10)	Quizzes _____
_____	2.Population set-up (10)	_____
_____	3. Card Museum (10)	_____
_____	4.Biological Organization (10)	_____
_____	5.Genetics (10)	_____
_____/200	6.Soil is not just dirt (10)	_____
	7.Pollination (10)	_____
	8. Field Trip (10)	_____/60
	9.Dissolved Oxygen (10)	
	10.Acid Rain (10)	
	11.Waste Management (10)	
	12.Species Diversity (10)	
	13.Population exp. results (20)	
		_____/140
	_____ Grand Total/ 400 = Your Percent	

Lecture Topics

Lecture	Date	Topic	
1	Mon 1/14	Introduction to Environmental Science & Ethics	Ch. 1,2
2	Wed 1/16	Environmental Systems - Chemistry	Ch. 3
Mon 1/21 MLK Holiday (no labs this week – there will be lecture on Wed)			
3	Wed 1/23	Biotic and Abiotic Molecules, Energy	
4	Mon 1/28	Food Chains and Food Webs, Nutrient Cycles	
5	Wed 1/30	Population Ecology,	Ch. 4

- 6 Mon 2/4 Adaptation, Evolution Ch. 5
 7 Wed 2/6 Ecosystems

- 8 Mon 2/11 Species Interactions, Succession

**Wed 2/13 LECTURE EXAM 1 4 - 5:15 PM Chapters 1 – 5
 LABS – Metrics, Population Dynamics, Biological Organization**

- 8 Mon 2/18 Human Population Growth, Resources Ch. 6
 9 Wed 2/20 Soil, Agriculture, the Future of Food Ch. 7

- 10 Mon 2/25 Increasing Food Production
 11 Wed 2/27 Pests and Pollinators, Managing Pests

- 12 Mon 3/4 Sustainable Agriculture

**Wed 3/6 LECTURE EXAM 2: 4 – 5:15 PM - Chapters 6 and 7
 Labs –Genetics, Species Diversity, Card Center**

3/11 – 3/14 - No classes during spring break

MIDSEMESTER

13	Mon 3/18	Toxicology	Ch 10
14	Wed 3/20	Water Pollution, Prevention, & Conservation	Ch. 12
15	Mon 3/25	Atmospheric Science	Ch. 13
	Wed 3/27	The Effects of Climate Change	
16	Mon 4/1	Air Pollution Problems	
17	Wed 4/3	Climate Change	Ch.14
18	Mon 4/8	Soil Pollution, Waste Management, Recycling	Ch 17
	Wed 4/10	LECTURE EXAM 3: 4:00 - 5:15 PM Chapters 10, 12, 13, 14 Labs - Soils, Pollination, Dissolved Oxygen, Acid Rain,	
19	Mon 4/15	Non-Renewable Energy & Conservation	Ch.15
20	Wed 4/17	Nuclear Energy – Pros and Cons	
21	Mon 4/22	Renewable Energy/ Alternative Energy	Ch.16
22	Wed 4/23	Our Urbanizing World	Ch. 9
23	Mon 4/29	Preserving Lands	
	Wed 5/1	LECTURE EXAM 4 4:00 – 5:15 PM Chs 15, 16, 9 Labs – Waste in Packaging, Population Dynamics, Field Trip	
	Mon 5/6	COMPREHENSIVE FINAL EXAM 4:00 – 5:15 PM	

**BIOLOGY 111
Spring 2013
LAB PROCEDURES**

**PRE-LAB – IN LECTURE EACH WEDNESDAY BEFORE THE NEXT WEEK’S LAB.
YOU ARE RESPONSIBLE FOR THE MATERIAL PRESENTED AND FOR READING THE
ASSIGNED PAGES BEFORE COMING TO LAB.**

MISSING TWO LABS RESULTS IN FAILING THE COURSE

HAVE YOUR LAB BOOK, A CALCULATOR, AND A PENCIL WHEN YOU COME TO LAB

Number	Lab Exercise	Dates
1	Metrics Lab	01/16,17
2,11	Population Dynamics	01/23,24
3	Biological Organization	01/30,31
4	Genetics & Population Genetics	02/6,7
14	Card Center	02/13,14
6	Species diversity	02/20,21
5	Soils	02/27,28
10	Pollination	03/06,07
	Spring Break	03/13,14
7	Dissolved Oxygen	03/20,21
8	No labs	03/27,28
9	Acid Rain	04/03,04
	Waste in Packaging	04/10,11
2,11 15	Field Trip OR Population Conclusion	04/17,18
2,11 15	Field Trip OR Population Conclusion	04/24,25
	NO labs this week	05/01,02

BIOL 111 LABORATORY SCHEDULE – FALL 2013
Ms Arlene Westhoven

OBJECTIVES: You have selected BIOL111, Environmental Biology, to fulfill the requirement for a lab science. Laboratory exercises allow you “hands on” experience using the steps of the scientific method to investigate the concepts presented in lecture. You will learn to use tools, techniques, and calculations that will help you draw conclusions from your observations. I hope you find the lab setting to be a rewarding and enjoyable learning experience.

Labs will meet the first week, beginning Monday, August 26. Your lab assignment is by section number.

All labs meet in SCI 227. Prelab and lab assignments will be posted on Ferris Connect. Read the lab and do the background work BEFORE coming to lab. Lab schedule as follows:

Section 211	Monday	10:00 - 11:50 am
“ 212	Tuesday	9:00 -10:50 am
“ 213	“	12:00 - 1:50 pm
“ 214	Wednesday	9:00 - 10:50 am
“ 215	“	11am -12:50 pm

OFFICE: Science 141
Phone: 231 591 5842
e-mail: westhova@ferris.edu

HOURS:

Monday ----- 12:00 – 2:00 PM
Tuesday ----- 2:00 - 3:00 PM
Wednesday ---- 2:00 - 4:00 PM

POLICIES:

- You must attend lab at your scheduled time. If you have an OCCASIONAL conflict, you may attend another lab, ONLY with permission from me. Labs must be made up during the scheduled week.
- You must bring your lab manual with you to every lab. Reports will not be accepted that are not written on the lab manual sheets. Lab manuals are available only at Great Lakes Bookstore, 840 Clark Street, Big Rapids.
- Experiments will be completed during the lab and lab reports submitted at the end of each lab.
- Missing two labs for any reason will result in failing the course.
- Bring a pencil and calculator to each lab.
- Laboratory information will be included on exams.

LAB SCHEDULE – FALL 2013

Lab	Title	Page In Lab Book	Week of
1	Metrics	3	08/26/13
	No labs this week		09/02/13
2/11	Population Growth/Scientific Method	11	09/09/13
3	Biological Organization/Microscope	23	09/16/13
4	Human Genetics/ Population Genetics	37	09/23/13
5	Soils/Particle Distribution	49	09/30/13
6	Sex and the Single Flower	57	10/07/13
7	Dissolved Oxygen	65	10/14/13
13	Material Safety Data Sheet (MSDS)	96	10/21/13
8	Acid Rain	73	10/28/13
9	Solid Waste	79	11/04/13
2/11	Population Experiment/Essay	11	11/11/13
14	Biodiversity/ Population Essay Due	101	11/18/11
10	Card Wildlife Center	91	11/25/11
	Finals Week - No Labs		12/02/13



Course Description: Great Lakes flora and fauna are studied, with emphasis on ecological relationships and environmental impacts. Fisheries and wildlife management principles are also discussed. Open to recreation and outdoor activities directors, teachers needing updating in natural science, lifelong learning adults and others interested in the out-of-doors. Not applicable to the applied biology major. Some hiking required. This course meets General Education requirements: Scientific Understanding, Lab.

Course Outcomes:

(1) *General Education.* This course may be used to help fulfill the general education requirement for Scientific Understanding. A student succeeding in this course should:

- Have a working knowledge of the fundamental principles of a natural science discipline.
- Be able to use appropriate scientific reasoning skills to interpret and analyze content in the natural sciences.
- Have a basic understanding of the scientific method, scientific concepts, and the evolution of scientific ideas.
- Have a more positive attitude toward science and an increased confidence in their ability to understand science.

(2) *Specific Course Outcomes.* **Through the knowledge acquired in lecture, daily material assessments, performing laboratory activities, application of journaling exercises, and a community service project, students will be able to:**

- Explain the interconnectedness among living and non-living things within a habitat.
- Identify basic flora, fauna, and habitats of Michigan by using field guides effectively.
- Predict the potential consequences of a habitat being altered in terms of species populations and interactions.
- Discuss many of the positive and negative impacts humans have on Michigan habitats.
- Develop an appreciation of the natural world through direct experience with local habitats.

Instructor: *Cindy Fitzwilliams-Heck*

<u>Office</u>	<u>Office Hours</u>	<u>Laboratory</u>
Science Building (SCI) 141-E Phone: Office: (231) 591-5843 Cell : (231) 349-7495 (texts okay) Home: (231) 592-4067 No calls 9pm - 6am E-mail: fitzwilc@ferris.edu	Tue - Wed 8 – 9:00 a.m. Wed & Fri 1 – 2:00 p.m. Or call/email for an appointment. <u>Lecture</u> M W F at 2 – 2:50 p.m. All lectures meet in SCI 126.	Mon 9 – 10:50 a.m. (211) 11 – 12:50 p.m. (212) Tue 9 – 10:50 a.m. (213) 12 - 1:50 p.m. (214) All labs meet in SCI 208 unless otherwise stated on our lab schedule, in class, or on Ferris Connect.

Grading Scale:

A = 100-94%	B = 86.9-83%	C = 76.9-73%	D = 66.9-63%
A- = 93.9-90%	B- = 82.9-80%	C- = 72.9-70%	D- = 62.9-60%
B+ = 89.9-87%	C+ = 79.9-77%	D+ = 69.9-67%	F = below 60%

REQUIRED Materials for the Course:

(1) **Reference books (7):**

- Trees of Michigan (Kershaw)
- Golden Guide: Pond Life (Reid)
- Insects of the Northwoods (Hahn)
- Fish of Michigan Field Guide (Bosanko)
- Amphibians & Reptiles of the North Woods (Sheldon)
- Birds of Michigan (Black & Kennedy)
- Mammals of Michigan Field Guide (Tekiela)

(2) **FerrisCONNECT (FC) access** (for printing notes/assignments, reading emails, turning in papers, and taking quizzes)

(3) **Nature Journal folder with tab dividers** (ACCEPTABLE OPTIONS: folder with fasteners or ½ " binder)

(4) **Three-ring binder (1") for lecture notes** (with pockets)

(5) **MISCELLANEOUS:** camera, line paper, #2 pencil, eraser, basic calculator, hole punch, stapler

(6) **COMFORTABLE WALKING SHOES (do not wear flip-flops or open-toed sandals to outside labs)!**

★ **ATTENDANCE POLICY:**

(a) **Prompt attendance to all lectures and labs is expected & critical to your grade.**

(b) If you miss lecture, you are responsible for its content & any assignments given during class. Notes & assignments will be available on FerrisCONNECT.

(c) You will sit in the same seat every lecture, but I won't take actual roll (**seating chart** will be passed around the second lecture so I can learn names ... remember, I have the right to change your seat).

(d) **Attendance in all lab sessions is required (note: LAB QUIZ most days) ...** there will be no make-up labs (see 'Grading Policy: Labs' section for more information). According to the FSU Biology Department's policy, **missing more than two lab periods may result in failure of the class.**

★ **GRADING:** (**Cheating will result in a zero & other disruptive behavior like using electronic devices or excessive talking may result in a grade reduction and will be reported to the Dean.**)

(a) To figure out grades, **compare your total number of points to the number of points possible** in the course. Keep all your papers & start your own grade sheet. **Current grades will be updated regularly on FerrisCONNECT.**

(b) **Labs**..... **10-50 points each**
Laboratory attendance is mandatory! More than two unexcused absences will result in failure of the course. **Labs cannot be made up.** You must notify me prior to missing lab in order for me to determine which of the other lab times you can attend *that* week. The lab quiz points may vary each week depending on the material. Arriving late, leaving early, not doing your own work, not fully participating, or not being prepared for class (i.e. no field guide, no pencil, etc.) will result in a deduction of your lab points.

(c) **Nature Journal (NJ)**..... **+/-= 300 points**
You will select an outside location of your choice (some place convenient - near where you *currently* live) to complete your requirements for this project. To help earn a good grade: pay close attention to assignment details, grading criteria, and due dates. The assignment sheets will be available throughout the semester on FerrisCONNECT for you to print, or may also be distributed in class. The final due date of the project is: **WEDNESDAY, NOVEMBER 27, 2013 @ 2:00 p.m.**

(d) **Community Service Project** **TBA**
The academic service-learning project is yet to be determined. You will take an active role in our community doing things to improve the environment. Stay tuned for more details!

(e) **Daily Assessments** **<,> = 12 points**
We will have an assessment (quiz) everyday in **lecture and/ online**. Questions will come from lecture material, homework assignments, and lab. The number and type of questions will vary depending on the material.

(f) **In-Class Assignments** **up to 10 points**
There may be unannounced/announced activities given during class.

(g) **Homework** **10 - ? points**
Take-home/online assignments given periodically throughout the course. Assigned in lecture or online.

(h) **Final Exam**..... **100 points**
Save all class notes, labs, books, homework, etc. to help you review.

(i) **Make-Up Work** ... If you have a documented excuse (i.e. a doctor's note, an excused university absence, funeral verification, or extenuating circumstances) you may complete the missed work for full credit. Stipulations: **you must contact me before class** to discuss your issue. Only **two excuses** allowed. Any missed assignment is **due upon return to class**. If you missed two classes, you have two days (not just class days) to turn in your work (I accept assignments online, or bring it to my office). If you do not have a legitimate excuse, and you missed an assignment or quiz, you may complete it for **half credit within 24 hours** of missing the work (contact me if you don't see anything new posted on FC).

(j) **Losing Points** ... **Using electronic devices** (i.e. phone, computer, mp3, etc.) during an assessment, at an inappropriate time, or if it is disruptive to those around you.

(k) **Extra Credit**... There WILL be some. Advice: come to class, check FerrisCONNECT often, & take advantage of every extra credit opportunity! No extra credit can be made up (no matter what). Opportunities are offered to the entire class not on an individual basis (so don't ask).

BIOL 116: Lecture Schedule FALL 2013



Fitzwilliams-Heck

- ★ **Check FerrisCONNECT often ... especially before class!**
- ★ **PRINT NOTES OUTLINE PRIOR TO LECTURE [and lab] (posted by 6 pm the day before class).**
- ★ **Be prepared for class: You must bring your CPS, notes, pencil, book, completed homework**
- ★ **This schedule is only tentative. I reserve the right for slight variations to accommodate our rate of progress, a topic revamping, or to address a pressing issue or interest the class may have.**

<u>Date</u>	<u>Lecture Topic</u>	<u>What Books to Bring to Class</u> <u>(ALWAYS Check Website Before Class)</u>
8/26 M	Class Introduction, Syllabus Discussion, FerrisCONNECT, BRAINSTORMING	
8/28 W	Seating Chart (check FerrisCONNECT), Notes: Scientific Method, Making Observations, Taxonomy + SPECIES OBSERVATIONS charts	
8/30 F	1ST Quiz Pre-read & print notes: 'Landscape Shapers of the Northwoods (NW)'	
9/2 M	NO CLASSES	Study
9/4 W	QUIZ NW Landscape + Ecology Basics	
9/6 F	Ecology: Populations	
9/9 M	Ecology: Communities	
9/11 W	Ecology: Species Interactions	
9/13 F	Ecology: Evolution I	
9/16 M	Ecology: Evolution II	
9/18 W	The Basics of Plants [& Trees] I	'Trees of Michigan'
9/20 F	The Basics of Plants [& Trees] II	'Trees of Michigan'
9/23 M	Ecology: The 4 Spheres	
9/25 W	Ecology: Energy Flow	
9/27 F	Ecology: Biogeochemical Cycles	
9/30 M	Ecology: Biodiversity	
10/2 W	Ecology: Biodiversity II & Conservation	
10/4 F	Ecology: Wildlife Management	
10/7 M	Terrestrial Habitats I: MI Habitats Defined	
10/9 W	Terrestrial Habitats II: Succession, Soils	
10/11 F	Terrestrial Habitats III: Field & Forest Communities	
10/14 M	MI Aquatic Habitats I: Water Prop. & Lakes	'Pond Life'
10/16 W	MI Aquatic Habitats II: Lakes II	'Pond Life'
10/18 F	MI Aquatic Habitats III: Rivers	'Pond Life'
10/21 M	MI Aquatic Habitats IV: Rivers II	'Pond Life'
10/23 W	MI Aquatic Habitats V: Wetlands	'Pond Life'
10/25 F	Insects (Arthropods)	'Insects'

10/28 M	Insects	'Insects'
10/30 W	Last day for "W" grade is 10/31! Please talk to me about withdrawing from this class before you do it. Lecture Topic: Insects	'Insects'
11/1 F	Fish	'Fish of Michigan Field Guide'
11/4 M	Fish	'Fish of Michigan Field Guide'
11/6 W	Fish	'Fish of Michigan Field Guide'
11/8 F	Amphibians	'Amphibians & Reptiles of the North Woods'
11/11 M	Amphibians	'Amphibians & Reptiles of the North Woods'
11/13 W	Reptiles	'Amphibians & Reptiles of the North Woods'
11/15 F	Reptiles	'Amphibians & Reptiles of the North Woods'
11/18 M	Birds	'Birds of Michigan'
11/20 W	Birds	'Birds of Michigan'
11/22 F	Birds	'Birds of Michigan'
11/25 M	Mammals	'Mammals of Michigan Field Guide'
11/27 W	Mammals	'Mammals of Michigan Field Guide'
11/29 F	NO CLASSES	STUDY
12/2 M	Mammals (ICA)	'Mammals of Michigan Field Guide'
12/4 W	Mammal ID Quiz (20 pts) – subject to change due to lab schedule	'Mammals of Michigan Field Guide'
12/6 F	Class Summary	All Class Notes
12/12 R	Comprehensive Final Exam 2-3:40 p.m. in SCI 126	



**BIOL 116: Lab Schedule FALL 2013**

- ★ All labs will meet in SCI 208, unless stated otherwise on the schedule, in lecture, or on FerrisConnect.
- ★ Any announcements about lab will be posted on FerrisConnect the day before your lab meets before 6:00 p.m. Outside for lab? Weather "iffy"? Check FC or call/text me!!!
- ★ This schedule is tentative & may change due to whim or weather ... stay tuned in.
- ★ Always come prepared with book(s), pencil, paper, class binder, & appropriate clothing/footwear for going outdoors.
- ★ Come to class! Two lab absences may result in failure of course.
- ★ If you must miss lab, please contact me prior to your absence in order to make arrangements for a different lab time.
- ★ Each lab has 10-50 points possible. (See 'Grading Policy' for more information).
- ★ Quizzes cover previous week's lab material.
- ★ Nature Journal Assignments will be due at the beginning of lab periods (dates below are tentative).



<u>Week</u>	<u>Date</u>	<u>Topic</u>	<u>Quiz</u>	<u>~Pts</u>
1	8/27-28	NO LABS – Take-Home Lab Homework: Choosing your Nature Spot & Making Observations	-	-
2	9/3-4	NO LABS	-	-
3	9/10-11	Meeting Place TBA in Lecture (Check FC): OUTSIDE (be prepared to get your feet wet): Aquatic/Terrestrial Collections (Books: 'Pond Life', 'Insects')	-	10
4	9/17-18	Meeting Place TBA in Lecture (Check FC): OUTSIDE - Tree Identification (Book: 'Identifying Trees')	-	10
5	9/24-25	Meeting Place TBA in Lecture (Check FC): OUTSIDE - Tree Identification <u>QUIZ</u> (Book: 'Identifying Trees' + Tree ID Notes)	Q1	20, 5
6	10/1-2	<u>NJ 1 Due!</u> Food Chain/Web (Books: Insects, Birds, Mammals)	-	10
7	10/8-9	Meeting Place TBA in Lecture (Check FC): OUTSIDE - Habitats & Orienteering OR ASL Project	-	-
8	10/15-16	SCI 208 + Outside Maps & Watersheds	-	-
9	10/22-23	Pond Life (Book: 'Pond Life')	-	10
10	10/29-10/30	<u>NJ 2 Due!</u> Insects (Books: 'Pond Life', 'Insects') + Pond Life ID Quiz	Q2	10, 20
11	11/5-6	Fish (Books: "Fish", 'Insects') + Insects ID Quiz	Q3	10, 20
12	11/12-13	Amphibians (Books: 'Amphibians/Reptiles', 'Fish') + Fish ID Quiz	Q4	10, 20
13	11/19-20	Reptiles (Books: 'Amphibians/Reptiles') + Amphibian ID Quiz	Q5	10, 20
14	11/26-27	<u>NATURE JOURNAL DUE [in its entirety – see FC]!</u> Birds (Books: 'Birds', 'Amphibians/Reptiles') + Reptile ID Quiz	Q6	10, 20
15	12/3-4	Mammals (Books: 'Mammals', 'Birds') + Bird ID Quiz Mammal ID quiz will <i>likely</i> be given in lecture	Q7	10, 20
16	12/10-11	NO LABS	-	-

Keep Track of Your Grades!!! (All graded assignments need to be kept as a record of your progress)

Assignment Title

Total Possible Points

Points Earned

Course Assessment Plan

Ferris State University

Z - BIOL Courses

Z - BIOL Courses

Course Outcome: BIOL 116 - Nature Study: Biodiversity (Created By Z - BIOL Courses)

Students will explain the interconnectedness among living and non-living things within a habitat.

Start Date: 12/01/2009

Course Outcome Status: Active

Means of Assessment

Assessment Method	Criterion for Success	Assessment Schedule	Active
Specific questions will be embedded in exams and quizzes. Assessment Method Category: Test - Internally Developed - Pre/Post or Post	Greater than 80% of the students will score at or above the C- level on these items.	Annually	Yes

Course Outcome: BIOL 116 - Nature Study: Identification (Created By Z - BIOL Courses)

Students will identify basic flora, fauna, and habitats of Michigan by using field guides effectively.

Start Date: 12/01/2009

Course Outcome Status: Active

Means of Assessment

Assessment Method	Criterion for Success	Assessment Schedule	Active
For ten weeks, students will record observations at the same outside location of their choice. Assessment Method Category: Written Product (essay, research paper, journal, newsletter, etc.)	Greater than 80% of the students should perform at or above the B-level on this project.	Annually	Yes

Course Outcome: BIOL 116 - Nature Study: Critical Thinking (Created By Z - BIOL Courses)

Students will predict the consequences of a habitat being altered in terms of species populations and interactions.

Start Date: 12/01/2009

Course Outcome Status: Active

Means of Assessment

Assessment Method	Criterion for Success	Assessment Schedule	Active
Specific questions will be embedded into course quizzes and lectures. Assessment Method Category: Test - Internally Developed - Pre/Post or Post	Greater than 80% of the students should perform at or above the C-level on these items.	Annually	Yes

Course Outcome: BIOL 116 - Nature Study: Discussion (Created By Z - BIOL Courses)

Students will discuss many of the positive and negative impacts humans have on Michigan habitats.

Start Date: 12/01/2009

Course Outcome Status: Active

Means of Assessment

Assessment Method	Criterion for Success	Assessment Schedule	Active
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Means of Assessment

Assessment Method	Criterion for Success	Assessment Schedule	Active
Students will informally discuss these topics in lecture and lab. Assessment Method Category: Presentation(Oral)	All students will actively and effectively contribute to class discussions during the semester.	Annually	Yes

GEOG 121
Weather and Climate
Fall 2013

Instructor: Dr. Jennifer J. Johnson
Extension: 2768
Email: jenniferjohnson@ferris.edu
OR FerrisConnect Mail

Office: ASC 2074
Office Hours: MW 10:00 a.m. – 12:00 p.m.

Course Information

This course is comprised of lecture section only. This course has a general education value of Scientific Understanding (no lab) at Ferris State University.

This class meets in Starr 139, MWF, from 1:00 p.m. to 1:50 p.m. Announcements, grades, and other relative material will be handled through FerrisConnect. If you are not familiar with FerrisConnect please see Dr. J right away for help getting started.

Disability Policy

The instructor is willing to make any reasonable accommodations for students with limitations due to disability, including learning disabilities. Please see me during the first week of class to discuss any special needs you have.

Required Materials

Text: The Atmosphere, Twelfth Edition, by Lutgens and Tarbuck (online or print)

Other: Calculator, ruler, pencil, eraser

FerrisLearn: Students will be required to access FerrisConnect for occasional submission of assignments, study materials, and grade information. Other applications of FerrisConnect may also be required.

Note: All work must be completed in pencil.

Grade Assessment

Your letter grade will be based on the total number of points that you earn. Your attainment of the course objectives will be demonstrated through class exercises, exams, and the class project.

Make-Up Work

There are no make-up exams or assignments without PRIOR arrangement, and only for university-sanctioned absences. If you are going to miss any of the above, you should notify the instructor as early as possible PRIOR to the absence in order to make other arrangements. **Students are individually responsible for all missed material due to absences.**

Grading

Lecture Exams: 4 x 150 pts each = 600 pts
SkyWarn Training = 100 pts
Class exercises = Approx. 200 pts

Course Total: Approx. 900

A	93.0 – 100.0%
A-	90.0 – 92.9%
B+	87.0 – 89.9%
B	83.0 – 86.9%
B-	80.0 – 82.9%
C+	77.0 – 79.9%
C	73.0 – 76.9%
C-	70.0 – 72.9%
D+	67.0 – 69.9%
D	63.0 – 66.9%
D -	60.0 – 62.9%
F	0 – 59.9%

General Education Outcomes for Scientific Understanding Courses

Students who have successfully completed their coursework in scientific understanding should:

- have a working knowledge of the fundamental principles of a natural science discipline;
- be able to use appropriate scientific reasoning skills to interpret and analyze content in the natural sciences;
- have a basic understanding of the scientific method, scientific concepts, and the evolution of scientific ideas;
- have a more positive attitude toward science and an increased confidence in their ability to understand science.

Students should recognize that:

- the physical universe is understandable;
- scientific ideas are not static, but rather are dynamic and change over time;
- scientific principles are testable;
- scientific knowledge is based on a vast number of observations.

Course Competencies and Objectives (Assessment in parentheses.)

In keeping with the goals of a scientific understanding course, students can expect to achieve the following outcomes through successful course completion.

- Identify the structure and composition of the atmosphere. (Class diagrams, Exam 1)
- Explain the relationship between Earth and the Sun, and describe how the sun influences radiation receipt, day length, seasons, and temperature patterns on Earth. (Class diagrams, Class exercises about albedo and temperature, Exam 1)
- Identify the key elements of weather, including how each is measured and observed. Identify the critical processes that control each element and produce daily weather. (Station model exercise, Exam 2)
- Recognize the basic symbols on a weather map and explain the associated weather processes. (Class exercises over station models and mid-latitude cyclones; Exam 3)
- Utilize various types of meteorological instruments and/or website to collect weather data. (Station model exercise, Albedo exercise)
- Identify and diagram the key features of severe thunderstorms, explain how thunderstorms produce severe weather such as hail and tornadoes, and recognize the signature of severe weather on Doppler radar and in the sky. (Class demonstration and participation, Exam 3, SkyWarn certification)
- Explain the development and life cycle of a hurricane. (Hurricane exercise, Exam 4)
- Apply the Scientific Method to answer questions related to weather and climate. (Albedo exercise)
- Identify the components of climate change and how it is measured and observed. (Exam 4)

Class Project

In this course, you will be expected to become a certified SkyWarn storm spotter for the National Weather Service. Training is completed online, and you make take each of the two module tests up to three times to improve your grade. More information will be provided in class and in FerrisConnect.

Extra Credit

A maximum of 20 points of extra credit projects may be completed for this class. Opportunities to earn extra credit will be made available throughout the semester. No extra credit will be offered to individuals unless it is offered to the entire class. All material submitted for extra credit must be received by the Friday prior to final exam week, or by the deadline stipulated by the instructor.

Expectations

Attendance, Tardiness, and Class Participation: Attendance is critical for your success. There will be a number of in-class exercises, which may not always be announced ahead of time, that you will not be able to make up if you miss them unless you have a properly documented, excused absence. You must submit paperwork for all university-sanctioned absences. ALWAYS send an email to Dr. J if you are going to miss class. Don't wait.

Absence of Instructor: If the instructor must be absent from class, your class time may be made up through an out-of-class exercise or the lecture will be given by a substitute. Whenever class is cancelled, please check FerrisConnect immediately as you may be given an out-of-class assignment.

Preparation: Related reading assignments should be completed prior to class sessions. This will greatly improve your ability to participate in and learn from lecture.

Cellular Phones and Pagers: ALL phones and pagers MUST be turned to their non-ringing option during class. If you must answer your phone, leave the room quietly to do so. Ringing cell phones and beeping pagers are disruptive to class. Please be courteous to the instructor and fellow students. Text messaging, game playing, and all other uses of cell phones, laptops, computers, etc. are strictly prohibited during class time. We value your presence in class, and we want you WITH us! =)

Contacting the Instructor

I am available during my posted office hours, or by appointment. Please do not hesitate to drop by or contact me if you would like to meet to go over material or any other concerns you might have. If you cannot attend my scheduled office hours, see me to set up an appointment. I am also very happy to answer questions via email, and will answer all emails promptly, usually within 24 hours. You may also leave a voice message for me at 591-2768, but keep in mind that I may not get it right away.

Changes to the Syllabus

The instructor reserves the right to modify the schedule and/or terms of this syllabus as necessary throughout the course of the semester. If changes are made to the terms of the syllabus, the new syllabus will be posted on FerrisConnect. A new paper copy will NOT be handed out in class.

Tentative Schedule

WEEK	DATES	LECTURE	CHAPTER
1	08/26-08/30	Course Introduction	1
		Composition and Structure of the Atmosphere	1
		Composition and Structure of the Atmosphere	1
2	09/02-09/06	LABOR DAY – NO CLASS	
		Earth-Sun Relationships	2
		Radiation	2
3	09/09-09/13	Radiation	2
		Albedo exercise (date may change - dependent on weather)	
		Principles of Air Temperature and Temperature Controls	3
4	09/16-09/20	Temperature: Spatial Patterns and Measurement	3
		Temperature cont.	3
		Class Exercise and Exam Review	
5	09/23-09/27	Exam 1	1, 2, 3
		Water in the Atmosphere	4
		Water in the Atmosphere	4
6	09/30-10/04	Adiabatics and Lifting Mechanisms; Stability	4
		Clouds and Fog	5
		Precipitation	5
7	10/07-10/11	Weather Modification	5
		Principles of Air Pressure and Wind	6
		TBA	
8	10/14-10/18	Winds and Circulation	6
		Class Exercise and Review	
		Exam 2	4, 5, 6
9	10/21-10/25	Atmospheric Circulations and Westerlies	7
		Atmospheric Circulations and Westerlies	7
		El Niño; Air Masses	8
10	10/28-11/01	Polar Front Theory	9
		Polar-Front Theory; Mid-Latitude Cyclones	9
		Polar-Front Theory; Mid-Latitude Cyclones	9
11	11/04-11/08	Isobar Exercise	9
		Class Exercise and Review	
		Exam 3	7, 8, 9
<i>(cont.)</i>			

12	11/11-11/15	Thunderstorms	10
		Thunderstorms	10
		Tornadoes	10
13	11/18-11/22	Tornado Exercise	10
		Hurricanes	11
		Hurricanes	11
14	11/25-11/29	Hurricane Exercise	
		<i>Thanksgiving - No Class</i>	
		<i>Thanksgiving - No Class</i>	
15	12/02-12/06	Air Pollution	13
		Climate Reconstruction	14
		Wrap Up Day	
16	12/11	My Final Exam for This Course is:	
		Wednesday, December 11, 2013, 12:00 – 1:40 p.m.	10, 11, 13, 14

Topical Outline of GEOL 121

Catalog description:

GEOL 121: Physical Geology, 4 Cr. (3+2). Examines the processes that continuously interact to cycle rock and water through the earth system, thus shaping the surface of our dynamic earth. Plate tectonics is the thread that ties the study of earthquakes, volcanoes, and mountain belts; weathering, erosion, and deposition. The interrelation of humans and the earth system is a recurring theme. **Prerequisite:** NONE. Semester offered: W.

- | | | |
|----|---------------------------|-----------|
| 1. | Science and Geology | 0.5 weeks |
| 2. | Rock Cycles | 2.0 weeks |
| | a. Minerals | |
| | b. Mineral Resources | |
| | c. Rocks | |
| 3. | Geologic Time | 1.0 weeks |
| 4. | Interior Processes | 5.0 weeks |
| | a. Interior Structure | |
| | b. Plate Tectonics | |
| | c. Earthquakes | |
| | d. Volcanoes | |
| | e. Mountains | |
| 5. | Surficial Processes | 5.5 weeks |
| | a. Hydrologic Cycle | |
| | b. Weathering and Erosion | |
| | c. Mass Wasting | |
| | d. Running Water | |
| | e. Groundwater | |
| | f. Glaciers | |
| 6. | Testing | 1.0 week |

Implemented: August, 1993

a:Sem_Conv:GEOL121.doc

GEOL 121, Physical Geology Course Syllabus for Fall 2013

This course explores the processes that continuously interact to cycle rock and water through the earth system, thus shaping the surface of our dynamic earth. Plate tectonics is the thread that ties the study of earthquakes, volcanoes, and mountain belts; weathering, erosion, and deposition. The interrelation of humans and the earth system is a recurring theme. This course meets General Education requirements: Scientific Understanding, Lab. (4 Credits)

Instructor: Dr. Fred Heck
Office: Commons Building 3013
Office Hours: Monday 10am to 12pm; Wednesday and Friday 1pm to 2 pm; or by appointment
Phone: Office, 591-2588; Home, 592-4067
Email: heckf@ferris.edu

Lecture: M-W-F from 9:00 to 9:50 am in IRC 120
Laboratory: Section 211 on Thursday from 12:00 to 1:50 pm in SCI 138
Section 212 on Thursday from 9:00 to 10:50 am in SCI 138

Required Materials: Earth: An Introduction to Physical Geology, 10th edition, by Tarbuck, Lutgens, and Tasa
GEOL 121 Physical Geology Assignment Manual, Fall 2013, by Fred Heck

Goals and Objectives of this Course:

By the end of this course students will be able to:

- explain the theory and history of plate tectonics.
- interpret processes involved in the formation of Earth's major surface features.
- analyze the important features of a rock in order to interpret its history.
- explain important interrelationships between humans and the Earth system.
- work effectively together in teams to analyze and solve geologic problems.

Because this is a General Education, Scientific Understanding course, students will also:

- have a working knowledge of the fundamental principles of geology;
- be able to use appropriate scientific reasoning skills to interpret and analyze geologic phenomenon;
- have a basic understanding of the scientific method, scientific concepts, and the evolution of scientific ideas;
- have a more positive attitude toward science and an increased confidence in their ability to understand science.

Method of Instruction:

The primary instructional method in this course will be the use of permanent cooperative learning teams consisting of four to five students. The valued practice in this class will be cooperation between team members (and ultimately class members) to help each other learn and understand the assigned material. The standard practice of competitive, "me versus you" for a higher grade is out this term. Assignments will be structured so that you are accountable both for your own performance AND your fellow team members performance.

You will find that the primary responsibility for learning the material in this course falls on your shoulders. My primary role will not be that of "a sage on the stage" but of a "guide on the side". I will not so much cover the material for you as I will uncover it with you. This is not to say there will be no lectures in this course, but they will be a subordinate instructional method to the learning teams. My hope is that this approach will help avoid what is proclaimed as the main problem with lecturing: "The information passes from the notes of the professor to the notes of the student without passing through the mind of either one."

Grading: Grades are calculated as points earned divided by points possible with the following weighting scheme for different types of assignments:

Individual assignments:	Points earned x 85%
Team assignments + peer evaluations:	Points earned x 15%

Individual assignments include:

Homework assignments at 4 points each
Quizzes at 3 points each
Laboratory quizzes at 5 points each
Laboratory activities at 5 points each
5 tests at 50 points each
1 final exam at 50 points

Team assignments include:

Quizzes at 3 points each
5 tests at 50 points each

"Team Player" peer evaluations:

2 evaluations at 50 points each

There may also be miscellaneous other individual or team assignments

Your final grade will be a percentage calculated as:

$$\left[\frac{\text{earned individual points}}{\text{possible individual points}} \right] \times .85 + \left[\frac{\text{earned team points} + \text{"Team Player" points}}{\text{possible team points} + \text{"Team Player" points}} \right] \times .15$$

NOTE: If you must be absent for an exam or a lab, see me beforehand to reschedule. **You must pass the laboratory portion of the course with a 70% average to get a passing grade in this class.**

Grading Scale:	A = 94% - 100%	C+ = 77% - 79.9%	D- = 60% - 62.9%
	A- = 90% - 93.9%	C = 73% - 76.9%	F = less than 60%
	B+ = 87% - 89.9%	C- = 70% - 72.9%	
	B = 83% - 86.9%	D+ = 67% - 69.9%	
	B- = 80% - 82.9%	D = 63% - 66.9%	

Excused Absences: Excused absences include health, legal, or emergency family problems and school sponsored functions. **You must provide written documentation for an excused absence. I will allow you to make up quizzes and homework for full credit if you make arrangements with me during the first class period that you return from an excused absence.** After that time I will only accept homework for half credit and will not allow quiz make-ups.

Unexcused Absences: If your absence is not excused I will accept homework for full credit if turned in before the class period it is due or for half credit if turned in within one week after the class period it is due. There will be no quiz make-ups.

Special Circumstances: PLEASE contact me as soon as possible in the event of an extended illness or other special problem that will cause you to miss too much class so we can make special arrangements for completing your assignments.

MORE ON ASSIGNMENTS

TEXTBOOK READING ASSIGNMENTS: For nearly every class period there will be a reading and questions assignment from the textbook. During class you will discuss the assignment in your learning teams, complete a team assignment and, at the end of the class period, you will be quizzed on the material both individually and as a team. Lecture and whole-class discussion will also take place as needed to help clarify the material. You should bring your text to class to help resolve questions that arise as your group discusses the assignment.

LABS: Labs are an essential aspect of this course. They provide an opportunity for hands on experiences that help illustrate, clarify and reinforce principles learned in the classroom.

TESTS: **Tests will include material from homework assignments, in-class assignments, lecture, AND previous tests.** Each test will consist of a mix of multiple choice and short answer questions. Examples of tests I have given in the past will be made available before each test. Before the first test I will say more about the types of questions you can expect and suggest some general strategies for taking tests. The last test will be a cumulative final exam.

THE LAST DAY TO DROP THIS CLASS WITH A "W" GRADE IS THURSDAY, OCTOBER 31

GEOLOGY 121
Tentative Course Schedule (Fall 2013)

		----- WEEK 1 -----
Aug. 26	M	Introduction to Geology 121
28	W	Forming learning teams
30	F	Viewing Earth as a System <i>Lab:</i> No lab
		----- WEEK 2 -----
Sep. 2	M	Labor Day: No Class
4	W	Geology and Science
6	F	Minerals <i>Lab:</i> FIELD EXERCISE: Earth as a System
		----- WEEK 3 -----
9	M	Rocks and the Rock Cycle
11	W	Geologic Time: Relative Age Dating
13	F	Geologic Time: Radiometric Age Dating <i>Lab:</i> Minerals and Rocks
		----- WEEK 4 -----
16	M	TBA
18	W	Test 1: Prep
20	F	Test 1: Individual and Team <i>Lab:</i> Topographic maps
		----- WEEK 5 -----
23	M	Earthquakes and Earth's Deep Structure
25	W	Alfred Wegener and Continental Drift
27	F	Plate Tectonics: Paleomagnetism and Sea-Floor Spreading <i>Lab:</i> FIELD TRIP: Sleeping Bear Dunes on Thursday, Sept. 26
		----- WEEK 6 -----
30	M	Plate Tectonics: Divergent Plate Boundaries
Oct. 2	W	Plate Tectonics: Convergent and Transform Plate Boundaries
4	F	Plate Tectonics: Testing the Theory <i>Lab:</i> Plate Tectonics
		----- WEEK 7 -----
7	M	Test 2 Prep
9	W	Test 2: Individual and Team
11	F	Volcanoes <i>Lab:</i> Forensic Geology
		----- WEEK 8 -----
14	M	Mountains
16	W	Depositional Environments
18	F	Earth History <i>Lab:</i> Geologic Maps
		----- WEEK 9 -----
21	M	Earth Resources
23	W	Test 3 Prep
25	F	Test 3: Individual and Team <i>Lab:</i> FIELD EXERCISE: Gravel Pit

----- WEEK 10 -----
28 M Mass Wasting
30 W Mass Wasting
Nov. 1 F Hydrologic Cycle; Streams
Lab: FIELD EXERCISE: Streams

----- WEEK 11 -----
4 M Stream Flooding
6 W Groundwater
8 F Groundwater
Lab: Stream discharge

----- WEEK 12 -----
11 M TBA
13 W Test 4 Prep
15 F **Test 4: Individual and Team**
Lab: Groundwater

----- WEEK 13 -----
18 M Glaciers
20 W Glaciers
22 F Causes and Effects of Glaciation
Lab: FIELD EXERCISE: Glacial landforms

----- WEEK 14 -----
25 M Global Climate Change
27 W Global Climate Change: Human Impact
29 F Thanksgiving Holiday: No Class
Lab: Thanksgiving Holiday: No Lab

----- WEEK 15 -----
Dec. 2 M Test 5 Prep
4 W **Test 5: Individual and Team**
6 F Course Wrap-up

----- WEEK 16 -----

CUMULATIVE FINAL EXAM
ON MONDAY, DECEMBER 9
FROM 8:00 AM TO 9:40 AM
IN ROOM IRC 120

----- **END OF TERM. HAVE A GOOD BREAK!!!!!** -----

This is what we have in TracDat for PHYS 211:

1. Students will develop a good functional understanding of mechanics, thermodynamics & wave motion (including sound).
2. Students will begin developing expert-like problem solving skills.
3. Students will develop lab skills.
4. Students will improve their communications, interpersonal, and questioning skills.
5. Students will develop attitudes and beliefs that are favorable to learning physics.

Topical Outline of PHYS 211

Catalog Description:

PHYS 211: Introductory Physics 1, 4 Cr. (3+3). Basic concepts and applications of motion, force, energy, fluids, heat and sound. Prerequisite: Math 116(C- or better).
Semester offered: FWS

1. Units and Significant Figures2 weeks
One Dimensional Motion
Free fall
2. Vectors and Scalars2weeks
Projectile Motion
Laws of Motion
Friction
3. Work and Energy2 weeks
Momentum and Collision
4. Angular Momentum2 weeks
Moment of Inertia
Torque
Equilibrium
Rotational Motion
5. Solids and Fluids2 weeks
Density and Pressure
Buoyant Forces
Elastic Properties of Solids
6. Thermal Physics2 weeks
Heat
Laws of Thermodynamics
7. Vibration and Wave Motion.....1.5 weeks
Sound
8. Testing.....1 week

Implemented: June, 2006

a: Office_Rpts:crseoutl:PHYS211.doc

Fall 2013
PHYS 211 – Introductory Physics 1

Faculty: Dr. Ali Abbasabadi, Professor of Physics.
Office & Phone: Room 3017, Arts & Sciences Commons Building, 591-3571.
Office Hours: M, W, F 2:00 – 2:50; F 3:00 – 3:50.
Lecture: M, W, F 1:00 – 1:50; Room 102, Science Building.
Lab Sections: 214: Monday, 3:00 – 5:50; Room 114, Science Building.
 213: Wednesday, 3:00 – 5:50; Room 114, Science Building.
 212: Thursday, 12:00 – 2:50; Room 114, Science Building.
 211: Thursday, 3:00 – 5:50; Room 114, Science Building.
Credit Hours: 4 (3 Hours Lecture; 3 Hours Lab).
Prerequisite: MATH 116 (C- or better) or MATH 120 (C- or better).
Description: Basic concepts and applications of motion, force, energy, fluids, heat, and sound.

Course Objective and Emphasis:

- The objective is to understand concepts of physics and apply them to physics problems.
- Emphasis will be on problem solving. Trigonometry and algebra will be used extensively.

Note: Syllabus will be followed exactly. Instructor, during semester, may impose additional restrictions and conditions for the conduct of the course.

Exams Schedule: Exams are in the same room as the Lecture, Room 102 Science.			
Monday	September	30	Midterm Exam: Chapters 1, 2, 3, 4, 5, 6, 7 (1 problem per chapter)
Wednesday 12:00 - 1:40	December	11	Final Exam: Chapters 8, 9, 10, 11, 12, 13, 14 (1 problem per chapter)
No students, under any circumstances , shall be given an exam (midterm or final) before the regularly scheduled exam.			

Required Materials:

- Textbook: College Physics, by Wilson, Buffa, and Lou, 7th Ed. 2010.
- Lab Manual: Physics 211 Lab Manual, by Ali Abbasabadi, current semester edition. It is available for purchase only at On-Campus Bookstore.
- Course syllabus, scientific calculator that you know how to use, ruler, protractor, pencil #2, and soft eraser.
- On the FSU web site, click on: MyFSU, Academics & Services, Registration and Academic Guide, then read and be aware of all University's Academic Policy Information. In particular, pay attention to: Calendars (such as the last day to drop the class), information regarding Incomplete Grade (I) and Withdraw (W), Academic Honesty and the Examination Schedules.
- On the FSU web site, click on: Academics, Academic Colleges, Arts and Sciences, Student Academic Policies, then read and be aware of all College of Arts & Sciences policies: Incomplete Grades, Academic Dishonesty, Disruptive Behavior, etc.

Attendance:

- **Lab Attendance:** You will get zero for missing labs, unless you make them up. Attendance will be taken at the start of each lab and you must print your name on attendance sheet, otherwise you will be considered absent and a zero will be recorded, even if your lab report is in the pile of lab reports. (Your lab report may get graded but a zero will be recorded.)
- **Exam Attendance:** You must attend all exams. You will get zero for any missing exam, unless you make it up.

- **Lecture Attendance:** Attendance for lectures will not be taken. However, if for whatever reason you miss a class, you will be responsible for getting lecture notes and announcements for that day from fellow students (no lecture notes, in any form, are available from instructor).

Time Conflict with other Courses:

Instructor, under no circumstances, will sign any paper regarding the permit for registering in Physics 211 or Physics 212, if there is any time conflict between them and any other courses.

Override for Registration:

Instructor, under no circumstances, will allow override in Physics 211 or Physics 212.

Repeating the Course:

No previous scores (exams, labs, etc.) will be accepted. You must attend all exams and labs.

Course Etiquette:

- Instructor would like to be called by students as Doctor Abbasabadi, Professor Abbasabadi, Doctor, or Professor.
- Instructor will not accept phone calls to home.
- Grades will not be given through phone, email, letter, etc.
- Cell phone, text-messaging, etc. must be off in class and lab.
- In class and lab, you are not allowed to consume food, drink, etc.
- All questions, regarding exams and grades, will be discussed and answered during office hours, not in class, nor by email, nor by phone, nor by letter.
- In class, you must be quiet. Talking to other students is not allowed.
- In lab, talk to other students quietly; other groups should not hear you.

Grading:

Grades are based on percentage of earned points from exams, homework, and lab. (All grades will count. None will be dropped.) The percentage will be calculated, **exactly** (no rounding), by dividing the total number of your earned points by the total number of possible points.

Midterm Exam	7 points
Final Exam	7 points
10 Labs & Homework	20 points (each 2 points)
Total	34 points

x = % of Total Score	Grade
$90\% \leq x \leq 100\%$	A
$86\% \leq x < 90\%$	A-
$82\% \leq x < 86\%$	B+
$78\% \leq x < 82\%$	B
$74\% \leq x < 78\%$	B-
$70\% \leq x < 74\%$	C+
$66\% \leq x < 70\%$	C
$62\% \leq x < 66\%$	C-
$58\% \leq x < 62\%$	D+
$54\% \leq x < 58\%$	D
$50\% \leq x < 54\%$	D-
$0\% \leq x < 50\%$	F

Accessing Grades:

Grades will be posted online at the time indicated on the exam's cover page. Grades will not be given through phone, email, letter, etc.

- **Midterm grade:** on FSU web site, click on MyFSU, FerrisConnect, PHYS, My Grades.
- **Final grade:** on FSU web site, click on MyFSU, Academics & Services, Student Grades.

Curving Grades:

There is no curve to increase or decrease your grade.

Extra Credits:

There are no extra credits for any extra work.

Quizzes:

There are no quizzes.

Lecture Notes:

No lecture notes, in any form, are available from the instructor.

Homework:

Several problems from the Textbook are assigned (see Homework Assignment in the syllabus) and few of them will be collected in lab. However, you must solve all assigned problems. To increase the possibility of getting higher grades, solve additional problems from the Textbook until you are confident that you are able to solve new problems. This is a judgment that you need to make on your own. However, you should not deceive yourself into false confidence that you understand the problems by seeing their solutions in the Textbook, in class, or during office hours. You must be able to solve problems on your own. You must develop problem-solving ability, not memorization of solutions. The best way to learn how to do problems is to do lots of them. If you have any difficulty in doing the Textbook problems (assigned or unassigned) on your own, you will have difficulty in doing the exams problems.

Exams:

Midterm exam and final exam are closed book and closed notes. No formulas will be given and you are not allowed to bring any formula and physics information with you (in any form, electronic, paper, etc.). The scientific calculator (no other electronic devices are allowed) that you bring to exams must be clear from any physics information and formula. You need to memorize all formulas given in your Textbook and those presented in class. Physical constants such as speed of light, acceleration due to gravity, etc. will be given.

Exams will consist of brand-new multiple choice problems that are based on materials in the Textbook and lectures. Problems may not resemble and may not be at the same level of difficulty as problems and examples in the Textbook and lectures. Many of problems will involve calculations. The regularly scheduled midterm exam papers will be returned to you on Friday, but not the original answer sheets (Scantron).

Taking an Exam Before the Regularly Scheduled Exam:

No students, **under any circumstances**, shall be given an exam (midterm or final) before the regularly scheduled exam.

Retaking an Exam:

There is no retake for any exam, midterm or final.

What to Bring to Exams:

You must bring a scientific calculator (no sharing is allowed and no other electronic devices are allowed) that you know how to use (you are fully responsible for all of its operations), and it must be clear from any physics information and formula. You are not allowed to use a cell phone or any other electronic devices as a calculator. You need a #2 pencil and a soft eraser to work out problems and to mark answer sheet (Scantron). Do not bring answer sheet and scrap papers. Plenty of spaces are provided on exams papers.

Instructions for Exams:

- On exam day, stay outside the class room to facilitate the distribution of exam papers.
- Exam starts the moment you enter the room. Stop talking as soon as you enter the room.
- Leave one seat empty between yourself and the next person. Instructor may rearrange the seating at any time during exam.
- Exam papers are stapled together. Do not remove staple and do not detach exam papers.
- On the provided answer sheet (Scantron), you must use **only** a #2 pencil. If you mark an answer with anything else (pen, ink, etc.), you will get zero for that question.
- Before starting exam, **print** your first and last name on **both** exam and answer sheet.
- On the answer sheet, you must **blacken** circles, not "gray" them.
- You must close all books and notes and put them away. You must turn off your cell phone and all other electronic devices (except calculator) and put them away.
- Before starting the exam, first check to make sure your exam is complete, with no missing and no blank pages.
- Each question of the exam is worth 1 point, with no partial credit. Answer all questions. There are no negative points for wrong answers.
- On the answer sheet, for each question, select only one answer (the one closest to your answer). If you select more than one answer, or no answer at all, you will get zero for that question.
- On the answer sheet, do not write comments or notes and do not leave any extra marks.
- You get credit for what you mark on the answer sheet, **not** for what you meant. (You do not get any credit for what you write on exam papers.)
- Turn in **both** the exam and the answer sheet when you finish (leave the answer sheet inside the exam). You will get zero for an exam with missing answer sheet.
- Answers to exam's problems will not be discussed or given to you until they are posted.
- The grades and answers to the problems will be posted on the web.

Sample Exam Questions:

There are sample exam problems that are given in the Lab Manual.

Make-up for Midterm Exam:

In order to make up missing midterm exam, you must follow **all** of the following steps:

1. If you are absent from midterm exam and have a valid excuse you may be given a make-up exam. See the instructor at the beginning of an office hour and present your excuse and at the same time make up the missed midterm exam during that office hour.
2. The make-up exam will be given **after** the regularly scheduled exam, **not** before. **No students, under any circumstances, shall be given a make-up exam before the regularly scheduled exam.**
3. You must make up the missed midterm exam as soon as possible.
4. A **zero** will be recorded for each missing exam. If you do not make up an exam, for whatever reason, you will get **zero** for that exam.
5. The degree of difficulty of the make-up exam may not be the same as the regularly scheduled exam.
6. No make-up exam paper or its answer sheet or their copies will be return to you. However, a copy of the regularly scheduled midterm exam will be given to you.

Make-up for Final Exam:

In order to make up a missing final exam, you must follow **all** of the following steps:

1. If you are absent from the final exam due to legitimate extenuating circumstances (the Instructor shall determine if you have a valid excuse) and inform and discuss with the instructor, regarding your absence, within 24 hours after the final exam, at latest (and preferably before the final exam), you may be given a make-up final exam **after** the regularly scheduled final exam and it will be only on the Thursday or Friday of the week that the final exam is regularly scheduled. If under no conditions you are capable of making up the final exam on the dates indicated here, you may want to read the section Incomplete Grade (I) in this syllabus to see if you are eligible to receive an Incomplete Grade (I), otherwise a **zero** will be recorded for the final exam.
2. The make-up final exam will be given **after** the regularly scheduled final exam, **not** before. **No students, under any circumstances, shall be given a make-up exam before the regularly scheduled exam.**
3. A **zero** will be recorded for each missing final exam. If you do not make up a final exam, whatever the reason is, you will get **zero** for the final exam.
4. The degree of difficulty of the make-up exam may not be the same as the regularly scheduled exam.
5. No make-up exam paper or its answer sheet or their copies will be return to you.

An Indicator for Exams Preparedness:

Following table may give you a rough estimate of how much you are prepared for exams. In the table, "Number of Problems Solved" refers to number of problems (Exercises, not Multiple Choice Questions or Conceptual Questions) from end of each chapter in the Textbook that you have solved on your own, without getting help from Textbook, other students, instructor, etc. You should not deceive yourself by solving some easy problems and get the false feeling of being prepared for exams. Also, you should not "double count" problems that are similar to each other. You need to solve problems from all sections of a chapter. Some sections in a chapter may need more exercise than the others. Note that if it takes you a long time to solve a problem at the end of a chapter, as far as that chapter is concerned, you are not prepared for exam.

Number of Problems Solved from End of Each Chapter	10	15	20	25	30
Level of Preparedness for Each Exam	Low	Below Average	Average	Above Average	High

How to Study for Exams and Increase Possibility of Getting Higher Grades:

- Study lecture notes and Textbook.
- Solve all examples given in the lectures, Textbook, and Lab Manual.
- Solve all assigned homework problems (not just those that are collected in the lab).
- If you still have difficulty in solving problems, or it takes you a long time to solve a problem, then solve additional problems from the end of chapters of Textbook that are not assigned as homework.
- Finally, it is not the number of hours that you spend studying that counts, it is the number of problems from the end of chapters that you solve on your own that may count.

Grading and Instructions for Lab:

There are 10 labs that you must attend (additional **Lab 6**, **Lab 9**, and **Lab 13** are for make-up). Working in group of maximum four, with the help of other members of your group, you will prepare your own lab report (one lab report for each student) during the lab period. If you have a question, first ask the partners in your group. If no one knows the answer, then ask the Instructor. Instructor, at any time, may rearrange the groups. You must be quiet in lab. If the instructor finds you loud or disruptive, you will be asked to leave the lab. In lab, you are not allowed to consume food, etc. You are also expected to be on time and stay in the lab, except for couple of minutes.

For most labs, there are assigned homework problems (see the Lab Manual and Lab Schedule). You must be present in the lab and perform all the work in the lab, answer all lab questions, write the complete solutions (not just the answers) to all assigned homework problems in the provided spaces in the lab report sheets, and submit your complete lab report **before** leaving the lab. You will lose points for each missing part, regardless of the reason, and if you do not hand in your lab report by the end of that lab session (for whatever reason), you will get zero for that lab. You must leave the lab promptly by the end of the lab period. No extra time (immediately after the lab session or afterward) will be given to you to complete the lab report. If you cannot complete your lab report during the lab session, due to sickness, etc., you may make up that lab session. All graded lab reports will be returned in the class and in the lab.

What to Bring to the Lab:

Syllabus, Textbook, Lab Manual, lecture notes, scientific calculator that you know how to use, ruler, protractor, pencil, and eraser.

What if you do not bring your Lab Manual to the Lab?

If you do not have the lab manual with you for a lab session, you must write down all your work, including solutions to lab questions and solutions to assigned homework problems, on blank sheets of papers and staple them and submit for grading. You are not allowed to leave lab for getting lab manual. If you leave, you will be considered absent and a zero will be recorded.

Make-ups for Labs:

If you have missed a lab or planning to miss a lab, you do not need to inform instructor. You may make up missed labs (and their homework) by choosing any of the following:

1. **Attending Another Lab Session:** You may attend another lab session during the same week (you do not need to inform the instructor in advance). However, you are not allowed to join a group that already consists of four students. Therefore, the only way to find out there is room for you in a group is to be present at the lab. If there is no group fewer than four in the lab, then you need to leave the lab and try to attend another lab session during the same week.
2. **Attending Make-up Lab Sessions:** If you miss labs you may make them up (and their homework) by attending make-up labs **Lab 6**, **Lab 9**, or **Lab 13**. Notice that you may also attend the make-up **Lab 6** or make-up **Lab 9** if you are planning to miss a lab later on and want to make it up in advance.
3. **Using the 3 Allowed Missing Labs:** If due to some circumstances, you cannot use the above methods for making up a missing lab and if you attend and receive full credits for minimum of 5 labs (or their make-ups) that at least one of them is **Lab 11**, **Lab 12**, or **Lab 13**, then you are allowed to miss maximum of 3 labs and get full credit for them (and their homework) without making them up.

(Homework is due at the end of lab sessions.)

Lab Schedule			
Lab	Week Beginning	Experiment	Homework due is from following chapters in the Textbook
1	August 26	Measurement	No Homework Due
X	September 2	NO LABS THIS WEEK	No Homework Due
2	September 9	Data Analysis	Chapter 1
3	September 16	Free Fall	Chapter 2
4	September 23	Vectors	Chapter 3
5	September 30	Kinetic Friction	Chapter 4
6	October 7	Make-up Lab: Collision	No Homework Due
7	October 14	Mechanical Equilibrium	Chapter 5
8	October 21	Thermal Equilibrium	Chapter 6
9	October 28	Make-up Lab: Projectile Motion	No Homework Due
10	November 4	Simple Harmonic Motion	Chapter 7
11	November 11	Pendulum	Chapter 8
12	November 18	String Vibration	Chapter 9
X	November 25	NO LABS THIS WEEK	No Homework Due
13	December 2	Make-up Lab: Density and Buoyancy	No Homework Due
X	December 9	NO LABS THIS WEEK	No Homework Due

Note:

- Although the make-up labs, **Lab 6**, **Lab 9**, and **Lab 13**, do not have any lab questions and homework, by attending any of them you will get credit for a missing lab and its homework.
- If you do not miss any labs during the semester and then attend a make-up lab, you will not get credit for that (no extra credits for attending extra labs).

Attend make-up labs **Lab 6** or **Lab 9** if:

- You have missed a lab.
- Or, you are planning (or there is possibility) to miss a lab later on.

Attend make-up lab **Lab 13** if:

- You have missed a lab.

Course Outline and Study Assignment

You need to know the entire content (including examples, insights, etc.) of **all** of the following sections, regardless of whether or not such materials were presented in class. Also, you need to know **all** materials presented in class (including the last session of class before an exam).

Chapter	Section	Chapter	Section
1	1: Why and how we measure. 2: SI units of length, mass, and time. 3: More about the metric system. 4: Unit analysis. 5: Unit conversions. 6: Significant figures. 7: Problem solving.	8	1: Rigid bodies, translations, and rotations. 2: Torque, equilibrium, and stability. 3: Rotational dynamics (moments of inertia of objects will be given). 4: Rotational work and kinetic energy. 5: Angular momentum.
2	1: Distance and speed: scalar quantities. 2: One-dimensional displacement and velocity: vector quantities. 3: Acceleration. 4: Kinematic equations (constant acceleration). 5: Free fall.	9	1: Solids and elastic moduli. 2: Fluids: pressure and Pascal's principle. 3: Buoyancy and Archimedes' principle. 4: Fluid dynamics and Bernoulli's equation.
3	1: Components of motion. 2: Vector addition and subtraction. 3: Projectile motion. 4: Relative velocity.	10	1: Temperature and heat. 2: The Celsius and Fahrenheit temperature scales. 3: Gas laws, absolute temperature, and the Kelvin temperature scale. 4: Thermal expansion. 5: The Kinetic Theory of Gases.
4	1: The concepts of force and net force. 2: Inertia and Newton's first law of motion. 3: Newton's second law of motion. 4: Newton's third law of motion. 5: More on Newton's laws: free-body diagrams and translational equilibrium. 6: Friction.	11	1: Definition and units of heat. 2: Specific heat and calorimetry. 3: Phase changes and latent heat. 4: Heat transfer.
5	1: Work done by a constant force. 3: The work-energy theorem: kinetic energy. 4: Potential energy. 5: Conservation of energy. 6: Power.	12	1: Thermodynamic systems, states, and processes. 2: The first law of thermodynamics. 3: Thermodynamic processes for an ideal gas. 4: The second law of thermodynamics and entropy. 5: Heat engines and thermal pumps (no formula for thermal pumps). 6: The Carnot cycle and ideal heat engines.
6	1: Linear momentum. 2: Impulse. 3: Conservation of linear momentum. 4: Elastic and inelastic collisions. 5: Center of mass. 6: Jet propulsion and rockets.	13	1: Simple harmonic motion. 2: Equations of motion. 3: Wave motion. 4: Wave properties. 5: Standing waves and resonance.
7	1: Angular measure. 2: Angular speed and velocity. 3: Uniform circular motion and centripetal acceleration. 4: Angular acceleration. 5: Newton's law of gravitation. 6: Kepler's laws and earth satellites.	14	1: Sound waves. 2: The speed of sound. 3: Sound intensity and sound intensity level. 4: Sound phenomena. 5: The Doppler effect. 6: Musical instruments and sound characteristics.

Homework Assignment from Textbook		
<p>Only solutions for Exercises in bold will be collected (at the end of each lab session). They must be written in the provided spaces in the Report Sheet pages of the Lab Manual. Solutions to the rest of the assigned homework problems will not be collected. Answers to the odd-numbered problems are given at the end of Textbook. Instructor does not have answers to the even-numbered problems.</p>		
Chapter	Problem	Due date for problems
1	Multiple Choice Questions:1,5,9,11,15,17 Conceptual Questions:9,17 Exercises:5,7,9,11,13,15,17,33,35,41,43,45,47,51,55,59,61 78,66,64,60,54,52,50,46,38,32,18,16,10,8	At the end of Lab 2
2	Multiple Choice Questions:1,3,5,7,11,13,19 Conceptual Questions:1,3,7,9,17,19 Exercises: 23,59 , 1,5,11,19,31,33,37,41,67,69,71,73,75, 88,86,68,66,64,56,50,44,22,18,10,8,4,2	At the end of Lab 3
3	Multiple Choice Questions:5,9,11 Conceptual Questions:1,5,7,15 Exercises: 3,5 , 1,9,13,17,27,29,35,45,47,51,53,71,73,77, 80,76,74,64,62,60,58,56,54,52,50,10,8,4	At the end of Lab 4
4	Multiple Choice Questions:3,5,7,9,13 Conceptual Questions: 1,3,7,9,19 Exercises: 13,19 , 1,5,15,21,23,31,39,41,43,45,51,63,65 80,78,76,70,68,66,60,58,56,54,26,22,20,2	At the end of Lab 5
5	Multiple Choice Questions:1,5,7,13,17,19 Conceptual Questions:3,9,11,13 Exercises: 1,3 , 9,15,29,31,33,37,39,41,43,45,47,51,63,67, 70,58,56,54,52,50,48,44,36,34,30,14,6,4,2	At the end of Lab 7
6	Multiple Choice Questions:1,3,5,7,11 Conceptual Questions:3,7,13 Exercises: 1,13 , 3,5,7,9,11,19,21,27,31,33,37,39,45,47,59, 82,50,48,46,38,32,30,26,18,6	At the end of Lab 8
7	Multiple Choice Questions:1,3,5,7,9,11,15 Conceptual Questions:3,5,13 Exercises: 9,23 ,3,5,7,13,15,17,19,25,27,29,31,49,53,55,57, 58,52,46,36,34,32,30,28,26,24	At the end of Lab 10
8	Multiple Choice Questions:3,5,9,11,15,17,19 Conceptual Questions:1,3,11,17,19 Exercises: 3,5 ,1,13,35,37,43,47,51,55,57,59,61,63,65,71,77 74,72,70,68,66,64,62,52,50,34	At the end of Lab 11
9	Multiple Choice Questions:1,3,5,7,9,13 Conceptual Questions:1,9,11,21 Exercises: 1,3 , 5,7,9,13,17,21,23,25,27,31,33,43,45,47,57, 72,60,58,56,48,46,44,40,38,36	At the end of Lab 12
10	Multiple Choice Questions:1,3,5,9 Conceptual Questions:3,15 Exercises: 15,21,23,27,31,33,37,39,41,45,49,53,57,59,63, 64,62,56,54,52,50,48,46,44,34	No Homework Due
Continued on the next page		

Continued from previous page		
Assigned Homework Problems		
Chapter	Problem	Due date for problems
11	Multiple Choice Questions: 1,5,9,11 Conceptual Questions: 3,5,9,11,13 Exercises: 7,9,11,13,15,17,19,23,25,27,29,31,33,35,43,47, 66,54,48,46,40,38,36,34,30,22	No Homework Due
12	Multiple Choice Questions: 5,13,17 Conceptual Questions: 5,7,15,17,19,23 Exercises: 1,7,13,19,21,23,33,35,37,39,49,51,53,55,57,59, 58,56,54,52,48,46,34,12,8,4	No Homework Due
13	Multiple Choice Questions: 1,3,9 Conceptual Questions: 3,5,7 Exercises: 1,3,5,7,9,11,13,15,21,23,31, 35,39, 41,57,61,65, 74,72,70,68,66,64,62,54,52,50	No Homework Due
14	Multiple Choice Questions: 1,3,5,7 Conceptual Questions: 7,9,15,21 Exercises: 3,7,9,21,25,29,31,47,49,51,55,57,59,63,65,67, 74,66,64,62,60,58,54,50,48,12	No Homework Due

Incomplete Grade (I) Policy:

Only students that successfully completed (with at least a passing grade) major parts of the course requirements (at least 75%) to date and missed a minor part of the course requirements (at most 25%) due to unexpected legitimate extenuating circumstances beyond their control and then faced with the same or different extenuating circumstances that prevented them from completing course requirements by the end of the last day of the semester **may** be considered, at the discretion of the Instructor, for the initiation of the request for the Incomplete Grade (I), subject to the authorization by the Department of Physical Sciences Office and the authorization by the Arts & Sciences Dean's Office. To be considered for receiving an Incomplete Grade (I), you must follow exactly the College of Arts & Sciences Policy and the University's Policy regarding the Incomplete Grade (I). On the FSU web site, click on: Academics, Academic Colleges, Arts and Sciences, Student Academic Policies, then read and follow the information and guideline of the College of Arts and Sciences policy regarding the Incomplete Grades. Also, on the FSU web site, click on: MyFSU, Academics & Services, Registration and Academic Guide, then under the title Academic Policy Information read and follow the information and guideline regarding the Incomplete Grade (I). To request for an Incomplete Grade (I), you must be eligible (poor performance will not make you eligible) to receive that grade and you must also inform and discuss with the Instructor that you are requesting to receive an Incomplete Grade (I) within 24 hours after the final exam, at latest (and preferably before final exam), in order to give Instructor enough time to process your request, as the Instructor must file the Incomplete Grade Form (signed by Instructor and you) with the Department's Office and the Dean's Office authorizing a grade of incomplete along with the requirements for completing the course. If the Instructor does not consider that the missing work and its lack of completion by the student by the end of the semester was under legitimate extenuating circumstances, or the Department's Office does not authorize an Incomplete Grade, or the Dean's Office does not authorize an Incomplete Grade, a **zero** will be recorded for all missing work (exams, labs, etc.). No request for an Incomplete Grade (I), due to missing the midterm exam or lab work, will be considered.

This is what we have in TracDat for PHYS 212:

1. Students will demonstrate competency in problem solving, teamwork and communication with regard to general physical principles relating to the area of electricity, magnetism, optics and atoms.
2. Students will use tools and instruments that allow them to design, analyze and evaluate physical principles and display data graphically, numerically or by text to illustrate those principles.
3. Students will understand the fundamental composition of matter with respect to electric charges and the concepts of electric and magnetic fields and forces, voltage and electrical power.
4. Students will be able to analyze simple Ohmic circuits.
5. Students will be able to describe the process of atomic emission and absorption and calculate the energy and wavelength of photons.
6. Students will understand the process of nuclear decay via the mechanisms of alpha decay, beta decay and gamma decay.
7. Students will be able to describe qualitatively and quantitatively the optical properties of eyeglasses and other lens components.

Sociology 121

Introduction to Sociology

Fall 2012

T/Th 9:30-10:45am
Starr Building, Room 324

Ferris State University



Course Description & Objectives

This course examines human societies, and what shapes them.

We will be learning about concepts, theories and research methods of sociology to expand awareness of society and social structure in both groups and individuals. We will analyze the nature and causes of inequality, deviant behavior, control, and more, especially in the contexts of American society. Emphasis will be on understanding how the lives of both students and those around them are shaped, and providing the tools to help students grow in their personal and professional worlds. This course also fulfills the GE Race, Ethnicity, and Gender Issues requirement.

Upon completion of this course, you will be able to:

- View and discuss social complexity as a sociologist.
- Demonstrate knowledge of modern societies and what shapes them.
- Explore the importance of race, ethnicity, gender, and more as traits which can significantly affect status and well-being in life.
- Understand how life experiences can greatly vary for minorities.
- Understand the great importance of self-examination, societal awareness, and an open-minded approach to understanding people.
- Improve your critical thinking and problem-solving skills, which are very useful for all college courses.

Course Details

Course Name:
SOCY-121-006

Department:
Social Sciences

Text:
Brinkerhoff, White, Ortega, &
Weitz: Essentials of Sociology,
8th Edition (2011).
Wadsworth/Cengage Learning.

(Available in Univ. book store)

In this syllabus...

Course info & requirements - 2
Weekly syllabus - 3
Student guidelines - 4

About this Course...

Sociology is a social science, where research often includes interpretation alongside 'hard' data. As such, expect reading and interpretation to go hand-in-hand with data and evidence in this field!

This course is presented through a combo of class discussions, lecture, assigned readings, hands-on projects, and other classroom activities. There are a few different ways that you can approach this material:

Novice

This may be your first sociology course, and you haven't learned much about societal diversity.

You are concerned with the main ideas, and hope to talk away with surface-level knowledge.

Intermediate

You have an idea of the complexity of society, but wish to learn more.

You respectfully challenge assumptions, are interested in multiple interpretations, and interested in the "whys" behind the "hows" of concepts.

Hardcore

You are experienced, and want to go deeper than you have before.

You actively seek alternate views, explanations, and opinions. You are curious, passionate, and concerned with why understanding society and culture are important.



Your instructor...

Zane Davidson

Office
ASC Building, Room 2088

Office Hours
Tu/Th 11am - 1pm

Phone
Ext. #2738

Email:
XXXX

Email is preferred. All emails will be responded to within 24 hours, though typically not over the weekend.

Course Evaluation and Breakdown

Tests (75%)

There will be five tests, each one worth 15% of your total grade. Exams will be primarily objective questions, based on your assigned reading and lecture material. Succeeding on tests requires effective use of reading and listening skills throughout the semester.

Test make-ups usually take the form of essays. Approval must be obtained within 24 hours of the absence, and the make-up must be completed within 2 weeks of the original test date.

In-class Solo and Group Work (25%)

Aside from work completed alone in class, work groups will be formed and will last the semester. Student work groups will collaborate on exercises designed to get everyone involved in thinking like a sociologist and confronting/understanding aspects of the social world.

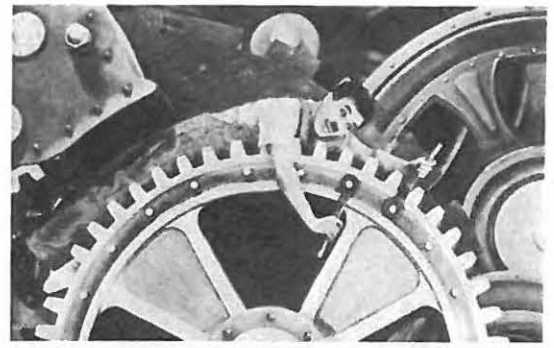
Make-ups will typically not be given for missed group work exercises. Exceptions are made only for medical difficulties or other serious problems. They must be requested within 24 hours of the exercise date, and completed within a week.

Attendance & Participation

Reasons for attendance should be obvious! Course material is easier understood and mastered, assignments are not missed, and relationships are built with the professor and your peers. In addition, anyone with perfect attendance will receive a 5% grade bonus.

As for participation, being alert and taking part in class discussions will only help your subject mastery. Good and active students are also given the benefit of the doubt when it comes to grading situations and other matters.

- Syllabus -



Topics	Reading	Examinations
<u>What is Sociology?</u>		
1. Course orientation 2. Intro to sociology	pp. 2-5, 10-16, and 27-29	TEST 1: Sections 1 & 2
<u>Methods and Research</u>		
3. Main principles of sociology	pp. 16-27	TEST 2: Sections 3, 4, & 5
<u>Building Blocks of Society</u>		
4. Culture 5. Social structure	pp. 31-53 pp. 76-89	TEST 3: Sections 6, 7, & 8
<u>Groups and Networks</u>		
6. From small to complex 7. Networks & community 8. Socialization	pp.103-111, 119-124 pp. 111-119 pp. 55-74	TEST 4: Sections 9 & 10
<u>Outside the Norm</u>		
9. Deviance and control 10. Inequality and stratification	pp. 126-145 pp. 151-173	TEST 5: Final Exam Date TBA
<u>Inequality in Societies</u>		
11. Race and ethnicity 12. Gender 13. Age, generation, etc.	pp. 184-207 pp. 209-226	

Syllabus Overview

Topic Dates:

The syllabus does not list exact dates, as to allow for time and content addition. Don't worry, it will always be made clear what topics are upcoming, and what your homework is. Notice of any changes will be given with ample notice.

Homework:

For each class period there will be a reading assignment from the textbooks. Occasionally a short article may be assigned as well. Articles will be handed out and/or available online.

Reading:

As we cannot cover every little thing in class, you will need to keep up with reading on your own! As with many college courses, the textbook serves as a starting point for topics which may be new or unfamiliar to you. In-class discussions and assignments assume that you have read the assigned readings, and build upon them.

In-Class Assignments:

Random in-class work, including group work, are not listed here. These are dependent on daily topics, which may shift. These usually cannot be made up.



Classroom Etiquette and Info

- Cell phones, laptops, mp3 players, and other technology **must be turned off and put away!** Repeated failure results in removal from room. Permission must be obtained if a laptop is needed for note taking.
- No chatting with friends, but, this does not mean do not talk. If you have any questions or wish to contribute, please ask! It is fine to interrupt and join the conversation.
- Be prepared for note-taking and oral participation. I will present material which is not in your textbooks.
- Students are responsible for assignments and materials covered during absences from class.
- No make-up exams and quizzes without a good and documented reason.
- Cheating (especially plagiarizing) will result in zero for assignment or exam.
- Excessive absences can result in a reduced grade and/or removal from class.
- Communicate with me! If conflicts arise or you need help, contact me in person or by email.
- Grades will be posted online. Please check it frequently.

The Fine Print

Academic Misconduct

Academic misconduct refers to dishonesty or misrepresentation with respect to assignments, tests, quizzes, written work, oral presentations, class projects, internship experience, or computer usage; violation of computer licenses, programs, or data bases; or unauthorized acquisition or distribution of tests or other academic material belonging to someone else. It includes such behaviors as cheating, copying materials from the internet without documentation, presenting another person's ideas or work as your own, taking someone else's exam for them, violating computer software licenses or program/data ownership, etc. It is the expectation of the College of Arts and Sciences that all work you turn in is your own and is original for the course in which it is being submitted. If you are uncertain about whether a particular behavior might represent academic misconduct, be sure to ask your professor for clarification.

Penalties for academic misconduct can include **FAILURE** of the assignment or the course, and/or disciplinary action up to and including probation or dismissal from the University.

Disruptive Behavior

The College of Arts and Sciences strives to maintain a positive learning environment and educational opportunity for all students. Consequently, patterns of behaviors which obstruct or disrupt the teaching/learning environment will be addressed. The instructor is in charge of his or her course (e.g., assignments, due dates, attendance policy) and classroom (e.g., behaviors allowed, tardiness). Harassment, in any form, will not be tolerated.

Penalties for disruptive behavior can include involuntary withdrawal from the course and/or disciplinary action up to and including probation or dismissal from the University. The full Disruptive Behavior Policy and additional policies are available on the College of Arts and Sciences website.

Academic Advising

All students have an assigned advisor and should confer with that advisor regularly. Students who have declared a major should see an advisor in that major. To find out who your advisor is, login to MyFSU and click on the Academics and Services tab, then Registration Status / Advisor Information link.

Other Resources

Academic Support Center.....	ASC 1017 – 591-3543
The Writing Center.....	ASC 1017 – 591-2534
Disabilities Services.....	STR 313 – 591-3057
Scholar Program.....	ASC 1021 – 591-5976
Assault & Abuse Help Center.....	2 nd Floor - 591-5968
Birkam Health Center.....	591-2614
FSU Book Store.....	591-2607
Flite Library.....	591-2669



Appendix 2a: Architecture and Facility Management Departmental Internship Policy

**FERRIS STATE UNIVERSITY
COLLEGE OF ENGINEERING TECHNOLOGY
SCHOOL OF BUILT ENVIRONMENT
ARCHITECTURE AND FACILITY MANAGEMENT
Final (Revised 3 Dec 2012)
FACILITY MANAGEMENT INTERNSHIP COORDINATOR POLICY**

Rationale for Policy:

The internship program is a key component to the success of the facility management program. It provides students with real world application of the concepts, theory, and processes developed in the classroom. Prospective students recognize the potential benefits of the internship experience; as such it is a great aid in recruitment of transfer students as well as Ferris' Architectural Technology students.

This success is in part due to consistent and ongoing involvement of a committed internship coordinator. It is imperative that the internship have continuity to ensure its continued success as well as the success of the Facility Management program.

There are several issues that are critical to ensuring a successful Facility Management internship program that are not consistent with the use of the College of Engineering Technology (CET) Rotation Schedule as the sole criteria to assign internship responsibilities. These issues include:

Continuous Presence to Employers:

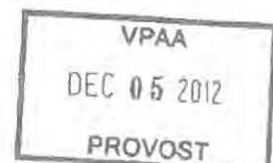
It is important that potential employers know who to talk to regarding internships. The internship coordinator needs to use current internship commitments to secure future internship opportunities. Internship sites need to be identified throughout the year and a relationship with each maintained. Further, reminders of upcoming internship "seasons" need to be sent early in the Fall Semester to ensure that internship sites remember to request funding for internship positions. Since the internship coordinator develops a relationship with the employers, other forms of cooperation such as working with employers to recruit graduating seniors and alumni, as well as identifying guest speakers and other cooperative ventures are an additional ongoing service provided by the coordinator.

Continuous & Early Presence to Students:

The students also need to be prepared for the internship starting in Fall Semester. This includes preparation of resumes, cover letters, familiarization with Bulldog Career Link, professional organizations and networking, internship seeking strategies, etc.

Proper Credentials and Practical Experience:

It is important that the contact person have the appropriate credentials to be recognized as a member of the field that hires the interns. Credentials specific to the facility management profession such as Certified Facility Manager, Facility Management Professional, IFMA (International Facility Management Association) Membership, experience working as a facility management practitioner are desirable, while other related credentials such as LEED accreditation, architectural and real estate licenses may also be considered.



To address these issues in a more productive fashion the Architecture and Facility Management faculty group has developed this policy for the selection of Internship Coordinator(s). The intent of this policy is to compliment University and College policies, not to replace them.

Selection of Internship Coordinators:

In order to establish a consistent "face" for the internship program and maintain continuity for the internship program, the Primary Internship Coordinator should typically be the lead facility management faculty member.

It is desirable to have a Secondary Internship Coordinator(s) to help with seasonal activities and the administration of the summer internships. The selection of the Secondary Internship Coordinator(s) from the Architecture and Facility Management Faculty Group should be based on involvement in the Facility Management program such as teaching, work experience, participation in Facility Management related continuing education activities, and professional membership .

When the number of qualified faculty members who express interest in this position exceeds the number of coordinators required to manage the number of interns, the CET Summer Rotation Schedule will be used to select the Secondary Internship Coordinator(s).

The Internship Coordinator(s) will be identified by the ATFM faculty group during the first three weeks of each Fall Semester.

Internship Coordinator Assignment, Loading, and Remuneration:

The remuneration for the Internship Coordinator(s) will be as contractually agreed to in the Ferris Faculty Association Contract and the policies of the College of Engineering Technology. Final faculty load assignments will be subject to administrative approval.

It is understood that the Primary Internship Coordinator will facilitate ongoing and coordination activities during the Fall and Spring semesters.

- The internships will be divided among all internship coordinators with the Primary Internship Coordinator being assigned five additional interns, to compensate for the work load assumed during the Fall and Spring Semesters.
- The internships will be assigned as follows:
 - To match the specific internship content with the interests and expertise of an individual faculty member.
 - To maintain a relationship with the internship site for future cultivation of the site for internships and/or employment opportunities for graduates. (Preference to Primary Internship Coordinator)
 - To develop an ongoing relationship with the internship site for further collaboration such as developing a "real world" project, etc. (Preference to Coordinator who seeks to collaborate)
 - Travel requirements. (Group assignments by geographical area to minimize travel costs)

Internships occurring during Fall and Spring semesters will be assigned to the Internship Coordinator with the lightest projected annual load at the time of the assignment. Per CET Policy, each student enrolled in an internship represents .444 credit hour load; this means that

internships that occur during this time will not result in any remuneration unless it constitutes a Contractual Overload for the Internship Coordinator. In that case the Internship Coordinator would be remunerated at the rate of .444 credit hours per assigned Intern.

Internship Responsibilities:



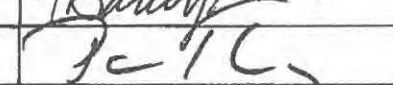
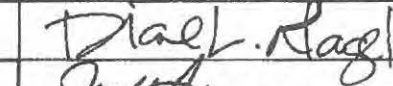

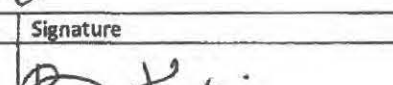
The Internship Cycle begins in the Fall Semester of the Academic Year with responsibilities continuing through Summer Semester of the Academic Year. The table below identifies the activities associated with the internship cycle within the Architecture and Facility Management Program Area. Faculty assigned to the internship will be responsible for these activities throughout the Internship Cycle.

Internship Responsibilities and Time Frame: (Code: Primary (P) and Secondary Coordinators (S))

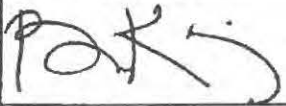
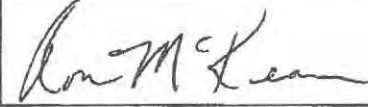
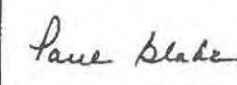
The following activities are directly related to the role and responsibilities of the Internship coordinator.	
It should be noted that some internships may be done outside the normal Summer Semester. These internships are shared by faculty assigned during the internship cycle. Depending on the faculty member's load, s/he may not be reimbursed for this work per CET Internship Policy.	
Responsibility	Time Frame
Identify and assign Faculty member(s) responsible for internship.	Start of Fall Semester prior to start of internship cycle
Identify Interns for the Internship Cycle.	September (P)
Coordinate Fall and Spring internships	(P/S)
Develop distribution list of interns identified for the Internship Cycle.	September (P)
Organize and hold general information meeting.	September (P/S)
Supervise development of student internship resumes/cover letters/etc. This includes proof reading/comments on content/etc.	September/October (P/S)
Organize and coordinate Intern Presentation Day. Presenters = previous summer's interns; attendees = next summer's interns.	October/November (P)
Organize, create and compile Intern Resume Booklet(s) if needed.	September (P/S)
Host a booth at the annual IFMA World Workplace Expo Hall that provides program information and resume booklets for interns and graduates. This event facilitates connections with future FM employers, internship sites and development partners.	October (P/S)
Host/attend other internship related events.	As needed (P/S)
Send email announcement/reminder(s) to past internship sites.	October/November/December/January (P)
Respond to calls from current and potential internship sites regarding questions on internship requirements, process, etc.	Ongoing (P)
Work with Prospective Internship sites to coordinate (typically with Career Services) on campus visits. (presentations/interviews)	Ongoing (P)
Review internship site announcements for compliance with FM internship requirements. Work with internship sites to bring internships into compliance with FM internship requirements.	Ongoing (P)
Review of existing and new internship sites in terms of viability, strengths against IFMA standards	January-April (P)

Distribute internship announcements to potential interns	Ongoing/with most in January-March (P)
Save/document internship announcements.	Ongoing (P)
Attend Ferris Career Day Networking Activities.	March (P)
Receive and save documentation of internship offers and acceptance.	Ongoing/most in April (P)
Split interns into sections.	End of April (P)
Set up methodology to manage assigned interns. (IE. Ferris Connect, email, etc.)	By start of Summer Semester (P/S)
Receive and evaluate Weekly Reports, Supervisor Evaluations, Reflective Essay, and other documentation of internship experience.	Summer Semester (P/S)
Contact site supervisor with a thank-you, introductions and purpose of internship.	May (P/S)
Plan and carry out site visit to interns within 300 miles.	Summer Semester (P/S)
Update Database of Internship sites.	Ongoing, but major update August (P)
Update Email Distribution List of Potential Internship Sites.	Ongoing, but major update August (P)
Contact site supervisor with a thank-you, etc.	August (P/S)
The following activities are related to connecting graduating students and alums with job opportunities.	
Maintain and update database of alumni.	Ongoing (P)
Maintain and update database of 4 th year students.	Ongoing (P)
Respond to calls from potential employers regarding questions on internships, student recruitment, and alumni recruitment. Help them identify which group they wish to recruit.	Ongoing (P)
Receive and forward employment announcements to appropriate group(s): interns, 4 th year students, alumni.	Ongoing (P)
Save job announcements.	Ongoing (P)
Work with Prospective Employers to coordinate (typically with Career Services) on campus visits. (presentations/interviews)	Ongoing (P)
Other activities.	
Assist in compiling the Annual Accreditation Report	August/September (P/S)

Faculty Signatures:

Name	Signature	Date
Mary Brayton		12/3/12
Gary Gerber		12/3/12
Dane Johnson		03/12/12
Paul Long		3 DEC 2012
Diane Nagelkirk		12/3/12
Joe Samson		3 DEC 2012

Administrative Signatures:

Name	Signature	Date
Brian K Craig Director, School of Built Environment		3 DEC 2012
Ronald McKean Associate Dean, College of Engineering Technology		3 Dec 2012
Paul Blake Associate Provost for Academic Affairs		12/6/2012

Appendix 2b: Internship Syllabus and Course Outline

**FERRIS STATE UNIVERSITY
COLLEGE OF ENGINEERING TECHNOLOGY
ARCHITECTURE AND FACILITY MANAGEMENT**

Syllabus: FMAN 393: Facility Management Internship

Instructor: Joe M. Samson, CFM, Professor
Office: 202 Johnson Hall (School year)
Phone: 231.591.2517 (School year); 616.874.8070 (Summer)
E-Mail: samsonj@ferris.edu

Mailing Address: (School year)
Architecture and Facility Management
915 Campus Drive, 314 SWN
Big Rapids, MI 49307

Office hours: As posted during school year.

Course Title: Facility Management Internship

Course Prerequisite: Completion of third year in Facility Management Program.

Course Description: Ten week (400 hours minimum) of supervised industry training experience in the facilities management environment.

Course Format: A course in which the student works at an internship site for 10 weeks (400 hours minimum) performing various facility related tasks under the supervision of a facility manager. The intern reports to the instructor via weekly reports and the intern's supervisor at the internship organization evaluates the intern's work and reports to the instructor as well.

Credit Hours: 4

Contact Hours: 400 hours minimum at internship position.

Course Purpose:

The purpose of the intern experience is to provide a transition from the university curriculum to practical application in a professional Facility Management setting. Theories of Facility Management and practical applications will be explored and tested by the student under close supervision of the cooperating organization and a faculty member from Ferris State University. Evaluation of the experience will be conducted by the organization, the student, and the faculty member. The student will be encouraged to continually review personal knowledge, skills, accomplishments, and professional growth as they relate to preparation for entry into the profession of Facility Management.

Course Objectives:

- A. To provide opportunities for practical experience in testing theories, concepts, and philosophies developed and acquired through classroom experiences. Ideally, practical experience in as many of the following areas as feasible would constitute an internship:
1. Long Range Planning
 2. Space Management
 3. Interior Planning
 4. Interior Installation
 5. Maintenance and Operations
 6. Architecture and Engineering Services
 7. Budgeting
 8. Real Estate
 9. CAD/BIM/FM software
- B. To provide the student an opportunity to assess skills and competencies in management, administration, and operational processes.
- C. To provide the student an opportunity to expand knowledge of the Facility Management profession through the utilization of personal evaluation instruments, company evaluations, and discussions with faculty of Ferris State University.
- D. To provide the student an opportunity to establish positive interpersonal relationships and to achieve personal fulfillment and growth.
- E. To provide the student an opportunity to begin the transition from student to Facility Management Professional.
- F. To provide an opportunity for facility management program to strengthen and maintain relationships with professional Facility Management departments.

Course Procedure:

Note: Compliance with the procedures described in this section will be considered in the Intern's grade.

- Preparation:
 - a. The Internship Coordinator will meet with students during the Fall Semester of the academic year prior to the summer in which the student plans to intern.
 - b. The Student is to prepare and submit a resume, (cover letter and thank you letter optional) for review by and input from the Internship Coordinator. The resume must be approved prior to applying for an internship. Be prepared to make revisions. **Make sure you use a "professional", appropriate email address.**
 - c. The Internship Coordinator will share a data base of potential internship sites for "controlled" student review and use. This data base is not the only source of internships for students to consider. The database

- includes contacts that the Internship Coordinator keeps in touch with or sites in which previous interns were placed.
- d. The Student should seek an internship experience that provides a broad view of the Facility Management profession.
- Site Approval:
 - a. Students desiring internships at sites that are not pre-approved by the Internship Coordinator are to complete the "Intern Site Approval Form". If the intern is not sure if the site is "pre-approved", he/she is to ask the Internship Coordinator. **All internship sites must be approved by the Internship Coordinator prior to the start of the internship. Most sites on the Data Base are pre-approved.**
 - b. The Internship Coordinator will review the information supplied and contact the site if necessary to determine if the internship provided at that site meets the criteria of a Facility Management Internship. The core requirement is 400 hours of work, typically done over a 10 week time frame, and exposure to and participation in FM functions.
 - Interview and Acceptance Process:
 - a. **The securing of interviews and the securing of an actual internship position is the responsibility of the student.** However, the Internship Coordinator will assist in the process whenever possible.
 - b. The student is to complete an "Interview Report" for each interview, (see attached form) and provide to the Internship Coordinator **if requested**.
 - c. The internship may be paid or unpaid. Consider both your financial situation and the value of the experience. Some excellent experiences can be gained at unpaid and minimally paid sites. **Governmental regulations restrict who can offer unpaid internships.** Normally these are restricted to qualified non-profit organizations. It is the organization's responsibility to check their individual situation.
 - d. The student is to **notify the Internship Coordinator upon accepting a position as an intern.**
 - e. **AFTER ACCEPTING A POSITION A STUDENT IS NOT TO BACK OUT AND ACCEPT ANOTHER.** This reflects poorly on yourself and the program and creates difficulties for future interns.
 - Internship:
 - a. Per College of Engineering Technology policies, students signing up for the internship course **must provide written evidence of an internship offer and its acceptance.** This can be a copy of a letter or email. **A list of internship activities is to be provided as well. This is necessary to be admitted to the course.**
 - b. **There IS tuition for the course.**
 - c. Typically internships are done during summer. However, if you secure an internship out of sequence contact the Internship Coordinator and special arrangements can be made.

- d. During the first week of the Internship (or as soon as the information is known), the Intern is to submit a completed "Internship Information Sheet" (see attached form) to the Internship Coordinator.
- e. The Intern is to professionally represent Ferris, the Facility Management Program, and themselves.
- f. Expected work schedule is for a minimum of 400 hours (typically 10 weeks). **The 400 hours is the minimum requirement.**
- g. Submit ten "Intern Weekly Reports" to the Internship Coordinator. These reports are to be submitted immediately after each week of work or reporting period (within three work days after the period being reported). This form is provided in this document and in the online course website. It is to be used by the Intern as a template for these reports. Ten (10) reports are required. Remember, you need 400 hours, so you could just send one every 40 hours, especially if your schedule does not follow traditional work "weeks". It is OK to count holidays and sick days in your time... just write "holiday" or "sick" day and the number of hours. These should not exceed 32 hours without the approval of the Internship Coordinator.
- h. After the 5th week, the company supervisor submits a completed "Supervisor's Week 5 Evaluation" and after the 10th week the "Supervisor's Final Evaluation" to the Internship Coordinator. They may be submitted via e-mail if sent directly from the supervisor, or hard copy. The Internship Coordinator will provide your Supervisor with a Word Document to use as a template for these reports.
- i. The Internship Coordinator may make an on-site visit at a time agreeable to the employer. This visit normally takes place after the fifth week of employment. One on-site visit shall be adequate.
NOTE: If the internship site is located more than 300 miles from Ferris State University, special arrangements for faculty monitoring will be made prior to approval of the internship. Distant sites will most likely not be visited.
- j. Upon completion of the internship, the student shall submit a written report of his/her internship experience and how the experience contributed to their development as a future Facility Manager. Separate instructions are provided for this assignment.

Evaluation:

After the completion of the Internship, the Internship Coordinator assigns a grade for the Internship. Factors affecting the grade are:

- A. Student Produced Items:
 - a. Timely completion, editing, and quality of Resume
 - b. Timely completion of interview forms, etc
 - c. Timely completion and content of Weekly Reports
 - d. Timely completion and content of Final Report

- B. Internship Supervisor Reports.
- a. The evaluation of the Intern's work as expressed by the Supervisor's Evaluations
 - b. All performance evaluations are shared with the student upon request

Note: For this course the following will be submitted via the online course website. Internship Information Sheet, Weekly Reports, Resume (yes/send it again), and Essay. The Supervisor Evaluations will be sent to the Internship Coordinator DIRECTLY by your supervisor via email.

Grading:

Updated Resume (completed at end of internship experience)	100 points
<ul style="list-style-type: none"> • Graphically interesting/clear • Well organized • Concise and well written 	
Internship Information Sheet	50 points
<ul style="list-style-type: none"> • Submitted within one week of start date at internship site • Complete and accurate information 	
Weekly Reports	250 points
<ul style="list-style-type: none"> • Submitted by Tuesday following work week reported • Accurately completes time information • Clearly and concisely reports weekly work activities 	
Five Week Supervisor Evaluation	200 points
<ul style="list-style-type: none"> • Received in a timely manner (you might have to remind supervisor) • Grade will reflect supervisor's evaluation 	
Ten Week Supervisor Evaluation	200 points
<ul style="list-style-type: none"> • Received in a timely manner (you might have to remind supervisor) • Grade will reflect supervisor's evaluation 	
Reflective Essay	200 points
<ul style="list-style-type: none"> • Clear and concise writing/proper grammar, spelling, etc. • Addresses how internship met your expectations • Addresses how internship differed from your expectations • What you like most/least, was most satisfying • How internship influenced your career goals • What you felt most/least prepared for 	

Course Grade:

The course grade will be based upon the total points awarded for the above activities.

	B+= 870-899	C+=770-799	D+=670-699	F < 600
A = 930-1000	B = 830-869	C = 730-769	D = 630-669	
A-= 900-929	B-= 800-829	C-= 700-729	D-=600-629	

Note: This syllabus may be updated to reflect changes in the policies of the College of Engineering Technology.

**FERRIS STATE UNIVERSITY
COLLEGE OF ENGINEERING TECHNOLOGY
FACILITY MANAGEMENT PROGRAM INTERNSHIP**

INTERN SITE APPROVAL FORM
(submit if the internship site is not pre-approved)

Intern Site Information:

Name of Organization: _____

Address: _____

City: _____ **State:** _____ **Postal Code:** _____

Primary Business: _____

Contact Name: _____ **Title:** _____

Contact Phone: _____ **Contact E-mail:** _____

Please indicate the types of tasks the intern can expect to participate in as well as the percentage of time he/she can expect to participate in them.

TASK (if other tasks are done write them in the blank spaces)	PERCENT OF HOURS
Long Range Planning	
Space Management	
Interior Planning	
Interior Installation	
Maintenance and Operations	
Architecture and Engineering Services	
Budgeting	
Real Estate	
CAD/BIM/FM software	

FERRIS STATE UNIVERSITY
COLLEGE OF ENGINEERING TECHNOLOGY
FACILITY MANAGEMENT PROGRAM INTERNSHIP

INTERVIEW REPORT

(complete for your records...provide to Internship Coordinator if requested)

Student Information:

Student Name: _____

Student Campus Address: _____

City: _____ State: _____ Postal Code: _____

Phone: _____ Cell Phone: _____

E-Mail: _____

Intern Site Information:

Name of Organization: _____

Address: _____

City: _____ State: _____ Postal Code: _____

Primary Business: _____

Name of Person who Interviewed you: _____

(If more than one person interviewed you, the person from the FM department is most appropriate, or you can provide info for more than one person.)

Title of Person who Interviewed you: _____

Phone of Person who Interviewed you: _____

E-mail of Person who Interviewed you: _____

Attach a brief "word processed" statement summarizing the interview. In particular information regarding the responsibilities you would have during the internship should be explained.

FERRIS STATE UNIVERSITY
COLLEGE OF ENGINEERING TECHNOLOGY
FACILITY MANAGEMENT PROGRAM INTERNSHIP

INTERNSHIP INFORMATION SHEET

(To be submitted as soon as you know the info...could be first week of internship)

Student Name: _____

Student Residence Information while at Internship:

Address: _____

City: _____ State: _____ Postal Code: _____

Phone: _____ E-mail: _____

Parent(s)' Information: (method to reach you if all else fails)

Name(s): _____

Address: _____

City: _____ State: _____ Postal Code: _____

Phone: _____ E-mail: _____

Contact Information for Internship:

Name of Organization: _____

Your Title: _____ Your Salary: _____

Typical Work Day Hours: _____

Start Date: _____ Completion Date: _____

Your phone: _____ Your E-Mail: _____

(Note: These are where you want me to call or send emails (in addition to the email within the online course website) to you during your internship..could be a work account or a personal account.)

Supervisor's Name: _____

(Note: This is the person who will do your 5 and 10 week evaluations.)

Supervisor's Title: _____

Supervisor's Work Address: _____

City: _____ State: _____ Postal Code: _____

Supervisor's Phone: _____ Supervisor's E-Mail : _____

CONTINUE ON REVERSE SIDE → → → → → → → → → → → → → → → →

Please indicate for each of the following categories, the percent of time that you believe you will spend on each during the internship. Total should be 100%.

- _____ % Long Range Planning
- _____ % Space Management
- _____ % Interior Planning
- _____ % Interior Installation
- _____ % Maintenance and Operations
- _____ % Architecture and Engineering Services
- _____ % Budgeting
- _____ % Real Estate
- _____ % CAD/BIM/FM software

Attach a brief "word processed" statement of your expected role and job function.

**FERRIS STATE UNIVERSITY
COLLEGE OF ENGINEERING TECHNOLOGY
FACILITY MANAGEMENT PROGRAM INTERNSHIP**

INTERN WEEKLY REPORT
(To be submitted immediately after each week of the internship)

Student Name: _____

Week Number: _____ Dates: _____

Number of hours at internship site by category of task and Total Hours Spent at Site.

TASK (if other tasks are done write them in the blank spaces)	NUMBER OF HOURS
Long Range Planning	
Space Management	
Interior Planning	
Interior Installation	
Maintenance and Operations	
Architecture and Engineering Services	
Budgeting	
Real Estate	
CAD/BIM/FM software	
Holiday/Sick, etc	
Orientation/Office Meetings	
TOTAL HOURS:	

Attach a brief "typewritten" statement elaborating on observations and activities in which you participated.

**FERRIS STATE UNIVERSITY
COLLEGE OF ENGINEERING TECHNOLOGY
FACILITY MANAGEMENT PROGRAM INTERNSHIP**

FINAL REPORT

Upon completion of your internship, each student shall submit a written report of his/her internship experience and how the experience contributed to their development as a Facility Manager.

Questions to consider when writing your report are: What was learned? Have you acquired a better understanding of FM, how and why? What did you like and/or dislike about your experience and FM in general? In what ways were you prepared or unprepared for your internship?

The length of the report should be 3-5 pages single spaced; the format and content of the report are left to the Intern's discretion. However, the report is to be concise, well organized and well written.

Submit via the online course website. If your internship extends beyond the end of the Summer Semester, complete the Internship Report as soon as possible and contact the Internship Coordinator for submission instructions.

FERRIS STATE UNIVERSITY

COLLEGE OF ENGINEERING TECHNOLOGY
FACILITY MANAGEMENT PROGRAM INTERNSHIP

SUPERVISOR'S WEEK 5 EVALUATION

Intern Name: _____ Date: _____

Supervisor: _____ Title: _____

Company Name: _____ Location: _____

Supervisor Signature: _____

Signature not required if submitted electronically by supervisor.

Instructions: *The immediate supervisor shall evaluate the student as objectively as possible by comparing the student with others of comparable academic level, age, experience, and job classification.*

Technical Skills: This area concerns the student's ability to handle the technical skills required for the specific work, i.e., computer skills, writing ability, software familiarity.

- _____ excellent
- _____ very good
- _____ average
- _____ below average
- _____ poor

Interpersonal Skills: This area concerns the student's relationships with co-workers, and other employees in the facilities management unit.

- _____ excellent
- _____ very good
- _____ average
- _____ below average
- _____ poor

Work Habits: This area concerns the student's ability to conform to the work ethic of the internship site, i.e., appropriate dress, punctuality, dependability, etc.

- _____ excellent
- _____ very good
- _____ average
- _____ below average
- _____ poor

Your opinion of the future success of this intern in the facilities management profession.

- excellent
- very good
- average
- below average
- poor

Your opinion of the student intern's contribution to your work unit during this internship.

- excellent
- very good
- average
- below average
- poor

Overall Performance:

- excellent: A or A-
- very good: B+ or B
- average: B- or C+
- below average: (PLEASE CALL!)

Comments: Please note any special characteristics or information that might be helpful to this student intern in evaluation of their work performance.

Is this intern the kind of employee you would consider for permanent employment?

- yes no

Did you discuss this evaluation with the student?

- yes no

Please return via email by conclusion of internship to:

Joe M. Samson, CFM, Professor
Architecture and Facility Management
Ferris State University
School Phone: 231.591.2517 Home (Summer) Phone: 616.874.8070
E-mail: samsonj@ferris.edu

FERRIS STATE UNIVERSITY
COLLEGE OF ENGINEERING TECHNOLOGY
FACILITY MANAGEMENT PROGRAM INTERNSHIP

SUPERVISOR'S FINAL EVALUATION

Intern Name: _____ Date: _____

Supervisor: _____ Title: _____

Company Name: _____ Location: _____

Supervisor Signature: _____

Signature not required if submitted electronically by supervisor.

Instructions: *The immediate supervisor shall evaluate the student as objectively as possible by comparing the student with others of comparable academic level, age, experience, and job classification.*

Technical Skills: This area concerns the student's ability to handle the technical skills required for the specific work, i.e., computer skills, writing ability, software familiarity.

- _____ excellent
- _____ very good
- _____ average
- _____ below average
- _____ poor

Interpersonal Skills: This area concerns the student's relationships with co-workers, and other employees in the facilities management unit.

- _____ excellent
- _____ very good
- _____ average
- _____ below average
- _____ poor

Work Habits: This area concerns the student's ability to conform to the work ethic of the internship site, i.e., appropriate dress, punctuality, dependability, etc.

- _____ excellent
- _____ very good
- _____ average
- _____ below average
- _____ poor

Your opinion of the future success of this intern in the facilities management profession.

- excellent
- very good
- average
- below average
- poor

Your opinion of the student intern's contribution to your work unit during this internship.

- excellent
- very good
- average
- below average
- poor

Overall Performance:

- excellent: A or A-
- very good: B+ or B
- average: B- or C+
- below average: (PLEASE CALL!)

Comments: Please note any special characteristics or information that might be helpful to this student intern in evaluation of their work performance.

Did the student intern demonstrate progress or growth in skills, knowledge, and professional demeanor during his/her internship? yes no

Explain:

Is this intern the kind of employee you would consider for permanent employment?

- yes no

Did you discuss this evaluation with the student?

- yes no

Do you verify that the intern has completed 400+ hours with 32 or less of the hours as holiday/vacation/sick time.

- yes no

Please return via email by conclusion of internship to:

Joe M. Samson, CFM, Professor
Architecture and Facility Management
Ferris State University
School Phone: 231.591.2517 Home (Summer) Phone: 616.874.8070
E-mail: samsonj@ferris.edu

Appendix 2c: Internship Sites – 2008-2014

FMAN 393 Facility Management Internship List - 2008

Student Name	Site
Megan Baty	Alcoa Howmett – Whitehall, MI
Jeff Baysarowich	Public Works Canada – Ottawa, ON
Tim Berman	Ferris State University – Big Rapids, MI
Joe Blake	Bissell – Grand Rapids, MI
Sean Bonner	Walgreens – Chicago, IL
Josh Bowman	Hillsdale County Medical Facility – Hillsdale, MI
Abigail Buchin	Sleeping Bear Dunes National Lakeshore – Empire, MI
John Came	US Environmental Protection Agency – Ann Arbor, MI
Chris Cleasby	Van Andel Institute - Grand Rapids, MI
Joe Curtis	City of Orlando - Orlando, FL
Isabel Isabel	John Ball Zoo – Grand Rapids, MI
Shane Keshwah	Public Works Canada – Ottawa, ON
Randy Kraft	John Ball Zoo – Grand Rapids, MI
Liz Madison	Priority Health – Grand Rapids, MI
Zach McIntosh	Spectrum-Health – Grand Rapids, MI
Bethany Moore	Grand Rapids Art Museum – Grand Rapids, MI
Thomas Mugambi	Public Works Canada – Ottawa, ON
Adam Phillips	DTE Energy – Detroit, MI
Justine Pritchard	Jones Lange LaSalle (Whirlpool) – Benton Harbor, MI
Frank Rhodes	Hyatt – New York, NY
Andrew Shelton	Johnson Controls – Holland, MI
Wendy Tichenor	Visioneering – Detroit, MI
Ryan VanderMolen	Grand Valley State University – Allendale, MI
Steve Wandtke	Hilton – Chicago, IL
Josh Westhouse	Facility Engineering Associates – Washington DC
David Zeeb	Collier County – Naples, FL

FMAN 393 Facility Management Internship List - 2009

Student Name	Site
Donnie Barnett	Harmon Glass – Cleveland, OH
Abdul Egal	Public Works Canada – Ottawa, ON
Megan Ferguson	American Institute for Research – Washington DC
Clayton Gallup	Grace’s Place Landscaping – Missoula, MT
Jamie Gerow	Kent Intermediate Schools – Grand Rapids, MI
Emily Haberkern	Michigan State University – East Lansing, MI
Eric Ham	Brookfield Zoo – Chicago, IL
RC Hunt	White Caps Stadium – Grand Rapids, MI
Kyle Johnson	Spectrum-Health – Grand Rapids, MI
Dan Kinsey	Newaygo Public Schools – Newaygo, MI
Kristen Kuk	Michigan State University – East Lansing, MI
Ben Larson	Voice of Martyrs – Bartlesville, OK
Kevin Lindholm	Michigan State University – East Lansing, MI
Jenna Mead	John Ball Zoo – Grand Rapids, MI
Jason Mulka	John Ball Zoo – Grand Rapids, MI
Joshua Mulka	Bissell – Grand Rapids, MI
Karin Olson	Ferris State University – Big Rapids, MI
Brett Pletzke	American Institute for Research – Washington DC
Alex Putnam	Michigan State University – East Lansing, MI
Andrew Rausch	Grand Valley State University – Allendale, MI
Mack Solomon	John Ball Zoo – Grand Rapids, MI
Ryan Szarowicz	Michigan State University – East Lansing, MI
Melanie Truesdell	ITCS-University of Michigan – Ann Arbor, MI
Jean Uwizeye	Michigan State University – East Lansing, MI
Mark Yager	US Environmental Protection Agency – Ann Arbor, MI

FMAN 393 Facility Management Internship List - 2010

Student Name	Site
Adam Case	DOW – Midland, MI
Carl Chapman	Collier County Government – Naples, FL
Greg Cole	Spectrum-Health – Grand Rapids, MI
Kirk Colpean	Michigan State University – East Lansing, MI
Emily Green	Frederick Meijer Gardens and Grand Rapids Art Museum – Grand Rapids, MI
AJ Gugliotta	Kent Intermediate Schools – Grand Rapids, MI
Eric Guikema	Grand Valley State University – Allendale, MI
Bill Hawk	St Clair Community College – Port Huron, MI
Kelsey Jett	Ceasar’s Palace – Las Vegas, NV
Abbot Kastanek	Grand Rapids Community College – Grand Rapids, MI
Patrick Kennedy	Kelly Services – Southfield, MI
Christine Kunde	Michigan State University – East Lansing, MI
Eric Lovell	Western Michigan University – Kalamazoo, MI
Derin Marino	Tri County Remodelling – Midland, MI
Aaron Metz	DOW – Midland, MI
Nate Mihos	Macatawa Bank – Holland, MI
Nick Miller	Ohio State University – Columbus, OH
Ju Lee Park	Frederick Meijer Gardens – Grand Rapids, MI
Jackie Pease	John Ball Zoo – Grand Rapids, MI
Jon Peckham	Good News Camp – Gladwin, MI
Ryan Penland	Michigan State University – East Lansing, MI
Mike Rensel	City of Orlando – Orlando, FL
Robert Ross	Saginaw Valley State University – Midland, MI
Ed Schindorf	Bissell – Grand Rapids, MI
Shawn Snoor	Michigan State University – East Lansing, MI
Aurora Temborg	Johnson Controls – Holland, MI
Seth Thornton	Frederick Hutchinson Cancer Research Institute – Seattle, WA
Ben Williams	US Environmental Protection Agency – Ann Arbor, MI

FMAN 393 Facility Management Internship List - 2011

Student Name	Site
Nate Cameron	Michigan State University – East Lansing, MI
Allison Clark	DOW – Spring Hill, PA
Chris DeBoer	John Ball Zoo – Grand Rapids, MI
Kayla Gottschalk	Collier County Government – Naples, FL
Ross Jacobs	Frederick Meijer Gardens – Grand Rapids, MI
Jenn Kelly	Metro Health – Kentwood, MI
Dan Koperski	Collier County Government – Naples, FL
Dave Masek	Big Cypress National Nature Preserve – Ochopee, FL
Steven Medich	Holland Home – Grand Rapids, MI
Jessica Miller	American Institute for Research – Washington DC
Brandon Murrell	Butterball Farms – Grand Rapids, MI
Kurt Potgeter	Michigan State University – East Lansing, MI
Kim Rademacher	Blue Cross Blue Shield of Michigan – Detroit, MI
Nate Ritter	Spectrum-Health – Grand Rapids, MI
Josh Ruff	Dominos – Ann Arbor, MI
Alaina Stiles	Michigan State University – East Lansing, MI
Jordan Weber	Ferris State University – Big Rapids, MI
Phil Wheeler	John Ball Zoo – Grand Rapids, MI
Jim Williams	John Ball Zoo – Grand Rapids, MI

FMAN 393 Facility Management Internship List - 2012

Student Name	Site
Crystal Anderson	Michigan State University – East Lansing, MI
Derek Bacigal	Boeing – Seattle, WA
Josh Bitson	Munson Medical Center – Traverse City, MI
Ryan Filipiak	Michigan State University – East Lansing, MI
Leif Haugen	Grand Rapids Community College – Grand Rapids, MI
Zach Hurd	DTE Energy – Detroit , MI
Jasmine Jackson	Meadow Brook Hall (Oakland University) – Rochester Hills, MI
Derick Kerbyson	ARAMARK – Texas
Patrick Markey	Casino Aztar – Indiana
Jacob Marsh	CMS Trucking – Sturgis, MI
Andrew Maclver	Ferris State University – Big Rapids, MI
Nick Nequist	Ottawa County – Holland, MI
Justin Peterson	McCain Foods – Chicago, IL
Nick Prytula	Blue Cross Blue Shield of Michigan – Detroit, MI
Craig Rinzema	Redstone Homes Property Management – Grand Rapids, MI
David Rowse	Michigan State University – East Lansing, MI
Jessica Socolovitch	DOW – Texas
Jordan White	Michigan State University – East Lansing, MI

FMAN 393 Facility Management Internship List -2014 (19 Students)

Student	Organization
Derek Austin	TRW Inc. (Farmington Hills, MI)
Ben Blair	DTE Energy (Detroit, MI)
Mike Bush	Terumo Cardiovascular Group (Ann Arbor, MI)
Kelley Carter	Smithsonian (Washington DC)
Josh Dennett	Big Cypress National Preserve (Ochopee, FL)
Spencer Gerber	Amway (Ada, MI)
Isandor Gomez	Amway Grand Hotel (Grand Rapids, MI)
Mac Hay	Padnos Corp. (Holland, MI)
Sierra Knepple	FEA (Arlington, VA)
John Lee	Federal Reserve Bank of Richmond (Richmond, VA)
Jake Leestma	Collier County Government (Naples, FL)
Mike O'Connor	The Ride (Grand Rapids, MI)
Leslie Runyon	Hurley Medical Center (Flint, MI)
Jeremy Samuels	Hyatt (Dallas, TX)
Matt Shedd	Denso Inc. (Kalamazoo, MI)
Kaylee Sisovsky	GRCC (Grand Rapids, MI)
Rachel Stieger	Hyatt (San Antonio, TX)
Andrew Tompkins	Kelly Fuels/B&B Hardware (Jackson, MI)
Keenan Zost	Haworth (Zeeland, MI)

Appendix 3: Advisory Board Members and Meeting Minutes

Ferris State University
2014-2015 FACILITY MANAGEMENT ADVISORY BOARD

<p>Mr. Marc Adelman, AIA, CFM, CCS Principal TVS Design The Rookery Building 209 South LaSalle St., Suite 801 Chicago, IL 60604 312-777-7422 Office 312-804-3115 Cell madelman@tvsa.com OR madelman@tvs-design.com Member: 1998</p>	<p>Emily Burns Facilities Planning Manager, Places Herman Miller Zeeland, MI 616.262.8234 emilyb8234@gmail.com</p>
<p>Mr. Skip Camp, CFM Facilities Management Director Collier County Board of Commissioners 3335 Tamiami Trail, East Naples, FL 34112 239-252-8380 skipcamp@colliergov.net Member: 1997</p>	<p>Ms. Samantha J. Dennison Lease Administration Manager GSA, NCR, WP3PST 301 7th Street, SW Suite 7645 Washington, DC 20407 202-708-5541 Office 202-725-6434 Cell Samantha.dennison@gsa.gov Member: 2010 (alum)</p>
<p>Damon Gonzales, CFM Vice President for Facilities Management Davenport University 6191 Kraft SE Grand Rapids, MI 49512 616.732.1156 Office 616.308.6103 Cell Dgonzales3@davenport.edu Member: 2010 (alum)</p>	<p>Mr. Chris Hodges, PE,CFM,IFMA Fellow Facility Engineering Associates 11001 Lee Highway, Suite D Fairfax, VA 22030 703-591-4855 X106 hodges@feapc.com Member: 2007</p>
<p>Ms. Deirdre Jimenez Operations Manager Jacobs Engineering Global Buildings North America 30800 Telegraph Rd, Suite 4900 Bingham Farms, MI 48025 248 .633.1432 Office deirdre.jimenez@jacobs.com also copy to kathy.galvin@Jacobs.com Member: 2010</p>	<p>Ms. Janice Kitchen, ASID, LEED AP Senior Interior Designer Fishbeck, Thompson, Carr & Huber, Inc. 1515 Arboretum Dr., SE Grand Rapids, MI 49546 616-464-3889 jkkitchen@ftch.com Member: 2007</p>

<p>Mr. Filip Martin Director of Engineering Hyatt Regency Phoenix 122 North Second Street Phoenix, AZ 85004-2379 602-440-3188 filip.martin@hyatt.com Member: 2004 (alum)</p>	<p>Mr. Steve Orsargos, CFM Manager, Facilities Operations DTE Energy 2000 2nd Avenue 1828 WCB Detroit, MI 48226 313-235-7173 orsargoss@dteenergy.com Member: 1997 (alum)</p>
<p>Mr. Sergio Pages Vice President/Chief Information Officer StructureTEC 34119 W 12 Mile Road, Suite 270 Farmington Hills, MI 48331 248.848.1791 x318 248.755.5852 cell SEP@StructureTEC.com Member:2012</p>	<p>Mr. Roger Peterson Senior Vice President ARAMARK Facilities Services Business and Industry Group 1101 Market Street, 20th Floor Philadelphia, PA 19107 919.345.8211 mobile Peterson-Roger@ARAMARK.com Member: 2012</p>
<p>Mr. Daniel Roth, CFM,MCR Pfizer, Inc. 7000 Portage Road, PORT-041-029 Kalamazoo, MI 49001 269-833-8051 daniel.j.roth@pfizer.com Member: 1997 (alum)</p>	<p>Mr. John Stivers J.H. Stivers Project Services LLC 651 Parkwood NE Grand Rapids, MI 49503 616-774-9447 jhstivers@comcast.net Member: 1990</p>
<p>Mr. Tom Theoret Manager, Facility Services Spectrum Health 100 Michigan Avenue, MC042 Grand Rapids, MI 49503 616-391-2340 Tom.Theoret@spectrum-health.org Member: 2007</p>	<p>Dr. Wayne Veneklasen, Ph.D., CFM President Facility Solutions 3722 Basswood Dr. Grandville, MI 49418 616-890-8122 cell wvenekla@att.net Member: 1990</p>

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kathy.galvin@Jacobs.com

Facility Management Advisory Board Meeting Minutes

Friday, April 26, 2010
Swan 205 & FLITE 438

Present: Diane Nagelkirk, Joe Samson, Gary Gerber, Dane Johnson, Mary Brayton, Skip Camp, Tom Theoret, Wayne Veneklasen, Damon Gonzales, Samantha Dennison, John Stivers, Mark Sekula, Pete Domenico

Out: Bruce Dilg, Marc Adelman, Filip Martin, Chris Hodges, Janice Kitchen, Steve Orsargos, Deirdre Jimenez

I. Updates

- Updates on reorganization of college, new names for college and program, searches for School Directors and Program Faculty.
- Updates on faculty activities/development.
- Updates on curriculum changes and implementation.
- Updates on involvement with BOMA/IFMA/MiSHE.
- Updates on lecture series/field trips/guests.
- Updates on new BS degree in Architecture and Sustainability
- Updates on enrollment trends/gpa/etc.
- Updates on scholarships awarded.
- Updates on internships/job placements.
- Updates on plans for facility enhancement.

II. Student Round Table Discussions.

- Job Seeking Skills for a Challenged Economy. Pete Domenico, Skip Camp, Samantha Dennison.
- Career Development after Graduation. Dan Roth, Wayne Veneklasen, Damon Gonzales.
- Acceptance of Sustainability in the Workplace. Tom Theoret, Mark Sekula, John Stivers.

III. General Discussion....Advisory Members and Students.

- Dan Roth discussed Linked-In.
- General discussion/student concerns, etc.

IV. Afternoon Discussion.

- Advisory Members pleased with student Interactions.
- Students generally satisfied in program.
- Students still wish for better handle on what FMers do...day in life of FMer.
- Students not sure of MGMT 350 as beneficial.
- Discussion of how to make team projects more collaborative.
 - Teams divvy up grade points.
 - In class progress/interaction on projects.
- Discussed ways to help students become more aware of FM softwares.
 - Demos/reports/analysis of needs and selection of most appropriate system.
- Discussed opportunity to solicit funds from local corporations to encourage students to serve internships at non-profits that cannot pay a salary.

- It was decided to investigate opportunities at Meijer Gardens and the Grand Rapids Art Museum.
 - John Stivers offered to facilitate this interaction.
 - Joe Samson will work with Karen Lerew, the CET's Advancement Officer to arrange/coordinate this effort.
- Tom Oldfield, CET Dean stopped by, greeted and thanked advisory board members and updated them on some of the challenges the college and university face.
- Ron McKean, CET Associate Dean stopped as well and participated in some of the afternoon discussion.

ADJOURN

Meeting Minutes
Ferris State University
Bachelor of Science in Facility Management
Advisory Committee Meeting – 3 October 2011

Attendance:

Advisory Members Present:

- Marc Adelman, Skip Camp, Damon Gonzales, Deirdre Jimenez, Janice Kitchen, Filip Martin, Steve Orsargos, Dan Roth, John Stivers, Tom Theoret, Wayne Veneklasen

Faculty Members Present:

- Mary Brayton, Bruce Dilg (morning only), Gary Gerber, Dane Johnson, Paul Long (morning only), Diane Nagelkirk, Joe Samson

FSU Administration Present:

- Brian Craig, Ron McKean (morning greeting)

Guests Present:

- Miguel Carballo, Dennis Linguidi

Meeting began at 9:00am after informal breakfast buffet.

1. Introductions:

- a. Advisory Members
- b. Faculty – new faculty member – Paul Long, AIA, LEED AP
- c. Clerical support – new secretary – Jan Anderson

2. Updates:

- a. Re-organization of CET from Departments to Schools
- b. Brian Craig hired as new Director for School of Built Environment in July 2010
- c. New Provost and Vice President – Dr. Fritz Erickson
- d. Review of faculty updates and accomplishments
- e. Curriculum updates: Added studio configuration to FMAN 331, 431, and 432; Revisions to ARCH 203 and 204; created an internal advising guide sheet for first two years for FM majors which includes relevant elective courses in place of ARTS 120 and PHYS 212
- f. Professional activities update
- g. IFMA Accreditation-standards update
- h. Program capacities and enrollment update – enrollment in FM program is stable, enrollment in architecture program is on the incline
- i. Internships continue to be successful
- j. Guest speakers & lecture series update

3. Goals for 2011/2012

- a. Re-design program website
- b. Maintain enrollment at or near program capacity of 50
- c. Initiate laptop program for fall 2012
- d. Enhance facilities and equipment
- e. Continue assessment of course content to match IFMA accreditation standards

- f. Fundraising and marketing
 - g. Explore possibility of re-introducing FMAN 441 into online certificate program
 - h. Secure additional faculty line for replacement of Bruce Dilg.
 - i. Wayne suggested that West MI IFMA Chapter may be able to provide some financial support to help achieve goals; help post and advertise internships; marketing of certificate and BS programs.
4. Comments from Brian Craig:
- a. S&E budgets have been reduced for all programs.
 - b. Technology presents unique challenges (costs/up to date).
 - c. What do technology issues mean for FM?
 - d. Bruce Dilg position must be approved by ALL college deans and is in the process of being requested.
5. Comments and discussion of BIM:
- a. Dierdre - design and CDs are done in BIM, but when the project is complete and information is provided to facilities, no one knows how to use it. A&E firms do not see the value of spending the extra time & money to imbed FM related information as no one knows how to use it. No investment by users. To integrate project delivery must have asset management capability for life cycle....there is no BIM version of asset management software.
 - b. Damon - organizations are doing more with less; as such multiple skills are needed.
 - c. Janice - clients extract information for A&E.
 - d. Filip – they are experimenting to hire students with more technical background – but many buildings (especially in hospitality) do not have new technologies.
 - e. Tom - used FTCH to do BIM at Spectrum, appreciate struggle for time/software to use it...it takes time to get there and software is not up to level where it is usable.
 - f. Skip - for midsize organizations FM software less important, but enterprise software (more generic and used by other organization departments) is important.
 - g. Gary - cost managers/problem to buy into BIM model by building owners.
 - h. Marc - technology not as big an issue as the protocol...hard to keep info up to date...so the cost of having current info to generate reports is very expensive.
6. Advisors and faculty break into 3 groups to brainstorm. Presentation results include:
- FUNDRAISING TEAM RESULTS**
- a. What is fundraising for and how is it done?
 - i. What? Events/Scholarships
 - ii. Multiple fundraising strategies
 - 1. Check/for tangible need/interactive event
 - iii. Build database of alums-friends/use network/alumni relations (person or committee).
 - iv. What does HVACR do...i.e. Jill Trinklein
 - v. Distinguished alumni awards.
 - b. Who
 - i. Utilize/recruit professionals to help solicit funds. (Alumni)
 - ii. Identify industry FM companies to solicit

1. Johnson controls & other FM companies
 2. Trane & other manufactures /equipment providers?
 - iii. Have alumni help build prospect list for university marketing
 - iv. Align advisory MTG or alumni homecoming with job fair. This justifies travel cost for advisory board member
 - v. National org. /industry org.
 - vi. Engage students
 - vii. Alumni relations committee
- c. Money
- i. Verify that alum's, who are giving, are allocating their money to the FM program. 400+ Alums
 - ii. Alumni like to donate to specific items
 - iii. Scholarship Funds
 - iv. Sponsorship of student trips
- d. Events
- e. Online auction with donated items
- f. Golf outing
- g. Lecture series
- h. Social media
- i. Donations
- i. Software
 1. BIM
 2. MS Office for students
 3. Energy analysis software
 - ii. Equipment
 1. Testing equipment, light levels, infrared cameras
 2. Computers powerful enough to run software
 - iii. Furniture
 - iv. Sponsorship of student trips or projects

RECOGNITION TEAM RESULTS

- Marketing: MI Works/IFMA Ads/IFMA Chapter Websites/Outsource companies
- Market directly to FM outsourcing companies (i.e. Aramark, AECOM, URS, JCI, Sodexo, etc.)
- Recruit through Social Networking (Facebook & LinkedIn/Community Colleges/BIM education.
- Minor to recruit through Allied Health/Business/Recreation.
- What do competitors do? Benchmark what other universities do.
- How to market FM? Make sexy/more tangible
- Posters
- Video Streaming: Alumni/what facility does and what they do there
- WM Chapter HS Career Day.
- Linked in: Job Postings...other info.
- FSU IFMA Chapter to do high school visits.
- Potential markets: Chicago/Cleveland/Mid MI/Ohio/Indiana/Illinois/ Milwaukee
- Target job-loss: AT, FM professions, career change professionals

- Train students on BIM
- Info to education chairs at IFMA regional chapters.
- Links to FSU-CEU's-online courses at chapter administration (website)
- Facebook page
- Direct high school marketing brochure/ HS career days
- Market FM to potential FM candidate (privately)
- Promote options into FM B.S.
- Continue IFMA booth- market online courses
- IFMA student group involvement in marketing; volunteer for career days?
- Educate what FM is
- Enhance social networking- linked in, Facebook, etc.
- Explore other FM school recruitment techniques. BYU, Wentworth, etc.
- Expand minors to non-technical areas (School of Business, Allied Health, Recreation, Museum Management, Hospitality Management)
- Continue to market salaries
- Continue to target community colleges
- Continue Summer Camps

FACILITIES TEAM RESULTS

- a. What is the FM work setting?
 - i. Permanent, impermanent, or roving?
 - ii. Laptops & smart phone, smart board, white board walls & desk surfaces
 - iii. Offices?
- b. Who is Client: Student/Faculty/Staff (wants choices in how they work)
- c. What is needed: Technology/choices/multi purpose spaces/flexibility-work anywhere
- d. Teams & Groups – how do they work?
 - i. How does this translate to classroom? Differentiation of functions.
 - ii. Touchdowns = less structure
 - iii. Small Spaces
 - iv. Technological flexibility
- e. Now and future. Steelcase/Herman Miller/Haworth
- f. Create FM work setting here? True office/teaming
- g. Student training in Granger - use this space more for FM.
- h. Establish relationships/make connections.
- i. Create identity within our area.
- j. Donations from big 3 furniture manufactures
- k. "Marketing"
 - i. Establishing relationships
 - ii. Make connections
 - iii. Have a specific plan and list of furniture, etc.
- j. Rethink computer labs
- k. Consider moveable, portable furniture
- l. Use existing connections & relationships
 - i. Leveraging advisory board & (local production)
- m. Prof Organization Engagement

- i. Presentation of wish list (needs)
 - ii. Establish and maintain on-going relationship with IFMA
 - n. Green sustainable spaces
 - i. Breakout spaces/casual/natural lighting
- 7. Advisor/Student Round Table Sessions.
 - a. Security and Risk Assessment: Skip Camp/Filip Martin/Wayne Veneklasen
 - b. Career Development and Job Seeking: Damon Gonzales/Deirdre Jimenez/ Dan Roth/John Stivers
 - c. Sustainable Operation of Existing Facilities: Marc Adelman/Janice Kitchen/ Steve Orsargos/Tom Theoret
- 8. Advisory member's impressions of Students
 - a. Students appear to be more engaged, were more content and had fewer complaints as in past years. In particular, the older students were very engaged.
 - b. Females were noticeably quiet.
 - c. Appears to be a diverse group in terms of non-traditional student demographic; military, graphic design and hospitality background.
 - d. Students seem "un-coached" in long term career planning, resume writing, interviewing techniques, etc. They appear to be unfamiliar with the value of networking, taking advantage of mentors, and being more proactive on where they want to be career-wise.
 - e. Create opportunities for others to help mentor and coach them.
 - f. Encourage students to contact:
 - i. Advisory board as resource/mentors
 - ii. Alumni as coaches for resume writing and interviewing techniques
 - g. Give them tools to manage their career. Teach them what they can do for themselves.
- 9. Advisory member's impressions of Program
 - a. Positive enrollment trends. New Architecture and Sustainability degree is a positive and will have favorable impact.
 - b. Facilities are very poor and are disjointed, convey a poor image, poor for marketing and un-welcoming.
 - c. Greatest program in the country deserves better facilities. The facilities do not match this fact.
 - d. Need visioning sessions to discover what is needed.
 - e. Consider creating and implementing an Alumni Facility Improvement Fund.
- 10. Trends
 - a. Sustainability/LEED is the future, particularly in terms of maintenance.
 - b. There is a gap between employer expectations for writing skills, etc vs. actual graduate skill level and quality of writing, communication, delivery of presentation. This is not just FSU – seems to be the case with education in general.
 - c. CAD and Technology are strong.
 - d. Weak in finance and management.
 - e. Create opportunities for students to write a business plan, a budget, tell a story.

- f. Are there too many concepts in last two years?
- g. Students need to logically present info to management: value engineering/Return on Investment.
- h. Be aware of things like energy management and consumption, retro-commissioning.
- i. Emphasis on writing/communication/thinking.

Meeting Adjourned at 3:30pm.

Meeting Minutes
Ferris State University
Bachelor of Science in Facility Management
Advisory Committee Meeting – 25 October 2013

Attendance:

Advisory Members Present:

- Marc Adelman, Skip Camp, Damon Gonzales, Laurie Gilmer, Deirdre Jimenez, Janice Kitchen, Steve Orsargos, Sergio Pages, Roger Peterson, Dan Roth, John Stivers, Tom Theoret, Wayne Veneklasen

Faculty Members Present:

- Mary Brayton, Chris Cosper, Gary Gerber, Dane Johnson, Paul Long, Diane Nagelkirk, Joe Samson

Meeting began at 9:00 am after informal breakfast buffet.

1. Introductions:

- a. Advisory Members
- b. Faculty – new faculty member Chris Cosper, AIA, LEED AP
- c. Clerical support – new secretary – Christine Anderson

2. The morning session included a Program Review and Update:

- a. Re-organization of CET from Departments to Schools
- b. Dr. John Schmidt replaced outgoing Brian Craig as new Director for School of Built Environment in September 2013
- c. Review of faculty updates and accomplishments
- d. Professional activities update
- e. IFMA Accreditation-standards update
- f. Program capacities and enrollment update – enrollment in FM program is declining, enrollment in architecture program is also on the decline. Reviewed possible reasons for the decline
- g. Internships continue to be successful
- h. Guest speakers & lecture series update
- i. Acquisition of new FM Learning Space – Swan 218
- j. Update on student Chapter successes

3. Goals for 2013/2014:

- a. Complete Accreditation Report
- b. Increase enrollment at or near program capacity of 50
- c. Enhance facilities and equipment
- d. Continue assessment of course content to match IFMA accreditation standards
- e. Fundraising and marketing

4. Advisory Board comments and discussion of Program Review and Update:
 - a. In terms of the drop in enrollment, other programs (such as BYU) aren't bringing in freshman either.
 - b. What entry-level jobs do our students find after graduation? Joe responded with:
 - i. Space planning
 - ii. Project management
 - iii. Operations
 - c. Do we, should we prepare students for upper management?
 - d. If we want students to move into upper management, we need to focus more on the business side of FM rather than the architecture side
 - i. We are missing the MEP side
 1. Joe stated that the technical architectural skills help students get internships and entry level jobs. Students are encouraged to continue their education. IE. Adding an MBA to the FMAN degree would add more management skills and a management credential.
 2. Students who earn the BS in HVACR and a minor or certificate in FM do have a good MEP side. There is strong interest in graduates with this background. However, there are few students who follow this path.
 - ii. The Architecture and Sustainability (ARST) and the Facility Management (FMAN) degrees need to be separated more; to identify each as distinct degrees
 - iii. ARST and FMAN aren't defined enough
 - iv. Need more 'people management' skills. Social Media is killing people and soft skills.
 - e. Advisory members who hosted summer internships indicated that it would be helpful to receive more feedback from internship coordinators regarding the overall experience of the student intern in terms of what they learned, etc.
5. From 10:30 a.m. to 12:00 p.m. Three Advisor/Student Round Table Sessions occurred. Each session ran for 25 minutes; students rotated from one to the other.
 - a. How FM works at Our Organization: *Skip Camp, Steve Orsargos, Damon Gonzales, Janice Kitchen*
 - b. Career Development and Job Seeking Tips: *Marc Adelman, Dan Roth, Wayne Venkassen, John Stivers, Deirdre Jimenez*
 - c. The next Big Challenge for FM: *Tom Theoret, Sergio Pages, Roger Peterson, Laurie Gilmer*
6. Advisory member's impressions of Students
 - a. Students feel there is too much ARCH in junior and senior years
 - b. Students feel that there is not a lot of FM experience within our faculty
 - c. Something sparks the students in the lower levels to be attracted to FM
 - i. Counselors/advisors direct them
 - ii. Pay scale

- d. Advisors reiterated (from previous years) that the process of becoming educated in an area is more important than what the actual content was. They also expressed that the ability to learn and to communicate effectively were most important.

7. After lunch a brief update on the revised IFMA Accreditation process was reviewed.

8. Advisory member's impressions of Program and FM:

Job Placement:

1. Starting salaries are going down
2. Should the program brochures be changed to take out numbers from job placement and salaries?
3. Joe thinks placement is actually in the 80% range (instead of 100%, like it says in brochure)
4. Is there an associate's degree that students can get that's not architectural?
 - a. Make a different track for students who know early on they want to go into FM
 - b. All faculty are architects, so we are limited in what we can offer.
 - c. Joe would like to see the program be less rigidly defined so they can have a concentration within the FM major but this may complicate accreditation, due to each concentration addressing different competencies. Also, if the courses were within the program area, there would be productivity issues as there is not sufficient enrollment to support elective options.
 - d. We should have some HVACR faculty come to the advisory board meetings
 - e. Kendall has a 'foundation' year that might be a good idea
 - f. The fact that we have the ARCH base attracts students and makes sense. So get them to come here with the architectural side, but then have the more technical options for FM
 - g. Since the job market is shifting, our program should also shift
 - h. The students didn't understand that they are making money for their company
 - i. If we are attracting people with the word 'architecture' then we need to make 'facility management' more attractive. Rebrand the department
 - j. The employers expect the grads to manage a facility, not how to space plan and design. They want to have HR classes and management classes.
 - i. Joe said that GVSU tried to do an all management degree and no one got jobs. They did not have a skill base in understanding buildings.
 - k. Maybe have a concentration of 'real estate', 'master planning', 'O and M', 'energy'
 - l. Facility management is very broad
 - m. Employers would rather see communication skills rather than Revit or CAD
 - n. It's more how do you get kids to come here rather than change the curriculum

- o. Maybe the existing classes can incorporate new topics to include other relevant aspects of FM
- p. Think it's good they take different types of classes so they get an idea of what they are working with in case they encounter it; then they understand it.

Curriculum Changes:

1. ARCH 362 (Environmental Systems 2) instead of Statistics
 - a. Think ARCH 362 would be way better than stats
 - b. Statistics is good for logical thinking; so it's not a bad class to have. Statistics is important to management related decision making
 - c. ARCH 362 would help you get that first job, but stats will help you get farther
2. OSHA Class
 - a. Highly recommend OSHA
 - b. Safety is #1
 - c. Even OSHA 10-hour would be good
 - d. Maybe even offer a non-credit course for resume

Retention:

1. Like idea of maintaining a minimum GPA; if they drop below the minimum they would not be able to take FMAN classes.
2. When evaluating their GPA's to get into FM, consider taking out the ARCH classes
3. Be cautious of raising the GPA when enrollment is down

Meeting Adjourned at 3:30pm.

Appendix 4a: Sample Student Assessment Instrument

Directions:

- In the Assessment part of the answer sheet, darken the cell that corresponds to your answer using the following guide for items 1 to 23.
 - If the item *does not apply to this course*, leave the cells blank.
 - If you *strongly agree* with the item, mark cell 5.
 - If you *agree* with the item, mark cell 4.
 - If you are *neutral (neither agree nor disagree)* with the item, mark cell 3.
 - If you *disagree* with the item, mark cell 2.
 - If you *strongly disagree* with the item, mark cell 1.
- For items 24 and beyond, mark the appropriate response. Note that item 24 requires a "Yes" or "No" response. If there are additional items numbered 25, 26, 27, 28, and 29, darken the corresponding cells as you did for items 1 through 23.

STUDENT
ASSESSMENT
INSTRUMENT
QUESTIONS

Faculty/Instructor Name: _____

Assessment:

	SA	A	N	D	SD
1 Expectations for graded assignments were clearly communicated.	5	4	3	2	1
2 Course activities (lectures, projects, etc.) helped me learn the course material.	5	4	3	2	1
3 Examinations, papers and other graded projects were returned in a reasonable amount of time.	5	4	3	2	1
4 The course was well organized.	5	4	3	2	1
5 The instructor helped me make connections between the content of this course and real life situations.	5	4	3	2	1
6 The instructor generally followed the stated course outline.	5	4	3	2	1
7 The instructor presented material in a clear and understandable manner.	5	4	3	2	1
8 Graded materials and activities covered the major points of the course.	5	4	3	2	1
9 The instructor gave helpful illustrations and examples in explaining application of the course materials.	5	4	3	2	1
10 The instructor seemed to be genuinely interested in what she/he was teaching.	5	4	3	2	1
11 The instructor was well prepared for classes.	5	4	3	2	1
12 I was able to get help in this course if I needed it.	5	4	3	2	1
13 I felt that the instructor put considerable effort into teaching this class.	5	4	3	2	1
14 The instructor was available outside of the regularly scheduled class time.	5	4	3	2	1
The instructor displayed an interest in students and their learning.	5	4	3	2	1
16 I really had to work to successfully complete the requirements in this course.	5	4	3	2	1
17 The instructor was enthusiastic about the subject matter of this course.	5	4	3	2	1
18 The instructor was receptive to the expression of student views.	5	4	3	2	1
19 The instructor stimulated my interest in the subject.	5	4	3	2	1
20 The subject matter in this course is difficult.	5	4	3	2	1
21 I was interested in the subject matter before I took this course.	5	4	3	2	1
22 Overall, I rate this as an excellent course.	5	4	3	2	1
23 Overall, I rate this instructor as an excellent teacher.	5	4	3	2	1
For item #24, mark cell 1 for a "yes," or cell 2 for a "no."					
24 I was required to take this course.				2	1
25	5	4	3	2	1
26	5	4	3	2	1
27	5	4	3	2	1
28	5	4	3	2	1
29	5	4	3	2	1

Written Response Items

Directions: Please respond to items A and B in the spaces provided below.

A What did you like about this course?

B What changes would you recommend?

Thank you!

Appendix 4b: Facility Management Exit Interview Reports

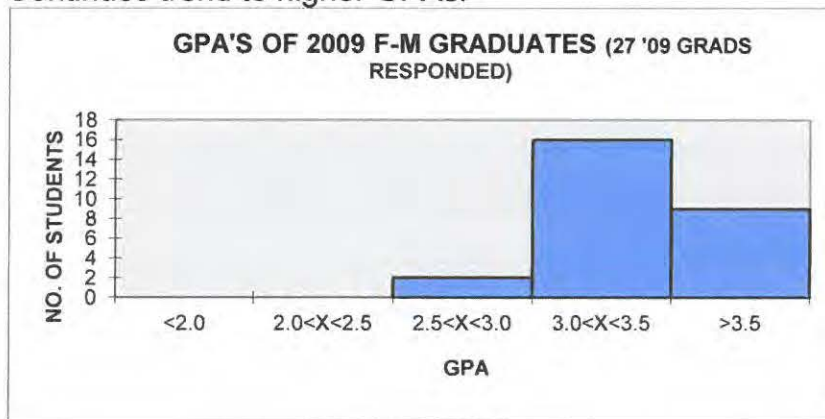
In the class of 2009, 27 of the graduating students returned surveys. This is an excellent return. Diane Nagelkirk, the Program Chair distributed the surveys to graduating FM students during the last two weeks of classes. The following is a summary of the results of the survey. The questions as they appeared on the survey are listed first, followed by a summary of the responses.

The author (Joe M Samson) has also made comments following the summary of responses if the results show significant difference from previous results.

This survey has been done previously in 1994, 1996, and 1998 through 2008.

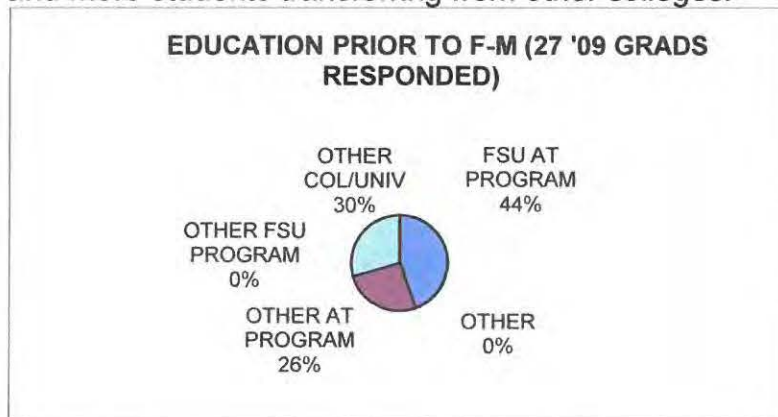
1. What is your current GPA?

Continues trend to higher GPAs.



2. How did you enter the F-M program?

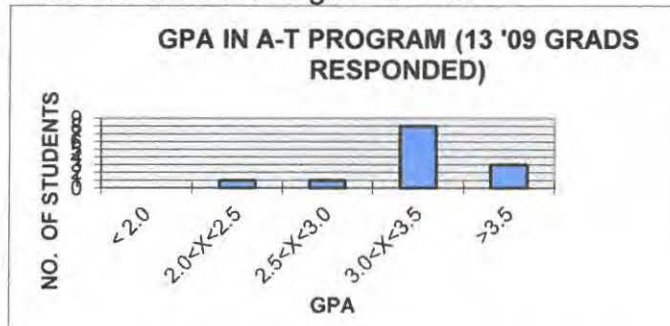
Similar to past years, with half of FM students from Ferris' AT program and more students transferring from other colleges.



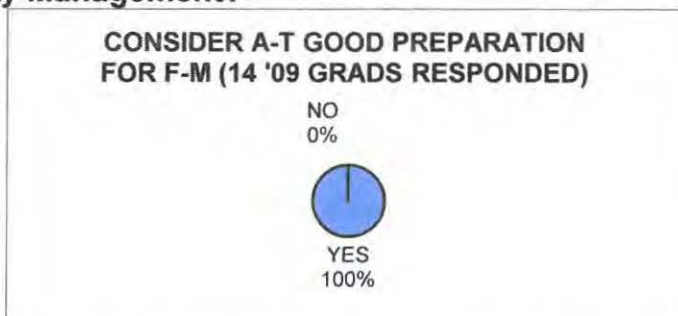
Questions 2A, 2B, and 2C were answered by graduates of the FSU architectural technology program.

2A. What was your GPA in the A-T program?

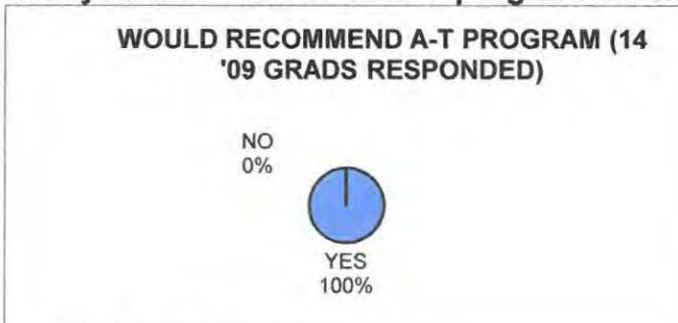
More students with higher GPAs.



2B. Do you consider the A-T program to be an appropriate preparation for Facility Management?



2C. Would you recommend the A-T program to others?



2D. Why or why not?

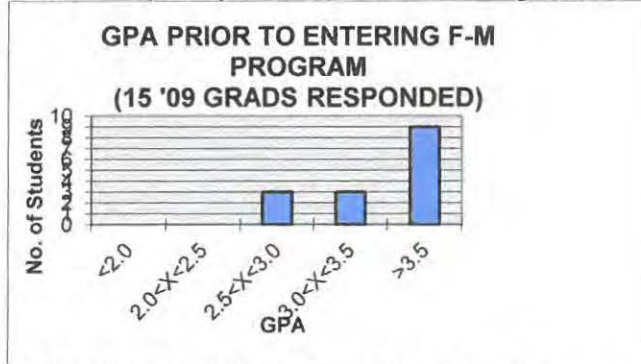
Yes: Great basis of knowledge for entering either the FM or CM program...it was a great base of knowledge of buildings and their components, materials-especially for beginners... It really helps you to understand how the building process works...It is very informative as to how buildings are put together, and what materials and systems are used...It is a very good program even just to prepare students for any degree or program (related) since it is a more challenging and time consuming program. I really learned all I know about architecture in that program. It taught me to manage time and to think outside the box...great teachers and projects...loads of fun...teaches you the basics of how buildings go together before anything else, reinforces things in later classes...because it gives you an architecture perspective of things and this will better help to understand materials and buildings...it provides a great working understanding of AT procedures...Being at FSU and learning the program faculty gives you a step up before entering the FM program...good overall fundamental knowledge of building

systems, etc...you learn valuable technical skills and information about building systems...

Questions 2E and 2F were answered by transfer students who did not enter F-M from the FSU architectural technology program.

2E. What was your GPA prior to entering the F-M program?

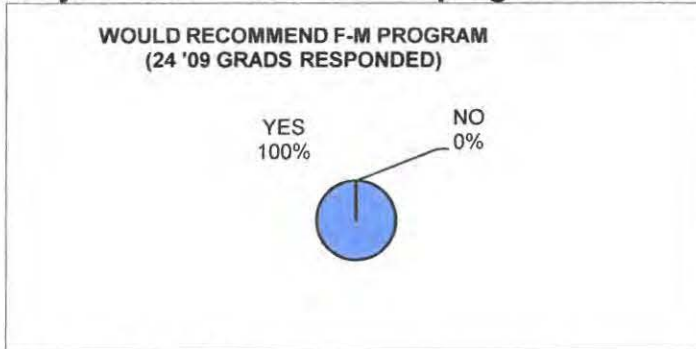
Similar to past years with transferring students coming with higher GPAs.



2F. What college did you transfer from?

- Humber College (Toronto, Ontario) – three students
- Grand Rapids Community College – five students
- Lansing Community College – two students
- DuPage College (Chicago, IL)
- Kalamazoo Valley Community College
- Mid Michigan Community College

3. Would you recommend the F-M program to others?



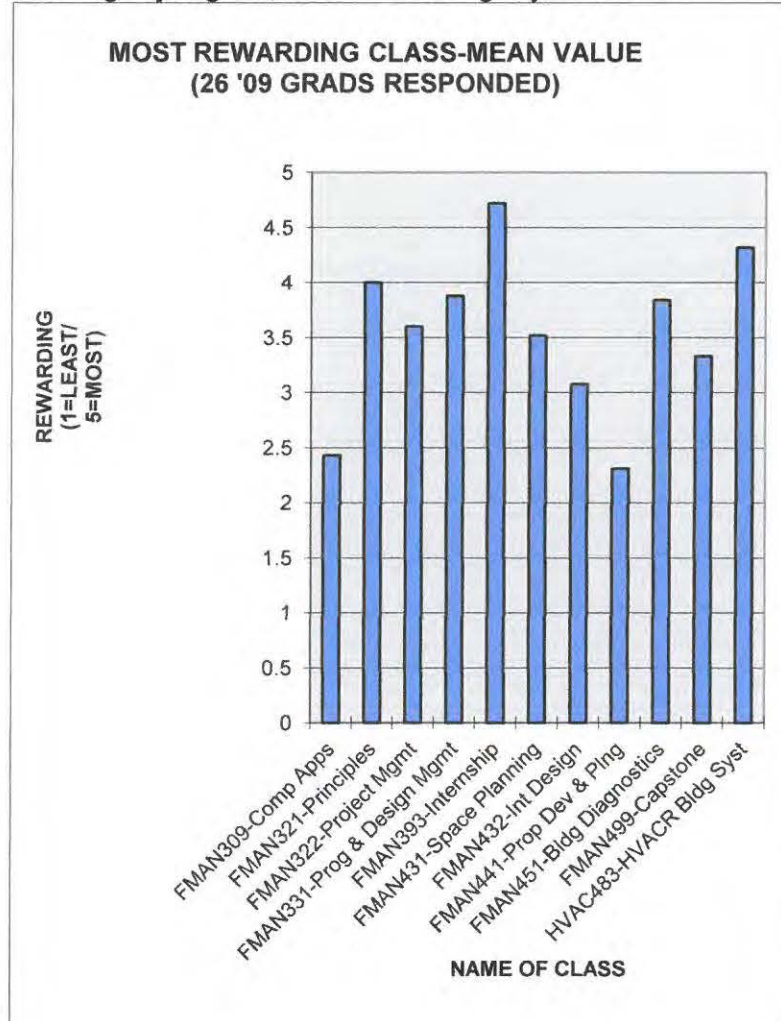
3A. Why or why not?

YES: It helps prepare you for a professional career and covers a wide array of subject matter...well rounded program with educated faculty...because there is a large spectrum of possibilities to be experienced...it was fun...good career...even though a lot of us feel at times we don't know what we should, I think we will all be surprised when we enter the workforce at how well we do...I feel it has prepared me for the workplace very well...if this field is what they really want to go into, this program is great...because Ferris' program is respected in the field...information is good, classes are ok...it is a unique field of study with a broad range of areas to go into after graduation...if the economy ever turns around the placement would be great, plus you are not stuck doing the same thing every day...it is a good field to get into if you want to stay with the built environment but don't want to continue with architecture, although it is a bit businessy...because it led to a

good job...it is a very helpful program which help in the overall aspect the operations of a building runs as well as the construction and design... some of the classes provide many of the tools needed to be productive as a FM...job opportunity...

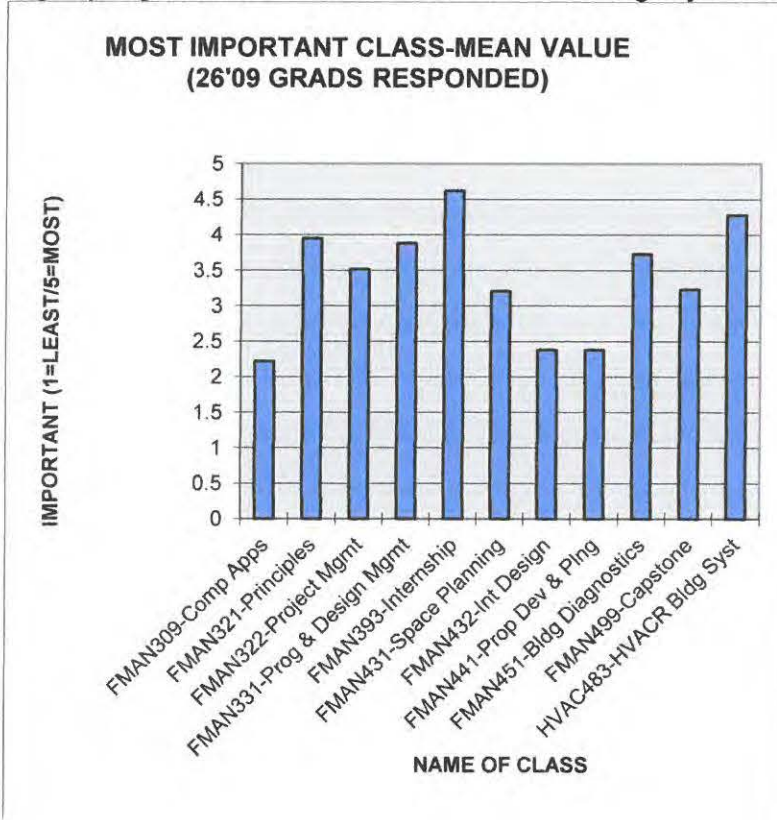
4. How rewarding were the courses?

Most classes very similar to previous surveys; FMAN 309, 499 and HVAC 483 slightly higher, FMAN 441 slightly lower.



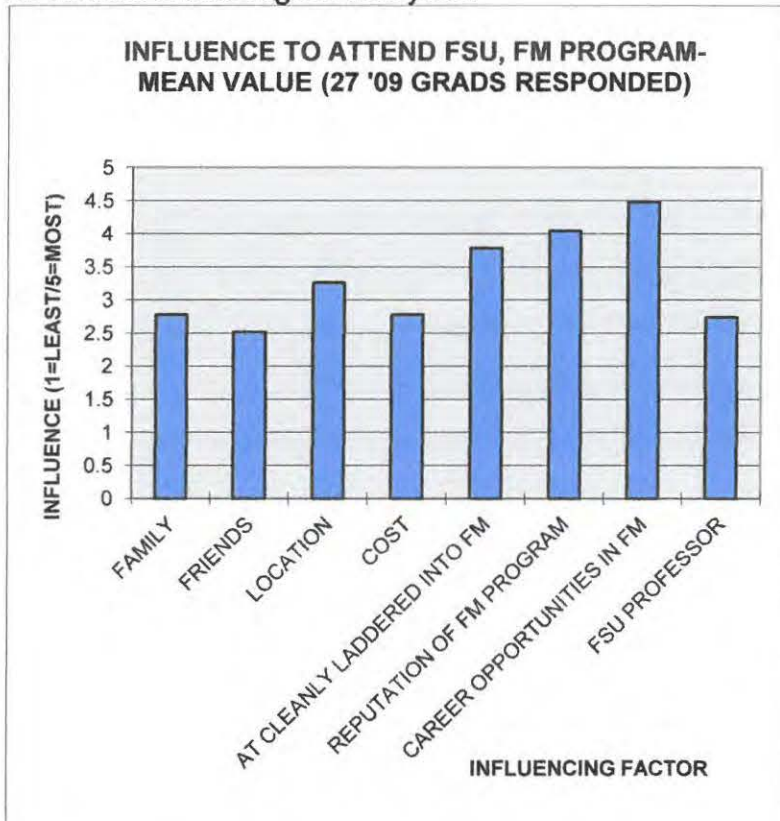
5. What courses do you think were the most important...courses in which you learned the most?

Students ranked courses similarly to in past years; FMAN 309, 322, 441 slightly higher while FMAN 331, 431 were slightly lower.



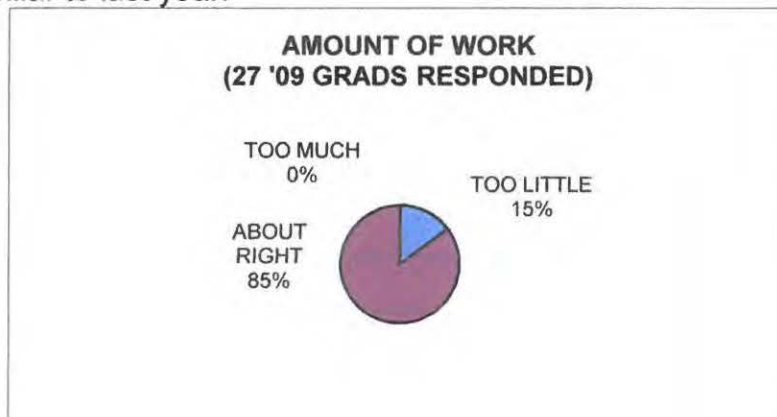
6. How influential were the following factors in your decision to attend the FM program at FSU?

All ranked a little higher this year.

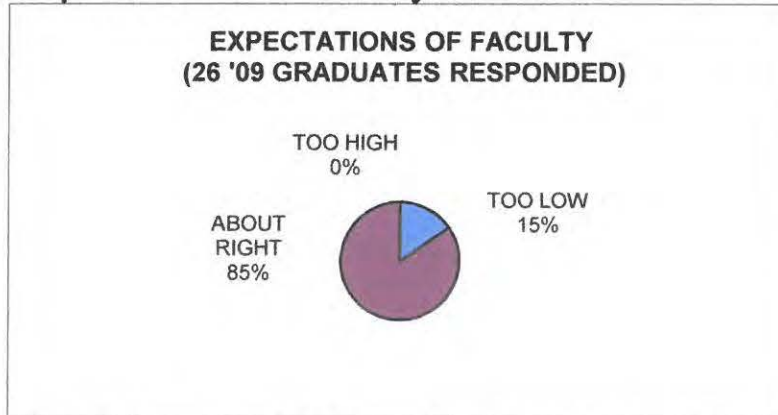


7. Considering what you have learned in you 2 years in the FM program, do you think the amount of work required in this program is...

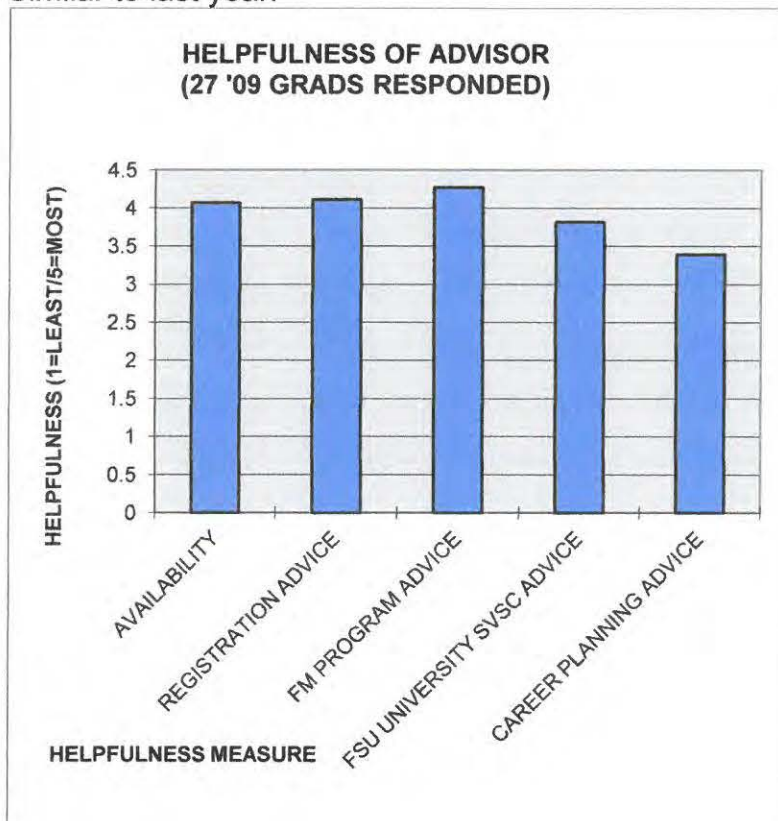
Similar to last year.



8. The expectations of the faculty were...

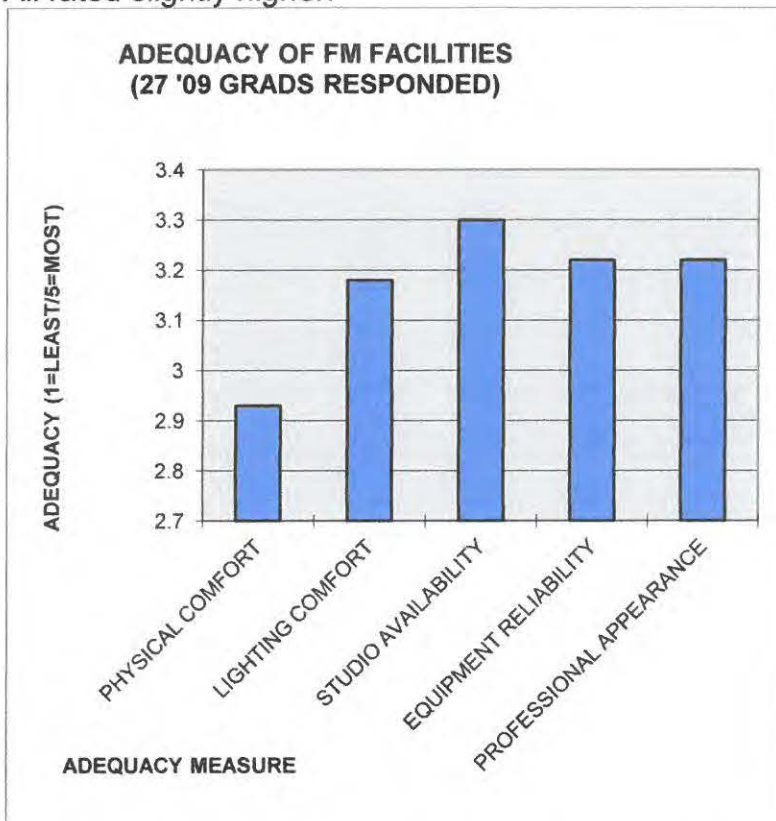


9. How helpful was your FM faculty advisor in the following areas? Please circle NA if the area does not apply) Similar to last year.



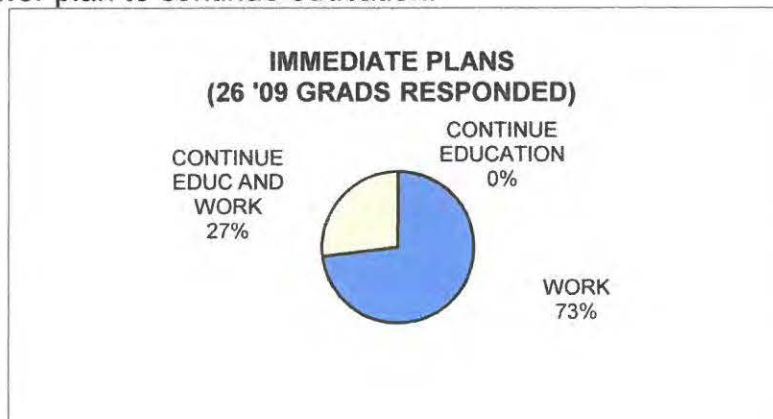
10. How adequate were the FM classrooms and studio facilities in the following area?

All rated slightly higher.



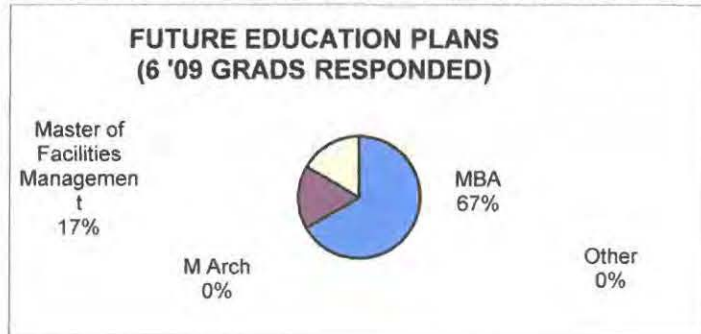
11. What are your plans upon graduation from the FM program?

Fewer plan to continue education.



11a. If your answer to 11 is “B”, what degree do you plan to pursue?

Continues trend toward more students interested in pursuing MBAs.



11b. If your answer to 11a is “B”, what college or university do you plan to attend?

University of Michigan – 1

12. What do you plan to be doing 5 years from now?

CFM and have Master's...retiring again...trying to find an internship and a job afterwards...working...working for National Park Service and going back to school for Master's...hopefully I will have progressed to an upper level facility/building manager...facility manger with a staff of at least three in a corporation of some sort...working and hopefully received a promotion...working for the GSA someplace in the USA, possibly own real estate/but be happy!...hopefully have a job and my student loans paid off... I am working on becoming an assistant facility manager, but I plan to work my way up to higher management. I hope to be working in an environment that fits my personality and skills...managing a facility, hopefully education or healthcare...I plan to be a successful FMer with my CFM, LEED AP, and other credentials at a major hotel...working at the EPA and having a degree in architectural history...working and completing MBA...I will be working as a facility manager in an academic setting preferably higher education. I just accepted a position at DePaul University as a facility residence director for their housing services department...working...managing an asset and owning a business...working as a facility manager...in FM related position...working within field hopefully healthcare related and starting a side real estate business...working for the government...work as an FM with my MBA, possibly owning my own property and facility management company...hopefully working in a place I love, possibly more school...starting a family...

13. What suggestions do you have for improving the FM program?

Import some talent in management. This program has too many architects and everyone thinks like designers. Management is a quite different process and someone with a management background might improve the course of the program. Also moving forward on a program in architecture would be helpful so the students interested in design could follow that course and focus more on management in FM...try to be more helpful in finding an internship and/or where to find one...make thesis more important and make it so the last semester isn't so hectic/tough to balance four courses plus capstone...smaller class sizes would help students get the one-on-one attention needed. With the economy the way it is, help seniors to get full time positions in the field...property development definitely needs some changes. It is an important class but the way in which we got the information was terrible. Keep pushing people to go out and get interns...FM is such a

broad field I think there should be some elective classes where things like security, building automation, etc. could be offered...more instructors/less class repetition in subject matter/writing class/business classes/better furniture/more stimulating atmosphere and classrooms...build in more options for students to take ie. One class or another to fulfill graduation requirements...have the computer labs open more often also schedule for the capstone class to be in one of the computer labs, this way when they don't meet you are able to work on the computers... additional instructor to take the stress off current ones. A little more help with acquiring internships and careers...less Powerpoints We need more hands on, more info on safety and emergency preparedness. Some of us need to know these things in our careers and we haven't really discussed this topic much. Also capstone project should be a more comprehensive approach to our FM degree. I think that it should incorporate as much of what we learned as possible...cut out busy work/less multiple choice tests, too often I can guess the right answers without even studying. Interview interim staff before hiring them; many of us had bad experiences with a certain "teacher" who literally didn't know any more about CAD than we did...add a safety class and remove the interior design class...a couple more business classes wouldn't hurt...be careful when selecting adjunct faculty. Both for the classes I took taught by adjunct prof were close to worthless...try to avoid repeating too much info/assignments that are done in the AT program. Work at holding students to higher academic standards...more courses relating to CAFM systems...eliminate some general education classes and add additional FM courses. Hire more faculty with FM experience...more faculty from FM profession...I would suggest to have a better way to do the internship. It was really hard when looking for internships. The availability in finding a internship was small at best...more management and business courses...try and bring in another professor with practical FM experience that will bring a little more diversity to the table...never have three hour lecture classes ever again...classes can be too similar to each other and AT courses (building equipment). Some classes are a waste of time and professors need to take their and our experience in college more seriously and challenge more...fm classes need to be taught by fm professionals/how can students be motivated to do assignments when the professors admit that they were just thrown into the position. Less redundancy in assignments...

Comments:

It would be nice to have a computer lab that was always available....some classes overlap and many students have problems with redundancy...I would like to see Swan 111 turned into a storage room...need some classes on industry fm...

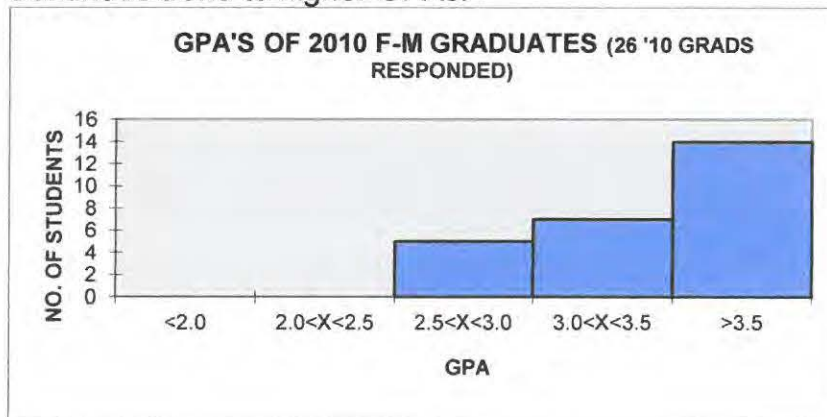
In the class of 2010, 26 of the 31 graduating students returned surveys. The two faculty teaching FMAN 499, the Capstone Thesis course distributed the surveys to graduating FM students during the last two weeks of classes. The following is a summary of the results of the survey. The questions as they appeared on the survey are listed first, followed by a summary of the responses.

The author (Joe M Samson) has also made comments following the summary of responses if the results show significant difference from previous results.

This survey has been done previously in 1994, 1996, and 1998 through 2009.

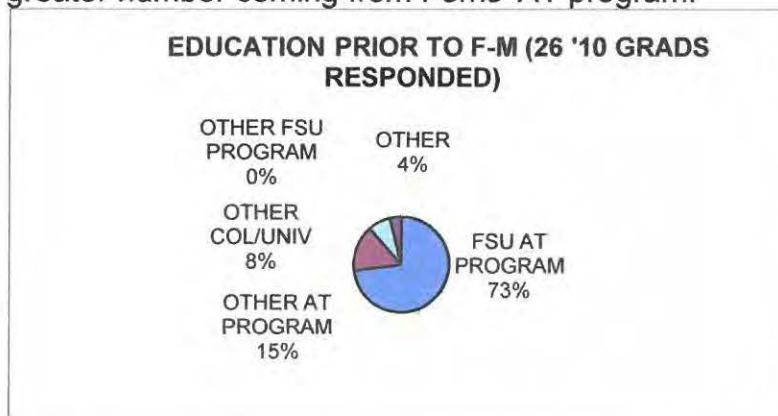
1. What is your current GPA?

Continues trend to higher GPAs.



2. How did you enter the F-M program?

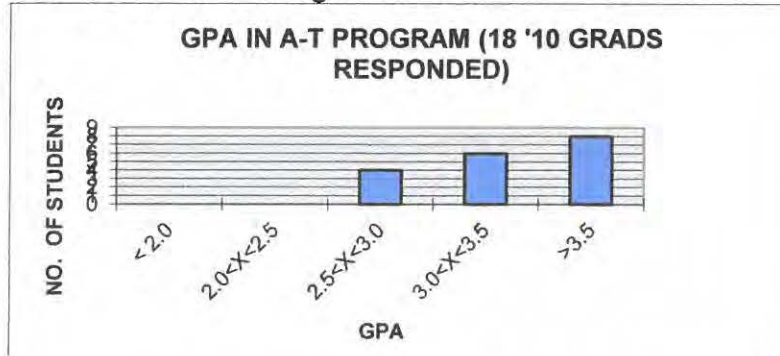
Reverses trend of more students coming from other programs, with a greater number coming from Ferris' AT program.



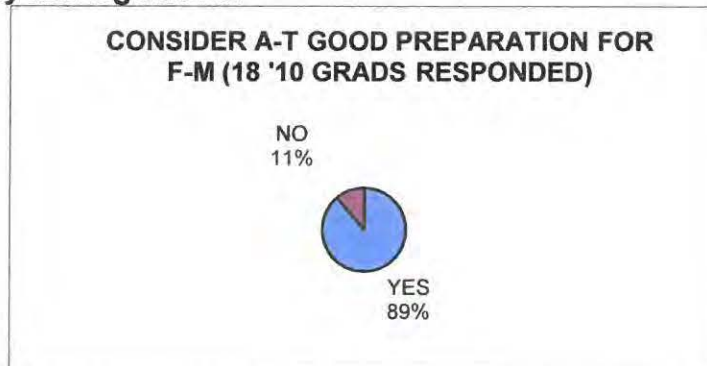
Questions 2A, 2B, and 2C were answered by graduates of the FSU architectural technology program.

2A. What was your GPA in the A-T program?

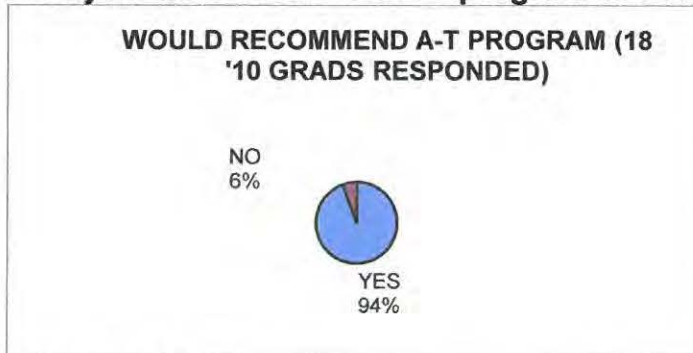
More students with higher GPAs.



2B. Do you consider the A-T program to be an appropriate preparation for Facility Management?



2C. Would you recommend the A-T program to others?



2D. Why or why not?

Yes: The AT program gave me a solid foundation in the building process on design and different types of construction materials available.,because its accelerated and actually accomplished about the same in two years compared to a four year university... I enjoyed how the classes jump right into architecture subjects with materials, computer programs, etc... very educational but still allows student to use their own creativity skills or thoughts... it gives a good background in building spaces and drawings... was more the materials and outside of building, FM is more internal...it gave me a strong base of knowledge to pursue construction project management and owner representation... it was pretty hands on... it is a very good technical base in design and architecture and materials... well rounded education and experience... great technical preparation and

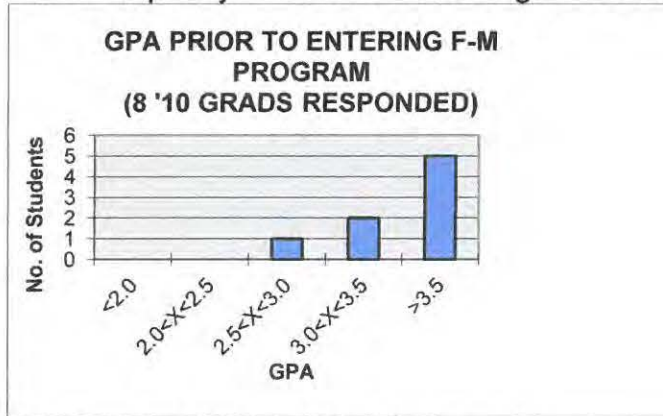
building knowledge... would recommend the AT program for someone that wants more technical background to architecture... it teaches technical architectural skills as well as how to analyze and articulate ideas in a professional realm... it helps educate students about the building components.

No: The program was misleading as a freshman. I felt coming into the program my expectations were different than the actual curriculum that was taught.

Questions 2E and 2F were answered by transfer students who did not enter F-M from the FSU architectural technology program.

2E. What was your GPA prior to entering the F-M program?

Similar to past years with transferring students coming with higher GPAs.



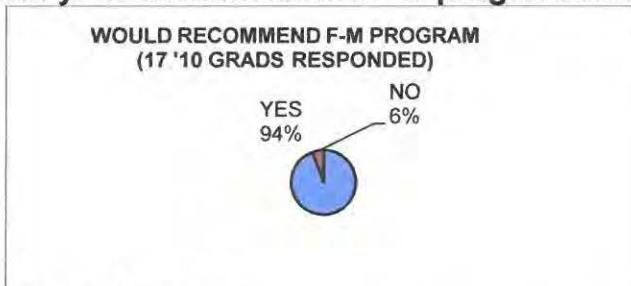
2F. What college did you transfer from?

Grand Rapids Community College – three students

Delta Community College – two students

Oakland Community College – one students

3. Would you recommend the F-M program to others?



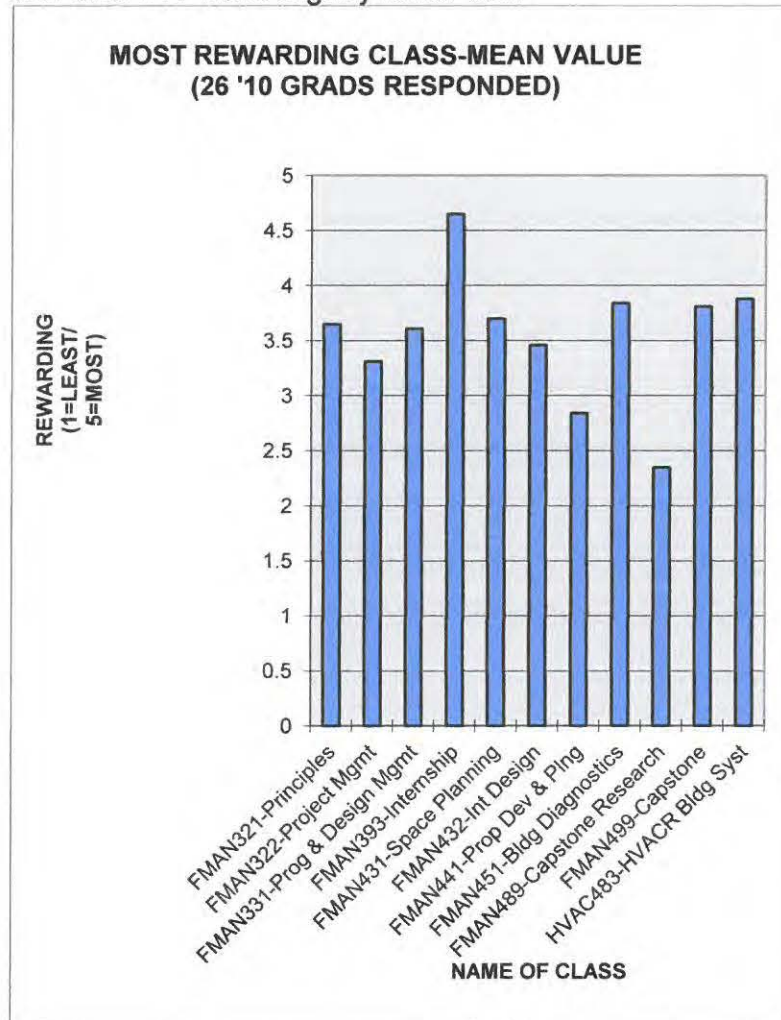
3A. Why or why not?

YES: it is the only school in the state... IFMA accreditation, very few BS in FM, best in MI... good entry to FM profession... the FM program applied real world material in its classes... teaches the fundamentals of responsibilities in the FM profession... growing industry, lots of opportunities... very interesting degree, has a lot of potential... I think some of the classes could be modified, but the program offers a lot of background in this field... it does a good job of looking at programming and managing projects. I do wish it focused a little more on HVAC systems and improvement of the project management class... good teachers, growing career... it is a great outlet for anyone interested in design but doesn't want to continue with architecture...

No: courses were all similar and I'm not sure of the benefits at this point... I feel that the classes are very repetitive and are not very in depth.

4. How rewarding were the courses?

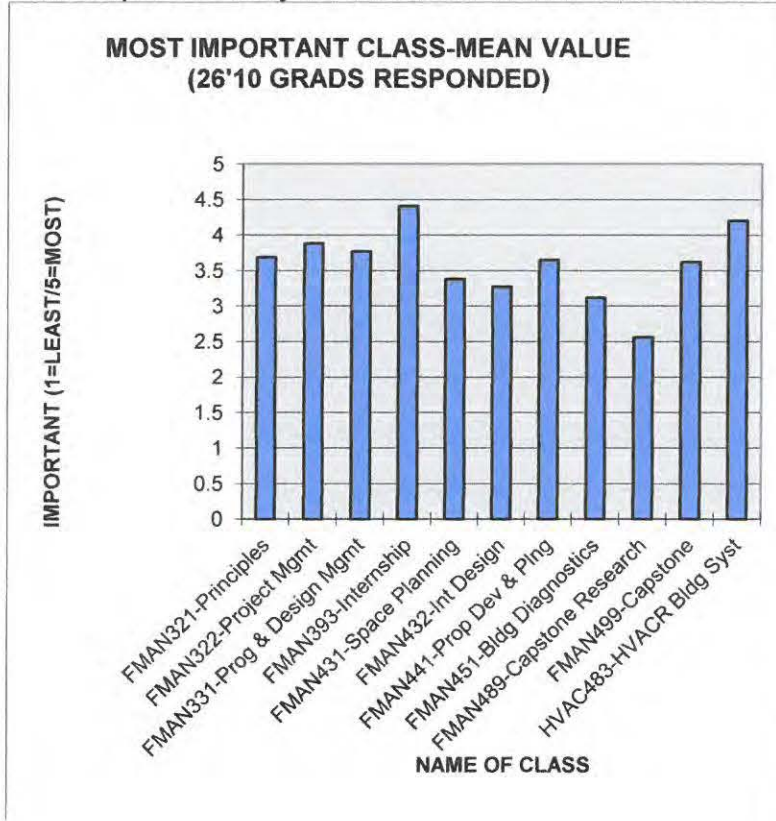
Most classes very similar to previous surveys. FMAN 489 is a new course and was not rated very highly. The course probably needs to develop over the next few years. However, it is the author's observation that students dislike courses in which the responsibility of developing a project is placed on them....they want to be given a project and told how to do it. More emphasis needs to be placed on the role of a manager: identifying and creating projects and determining how to best address them. FMAN 322 and 441 were slightly lower too.



5. What courses do you think were the most important...courses in which you learned the most?

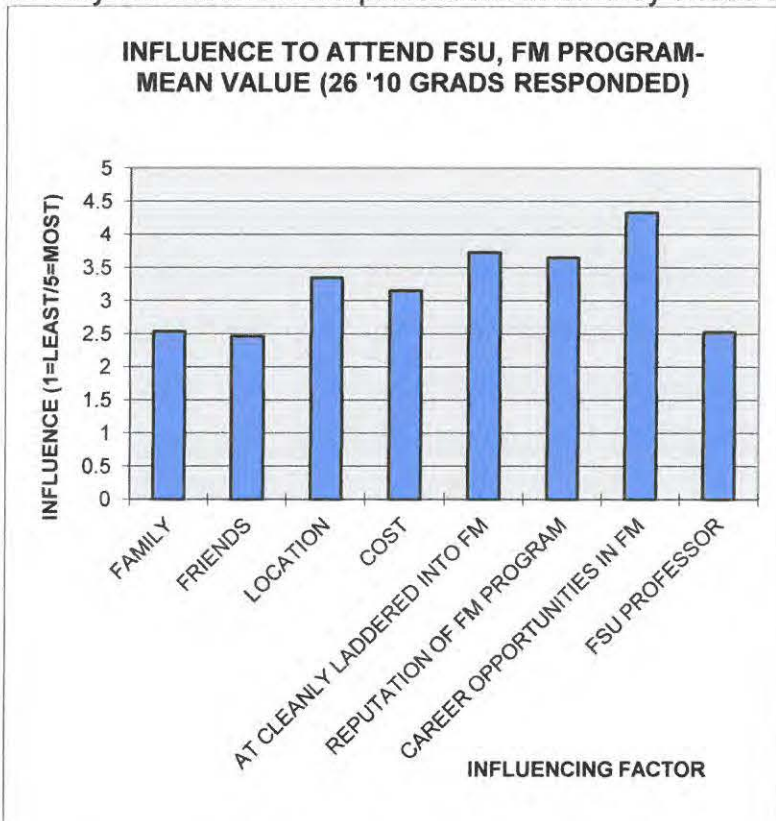
Students ranked courses similarly to in past years.

The accuracy of this table is in doubt. The responses did not line up properly with the courses in the surveys distributed to the students. Thus their responses may be incorrect and the table incorrect as a result.



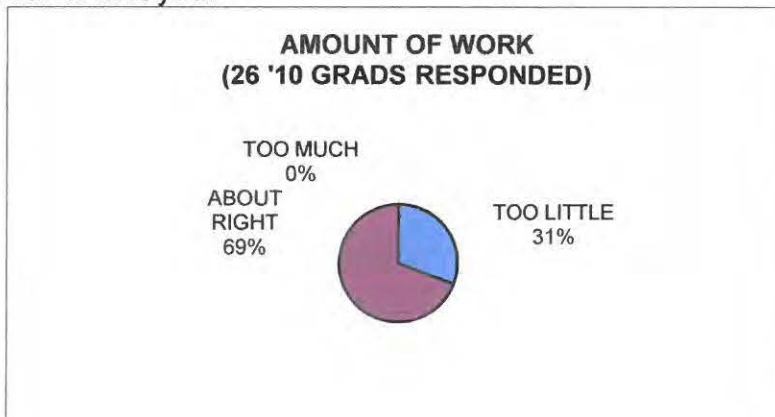
6. How influential were the following factors in your decision to attend the FM program at FSU?

One comment by several responders was that FSU professor is marked low as they did not know the professors when they chose the program..

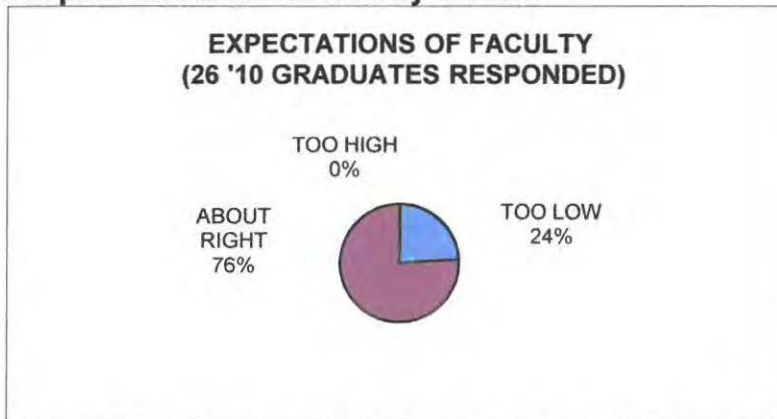


7. Considering what you have learned in you 2 years in the FM program, do you think the amount of work required in this program is...

Similar to last year.



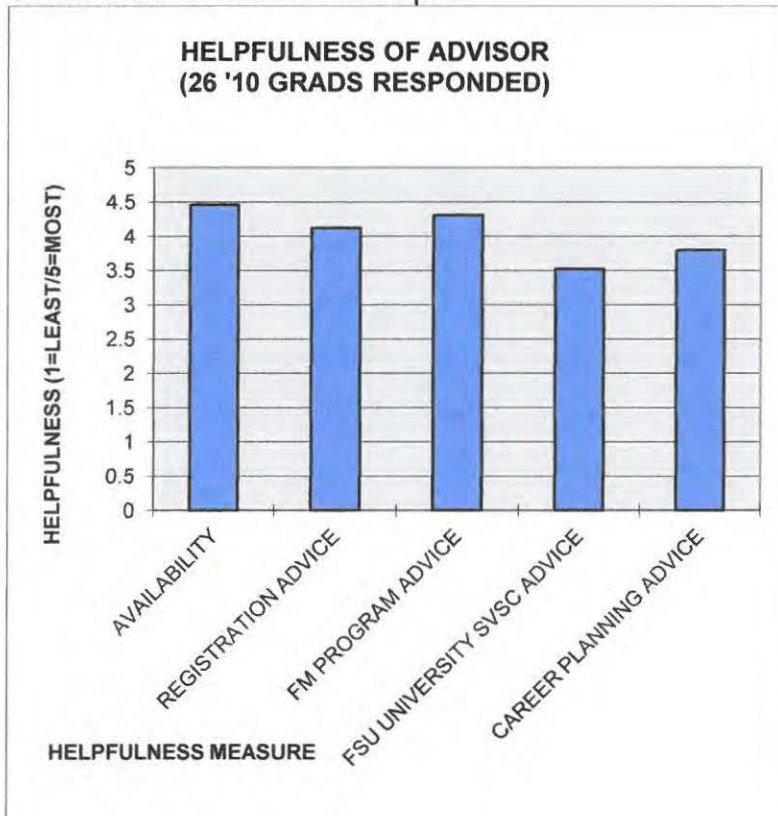
8. The expectations of the faculty were...



9. How helpful was your FM faculty advisor in the following areas? Please circle NA if the area does not apply)

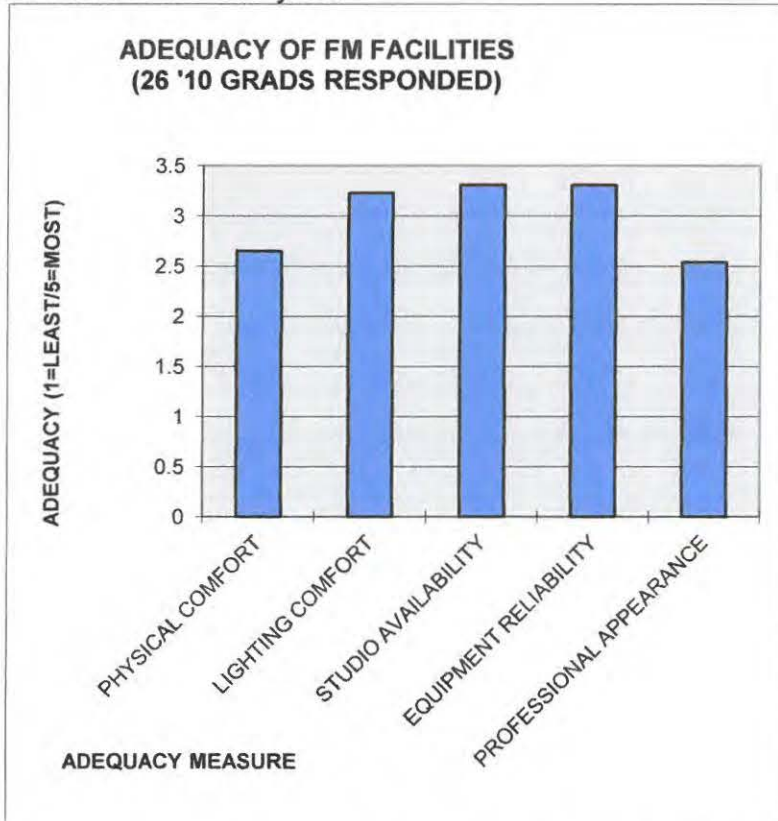
Similar to last year.

One student commented that their original plan did not meet graduation requirements and had to be altered. Another noted that their advising as a GRCC transfer was most helpful.



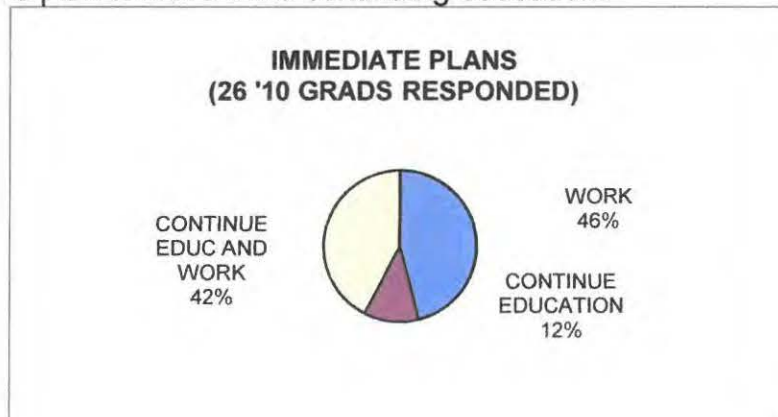
10. How adequate were the FM classrooms and studio facilities in the following area?

All rated lower this year.

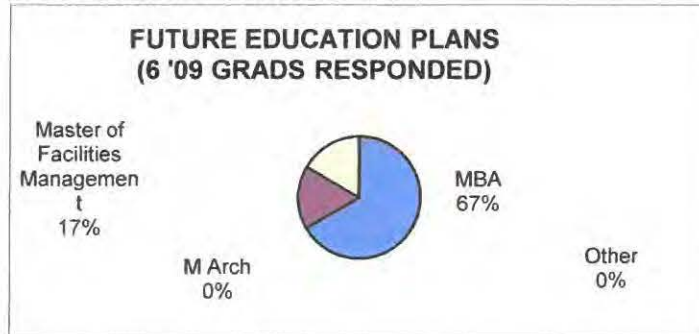


11. What are your plans upon graduation from the FM program?

More plan to work while continuing education.



11a. If your answer to 11 is “B”, what degree do you plan to pursue?
 More students selected M Arch degrees than in past years. Strong interest in MBAs continues.



11b. If your answer to 11a is “B”, what college or university do you plan to attend?

- University of Michigan – 1
- Lawrence Technological University – 1
- Ball State University – 1
- University of Colorado - 1

12. What do you plan to be doing 5 years from now?

I hope to have completed an MBA and working my way up in a corporation in the management/operations area of a business... working at an organization where I deal with sustainability... working as a project manager or related job... want to have a steady job, hopefully starting a family also. If my career choice engages me in having to continue my education, I will... working for an architectural firm as an architect... working for an architectural firm (2)... hopefully working for UNICCO and working my way up the ladder... working in project management and/or real estate development... supervisor of plant operations... assistant director of facilities... facilities manager/director in a healthcare environment... hopefully managing my own facility or on the way to being an executive facility manager... continue in my profession in the FM field plus obtaining the CFM certification... working at the director level or higher FM or Real Estate position... be an assistant facility manager or project manager at a large university or business. Ultimately, the facility director position is my goal... managing governmental buildings and finishing my MBA... working in an FM position (2)... working and back at school at same time... paying off loans somehow... working, the same thing I will be doing 25 years from now... working (3)... working the next few years while taking interior design classes...

13. What suggestions do you have for improving the FM program?

Include more real life examples, they must be current, less than 5 years old. Classes were redundant... Nagelkirk and Gerber are poor teachers... Bring in FM based teacher. Continue guest speakers. Put accounting back in. Possibly adjust AT to track away from AT and into FM to allow more focus. Allow for more emphasis on O&M and Management than architecture for those not pursuing an M Arch and because we compete with four year FM programs for jobs... create working studios that would benefit Ferris in maintaining and developing campus property. Give the students real life working conditions... more/better networking for future careers. Better classroom layout (we are in a creative/design type major) our classrooms should reflect this... felt some of the classes seemed a bit repetitive such as FMAN 331 and 451 (author's note... maybe means 321? The two courses listed are totally different). FMAN 441 could have had more projects to

relate to real world experience...more hvac or construction classes. Possibly an accounting class...more exposure to potential employers...have a couple hands on classes with hvac and other engineering classes. Get professors that care and know about FM. A few of them were very unorganized and couldn't answer any questions. Push students more on the capstone project. We feel like we don't have to put effort into them because the professors don't put in any effort. Professors for capstone would show up late for class and miss without letting students know. Very unprofessional. (Author's note: don't know what this is about??)...more hands on experience, less book work. I learned way more on my internship than I feel I did anywhere else. Life isn't like a book...more hvac and classes that are more hands on...reorganize property development class...program lacks "energy" or outside events, involvement for students. Not sure how to solve this, but maybe create some sort of recurring event...more emphasis on HVACR and lighting, the things most employers are interested in. (take an amp meter and do conversions, etc.)...get away from architectural influence; teachers with true FM experience, more applicable classes or more hands on...more coursework, beginnings of semesters are always too relaxed and ends too hectic. Variety of classes. Powerpoints/real life examples in FMAN 321, 331, 451 were all similar and I feel like I gained little...I think you should rework some of the classes, felt like I had a couple of classes 2 or 3 times. Also don't just teach the O&M side of it, go into more space planning. Also, I would try to get the program name out there more, people do not understand what FM is...better courses on HVAC and project management. Get more faculty that have been facility managers. Better spaces to learn in. Field trips to fm companies or places run by facility managers...the AT program was much harder than the FM and I learned more from it. Classes need to be re-worked and projects in those classes need to be more real world FM situation intensive...more HVAC and technical background, less general business...in some of the classes, not at all. It usually depended on the teacher, but I felt that assignments were generally pointless and that I was not learning as much as I possibly could...stop being so vague. Connect classes with real problems on campus or in Big Rapids community. Retire professors who have lost passion and commitment...FMAN 321, 331,451 all felt like the same class as we covered many of the same things in these classes...

For the capstone class: make the research class more useful, give a yes/no to projects by the end of September.

Comments:

I liked the opportunity to take college of business courses and HVAC courses. Maybe some CM courses need to be included in the education as well. The program offers many career options after completion and I think that is a very good thing...there really should be another professor. It seems like there is way too much going on for the current professors. In addition, there was not much assistance in finding an internship. If students are paying for 4 credits (\$1200) there should be more help by faculty or lower it to 2-3 credit hours...I am not against the AT/FM programs. I feel that even though the FM program did not fulfill my expectations, I still can enter the professional world and contribute, it just may be more difficult...we as students have good knowledge from behind a desk but few will be prepared for real life situations-no hands on knowledge...I felt that I learned very little in FMAN 441. The professor spent little time editing his presentations and much of the class did not focus on the textbook. The class seemed to focus more on the professor's current projects. When it was time for a project or tests, students felt lost, without learning the appropriate information. Overall I felt I did not learn what I was supposed to learn which was disappointing and frustrating...Great school, Great programs!

In the class of 2011, 26 of the 28 graduating students returned surveys. The two faculty teaching FMAN 499, the Capstone Thesis course distributed the surveys to graduating FM students during the last two weeks of classes. The following is a summary of the results of the survey. The questions as they appeared on the survey are listed first, followed by a summary of the responses.

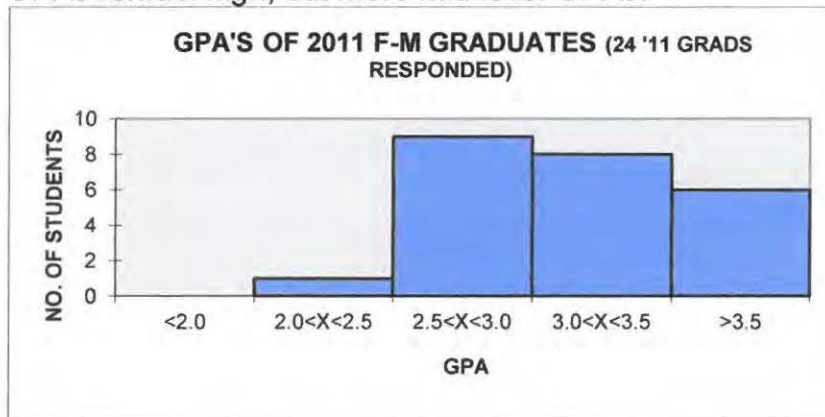
This graduating class had adjunct faculty for their first year of the AT program while Mary Brayton was on sabbatical, and a substitute faculty for FMAN 322 while Diane Nagelkirk was on sabbatical.

This survey has been administered in 1994, 1996, and 1998 through 2010.

The author (Joe M Samson) has also made comments following the summary of responses if the results show significant difference from previous results.

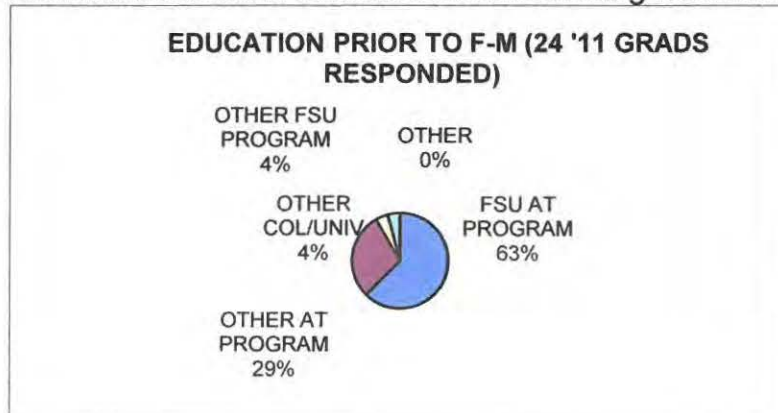
1. What is your current GPA?

GPA's remain high, but more mid level GPA's.



2. How did you enter the FM program?

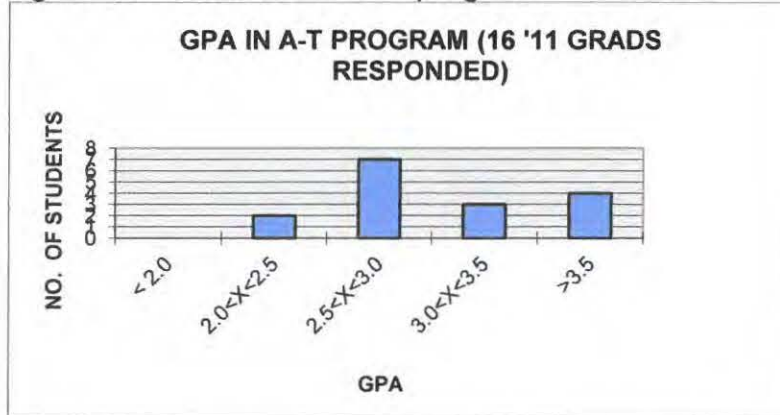
Continues the trend of more students coming from other AT programs.



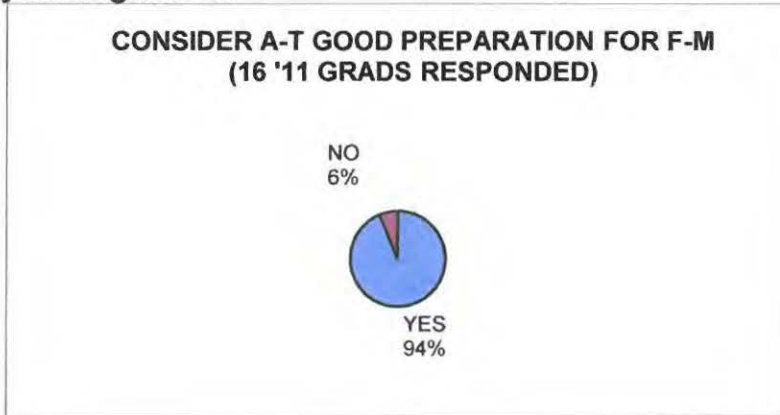
Questions 2A, 2B, and 2C were answered by graduates of the FSU architectural technology program.

2A. What was your GPA in the AT program?

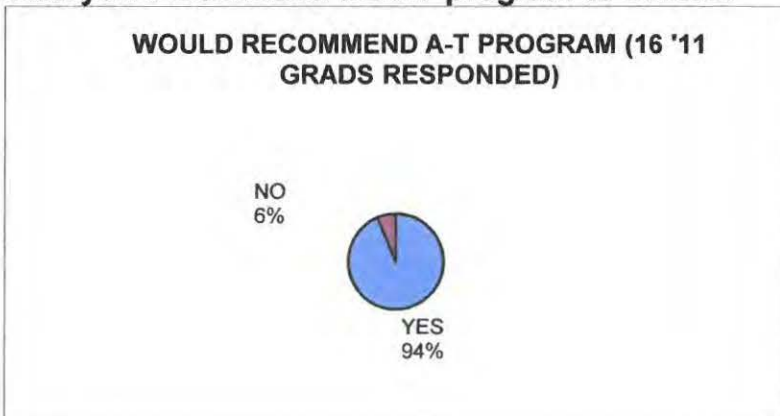
More students with average GPAs. In previous years most FM students had higher GPAs while in the AT program.



2B. Do you consider the AT program to be an appropriate preparation for Facility Management?



2C. Would you recommend the AT program to others?



2D. Why or why not?

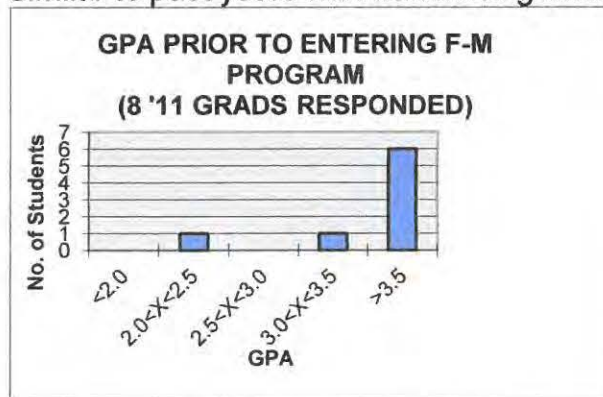
Yes: The AT program is helpful to understand the FM program...The program gives a good technical and design preview and allows you to make an accurate decision to pursue a design, management, or technical career....Practices a solid background to the field of the built environment that makes the overall transition very smooth...I would recommend it but state some issues as well. First, I felt certain classes did a fair job preparing me for the program. But I also feel that some of the courses lacked substance. Examples are ARCH 101, hand drafting, and ARCH 115. I believe this was due to the professor that taught the courses while Professor Brayton was on sabbatical...Its good to learn about the structure of a building before you try to learn how to take care of it...If someone is interested in any aspect of buildings and/or sites, AT is a great way to learn the process...provided useful technological information and taught practical design to students...Gets you to think about all things in the built environment with AT and FM...I think the skills learned help in the FM program...It prepared me with basic building systems knowledge which have been really helpful in FM... There are a lot of fundamentals taught in the AT program. I used my skills on several occasions during the FM program...Fun, interesting, and useful knowledge, especially if transitioning into FM...It gives you a solid foundation and knowledge of the built environment...

No: It was a good preparation for an architectural degree but not for FM.

Questions 2E and 2F were answered by transfer students who did not enter FM from the FSU architectural technology program.

2E. What was your GPA prior to entering the FM program?

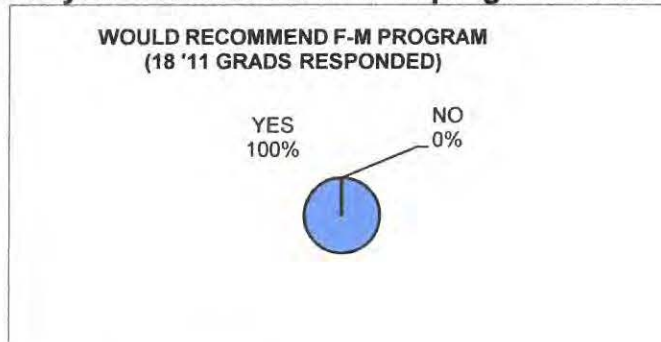
Similar to past years with transferring students coming with higher GPAs.



2F. What college did you transfer from?

Grand Rapids Community College – six students
Lansing Community College – one student
Everett Community College (Seattle) – one student
FSU Electrical Engineering – one student

3. Would you recommend the FM program to others?



3A. Why or why not?

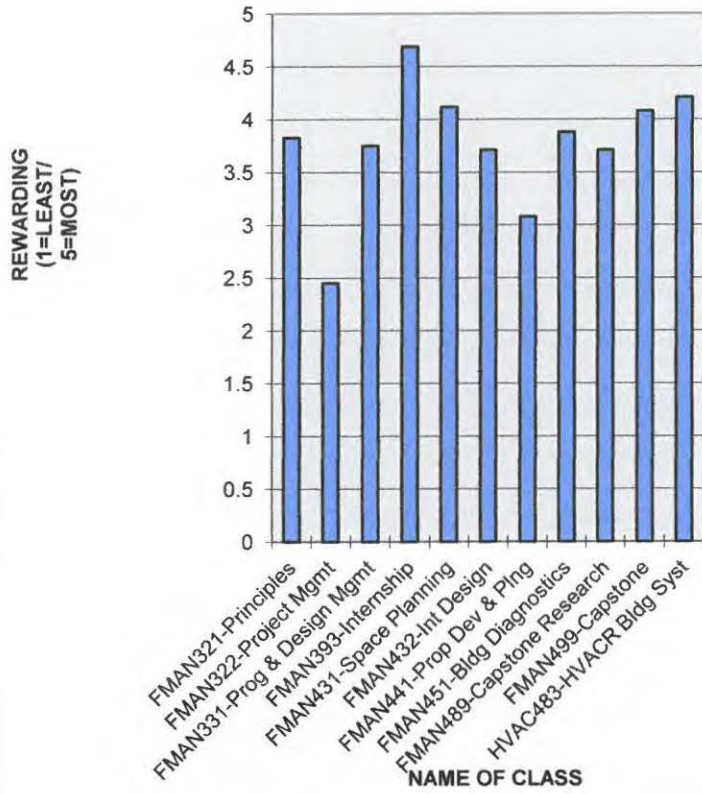
YES: I learned a lot and will end up in a job for what I came here for. There are a few professors who really make the curriculum relevant... Excellent niche field for a career/great professors... Great opportunity to get a degree where people are still in demand... There are many options for students after graduation... I would tell others if they are looking for a facility management program heavily focused on design, Ferris is the right school... people in the FM profession have much respect for Ferris' FM program and they try to hire its graduates... you get a taste of most everything; real estate, maintenance, cost estimates, etc to prepare you for the real world... it provides a solid foundation for a career in the field... it is a good experience in everything FM.... I think it is a great program. It seems like people are very prepared for the workforce upon graduation... It is very interesting and lets you do a lot of different types of work... it is the only IFMA accredited program in MI... Lots of jobs... because it is a growing program with a lot of great job potential and is very educational... it is a jack of all trades program, you learn a lot about a variety of topics that are practical and useful... it gives you a unique skill set that most people don't have a degree in... I like architecture.

No: no responses

4. How rewarding were the courses?

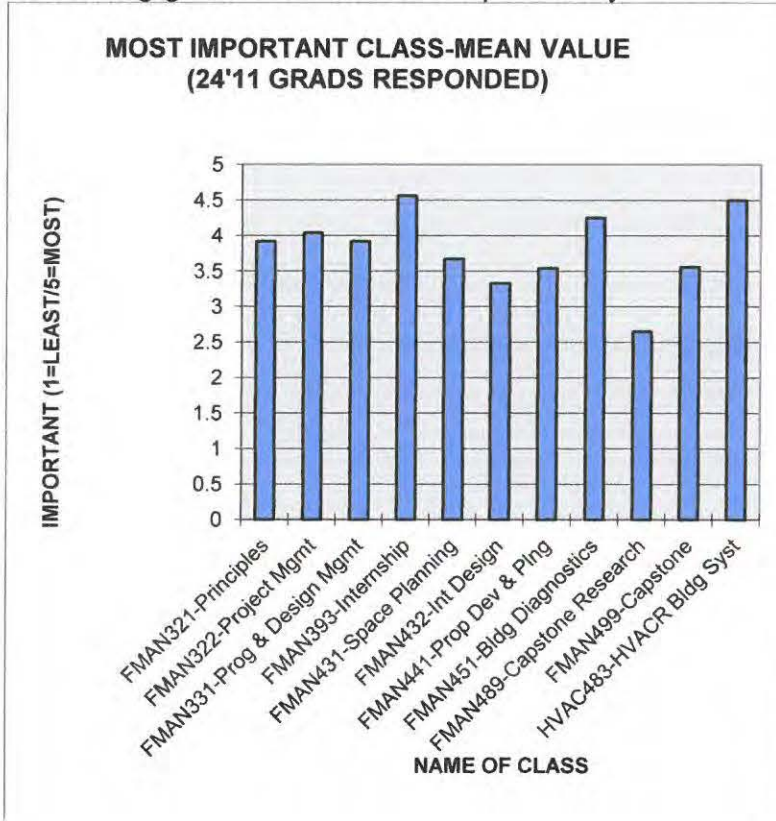
Most classes very similar to previous surveys. FMAN 322 was lower, probably due to a different instructor while Diane Nagelkirk was on sabbatical.

**MOST REWARDING CLASS-MEAN VALUE
(24 '11 GRADS RESPONDED)**

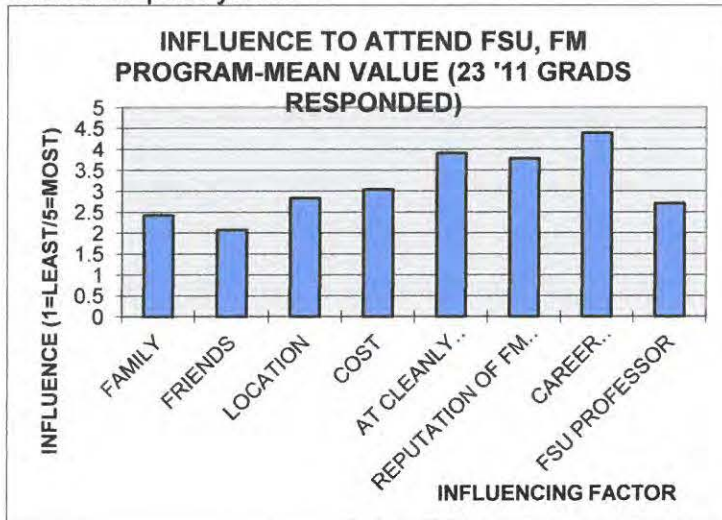


5. What courses do you think were the most important...courses in which you learned the most?

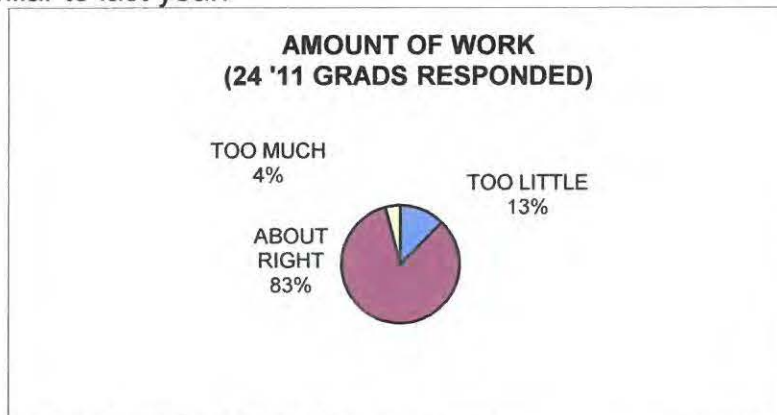
Students ranked courses similarly to in past years. FMAN 489 continues to be ranked low. It is the author's observation that students in this program do not like to explore. They are more comfortable with specific guidelines, rather than being given freedom and responsibility.



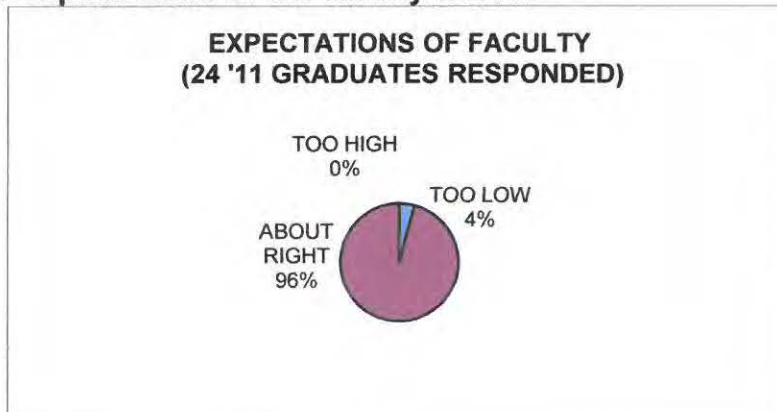
6. How influential were the following factors in your decision to attend the FM program at FSU?
Similar to past years.



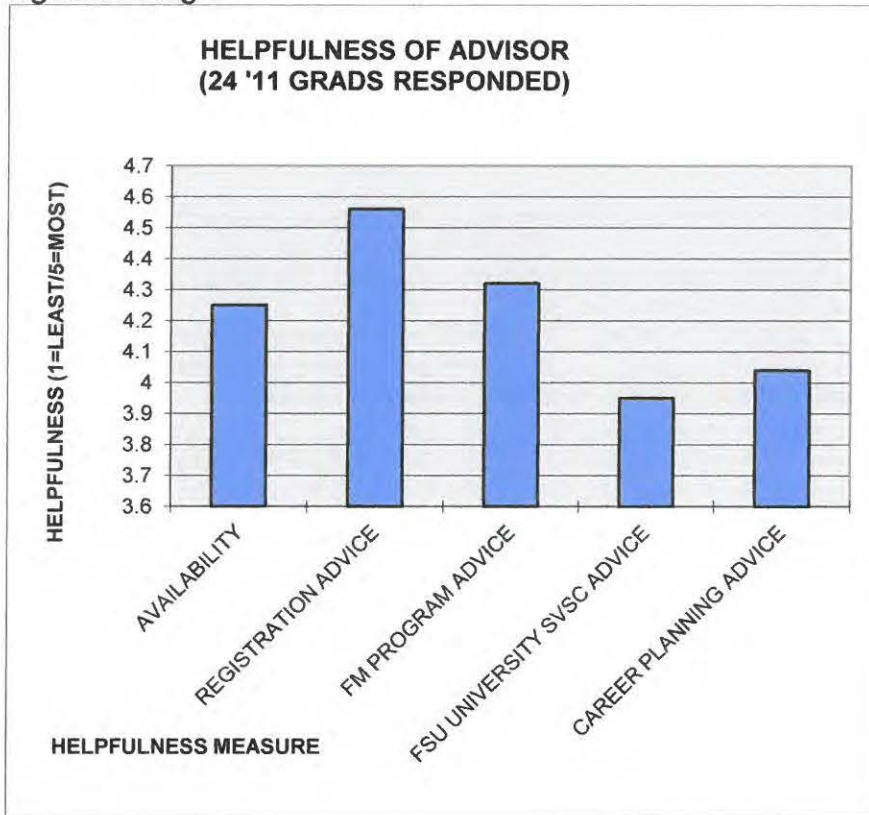
7. Considering what you have learned in you 2 years in the FM program, do you think the amount of work required in this program is...
Similar to last year.



8. The expectations of the faculty were...

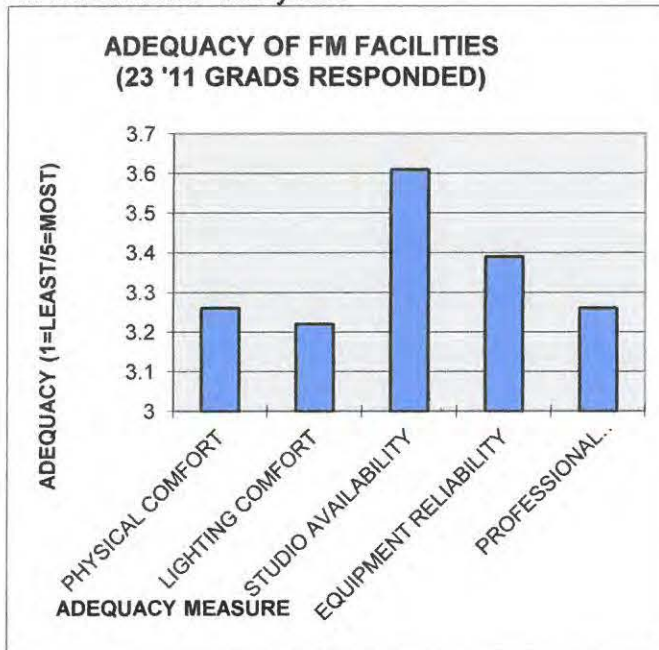


9. How helpful was your FM faculty advisor in the following areas? Please circle NA if the area does not apply)
Similar to last year. However registration advice has consistently received the highest ratings.



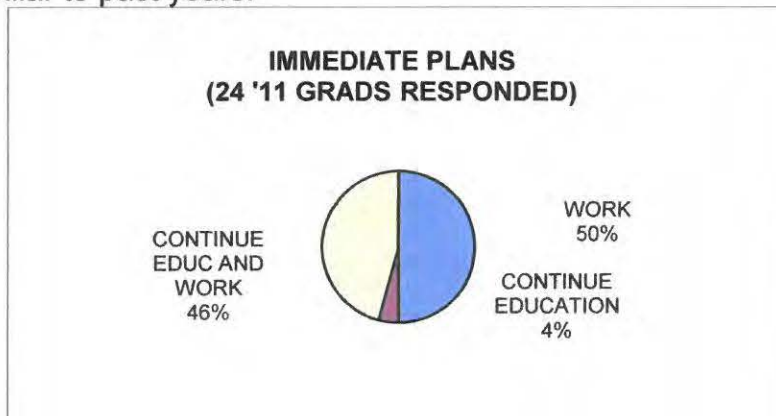
10. How adequate were the FM classrooms and studio facilities in the following area?

All rated lower this year.



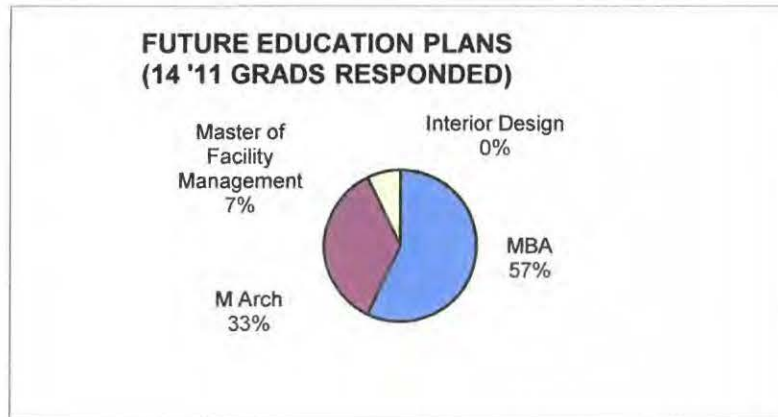
11. What are your plans upon graduation from the FM program?

Similar to past years.



11a. If your answer to 11 is “B”, what degree do you plan to pursue?

More students selected M Arch degrees than in past years. Strong interest in MBAs continues.



11b. If your answer to 11a is “B”, what college or university do you plan to attend?

Most indicated “other” as the university they plan to attend. In some cases the degrees they planned to pursue, M Arch, are not available at the schools identified by the student, Central and Grand Valley.

12. What do you plan to be doing 5 years from now?

Working (4)...Working and possibly attending college part time...Work in Sports Entertainment facilities...Working in an FM job, hopefully out of state...working and attending architectural school...move back to MI for an FM job. Work at a large university/education industry. Potentially continue education part time. Eventually be a Facility/Architectural Programmer...to be part of a company that cares about its workers and allows me to contribute. I would also like to complete a Master's degree...Working towards my career as a facility manager. Either working with an organization or starting my own consulting firm in a major city to provide services for a fee... Completed MBA and still working with current employer...architecture somewhere in the NW or NE or Europe...be promoted to facility manager within Aramark...working for a successful organization while returning to school to achieve a degree that I am satisfied with...carry a full time job related to facility management...I plan on having an FM career at a company I am happy with, paving my way to move up within the company...go back to school to obtain an MBA...ideally I'd like to have several years of experience in the field of facility management. Hopefully, I will continue working toward a position within the Department of State or GSA if I'm still in the USA...I plan to be working my way to a project management or energy management position and move away from an operations and maintenance role...getting an M Arch...hopefully working successfully getting ready for a CFM...managing or directing a facility management program at a healthcare institution.

13. What suggestions do you have for improving the FM program?

Incorporate WM IFMA Chapter and any FM contacts into FMAN 489 to help students develop necessary and relevant projects. Make campus based projects off limits. Get FMAN 322 out of the class room. Go visit actual project managers or do projects that get students in the field as much as possible. PM can't really be learned from books and videos. (editor's note: comments may be based in part due to a different instructor while Diane Nagelkirk was on sabbatical.) I learned a lot about it during my internship. Add an HVAC minor. I know its not in your department, but I know it would be important to me and other FM students, or possibly create a project management minor. It seems like those skills are very valuable to employers...Combine interior design and space planning courses. Have HVAC classes focus on operations and maintenance instead of load calculations. And make HVAC more hands on. We only talked about types of maintenance, which was covered in other FM classes anyway. I was hoping to learn common strategies and approaches to maintain and repair this equipment instead of calculating the btu's a person gives off and how much electricity is lost in a power line w/o a transformer...would be nice to have some exposure to FM software. Also I have had employers mention that HR or finance classes would be useful knowledge to have (editor's note: HR is an elective and finance is in MGMT 350)...It might be beneficial if you offered an option to do two internships for credit vs just one ... more hands on learning...the rooms are in need of an uplift. Some of the rooms are not very comfortable and there are always technology problems. ...More in class homework. Worksheets. Requirements to read our books ...better spaces and equipment to work. Open labs to work anytime...provide more balanced education focusing on more detailed hvac and budgeting courses...a stronger emphasis on MPE systems while shying away from design oriented courses. These courses are all fantastic, I just see employers get far more excited about MPE experience...more specific finance courses, more hands on project management. more dynamic projects. I was proud of everything I did in AT, but every project in FM was mundane and usually just pages of text. I am not proud of anything I did.

Comments:

Overall, a very good program. Glad I came here. Would recommend it to anyone. Thanks for everything...Also, there was an occasion I heard another student was told by a staff member that they could "go ahead and take them to the Dean, but they were tenure and nothing would change." I feel that is very inappropriate and as students we should be able to express concern. We should not have to feel like we don't have a chance to stand up for ourselves if we feel there is a problem. A comment like that should never have been stated... A few professors should be more interested in their work to keep students interested...Fire Gary Gerber...I thought the program covers a lot of the areas that I use daily at work. I have begun to notice how the classes help me every day at work....The biggest damper to my education was having Prof Gerber as an instructor...I feel Prof Gerber is holding the program back. He taught what I consider to be one of the most important courses, yet I feel like I didn't learn anything...second year of fm is mostly a waste of time, besides the hvac course. I felt that I was learning redundant, common sense material and I'm not any more prepared for the workplace than I was when I finished my internship. I describe the FM program as Ferris' best kept secret. You can get a degree with minimal effort and be able to still attain a decent job. I know I have become more lazy about my quality of work since I entered the FM program. You

don't need to put much effort into anything besides the capstone and by then it is too late. I don't feel I was prepared enough for leadership, project management, proper procedure for common types of projects and issues. We were told to make up our own topics a lot of the time, with little or no background information needed to make accurate choices.

No surveys were distributed this year.

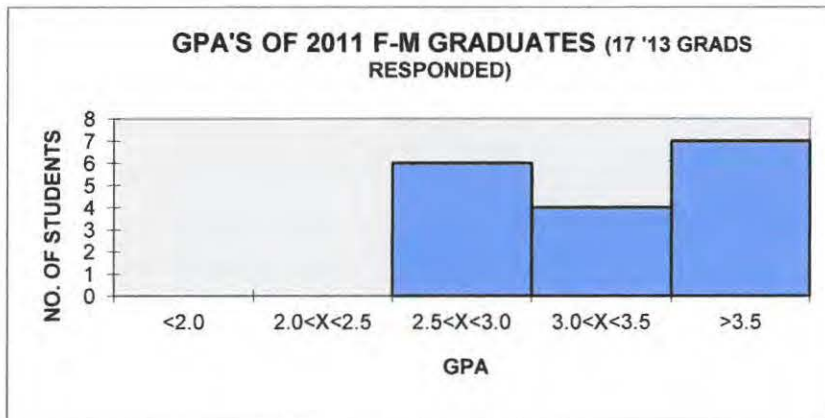
In the class of 2013, 17 of 21 graduating students returned surveys. The faculty member teaching FMAN 499, the Capstone Thesis course distributed the surveys to graduating FM students during the last two weeks of classes. The following is a summary of the results of the survey. The questions as they appeared on the survey are listed first, followed by a summary of the responses.

This survey has been administered in 1994, 1996, and 1998 – 2011, and 2013.

The author (Joe M Samson) has also made comments following the summary of responses if the results show significant difference from previous results.

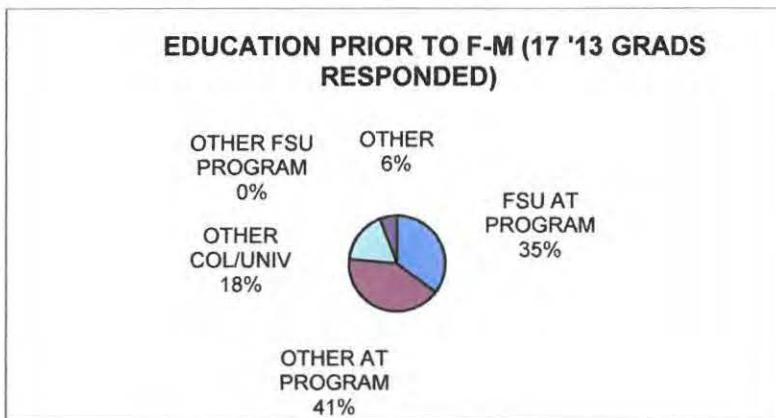
1. What is your current GPA?

Similar to recent years.



2. How did you enter the FM program?

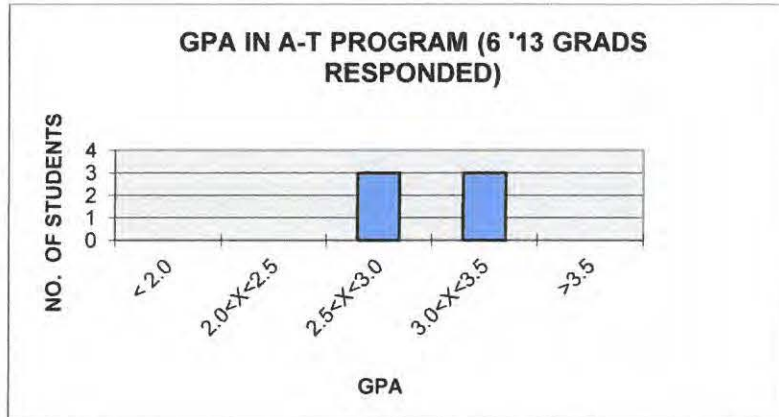
Similar to recent years.



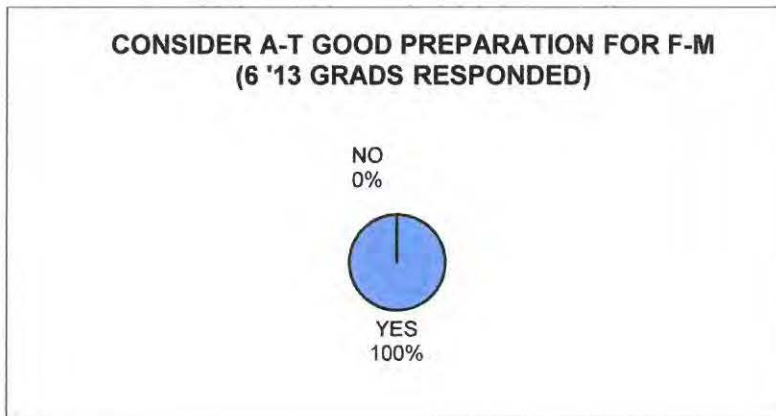
Questions 2A, 2B, and 2C were answered by graduates of the FSU architectural technology program.

2A. what was your GPA in the AT program?

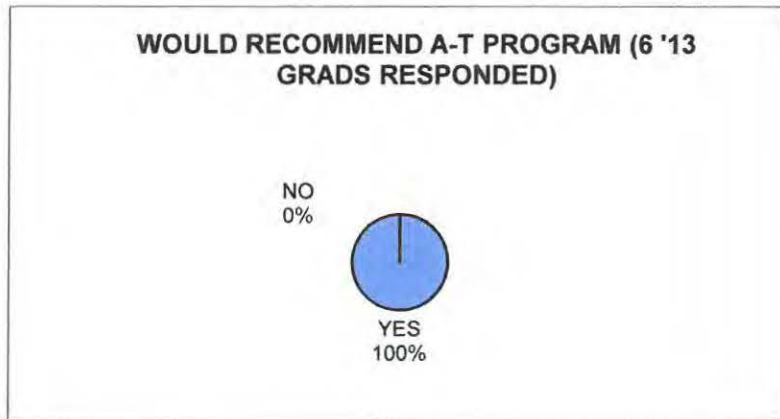
GPA's less distributed than in past (no 2-2.5 or >3.5).



2B. Do you consider the AT program to be an appropriate preparation for Facility Management?



2C. would you recommend the AT program to others?



2D. Why or why not?

Yes:

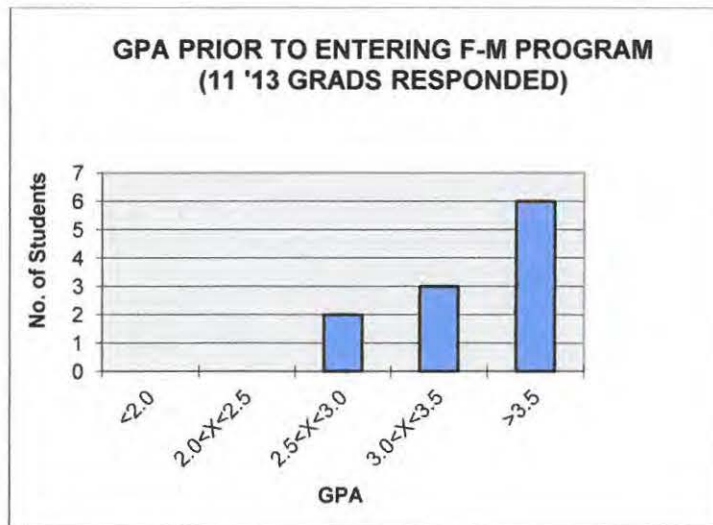
- Good base info but should have professors weed individuals out
- Because of Joe Samson
- It's a good program and seems to be getting better
- It's way too heavy on design, which is something I haven't seen in any applications

No:

Questions 2E and 2F were answered by transfer students who did not enter FM from the FSU architectural technology program.

2E. what was your GPA prior to entering the FM program?

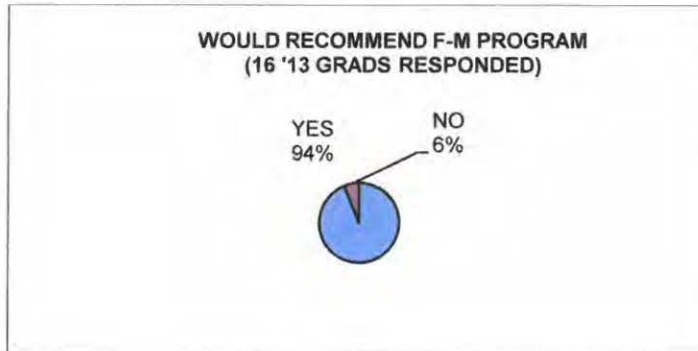
Similar to past years with transferring students coming with higher GPAs.



2F. What college or program did you transfer from?

- Grand Rapids Community College –4 students
- Lansing Community College – 3 students
- Construction Management – 1 student
- Graphic Design – 1 student
- ITT Tech – 1 student
- Delta College – 1 student

3. Would you recommend the FM program to others?



3A. Why or why not?

YES:

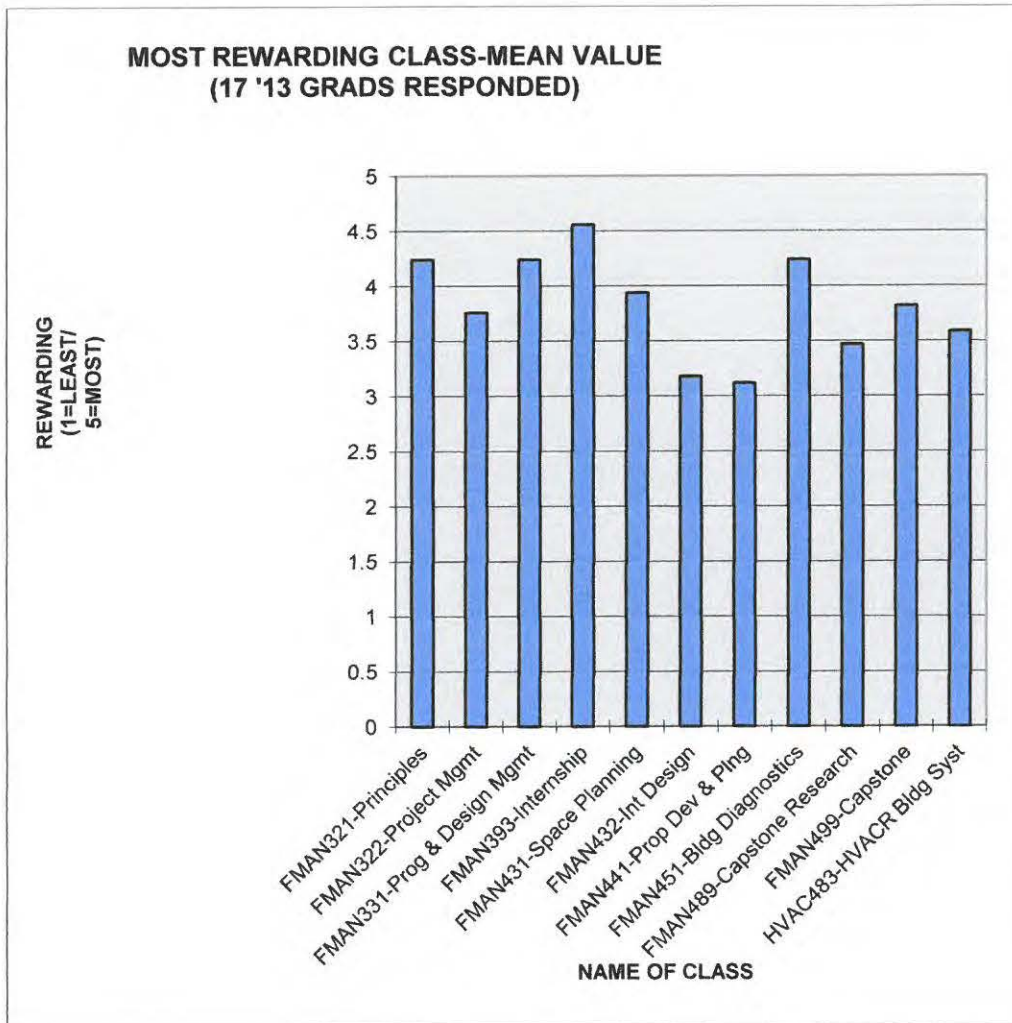
- It's well rounded
- It is a well-respected program and it covers a broad degree of things
- The program is very well taught and will help in many areas of possible careers
- Small, but good program. Nice knowing everyone in program. Left with a career
- Good program, very useful and real world information
- Good degree to have and is a wanted career high desired by companies
- I liked it
- There are many opportunities available in the FM field. This discipline will be around for a very long time.
- This program gives a wide variety of items related to facility management. This program is a great foundation for entering into a FM career
- Because it's great fun
- Hands-on, emphasis on construction detailing, and working on real world projects with clients. Professors care about helping students on any projects

No:

- This program opened up a lot of opportunities for me. However, I feel like the lack of knowledge, both professionally and technologically, of the professors needs to be developed for the program

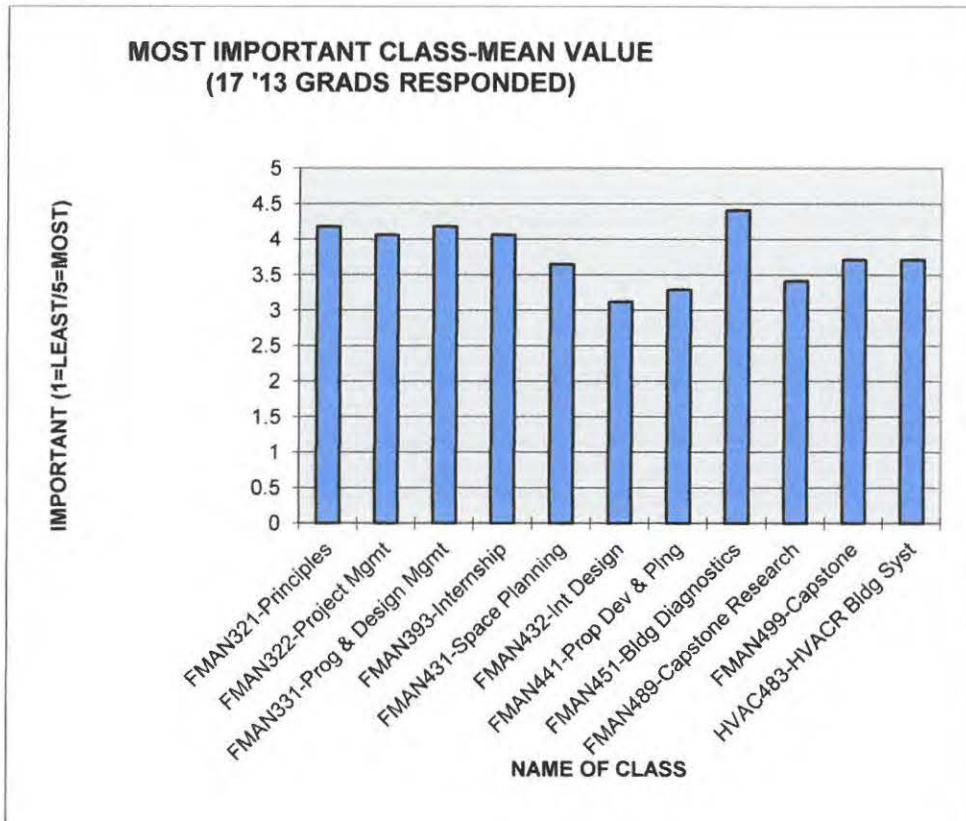
4. How rewarding were the courses?

Most classes were similar to past years except FMAN 431 and 441 slightly lower.

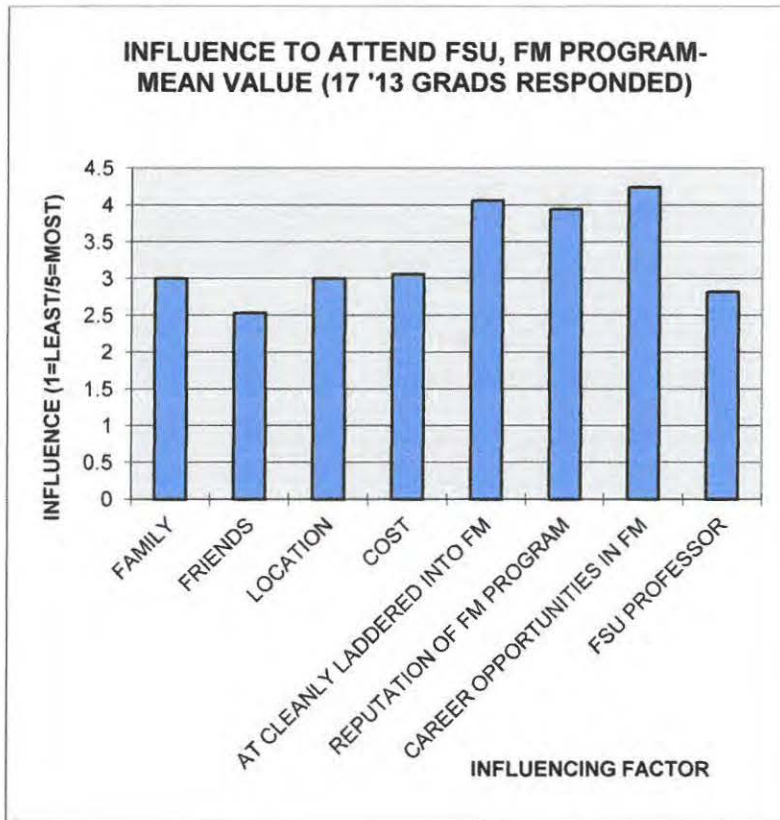


5. What courses do you think were the most important...courses in which you learned the most?

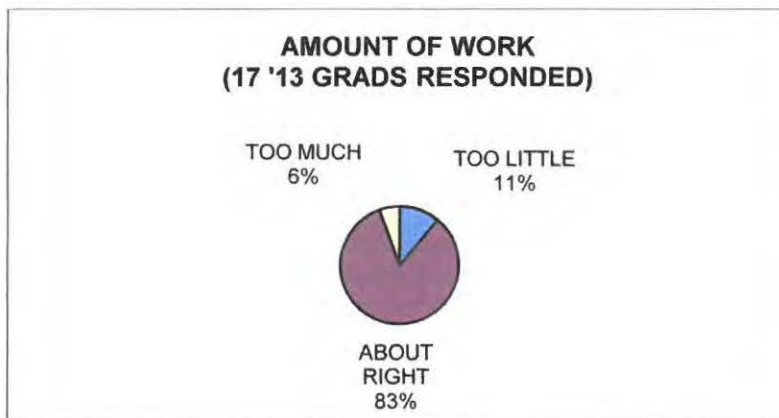
Most slightly higher or similar. FMAN 393 slightly lower.



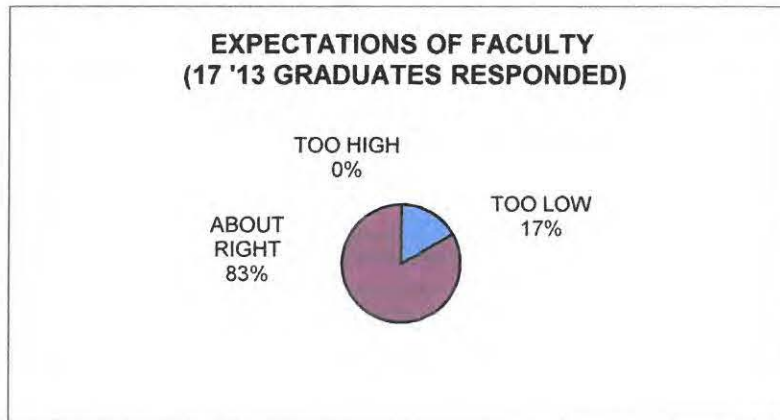
6. How influential were the following factors in your decision to attend the FM program at FSU?
 Similar to past years.



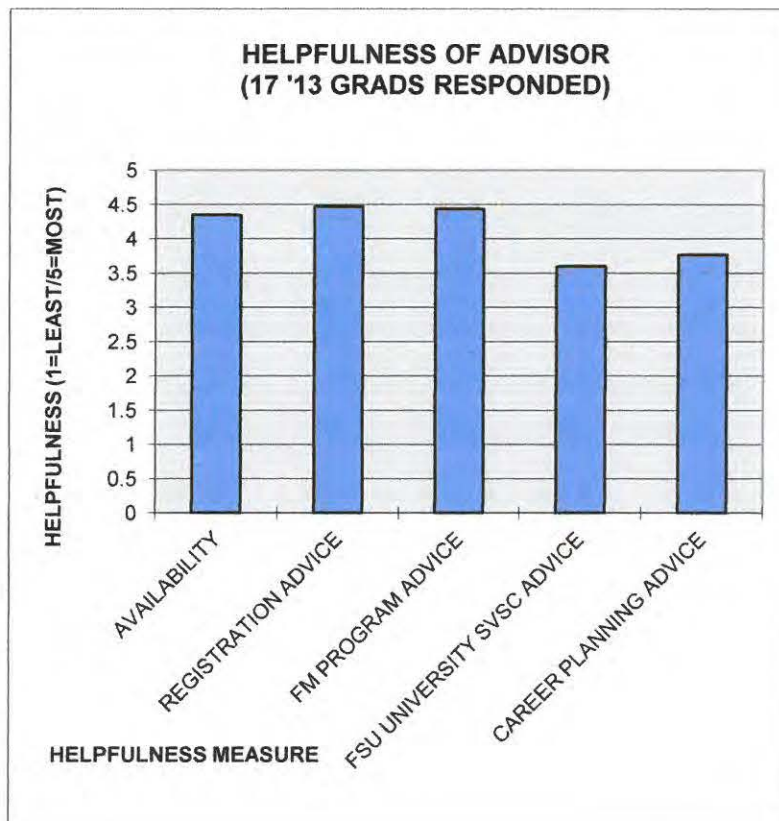
7. Considering what you have learned in your 2 years in the FM program, do you think the amount of work required in this program is...
 Similar to past years.



8. The expectations of the faculty were...

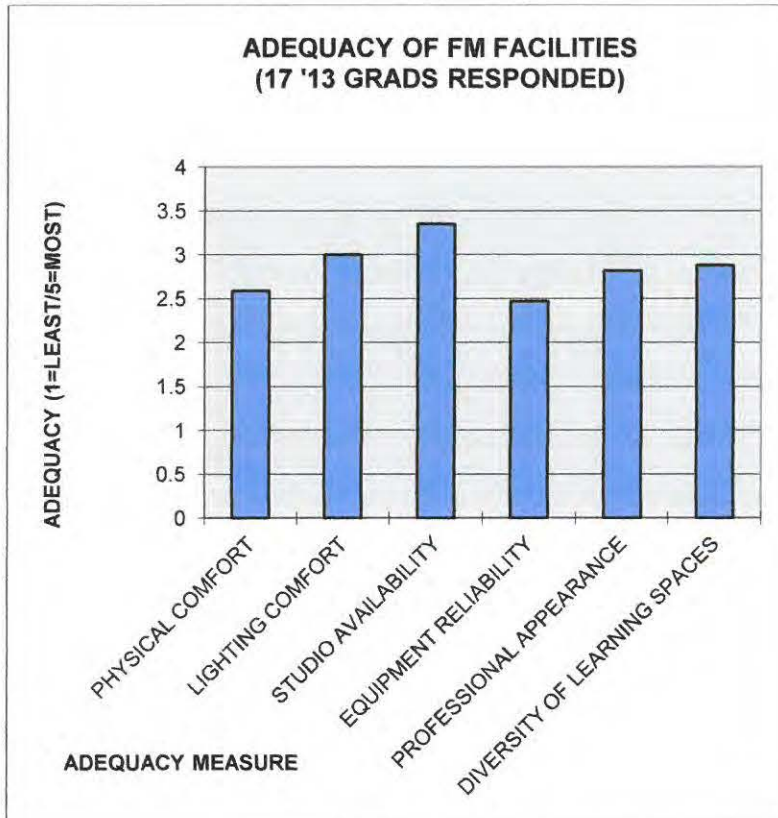


9. How helpful was your FM faculty advisor in the following areas? Please circle NA if the area does not apply)
About the same as past years.



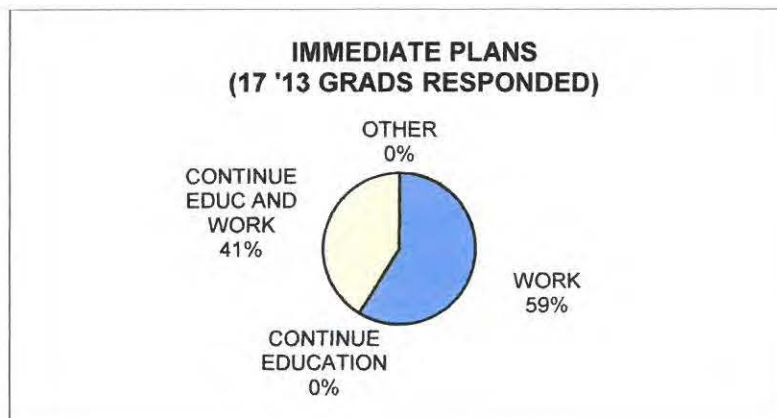
10. How adequate were the FM classrooms and studio facilities in the following area?

Similar to past years. It should be noted that this area has consistently ranked low.

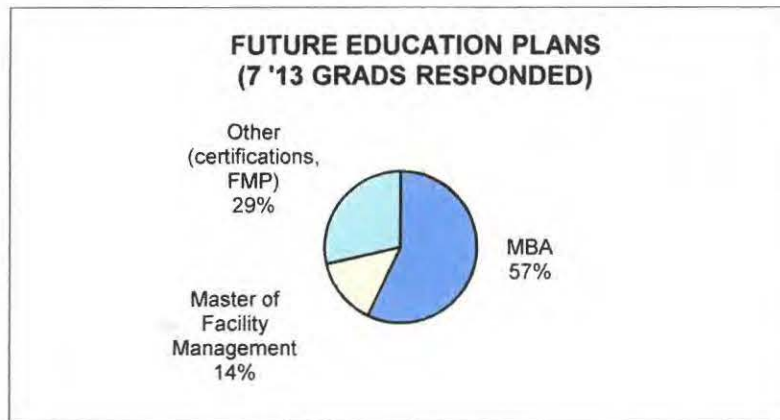


11. What are your plans upon graduation from the FM program?

Similar to past years.



11a. If your answer to 11 is “B”, what degree do you plan to pursue?
 Strong interest in MBAs continues.

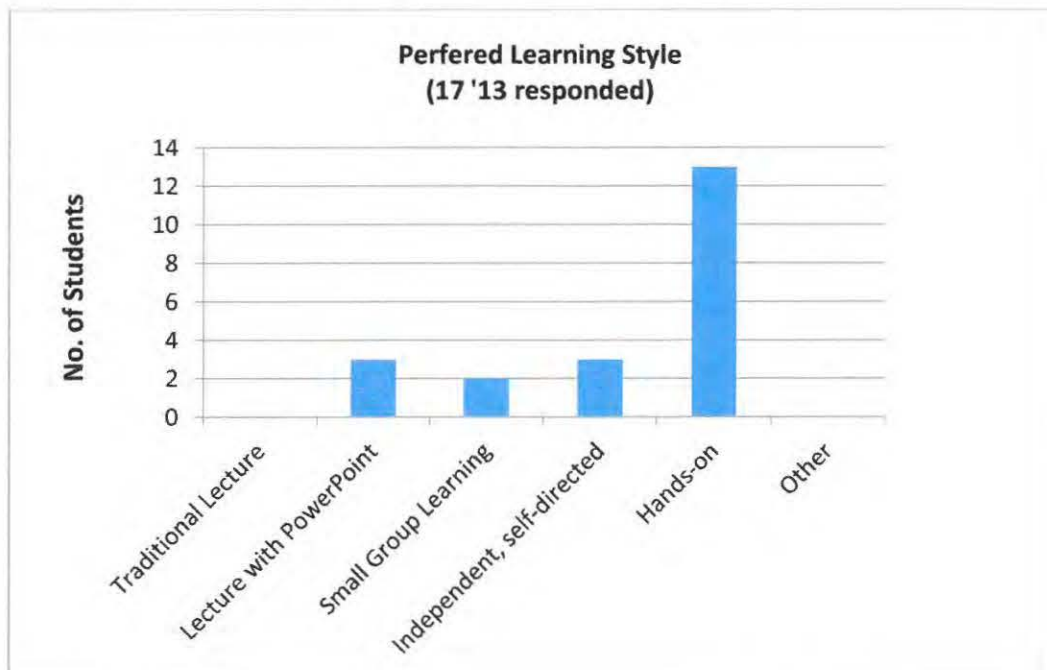


11b. If your answer to 11a is “B”, what college or university do you plan to attend?

No responses

12. What is your preferred learning style?

New question for 2013. Hands-on is most preferred



13. What do you plan to be doing 5 years from now?

- Work
- Facility or construction project manager (in higher education or for an AE firm)
- To be working
- In 5 years I hope to be employed at a firm working with interior design or space planning
- Hopefully I will have a gained good experience in FM and will be looking for a job in a location I can settle down.
- New construction project management
- Working at Haworth as a facility project manager with a Master in business administration
- I hope to be working my way up through the Aramark Corp. and working and managing my own college campus.
- Plan on moving up the ladder at Hyatt. Director of Engineering
- Working as upper FM with MISA
- I plan on having a career in a hospitality style field, possible 3rd party FM company
- Hopefully employed and building a base for my future
- I hope to run a neighborhood of MSU. A neighborhood is a group of 3-4 residence halls
- Hopefully working in a sports facility
- Working a full time position
- Project management or other FM related fields in west or north Michigan, possibly Ontario.

14. What suggestions do you have for improving the FM program?

- Learn the current software packages. It is ridiculous that students can't ask professors how to use software because you don't 'have time' to continue with professional development
- Having a greater emphasis on HVACR systems. In the FM program, there is very little of this studied in detailed.
- I would have liked a larger opportunity to learn more about computer and facility management (CAFM)
- Update classrooms
- More hands on projects. Project Management- real client to see actual results
- Interaction with architecture students. Use programs to cross-over projects
- PowerPoint/lectures that flow within class assignment and subsequent homework. Students do 'in class assignments' with professors as the prof instructs/lectures the class. Homework should reflect 'ICA' but not mirror.

- Make laptops a requirement for students. If required they can be purchased by financial aid.
- Update the facilities
- Add a few more faculty members that have more up to date field info rather than 25 years ago
- I liked the program overall! Get more people with more recent experience as an FM-er
- New teacher for Property Development and Planning. Gerber is a burnout
- Technology! I know finances is an issue, but upgrading just a few for rendering might be an alternative
- More real-life project management practice. It is hard to make it simulate real-life, but I think it would be beneficial
- More emphasis on IFMA
- More options for capstone/thesis
- More strict guidelines for grading
- Provide better computers and printing resources.

Comments:

- Property development (441) was the worst class I have ever taken. The professor is not experienced enough to teach this class. If I wanted to listen to a prof regurgitate a text book, I would have just stayed at home and done that myself. Furthermore, the projects are recycled from year to year with no development for class learning. Prof Gerber is not the right professor for this class. He is lazy and has no intentions to ensure students get the most out of the class.
- Audit every teacher and the way they teach and make an evaluation. There are some that are extremely lacking
- Thanks! Good luck to the program!
- Thanks to everyone that put up with me and my sense of humor. Especially Johnson, that guy didn't have to be so lenient on me. Luckily over time he started to like it, even if he doesn't admit it.
- I feel the majority of the tests I took weren't too difficult. By giving tests that were more essay-oriented would force students to learn the material better.
- I enjoyed the AT/FM experience and have grown as an individual
- Thank you to all the instructors who have mentored me and helped to this point in my life. Your help, guidance, and expertise was noticed and will reflect on all of us in our professional careers.

Appendix 4c: Academic Program Review Feedback

MEMORANDUM

DATE: 17 November 2011
TO: Academic Senate
FROM: Academic Program Review Council
SUBJECT: Recommendations for **B.S. in Facility Management and A.A.S. in Architectural Technology**
CC: Joe Samson, Diane Nagelkirk, Brian Craig, Ron McKean, Doug Haneline, Donald Flickinger, Roberta Teahen, Fritz Erickson

I. IDENTITY OF PROGRAM:

B.S. in Facility Management
A.A.S. in Architectural Technology

II. RECOMMENDATION OF ACADEMIC PROGRAM REVIEW COUNCIL:

Continue the Program: The program's status with respect to the categories in Section 5 of the report merits continuation. Minor modifications may be needed.

III. RATING BASED ON CRITERIA:

- **Relationship to FSU Mission:** The program aligns to the FSU mission by providing a career education and opportunities for lifelong learning for students.
- **Program Visibility and Distinctiveness:** The Facility Management program is one of five accredited bachelor degree facility management programs in the country.
- **Program Value:** The program offers a high placement rate post graduation.
- **Program Enrollment:** In Fall 2010, the Facility Management and Architectural Technology programs had 96 students enrolled.
- **Characteristics, Quality, and Employability of Students:** Graduates of the program find employment in Michigan and throughout the United States.
- **Quality of Curriculum and Instruction:** Curriculum and instruction are of high quality.
- **Composition and Quality of Faculty:** The faculty are well qualified.

IV. APRC NOTES THE FOLLOWING STRENGTHS OF THE PROGRAM:

- The Facility Management program is one of only five accredited programs in the country.
- The program enjoys a close working relationship with their advisory board.
- Program faculty has worked hard to address challenges within the economy, including establishment of a Bachelor of Science degree in Architecture and Sustainability.

V. APRC OFFERS THE FOLLOWING SUGGESTIONS FOR PROGRAM IMPROVEMENT:

- Faculty within the Facility Management and Architectural Technology programs should establish a working relationship with FSU administration regarding long-term university facility planning and design.
- The Architectural Technology program should explore implementation of a formal student retention program as this is a recognized challenge within the discipline.
- ~~The administrative structure within the CET must be stabilized in the form of a permanent Dean.~~

MOVED TO GEN'L COMMENTS

Appendix 5: Placement Data – FSU Institutional Research Data and Program Review Survey

2008/2009 Graduate Follow Up Survey Summary

College: Engineering Technology

ENGINEERING TECHNOLOGY	Degrees			TOTAL	Placement Information				
	CERT	AAS	BS		# Responded	% Responded	# Employed/CE	Placement Rate	Ave Salary
SCH. OF AUTO & HEAVY EQUIPMT									
Automotive & Heavy Equipment			29	29	5	17%	5	100%	\$ 33,180
Automotive Body		3		3	0	0%	0	0%	NA
Automotive Engineering Technology			44	44	6	14%	5	83%	\$ 34,300
Automotive Management			22	22	5	23%	5	100%	\$ 27,200
Automotive Service Technology		37		37	3	8%	2	67%	\$ 18,720
Heavy Equip Svc Engineering Technology			12	12	2	17%	2	100%	\$ 48,500
Heavy Equipment Technology		23		23	0	0%	0	0%	NA
Performance Machining	8			8	0	0%	0	0%	NA
Performance Motorsports	41			41	3	7%	3	100%	\$ 35,500
SCH. OF BUILT ENVIRONMENT									
Advanced Construction Management	11			11	2	18%	1	50%	NA
Architectural Technology		36		36	5	14%	4	80%	\$ 28,787
Building Construction Technology		44		44	4	9%	2	50%	\$ 52,000
Civil Engineering Technology		17		17	1	6%	1	100%	NA
Construction Administration	16			16	2	13%	1	50%	NA
Construction Management			84	84	10	12%	8	80%	\$ 42,729
Facility Management	8		26	34	8	24%	7	88%	\$ 47,227
HVACR Engineering Technology			31	31	7	23%	5	71%	\$ 49,600
HVACR Technology		30		30	4	13%	2	50%	\$ 29,520
SCH. COMPUTER, ELEC, ENERGY, MECH, SURVEY									
Computers Networks and Systems			13	13	2	15%		0%	NA
Electrical Power Generation	3			3	0	0%	0	0%	NA
Electrical/Electronics Engineering Technology			15	15	3	20%	2	67%	\$ 28,000
Industrial Electronics Technology		12		12	1	8%	0	0%	NA
Mechanical Engineering Technology		13	18	31	3	10%	3	100%	\$ 40,350
Surveying Engineering			16	16	2	13%	2	100%	\$ 62,500
Surveying Technology		12		12	2	17%	2	100%	\$ 62,500
SCH. OF DESIGN AND MANUFACTURING									
CAD Drafting & Tool Design Technology		17		17	2	12%	1	50%	NA
Manufacturing Engineering Technology			24	24	5	21%	4	80%	\$ 63,250
Manufacturing Tooling Technology	8			8	0	0%	0	0%	NA
New Media Printing and Publishing			7	7	1	14%	0	0%	NA
Plastics Engineering Technology			31	31	8	26%	7	88%	\$ 42,623
Plastics Technology		28		28	3	11%	3	100%	\$ 30,000
Printing and Digital Graphic Imaging Technology		16		16	2	13%	2	100%	\$ 35,000
Printing Management			12	12	2	17%	2	100%	\$ 35,000
Product Design Engineering Technology			24	24	5	21%	5	100%	\$ 29,275
Quality Engineering Technology			5	5	2	40%	1	50%	NA
Quality Technology	28			28	1	4%	0	0%	NA
Rubber Engineering Technology			4	4	1	25%	1	100%	NA
Rubber Technology		5		5	2	40%	2	100%	\$ 45,000
Welding Engineering Technology			28	28	28	100%	25	89%	\$ 45,960
Welding Technology		32		32	3	9%	3	100%	\$ 36,426
Eng. Tech TOTAL	115	333	445	893	145	16%	118	81%	Not Calculated

2009/2010 Graduate Follow Up Survey Summary

College: Engineering Technology

ENGINEERING TECHNOLOGY	Degrees			TOTAL	# Responded	% Responded	Placement Information		
	CERT	AAS	BS				# Employed/CE	Placement Rate	Ave Salary
SCH. OF AUTO & HEAVY EQUIPMT									
Automotive Body		1		1	0	0%	0		NA
Automotive Engineering Tech			34	34	4	12%	4	100%	\$ 52,270
Automotive/Heavy Equipment Mgt			9	9	2	22%	2	100%	\$ 41,500
Automotive Management			24	24	5	21%	5	100%	\$ 44,400
Automotive Service Technology		16		16	6	38%	4	67%	\$ 39,500
Heavy Equip Service Eng Tech			11	11	1	9%	1	100%	NA
Heavy Equipment Technology		25		25	6	24%	5	83%	\$ 78,500
Performance Machining	9			9	0	0%	0		NA
Performance Motorsports	31			31	5	16%	2	40%	\$ 48,000
SCH. OF BUILT ENVIRONMENT									
Advanced Construction Mgmt	1			1	0	0%	0		NA
Architectural Technology		22		22	4	18%	2	50%	NA
Building Construction Tech		43		43	5	12%	2	40%	NA
Civil Engineering Technology		18		18	3	17%	1	33%	NA
Construction Management			78	78	12	15%	12	100%	\$ 44,136
Facility Management	4		29	33	10	30%	8	80%	\$ 39,143
HVACR Engineering Technology			45	45	10	22%	9	90%	\$ 62,278
HVACR Technology		36		36	4	11%	2	50%	\$ 25,000
SCH. COMPUTER, ELEC, ENERGY, MECH, SURVEY									
Computers Networks and Systems			11	11	3	27%	3	100%	NA
Electrical Power Generation	5			5	1	20%	0	0%	NA
Electrical/Electronic Eng Tech			18	18	1	6%	1	100%	NA
Geographic Info Systems	3			3	1	33%	0	0%	NA
Industrial Electronics Tech		12		12	0	0%	0		NA
Mechanical Engineering Tech		15	12	27	3	11%	3	100%	\$ 41,500
Surveying Engineering			21	21	3	14%	2	67%	NA
Surveying Technology		15		15	2	13%	0	0%	NA
SCH. OF DESIGN AND MANUFACTURING									
CAD Drafting/Tool Design Tech		19		19	1	5%	0	0%	NA
Manufacturing Engineering Tech			18	18	5	28%	5	100%	\$ 57,400
Manufacturing Tooling Tech	7			7	0	0%	0		NA
New Media Printing and Publishing			9	9	4	44%	3	75%	\$ 48,333
Plastics Engineering Tech			20	20	3	15%	3	100%	\$ 57,667
Plastics Technology		19		19	3	16%	2	67%	\$ 42,500
Print/Digital Graphic Img Tech		18		18	1	6%	0	0%	NA
Printing Management			7	7	1	14%	1	100%	NA
Prod Design Engineering Tech			25	25	7	28%	6	86%	\$ 44,200
Quality Engineering Technology			1	1	1	100%	1	100%	NA
Quality Technology	22			22	4	18%	0	0%	NA
Rubber Engineering Technology			1	1	0	0%	0		NA
Rubber Technology		5		5	0	0%	0		NA
Welding Engineering Technology			30	30	30	100%	22	73%	\$ 55,864
Welding Technology		30		30	2	7%	2	100%	NA
Eng. Tech TOTAL	75	301	403	779	153	20%	113	74%	Not Calculated

2010/2011 Graduate Follow Up Survey Summary

College: Engineering Technology

ENGINEERING TECHNOLOGY	Degrees				Placement Information				
	CERT	AAS	BS	TOTAL	# Responded	% Responded	# Employed/CE	Placement Rate	Ave Salary
ARCHITECTURAL TECH & FACILITIES MGMT									
Architectural Technology		19		19	5	26%	4	80%	\$ 15,000
Facility Management	6		25	31	6	19%	5	83%	\$ 49,000
AUTOMOTIVE									
Automotive Engineering Tech			43	43	7	16%	7	100%	\$ 52,500
Automotive Management			23	23	3	13%	3	100%	\$ 55,667
Automotive Management (2+2)			1	1	0	0%	0		NA
Automotive Service Technology		14		14	1	7%	0	0%	NA
Automotive & Heavy Equipment Mgt			6	6	1	17%	1	100%	NA
Performance Machining	12			12	3	25%	0	0%	NA
Performance Motorsports	23			23	6	26%	0	0%	NA
CONSTRUCTION TECHNOLOGY & MGMT									
Advanced Construction Mgmt	2			2	0	0%	0		NA
Building Construction Tech		37		37	3	8%	1	33%	NA
Civil Engineering Technology		20		20	3	15%	1	33%	NA
Construction Administration	1			1	1	100%	0	0%	NA
Construction Management			69	69	12	17%	12	100%	\$ 37,591
ELECTRONICS/CNS									
Computers Networks and Systems			9	9	1	11%	1	100%	NA
Electrical/Electronic Eng Tech			13	13	1	8%	1	100%	NA
Industrial Electronics Tech		4		4	1	25%	1	100%	NA
HEAVY EQUIPMENT									
Electrical Power Generation	2			2	0	0%	0		NA
Heavy Equip Service Eng Tech			11	11	0	0%	0		NA
Heavy Equipment Technology		10		10	1	10%	1	100%	NA
HVACR									
HVACR Engineering Technology			50	50	8	16%	8	100%	\$ 60,500
HVACR Technology		26		26	2	8%	2	100%	\$ 25,940
MANUFACTURING ENGINEERING									
Manufacturing Engineering Tech			30	30	3	10%	3	100%	\$ 50,000
Manufacturing Technology		4		4	0	0%	0		NA
Manufacturing Tooling Tech		10		10	1	10%	1	100%	NA
Quality Engineering Technology			4	4	1	25%	1	100%	NA
Quality Technology	28		1	29	7	24%	0	0%	NA
MECHANICAL DESIGN									
CAD Drafting/Tool Design Tech		8		8	0	0%	0		NA
Mechanical Engineering Tech		27	15	42	4	10%	3	75%	\$ 62,650
Prod Design Engineering Tech			14	14	8	57%	7	88%	\$ 44,143
PLASTICS & RUBBER ENG TECHNOLOGY									
Plastics Engineering Tech			24	24	3	13%	3	100%	\$ 51,667
Plastics Technology		29		29	2	7%	1	50%	NA
Rubber Engineering Technology			6	6	1	17%	1	100%	NA
Rubber Technology		4		4	1	25%	0	0%	NA
PRINTING & IMAGING TECHNOLOGY MGMT									
New Media Printing and Publishing			9	9	0	0%	0		NA
Print/Digital Graphic Img Tech		10		10	1	10%	1	100%	NA
Printing Management			3	3	1	33%	1	100%	NA
SURVEYING ENGINEERING									
Geographic Info Systems (GIS)	4			4	0	0%	0		NA
Surveying Engineering			18	18	2	11%	2	100%	\$ 34,250
Surveying Technology		13		13	4	31%	3	75%	NA
WELDING ENGINEERING TECHNOLOGY									
Welding Engineering Technology			22	22	21	95%	18	86%	\$ 59,342
Welding Technology		38		38	0	0%	0		NA
Eng. Tech TOTAL	78	273	396	747	125	17%	93	74%	Not Calculated

2011/2012 Graduate Follow Up Survey Summary

College: Engineering Technology

ENGINEERING TECHNOLOGY	Degrees			Placement Information					
	CERT	AAS	BS	TOTAL	# Responded	% Responded	# Employed/CE	Placement Rate	Ave Salary
ARCHITECTURAL TECH & FACILITIES MGMT									
Architectural Technology		18		18	1	6%	0	0%	NA
Facility Management	10			10	1	10%	1	100%	NA
Facility Management			21	21	4	19%	4	100%	\$ 39,125
AUTOMOTIVE									
Automotive Engineering Tech			46	46	12	26%	12	100%	\$ 46,793
Automotive Management			23	23	3	13%	3	100%	\$ 52,667
Automotive Service Technology		9		9	1	11%	1	100%	NA
Automotive/Heavy Equipment Mgt			1	1	0	0%	0		NA
Performance Machining	19			19	4	21%	1	25%	NA
Performance Motorsports	43			43	10	23%	0	0%	NA
CONSTRUCTION TECHNOLOGY & MGMT									
Building Construction Tech		38		38	8	21%	3	38%	\$ 51,667
Civil Engineering Technology		20		20	4	20%	1	25%	NA
Construction Management (all inclusive)			63	63	14	22%	14	100%	\$ 50,975
ELECTRONICS/CNS									
Computer Networks and Systems			11	11	2	18%	2	100%	\$ 33,000
Electrical/Electronic Eng Tech			13	13	3	23%	3	100%	\$ 43,000
Industrial Electronics Tech		11		11	2	18%	1	50%	NA
HEAVY EQUIPMENT									
Electrical Power Generation	4			4	1	25%	0	0%	NA
Heavy Equip Service Eng Tech			16	16	5	31%	4	80%	\$ 46,350
Heavy Equipment Technology		19		19	3	16%	1	33%	NA
HVACR									
HVACR Engineering Technology			45	45	7	16%	7	100%	\$ 67,286
HVACR Technology		19		19	4	21%	3	75%	\$ 27,500
MANUFACTURING ENGINEERING									
Industrial Practices	1			1	0	0%	0		NA
Manufacturing Engineering Tech			28	28	4	14%	3	75%	\$ 62,667
Manufacturing Technology		7		7	2	29%	2	100%	NA
Manufacturing Tooling Tech		1		1	0	0%	0		NA
Quality Engineering Technology			3	3	1	33%	0	0%	NA
Quality Technology	68			68	15	22%	0	0%	NA
MECHANICAL DESIGN									
CAD Drafting/Tool Design Tech		15		15	1	7%	1	100%	NA
Mechanical Engineering Tech		26		26	1	4%	0	0%	NA
Mechanical Engineering Tech			22	22	3	14%	3	100%	\$ 53,747
Prod Design Engineering Tech			22	22	6	27%	6	100%	\$ 51,500
PLASTICS & RUBBER ENG TECHNOLOGY									
Plastics Engineering Tech			30	30	8	27%	8	100%	\$ 52,906
Plastics Technology		15		15	2	13%	2	100%	\$ 53,230
Plastics/Polymer Engineering Tech		8		8	0	0%	0		NA
Rubber Engineering Technology			3	3	2	67%	1	50%	NA
Rubber Technology		5		5	1	20%	1	100%	NA
PRINTING & IMAGING TECHNOLOGY MGMT									
Digital Media Printing and Publishing			7	7	2	29%	1	50%	NA
Print/Digital Graphic Img Tech		4		4	0	0%	0		NA
Printing Management			9	9	2	22%	1	50%	NA

Perceptions of Administrative Support

(Mean Scores on 1-4 scale: Not at all/Poor/Good/Excellent)

Measure	Faculty N=5	Advisory Board N=9
University and College Administration provides program with financial resources necessary to perform effectively.	2.20	3.22
University and College Administration provide the program with teaching spaces necessary to perform effectively.	1.80	3.44
University and College Administration provide the program with the equipment necessary to perform effectively.	1.80	3.67
University and College Administration provide the program with the faculty necessary to perform effectively.	2.00	2.78
University and College Administration provide the program with adequate support staff.	1.80	3.22

2.C.2.a. Alumni Follow Up Survey – Facility Management

Seventy five alumni responded to the survey. Forty three, or 57% of respondents graduated after 2006. Fifty seven, or 76% of respondents graduated after 1996. Thus the results of the survey are skewed toward recent graduates.

Of the respondents, about half also completed Ferris' AAS in Architectural Technology degree. Most learned about the Facility Management degree while at Ferris and were attracted to the career option mainly because it easily built on the AAS in Architectural Technology degree as well as the salary potential.

Forty one, or 55% did not continue formal education. Most who did continue their education have done so through seminars. Five, or 6% earned Masters level degrees: 3 MBAs and 1 Master of Architecture.

Forty one, or 55% of the respondents currently live in Michigan. Most reported being flexible to relocation options when searching for their first job. Thirty four, or 45% had a job prior to graduation. Fifty eight, or 77% had found employment within 6 months of graduation. Seventy three percent found employment within Facility Management or a closely related field upon graduation. Eighty three percent are currently employed within Facility Management or a closely related field.

Graduates are employed in various sectors of the economy. Of those responding:

- 18, or 24% worked in the government sector
- 16, or 21% worked in the industrial sector
- 14, or 19% worked in the services sector
- 7, or 9% worked in the healthcare sector
- 7, or 9% worked in the education sector

Reported salaries were less than those reported by sources such as the US Department of Labor. This may be in part due to the fact that most respondents were relatively recent graduates. Most alums started at less than \$40,000 per year. Currently 13, or 18% make in excess of \$70,000 per year, while 59, or 80% earn less than \$70,000 per year.

Overall, alumni felt that they had been well prepared for their chosen career. In most measures of preparation in the skills associated with architectural technology, over 85% of students responded that they had “Good” or “Excellent” preparation. Notable exceptions were that for the various aspects of Real Estate, approximately one third felt that they were not adequately prepared. A similar percentage did not feel adequately prepared to negotiate contracts. Approximately 25% felt poorly prepared to develop budgets, approximately 20% felt that they were not prepared to develop specifications, and approximately 16% felt unprepared to deal with Human Resource issues.

The areas in which alumni noted lower levels of preparation are part of course content. Some, especially aspects of budgeting, human resources, and some aspects of contracts are dealt with mainly in courses outside the curriculum. Perhaps, better integration of these general concepts into the curriculum would enhance the student’s knowledge of these topics. This is a curriculum goal for the program.

It should also be noted that Facility Management is a general field and that practitioners as well as students often feel that specific topics, namely those which they deal with in their particular job, should be more strongly emphasized.

Most comments of the alumni were positive. Most felt that they had a good preparation for Facility Management and that the Architectural Technology foundation was very helpful in allowing them to be effective facility managers. Some of the positive comments dealt with exposure to professionals through the International Facility Management Association and other outside activities. They also expressed a desire for more faculty with facility management specific credentials and experience.

2.C.2.b. Employer Survey – Facility Management

Twelve employers responded to the Employer Survey which was sent to 32 employers. The employers were identified from information provided by alumni in the Alumni Survey as well as from a database maintained by faculty.

The respondents were from the US and Canada and represented the following sectors of the economy: 2 from Education; 6 from Federal Government; 1 from Healthcare; 1 from Hospitality; and 2 from Real Estate. This distribution corresponds to the faculties’ understanding of alumni placement over the last five years.

Many of the responders indicated that their organization had hired more than one Ferris Facility Management alum. Two indicated their organization has hired more than 10 alums; 6 indicated that their organization had hired 2-5 alums, and 4 indicated that their organization

Appendix 6: FSU Transfer Student Policies

Transfer Student Policies and Guidelines

College of Education and Human Services

Credit Transfer Policy

Students desiring to transfer in any College of Education and Human Services Baccalaureate from other accredited institutions of higher education are granted transfer credit on individual basis. Student may need to provide a college catalog with course descriptions and/or course syllabi credit for specific credit evaluation.

The following conditions apply to the transferring of course credit to the College of Education and Human Services:

- Credit may be accepted for courses taken elsewhere provided grades of "C" (2.0 GPA) or better were earned.
- In some cases, courses similar in title and content to the College of Education and Human Services courses at the 300-400 level may not receive specific credit if taken at the 100-200 level at another institution. However, general credit may be granted for those courses.

Course and Transcript Evaluations

Transcripts of transfer students are evaluated by the dean's office of the College in which the student enrolls.

Transfer course equivalency evaluations are determined by the Ferris State department with comparable coursework as indicated by the Ferris course designator. These evaluations represent an institutional determination and will not be independently renegotiated by each Ferris State University College. That is, if a transfer student enters Ferris State and then changes program and College, the initial transfer course equivalent determinations is not changed.

Course evaluations allow equivalency determination where courses are at least 75% the same content. Course equivalency is not denied simply on the basis of differences in course numbering. For instance, a community college adolescent psychology course at the 200 level is not denied equivalency for a 300-level Ferris adolescent psychology course, if the two courses are substantially the same in content.

In those cases where specific course equivalents are not transferred, prerequisite course requirements may be waived and the course equivalency granted when the transfer student completes the next course in a sequence with a grade of "C" or better, demonstrating prior preparation equivalent to preceding courses in the sequence. Failure to achieve a grade of "C" or better in the latter course indicates that the student needs to take the appropriate Ferris prerequisite course.

Course sequences or clusters may be evaluated for Ferris State course equivalency in total rather than course-by-course. For example, when a community college "packages" its course sequence differently but covers substantially the same content as the Ferris course sequence, the entire sequence of transfer courses may be evaluated as a whole, rather than course-by-course. An example of this may be:

Biology 101, 102, &103 at another institution may be accepted as Biology 121 & 122 at Ferris.

Credits in Residency Policy

To fulfill the residency requirement for an associate degree, a student must earn a minimum of fifteen semester credit hours from Ferris State. To fulfill the residency requirement for a bachelor's degree, a student must earn a minimum of thirty semester credit hours from Ferris State. The University expects that these hours are the final credits earned for the degree.

It is expected that a maximum of one-half the total hours required for completion of the degree at Ferris may be transferred from non-bachelor degree granting institutions which have articulations agreements with Ferris. In such a case, additional lower-division courses required for a Ferris bachelor's degree may be transferred.

Approved off-campus degree program may be exempted from portions of this policy. College Dean's Office should be consulted for specific requirements.

Additional Important Information

If you are planning to complete additional college coursework, you must provide current transcripts for evaluation, as your current college will not automatically send another transcript.

Credit is granted only once per course. If a course is repeated, the last earned grade stands.

Courses that transfer to Ferris below the 100 level do not count toward graduation and credit hours are not granted for them.

If a course that Ferris accepts has fewer credits than the Ferris requirement, you may need to take additional courses to fulfill the minimum graduation credit requirements of your program. Please check with your department office.

Extracted from

<http://www.ferris.edu/HTMLS/colleges/educatio/policies/Transfer-Student-Policies.htm> on 11 June 2013.

Appendix 7: Faculty Vitaes

Mary E. Brayton

20050 N. Davison Drive
Paris, Michigan 49338
Home (231) 592-0570
Office (231) 591-3584
Fax (231) 591-2931

EDUCATION

University of Michigan - Ann Arbor
College of Architecture and Urban Planning
Masters in Architecture, December 1988

University of Michigan - Ann Arbor
College of Architecture and Urban Planning
Bachelor of Science in Architecture, 1984

Ferris State University – Big Rapids
College of Arts and Sciences
Associates in Applied Science in Ornamental Horticulture Technology, 2008

Grand Rapids Junior College - Grand Rapids, Michigan
Associates in Art, 1982

TEACHING EXPERIENCE

Ferris State University, Big Rapids, Michigan
Architectural Technology and Facilities Management Programs
Professor, 2008 - Present

Ferris State University, Big Rapids, Michigan
Architectural Technology and Facilities Management Programs
Associate Professor, 2004 - 2008

Ferris State University, Big Rapids, Michigan
Architectural Technology and Facilities Management Programs
Assistant Professor, August 1997- 2004

COURSES TAUGHT

Arch 101 – Architectural Graphics
Arch 102 – Architectural Construction Documents
Arch 109 – Introduction to Computer Graphics in Architecture
Arch 110 – Introduction to Computer Graphics for HVACR
Arch 112 – Structural Materials, Systems and Codes
Arch 115 – Interior and Exterior Finishes and Systems
Arch 190 – Introduction to Architecture
Arch 203 – Architectural Construction Detailing
Arch 204 – Architectural Construction Documents
Arch 241 – Design Fundamentals
Arch 281 – Advanced Presentation
Fman 432 – Interior Architecture for Facility Managers

PROFESSIONAL REGISTRATION

Licensed Architect, State of Michigan

PROFESSIONAL CONSULTATION

Brayton Residence, Cedar, MI
June 2012

Roberts Residence, Big Rapids, MI
May 2010

Gifford Cottage, Canada
October 2005 – May 2006

PROFESSIONAL EXPERIENCE

Habegger Construction, Empire, Michigan
Apprentice Carpenter, June - August 1998

Schemata Inc., Grand Rapids, Michigan
Project Architect, January 1995 – August 1997

Czerew Architects, Grand Rapids, Michigan,
Project Architect, January 1991 - December 1994

Wassenaar + Czerew Architects, Grand Rapids, Michigan,
Intern Architect, August 1989 - December 1990

DeWinter Associates, Inc., Grand Rapids, Michigan
Intern Architect, January - June 1989

MHB Design Group, Inc., Grand Rapids, Michigan
Architectural Draftsperson, July - August 1988

MHB Design Group, Inc., Grand Rapids, Michigan
Architectural Draftsperson, May - August 1987

Greiner, Inc., Grand Rapids, Michigan
Architectural Draftsperson, February - April 1987)

Comp - Aire Systems, Inc., Grand Rapids, Michigan
Architectural Draftsperson, November 1984 - January 1987)

M.C. Smith & Associates, Inc., Grand Rapids, Michigan
Architectural Draftsperson, June 1984 - November 1984

CONTINUING EDUCATION

- NeoCon 2013
Chicago, Illinois
June 10 – 11, 2013
Common Sense Sustainability: Tools for Better Work Stations
Sustainability and the Furniture Industry
The ABDs of Chemical Toxicity and materials

- IFMA Facility Fusion Conference & Expo
Chicago, Illinois
April 11 – 12, 2012
IFMA & BIM for Life Cycle Management
Engaging Building Occupants in Sustainability Initiatives
How do we get from BIM to CAFM? The Process & Today's Tools
The Venter Laboratory: Zero Energy
Wellbeing in the Workplace: Are you Missing Out on the Next Big Thing?
- WomenTech: Train-the-Trainer's Workshop- Presented by Donna Migram, IWITTS Executive Director
Emeryville, CA
June 28-29, 2010
- Academic Dishonesty: Defining, Detecting, Deterring – Facilitators Virginia Hines and Helen Woodman
Ferris State University
Big Rapids, MI
June 14 - 17, 2010
- Sound Healthcare 2010
Grand Rapids, MI
May 18, 2010
- Building Information Modeling Workshop – Facilitated by Bruce Dilg, Professor
College of Engineering Technology, Ferris State University
Big Rapids, MI
May 12-14, 2010
- 2010 Michigan Energy Conference
Big Rapids, MI
April 7 & 8, 2010
- Tegrity New Users Workshop - Facilitators: Kim Hancock and Kimn Carlton-Smith
Ferris State University
Big Rapids, MI
September 25, October 16 and December 4, 2009
- “Why Are We Here: to Serve the Market or to Strengthen Democracy” by Dr. Art Chickering
Faculty Development Day Activities, Ferris State University
Big Rapids, MI
August 26, 2009
- Tegrity 2.0 Lecture Capture System by Dr. Kim Hancock, Professor
Faculty Development Day Activities, Ferris State University
Big Rapids, MI
August 26, 2009
- Ecobuild America2008
Anaheim, CA
May 19-22, 2008
Introduction to BIM: People, Processes & Tools
BIM Implementation Strategies: Changes in your office
Collaboration, Communication & Sustainability in Design, BIM and other Enablers of Process Change
Second Generation BIM: Emerging Scenarios and Values
BIM and the Evolution of Specifications
Applying BIM to Sustainable Building Design
BIM Best Practices: Case Studies, Expert Advice
- Ferris Connect training by Gloria Lukusa-Barnett
Ferris State University
May 13, 14 2008
- Michigan Energy Conference
Holiday Inn, Big Rapids, MI

- April 11, 2008
The Historical Architecture of Big Rapids by Dane Johnson AIA
Festival of the Arts, Big Rapids, MI
March 9, 2008

ACADEMIC ACTIVITIES

- ***Spaghetti Bridge – Authenticity Division***
Ferris State University
March 19, 2010
- ***Regional 14 & 15 MITES Competition, Architectural drafting entries***
Mesick High School, Mesick MI
May 2, 2008

Christopher L. Cospers

411 Chapin St., Starkville, MS 39759

662-418-5960

email: clc36@msstate.edu

Education

Harvard University, Graduate School of Design, Cambridge, MA

Master of Design Studies (MDesS), May 2012

- Critical Conservation (first graduate of program)

Mississippi State University, Starkville, MS

Master of Arts, English, May 1996

- 4.0 GPA on 4.0 scale

Bachelor of Architecture, May 1994

- Ranked 2nd in class of 37 students by GPA
- Magna Cum Laude

Teaching Experience

Mississippi State University, Starkville, MS

Visiting Assistant Professor and Instructor, August 2006-present

- Teaching BCS Studio 2 (Spring 2013). Working with architecture faculty to develop joint tectonic studio. Emphasizing construction means and materials, construction sequencing, scheduling, and cost estimating.
- Taught BCS Foundation Studio A (Fall 2012). Designed new course to introduce incoming freshmen to studio-based learning and professionalism. Incorporated an introduction to BIM into course.
- Taught Electrical Systems (Fall 2009, Fall 2010, Fall 2012). Redesigned course to examine advanced building systems and to complement concepts learned in the prerequisite course, Active Building Systems. Emphasized construction-phase issues.
- Taught BCS Studio VI (Spring 2011). Final studio for first class of MSU Building Construction Science program. Worked collaboratively with Jamie Myers, a Jackson-based contractor. Focused on cost estimating and scheduling. Designed course content to meet unique needs of class.
- Taught Fourth Year EDI Design Studio (Fall 2008, Spring 2010). Created collaborative studio with the College of Education, School of Architecture, Educational Design Institute (EDI), and, in 2010, the Interior Design Department. Emphasized planning, programming, code reviews, and architect-client interaction.
- Taught Active Building Systems (Spring 2007-Spring 2010). Revised course content to better coordinate with Passive Building Systems course. Integrated course content into Third Year Design Studio. Used eInstruction audience response system to improve content delivery.

- Taught First Year Design Studio (Summer I 2008). Worked with studio coordinator and S/ARC director to develop course content. Participated on field trip to Auburn's Rural Studio in Alabama.
- Taught Detailing and Construction Documents for Interior Design (Spring 2008). Starting with a basic outline, designed course content. Developed new projects and lectures. Integrated class project with students' studio field trip to Atlanta.
- Taught Fourth Year Design Studio (Fall 2007). Designed content of course. Adjusted pedagogy to reflect strengths and weaknesses of class. Designed collaborative project with Interior Design.
- Taught AutoCAD for Interior Design (Fall 2007, Spring 2008). Adjusted established course content to meet needs of first year students.
- Taught Third Year Design Studio (Spring 2007). Worked with studio coordinator and other instructors to develop course content. Developed plan for final reviews to address student and faculty concerns.
- Taught Second Year Design Studio (Fall 2006). Worked with studio coordinator and other instructors to develop course content. Led one section of the studio; organized student reviews and graded student work. Traveled with class to Philadelphia, PA.
- Coached 2012 Associated Schools of Construction Region II competition team. Focusing on LEED and other sustainability issues.
- Coached 2010 Associated Schools of Construction Region II competition team. Focused on written and oral presentation skills.

Teaching Assistant, Department of English, August 1994-May 1996

- Taught six sections of English Composition as primary classroom instructor.
- Served as a TA for one semester of Writing for Engineers.
- Worked with Peter Shillingsburg, Ph.D., on *The Grisham Brief*, a scholarly investigation of John Grisham's literary career.

Relevant Graduate Coursework

Harvard University, Graduate School of Design, Cambridge, MA

- Culture, Conservation, and Design—Creating the Conversation. Examined conservation projects from a cultural context, emphasizing how social, political, and other factors influence a project. Examined impact of these forces on the processes of development, design, and construction.
- Critical Memory and the Experience of History. Focused on how memory and different historical interpretations influence the field of conservation. Established theoretical background for Critical and Strategic Conservation program.
- Conservation Canons and Institutions. Focused on standard conservation practices and institutions that conduct those practices. Critiqued those practices through the theoretical lens established in Critical Memory and the Experience of History.
- Case Studies in Critical Conservation. Considered a series of specific conservation projects with case studies presented by experts associated with those projects. Specific case studies included an MIT dormitory by Alvar Aalto renovated in 2000. Both the original construction and renovation work were addressed.

- Preservation Media Project—The Hatch Cottage. Considered construction, detailing, and conservation of the Hatch Cottage, a mid-century Modern beach cottage on Cape Cod, through three-dimensional modeling, rendering, and animation. Required class of nine students to work as a single team.
- Changing Natural and Built Coastal Environments. Examined coastal environments from an ecological perspective. Relevant to both builders and designers. Directly applicable to my research on the Mississippi Gulf Coast post-Katrina.
- Field Studies in Real Estate, Planning, and Urban Design. Used market analysis, absorption rate analysis, and other real estate tools to plan a real, client-based project – Jack’s Point Village, Queenstown, New Zealand.
- Planning and Environmental Law. Focused on land-use planning and environmental regulation regimes in the United States. Designed for future urban planners, but directly relevant to architects, engineers, builders, and others who work within the regulatory environment.
- Designing the American City (audited). Traced urban design in the United States from the colonial era to present day. Presented developments in urban design as a series of large ideas which evolve over time. Directly relevant to my research on the Mississippi Renewal Forum.
- Environmental Technologies in Buildings (audited). Considered buildings as “captured energy” and building systems as movers of energy. Emphasized innovative HVAC systems. Designed for GSD M-ARCH I students; similar in content to MSU’s Active Building Systems.

Mississippi State University, Starkville, MS

- Teaching College Writing (4 semesters). Focused on developing teaching skills of Teaching Assistants. Linked directly to freshman English Composition program. Included weekly overviews of pedagogical concerns, reviews of graded assignments, and classroom visits.
- Teaching Technical Writing. Focused on specific skills required to teach technical writing. Emphasized the needs of multiple audiences, understanding the goal of written communication, precision, and conciseness.
- Seminar in Bibliographic Research Methods. Addressed research skills including library searches and database searches. Emphasized unreliable nature of certain sources and the need to approach written material skeptically.

Publications

- “The Client-Based Studio: Meeting Pedagogical Needs and Serving the Community”—presented to the University of Oklahoma Creating_Making Forum and published in the proceedings. (2011)
- “Evaluating the Implementation of Lean Construction into a University Curriculum”—coauthored with MSU colleague Tom Leathem. Examines the curricular options for integrating Lean Construction principles into a building construction curriculum: a lecture or “silo” class, a studio, or a special summer class. Scheduled for inclusion in the 2013 Associated Schools of Construction Conference. (2013)

Other Papers

- “The New Old Corps: The U.S. Army Corps of Engineers Tackles the Post-Katrina Mississippi Gulf Coast”—examines case studies from the U.S. Army Corps Mississippi Coastal Improvements Program (MsCIP) and argues that today’s Corps is struggling to balance old-style infrastructure projects with environmental restoration work.
- “Fort Maurepas: France, Memory, and Festival on the Mississippi Gulf Coast”—examines issues of heritage and memory by looking at historic Fort Maurepas, a 1981 replica of the original fort, and a post-Katrina park built on the site of destroyed replica.
- “Time-Honored Versus Bigger and Better: Critical and Strategic Conservation in Post-Katrina Mississippi”—focuses on the Mississippi Renewal Forum, a series of design charrettes held six months after Hurricane Katrina, and a set of case study projects that developed after those charrettes. As the first thesis paper from the Critical and Strategic Conservation program, the paper is designed to define the discipline as well as addressing the specific subject.
- “The Coast by Storm: Planning the Recovery of Post-Katrina Mississippi”—examines the Mississippi Renewal Forum, specifically the role of the New Urbanists in the post-Katrina planning process. Although focused on a relatively narrow subject, this paper will have implications for urban planning across the country. In progress.

Work Experience

Mississippi State University, Starkville, MS

Visiting Assistant Professor, Building Construction Science, August 2012-present

- Full-time position focused on teaching and research.
- Teaching BCS courses including BCS Studios and Electrical Systems.
- Applying for ORED grants to initiate research into integrated practice.

Assistant Director, Educational Design Institute, September 2008-August 2011

- Worked on a variety of master planning, cost estimating, and preliminary design projects for Mississippi school districts.
- Coordinated collaborative projects between the College of Architecture, Art + Design and the College of Education.
- Managed student workers.

School of Architecture Admissions and Advising Coordinator, June 2010-June 2011

- Helped incoming freshmen and summer studio students with admissions process.
- Advised pre-architecture students working toward admission to studio.
- Worked to increase minority enrollment in summer studio as gateway to design studio sequence.

Interim Director, Carl Small Town Center, Fall 2009

- Managed center, including employees and student workers, during director's sabbatical.
- Communicated with current and prospective clients.
- Kept director informed of critical developments.
- Judged 2009 Mississippi Home Corporation Green Home competition

Architect, Carl Small Town Center, October 2006-April 2008

- Managed completion of the East Oktibbeha County High School Outdoor Classroom. Coordinated student design and construction work. Coordinated contractor work, including welding and painting. Updated client on project progress.
- Worked to develop a needs assessment and architectural program for Central Mississippi Health Services. Managed the efforts of two student workers.

Cosper & Associates Architecture · Consulting, P.L.L.C., Starkville, MS

Owner, October 2006-present

- Working in an integrated practice model with Tabor Construction on a series of projects including a new office building and a restaurant.
- Worked in close collaboration with Tabor Construction on an award-winning series of projects at Central Station.
- Designed and administered construction of a new \$2.0 million office building for the Starkville Electric Department. Worked with M&E engineers and contractors to meet LEED Certified standards.
- Designed and administered construction on a \$1.0 million addition to the MSU Wesley Foundation.

Pryor & Morrow Architects, Columbus, MS

Partner, January 2003-September 2006

- Worked with another partner to design and administer construction on the \$10.0 million renovation of the historic Marks-Rothenberg building in Meridian, MS.
- Worked with IT manager to coordinate firm's technology program.
- Updated the firm's master specification. Reviewed revision requests from co-workers, researched new products and methods, and edited prototype Word files.
- Performed code reviews on many of the firm's most complicated projects.
- Designed a revision of firm logo.

Architect, August 1999-January 2003

- Served as project architect on numerous projects, including the \$3.5 million renovation of Bowen Hall at Mississippi State University. Oversaw all aspects of projects, including client satisfaction.
- Helped reorganize firm's master specification.
- Coordinated many of firm's marketing presentations.
- Coordinated firm's intern and co-op recruitment efforts.

Intern Architect, January 1996-August 1999

- Drew and coordinated construction documents for a variety of projects, including Hilbun Hall at MSU and Carthage Elementary School.
- Programmed projects.
- Assisted with marketing efforts.
- Worked with another intern to develop firm's technology program.

Mississippi State University Physical Plant, Starkville, MS

Intern Architect, Summer 1993, 1994

- Drew existing buildings and renovation projects.
- Performed site investigation on existing buildings.
- Surveyed with transit and Philadelphia rod.
- Worked with engineers in a team atmosphere.

Guild, Jaubert & Hardy Architects, Gulfport, MS

Intern Architect, Summer 1990, 1991, 1992

- Drafted construction documents.
- Rendered presentation drawings and built presentation models.
- Organized shop drawings and specifications.

Awards

- 2012 Home Builders Association of Mississippi award for Multifamily Renovation Under 50 Units—The Lofts with Tabor Construction
- 2012 Home Builders Association of Mississippi award for Multifamily Renovation More than 50 Units—University Club with Tabor Construction
- 2012 Home Builders Association of Mississippi award for Commercial Renovation—The Lofts (Office Space) with Tabor Construction
- 2010 Home Builders Association of Mississippi award for the Best Commercial Building Remodel—Central Station with Tabor Construction
- 2010 Starkville Central Neighborhood Foundation Award of Merit for Adaptive Reuse—Central Station with Tabor Construction
- 2000 Mississippi AIA Honor Award—EMCC Center for Manufacturing Technology Excellence (participated on Pryor & Morrow team working on the project)

Computer Skills

Advanced skill level

- AutoCAD
- Microsoft Office Suite
- SketchUp

Intermediate skill level

- Adobe Premiere
- Revit

Registration

- Registered architect, Mississippi #3166, NCARB #51916
- LEED 2.0 Accredited Professional
- American Institute of Architects

Community Service

- First president and founding member, Starkville in Motion, a community organization dedicated to increasing awareness of and funding for bike lanes, sidewalks, and trails in Starkville and Oktibbeha County.
- Member, Starkville Kiwanis Club. Work with other club members in the Humphrey Coliseum concession stands to raise money (typically more than \$50,000 annually) for local charities.

Interests

- Reading, gardening, backcountry hiking

**GARY R. GERBER AIA, CSI, USGBC, CDT, LEED AP
ASSOCIATE PROFESSOR
FERRIS STATE UNIVERSITY
JOHNSON 208
BIG RAPIDS, MI 49307**

EDUCATION:

**Ferris State College 1975
Big Rapids, MI
School of Technology
Associate Degree in Architectural Drafting**

**University of Michigan 1978
Ann Arbor, MI
School of Architecture
B.S. in Architecture**

**Grand Valley State University 1995
Allendale, MI
School of Business
Masters in Business Administration**

WORK EXPERIENCE:

**Associate Professor
Architectural and Sustainability
School of the Built Environment
College of Engineering Technology
Ferris State University
Big Rapids, MI
1989 to present**

**Gerber Brother Ventures, LLC
Commercial office building development and ownership
Belmont MI
2008 to present**

**Gerber Architectural
Architectural consulting
Belmont MI
1989 to present**

**Gerber Architectural Properties, LLC
Commercial office building development and ownership
Belmont MI
2002 to present**

Architect and Director of Design Services
Square Real Estate Inc.
Grand Rapids, MI
1985-1989

Architectural Draftsperson
Daverman Associates Inc.
Grand Rapids, MI
1983-1985

Architectural Energy Specialist
Daverman Associates Inc.
Grand Rapids, MI
1980-1982

Building Designer and Construction Foreman
Gerber Construction Co. Inc.
Reed City, MI
1978-1980

Carpenter and Architectural Draftsman
North American Building Systems
Reed City, MI
1972-1978 (part time)

PROFESSIONAL ORGANIZATIONS & REGISTRATIONS:

Registered Professional Architect State of Michigan

American Institute of Architects

Construction Specification Institute

Certified Document Technician (CDT)

Leadership in Energy & Environmental Design Accredited Professional (LEED AP)

REAL ESTATE PROJECT EXPERIENCE:

MULTI-UNIT HOUSING—

- **Design Arch. - Lexington Suites Motel - Cascade, MI**
- **Architect - Rivers Edge Condominiums - Big Rapids, MI**
- **Architect - Heritage Acres Condominiums - Reed City, MI**
- **Architect - Crosswinds Estates Condominiums - Ludington, MI**
- **Architect - Pere Marquette Quad cabin - Baldwin, MI**

COMMERCIAL & INSTITUTIONAL CONSTRUCTION—

- **Architect --Canadian Lakes Pavilion—Stanwood MI**
- **Architect – Reed City Depot Building Osceola Foundation Addn—Reed City, MI**
- **Architect – Reed City Depot Building—Reed City, MI**
- **Architect – Lake Osceola State Bank Perry Street Branch—Big Rapids, MI**
- **Architect - Michigan Works West Central Office Building Renovation- Big Rapids, MI**

- Architect – Crankers Brewery—Big Rapids, MI
- Architect – Spectrum Health Reed City Emergency Room Renovation & Remodeling- Reed City, MI
- Architect – United Methodist Church of Reed City Entry Canopy Addition—Reed City, MI
- Architect – Lake Osceola State Bank Remodeling and Historic Renovation—Big Rapids, MI
- Architect - Nail Salon lease space Main Street Business Center—Grand Rapids, MI
- Architect - 911 Dispatch Addition – Paris, Michigan
- Architect - Neale Business Center - Reed City, MI
- Architect - Pattie Drugs Addition & Renovation - Baldwin, MI
- Architect - Pioneer Group Production Facility – Big Rapids, MI
- Architect - Michigan Works Office Building - Reed City, MI
- Architect / Owner - Michigan Works Office Building - Baldwin, MI
- Architect - Wexford/Missaukee Family Independence Agency - Cadillac, MI
- Architect - Young Insurance \ Rockford Travel Bldg - Rockford, MI
- Architect - Reed City Public Schools - Weight Room Addn, Storage Additions, Concession Stand - Reed City, MI
- Architect - Nabco Inc. Corporate Office Remodeling - Reed City, MI
- Consultant- Hardwood Grill Restaurant - Restaurant Remodeling - Gruner Prussner and Lloyd - Mishawaka, IN
- Architect - Assessment Center Addition - Eagle Village - Hersey, MI
- Architect - Dining Center Addition - Eagle Village - Hersey, MI
- Architect - Porteous Law Office - Reed City, MI
- Architect - Reed City Fire Department - Reed City, MI
- Architect - Evert Products Material Marshalling Area - Evert, MI
- Architect - The Bagel Beanery - Grand Rapids, MI
- Architect - Kellogg Square Retail Mall - Kentwood, MI
- Architect - Fables Woodland Mall Remodeling - Kentwood, MI
- Architect - Smyrna Bible Church Addition - Smyrna, MI
- Architect - Art Works – Big Rapids, MI
- Architect / Owner - Michigan Works West Central Office Building – Big Rapids, MI
- Architect - Reed City Depot Building – Reed City, MI
- Architect - Lebaron Financial Renovation and Addition – Reed City, MI
- Architect - Michigan Works West Central Office Building Addition and Renovation- Reed City, MI
- Architect - Green Township Picnic Shelter Adaptive Reuse Study– Paris, MI
- Architect - Williamson Chiropractic renovation – Big Rapids, MI
- Architect - Mecosta County Jail Skylight Remodeling – Big Rapids, MI
- Architect - Indigo Inn Bed and Breakfast Code Study – Fremont, MI
- Architect - Spectrum Health Reed City Emergency Room Renovation and Remodeling- Reed City, MI
- Architect - Reed City United Methodist Church entry canopy – Reed City, MI
- Architect - Anderson Agency Façade Renovation and entry vestibule - Reed City, MI

RESIDENTIAL—SINGLE FAMILY

- Architect - Cindy and Mick Lowe Cottage – White Cloud, MI

- Architect - Dr Alex Tasic Residence – Big Rapids, MI
- Architect - Bill and Ann Coats Residence – Chase, MI
- Architect - Dave and Marge Lewis Home Addition & Renovation Big Rapids, MI
- Architect - Jim and Joyce Bradley Residence – Canadian Lakes, MI
- Architect - Gunther Residence – Canadian Lakes, MI
- Architect - Wayne and Carole Richardson Residence – Rockford, MI
- Architect - Jim and Dorothy Heyart cottage addition and renovation– Canadian Lakes, MI
- Architect - Jerry and Marcy Springer cottage addition and renovation– Canadian Lakes, MI
- Architect - Crystal River Cottages – Glen Arbor, MI
- Architect - Browers Home – Rodney, MI
- Architect - Battdorf Home renovation – Big Rapids, MI
- Architect - Bengry Home addition and renovation – Ewart, MI
- Architect - Wolverton Cottage addition and renovation – Bear Lake, MI
- Architect - Beth Steenwyk Home addition & renovation – Canadian Lakes, MI
- Architect - McNabb home addition and renovation - Cascade, MI

CONTINUING EDUCATION:

Gary Gerber, Associate Professor, AIA, CSI, CDT, LEED AP

1. Success Magazine Investor Education- August 12, 2005 Grand Rapids MI
2. Get Motivated Business Seminar- August 2, 2005 Grand Rapids MI
3. Sketching Workshop with Paul Lasseau- April 1, 2005 Big Rapids MI
4. Sexual Harassment Awareness Session April 2005 Big Rapids MI
5. United States Green Building Council Conference-November 2004 Portland OR
6. New Brain Research and Its Application to Education-November 2004 Big Rapids MI
7. United States Green Building Council LEED AP training East Lansing MI-June 2004
8. Revit 5 Level 1 Software training –July 2003 Grand Rapids MI
9. Critical Thinking Institute-May 22-23, 2003 Big Rapids MI
10. Construction Documents Technology Program-February 2003 Grand Rapids MI
11. United States Green Building Council Conference-November 2002 Austin TX
12. Architectural Desktop 3 Level 1 Training (6/02) Grand Rapids MI
13. Problem Based Learning-July 16-18, 2001 Big Rapids MI
14. AIA 2001 National Convention and Design Exposition - May16-19, 2001 Denver, CO
15. AIA 2004 National Convention and Design Exposition - June 10-12, 2004 Chicago, Illinois
16. AIA 2008 National Convention and Design Exposition- May 15-17, 2008 Boston, MA
17. AIA Grand Valley - Michael Graves-The Design Process- April 27, 2000
18. AEC Systems conference-June 1998 Chicago
19. Management Computer Controls-Estimating Software Training (12/96)
20. Mich. State University-Construction Cost Estimating (3/96)
21. AEC Systems conference-June 1996 Anaheim CA
22. AEC Systems conference-June 1994 Washington DC
23. AEC Systems conference-June 1993 Anaheim CA
24. Urban Land Institute – Basic Real Estate Development – Chicago IL May 2-3, 2006
25. USGBC - LEED Technical Review – April 14, 2005
26. AIA Grand Valley - Kirk Blunck Design Series Lecture - May 8, 2008
27. AIA Grand Valley - Haworth Corporate Headquarters Tour - May 7, 2008
28. AIA Grand Valley - Steven Ehrlich FAIA Muticultural Modernism Lecture - April 6, 2006

29. AIA Grand Valley - Mark Cameron, AIA - Neighborhood Design Lecture - September 21, 2006
30. AIA Grand Valley - Sarah Susanka, AIA- Design Series Lecture - February 17, 2005
31. AIA Grand Valley - Jan Gehl - Human Dimension in Urban Planning and Design -November 9, 2006
32. AIA Grand Valley - Steve Faber and Marty Morgan - Cohousing Development - October 19, 2006
33. AIA Grand Valley - Michael F. Kaufman, AIA - Grand Rapids J.W. Marriot Hotel – October 27, 2005
34. Fred Pryor Seminars – Facilities Management Seminar - January 25, 2006
35. Grand Valley Metropolitan Council – Building Public Awareness About Great Communities – June 9, 2005
36. Grand Valley Metropolitan Council – Prospering Through Partnerships – June 8, 2006
37. Grand Valley Metropolitan Council –Growing Communities Conference - June 14 2007
38. FSU Festival of the Arts - James Timberlake FAIA Lecture - February 4, 2008
39. AIA Grand Valley – Tour of Grand Rapids Art Museum – February 8, 2008
40. IFMA West Michigan – Dean T. Kashiwagi Ph.D., PE – How to Implement Best Value in Public & Private Sector – September 20, 2006
41. AIA Michigan leadership retreat January 18-19, 2008 Traverse City, MI
42. Architectural Record Continuing Ed - An Abandoned Airport Brownfield Takes Off – April 15, 2008
43. Architectural Record Continuing Ed – Building Even Better Concrete – February 29, 2008
44. Architectural Record Continuing Ed – (Mis) Leading Green Materials – November 30, 2007
45. Architectural Record Continuing Ed – Architecture Hot and Cold – February 29, 2008
46. Architectural Record Continuing Ed – The Case For Commissioning – March 31, 2008
47. Architectural Record Continuing Ed – Getting Aggressive About Passive Design – April 15, 2008
48. Architectural Record Continuing Ed – Rapidly Renewable Materials Complex Calculus– April 15, 2008
49. Ferris Connect training – February 11 & 13, 2008
50. Kirk Blunck, FAIA Design Lecture – May 8, 2008
51. AIA National Convention 2008 Boston MA – May 15 -17, 2008
52. Designing Healthy Livable Communities Conference May 29, 2008 Lansing MI
53. SUSTAINABILITY BY DESIGN: HAWORTH'S May 31, 2008 WORKSPACE CASE STUDY
54. CSI Convention 2008 June 5-7, 2008 Las Vegas, NV
55. Grand Valley Metro Council Annual Growing Communities Conference May 12, 2008
56. Lilly North Conference September 18-21, 2008 Traverse City MI
57. Intergrated Project Delivery October 1, 2008 AIA Grand Valley
58. Precast Concrete Components October 2, 2008 AIA Grand Valley
59. L. William Seidman Who's going to Help Michigan More? October 9, 2008 GVSU
60. Urban Land Institute Real Estate Conference Grand Rapids, MI October 15-16, 2008
61. Classic Labs Ascribe Professional Service Marketing
62. Webinar on Certified Wood November 12, 2008
63. COMMERCIAL BUILDING INSULATION APPLICATIONS FOR XPS
64. High Performance Sheathings Designed for Todays Exterior Building Systems
65. CONSTRUCTION PRACTICES; MOLD / MILDEW RESISANT SYSTEMS
66. MANAGING RADIANT HEAT IN BUILDINGS
67. The Challenges of Installing Large Format Porcelain Tile
68. ADVANCED CERAMIC TILE METHODS, STANDARDS & MATERIALS
69. Plainfield Township Training session on Formed Based Zoning
70. AIA Michigan Leadership Retreat January 16-17, 2009 Traverse City MI
71. ACOUSTICALLY ENHANCED GYPSUM BOARD FOR HIGH STC WALL PARTITIONS
72. An Overview of Insulated Concrete Forms February 28, 2009
73. CSI Construction and Design Professionals' Expo 2009
74. Plainfield Township Training session on walkable communities March 31, 2009

75. Design lecture on two local buildings winning design awards April 3, 2009
76. Design lecture on two local buildings winning sustainable design awards April 17, 2009
77. Introduction to underfloor air delivery systems April 24, 2009
78. UNDERFLOOR SERVICE DISTRIBUTION April 24, 2009
79. City Flats Hotel Holland MI building tour April 28, 2009
80. The New ADA Standards: What You Need to Know AIA Webinar May 1, 2009
81. The Beauty of Zero: The Design of a Zero Energy Building AIA Webinar May 1, 2009
82. Towards a Carbon Neutral Future: Making Dramatically Better Buildings Affordably
83. Focus on Contemporary Architecture: Critical and New Opinions AIA Convention Webinar
84. Positioning Michigan in an Era of Climate Change by Glen Le Roy May 7, 2009
85. Plainfield Township Training on billboards & digital sign technology May 11, 2009
86. Developing and Funding Trailways and Bike paths May 12, 2009
87. The Triple Bottom Line May 14, 2009
88. Historic Preservation and Green Architecture: Friends or Foe? May 15, 2009
89. The Green Side of Polished Concrete May 20, 2009
90. Tour of Phillip Johnson's Glass House New Canaan, Connecticut May 23, 2009
91. Tour of Frank Lloyd Wright's Guggenheim Museum May 24, 2009
92. Grand Valley AIA Van Andel Institute Tour May 27, 2009
93. Form Based Codes and New Urbanism May 29, 2009
94. Grand Valley Metro Council Annual Growing Communities Conference June 5, 2009
95. Building Tour of Cathedral Square June 23, 2009
96. Urban Spawl Lecture at Calvin College September 14, 2009
97. Plainfield Township Training on billboards & digital sign technology September 14, 2009
98. Understanding Solid Surface in Interiors September 25, 2009
99. Helping Your Clients Create Healthy Indoor Air September 25, 2009
100. Lecture on Cost Management at FSU by Gardiner and Theobald NYC September 29, 2009
101. Design Think--Chad Gould lecture on MSU Dining Hall design October 2, 2009
102. PREVENTING MOISTURE-RELATED PROBLEMS IN RES FRAMING October 5, 2009
103. An End in Sight for a Centuries-Old Building Project October 5, 2009
104. From the Ground Up: The Complexities of Geothermal October 5, 2009
105. Intrinsic Materials: Modernism, Sustainability and Fiber Cement Panels October 5, 2009
106. LEED for Existing Buildings October 5, 2009
107. Technologies for Energy Efficiency October 5, 2009
108. Transparency: Literal and Sustainable October 5, 2009
109. When the Whole Is Greater Than the Sum of Its Parts October 5, 2009
110. Yes In My Backyard (Renewable District Energy) October 5, 2009
111. Montpelier's shrunken state is fit for a president October 6, 2009
112. Roofing Strategies Reach New Heights October 6, 2009
113. Tall Buildings Push Limits by Stepping Up, Not Back October 6, 2009
114. And the award for best sound effects goes to... October 7, 2009
115. BIM Promotes Sustainability October 7, 2009
116. BUILDINGS THAT BREATHE October 7, 2009
117. Courting Nature in Design October 7, 2009
118. Essential Zinc: Building For The Future October 7, 2009
119. Model Behavior: Anticipating Great Design October 7, 2009
120. Prefabrication's Green Promise October 7, 2009
121. SLEEK SKYSCRAPER IN SAN FRANCISCO RAISES THE PROFILE October 7, 2009
122. ENERGY MODELING FOR SUSTAINABILITY October 8, 2009

123. Current Issues in Construction Law and Changes in LEED reqts October 30, 2009
125. Legal Issues with Building Information Modeling and Integrated Project Deliver November 5, 2009
127. Design presentation on by Bryan Koehn senior designer at Progressive AE November 6, 2009
129. Classic Labs-Ascribe-Grand Valley AIA Project Showcase November 20 2009
131. TOTAL PASSIVE FIRE PROTECTION November 20 2009
133. Is Brown the New Green? Urban Brownfields Make Way for Mixed-Use Communities December 3 2009
135. AIA Michigan Leadership Retreat January 15-16 2010
137. Update on contract documents and how to sell professional services January 29 2010
139. Into Thin Air February 1 2010
141. Design presentation by Adam on Global Forex Trading's corporate headquarters February 5 2010
143. Lumber by the Numbers -Discuss historic wood use patterns February 21 2010
145. Precast Concrete Solutions - Integrated Design February 26 2010
147. Introduction to Photoshop for Architecture March 19 2010
149. Green Roof Specifications - Making it Right March 25 2010
151. Ground Penetrating Radar March 25 2010
153. Legal Risks and Responsibilities in Building Green March 25 2010
155. Risk Drivers: Understanding the Dynamics of Risk in the A/E Industry April 29 2010
157. Faculty BIM May 12-14 2010
159. Avian Lightweight Boards May 28 2010
161. Grand Valley Metro Council Annual Growing Communities Conference June 10 2010
163. Great Teachers Seminar June 28-30 2010
165. Builders Exchange of West Michigan September 24 2010
166. Manmade Stone Fundamentals October 29, 2010
167. Alternative Energy Site Selection Consultants October 29, 2010
168. How to select the right architectural aluminum product January 23, 2011
169. Optimizing Performance in Commercial Fenestration January 23, 2011
170. Building Movement Joints and BIM February 2, 2011
171. Spray Polyurethane Foam (SPF) Insulation Systems February 25, 2011
172. Maximizing Benefits of E-Act February 25, 2011
173. Building Movement Joints and BIM February 2, 2011
174. Using Google SketchUp for Design and Presentations March 25, 2011
175. Top Ten Legal Issues Facing Design Professionals May 27, 2011
176. Convia-enabled Wiremold Energy Management April 27, 2011
177. Utilizing Revit in production of working drawings April 29, 2011
178. Building Information Modeling in the Building Life September 30, 2011
179. Access for All January 20, 2012

180. Restaurant consultants and restaurant equipment suppliers and their work January 27, 2012
181. Lighting within Limits February 11, 2012
182. Roofing Options February 22, 2012
183. Hang, Lock, Control and Protect the Door February 24, 2012
184. Core Values March 6, 2012
185. Deal Maker and Deal Breaker Contract Clauses March 23, 2012
186. Changes on windows in residential construction April 27, 2012
187. Sustainable Carpets April 27, 2012
188. Connecting Education and Practice May 18, 2012
189. Opening Keynote Presentation David McCullough May 17, 2012
190. Digital Connections: Better Designs, Better Buildings May 16, 2012
191. Connecting Education and Practice May 18, 2012
192. Keynote Presentation Hon. Shaun Donovan May 17, 2012
193. Research and the Academy: Academic Research May 17, 2012
194. Bridging the Gaps: A Collaborative Discussion on May 16, 2012
195. Connecting State, Local, and Federal Energy Policy May 17, 2012
196. Achieving Thermal Integrity and Spray Applied Acoustical Finish September 20, 2012
197. Top 20 Contract Clauses September 20, 2012
198. Integrated Project Delivery September 20, 2012
199. The Nail Beats the Hammer: Getting Tax Dollars from the September 20, 2012
200. AIA Michigan Design Retreat Torch Lake MI September 21-22, 2012
201. Daylighting with Prismatic Skylights September 28, 2012
202. Locally Manufactured Insulating Materials September 28, 2012
203. Acoustical Control with Gypsum Board April 10, 2013
204. Next Generation Machine-Roomless Elevators April 22, 2013
205. A Force of Nature April 22, 2013
206. Lightning Protection Basics April 19, 2013
207. Bracing for Climate Change April 3, 2013
208. Wood's New Wave April 3, 2013
209. Scanning Existing Construction for your BIM Model March 22, 2013
210. Solar Wall and Solar Duct February 22, 2013
211. Ways To Achieve High Density, High Performance The February 22, 2013
212. Managing Hazardous Materials in Buildings January 25, 2013
213. Blue Book Building Construction Network January 25, 2013
214. Building Services and Hazardous Materials January 25, 2013
215. Paradigm Shift October 23, 2012

Dane Archer Johnson
27211 Meadowbrook Way
Lathrup Village, Michigan 48076

CURRICULUM VITAE

EDUCATION

Ferris State University, Big Rapids, Michigan
College of Education and Human Services

Enrollment in Master of Science in Career and Technical Education program
Degree anticipated summer 2014

Lawrence Technological University, Southfield, Michigan
College of Architecture and Design

Master of Architecture, with Distinction
Bachelor of Architecture, with Distinction
Bachelor of Science in Architecture

University of Michigan, Ann Arbor, Michigan
Residential College

REGISTRATION

Registered Architect, State of Michigan
Certified Historical Architect, U.S. Department of Interior

ACADEMIC EXPERIENCE

Ferris State University – College of Engineering Technology
Associate Professor in Architecture and Facility Management - 2006-present
Courses taught: ARCH 101, Architectural Graphics; ARCH 102, Architectural Construction Documents 1; ARCH 244, Architectural History 1; ARCH 245, Architectural History 2; ARCH 246, Twentieth Century Architecture; ARCH 241, Design Principles; ARCH 342, Architectural Design 2; FMAN 321, Principles of Facility Management; FMAN 331, Programming and the Design Process, FMAN 431, Principles of Space Planning; FMAN 489, Capstone Research; FMAN 499, Capstone Assessment Thesis; FSUS 100, Ferris State University Seminar.

Lawrence Technological University – College of Architecture and Design
Lecturer in Architectural History – 1987-2006
Development and delivery of courses including *Twentieth Century Architecture*, *Frank Lloyd Wright and his Times*, *The Arts and Crafts Movement*, and *History of the Designed Environment*.

Lawrence Technological University – College of Architecture and Design
Visual Resources Coordinator – 1997-2006
Manager of Architecture Resource Center, housing a collection of slides, digital images, books, videotapes and periodicals; coordinator for audio-visual equipment for college; manager of departmental library, providing reference services and collection development.

Lawrence Technological University – Office of Admissions

Transfer Advisor for Architecture – 1993-1997

Counselor in Office of Admissions; liaison between Admissions and the College of Architecture and Design. Developed transfer guides for all colleges in Michigan to assist incoming transfer students and guide prospective students to proper course selection.

Ferris State University, Big Rapids, Michigan – College of Technology

Lecturer – 1993-1994

Adjunct faculty in the Architectural Technology program for a required course entitled *Historical Development of Western Architecture*. Course traces general development of architecture from pre-history through Post-Modernism.

PROFESSIONAL EXPERIENCE

Dane Archer Johnson, Architect-Historian – Lathrup Village, Michigan

1992-present

Independent architect providing architectural design, historic preservation and historic research services. Projects include the Wist Carriage House in Grand Rapids, Michigan; York Guest House in Oakland Township, Michigan; Donaldson Summer House in Grand Bend, Ontario and the Kliffel Residence in Ortonville, Michigan. Created National Register of Historic Places historic districts in Novi, Michigan (Fuerst Farmstead) and Lathrup Village, Michigan. Preservation Consultant for Oakland Township, Michigan. Other clients include the Michigan Department of Transportation, City of Livonia, Michigan and Preservation Novi.

Kirkarchitecture inc. -- Detroit, Michigan

1986-1992

Associate and Project Architect on historic restoration, architectural survey and corporate space planning projects. These include the Chrysler Corporation corporate office standards; Sheldon School Rehabilitation in Canton, Michigan; the Spicer House restoration in Farmington Hills, Michigan; the Pleasant Ridge Historic and Architectural Survey. Also responsible for management of information systems for the firm including introduction of CADD and desktop publishing into the office.

Harley Ellington Pierce Yee Associates – Southfield, Michigan

1984-1986

CADD and manual draftsman on large-scale institutional projects such as the Dow Laboratory at the University of Michigan, the Fetzer Foundation Administration Building in Kalamazoo, Michigan and the Flint Ink Technical Center in Ann Arbor.

CONFERENCES, SEMINARS AND PRESENTATIONS

Michigan Modern: Design that Shaped America

Michigan State Office of Historic Preservation

June, 2013, Cranbrook Academy of Art, Bloomfield Hills, Michigan

Just Add Water: the Profound Influence of Michigan's Lakes, Rivers, Ponds, and Streams on its Architecture, Land Use, and Culture

Michigan Historic Preservation Network, Statewide Preservation Conference

May, 2011, Saugatuck, Michigan

Advancing Architectural Praxis
Taubman College of Architecture and Urban Planning, University of Michigan
April 2011, Ann Arbor, Michigan

Box City
February 2012, 2011, Big Rapids, Michigan – Ferris State University Festival of the Arts

Relearning² – Learning to Unlearn and Relearn,
CEFPI Midwest Great Lakes Regional Conference
May, 2010, Grand Rapids, Michigan

AIA Michigan Design Retreat,
September, 2011, 2010, 2009, 2008, Torch Lake, Michigan

Big Rapids – Patterns of a Michigan Town
February, 2008, Big Rapids, Michigan – Ferris State University Festival of the Arts

LEED for Existing Buildings Seminar, United States Green Building Council
April, 2007, Big Rapids, Michigan

Integrated Practice and the Twenty-First Century Curriculum,
2007 Teachers Seminar
Association of Collegiate Schools of Architecture
June, 2007, Cranbrook Academy of Art, Bloomfield Hills, Michigan

Midwest Regional Conference, Visual Resources Association
October, 2005, Michigan State University, East Lansing, Michigan
October, 2004, Oberlin College, Oberlin, Ohio

National Conference, Visual Resources Association
March, 2005, Miami Beach, Florida
March, 2004, Houston, Texas

PUBLICATIONS

"Urban Exodus." *The Construction Specifier*, July 1993
"Consummate Conservation." *The Construction Specifier*, July 1992
"Homes Sweet Homes." *Place Magazine*, Fall 1991
"Paradise Regained." *Place Magazine*, Spring 1991
"History: A Defense." *Architext: Journal of Architecture and the Arts*,
Spring 1989
"Television and the Home." *CRIT*, Spring 1984
Column: "Architectural Perspectives." *Novi News*, 1983-86

ACADEMIC ACTIVITIES Ferris State University

Co-Coordinator, Architecture Lecture and Film Series, 2011-
Member, Dean's Advisory Council, College of Engineering Technology, 2010-11
Member, Curriculum Committee, School of the Built Environment, 2010-11
Coordinator, AT Advisory Board Meeting, April 2010
Member, Diversity Committee, Academic Senate, 2008-
Secretary, Library/Archival/Historic Committee, Academic Senate, 2007-2008
Faculty Advisor, American Institute of Architecture Students, 2006-present
Departmental Liaison to FLITE, Architecture and Facility Management, 2006-

Faculty Advisor, Design Competition of the USGBC West Michigan Chapter,
2008, 2009

Team Leader, Design Charrette, AT Advisory Board Meeting, April 2007

Kendall College of Art and Design, Ferris State University,

Co-author, Proposal for New Degree: Master of Architecture, 2007

Lawrence Technological University, College of Architecture and Design

Adjunct Faculty Representative, Faculty Council, 2005-2006

Chair, Staff Senate, 2003-2005

Ferris State University Festival of the Arts, Guest Lecturer, 1991

University of Michigan, Department of Art History, Guest Lecturer, 1983

PROFESSIONAL ACTIVITIES

Council of Educational Facility Planners International, member 2010-

Association of Licensed Architects, member 2010-

Visual Resources Association, member 2000-2006

National Trust for Historic Preservation, member 1998-present

City of Royal Oak, Michigan – Historic District Commission, Chair 1997-98

American Institute of Architects, member 1988-95

Place Magazine, AIA Michigan, Editorial Board, member 1991-94

City of Novi, Michigan – Economic Development Committee, 1983-84

PAUL W. LONG

Registered Architect – Colorado, LEED AP BD+C, NCARB
Assistant Professor of Architecture and Sustainability
School of Built Environment - Ferris State University

CURRICULUM VITAE

AREAS of RESEARCH and PROFESSIONAL INTEREST

Social and environmental justice within architecture and the built environment – The integration of economic and social sustainability with environmental sustainability within the discourse of sustainable architecture and urban design.

Sustainability and architectural design education – The education of architecture and interior design students in the holistic principles of sustainability and its translation into the design profession. The technical integration of sustainable design principles and theories into the design process.

Architectural visualization and the merger of traditional and digital visualization techniques – why sketching matters in the world of 3d modeling, digital fabrication and rapid prototyping.

Film making/digital video editing as a means of architecture and urban design research and visualization in the architectural design process.

Design for adaptive reuse and design for building material reuse.

EDUCATION

MSc CITY DESIGN and SOCIAL SCIENCE, *Merit*, November 2008
London School of Economics – London, England

- Design research MSc program that looked at cities and urban issues in a holistic manner with the objective of relating the physical and social structure of cities.
- Awarded *Distinction* for thesis investigating the effectiveness of sustainability assessments in achieving holistic, tri-partite (economic, environmental, social) sustainable development.

MASTER of ARCHITECTURE, June 2002
University of Idaho – Moscow, Idaho

- Participant Idaho Urban Research and Design Center (IURDC) – Boise, Idaho.
- Master's design thesis focused on underutilized urban spaces found in typical cities and how those spaces might be used as housing or business opportunities by those on the fringe of society.

BACHELOR of SCIENCE, *summa cum laude* in Architecture, June 2002
University of Idaho – Moscow, Idaho

- Graduated with High Honors.

ASSOCIATE of ARTS and SCIENCE, August 1998
Brigham Young University Idaho (BYU Idaho) – Rexburg, Idaho

PROFESSIONAL WORK EXPERIENCE

ARCHITECTURAL DESIGNER/TEAM LEADER, Aug 2002 – Aug 2007, Oct 2008 – Dec 2010
Chamberlin Architects – Lakewood/Grand Junction, Colorado

- Architectural designer and team leader for architectural design firm specializing in sustainable design, adaptive reuse, and restoration of historic buildings.

ARCHITECTURAL DESIGNER, 2005 – 2010

In conjunction with Innovative Interiors – Evergreen, Colorado

- Architectural designer for design-build collaboration with Innovative Interiors. Collaboration focused on residential remodels and small scale new construction.

ARCHITECTURAL DESIGNER, 2007 – 2010

Think-Design Build – Golden, Colorado

- Architectural designer and co-founder of small residential design-build partnership that focused on residential renovations and small scale new construction.

ARCHITECTURAL INTERN, September 2001 – December 2001

XX Architecten – Delft, Netherlands

- Participated in international student exchange program at prominent Dutch architecture firm.
- Performed commercial and residential design, 3D modeling, and presentation graphics.

DESIGNER/MANAGER, 1994 – 1999

Landscape Design Inc. – Rexburg, Idaho

- Performed design work and managed construction crews and installation of landscape designs for residential landscape architecture firm.

PROFESSIONAL LICENSES, ACCREDITATIONS and ORGANIZATIONS

REGISTERED ARCHITECT, State of Colorado

NATIONAL COUNCIL of ARCHITECTURAL REGISTRATION BOARDS (NCARB) – Certified

LEADERSHIP in ENERGY and ENVIRONMENTAL DESIGN (LEED) BD+C Accredited Professional

U.S. GREEN BUILDING COUNCIL (USGB) – West Michigan Chapter, Individual member

ASSOCIATION of COLLEGE SCHOOLS of ARCHITECTURE (ACSA), Basic Member

ASSOCIATION of PEDESTRIAN and BICYCLE PROFESSIONALS (APBP), Professional Member

LEAGUE of AMERICAN BICYCLISTS – Individual Member

LEAGUE of MICHIGAN BICYCLISTS – Individual Member

ACADEMIC TEACHING EXPERIENCE

ASSISTANT PROFESSOR – ARCHITECTURE and SUSTAINABILITY, January 2011 – Present
Ferris State University – Big Rapids, Michigan

- Courses Taught:
 - ARCH 101: Architectural Graphics
 - ARCH 102: Digital Architectural Graphics
 - ARCH 203: Architectural Documentation (Revit Architecture)
 - ARCH 270: Building Information Modeling (Advanced Revit)
 - ARCH 297: Special Studies in Architecture – Digital Presentation
 - ARCH 361: Environmental Systems I
 - ARCH 362: Environmental Systems II
 - ARCH 421: Current Issues in Architecture
 - ARCH 441: Architectural Design III – *Small Town Studio*
 - FMAN 432: Principles of Interior Architecture
 - ARCH 499: Architectural Design IV - Capstone

ADJUNCT FACULTY – INTERIOR DESIGN, October 2008 – December 2010
Art Institute of Colorado – Denver, Colorado

- Developed Revit Architecture course for interior design students
- Taught 8 semesters (63) credits of interior design coursework for Bachelor of Arts Interior Design Program.
- Courses Taught:
 - RS1301: Architectural Drafting (Hand Drafting)
 - ID3305: Revit Architecture
 - ID3359: Fundamentals of Working Drawings
 - ID3384: Computer Rendering (Adobe Photoshop, Google Sketchup, 3D Studio Max, Revit)
 - ID3347: Building Codes and Barrier Free Design
 - ID4364: Advanced Construction Documents
 - ID4371: Interior Architectural Detailing

TEACHING ASSISTANT – 3D STUDIO MAX, June – July 2001

John W. Anderson, Department of Art and Architecture, University of Idaho – Moscow, Idaho

- Served as teaching assistant and tutor for architectural 3D modeling course.

ACADEMIC SERVICE / COMMITTEES

CURRICULUM COMMITTEE – COLLEGE of ENGINEERING TECHNOLOGY, October 2012 – Ongoing

Ferris State University – Big Rapids, Michigan

CURRICULUM COMMITTEE – SCHOOL of BUILT ENVIRONMENT, October 2012 – Ongoing

Ferris State University – Big Rapids, Michigan

ARTS and LECTURES COMMITTEE, September 2012 – Ongoing

Ferris State University – Big Rapids, Michigan

HIRING COMMITTEE – DEPT. of ARCHITECTURE and FACILITY MANAGEMENT, November 2012 – May 2013

Ferris State University – Big Rapids, Michigan

STUDENT RESEARCH ASSISTANT GRANT REVIEW COMMITTEE, October 2012

Ferris State University – Big Rapids, Michigan

JUDGE – *RESEARCH to REALITY*, MICHIGAN ENERGY CONFERENCE POSTER COMPETITION, March 2012

Ferris State University – Big Rapids, Michigan

AMERICAN INSTITUTE of ARCHITECTURE STUDENTS (AIAS) – CO-ADVISOR, November 2011 – Ongoing

Ferris State University – Big Rapids, Michigan

ARCHITECTURAL DESIGN FILM and LECTURE SERIES – CO-CHAIR, January 2011 – Ongoing

Ferris State University – Big Rapids, Michigan

COUNCIL for INTERIOR DESIGN ACCREDITATION (CIDA) PREPARATION COMMITTEE, October 2009 – December 2009

Art Institute of Colorado – Denver, Colorado

ADVISING / STUDENT AWARDS

1st Place – *RESEARCH to REALITY*, MICHIGAN ENERGY CONFERENCE POSTER COMPETITION – *DESIGN FOR DISASSEMBLY*, ANTHONY AMATO, April 2012

Grand Rapids, Michigan

2nd Place – *RESEARCH to REALITY*, MICHIGAN ENERGY CONFERENCE POSTER COMPETITION – *BUILDING INTEGRATED PHOTOVOLTAIC DESIGN*, RACHEL WELLER, April 2012

Grand Rapids, Michigan

4th Place – *RESEARCH to REALITY*, MICHIGAN ENERGY CONFERENCE POSTER COMPETITION – *DAYLIGHT DESIGN OF BUILDINGS*, EVAN WEAVER, April 2012

Grand Rapids, Michigan

GOLD – SKILLS MICHIGAN, ARCHITECTURAL DRAFTING & DESIGN (REVIT) – BRAD EDLUND, April 2012

Faculty advisor for state wide architectural design competition
Lansing, Michigan

SILVER – SKILLS USA, NATIONAL ARCHITECTURAL DRAFTING & DESIGN (REVIT) –
BRAD EDLUND, June 2012
Kansas City, Missouri

ONGOING RESEARCH / ACADEMIC WORK

INTERDISCIPLINARY INNOVATIONS – ROMAN FRESCOES in the MODERN AGE, February
– May, 2013

Faculty Center for Teaching and Learning, Ferris State University – Big Rapids, Michigan

- Co-Presenter, with Dr. Rachel Foulk, Assistant Professor of Art History, as part of university initiative highlighting interdisciplinary academic work impacting student learning.

THE ART of ARCHITECTURE, Ongoing – April 2013

Ferris State University Rankin Gallery – Big Rapids, Michigan

- Curator for student art show highlighting architecture student work as an artistic means of expression. Student work to be showcased in the University's Rankin Art Gallery.

THE ARCHITECTURAL CONTEXT of ANCIENT ROMAN FRESCOES, May 2012 – Ongoing
Ferris State University – Big Rapids, Michigan

- Member of collaborative research project utilizing digital architectural modeling to explore the physical context in which ancient Roman frescoes were displayed.

TEACHING INQUIRIES, Spring 2012 – Ongoing

Faculty Center for Teaching and Learning, Ferris State University – Big Rapids, Michigan

- Participant in collaborative research group taking a systematic approach to investigating the effectiveness of varied teaching approaches on student learning.
- Conducting research exploring the use of example solutions, when presenting a new student project, and how they influence design fixation and the ability of beginning architecture students to develop novel concept generation when solving beginning design problems.

ACADEMIC RESEARCH

STUDENT RESEARCH FELLOWSHIP PROGRAM, May – August 2012

Ferris State University – Big Rapids, Michigan

- Faculty mentor and director of student research project – “*A comparison of the accuracy of architectural daylighting analysis methods.*” A Ferris State Video highlighting the program can be found at:
<http://www.youtube.com/watch?v=tbtFQyVcytk&feature=share&list=UUAxQZuw6gLT4ciCK949gQg>

STUDENT RESEARCH FELLOWSHIP PROGRAM, May – August 2012

Ferris State University – Big Rapids, Michigan

- Faculty mentor and director for – “*A comparative, case study analysis of industry standard sustainability assessment methods and their application to sustainable architecture and urban development in Michigan.*”

RESEARCH ASSISTANT – SPATIAL COGNITION LAB, May – December 2001

Dr. Steffen Werner, Dept. of Psychology and Communication Studies, University of Idaho – Moscow, Idaho

- Worked as a research assistant in ‘Spatial Cognition Lab’ utilizing virtual reality technology to study way-finding and cognition related to architectural floor plans.
- Co-authored chapter in psychology textbook relating cognition and architectural design.

RESEARCH ASSISTANT, May 2000 – May 2001

Professor Steve Thurston, Dept. of Art and Architecture, University of Idaho – Moscow, Idaho

- Documented medieval French towns known as Bastides by providing technical support and performing digital video cinematography and editing for documentary film.

PUBLICATIONS

BIG RAPIDS, MICHIGAN – BICYCLE and PEDESTRIAN MASTER PLAN, August – December 2012

Ferris State University – Big Rapids, Michigan

- Faculty adviser for Bicycle and Pedestrian Plan written by *Small Town Studio* students in collaboration with Big Rapids, MI, city staff.
- Publication can be found at: www.ci.big-rapids.mi.us/pdfs/Pedestrian_Plan.pdf

FACILITY MASTER PLAN, COLORADO NORTHERN COMMUNITY COLLEGE (CNCC), 2010 Rangely Campus – Rangely, Colorado

- Primary author of facilities master plan focused on place making and improving the walkability and bicycle access across campus.

SUSTAINABILITY ASSESSMENT METHODS: A GREENWICH MILLENNIUM VILLAGE CASE STUDY, 2008

The Cities Programme, London School of Economics – London, England

- Co-author of research analyzing the effectiveness of sustainability assessments in achieving holistic, tri-partite (economic, environmental, social) sustainable development using the Greenwich Millennium Village, London, as a case study.

OUTER CITY, 2008

The Cities Programme, The London School of Economics – London, England

- Co-author of chapter “Emerging Typologies and Densities” that analyzed the interaction of housing typologies, urban density, and transit accessibility.
- Publication can be found at:
<http://www2.lse.ac.uk/LSECities/citiesProgramme/citiesStudioPublications.aspx>

LAKE MEAD, ALAN BIBLE VISITOR CENTER CONDITION ASSESSMENT REPORT, 2006

Lake Mead National Recreation Area – Boulder City, Nevada

- Primary author and editor of condition assessment report for historic Mission 66, National Park Service visitor center. The visitor center is considered eligible for the National Register of Historic Places.

BATHHOUSE ROW HISTORIC STRUCTURES REPORTS, 2004

Hot Springs National Park – Hot Springs, Arkansas

- Documented existing conditions and developed treatment recommendations for 6 historic bathhouses. Bathhouse row was placed on the 2003 National Trust for Historic Preservation's list of 11 Most Endangered Sites.

ADAPTIVE REUSE FEASIBILITY STUDY, OLD STONEY SCHOOL, 2004

National Forest Service – Sundance, Wyoming

- Documented and developed treatment recommendations for the adaptive reuse of historic high school constructed in 1923. The school was listed on the National Register of Historic Places in 1985.

Werner, S., & Long, P. (2003). "Cognition meets Le Corbusier - Cognitive principles of architectural design." In C. Freksa, W. Brauer, C. Habel & K. F. Wender (Eds.), *Spatial Cognition III* (pp. 112-126). Heidelberg: Springer.

CONFERENCES / SEMINARS / WORKSHOPS PRESENTED

FROM the OUTSIDE IN: SUSTAINABLE FUTURES for GLOBAL CITIES and SUBURBS, March 7-9, 2013

National Center for Suburban Studies, Hofstra University, Hempstead, New York

- Papers accepted for presentation at conference focused on sustainable futures in global city-regions.

Presentation topics:

- A case study analysis of Greenwich Millennium Village, London England as a tool for investigating the effectiveness of sustainability assessments in achieving holistic sustainable development.
- The role of architecture students in facilitating sustainable development.

ARCHITECTURAL RENDERINGS – THE ESQUILINE LANDSCAPE CALENDAR: TIME, NATURE, AND AUTHORITY IN IMPERIAL ROME, January 3-6, 2012

Archeological Institute of America Annual Meeting, Seattle, Washington

- Produced digital architectural renderings and digital architectural reconstructions for paper presented by Dr. Foulk exploring the relationship between ancient Roman frescoes and their physical, architectural context.

ADOBE ILLUSTRATOR and INDESIGN FOR ARCHITECTS, November 17, December 1, 2012

Ferris State University – Big Rapids, Michigan

- Led series of workshops introducing architecture students to Adobe Illustrator and InDesign with an emphasis on their incorporation into the architectural design process.

EXPERIMENTS in DIGITAL FABRICATION – UNIVERSITY WIDE LECTURE and WORKSHOP, March 23 – 24, 2012

Ferris State University – Big Rapids, Michigan

- Coordinated and facilitated university guest lecture and workshop by Dan Rentsch of Belzberg Architects, Santa Monica, CA, discussing digital fabrication in architectural design.

ARCHITECTURE STUDENT PORTFOLIO WORKSHOP, January 2012

Ferris State University – Big Rapids, Michigan

- Led workshop presenting design portfolio skills and techniques to architecture students.

INTRODUCTION to LASER CUTTER STUDENT WORKSHOP, October 2011

Ferris State University – Big Rapids, Michigan

- Led workshop introducing students to use of laser cutter in architectural design process.

ARCHITECTURE STUDENT PORTFOLIO WORKSHOP, March 2011

Ferris State University – Big Rapids, Michigan

- Led workshop presenting design portfolio skills and techniques to architecture students.

SKETCHUP in HIGHER EDUCATION, March 2010

Google Sketchup – Mountain View, California

- Participated in video/interview documenting use of Google Sketchup in higher education.

Video can be found at: <http://www.sketchup.com/intl/en/industries/edu/tertiary.html>

SELECTED PROFESSIONAL PROJECTS

RESIDENTIAL ADDITION – DESIGN BUILD, 2010 – 2011

Evergreen, Colorado

- Designed residential addition in conjunction with Innovative Interiors as part of a design-build project delivery. The addition doubled the size of the small mountain home and had to be uniquely designed to fit within setback requirements on a steeply sloping site.

PRIVATE BIKE PARKING, 2010

Golden, Colorado

- Designed innovative private parking in conjunction with Innovative Interiors as part of a design-build project delivery. The structure used non-traditional building materials typically intended for landscape design.

ROCKY MOUNTAIN RESEARCH STATION, 2010

Fort Collins, Colorado

- Project Designer and oversaw construction documents for comprehensive remodel of a 32,000 U.S. Forest Service Research Lab. The rehabilitated structure is expected to achieve a LEED® Silver rating under the USGBC New Construction system.

GREAT PLAINS DISPATCH CENTER, 2010

National Forest Service – Rapid City, South Dakota

- Oversaw construction document preparation for SIPS constructed U.S. Forest Service Fire Dispatch Center. Coordinated A/E team to develop project that achieved a LEED® Silver rating under the USGBC New Construction system.

FACILITY MASTER PLAN, COLORADO NORTHERN COMMUNITY COLLEGE (CNCC), 2010

Rangely Campus – Rangely, Colorado

- Lead author and designer for campus master plan focused on place making and improving alternative transportation options on campus.

LITTLE MAVS DEVELOPMENT CENTER, 2009

Colorado Mesa University – Grand Junction, Colorado

- Designed and supervised construction of renovated Catholic church that was transformed into a child development center for Colorado Mesa University, Grand Junction, CO.

PRIVATE RESIDENCE – DESIGN BUILD, 2008

Alta, Wyoming

- Designed and supervised construction of 4,500 sq. ft. vacation home for private client. Home was designed with weathered wood siding, rustic alder floors and post & beam construction to fit in with the farmhouse vernacular of the area. Project was developed in conjunction with Dave Robinson Construction as part of a design-build project delivery.

KELLY HALL RENOVATION, 2008

Western State College – Gunnison, Colorado

- Project Designer for comprehensive remodel of a 25,000 sq. ft. 1950s classroom building. The rehabilitated structure achieved a LEED® Gold rating under the USGBC Existing Building system.

ST. BENEDICT PLACE APARTMENTS, 2008

Grand Valley Catholic Outreach – Grand Junction, Colorado

- Team leader for Housing Colorado's 2008 Eagle Award winning 23 unit (3 building) apartment complex for chronically homeless and disabled persons.

PRIVATE RESIDENCE – DESIGN BUILD, 2007

Golden, Colorado

- Designed and supervised construction of renovated townhouse. To overcome square foot limitations this project was designed with a strong emphasis on unique materials to turn a 1980s shag feel into an ultra-modern practical home. Project was developed in conjunction with Innovative Interiors and Think-DB as part of a design-build project delivery.

LAKE MEAD, ALAN BIBLE VISITOR CENTER REHABILITATION, 2007

Lake Mead National Recreation Area – Boulder City, Nevada

- Oversaw development of historic structure assessment and design to rehabilitate a historic Mission 66, National Park Service visitor center. Design sought to improve the building's energy efficiency and accessibility while preserving its essential historic character while achieving a Leed® Silver Existing Building rating.

DMVA MAINTENANCE FACILITY, 2007

Colorado Department of Military and Veterans Affairs – Grand Junction, Colorado

- Participated in schematic design and design development of Department of Military and Veterans Affairs maintenance facility. Qualified for LEED Silver rating but was not formally registered with USGBC.

PEAR PARK / RIM ROCK ELEMENTARY SCHOOLS, 2006

Mesa County School District – Grand Junction / Fruita, Colorado

- Performed project architect duties supervising the production of construction documents and construction administration of a 55,000 sq. ft. and 62,000 sq. ft. elementary school.

BENT'S OLD FORT NATIONAL HISTORIC SITE, 2005

National Park Service – La Junta, Colorado

- Produced construction documents, detailed daylighting components, and supervised construction administration for new park administration building and restoration of historic military fort.

BATHHOUSE ROW – HOT SPRINGS NATIONAL PARK, 2005

National Park Service – Hot Springs, Arkansas

- Project designer for the restoration of 3 historic bathhouses placed on the 2003 National Trust for Historic Preservation's list of 11 Most Endangered Sites.

BUREAU of LAND MANAGEMENT FIELD OFFICE, 2002

Bureau of Land Management – Craig, Colorado

- Produced construction documents, detailed daylighting components, and participated in design of LEED Gold qualifying building. Project was not formally registered with USGBC.

I.T. AND LANGUAGE SKILLS

EXPERT KNOWLEDGE – AutoCAD, Revit Architecture, Sketchup, and Adobe Creative Suite – Photoshop, Illustrator and Indesign.

ADVANCED KNOWLEDGE – 3D Studio Max, Rhino 3D

ADVANCED KNOWLEDGE – Video editing using Adobe Premier and Final Cut Pro.

PROFICIENT KNOWLEDGE – ArcGIS.

INTERMEDIATE – Conversational Polish language skills.

PUBLIC and COMMUNITY SERVICE

HABITAT for HUMANITY HOME ENERGY AUDIT, October 2012 – Ongoing
Ferris State University – Big Rapids, Michigan

- Member of interdisciplinary team performing home energy audits on Mecosta County Habitat for Humanity homes.

BOX CITY ARCHITECTURE EVENT – FESTIVAL of the ARTS, February 2011 and February 2012

Big Rapids, Michigan

- Led 3rd – 5th graders in city model making event exploring city planning and urban design.

PLANNING COMMISSION, 2005 – 2007, 2009 – 2010

Golden, Colorado

- Member of city planning commission. Worked with city staff to rewrite portions of the city's development code and the implementation of new infill regulations for the City of Golden.

TRANSIT ALLIANCE CITIZENS' ACADEMY, 2009

Regional Transit Denver – Denver Colorado

- Graduate of 7 week program discussing the complexities of combining transportation and community development to support the regional success of Transit Oriented Development (TOD) in the Metro Denver area.

DOWNTOWN CHARACTER COMMITTEE, 2007

City of Golden – Golden, Colorado

- Member of committee that developed architectural guidelines for the central business district of Golden, Colorado.

THE COLLEGE of ART AND ARCHITECTURE FOUNDATION, 2002 – 2003

University of Idaho – Moscow, Idaho

- Member of alumni group which helped restore the College of Art and Architecture at the University of Idaho.

IDAHO URBAN RESEARCH DESIGN CENTER, January – June 2002

University of Idaho – Boise, Idaho

- Performed traffic calming research and designed streetscape with traffic calming interventions in collaboration with a local, historic neighborhood association.

ADDITIONAL TRAINING / CONFERENCES ATTENDED

NATIONAL CONFERENCE on the BEGINNING DESIGN STUDENT, March 2012
Pennsylvania State University

INQUIRIES into TEACHING and LEARNING, Spring 2012
Ferris State University – Big Rapids, Michigan

LILLY CONFERENCE NORTH UNIVERSITY TEACHING and LEARNING CONFERENCE,
September 2011
Traverse City, Michigan

AASHTO BICYCLE FACILITY DESIGN TRAINING, September 2011
Big Rapids, Michigan

AIA MICHIGAN ANNUAL DESIGN RETREAT, September 2011
Torch Lake, Michigan

PERMANENT CHANGE: PLASTICS in ARCHITECTURE and ENGINEERING, March 2011
The Graduate School of Architecture, Planning And Preservation at Columbia University – New
York, New York

ADVANCING ARCHITECTURAL PRAXIS, March 2011
University of Michigan Taubman College of Architecture and Planning – Ann Arbor, Michigan

THE 3 R'S: RUBRICS, READABILITY = RETENTION, Spring 2011
Ferris State University – Big Rapids, Michigan

Diane L Nagelkirk

CURRICULUM VITAE

Education

- San Francisco Institute of Architecture**
Master of Science in Green Building, pending May 2014
- Lawrence Technological University** Southfield, Michigan
Master of Architecture, 2008
- Lawrence Technological University** Southfield, Michigan
Bachelor of Architecture, 1984
- Lawrence Technological University** Southfield, Michigan
Bachelor of Science in Architecture, 1982
- Calvin College** Grand Rapids, Michigan
Sociology Major, 1975-1979

Professional Experience

- 1988–current
Ferris State University, Big Rapids, Michigan
Architecture and Facility Management Department
Professor & Department Chair
- 1987–1988
WBDC Group, Inc., Grand Rapids, Michigan
Health Care Division
Associate Architect
- 1985–1987
DSO Reid Architects, Inc., Grand Rapids, Michigan
Associate Architect
- 1984–1985
Vermurlen Architecture, Grand Rapids, Michigan
Associate Architect
- 1981–1984
Lawrence Technological University, Southfield, Michigan
Office of Public Relations
Graphic Artist

**Professional
Registration**

Licensed Architect, State of Michigan

**Professional
Associations**

American Institute of Architects
American Association of University Women
International Facility Management Association
National Trust for Historic Preservation
U.S. Green Building Council

**Professional
Consultation**

Private Design Practice
May 1992 – current

Via Design, Grand Rapids, Michigan
Design Consultant & Project Manager
May - August 2002
May - August 2003

Design Pinnacle, Grand Rapids, Michigan
Design Consultant & Project Manager
May 1998 - August 2000

Dan Vos Construction, Inc., Grand Rapids, Michigan
Design Consultant
May - August 1997

Greiner Inc., Grand Rapids, Michigan
Computer Aided Design Consultant
October 1991 - May 1992

Universal Forest Products, Inc., Grand Rapids, Michigan
Structural Design Consultant
May - August 1990

Continuing Education

- Michigan Modern Symposium: Design that Shaped America
Cranbrook Academy, Bloomfield Hills, MI
June 13-16, 2013
- IFMA World Workplace Conference
San Antonio, Texas
October 30 – November 2, 2012
- National Conference on the Beginning Design Student
Penn State University
March 29-31, 2012
- Michigan Historic Preservation Conference
Saugatuck, MI
May 19-20, 2011
- University of Michigan - *Advancing Architectural Praxis Symposium*
Ann Arbor
March 26, 2011
- IFMA World Workplace Conference
Atlanta, Georgia
October 26-29, 2010
- AIA Michigan Design Retreat
Bellaire, MI
September 17-19, 2010
- 2010 CEFPI Midwest Regional Conference
Grand Rapids, Michigan
May 12-13, 2010
- IFMA World Workplace Conference
Orlando, Florida
October 7-9, 2009
- AIA Michigan Design Retreat
Bellaire, MI
September 19-20, 2009
- Grand Valley State University - *Energy Summit 2009*
Grand Rapids, MI
June 25, 2009
- Michigan Historic Preservation Conference
Grand Rapids, MI
May 14-16, 2009
- PACE University
Scottsdale, Arizona
May 7-8, 2009
- IFMA World Workplace Conference
Dallas, Texas
October 15-17, 2008
- AIA Michigan Design Retreat
Bellaire, MI
September 12-14, 2008

Microsoft Project Seminar
March 17-18, 2008

IFMA World Workplace Conference
New Orleans, Louisiana
October 2007

Cranbrook Educators Conference
Bloomfield Hills, Michigan
June 2007

IFMA World Workplace Conference
San Diego, California
October 2006

Niacon '06
World Exposition of Workplace Planning and Design
June 2006

Land Development Seminar
Scottsdale, Arizona
November 2005

IFMA World Workplace Conference
Philadelphia, Pennsylvania
October 2005

IFMA World Workplace Conference
Salt Lake City, Utah
October 2004

AIA National Convention and Design Exposition
Chicago, Illinois
June 10-12, 2004

Total Facility Management Show and Exposition
Chicago, Illinois
April 21-24, 2004

Grand Valley State University
Academic Lecture Series
Stephen Murray
3-D Look at Medieval Architecture
November 5, 2003

AIA Grand Valley
CEU Marathon Day
October 1, 2003

Alden B. Dow Creativity Center
International Conference on Creativity in Colleges and Universities
July 10-13, 2003

AutoDesk Training Workshop
Revit Fundamentals
July 1-3, 2003

ACSA/AIA Teachers' Seminar, Cranbrook
Sustainable Pedagogies and Practices
June 12-15, 2003

Ferris State University
2003 Critical Thinking Institute
May 22-23, 2003

Concord Grove Educational Center of West Michigan
 Zero Energy Homes in Michigan
 May 3, 2003

Concord Grove Educational Center of West Michigan
 Ecological Design: Inventing the Future
 April 25, 2003

Concord Grove Educational Center of West Michigan
 Thomas Moore: The Soulful Approach to Religion and Life
 April 11, 2003

Ferris State University
 Spring Learning Institute
 March 28, 2003

Ferris State University
 Center for Teaching, Learning, and Faculty Development
 Using Humor to Get and Keep Student's Attention
 March 19, 2003

Ferris State University
 Center for Teaching, Learning, and Faculty Development
 Why some Students Don't Get It – How to Help Students Improve
 their Learning and Memory
 January 29, 2003

AIA Grand Valley
 Sustainable Architecture Seminar
 October 10, 2001

Calvin College Seminars in Christian Scholarship
 Philip Bess, Professor, Andrews University
Monks and Markets: culture, Economics, and Good Cities
 July 17, 2001

Calvin College Seminars in Christian Scholarship
 Paul Vitz, Professor, New York University
The Self: From the Postmodern Crisis to a Transmodern Solution
 July 10, 2001

AIA Grand Valley
 Jim Wines, AIA Architecture Lecture
 November 16, 2000

Duke University
 Durham, North Carolina
 Art History Department
ARH 189 Modern and Post Modern Architecture,
Winter 2000, 3 credit hours

Temple University
 Philadelphia, PA
 Architecture Department
ARCH 0015 Digital Modeling, Winter 2000, 3 credit hours

University of North Carolina
 Chapel Hill, North Carolina
 Art History Department
ARH 30 Introduction to Architecture, Winter 2000, 3 credit hours
ARH 35 Medieval Art and Architecture, Winter 2000, 3 credit hours

Environmental Design Research Association Conference
Orlando, Florida
June 2-6, 1999

Diversity and Learning Conference
Philadelphia, Pennsylvania
November 12-15, 1998

Ferris State University Faculty Summer Institute: Development and
Technology of Web-based instruction
July, 1998

CareerTrack Seminars

How to Build a Successful Web Site
May 8, 1998

Ferris State University

Computer Information Systems Management, Master of Science degree
program

CISM 615, Fall 1995, 3 credits

CISM 700, Winter 1996, 3 credits

CISM 710, Fall 1996, 3 credits

Restoration & Renovation Chicago Conference
October 16-18, 1997

Pace University

British Columbia, Vancouver

Case-based Learning in College Education

August, 1997

Ferris State University

Creating your own Web Page

April, 1997

Midwestern University

Infusing Critical Thinking into College and University Instruction

Downers Grove, Illinois

August 14 & 15, 1996

Ferris State University

Faculty Summer Institute: Developing the Learner Centered Classroom

June, 1996

American Institute of Architects National Convention

Minneapolis, Minnesota

May 1996

University of Wisconsin

Innovative Environments for Dementia Care: Planning, Design & Evaluation

Milwaukee, Wisconsin

October 27, 1994

University of Michigan

Ann Arbor, Michigan

American Institute of Architects, Design Computing in the 90's and
beyond

October 1, 1994

Grand Rapids Community College
AutoCAD Advance Drafting Short Course Seminar
March 1994

SkillPath Seminars
Troubleshooting & Maintenance of IBM PCs & Compatibles
February 1994

Team Building & Personal Profile Workshop
Applied Technology Center
January 1993

Neocon '92
World Exposition of Workplace Planning and Design
June 1992

Women's Professional Development Conference
Ferris State University Lifelong Learning, Leadership 2000: Preparation
for the Future
May 1, 1992

Construction Specification Institute Product Show
Grand Rapids, Michigan
April 1992

CareerTrack Seminars
High Impact Communication Skills
February 4, 1992

Ferris State University
AutoCAD Short Course Seminar
August 1991

Women's Professional Development Conference
Ferris State University Lifelong Learning
New Images of Leadership & Progressive Teaching Techniques
April 12, 1991

Fred Stitt Architectural Technology & Education Seminar
April 1991

American Institute of Architects
Performance of Roof Systems Seminar
January 1991

American Institute of Steel Construction, Inc.
Allowable Stress Design Specification & Ninth Edition Steel Manual
Seminar
March 29, 1990

Ferris State University
AutoCAD Short Course Seminar
March-April 1989

Michigan Society of Architects Convention
1989, 1992

JOE M. SAMSON

7405 Arbol Drive NE; Rockford, Michigan 49341

Phone: 616.874.8070

Registered Architect: Michigan

Certified Facility Manager-(by International Facility Management Association)

(Note: Achievements since last Promotion shown in red italics.)

TEACHING EXPERIENCE:

FERRIS STATE UNIVERSITY

College of Technology; Architectural Technology and Facility Management Department
Big Rapids, Michigan 49307

MERIT- (September '11)

Interim Program Coordinator-(Spring 2010)

PROFESSOR-(September '06) Continue to teach in Architectural Technology and Facility Management programs. Have developed online courses in WebCT and then in FerrisConnect for FM Certificate and worked to develop FM internship program and job placement contacts.

MERIT-(September '01)

ASSOCIATE PROFESSOR-(September '94-September '06)

Taught Architectural Technology and Facility Management courses. Work with faculty to update courses, make curriculum changes, etc. Responsible for 3 of the 4 courses offered in On-line FM Certificate Program.

ASSISTANT PROFESSOR-Tenured '93 (September '88-September '94)

Taught in Architectural Technology Associate Degree program which prepares students to work in the architectural field or go on to further studies. Courses taught include architectural graphics and presentation techniques, beginning computer graphics, working drawings in both first and second year courses, and contract documents and specifications. Also, taught facility programming and facilities operations in Baccalaureate Facility Management Program.

COURSES TAUGHT:

ARCH 101 - Architectural Graphics (3 ch): Taught most Fall Semesters until 2008.

Utilized the concepts of team projects and cooperative learning to master the basics of architectural drafting. Course revised Fall '01. (Previously 4 ch)

ARCH 102 - Working Drawings 1 (4 ch): Taught most Spring Semesters until 2008.

Utilized the concepts of team projects and cooperative learning to design and develop a set of working drawings for a small building. Course revised to be CAD based Spring'02.

ARCH 109 - Computer Graphics in Architecture 1 (3 ch): Taught some Semesters.

Course revised Fall '01 to be more comprehensive and include 3D usage. (Previously 2 ch)

ARCH 110 – Computer Graphics in Architecture – HVACR (2ch): Taught Spring '09.

ARCH 204 – Architectural Detailing (4ch): Team taught with Diane Nagelkirk Spring '13.

ARCH 241 – Design Fundamentals (3 ch): Taught some Semesters prior to 2006.

Developed series of lectures and hands on exercises designed to develop an appreciation and entry level competency in two dimensional and three dimensional design basics. Revised course with additional material. Fall '02. (Previously 2 ch)

ARCH 285 - House: An American Evolution (3 ch): Taught periodically.

Continue to teach this course which I developed. Revised for Spring '03 from 2 to 3 credit hours. Revised for Spring '12 to incorporate vernacular studies as related to sustainable residential design.

FMAN 321 - Principles of Facility Management (3 ch): Taught annually starting Spring '04.

FMAN 321 - Principles of Facility Management (3 ch)Web version for Certificate Program: Developed Fall '04. First taught Fall '05.

FMAN 321 – Principles of Facility Management (3ch): Customized course for special section for Leadership and Recreation Management majors. Fall 2009 – Fall 2012.

FMAN 322 – Project Management for Facility Managers (3ch): Taught Spring 2009.

FMAN 331 - Facility Programming and the Design Process (3 ch): Taught Spring Semester.

FMAN 331 - Facility Programming and the Design Process (3 ch) Web version for Certificate Program: Developed Spring '05. Taught Spring '06 – Spring -08.

FMAN 393 – Internship in Facility Management (3 ch): Taught Summers starting '04.
FMAN 451 – Planning and Budgeting for Operations (3 ch): Taught Fall Semester.
FMAN 451 – Planning and Budgeting for Operations (3 ch) Web version for Certificate Program:
 Developed Spring '06; First taught Fall '06.
FMAN 489 – Capstone Research (1ch): Taught Fall '12 - present
FMAN 499 – Capstone Thesis (3 ch): Taught Spring '09, '10, '11, '13.

PROFESSIONAL ACTIVITIES AND AFFILIATIONS:

- **External Evaluator for Provincial Program Review, Diploma in Architecture: Project and Facility Management Diploma;** Conestoga College, Kitchener, ON (November '12)
- **Member, IFMA Foundation Academic Program Accreditation Committee.** (January '07 to present).
 - Member: Missouri State University Accreditation Committee (Summer 2012)
 - Member: University of Minnesota Accreditation Committee. (Fall 2011)
 - Member: Southern Polytechnic State University Accreditation Committee. (Spring 2011)
 - **Visitation Committee:** TCI College, New York. (September 2010)
 - **Chair:** Brigham Young University Re-recognition. (Summer '08).
 - **Member:** Conestoga College, Kitchener, Ontario Recognition Committee. (Summer '08).
 - **Mentor to resolve final issues for recognition:** Conestoga College, Kitchener, Ontario Recognition Committee. (Summer '08).
 - **Member:** BREDA University Recognition Committee. (Summer '07).
- **Member, External Review Committee; Bachelor of Applied Technology – Architecture (Project and Facility Management);** Conestoga College, Cambridge, ON (November -12)
- **Member, IFMA Foundation Academic Program Accreditation Committee Strategic Planning Task Force.** (Summer '07).
- **External Evaluator for New York Department of Education; Proposed B of Tech in Facilities Management,** TCI College, New York, NY (September '11)
- **External Evaluator for Internal Program Review; AOS in Facilities Management,** TCI College, New York, NY. (August '11)
- Worked with BOMA (Building Owners and Managers Association) of Metro Detroit to establish a relationship with Facility Management students.
 - BOMA members travelled to Ferris and presented three “Lunch and Learn” sessions.
 - BOMA created professional Facebook page to communicate with students.
 - BOMA created new students membership designation and Young Professionals sub-category to help students transition to careers.
- **Architectural Licenses current in Michigan, allowed Ohio to expire in 2012.**
- **Renewed Certified Facility Manager Designation, IFMA, '00, '03, '06, '09.**
- **Member, International Facility Management Association.** ('89-Present)
- **Certified Facility Manager, IFMA,** earned designation 1997.
- **Member, Facility Management Educators' Council.** ('91-'99)
- **Secretary-Treasurer, Facility Management Educators' Council.** ('94-'96)
- **Member, Architects/Designers/Planners for Social Responsibility.** ('89-'95)
- **Member, City of Kent, Ohio; Board of Zoning Appeals.** (August '86-August'88)

TEACHING METHODOLOGY AND RELATED:

- **Organized online training for Facility Management students in FM:Systems through “Educational Grant Program 2013 Curriculum: A Step-by-Step Approach to Becoming Familiar with FM: Interact.**
- **Converted FerrisConnect courses to LEARN (2012)**
- **Chair Program Review 2011 for Architectural Technology and Facility Management Programs.**
- **Prepared documentation for successful re-accreditation of Bachelor of Science in Facility Management degree for International Facility Management Association with Diane Nagelkirk. (Summer 2008)**
- **Worked with Canadian government officials to gain approval of Ferris' Facility Management Internship program. (2008)**

- **Developed articulation agreement with Fachhochschule Kufstein Facility Management program in Kufstein, Austria. (2007)**
- **Converted WebCT courses to FerrisConnect. (2007-2008)**
- **Responsible for Facility Management Internship Program (FMAN393). (Summer 2004-Present)**
- **Developed revisions to Facility Management Curriculum with Diane Nagelkirk. (Winter 2005)**
- **Adapted FMAN 321-Principles of Facility Management for On-Line Delivery. (Fall 2004)**
- **Adapted FMAN 331-Facility Programming and the Design Process for On-Line Delivery. (Winter 2005)**
- **Prepared as Member of BS and M Arch Curriculum Development Committee.**
 - **Summer contract with Diane Nagelkirk to continue work on above. (Summer '03)**
 - **Prepared PCAF.**
 - **Compiled survey information.**
 - **Researched and developed draft curriculum consistent with NAAB matrix.**
 - **Researched and developed budget and staffing requirements for draft curriculum.**
 - **Mission and Vision Statements. (Winter '03)**
 - **Survey of Employer Demand. (Winter '03)**
 - **Survey of Student Demand. (Winter '03)**
- **Prepared Study of Impact of High School Teacher's Architectural Technology/CAD Seminar and Recruitment of Students. (September '02)**
- **Prepared Study of MI High Schools to Target for 2003 Recruitment. (September '02)**
- **AT Curriculum Revisions:** Implemented first year changes in curriculum revisions. These revisions are intended to bring more use of the computer and CAD into the classroom and to involve the students in comprehensive, team based study. (Implemented Fall '01, Winter '02)
- **Worked with faculty to revise courses for AT curriculum revision: (Fall '01-Winter '03)**
 - **Revised ARCH 241, Design Fundamental. Increased course from 2 to 3 credit hours. Developed new Power Points and new projects that utilize models to explore concepts.**
 - **Revised ARCH 285, House: An American Evolution. Increased course from 2 to 3 credit hours.**
 - **Revised ARCH 102, Working Drawings 1 with Diane Nagelkirk and Mary Brayton. Converted course to CAD base.**
 - **Revised ARCH 101, Architectural Graphics with Diane Nagelkirk and Mary Brayton. Reduced from 8 to 6 contact hours and restructured course to prepare students to use hand drafting as a tool to aid in planning and organizing CAD work.**
 - **Revised ARCH 109, Computer Graphics for Architecture with Diane Nagelkirk. Increased course from 4 to 6 contact hours and added content from former ARCH 209. Restructured course as well.**
- **Prepared Draft Proposal for Revisions to Architectural Technology Associate Degree. (March '00)**
- **FM-Campus Location:** Participated with Vicky Hardy and Mel Kantor in developing a survey of potential FM students to determine the best campus for the program; Big Rapids or Grand Rapids.
- **FM Curriculum Revisions:** Organized FM curriculum revision process with Vicky Hardy and Mel Kantor. Approved 1998.
- **Prepared Survey of Architects and Contractors Regarding Employment Potential for BS in Architectural Technology. (Summer '98)**
- **Preliminary Study of Potential Programs for Articulation into Proposed BS in Architectural Technology. (February '98)**
- **Prepared Survey of Alumni and Current Students Regarding Interest in Proposed BS in Architectural Technology. (Winter '96)**
- **FM Minor Degree Option:** Developed Minor Degree option for Facilities Management Program. Approved 1996.
- **Distance Learning:** Adapted FMAN 331 and FMAN 451 to distance learning methods and taught both courses via distance learning.
- **Architectural Technology Baccalaureate Development:** Worked with architectural technology faculty to develop proposal for baccalaureate degree in architectural technology. Developed and proposed to faculty concept of tracks for the degree. Developed survey for professionals regarding their

need for graduates of proposed program. (this proposal has not moved outside the program)

PUBLICATIONS AND PRESENTATIONS:

“Slovak Folk Architecture: Village Worship Spaces” and “Slovak Folk Architecture: Traditional Homes and Villages”, Slovak American Society of Washington D.C., June 2013.

Presentation via teleconference for Northwest Ohio IFMA Chapter; **“Developments in Facility Management Education and Facility Management Educational Options at Ferris State University”**; 20 March 2013.

Interviewed for and quoted in **“Smaller Budgets and Rising Costs Shape the Industry in 2011”, Buildings**; Janelle Penny and Chris Olson; January 2011.

“Qualities of an Excellent Facility Manager”; Presented to General Services Administration Facility Management Staff at regional training session. Indianapolis, IN (29 April '10)

“Facilities Management – Then, Now & the Future”; Round Table Panel Member representing FM education; Presented to Southeastern Michigan IFMA. Southfield, MI (21 April '10)

“Evolution of American House Styles”; Presented as part of Ferris State University Festival of the Arts. Big Rapids, MI (10 February '10)

“The Future of FM Belongs to Higher Education”; Co-presenter with Paula Behrens, Alana Dunhoff, Kevin Burr, Ying Hua, Cathy Roper, Carol Reznikoff and Nathan Wade at World Workplace. Dallas, TX (October '08)

“New Blood: Career Paths in Facility Management”; Presented at Michigan Society of Hospital Engineers Annual Conference, Amway Grand Hotel, Grand Rapids, MI. (27 September '07)

“World Workplace '06 Session Moderator”; Facilitated educational sessions at convention. “Why Can't You Be Normal Like Me: How to Successfully Design Culture into the Workspace.” by Carol Rickard-Brideau. (October '06)

“World Workplace '05 Session Moderator”; Facilitated educational sessions at convention. “Benchmark This! Elevating the Value of Your Facility Department through a Benchmarking Consortium” by Jim Rice and Mitch Rabil; “Sustainability Leadership for Facility Managers” by Christopher Juniper. (October '05)

Guest Speaker, “SOCY 344: World Urban Sociology; for Tony Baker; FSU, Winter '04, Winter '05, Winter '06.

“Forces That Shape Vernacular Architecture: The Wooden Churches of Slovakia”, *Insider*, May 2006.

Guest Speaker, ARCH 112: Structural Materials; for Bruce Dilg, FSU, Fall '04.

“Longevity in Wood Construction”, *Michigan Design Educators Conference*, FSU, Big Rapids, MI, Fall '04.

“Impressions of Slovakia – 9 Years Later”, *Slovakia*, Summer 2004.

“Keeping Warm in Orava and the Slovak Carpathians”, *Slovakia*, Summer 2004.

“A Visit to the Folk Jewels of Slovakia”, *Slovakia*, Summer 2004.

“World Workplace '02 Session Moderator”; Provided introduction as well as facilitated educational sessions at the convention. “Achieving Effective Office Acoustics” by Klaus and Niklas Moeller, Moeller Associates Ltd., Oakville, Ontario; “Green Building Design” by Eric Truelove, PE, Matthew Tendler AIA, and Patrick Kressin, Midwest Sustainable Collaborative, Milwaukee, WI; “Going Green: What Does It Mean? An FM Guide to Sustainability” by Judy Munro CFM, Tri-Metropolitan Regional Transit District, Portland, OR; Toronto, Ontario. (October '02)

“Slovak Folk Architecture”, Article published in *Slovakia* a quarterly publication of the Slovak Folk Heritage Society. (Summer 2002)

“Folk Architecture of Slovakia”, Presented at the “Slovak Fest”, Lakeland Community College, Cleveland, OH. (November 10-11, 2001)

“Architectural and Mechanical CAD Drafting, Design, and Modeling Seminar”, Developed and coordinated session with cooperation of Architectural Technology/Facilities Management and Technical Drafting/Tool Design Departments; presented with Diane Nagelkirk and Mary Brayton for “CAD Basics II”, FSU, Big Rapids, MI. (October 2000)

Guest Speaker, “CISM 610: Database Management and Administration; for Rose Ann Swartz; FSU, Summer '99, Fall '99, and Winter '00.

“World Workplace '98 Session Moderator”; Provided introduction as well as facilitated educational sessions at the convention. “Computer Maintenance Management System Implementation” by Kalman Feinberg, Facilities Management Engineering Inc., Teaneck, NJ and “Managing the

- Moves/Adds/Change Process" by Sonya Toblada, Facility Resources Inc., Atlanta, GA; Chicago, IL. (October '98)
- "CAD Basics II"**, Presented with Diane Nagelkirk at "Architectural Graphics Design Seminar"; FSU, Big Rapids, MI. (April '97)
- "Architectural Graphics Design Seminar"**, Developed and coordinated session; FSU, Big Rapids, MI (October '95)
- "How Would an Architect Do That?"**; Presented with Diane Nagelkirk and Dave Tulos at "Architectural Graphics Design Seminar"; FSU, Big Rapids, MI. (October '94)
- "Drafting Techniques for Communicating Architectural and Building Technology Concepts"**; Presented with Diane Nagelkirk at "Back to the Future II"; FSU, Big Rapids, MI. (March '93)
- "Post-Occupancy Evaluation of Buildings and Its Impact on Users"**; Presented at Environment-Behavior Applications in the Design Field; Kent State University; Kent, OH. (November '91).
- "Architecture of the '90s: A Vision of an Environmentally & Socially Responsible Built Environment"**; Presented with Diane Nagelkirk at ATEA Workshop sponsored by FSU, Big Rapids, MI. (November '90)
- "Conflicting Environmental Priorities of Designers, Clients, and Users of Office Spaces: A Survey of Eight Office Settings"**; Design Methods and Theories, Vol. 22, No. 3, '88, page 878.
- "Post-Occupancy Evaluation of Environmental Systems in Commercial and Institutional Office Buildings"**; Co-author with Jack Alan Kremers, Prof. of Architecture, Kent State University; Presented at the Energy Conference sponsored by the Tennessee Valley Authority; Chattanooga, TN. (May '88)

RESEARCH:

- **Sabbatical to Study Vernacular Wooden Church Structures in Northeastern Slovakia.** (Fall '03)

GRANTS:

- **Recipient of College of Engineering Technology Faculty Development Grant.** To fund travel to present to Slovak American Society in Washington DC. (15 June '13)
- **Recipient of Team College of Engineering Technology Faculty Development Grant (with Mary Brayton).** To fund travel to IFMA Facility Fusion, Chicago, IL. (April '12)
- **Recipient of Team College of Technology Faculty Development Grant (with Diane Nagelkirk).** To fund travel to World Workplace. (October '08, October '09, October '10, October '12)
- **Recipient of Team College of Technology Faculty Development Grant-Submitted by Mary Brayton.** Used to fund sketching seminar for Architectural Technology Faculty. (April '05)
- **Recipient of Team College of Technology Faculty Development Grant-Submitted by Gary Gerber.** Used to fund LEED seminar for Architectural Technology Faculty. (April '05)
- **Recipient Timme Grants.**
 - Fall '12 trip to San Antonio for World Workplace.
 - Fall '07 trip to New Orleans for World Workplace.
 - Fall '06 trip to San Diego for World Workplace.
 - Fall '05 trip to Philadelphia for World Workplace.
 - Fall '03 Sabbatical.
 - Fall '02 trip to Toronto, Ontario for World Workplace.
- **Recipient of Academic Senate Faculty Development Grant.** Used to fund Fall '03 Sabbatical.
- **Recipient of Individual College of Technology Faculty Research Grant.** Used to fund Fall '03 Sabbatical.
- **Recipient of Team College of Technology Faculty Development Grant-Submitted by Gary Gerber.** Used to fund REVIT seminar for Architectural Technology Faculty. (July '03)

ACADEMIC BACKGROUND:

KENT STATE UNIVERSITY

Kent, Ohio 44242

- **MASTER OF ARCHITECTURE**-3.67 GPA (Spring '88)
Thesis Title: "Post-Occupancy Evaluation as a Function of the Design-Construction Process: A

Study of Office Spaces as Perceived by the Designer, Client, and User."

- **TEACHING ASSISTANT**-(Fall '86-Spring '87)
- **BACHELOR OF ARCHITECTURE**-3.18 GPA (Spring '77)
Tau Sigma Delta Honorary
- **GRADUATE SCHOOL OF BUSINESS**-(Spring '81-Spring '85)
24 Graduate hours completed

CONTINUING EDUCATION:

- **Research on the Future of FM in the Nordic Countries of Europe; Per Anker Jensen, PhD, MSC, Technical University of Denmark, Professor.** IFMA World Workplace. San Antonio, TX (1 November, 2012, 1 hour)
- **Computer Gaming in FM Education; Michael May, PhD, GEFMA, University of Applied Sciences – HTW Berlin, Professor Facility Management Technology.** IFMA World Workplace. San Antonio, TX (1 November, 2012, 1 hour)
- **Next Generation of Green Restroom Design; Bruce Bohner, VP Excel Dryers, Inc.** (2 November, 2012, 1 hour)
- **Shaping the Next Generation of FM Leaders: An Internship Case Study at the Smithsonian Institution; Judie Cooper, CFM, FM Analyst.** (2 November, 2012, 1 hour)
- **CONCUR Training.** Ferris State University. (3 August, 2012, 6 hours)
- **IFMA & BIM for Life Cycle Management. Kathy Roper, CFM, MCR, LEED AP, IFMA Fellow, IFMA Chair.** IFMA Facility Fusion, Chicago, IL (11 April, 2012, 1 hour)
- **Engaging Building Occupants in Sustainability Initiatives. Josh Radoff, LEED AP + BD&C, SCA.** IFMA Facility Fusion, Chicago, IL (11 April, 2012, 1 hour)
- **Changing Chaos Into Productivity. Len Merson.** IFMA Facility Fusion, Chicago, IL (11 April, 2012, 1.5 hours)
- **Work on the Move: An Interactive Workshop with Authors of a New Workplace Strategy Book.** IFMA Facility Fusion, Chicago, IL (11 April, 2012, 1 hour)
- **Reinventing Your Leadership Future: Are you Ready for the Next Phase of Your Leadership Life? Steven Sostino.** IFMA Facility Fusion, Chicago, IL (12 April, 2012, 1 hour)
- **The Venter Laboratory. John Weale, PE, LEED AP, Ted Hyman, FAIA, LEED AP.** IFMA Facility Fusion, Chicago, IL (12 April, 2012, 1 hour)
- **Sustainability Reporting: The Role of the FM in Measuring and Managing Energy, Carbon, and Water. Chris Hodges, PE, CFM, LEED AP, IFMA Fellow, Laurie Gilmer, PE, CFM, LEED AP.** IFMA Facility Fusion, Chicago, IL (11 April, 2012, 1 hour)
- **Blackboard 9.1 Training Part 1; Eunice Beck.** Ferris State University (7 February, 2012, 3 hours)
- **CAFM Systems: "I Scream, You Scream, We All Scream for Credible Data; Susan Hensey, FAIA, David Stephenson, CFM, LEED AP.** IFMA World Workplace. Atlanta, GA(28 October, 2010, 1 hour)
- **Facility Management for Climate Change Adaptation. Ying Hua, PhD.** IFMA World Workplace. Atlanta, GA (28 October, 2010, 1 hour)
- **Begin With the End in Mind: Infusing FM Strategy Into Construction...the Rest of the Story(Case Study).** Teena Shaouse, CFM, IFMA Fellow, Bud Jeffress, IFMA World Workplace. Atlanta, GA(28 October, 2010, 1 hour)
- **Sustainable Energy Initiatives in the Public Sector: A Sonoma County Case Study.** Jon Martens, CFM, IFMA Fellow. IFMA World Workplace. Atlanta, GA(28 October, 2010, 1 hour)
- **Batteries Included: Lessons to Energize and Balance Your Life.** Linda Edgecombe. IFMA World Workplace. Atlanta, GA(29 October 2010, 1 hour)
- **New Kids on the Block: New Generations Changing Perceptions of Work and the Workplace.** Brenda Groen, PhD, Xander Lub. IFMA World Workplace. Atlanta, GA(29 October, 2010, 1 hour)
- **Building Information Modeling Workshop. Bruce Dilg.** Ferris State University School of Built Environment. (12-14 May, 2010, 21 hours)
- **Sustaining Sustainability: How to Create Long Term Sustainable Operations in Your Facility. Bill Conley CFM, LEED AP, IFMA Fellow and Laurie Gilmer PE, CFM, LEED AP.** IFMA World Workplace. Orlando, FL (8 October, 2009, 1 hour)
- **Energy Management in Federal Facilities. Jennifer Hazelman.** IFMA World Workplace. Orlando,

- FL (8 October, 2009, 1 hour)
- **Green Building Operations and Maintenance: The LEED Implementation Process.** USGBC, Big Rapids, MI (16 April, 2009, 7 hours)
 - **LEED for Existing Buildings (LEED-EB).** Cheri Holman, LEED AP, Hurst Mechanical. IFMA Meeting program. Grand Rapids, MI (15 April 2009, 1 hour)
 - **Wellness in the Workplace; Katrina Hogan, Details.** Steelcase University, IFMA Meeting program. Grand Rapids, MI (18 February, 2009, 1 hour)
 - **Understanding Water Use in Commercial Buildings; Rob Zimmerman.** IFMA World Workplace. Dallas, TX (16 October, 2008, 1 hour)
 - **Elements of Sustainable Lighting; Steve McGuire.** IFMA World Workplace. Dallas, TX (16 October, 2008, 1 hour)
 - **Generations @ Work: A Gen Y Perspective;** IFMA World Workplace. Dallas, TX (17 October, 2008, 1 hour)
 - **Workplace Hostility: Fact and Fiction; Charles Carpenter.** IFMA World Workplace. New Orleans, LA. (26 October, 2007, 1.5 hours)
 - **Building Information Modeling: Changing the Design and Construction Paradigm; Ethan Marsh, Lewis Goetz.** IFMA World Workplace. New Orleans, LA. (25 October, 2007, 1 hour)
 - **Post-Occupancy Evaluations of Creative Companies: A Tool to Measure Design Impact on Business Success; Vicki Simons, Patrick Donnelly.** IFMA World Workplace. New Orleans, LA. (26 October, 2007, 1 hour)
 - **Total Facility Commissioning;** Sponsored by AIA, CSI, IFMA, ASHRAE. Hudsonville, MI (10 November 2006, 1.5 hours)
 - **Why Can't You Be Normal Like Me: How to Successfully Design Culture into the Workspace; Carol Rickard-Brideau.** IFMA World Workplace. San Diego, CA (9 October 2006, 1 hour)
 - **Prove It! Studies that Support Your Design Solution; Caren Martin and Denise Guerin, University of Minnesota.** IFMA World Workplace. San Diego, CA (9 October 2006, 1.5 hours)
 - **Sizing Up Your Environmental Footprint and Walking the Walk; Ken Sidebottom, Johnson Controls.** IFMA World Workplace. San Diego, CA (9 October 2006, 1.25 hours)
 - **In Pursuit of the Creative Workspace; Scott Francisco and Janet Fana.** IFMA World Workplace. San Diego, CA (9 October 2006, 1hour)
 - **Realigning Your Facilities: Using a Discovery Process to Improve Workplace Effectiveness; Jonathan Pettit, Scott Kruse, John Crosby.** IFMA World Workplace. San Diego, CA (10 October 2006, 1.25 hours)
 - **How to Implement Best Value in the Public and Private Sector; Dean T. Kashiwagi, PhD, PE, Arizona State University.** West Michigan Chapter of IFMA. (20 September 2006, 2 hours)
 - **CEU Marathon Day.** Construction Specifications Institute and Grand Valley American Institute of Architects. Grand Rapids, MI. (23 March, 2006)
 - **Climate Specific Design; Maria Spinu, PhD, Building Science Integration Manager, Du Pont.** Review air barrier contribution to manage moisture loads in the building enclosure. (1.5HSW LU)
 - **Windows, Energy and Green Buildings; Aric Lavancher, CSI, CDT, Andersen Windows.** Review the role of windows in building energy consumption and Green Building rating systems such as LEED and EnergyStar. (1.0 HSW LU)
 - **Advanced Fenestration Technology; Dennis Pelletier, FCSI, CCPR, Cabot Corporation.** Class examines the considerations in daylighting and presents innovative opportunities to overcome design challenges. (1.0 HSW LU)
 - **Parking Structure Restoration; Mark DeClercq; Walker Parking Consultants.** Assessment Planning and its benefits in effective budgeting for repairs and maintenance. (1.0 HSW LU)
 - **Benchmark This! Elevating the Value of Your Facility Department Through a Benchmarking Consortium; Jim Rice, Mitch Rabil.** IFMA World Workplace. Philadelphia, PA (24 October 2005, 1.5 hours)
 - **Sustainability Leadership for Facility Managers; Mary Ferdig, Christopher Juniper.** IFMA World Workplace. Philadelphia, PA (24 October 2005, 1.25 hours)
 - **Proforma for Sustainability; Alan Scott, Richard Manning.** IFMA World Workplace. Philadelphia, PA (25 October 2005, 1 hour)

- **Using Workplace Standards in Programming: A Case Study of Three Global Corporate Projects;** Steven Parshall, Andrea Moeder. IFMA World Workplace. Philadelphia, PA (25 October 2005, 1 hour)
- **LEED Training.** Ferris State University. (8 hours, 14 April, 2005)
- **Sketching Workshop with Paul Laseau.** Ferris State University. (1 April, 2005, 8 hours)
- **Diversity Education Session.** Ferris State University. (25 March, 2005, 1 hour)
- **The Intentional Campus: Everyday Opportunities to Enrich Students' Experience by Improving the Physical Environment of a Campus.** Society for College and University Planning. Web Presentation at Physical Plant, Ferris State University. (1.5 hours, 17 February, 2005)
- **Spring Learning Institute: Communication: Changing Patterns in a Changing World.** Ferris State University, Big Rapids, MI. (Half day, 2 April '04)
- **REVIT Fundamentals.** Autodesk Training Center, Grand Rapids, MI. (3 days, 30 May – 2 June, '03)
- **ADA Seminar and Mock Mediation Program.** Sponsored by Grand Valley AIA at Aquinas College. Grand Rapids, MI (One Day, May 18, '00)
- **AutoCAD 2000 Update.** Sponsored by Autodesk Training Center at Grand Rapids Community College. Grand Rapids, MI (Two Days, May 8-9, '00)
- **Diversity in Higher Education.** Sandra Strothers. Sponsored by FSU. (One Hour, April '00)
- **Sexual Harassment Session.** Sponsored by FSU. (One Hour, Fall '99)
- **Waste Reduction and Energy Efficiency Workshop.** Sponsored by the Michigan Department of Environmental Quality. Livonia, MI (One Day, 10 November '99)
- **Handling Asbestos: Your Rights and Responsibilities Workshop.** Sponsored by the Michigan Department of Environmental Quality. Grand Rapids, MI (Half Day, 26 March '98)
- **"Archibus Training the Trainers Seminar"**, Presented by Archibus in Boston, MA. Part of grant obtained by Mel Kantor, seeded by initiatives identified at "Faculty Summer Institute". (Three Days, June '97)
- **"FM-Systems Seminar"**, Presented by Mike Schley of FM-Systems, a seminar on computer based Facility Planning and Management. Sponsored by Joe Samson and Vicky Hardy with funds from the "Faculty Summer Institute". (One Day, April '97)
- **"Environmentally Conscious Interior Design"**, Presented by Denise Guerin, PhD of the University of Minnesota at Eastern Michigan University, Ypsilanti, MI. (One Day, 7 March '97)
- **"Faculty Summer Institute"**, Presented by the Center for Teaching, Learning, and Faculty Development at Ferris State University. (June '96)
- **"Facility Executive Perspectives on Workplace for the Next Millenium"**, Presented in Chicago, IL by the International Society of Facility Executives (MIT), 336 Main Street, Cambridge, MA 02142-1014. (One Day, June '96)
- **"Focus on Facilities"**, Seminar sponsored by Northern Illinois IFMA Chapter, Chicago, IL. (One Day, October '94)
- **"AutoCAD Advanced Drafting"**, Grand Rapids Community College Autodesk Training Center. (One Day, March '94)
- **"A Better Environment-By Design"**, A seminar on environmentally sensitive design and construction. Sponsored by Michigan Construction Users Council. Lansing, MI. (One Day, December '93)
- **"Creating Learning Organizations: Growth Through Quality"**, PBS produced conference featuring Drs. Deming and Senge. Teleconference at FSU. (February '93)
- **"FSU Technology/Business Faculty Seminar"**. Sponsored by FSU. (October '92)
- **"Construction Department AutoCAD Seminar"**. Sponsored by FSU Construction Department. (Summer '91)
- **"Facilities Strategic Planning Seminar"**. Sponsored by International Facilities Management Association. Chicago, IL. (July '90)
- **"Gerholtz Institute AutoCAD Seminar"**. FSU. (Fall '89)
- **"The Life Safety Code Seminar"**. Sponsored by the National Fire Protection Agency. Albany, NY. (Spring '86)

CONFERENCES AND CONVENTIONS ATTENDED:

- **World Workplace:** Annual conference and convention for the International Facility Management

- Association. San Antonio, TX (30 October – 2 November '12)
- **IFMA Facility Fusion:** Attended 2 days of 3 day conference. Chicago, IL (11-12 April '12)
- **World Workplace:** Annual conference and convention for the International Facility Management Association. Atlanta, GA (26-29 October '10)
- **World Workplace:** Annual conference and convention for the International Facility Management Association. Orlando, FL (5-9 October '09)
- **World Workplace:** Annual conference and convention for the International Facility Management Association. Dallas, TX (14-17 October '08)
- **World Workplace:** Annual conference and convention for the International Facility Management Association. New Orleans, LA (24-26 October '07)
- **World Workplace:** Annual conference and convention for the International Facility Management Association. San Diego, CA (8-11 October '06)
- **World Workplace:** Annual conference and convention for the International Facility Management Association. Philadelphia, PA (22-26 October '05)
- **World Workplace:** Annual conference and convention for the International Facility Management Association. Toronto, Ontario (6-9 October '02)
- **World Workplace;** Annual conference and convention for the International Facility Management Association. Chicago, IL (18-20 October '98)
- **TFM Show at Construct America. (Facility Management).** Chicago, IL. (3 days, 21-23 April '04)
- **A/E/C Systems '98;** Seminar of computer and software systems for architects, engineers, and contractors. Chicago, IL (One day, June '98)
- **World Workplace;** Annual conference and convention for the International Facility Management Association. Baltimore, MD (October '94)
- **Facility Management Educators' Council.** Conferences. Lansing, MI (September '91), Grand Rapids, MI (September '92), Buffalo, NY (September '93), Lansing, MI (May '94), Chicago, IL (October '98)
- **IFMA Student Conference;** Lansing, MI (September '91), Grand Rapids, MI (September '92), Lansing, MI ('94)
- **NEOCON;** Chicago, IL. (June '90, '91, '92)

SERVICE AND COMMITTEE MEMBERSHIPS:

Program/Department:

- Chair, Architectural Technology and Facility Management Program Review. (Fall '10-Fall '11)
- Organized and Chaired FM Advisory Board meeting. (April 2010)
- Member department committee to develop degree proposal for BS in Architecture and Sustainability. (2008-2009 Academic year)
- Participated in Spring CET Open House. (April '09)
- Member department committee to plan and implement revisions to FM curriculum. ('07-'08)
- Faculty Advisor to FSU Student Chapter of International Facility Management Association. (1996-Present)
- Liaison for job placements and internships. (2006-present)
- Chair of Tenure Committee for Dane Johnson. (Fall 2006-Fall 2010)
- Participated in Educator's Academy at FSU. (June 2006)
- Developed, administered, and analyzed employer, student, and alumni data for Facility Management Program Review. (Winter 2005)
- Developed and maintain FM Alumni Distribution List for FM Job Opportunities. (Fall 2003-Present)
- Reviewed statistics on high schools with most potential for student interest in program and coordinated faculty-high school visits. (Winter '03)
- Member BS and M Arch Curriculum Development Committee. (Winter '03-Present-on hold)
- Chair of Tenure Committee for Mike Feutz. ('01-'02)
- Organized first, and second, and third "Architectural Graphics and Design Seminar" for high school drafting instructors with presentations by FSU Architectural Technology faculty. (October '00, '95, '94) 2000 seminar was in cooperation with AT/FM and TDTD faculty for high school drafting instructors.
- Participated in "Autumn Adventure". (October '93, '94, '95, '98, '00, '01)

- Architectural Technology and Facilities Management Library Liaison. ('89-'00)
- Member lab maintenance committee. (Fall '92-Present)
- Faculty Advisor International Facility Management Association, FSU Student Chapter. ('90-Present)
- Developed exit interview for graduating AT and FM students. Compiled results and prepared annual reports. (Spring '92-Present)
- Advise Facility Mgmt. transfer students as assigned. ('94-Present)
- Worked on program review content for AT and FM programs. (1999)
- Worked with architectural technology faculty to develop proposal for baccalaureate degree in architectural technology. Developed and proposed to faculty concept of tracks for the degree. (not accepted) Developed survey for professionals regarding their need for graduates of proposed program. (this proposal has not moved outside the program)
- Member of Tenure Committee for Mary (Bockstahler) Brayton. ('96-'01)
- Developed proposal for Minor Degrees in Facility Planning Management and Facility Operations Management with Vicky Hardy. (Approved Spring '96)
- Adapted FMAN 331 and FMAN 451 to distance learning methods and taught both courses via distance learning. ('96)
- Prepared program display for Construction Specification Institute Convention. ('96)
- Mentor and Chair of Tenure Committee for Victoria Hardy. ('94-'99)
- Record, prepare, and distribute minutes of AT/FM program meetings. (Fall '91-Spring '94)
- Member course scheduling committee. (Fall '92-Spring '94)
- Participated in Homecoming Chili Cookoff (Fall '97)
- Organized field trip for students to Cleveland, Ohio. (April '93)
- Member Search Committee for Construction Department Head. (April-May '91)
- AIAS student field trip to Columbus, IN. (April '91)
- Mentor to Dave Batie. ('90-'91)
- Member of committee to write proposal for a "Summer Institute" program at FSU. (Fall '90)
- Faculty Co-advisor American Institute of Architectural Students. ('89-'90)
- Organized departmental display for Michigan Society of Architects Convention. (Fall '88-'89)
- Organized student/program advisory board interaction sessions for '89 advisory board meeting.

College:

- Member CET Promotion Committee. (Fall '11-'15)
- Member CET Sabbatical Committee. (Fall '10-Spring '12)
- Member CET Search Committee Director School of Built Environment. (Spring 2010)
- Member CET Promotion Committee. (2007-2010 Academic Years)
- Member COT Sabbatical Committee. (2006-2007 Academic Year)
- Member COT Associate Dean Search Committee. (Winter '06)
- Member COT Promotion Committee. (Fall '03 – Winter '05)
- Member COT Faculty Research Grant Committee (Fall '02-2005)
- Worked at COT Student Picnic ('96, '97, '00, '01, '02)
- Member College of Technology Promotion Committee (Fall '97-Spring '00)
- Chair of College of Technology Promotion Committee ('98-'99 Academic Year)
- Represented Construction Department in writing of program goals for State Grant Request for proposed Technology Building Addition. (October '94)
- Worked with College of Technology to develop Alumni Survey. ('90)

University:

- Member 2010 Energy Conservation Task Force (November 2010 to March 2011)
- Member Ferris Fulbright and International Scholar Group (Fall 2006-2008)
- Member Online Bachelor Degree Accreditation Committee (Fall 2005-Summer 2006)
- Member Art Walk Committee. (Fall 2005-2006)
- Member Physical Teaching Spaces Renovation Committee. (Winter 2005-Fall 2006)
- Member Physical Teaching Spaces Task Force. (Fall 2004)

- Member Social Awareness Sub-Committee of the General Education Outcomes Assessment Committee. ('01-'05)
- Coordinated Distribution of Social Awareness Exit Interviews for College of Technology. (April '02, '03)
- Member of Student Fees Committee. ('97-'99)
- Member of University Recreation Advisory Committee. (March '93-March'94)
- Member Campus Facilities Master Planning Committee. ('90-'93)
- Member International Education Committee. ('90-'91)
- Member FSU Academic and Administrative Computer Activities Steering Committee. ('89-'90)

Community:

- Volunteer Soccer Coach YMCA. (Spring 2006-Spring 2007)
- 9 Gallon Donor – Michigan Community Blood Centers. (Fall 2011)
- Volunteer Instructor/Coach Griffins Youth Foundation. Grand Rapids, MI. ('02)
- Volunteer to implement wildflower garden at St. Patrick's School in Parnell, MI. Part of National Wildlife Foundation Grant. (May '01)
- Volunteer Casey's Kitchen. Restaurant in Grand Rapids that serves free breakfasts to needy in restaurant atmosphere. (August '00)
- Volunteer Landscaping Coordinator for Project One (similar to Habitat) Davis Street house in Grand Rapids. (May '99).
- Carpentry volunteer for Project One Davis Street house in Grand Rapids. (Fall '98)
- Michigan Association of Vocational Industrial Clubs of America; Developed design and drafting project for state architectural competition. (April '97)(April '98)(April '99)
- Grand Rapids Home Builders Association. Judge for Awards of Excellence. (June '91, '92, '93, '94, '95, '96, '97)
- Olde Millpond Condominium, Building and Grounds Committee. Chair (April '94-July '95) Member (October '92-July '95)
 - instrumental in negotiating maintenance contracts.
 - independently developed computerized spread sheet to schedule and budget long term maintenance. (Summer '93)
- Olde Millpond Condominiums, Board of Directors. Member (April '94-July '95) Associate Member (May '92-April '94)
- Monday Night Technology at FSU. (January '95)
 - helped 7th and 8th graders attending a seminar developed by Bruce Dilg.
- Building review and schematic design for Downtown Development Authority; City of Coopersville. Joint project with Mel Kantor and Diane Nagelkirk. (September '92-August '93)
 - Schematic design for new city signage. (Summer '93)
 - Schematic design for apartments over Annabelle's Dress Shop. (Summer '93)
 - Schematic design for renovation to facade of Safeway Lumber. (Summer '93)
- Rockford City Schools; Judge for Architectural Drafting Competition. (April '91, April '92)
- Michigan Association of Vocational Industrial Clubs of America; Judge for state architectural competition. (May '89, May '92)

RELATED WORK EXPERIENCE:

CLEVELAND METROPOLITAN GENERAL HOSPITAL

Department of Facilities Planning; 3395 Scranton Road, Cleveland, Ohio 44109

ARCHITECT-(April '88-July '88)

Served as liaison between hospital and consulting architects and designers. Developed conceptual design programs for implementation of hospital master plan.

A. A. LUKETIC ASSOCIATES, INC; ARCHITECTS-(1987-1988)

3385 Biltz Road, Kent, Ohio 44240

Subcontractor to firm specializing in residential and small commercial projects.

UNIVERSITY HOSPITALS OF CLEVELAND

Department of Planning and Construction; 2074 Abington Road, Cleveland, Ohio 44106

PROJECT COORDINATOR-(January '83-August '86)

Responsible for remodeling and new construction within the hospital, program development, content of working drawings and specifications, cost estimates for administration, competitive bidding, letting of contracts, scheduling and supervision of work, payment approval, and supervision of drafters.

DRAFTER-(June '81-January '83)

Responsible for the preparation of working drawings for construction projects within the hospital.

ROBERT L. HUNKER ASSOCIATES, INC.

Box 178, Peninsula, Ohio 44264

ARCHITECTURAL DESIGNER-(November '78-June '81)

Design and preparation of working drawings, specifications, bids, material and cost estimates for commercial and residential projects. Client contact, construction supervision, and work with survey crews to lay out allotments.

HWH ASSOCIATES, INC.

1150 West 3rd St., Cleveland, Ohio 44113

ARCHITECTURAL DRAFTER-(June '77-November '78)

Prepared architectural, structural, and mechanical working drawings for industrial projects. Prepared material estimates.

NORTHEAST OHIO AREAWIDE COORDINATING AGENCY

1501 Euclid Avenue, Cleveland, Ohio 44115

PLANNING INTERN-(Summer '76)

Developed computerized community participation correspondence system for federally funded 208 Wastewater Management Program.

CONSULTING:

PRELIMINARY DESIGN STUDIES, WIERSMA HOUSE: Lowell, MI (Winter 2007)

ROGALKE ADDITION: Lowell, MI (June-July '03)

ALBER LAKE HOUSE RENOVATION: Rockford, MI (August '01)

Developed design concept drawings for renovation and addition to cottage.

SHANGRAW RESIDENCE: Sparta, MI (June '01)

Developed design and working drawings for residence.

ROBINHOOD AIRPORT EXPANSION: Big Rapids, MI (May '01)

Developed aerial perspective presentation drawing illustrating conceptual design proposed by airport user groups. Coordinated with Mike Lafferty.

MICHIGAN OCCUPATIONAL COMPETENCY ASSESSMENT CENTER; Big Rapids, MI (May '01, May '99)

Administered and graded performance portion of architectural drafting portion of test.

SHIAWASSEE COUNTY COMMUNITY MENTAL HEALTH CENTER; Owosso, MI ('98-'99)

Developed methodology to audit and develop preventive maintenance plans and budgets for the health center which consists of 4 leased spaces within the city of Owosso.

MECOSTA COUNTY GENERAL HOSPITAL; Big Rapids, MI ('97)

Long Term Site Development and Master Planning for hospital complex, along with preliminary budgeting and recommendations on atmosphere and visitor wayfinding.

OTTAWA INTERMEDIATE SCHOOL DISTRICT; Holland, MI ('97)

Space Planning for Grand Haven and Holland CBI (Community Based Instruction) facilities

OTTAWA INTERMEDIATE SCHOOL DISTRICT; Holland, MI ('97)

Master Planning for Educational Services Building.

HASHIMI RESIDENCE; Big Rapids, MI ('97)

Schematic Design, Design Development for new residence.

FRASER RESIDENCE ADDITION; Big Rapids, MI. ('97)

Schematic Design, Design Development for living area for physically disabled daughter.

BRASSEUR RESIDENCE; Hastings, MI. ('94-'95)

Schematic design, Design Development, Contract Documents for 8500 square foot home.

BEURKENS SUMMER HOME; Chippewa County, MI. (Summer '93)
Feasibility, Schematic Design.

PELLISIER RESIDENCE; Rockford, MI. (Spring '93)
Design drawings for renovation of laundry and storage area.

GORNEY RESIDENCE; Grand Rapids, MI. (Summer '92)
Design and schematic drawings for a contemporary residence.

MULLINS CABIN; Portage County, OH. (Summer '90)
Design and working drawings for a small rural cabin.

WVIZ-TV25; Cleveland, OH. ('85)
Design and schematic drawings for addition and renovation to office area and transmission areas.

CHURCH OF THE BLESSED HOPE; Chesterland, OH. ('84)
Design and working drawings for addition to church.

Several other private residences in the northeast Ohio area.

BOOK REVIEWS:

WEST PUBLISHING CO.

454 Central Avenue, Highland Park, IL 60035

Architectural Drafting Fundamentals; Mark Schwendau.

-Overall evaluation of proposal for text. (July '93)

Construction Materials; William P. Spence.

-Reviewed entire draft. (February '93)

AEC Drafting Fundamentals; Jules Chiavaroli.

-Reviewed final draft. (July '94)

-Reviewed revised draft of Chapters 13-16. (October '93)

-Reviewed revised draft of Chapters 8-12. (August '93)

-Reviewed revised draft of Chapters 1-7. (July '93)

-Reviewed entire draft. (December '92)

-Reviewed revised draft of Chapters 1-9. (April '92)

-Reviewed original draft of Chapters 1-9. (April '91)

Appendix 8: Faculty Selection and Appointment Policies

Part 6 Subpart 6-2 Hiring Policy

Sec. 6-201. *Statement of Principles.*

It is the responsibility of the President, or his/her designee, to establish and administer recruitment methods and procedures that will serve to attract large, diverse applicant pools that will allow the University to select and hire qualified, talented employees while complying with applicable laws, regulations and policies.

Cross Reference:

[FSU-HRPP 04:11](#). Human Resources Policies and Procedures, *Criminal Records Search*

[FSU-HRPP 04:05](#). Human Resources Policies and Procedures, *Hiring*

[FSU-HRPP 04:12](#). Human Resources Policies and Procedures, *Hiring Process Exceptions*

[FSU-HRPP 04:13](#). Human Resources Policies and Procedures, *Pre-Employment Physicals*

Sec. 6-202. *Moving Expenses.*

The President (for employees within his/her division or reporting directly to him/her) or divisional vice presidents (for employees within their division) are authorized to reimburse moving expenses for new, or transferred, administrative and administrative support employees and faculty members if budget allocations are available. The President, or his/her designee, shall establish and maintain policy and procedures for the administration of this benefit.

Cross Reference:

[Sec. 6-001](#). Definitions.

[FSU-HRPP 04:14](#). Human Resources Policies and Procedures, *Moving Expenses*

Prior Board Action:

Entire Subpart 6-2 included in October 19, 2001 Codification, Phase I.

Entire Subpart 6-2 included in October 22, 2004 Codification, Phase II.

Extracted from: <http://www.ferris.edu/HTMLS/administration/Trustees/boardpolicy/Part6/6-2/homepage.htm> on 11 June 2013

The termination appeal procedure provides a method by which a covered employee can have his or her termination from employment reviewed by a neutral person not involved in the decision-making process.

Cross Reference:

[FSU-HRPP 04:09](#). Human Resources Policies and Procedures, *Termination Appeal Procedure*

Prior Board Action:

October 11, 2002.

Sec. 6-112. Requirement of Board Approval for Collective Bargaining Agreements or Individual Employment Contracts.

No collective bargaining agreement covering employees of the University shall become effective without the express approval of the Board. Additionally, the President may not enter into an individual written employment contract that has provisions for terms or conditions of employment that are different from the terms or conditions defined by Board policy unless reviewed by the University General Counsel or Board Counsel and approved by the Board.

Prior Board Action:

October 11, 1996.

February 13, 1999.

May 5, 2000.

October 11, 2002.

Entire Subpart 6-1 included in October 19, 2001 Codification, Phase I.

Entire Subpart 6-1 included in October 22, 2004 Codification, Phase II.

Extracted from: <http://www.ferris.edu/HTMLS/administration/Trustees/boardpolicy/Part6/6-1/homepage.htm> on 11 June 2013

[Sec. 6-001\(8\)](#). Definition of "Just Cause."

[Sec. 6-111](#). Summary of the Termination Appeal Procedure.

[FSU-HRPP 04:09](#). Human Resources Policies and Procedures, Termination Appeal Procedure

6. *Challenges to Terminations for Business or Economic Reasons.* Challenges to termination of employment for business or economic reasons are limited to the issue of whether the University's selection of specific employees for such termination is in violation of applicable procedures and criteria. All such challenges are subject to the termination appeal process or the grievance procedure of any applicable collective bargaining agreement. If a support employee's employment is terminated for business or economic reasons and the employee wishes to challenge his or her selection for termination, he or she must use the Termination Appeal Procedure.

Cross Reference:

[Sec. 6-001\(9\)](#). Definition of "Business or Economic Reasons."

[Sec. 6-111](#). Summary of the Termination Appeal Procedure.

[FSU-HRPP 04:09](#). Human Resources Policies and Procedures, *Termination Appeal Procedure*

Prior Board Action (for entire Sec. 6-110):

February 13, 1999.

May 5, 2000.

October 11, 2002.

May 1, 2007.

November 7, 2008.

Sec. 6-111. *Summary of the Termination Appeal Procedure.*

(1) A termination appeal procedure has been established as a means to resolve certain complaints regarding termination of employment.

Dean or the Academic Department Head at least ninety (90) days (or, in the case of a Provost, Vice President, Chief Diversity Officer, Academic Dean or Academic Department Head with more than one (1) year remaining on his or her appointment period, at least one (1) year) before (i) the effective date of such non-continuation, or (ii) the end of the appointment period, whichever is later.

- c. *Coaches and Hall Directors.* If a decision is made prior to the completion of the first year of employment not to continue the appointment of a Coach or Hall Director, the University will notify the employee at least 90 calendar days before the expiration of the first year of employment of such non-continuation. If a decision is made not to continue the employment after the Coach's or Hall Director's first full year of employment, the University shall notify the employee at least 180 calendar days before the effective date of such non-continuation.
- d. *Support Employees.* If after the successful completion of the probationary period, a decision is made not to continue the employment of a support employee for business or economic reasons, the University will notify the employee at least sixty (60) calendar days before the effective date of such non-continuation.

Cross Reference:

[Sec. 6-001\(5\)](#). Definition of "Support Employee."

[Sec. 6-001\(9\)](#). Definition of "Business or Economic Reasons."

4. *Pay or Reassignment in Lieu of Notice.* The University may elect to provide an employee with payment in lieu of notice, and may elect to reassign a Provost, a Vice President, the Chief Diversity Officer, an Academic Dean or an Academic Department Head to other duties in lieu of notice, payment, or both, as follows:
 - a. The University may elect to provide an employee with pay in lieu of notice in an amount equal to the base compensation which the employee would have received during the specified notice period.
 - b. Where the a Provost, a Vice President, the Chief Diversity Officer, an Academic Dean or an Academic Department Head has more than one (1) year remaining on his or her appointment period, the University may elect to reassign the Provost, Vice President, Chief Diversity Officer, an Academic Dean or Academic Department Head for the remainder of the appointment period, in lieu of notice, payment, or both. Any such reassignment shall be made at the same rate of base compensation that the Provost, Vice President, Chief Diversity Officer, Academic Dean or Academic Department Head was receiving immediately prior to the time of the reassignment.
5. *Exception to Requirements for Notice Period or Payment In Lieu of Notice in Cases of Just Cause Termination.* No notice period, or payment in lieu of notice and/or reassignment, shall be required if an employee is terminated for just cause (but such terminations are subject Termination Appeal Procedure or the grievance procedure of any applicable collective bargaining agreement).

Cross Reference:

[Sec. 6-001\(8\)](#). Definition of "Just Cause."

2. *Support Employees and Just Cause*. Support employees who have successfully completed probation, may only be terminated for just cause, or for business or economic reasons. A current support employee who seeks and obtains a different position within the University shall be considered probationary in the new position for sixty (60) calendar days. If during such period a decision is made not to continue the employee in the position, the University may elect to return the employee to his or her former position or to terminate the employment (in which case the termination will be deemed to be for business or economic reasons if not specified to be for just cause).

Cross Reference:

[Sec. 6-001\(5\)](#). Definition of "Support Employees."

[Sec. 6-001\(8\)](#). Definition of "Just Cause."

[FSU-HRPP 04:06](#). Human Resources Policies and Procedures, *Probationary Periods for Non-Bargaining Employees*

[FSU-HRPP 04:08](#). Human Resources Policies and Procedures, *Termination of Employment*

3. *Notice of Non-Continuation*. Employees shall (subject to the University's right to provide pay in lieu of notice) receive notice of non-continuation of employment as follows:
 - a. *Administrative employee*. If a decision is made prior to the completion of the first year of employment to not continue the employment of an administrative employee, other than a Provost, a Vice President, the Chief Diversity Officer, an Academic Dean an Academic Department Head, a Coach, or a Hall Director, the University shall notify the administrative employee at least ninety (90) calendar days before the effective date of such non-continuation. If a decision is made after the completion of one year of employment to not continue the employment of such an administrative employee, the University shall notify the administrative employee at least one (1) year before the effective date of such non-continuation.

Cross Reference:

[Sec. 6-001\(4\)](#). Definition of "Administrative Employee."

[Sec. 6-001\(7\)](#). Definition of "At Will."

- b. *Provost, Vice President, Chief Diversity Officer, Academic Dean, and Academic Department Head*. If a decision is made during the appointment period not to continue the appointment of a Provost, a Vice President, the Chief Diversity Officer, an Academic Dean or an Academic Department Head, the University shall so notify the Provost, Vice President, Chief Diversity Officer, the Academic

Prior Board Action:

October 11, 1996.

February 13, 1999.

Sec. 6-109. Authority to Terminate Employment.

The Board delegates to the President the authority to terminate the employment of all employees, to give notices required by this part, and to make determinations with respect to payment in lieu of notice and/or reassignment, all in accordance with this part. Any delegation of this authority by the President must be in writing. The President may not delegate the authority to terminate an administrative employee. The President must notify the Board, in advance of any action he/she intends to take under this section with respect to a Provost or Vice President.

Cross Reference:

Presidential delegation.

[Sec. 6-001](#). Definitions.

[FSU-HRPP 04:08](#). Human Resources Policies and Procedures, *Termination of Employment*

Prior Board Action:

October 11, 1996.

February 13, 1999.

November 7, 2008.

Sec. 6-110 Policy in Regard to Non-Continuance of Employment.

1. *At Will*. All administrative employees and other employees who are not designated as "just cause" under Sec. 6-110(2) of Board policy or collective bargaining agreements are employed with the University on an "at will" basis.

Cross Reference:

[Sec. 6-001\(7\)](#). Definition of "At Will."

October 11, 1996.

February 13, 1999.

November 11, 2005.

Sec. 6-107. *Prior Notification to Board Regarding Nominees for Provost and Vice Presidential Appointments.*

The President shall notify the Board in advance of the names of people to be recommended for Provost and Vice Presidential appointments, and of the proposed terms of their appointments, prior to seeking Board approval and prior to any public announcement with regard thereto.

Prior Board Action:

October 11, 1996.

February 13, 1999.

November 7, 2008.

Sec. 6-108. Authority to Take Corrective Action with Employees.

The Board delegates to the President and his or her authorized designees the authority to take corrective action with employees, up to and including decision-making leave, with or without pay. Any delegation of this authority by the President must be in writing.

1. Any corrective action or discipline of employees must be in accordance with the applicable collective bargaining agreement provisions, if any.
2. If the employee is not satisfied with the decision of the President or of the President's designee, the employee may file a grievance under a grievance procedure to be adopted by the President. Employees covered by a collective bargaining agreement must follow the provisions of that agreement if they wish to contest any corrective action (referred to as "discipline" in collective bargaining agreements) or discharge decisions.

Cross Reference:

Presidential delegation.

[FSU-HRPP 04:07](#). Human Resources Policies and Procedures, *Corrective Action Guidelines*

- d. All other employees shall be appointed for an undefined period on an at will basis, except some temporary employees who may be appointed for a specified period of time on an at will basis.

Cross Reference:

Presidential delegation.

[FSU-HRPP 04:05](#). Human Resources Policies and Procedures, *Hiring*

Human Resources Policies and Procedures, *Probationary Periods for Non-Bargaining Employees*

Prior Board Action:

May 1, 2007.

November 7, 2008.

Sec. 6-105. *Requirement That There Be a Sufficient Unencumbered Balance.*

The President, or his/her authorized designee, shall not employ any individual without first determining that there is a sufficient unencumbered balance in the hiring department's budget or fund balance to fund the amount to be expended. A Provost and the Vice Presidents shall have the authority to transfer positions within a division.

Prior Board Action:

October 11, 1996.

February 13, 1999.

November 7, 2008.

Sec. 6-106. *Reporting Requirement regarding University Staffing Levels.*

The President must provide to the Board of Trustees, on not less than a semi-annual basis, a report on University staffing levels containing full-time and full-time temporary position FTE data for all campuses.

Prior Board Action:

Except as otherwise provided in this subpart, the Board retains the authority, after consultation with the President, to employ or terminate the employment of those classes of personnel as to which authority is not specifically delegated to the President.

Prior Board Action:

October 11, 1996.

February 13, 1999.

Sec. 6-104. Authority to Hire Employees.

The Board delegates to the President and his or her authorized designees, the authority to hire employees and to execute individual written employment contracts within the provisions of applicable Board policy. Any delegation of this authority by the President must be in writing.

Prior Board Action:

October 11, 1996.

February 13, 1999.

1. *Appointment.* Employees shall receive appointments as follows:
 - a. An administrative employee, other than a Provost, Vice President, the Chief Diversity Officer, an Academic Dean or an Academic Department Head will be hired initially for a one (1) year period.
 - b. A Provost, a Vice President, the Chief Diversity Officer, an Academic Dean or an Academic Department Head will be hired for a three (3) year appointment ("appointment period"). At the end of the first year of the appointment period, and at the end of each year thereafter, the President is delegated the authority to extend the appointment period by one (1) or more years; provided that the appointment period shall at no time exceed a total of three (3) years in duration. The President shall notify the Board of Trustees prior to extending the duration of an appointment under the authority granted in this Sec. 6-109(1)(b), and prior to notifying the affected administrative employee or making any public announcement with regard thereto.
 - c. A support employee's initial appointment shall be for a period of six (6) months, during which time the employee will be considered a probationary employee. Probationary employees are given no assurance of continued employment and their employment may be terminated at any time, with or without notice, and with or without cause. Probationary periods may be extended, with notice to the employee, because of performance, conduct or administrative issues.

Part 6 Subpart 6-1 Personnel Hiring Policy

Sec. 6-101. *Statement of Principles.*

Article VIII, Section 6, of the Michigan Constitution of 1963 provides that the Board shall have general supervision of the University and control and direction of all expenditures of the University's funds, and that the President shall be the principal executive officer of the University. In order for the Board to exercise its powers fully and responsibly, it must have a clearly defined policy for engaging individuals for personal services.

Cross Reference:

[Subpart 2-1](#). The University and the Board of Trustees Under the Michigan Constitution and Related Law

Sec. 6-102. *Equal Employment Opportunity.*

All recruiting and hiring of University personnel shall be in compliance with applicable law and shall follow the Equal Employment Opportunity Policy and the University's Affirmative Action Plan and commitment to Equal Employment Opportunity. In accordance with this commitment, the University will make all decisions regarding recruitment, hiring, promotion, and all other terms and conditions of employment based on employment-related criteria and qualifications in a manner that does not discriminate with respect to an employee or applicant in any way which violates the University's Policy on Non-Discrimination or applicable State or Federal laws. This Section applies to all employment with the University.

Cross Reference:

[Part 7](#). Equal opportunity and non-discrimination policy.

[FSU-HRPP 04:04](#). Human Resources Policies and Procedures, *Equal Employment Opportunity*

Prior Board Action:

October 11, 1996.

February 13, 1999.

October 19, 2001.

Sec. 6-103. *Authority Retained by the Board.*

Appendix 9a: Tenure and Post Tenure Review Policies

1 9. Copies of formally approved University procedures, rules and/or
2 policies. These documents will be provided within ten (10) working days of receipt of a
3 written request from the FFA.

4 B. Member Responsibilities:

5 Members are responsible for providing the Employer with the address and telephone
6 number at which they are to be contacted. The Employer has no liability if written notices are
7 sent to such addresses or calls are made to such telephone numbers.

8 2.11 Non-Discrimination

9 The Employer and the FFA both recognize their responsibilities under federal, state and
10 local laws pertaining to fair employment practices as well as the moral principles involved in the
11 area of civil rights. Accordingly, both parties reaffirm by this Agreement the commitment not to
12 discriminate against any person or persons because of race, creed, color, religion, national origin,
13 ancestry, age, gender, marital status, sexual preference, handicap, FFA or MEA-NEA affiliation.
14 Any member claiming a violation of this Section must seek relief in the appropriate legal forum
15 and may not use the grievance process unless the nature of the alleged discrimination is not a
16 violation of the law.

17 **Section 3 - TENURE**

18 3.1 Definitions and General Conditions

19 A. Tenure is the right to continual employment in a bargaining unit position
20 until voluntary separation from FSU employment, lay-off or termination for just cause under the
21 contractual process in Section 4.

22 B. All employees of the University awarded tenure prior to the ratification of
23 this Agreement shall retain such tenure.

24 3.2 Employer Tenure Policy

25 A. The tenure policy described in this Agreement applies only to non-tenured
26 members. Tenure shall not be acquired automatically by length of service, but rather through the
27 criteria and procedures set forth in this Agreement. There shall be no arbitrary establishment of
28 a fixed proportion of tenured to non-tenured members by the FFA, the Employer or any
29 division(s) thereof. Only continuous appointment as a member shall be counted toward
30 qualification for tenure. However, except in the specific case of FSU administrators, the
31 following applies:

32 1. One full year's absence, or less, from the bargaining unit but not the
33 University shall not be considered an interruption of continuous service with respect to
34 qualification for tenure.

35 2. All time in excess of one full year's absence from the bargaining unit
36 but not the University shall, by rounding to the nearest academic semester,
37 correspondingly reduce the time counted toward qualification for tenure previously
38 accumulated in the bargaining unit.

1 B. The granting of tenure results from a deliberative process involving a
2 department tenure review committee, the department head, the dean, the provost/vice president
3 for Academic Affairs, and the president of FSU.

4 C. New members may be granted tenure at the time of their initial appointment
5 subject to prior concurrence of a majority of the tenured members of the department, the
6 department head, the dean, the provost/vice president for Academic Affairs, and the president of
7 FSU. The subject member must have previously attained tenure at the University or another
8 regionally accredited, post-secondary or first professional-degree-granting institution.

9 3.3 Department Tenure Policy and Procedures

10 Each department shall set policy and procedures for the attainment of tenure within the
11 following guidelines:

12 A. The tenured members of each department shall be responsible for:

13 1. Devising the department policy and procedures for attainment of
14 tenure. This process may include the establishment of a subcommittee(s).

15 2. Determining, as part of the policy and procedures, the criteria for
16 attainment of tenure based in part on the following:

17 a. Assigned professional responsibilities, such as teaching,
18 advising, counseling, or librarianship;

19 b. Professional development, such as research, scholarship,
20 creative endeavors and/or consulting; and,

21 c. Service, such as service on committees, service to the student
22 body, service to the profession, and/or professionally-related community service.

23 3. Establishing tenure review policy and procedures for: reviewing the
24 applicant's material, providing for applicant's rebuttal, and evaluating the rebuttal and
25 material. This review must occur prior to submission of the tenure review committee's
26 final recommendations to the appropriate department head.

27 4. Amending tenure review policy and procedures.

28 B. Any proposed amendment(s) must be submitted to the department head by
29 January 30. The department head shall forward the proposal and his/her recommendation to the
30 dean by February 15.

31 C. The dean shall forward the proposal and his/her recommendations to the
32 provost/vice president for Academic Affairs who shall either accept or reject the proposed
33 amendments by April 15. Failure by the provost/vice president for Academic Affairs to act upon
34 the submitted amendments within the timeline given shall constitute disapproval thereof and the
35 proposed amendment shall not be effective.

1 D. The provost/vice president for Academic Affairs may impose amendments to
2 the policies and procedures, at any time, only when such amendments are based upon the
3 institutional necessity to conform with federal, state and/or local laws and/or regulations.
4 Amendments imposed under this provision are subject to the grievance procedure of this
5 Agreement as an FFA grievance and shall begin at 9.3. D. Step 4 of such procedure.

6 E. Amendments to tenure review policies and procedures created under this
7 Agreement shall apply only to those tenure applicants hired after formal implementation of the
8 amendments. Tenure applicants hired prior to the implementation of the amendments may elect
9 to be reviewed by the newly implemented policies and procedures or the policy and procedures
10 otherwise applicable pursuant to this Agreement. Selection of amended policy and procedures
11 by a member shall not extend his/her non-tenured period.

12 F. Present Tenure Policies and Procedures will remain in effect until such time
13 as amended in accordance with this Agreement.

14 3.4 Evaluation and Reappointment/Non-Reappointment of Non-Tenured Faculty

15 A. Prior to the attainment of tenure, all Board-appointed members shall be on a
16 non-tenured appointment. Non-tenured appointments are renewable appointments of an
17 academic year or twelve (12) months in length.

18 B. Except as otherwise provided in 3.2.C above, all new members must serve a
19 non-tenured period prior to applying for tenure. The non-tenured period shall commence with
20 the first fall semester of a member's non-tenure appointment. A non-tenured member must
21 apply for tenure no later than his/her fifth academic year. Failure to apply for tenure
22 consideration shall result in denial of tenure. A non-tenured member with an initial academic
23 rank of instructor or assistant professor may not apply for tenure prior to his/her fifth year. A
24 non-tenured member with an initial academic rank of associate professor may not apply for
25 tenure prior to his/her fourth year. A non-tenured member with an initial academic rank of
26 professor may not apply for tenure prior to his/her third year.

27 C. During his/her first semester of appointment and prior to any evaluation, the
28 non-tenured member shall receive, in writing, the effective department tenure and evaluation
29 policy and procedures. The chair of his/her department tenure review committee shall provide
30 this document. This department policy and procedures shall provide a basis for the decision to
31 renew non-tenured appointments and shall provide a basis for determining the attainment of
32 tenure itself.

33 D. All non-tenured members shall be observed by at least one tenured faculty
34 member of the tenure review committee during the fall and winter semesters of each year, with
35 the exception of the year tenure is requested.

36 E. The non-tenured member shall be evaluated annually by the department
37 tenure review committee by November 1 of his/her first and subsequent academic years of
38 service. These evaluations shall include recommendation for reappointment or non-
39 reappointment and shall be forwarded to the department head.

1 F. At each of these annual evaluations, the member shall be afforded an
2 opportunity to submit to this committee any documentation to support his/her continued non-
3 tenured appointment. The tenure review committee will advise the non-tenured member of its
4 preliminary evaluations and recommendation for reappointment or non-reappointment by
5 November 1. The non-tenured member shall be afforded an opportunity to meet with the tenure
6 review committee to discuss its preliminary recommendation. Such meeting shall take place by
7 November 10. The tenure review committee will forward in writing the final evaluation and
8 recommendation to the non-tenured member and the appropriate department head by November
9 20.

10 1. On or before November 30, a member who disagrees with any or all of
11 the TRC's annual evaluation/recommendation must deliver a written response to the
12 department head. The response must identify all aspects with which there is
13 disagreement and the factual basis for such disagreement.

14 2. The written response by the member will be attached and remain with
15 the TRC'S evaluation/recommendation.

16 G. The non-tenured member shall be evaluated annually by the appropriate
17 department head in a manner consistent with Section 3.3.A.2. The department head will
18 provide a written copy of his/her evaluation and recommendation to the member by December
19 10. The department head will also forward written copies of his/her
20 evaluation/recommendation, the TRC's evaluation/recommendation, and the member's
21 response (if any) to the dean by December 10.

22 1. On or before December 20, a member who disagrees with any or all of
23 the department head's annual evaluation/recommendation must deliver a written response
24 to the dean. The response must identify all aspects with which there is disagreement and
25 the factual basis for such disagreement.

26 2. The written response by the member will be attached and remain with
27 the review.

28 H. On or before January 15 the dean will submit his/her recommendation and all
29 materials submitted in accordance with 3.4.E-G to the provost/vice president for Academic
30 Affairs. The decision to grant or deny the first non-tenure reappointment rests solely with the
31 provost/vice president for Academic Affairs. All subsequent reappointment decisions require
32 affirmative recommendations by both the appropriate tenure review committee and the
33 provost/vice president for Academic Affairs. However, failure by the tenure review committee
34 to file its recommendation with the department head in a timely manner shall constitute
35 complete concurrence with the decision of the provost/vice president for Academic Affairs with
36 regard to reappointment or non-reappointment of the non-tenured member.

37 I. The timetable for formal notice of reappointment or non-reappointment shall
38 be as follows:

39 1. Not later than March 15 of the first year of service;

1 2. Not later than January 30 for each subsequent year except for the year
2 tenure is requested.

3 J. In the case of non-reappointment, the specific reasons for denial shall be
4 cited in writing.

5 K. In the event the tenure review committee and the provost/vice president for
6 Academic Affairs concur in recommending reappointment, the reappointment is granted. In any
7 other scenario, reappointment is denied as described below:

8 1. In the event the tenure review committee and the provost/vice
9 president for Academic Affairs both recommend against reappointment, the
10 reappointment is denied and the member may appeal to the president. This appeal is
11 limited to a claim that the contractual and/or department/college procedures were not
12 followed

13 2. In the event that either the tenure review committee or the provost/vice
14 president for Academic Affairs recommend against reappointment, the reappointment is
15 denied and the member may appeal to the president. This appeal is not limited to
16 procedurcs.

17 3. Any appeal must be in writing, be delivered to the office of the
18 president of FSU on or before April 15 for members in their first year of service and
19 February 15 for each subsequent year. The appeal must state the specific reasons for the
20 appeal.

21 4. The decision of the president of FSU is final, binding and not subject
22 to arbitration.

23 L. The failure of the tenure review committee to comply with any of its
24 obligations under Section 3 is exempt from the grievance process and the Employer shall have
25 no liability because of such failure.

26 3.5 Attainment of Tenure

27 A. By October 1 of the tenure decision year, the member must apply for tenure
28 and present evidence in support of his/her application.

29 B. By November 1, the tenure review committee will advise the applicant of its
30 evaluation and intended recommendation. By November 15, the applicant may request in
31 writing a meeting with the tenure review committee, which shall be scheduled as soon as
32 reasonably possible. The final recommendation of the tenure review committee shall not be
33 made until after the meeting.

34 C. The tenure review committee shall prepare a written report, with all
35 supporting documents, containing its recommendations. This report shall not include the
36 committee deliberations or a personnel-specific record of the vote. The written
37 recommendation shall be one of the following:

1 1. Grant tenure, beginning with the start of the University's next
2 academic year:

3 2. Grant one (1) additional non-tenured year during which the applicant
4 must fulfill specific conditions that are determined by the provost/vice president for
5 Academic Affairs following input from the TRC, department head and dean. During that
6 conditional year, the tenure application process will again be followed. In the event of
7 denial of tenure, employment will be terminated at the end of the academic year in which
8 tenure is denied; or

9 3. Deny tenure and terminate employment at the end of the next regular
10 academic year.

11 D. By December 15, the final report and recommendation by the committee
12 together with supporting data shall be presented to the department head and to the tenure
13 applicant.

14 E. Failure by the tenure review committee to timely deliver its recommendation
15 to the department head constitutes concurrence with the decision of the provost/vice president
16 for Academic Affairs.

17 F. The department head shall attach his/her evaluation and recommendation and
18 shall forward all material to the dean. The dean shall forward the recommendations and
19 supporting documentation to the provost/vice president for Academic Affairs and shall append
20 his/her recommendation and evaluation. Neither the department head nor the dean may change
21 the tenure review committee's recommendations.

22 G. By March 1, the provost/vice president for Academic Affairs shall notify, in
23 writing, all applicants for tenure of his/her decision. Failure by the provost/vice president for
24 Academic Affairs to act on the recommendations constitutes his/her concurrence with the tenure
25 review committee's recommendation.

26 H. If either the provost/vice president for Academic Affairs or the tenure review
27 committee recommends the granting of an additional year, that year is granted. A member can
28 be granted only one extension of the non-tenured period. When the tenure review committee
29 recommends the granting of tenure and the provost/vice president for Academic Affairs
30 concurs, tenure is awarded. In all other cases, tenure is denied.

31 I. A member denied tenure may appeal the decision in writing to the president
32 of FSU by March 15. The president of FSU, following a review of the tenure materials, shall
33 communicate in writing his/her decision to either grant tenure, deny tenure, or grant one
34 additional non-tenured year, provided that such a year has not previously been granted. The
35 decision of the president of FSU is final, binding and not subject to arbitration.

36 J. The failure of the tenure review committee to comply with any of its
37 obligations under Section 3 is exempt from the grievance process and the Employer shall have
38 no liability because of such failure.

1 3.6 Academic Administrator Appointment with Tenure

2 A. Academic department heads, directors, deans, the provost/vice president for
3 Academic Affairs and the president may be granted tenure subject to the following conditions:

4 1. The academic department head, director, dean, provost/vice president
5 for Academic Affairs and president must possess qualifications appropriate to the
6 academic discipline in which tenure is conferred.

7 2. The academic department head, director, dean, provost/vice president
8 for Academic Affairs and president must have previously attained tenure at a regionally
9 accredited post-secondary or first professional-degree-granting institution.

10 3. The tenured faculty in the academic discipline in which the person is
11 to be conferred tenure must be provided the opportunity to review and share comments
12 with their department head, dean, and the provost/vice president for Academic Affairs or
13 the president of FSU on the candidate's qualifications preceding the offer of tenure to the
14 candidate.

15 B. Academic administrators who are granted tenure according to Section 3.6.A
16 will not accrue seniority during the course of their administrative appointment. If an academic
17 administrator with tenure moves from his/her administrative position to a faculty position,
18 he/she will commence accruing seniority in the bargaining unit and will thereafter be subject to
19 all provisions of this Agreement, except those having to do with the attainment of tenure.

20 **Section 4 - REPRESENTATION AND PROFESSIONAL CONDUCT**

21 4.1 Discipline

22 A. The Employer and the FFA recognize a mutual responsibility for promoting
23 professional conduct that encourages quality in the educational process, thereby reflecting
24 favorably upon the University. Breaches of professional conduct, as differentiated from
25 incompetence, are subject to discipline including, but are not limited to: abuse of sick leave and
26 other leaves, excessive tardiness, willful deficiencies in professional conduct and/or
27 performance, violation of Employer policies, regulations and administrative directions not
28 inconsistent with the terms of this Agreement, and violation of the terms of this Agreement.
29 Alleged breaches of professional conduct shall be reported promptly to the offending member.

30 Issues pertaining to competence will be handled through evaluation.

31 B. Disciplinary action shall be defined as any oral or written warning; oral or
32 written reprimand; disciplinary probation; suspension, except for suspensions pending
33 investigation; discharge for misconduct or any combination of the above, of which a formal
34 record is kept or of which the disciplined member is thereafter formally prejudiced. In no case
35 will a member be subjected to disciplinary action without just cause or on the basis of any
36 anonymous information.

37 C. A member shall be notified of the right to have FFA representation at any
38 meeting at or from which disciplinary action, as defined in this Section, may result. In no event

Post-Tenure Review Policy and Procedures

The policy establishes the university-wide standards for performance appraisal and provides for department/unit adaptation of the standards. It establishes the procedures for review of the teaching, scholarship and service responsibilities of faculty members using those standards. In addition, it provides a mechanism for development of university-wide student assessment of instruction.

A. Standards

1. The university-wide standards describe the level of performance expected of faculty members in the areas of teaching, scholarship, and service. It is recognized that there are variations in faculty assignments, teaching styles and interests. Moreover, it is recognized that pedagogy and methodology may differ between departments. For that reason, not all of the standards may be applicable for review of a given faculty member. However, because of the importance of the tenured faculty to the University, these persons should demonstrate capability in the three areas previously mentioned using the unit-specific standards derived from the university-wide standards given below:

Teaching -

- Meets expected program/departmental outcomes/objectives for the course taught.
- Is knowledgeable of current developments in one's discipline and retains clinical/professional competence as appropriate.
- Demonstrates consistency in the application of a defined teaching methodology.
- Meets individual student needs through established office hours and advising of designated student advisees.
- Presents material in an organized fashion.
- Provides course guidance by a syllabus with course outline, objectives, basis for evaluation, and grading policy.
- Evaluates student learning consistent with course objectives.
- Provides timely and corrective feedback to students.
- Maintains a classroom atmosphere that is conducive to learning and respectful of differences.
- Participates in departmental deliberations on curricular and pedagogical matters.

Scholarship -

- Participates in curriculum innovation and development.
- Demonstrates evidence of scholarly activity including research, creative activity, or application of research or pedagogy in one's discipline or area of professional responsibility.
- Remains current in the field as evidenced by attending professional meetings, giving presentations, or publishing papers.
- Participates in professional development activities and demonstrates continued professional growth.

Service -

- Serves on departmental, college and University committees.
- Is a member of appropriate professional organizations.
- Participates in community activities that are professionally related.
- Engages in voluntary service to the University community including student organizations.

B. Post-tenure Review Process Original Documentation

1. During the first part of the 1998-99 academic year, the colleges/departments will adapt the university-wide standards of performance to reflect the specific needs of the college/department, such as standards for clinical instruction, consulting, program and accreditation review, etc. By February 1, 1999, the department head or equivalent, providing an opportunity for input from the faculty, will submit proposed modifications to the standards for approval to the dean or the Vice President for Academic Affairs (VPAA), if there are no department heads. If the majority of the faculty agree on the unit specific adaptations, that information shall be forwarded to the dean by the faculty. The dean or VPAA shall approve or modify the unit-specific standards on or before March 1, 1999. If they do not adopt the standards submitted by the department head or equivalent, the dean or VPAA must inform the faculty, in writing, of the reasons for modifying the proposed standards.

2. A list of the recommended components of the faculty portfolio for the department/college will be submitted to the dean for information by March 1, 1999. The department head or equivalent will develop the list after actively seeking input from the faculty. If the majority of the faculty agree on the components of the portfolio, that information shall be forwarded to the department head or equivalent by the faculty. In addition to student assessment of instruction, the portfolios may include a current resume, faculty self-assessment, faculty peer review, administrative observation, and other supporting documentation. These portfolios will be utilized for all reviews conducted after July 1, 1999. The department head must inform the faculty, in writing, of the reasons if the list of portfolio components adapted by the faculty is not adopted.

3. Standards of expected performance in areas other than scholarship and service have yet to be developed for the librarians and counselors. These standards will be developed by a representative group of faculty members and administrators appointed by the VPAA. The VPAA will appoint the committee by May 15, 1998. The committee will submit standards to the VPAA by September 1, 1998. The VPAA will accept or modify the standards by October 1, 1998. The standards for counselors and librarians will then be adapted as given in Section 2 above.

4. The reviews of the first group of faculty will be undertaken during the 1998-99 academic year. By May 8, 1998, the department head or equivalent administrator, with input from the faculty, submits the initial order in which tenured faculty members will be reviewed to the dean. The initial schedule should provide that all tenured faculty members are reviewed once within a five-year period. ***This policy was amended by the Vice President of Academic Affairs as of November 15, 2007 changing the review period to once within a five-year period.*** The department head or equivalent administrator shall solicit volunteers for review prior to determining the initial list. This

order should be flexible so faculty members desiring to combine post-tenure review with application for promotion/merit may request an early and concurrent post-tenure review. As additional faculty members become tenured, they will be added to the list so that they are reviewed in the fifth year after their tenure becomes effective. ***This policy was amended by the Vice President of Academic Affairs as of November 15, 2007 changing the review period to the fifth year after tenure becomes effective.***

5. By May 15, 1998, their respective deans will officially notify faculty members scheduled for post-tenure review during the 1998-99 academic year. The faculty members will receive a copy of the university-wide standards. They will submit material similar to that required by the promotion/merit committee in their respective units but directed to the list of university-wide standards describing the level of performance expected of faculty members in the areas of teaching, scholarship, and service. In all subsequent years, the notification will be done by May 1.

6. On or before December 1, the faculty member being reviewed shall submit his/her portfolio to the evaluator. In many cases, the evaluator will be the department head. In those colleges where there are no departments, the dean or another administrator designated by the dean will be the evaluator. It is recognized that data from the University-wide standardized student assessment of instruction instrument will not be available for reviews in the 1998-99 academic year.

7. On or before January 30, the evaluator will meet individually with faculty members to discuss the post-tenure review evaluation. The individual faculty member shall receive a preliminary copy of the post-tenure review evaluation at least ten working days before the meeting is scheduled. This session will include a discussion of progress toward meeting program/departmental/ college goals and exploration of faculty development opportunities that might be appropriate.

The review will indicate the faculty member's strengths and weaknesses. The evaluator may state that the performance exceeds department/unit expectations.

Each faculty member being reviewed will develop a written document outlining goals for the faculty member for the coming review cycle; a mechanism for determining progress toward those goals will be included. This document will be developed in consultation with the evaluator involved. This information in the development plan will be used as the basis for the next evaluation. If performance in a given area is deemed deficient, the next review may be scheduled as soon as one year or up to four years in the future. The faculty member will receive a copy of the plan and will sign the development plan indicating that the plan has been discussed with the faculty member. A faculty member may request that another faculty member attend the discussion of the post-tenure review evaluation. The faculty member who disagrees with all or part of the evaluation has fifteen working days from the date of the meeting to respond to the evaluation in writing to the evaluator. The post-tenure review evaluations and written responses, if any, will be forwarded to the dean or the next highest administrator on February 21.

Also if the faculty member disagrees with the evaluation, he/she may request a meeting with the next highest administrator. This request must be made within 15 working days of the meeting with the evaluator. Upon such a request, the administrator shall meet with the faculty member to discuss the review within 15 working days of the request. The administrator will give the faculty

member a written response to his/her areas of disagreement within 15 working days of the meeting. This appeal right is limited to one level above the evaluator.

8. The dean shall submit his/her report on the post-tenure review process to the VPAA on or before March 15. On completion of the process, the portfolio is returned to the faculty member. The dean will forward the post-tenure review evaluation and the faculty response, if any, to HRD for placement in the faculty member's official file. All correspondence resulting from review by the next highest administrator will also be placed in the official file in HRD. The original evaluation and all subsequent correspondence will be considered to be the post-tenure review.

9. On or before April 15, the VPAA will report on the post-tenure review process to the President.

C. Summary of Calendar After the First Year

May 1 - The dean notifies faculty members that they will be reviewed the following year and provides them with a copy of the departmental/college expectations and a list of material to be included in the portfolio.

December 1- Portfolios for evaluation are submitted to the evaluator. Data from student assessment of instruction must be considered in the evaluation.

January 30 - Last day to hold the meeting between administrator and faculty member to discuss post-tenure review evaluation. Faculty member must receive a preliminary post-tenure review evaluation at least ten working days prior to the scheduled meeting. Faculty member must submit written response within fifteen (15) working days of the meeting to be included as part of the post-tenure review evaluation.

February 21 - Evaluator forwards post-tenure review evaluation and the written response of the faculty, if one exists, to the Dean or VPAA if appropriate.

March 15 - The Dean forwards his/her report on post-tenure review to VPAA.

April 15 - The VPAA will report on post-tenure review process to the President.

D. Student Assessment of Instruction Original Documentation

Prior to May 15, 1998, the VPAA and the president of the Academic Senate will appoint a joint committee composed of individuals from the Deans' Council and the Academic Senate to make recommendations on the selection of an instrument for student assessment of instruction. The committee may recommend a nationally normed instrument or develop a Ferris-specific instrument. The committee will recommend an evaluation process including but not limited to the frequency of evaluation, the classroom administration of the evaluations, the compilation of the data from the evaluations, and the mechanism for sharing that information. The VPAA will submit the recommendations to the Deans' Council and the Academic Senate for advice by September 1, 1998. The VPAA shall approve selection of the instrument and the evaluation process no later than October

1, 1998 so that the instruments can be used during the Fall 1998 semester. Additional questions may be added by the department/unit.

E. Summary of Calendar After the First Year

By October 1 - Results of Spring semester student assessment of instruction provided to faculty members.

November 1/December 1 - Fall semester student assessment of instruction instruments administered.

By March 1 - Results of Fall semester student assessment of instruction provided to faculty members.

April 1 - April 20 - Student assessment of instruction instruments are administered in Spring semester classes.

Appendix 9b: Faculty Load Policy

ACADEMIC AFFAIRS POLICY LETTER

ANNUALIZED WORKLOAD FOR INSTRUCTIONAL FACULTY:

July 25, 2007

98:1 REVISED

1. All examples will be based on a standard workload of 24 semester hours per academic year, excluding Summer (recognizing the differences between colleges and between departments within colleges, 24 hours shall neither be a minimum nor a maximum).
2. No more than two-thirds ($2/3$) of an annual workload will be assigned in any one semester unless the member agrees. On a semester hour basis, where 24 hours is the standard workload, sixteen (16) semester hours would be two-thirds ($2/3$) of an annualized load.
3. A member with a full workload, including released time, may teach a maximum of five (5) overload credit hours per semester under this policy.
4. If the department head/chair can document to the dean that a faculty member in his or her college will be assigned and has agreed to teach an overload in the fall semester and will have a full load or an overload in the spring semester, the fall overload will be paid during the fall semester.

Revised July 25, 2007

EXTRACTED FROM:
WWW.FERRIS.EDU/HTMLS/ADMINISTRATION/ACADEMICAFFAIRS/
POLICYLETTERS/ANNUALIZED.PDF
ON 25 APRIL 2014

Appendix 10: Bulldog Values

Bulldog Values

Your commitment to being a student at Ferris State University begins with an understanding of and appreciation for the Core Values of the institution which are:

Collaboration	Excellence
Diversity	Learning
Ethical Community	Opportunity

Embodied in the University's Core Values are certain expectations of you as a member of our learning community, including, but not limited to, the following:

As a Ferris State University student, you will be an active learner.

- It is expected that you attend class. Appropriate class attendance includes being on time, coming prepared and being attentive.
- It is expected that you study. Studying is an intentional, deliberate act requiring hard work. This includes seeking out the various resources designed to help you be academically successful.
- It is expected that you will treat your professors and fellow classmates with courtesy and respect.
- It is expected that you will be ethical in your scholarship and will practice academic integrity. This includes properly crediting others for their ideas that you may find useful.

As a Ferris State University student, you will take responsibility for your health and wellness.

- It is expected that you recognize that eating properly, getting adequate sleep and exercise are all factors in maintaining your health and that good health is conducive to your success.
- It is expected that you recognize that the use/abuse of alcohol and other drugs is detrimental to your health and a potential barrier to your success.
- It is expected that you will be responsible for your wellness and make use of appropriate University resources to assist you as needed.

As a Ferris State University student, you will be an ethical member of the University community.

- It is expected that you respect the rights and property of others, recognizing that this includes the larger community of Big Rapids.
- It is expected that you will discourage bigotry and strive to learn from differences in people, opinions and ideas.
- It is expected that you abide by the Student Code of Community Standards and the laws of the State of Michigan.
- It is expected that you involve yourself in leadership, service and/or personal development opportunities outside of the classroom as part of your comprehensive educational experience.

Extracted from:

http://www.ferris.edu/htmls/administration/studentaffairs/judicial/bulldog_values/bulldogvalues.htm

on 11 June 2013

Refund Policy

You must contact your regional office for any class drops or withdrawals immediately following your decision to drop or withdraw from a course.

After the first four days of the semester or the first meeting of class, refunds are only made in some cases of total withdrawal from the University.

A reduction in course load (a class withdrawal), after the first four days of the semester or the first meeting of class, is not a basis for a refund.

If you completely withdraw from the University and drop all classes, refunds are made according to the following schedule:

Prior to the 1st day of class - 100%

Between the 1st and 4th day of classes - 100%

From the 5th through the 10th day of classes - 50%

From the 11th through the 20th day of classes - 25%

After the 20th day of classes - no refund

Registration and Academic Guide 2013-2014

Academic Honesty

The University encourages a mature attitude toward learning and sound academic morale, and discourages illegitimate aids in examinations, laboratory work, and homework assignments. Cheating, plagiarism and other forms of academic dishonesty including the acquisition, without permission, of tests and other academic material belonging to a member of the University community, and the sale and/or distribution of such material are in violation of University policy and subject to disciplinary action.

"Cheating" includes, but is not limited to: (1) use of any unauthorized assistance in taking quizzes, tests, or examinations; (2) dependence upon the aid of sources beyond those authorized by the instructor in writing papers, preparing reports, solving problems, or carrying out other assignments; or (3) the acquisition, without permission, of tests or other academic material belonging to a member of the University faculty or staff.

"Plagiarism" includes, but is not limited to, the use by paraphrase or direct quotation, of the published or unpublished work of another person without full and clear acknowledgment. It also includes the unacknowledged use of materials prepared by another person or agency engaged in the selling of term papers or other academic materials.

A student who has been found to be in violation of academic misconduct may receive a failing grade in the course and any of the disciplinary sanctions outlined in the Board of Trustees policy of student responsibilities, including suspension or dismissal from the University.

[Go to Table of Contents](#)

Assigned/Early Registration Information

Dates for early registration are assigned according to hours earned prior to the beginning of the current term. Registration dates will be available on MyFSU about the fifth week of the semester.

[Go to Table of Contents](#)

Class Standing

Class standing criteria is as follows:

Appendix 11: Marketing Materials

Ferris State University 2013-2014

The figures below may be used to plan for the 2013-2014 academic year costs for at Ferris State University effective May 15, 2013. Room & Board is based on the Silver plan in the residence hall with two persons per room. The following rates are based on per credit tuition. Any internet/on-line classes—add \$10 per credit hour.

UNDERGRADUATE
Estimates based on:

MICHIGAN RESIDENT
\$365 per credit hour
(14 credit hours per semester)

U.S. NON-RESIDENT
\$548 per credit hour
(15 credit hours per semester)

	Per Semester	2013-2014
*Tuition	\$5,110	\$10,220
Room and Board	\$4,455	\$ 8,910
TOTAL	\$9,565	\$19,130
**Refundable Fees		
Racquet Facility	\$13	\$26
Student Activity & Govt.	\$21	\$42
Health Center	\$47	\$94
Estimated Costs:		
Books and Supplies	\$443	\$ 886
Personal/Misc/Travel	\$728	\$1,456
ESTIMATED TOTALS	\$10,817	\$21,634

	Per Semester	2013-2014
*Tuition	\$8,220	\$16,440
Room and Board	\$4,455	\$ 8,910
TOTAL	\$12,675	\$25,350
**Refundable Fees		
Racquet Facility	\$13	\$26
Student Activity & Govt.	\$21	\$42
Health Center	\$47	\$94
Estimated Costs:		
Books and Supplies	\$ 443	\$ 886
Personal/Misc/Travel	\$1,069	\$2,138
ESTIMATED TOTALS	\$14,268	\$28,536

PHARMACY \$591 per credit hour

\$887 per credit hour

OPTOMETRY \$603 per credit hour

\$905 per credit hour

GRADUATE \$497 per credit hour

\$746 per credit hour

DOCTORAL \$586 per credit hour

INTERNATIONAL STUDENT – *Undergraduate Rate \$586 per credit hour

*Undergraduate tuition rate for Junior and Senior students will increase for Spring 2014 semester as follows: Resident \$370 per credit hour, Non-Resident \$555 per credit hour, and International Students \$594 per credit hour.

**If requested during the first five days of classes the Racquet Facility, Student Activity and Student Government, and Health Center Fees can be removed from the student's account. Cash refunds will only be granted for the Student Activity and Student Government fee if the student's account is paid in full.

ROOM AND BOARD RATES (based on double occupancy)

ROOM RATES	PER YEAR	PER SEMESTER	MEALS	GUEST PASSES	BULLDOG BUCKS
PLATINUM	\$9,522	\$4,761	All you care to eat 7 days a week	12	\$300
GOLD	\$9,216	\$4,608	All you care to eat 7 days a week	8	\$150
SILVER	\$8,910	\$4,455	All you care to eat 7 days a week	4	May be purchased separately
BRONZE (weekday plan)	\$8,910	\$4,455	All you care to eat M-F	4	\$100

A private room is an additional \$986 per semester.

Apartment/Townhouse info on reverse side.

Apartments – 12 Month Lease

One Bedroom—East Campus	\$ 9,264
Two Bedroom—East Campus (1 Person)	\$10,332
Two Bedroom (townhouse)-West Campus	\$11,268
Three Bedroom (townhouse)-West Campus	\$12,312
Four Bedroom—East Campus Suites	Fall/Spring Semesters \$5,562 per person
Two Bedroom—East Campus Suites	Fall/Spring Semesters \$7,470 per person

Fall Semester 2013

Late Registration	August 21, 22, 23
First Day of Classes	August 26
Labor Day (no classes)	September 2
Mid-Term Grades Due	October 21
Last Day for “W” Grades (full semester)	October 31
Thanksgiving recess begins (no classes Wednesday Noon)	November 27
Thanksgiving recess ends (classes resume)	December 2
Last Day of Classes	December 6
Examination Week Begins	December 9
Examination Week Ends	December 13
Commencement	December 14
Final Grades Due, 1:00 pm, Registrar’s Office	December 16

Spring Semester 2014

Late Registration	January 8, 9, 10
First Day of Classes	January 13
Martin Luther King Day (no classes)	January 20
Spring recess begins (no classes)	March 8
Mid-term grades due	March 10
Spring recess ends (classes resume)	March 17
Last Day for “W” grades (full semester)	March 28
Mid-semester break begins (no classes)	April 17
Mid-semester break ends (classes resume)	April 21
Last Day of Classes	May 2
Examination week begins	May 5
Examination week ends	May 9
Commencement	May 9, 10
Final Grades Due, 1:00 pm, Registrar’s Office	May 12

Summer Semester 2014

Late Registration	May 19
First Day of Classes	May 20
Memorial Day (no classes)	May 26
Independence Day observed (no classes)	July 4
Last day for “W” grades (full semester)	July 10
Last Day of classes	August 13
Final Grades Due, 1:00 pm, Registrar’s Office	August 18

School of Built Environment

ARCHITECTURE AND FACILITY MANAGEMENT

PROGRAMS:

- Architectural Technology
- Architecture and Sustainability
- Facility Management

FACULTY

STUDENT ORGANIZATIONS

ADVISORY BOARD

EVENTS

GIVING OPPORTUNITIES

ALUMNI INFORMATION UPDATE FORM

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SCHOOL OF BUILT ENVIRONMENT
231-591-3773



Architecture and Facility Management

Since its founding more than 125 years ago, Ferris State University has been a national leader in providing innovative teaching and learning in career-oriented, technical and professional education. The Architecture and Facility Management programs remain true to this mission by providing technical, professional education for all who are passionate about pursuing a career in the built environment.

The program degree options are:

- Associate in Applied Science in Architectural Technology
- Bachelor of Science in Architecture and Sustainability
- Bachelor of Science in Facility Management

Architecture and Sustainability Students Create ArtPrize Piece 2013

Visit us on Facebook at: Architecture at Ferris State University

Visit us on Facebook at: Facility Management at Ferris State

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- program message
- curriculum
- course descriptions
- internships

graduate options

- program enrollment
- faculty

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www.ferris.edu/HTMLS/colleges/technolo/atfm/facility/graduate-option.html



Facility Management

Welcomel

The pioneering Facility Management curriculum at Ferris State University has a proud record of providing a professional cutting edge facility management education. The program is recognized among professionals, corporations and associations as producing qualified, employable graduates with valued technical and management skills. Our graduates currently enjoy successful careers in facility management, architecture and in other professions of the built environment.

Facility Management is a dynamic, evolving profession that faces new challenges and opportunities created by technology advances and global business development. As defined within the International Facility Management Association's (IFMA) official statement, it is:

'...the practice of coordinating the physical workplace with the people and the work of the organization ... integrating the principles of business administration, architecture, and the behavioral and engineering sciences.'

The FSU degree is accredited by the IFMA Foundation for meeting the highest standard in facility management education. All courses in the curriculum qualify for Certified Facility Manager maintenance points.

Ferris State University offers three educational programs dealing with Facility Management designed to meet the needs of various individuals who plan to or currently deal with facilities.

School of Built Environment

FACILITY MANAGEMENT

- [program message](#)
- [curriculum](#)**
- [course descriptions](#)
- [internships](#)
- [graduate options](#)
- [program enrollment](#)
- [faculty](#)

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Curriculum Guide

THIRD YEAR - FALL SEMESTER (15 semester hours)

- FMAN 321 Principles of Facility Management
- FMAN 431 Principles of Space Planning
- ECON 221 Principles of Economics 1 (MATH 110)
- ENGL 311 Advanced Technical Writing (ENGL 250)
- MGMT 301 Applied Management (junior status or permission)

THIRD YEAR - SPRING SEMESTER (15 semester hours)

- FMAN 322 Project Management (FMAN 321)
- FMAN 331 Facility Programming and the Design Process (FMAN 321)
- FMAN 432 Principles of Interior Architecture (FMAN 431)
- BLAW 221 Elementary Business Law
- ECON 222 Principles of Economics 2 (ECON 221)

THIRD YEAR - SUMMER SEMESTER (4 semester hours)

- FMAN 393 FM Internship (completion of JR year or instructor's permission)

FOURTH YEAR - FALL SEMESTER (16 semester hours)

- FMAN 441 Property Development and Planning (FMAN 321, BLAW 221)
- FMAN 451 Planning and Budgeting for Operations (FMAN 321)
- FMAN 489 Capstone Research (senior status)
- MGMT 350 Tools for Decision Making
- STQM 260 Introduction to Statistics (MATH 115)
- Elective Cultural Enrichment Elective (G)

FOURTH YEAR - SPRING SEMESTER (15 semester hours)

- FMAN 499 Capstone Thesis (FMAN 489)
- HVAC 483 HVACR Building Systems
- Elective Cultural Enrichment Elective
- Elective Management Elective
- Elective Science Elective

Continued on next page

School of Built Environment

FACILITY MANAGEMENT

- [program message](#)
- [curriculum](#)
- [course descriptions](#)
- [internships](#)
- [graduate options](#)
- [program enrollment](#)
- [faculty](#)

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Facility Management



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Course Descriptions

FMAN 321 Principles of Facility Management (enrolled in FM Program or permission)

Overview of facility project management concepts and methods. Course topics include: development of project plans and teams, sequencing of activities, development of schedules, estimating of resources, coordinating and monitoring of projects, and relocation and move management.

FMAN 322 Project Management (FMAN 321 or permission)

Overview of facility project management concepts and methods. Course topics include: development of project plans and teams, sequencing of activities, development of schedules, estimating of resources, coordinating and monitoring of projects, and relocation and move management.

FMAN 331 Facility Programming and the Design Process (FMAN 321)

Course will enable students to understand the role of the facility manager in working with the organization and the users of space to identify facility related needs and present them to design professionals. Students will also learn the facility manager's role in strategic planning, facilitating the organization's business plan, and working with outside consultants to develop facilities.

FMAN 393 Facility Management Internship (completion of junior year in FM or permission)

Ten to fifteen weeks of supervised industry training experience in the Facility Management environment.

FMAN 431 Principles of Space Planning (enrolled in FM program)

Introduction to facility space planning concepts; office layouts and furniture systems. Space development and furniture systems will be examined in terms of how they serve the business goals of organizations, including growth and contraction forecasting. The course will include an historical overview of office facilities; development of architectural programs; and teamwork experiences to expose students to multiple roles in the facility development team.

FMAN 432 Principles of Interior Architecture (FMAN 431)

Overview of the elements of interior design and their application. Students apply the principles of interior design with regard to program requirements, context, environment, ergonomics, code and regulatory issues. The visual effects and physical attributes of various components of the interior space are studied.

FMAN 441 Property Development and Planning (FMAN 321, BLAW 221)

Introduction to principles and processes of real estate development. The public sector's role in approving and regulating development will be examined along with the roles and responsibilities of the development team. Leasing practice from the landlord and tenant perspective is examined. Areas of study also include; history of real estate development, market analysis, demographics, zoning, feasibility studies and finance, and development practices and trends.

FMAN 451 Planning and Budgeting for Operations (FMAN 321)

A survey of the operating systems within facilities, and the methodologies used to keep those

School of Built Environment

FACILITY MANAGEMENT

- program message
- curriculum
- course descriptions
- internships
- graduate options
- program enrollment
- faculty

APPLY ONLINE →



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Facility Management Internship

The purpose of the internship experience is to provide a transition from the university curriculum to a practical application found in a professional Facility Management setting. Theories of facility management and practical applications are explored and tested by the student under close supervision of the cooperating organization and a faculty member from Ferris State University. Evaluation of the experience is conducted by the organization, the student, and the faculty member. The student is encouraged to continually review personal knowledge, skills, accomplishments, and professional growth as they relate to preparation for entry into the profession of Facility Management.

Course Policies and Procedures:

- Completion of the third year of the Facility Management program is required.
- The securing of an internship position is the responsibility of the student; however, the faculty will assist in the process whenever possible.
- A minimum of 400 hours of work or ten weeks is required.
- Ten weekly self-assessment reports are required by the student throughout the internship.

A sampling of Internship sites include:

- **Collier County Government**
Naples, Florida
- **DTE Energy**
Detroit, Michigan
- **Dow Chemical Company**
Midland, Michigan
- **Sleeping Bear Dunes National Lakeshore**
Empire, Michigan
- **Facility Engineering Associates**
Fairfax, Virginia
- **Fred Hutchinson Cancer Research Institute**
Seattle, Washington
- **Hyatt Hotels**
San Antonio, Texas
- **Kent Intermediate School District**
Grand Rapids, Michigan
- **Environmental Protection Agency**
Ann Arbor, Michigan
- **Michigan State University**
East Lansing, Michigan
- **Kelly Services Corp. Headquarters**
Troy, Michigan
- **Smithsonian Institution**
Washington D.C.
- **Spectrum Health**
Grand Rapids, Michigan
- **University of Michigan Hospital, Construction Services**
Ann Arbor, Michigan
- **Van Andel Institute**
Grand Rapids, Michigan

School of Built Environment

- FACILITY MANAGEMENT**
- [program message](#)
- [curriculum](#)
- [course descriptions](#)
- [internships](#)
- [graduate options](#)**
- [program enrollment](#)
- [faculty](#)

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Graduate Option

Employment and Educational Opportunities:

The demand for facility management graduates is high and a career in facility management offers many opportunities. The responsibilities of facility managers are varied and numerous. A facility manager may supervise numerous aspects of a company's facilities including architecture, interior design, computer systems, telecommunications, real estate acquisition, security, and more. As such, facility managers wear many professional hats and must be knowledgeable and skilled as follows: communicators, environmentalists, designers & space planners, strategic planners, financial planners, "tekkies", and team leaders (source: International Facility Management Association - IFMA). Facility Management is ideal for those who are detail-oriented, organized, and enjoy working with and managing people.

In a 2011 IFMA survey of facility management practitioners, the average facility manager earned \$99,576. Those with three years or less work experience averaged \$65,000 per year.

The average starting salary for Ferris Facility Management graduates from 2008-2012 was \$41,750, with a range of approximately \$40,000 - \$60,000. These competitive salaries vary depending on geographic location, company size and entry-level position. Many alumni advance quickly in their careers and achieve impressive job positions and salary promotions within three to five years after graduation.

From 2008-2012, 88% of Ferris Facility Management graduates found facility management related employment within three months of graduation (source: Ferris Institutional Testing and Research).

A sampling of employers of Ferris Facility Management alumni include:

- Aramark Corporation
- Boeing
- Dominoes Pizza
- DOW Chemical
- Facility Engineering Associates
- Environmental Protection Agency
- DTE Energy
- FM Systems
- General Services Administration (GSA)
- Gordon Food Services
- Haworth
- Hyatt Hotels
- Intel Corporation
- Meijer Corporation
- U.S. National Park Service
- Pfizer
- Public Works Canada
- Starbucks Coffee
- Spectrum Health
- Steelcase
- University of Michigan
- Walgreens

School of Built Environment

- FACILITY MANAGEMENT**
- program message
- curriculum
- course descriptions
- internships
- graduate options
- program enrollment
- faculty

APPLY ONLINE →



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Program Enrollment

Graduates of the Architectural Technology program at Ferris State University or other accredited institutions will be eligible for admission to the Facility Management program with a minimum GPA of 2.5 or above. Admission will be granted on a competitive basis upon review of all applicants by the faculty.

A student may be admitted into the Facility Management program from other Ferris State University programs and other accredited institutions upon completion of an associates degree or achievement of junior status (60 or more credit hours). A modified curriculum will be developed by the faculty on a case-by-case basis to ensure that competency is achieved and all Ferris State University requirements, including general education requirements, are met.

Students with special circumstances may be allowed to enroll in Facility Management courses but will not be officially admitted into the program until meeting the standard requirements. Until officially admitted, they may be classified as pre-FM students in Facility Management.

NOTE: Ferris State University requires a 2.0 GPA for graduation.

How to Enroll

to apply via the internet go to:

www.ferris.edu/admissions/application

Applicants are encouraged to apply and send official college transcripts to Ferris by February 1 prior to fall entry.

Further information may be obtained by calling the Architecture and Facility Management Department Office at 231-591-3100.

School of Built Environment

ARCHITECTURE AND FACILITY MANAGEMENT

PROGRAMS:

- Architectural Technology
- Architecture and Sustainability
- Facility Management

FACULTY

STUDENT ORGANIZATIONS

- ADVISORY BOARD
- EVENTS
- GIVING OPPORTUNITIES
- ALUMNI INFORMATION UPDATE FORM

APPLY ONLINE →



SCHOOL OF BUILT ENVIRONMENT
231-591-3773



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Printed Program Brochures will be available at the Site Visit.

Appendix 12: TracDat Assessment Data

****Unit Assessment Report - Four Column**

**Ferris State University
Program - Facility Management (B.S.)**

Mission Statement: The mission of the Bachelor of Science in Facility Management degree program is to be a nationally recognized program that provides students with a foundation of concepts, skills and values to effectively begin the practice of facility management; and instills the value of lifelong learning.

Assessment that measures the fulfillment of this mission includes:

- Student demonstration of the ability to think effectively and develop critical thinking skills partnered with vocational readiness.
- Student demonstration of awareness, knowledge and/or competency in course specific skills and content.

*Course outlines are designed to address and weigh content in terms of awareness, knowledge and/or competency based on core competencies developed by IFMA (International Facility Management Association).

- Successful completion the FM internship including positive evaluation from the intern site.
- The ability of students to successfully find employment and/or continue their education.

Advisory Board/Committee Once per year

Meetings:

Next FSU Academic Program 2017-2018

Review:

Accreditor Body: International Facility Management Association (IFMA). The IFMA Foundation has an Accreditation Degree Program for programs that meet excellence in FM Educational Standards.

Accreditor Body - Academic 2013-2014

Year of Next Review:

College: CET

Outcomes	Means of Assessment & Criteria for Success / Tasks	Results	Action & Follow-Up
Program - Facility Management (B.S.) - Critical Thinking - Demonstrate the ability to think effectively and develop critical thinking skills partnered with vocational readiness.	Assessment Method: Student demonstration of knowledge and skills developed during the two-year period of the program are analyzed in FMAN 489; Capstone Research and FMAN 499; Capstone Thesis.	03/01/2012 - 91% of students achieved a grade of C+ or higher on capstone thesis project in spring semester of 2011.	
Outcome Status: Active	Assessment Method Category: Written Product (essay, research paper, journal, newsletter, etc.)	Classification: Criterion Met	Action: 1 - No Action Required
	Criterion for Success: 85% of students will achieved a grade of C+ or higher on a professionally prepared thesis report and oral presentation that demonstrates analysis and synthesis of core IFMA educational competencies.		
	Assessment Method: Administer and review periodic alumni surveys created and generated by FM program faculty.		
	Assessment Method Category:		

Outcomes	Means of Assessment & Criteria for Success / Tasks	Results	Action & Follow-Up
	Survey - Alumni (after one year) Assessment Method: Review of FM curriculum and student preparedness with FM advisory board for relevancy and appropriateness. Assessment Method Category: Survey - Advisory Board		
Program - Facility Management (B.S.) - Professional Standards - Understand the core competencies developed by IFMA (International Facility Management Association); students will integrate these competencies in a management-based approach to facilities. Outcome Status: Active	Assessment Method: Student demonstration of IFMA core competencies are analyzed and synthesized in FMAN 489: Capstone Research and FMAN 499: Capstone Thesis. Assessment Method Category: Written Product (essay, research paper, journal, newsletter, etc.) Criterion for Success: Successful completion and assimilation (grade of C+ or higher) of thesis project by 90% of students.	03/01/2012 - 91% of students achieved a grade of C+ or higher in spring semester of 2011. Classification: Criterion Met Action: 1 - No Action Required	
Program - Facility Management (B.S.) - Analytical Thinking - Think analytically and apply research generated knowledge and quantitative tools to analyze, manage and carry out research. Outcome Status: Active	Assessment Method: Assessment of student research and thesis project by Thesis Faculty Committee. Assessment Method Category: Juried Reviews of Project Criterion for Success: Successful student demonstration of creativity, interpretation of data, and effective approach and solution to problem. 90% of students will achieve a rubric score of 3 or higher (on a scale of 1 to 5).	03/01/2012 - 90% of students scored a 3 or higher in spring semester of 2011. Classification: Criterion Met Action: 1 - No Action Required	
Program - Facility Management (B.S.) - Effective Communication - Use a variety of media to communicate effectively with diverse audiences. Outcome Status: Active	Assessment Method: Review of oral presentations with emphasis on principles of public speaking and use of visual graphics by Thesis Faculty Committee. Assessment Method Category: Presentation(Oral) Criterion for Success: Successful development and delivery of oral presentation by students. 85% of students will	03/01/2012 - 86% of students scored a 3 or higher in spring semester of 2011. Classification: Criterion Met Action: 1 - No Action Required	

Outcomes	Means of Assessment & Criteria for Success / Tasks	Results	Action & Follow-Up
	achieve a rubric score of 3 (on a scale of 1 to 5).		
<p>Program - Facility Management (B.S.) - Leadership and Management - Understand organizational, managerial, ethical and legal principles for the delivery of facility management services.</p> <p>Outcome Status: Active</p>	<p>Assessment Method: Written tests featuring a variety of question methods (multiple choice, true/false, matching, short answer, essay) will be evaluated for student progress, knowledge, comprehension, application, analysis and synthesis of program learning outcomes.</p> <p>Assessment Method Category: Test - Internally Developed - Pre/Post or Post</p> <p>Criterion for Success: Successful passage (grade of C+ or higher) of tests by 85% of students.</p> <hr/> <p>Assessment Method: Review of written assignments, papers and/or projects.</p> <p>Assessment Method Category: Project/Model/Invention</p> <p>Criterion for Success: Successful execution and development (grade of C+ or higher) of writing and technical content by 85% of students.</p>		
<p>Program - Facility Management (B.S.) - Human and Environment Factors - Understand and integrate concepts concerning relationships between the physical work environment, social, psychological and physiological needs of the users. Understand and integrate concepts concerning safe, humane and functional work environments in the context of sustainable ecological practices.</p> <p>Outcome Status: Active</p>	<p>Assessment Method: Written tests featuring a variety of question methods (multiple choice, true/false, matching, short answer, essay) will be evaluated for student progress, knowledge, comprehension, application, analysis and synthesis of program learning outcomes.</p> <p>Assessment Method Category: Test - Internally Developed - Pre/Post or Post</p> <p>Criterion for Success: Successful passage (grade of C+ or higher) of tests by 85% of students.</p> <hr/> <p>Assessment Method: Experience first hand the impact "facilities" have on user groups through program and classroom furnishings, equipment, and various leaning tools.</p> <p>Assessment Method Category: Z - Other - specify</p>		

Outcomes	Means of Assessment & Criteria for Success / Tasks	Results	Action & Follow-Up
Outcome Status: Active	education. Assessment Method Category: Survey - Graduate (Current Year) Criterion for Success: 75% of graduates will demonstrate successful job placement or pursuit of graduate education.	secured employment and 2 students were continuing their education into graduate programs. Classification: Criterion Met Action: 1 - No Action Required	

Program - Facility Management (B.S.) - Curriculum Map

Legend: (A) - Program Assessment, (I) - Introduced, (M) - Mastery, (R) - Reinforced

Component	BI OL 111	BI OL 116	BL AW 221	EC ON 221	EC ON 222	EN GL 311	FM AN 321	FM AN 322	FM AN 331	FM AN 393	FM AN 431	FM AN 432	FM AN 441	FM AN 451	FM AN 489	FM AN 499	GE OG 121	GE OL 121	HV AC 483	MG MT 301	MG MT 302	MG MT 305	MG MT 350	MG MT 373	MG MT 447	STQM 260	
Critical Thinking	R	R	R	R	R	R	R	R	R	A, R	R	R	R	R	A, M	A, M	R	R	R	R	R	R	R	R	R	R	R
Professional Standards			I				I	R	R	R	R	R	R	R	A, M	A, M			R	I	I	I	R	I	R	I	
Analytical Thinking							I	I	R	R	R	R		R	A, R	A, M											
Effective Communication						R	R	A, R	A, R		A, R	A, R		R	A, M	A, M											
Leadership and Management			I	I	I		I	I		R										I	I	I	I		I		
Human and Environment Factors	I	I					I		I		R	R					I	I	R								
Curriculum																											
Internship										A, M																	
Professionalism & Career Potential							I			R					M	M											

Appendix 13: Organizational Chart

FERRIS STATE UNIVERSITY
ACADEMIC AFFAIRS DIVISION

COLLEGE OF ENGINEERING TECHNOLOGY

