Ferris State University

College of Engineering Technology

Architecture and Facility Management Department

Academic Program Review Report

AAS in Architectural Technology

BS in Architecture and Sustainability

Submitted August 15, 2017

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APPENDIX

01

PROGRAM NAME AND HISTORY

It is important to have an understanding of where a program has been in order to fully appreciate where they are and where they would like to be. This section gives programs an opportunity to articulate where they have come from in order to provide the reader a framework for responses given in the remaining sections.

A. PROGRAM HISTORY AND DESCRIPTION

AAS in Architectural Technology

At its inception in the early 1950s, the main goal of the two-year AAS in Architectural Technology (ARCH) program was to prepare students for immediate employment upon graduation, as drafters, within architectural or engineering firms. With the advent of CAD (Computer Aided Design) in the 1980s the emphasis changed from hand to digital drafting with a stronger focus on technology; as such, the program shifted from preparing drafters to preparing architectural technicians. In the current work environment, all personnel use computers so there is no longer a need for "drafters," but rather technicians who possess a variety of skills. Today, the evolution of how buildings are designed and documented utilizes BIM (Building Information Modeling) and a variety of complex design and presentation software that require sophisticated skills. Furthermore, architecture firms prefer to employ graduates who hold degrees beyond the AAS level. Therefore, the focus of the ARCH degree has changed, and now its main goal is to provide a foundation for further study within professions related to the built environment. Specifically, the two-year program lays a foundation in skills that include digital and visual communication, basic design principles, architectural documentation and detailing, an appreciation of the history and aesthetics of the built environment, and how building systems work, with a focus on sustainability.

Most AAS graduates seek baccalaureate degrees; as such, the primary goal of the ARCH program is to prepare students for further study and to also assist them in discerning the aspect of the built environment they wish to pursue. The program feeds students into the following baccalaureate degrees: BS in Architecture and Sustainability (ARST), BS in Facility Management (FMAN), or BS in Construction Management (CONM); all offered within the School of Built Environment.

From its inception, the program has delivered graduates who possess a skill set that employers value; thus, the program has a reputation of producing employable graduates that are relevant and meet the needs of current architectural practice. The enduring mission of preparing graduates for practice heavily impacts the decision-making process regarding curriculum and long-term program goals. Additionally, the emphasis on preparation for further undergraduate study, and the option to pursue a graduate level degree after completing the baccalaureate degree at Ferris, also impacts curriculum standards and content.

BS in Architecture and Sustainability

In the fall of 2011, the BS in Architecture and Sustainability (ARST) was launched to provide further study in architecture, beyond the AAS degree, that responded to the changing needs of architectural education and practice. The primary goal of creating this program was to provide greater employment and career opportunities for Ferris graduates. Additionally the program was conceived with the long term goal of establishing an accredited architecture degree on the Big Rapids campus; as such, various steps to meet this goal were built into the BS curriculum.

At its inception, the curriculum incorporated existing coursework found in the AAS in ARCH, the BS in Facility Management (FMAN) and in the Community Studies Minor degree within the College of Arts and Sciences. The goal was to provide a unique, collaborative program that met employment needs within the architectural profession and innovative educational approaches regarding the built environment.

While the AAS degree consists of the first two years, the BS degree comprises the second two years of the undergraduate experience that focuses on the process of architectural problem solving within the context of human, social, and natural ecosystems. Both the AAS and BS degrees focus on the fundamental skills of design, visual communication, building systems, and building materials to prepare graduates to participate in the profession of architecture. At both levels, the curriculum is defined by its emphasis on the practice of the profession and sustainability. Entry into the BS program is competitive and open to Ferris AAS students and community college transfer students at the third year with appropriate preparation. Upon graduation, students can enter the workplace or continue into an accredited Master of Architecture (M.Arch) program, thereby providing students the educational path to architectural licensure.

Through continuous monitoring and enhancement, the program seeks to provide a process of architectural education that maintains relevance and becomes increasingly recognized for excellence by the architectural community.

The Future: Bachelor of Architecture

In the fall of 2016, the architecture faculty submitted a PCAF proposing a Bachelor of Architecture (BArch) professional degree program at Ferris State University. Such a degree would represent the final phase of an evolution of the degree offerings in architecture, and would prepare graduates to become licensed architects.

Among the requirements for architectural licensure, in Michigan and most other states, is attainment of an accredited professional degree. Such a degree, whether it be a Bachelor of Architecture or Master of Architecture (MArch), is comprised of a degree beyond the Bachelor of Science. Accreditation is granted by the National Architectural Accrediting Board (NAAB), which only grants accreditation to one of these degree types. The Bachelor of Architecture represents the quickest path toward licensure, and is also the most economical approach, since students in a BArch program are still charged undergraduate tuition only, and the BArch is typically a one-year program. The Master of Architecture, such as that offered at Kendall College of Art and Design, typically requires completion of at least two years of study, at graduate-level tuition rates, which results in significantly higher costs. The BArch is typically structured to prepare

graduates for professional practice, whereas MArch programs are commonly rooted in a more theoretical approach to architecture, preparing graduates for teaching as well as practice. It was determined by the faculty group that the BArch would have the greatest appeal to graduates of the ARST program, and would reflect the career orientation of programs at Ferris State University.

This report will reference the proposed BArch, proposed curricular changes to facilitate the BArch, and proposed modifications to the ARCH and ARST programs required to create a seamless path toward the BArch that will comply with NAAB standards for accreditation.

B. PROGRAM CULTURE AND STORY

AAS in Architectural Technology and BS in Architecture and Sustainability Culture

The culture of the program is centered around the studio where individual or small groups of students are led by a faculty member on projects that employ a "learn by doing" methodology. Courses and studios are structured to mirror the office environment, thereby preparing graduates for employment. Additionally, the program strives to communicate the idea that architectural education changes a student's understanding of the world. It does so indirectly, through the hands of the students, who become professionals who envision, design, and build the environment that we live in. The program prepares students to be flexible thinkers, to evaluate, organize and refine ideas, and to find creative, sustainable solutions to a wide variety of challenges. The program also prepares students to collaborate with others, be respectful of others, give constructive feedback, and accept feedback appropriately. In short, the program prepares students to develop skills that apply in art, business, science, technology, and the environment.

The program, its culture, and the student learning experience itself, are publicly communicated through a variety of events that include advisory board meetings, attendance at local and national professional association meetings and conferences, social media (Facebook page), the Visiting Professor program, the Place Matters Lecture and Film series, Small-Town Studio community engagement projects, and end-of-the-semester Design Crits of student projects.

Story

The story of the AAS and BS programs comprises a four-year journey that consists of four chapters.

1. Freshman Year: Fundamentals

The first year begins with foundational studios in architectural drawing and the introduction to various graphic media as tools of the architectural design process. Emphasis is placed on the integration of traditional and digital media in two- and three-dimensional work. Concurrently, students study building materials and methods of construction for an understanding of how buildings work, are detailed, and designed. The remaining courses are dedicated to general education.

2. Sophomore Year: Development

Second-year classes grow from the coursework of the first year—architectural graphics, building materials and methods of construction—leading to the detailing and documentation of buildings that demonstrate

sustainable practices. These courses are complemented by study of mechanical and electrical systems, as well as statics and strength of materials. Parallel design studios focus on design principles that begin with and move from conceptual design studies to architectural design. This is complemented by the study of architectural history, which provides students with an understanding of precedent and design as an expression of culture. As is true in the freshman year, the remaining courses are devoted to general education.

3. Junior Year: Exploration

Third-year studios focus on architectural design and intensify as projects become more reality-based and complex. Projects address the relationship between space, form, structure, site, and how these reflect client needs and desires. Student understanding of principles of sustainability expands through studio exploration of historic preservation, as well as architectural and community context. Courses in environmental building technology address issues of energy conservation and sustainable systems. These courses are complemented by the study of structural design, as well as architectural electives.

4. Senior Year: Synthesis

The centralizing elements of the fourth year are the Small-Town Studio (STS) and the Capstone Studio. Together these experiences take students out of the classroom and into the community to address real-world problems of planning and design that address the spatial, architectural, transportation, economic and cultural needs of small towns. Working with program faculty and visiting professors, students engage in processes that are closely tied to the professional practice of architecture. Studio work is undertaken in interior design, and the studios are complemented by a seminar course in current issues in architecture, as well as architectural electives that allow for individual exploration in specialized areas of interest.

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PROGRAM MISSION

In broad strokes, a program's mission statement helps guide program decision-making and allows program stakeholders a clear understanding of where the program stands, who they serve, and where they strive to be. A program's mission should fit with the mission of the department in which they reside, the college, and Ferris State University.

A. MISSION STATEMENTS

Ferris State University

Ferris State University prepares students for successful careers, responsible citizenship, and lifelong learning. Through its many partnerships and its career-oriented, broad-based education, Ferris serves our rapidly changing global economy and society.

College of Engineering Technology Mission

Our mission is to prepare graduates who have met the high academic standards of our program for current and future industrial and business needs of the state, the nation, and the global market.

School of Built Environment Mission

Not available.

Associate of Applied Science in Architectural Technology (ARCH) Mission

The mission of the Architectural Technology associate degree program is to provide students with a foundation of architectural concepts, skills, and values necessary to continue education for advanced degrees, leading to careers in architecture and professions related to the built environment.

Assessment that measures the fulfillment of this mission includes:

- 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 that are designed to address and weigh content in terms of awareness, knowledge, and/or competency regarding current and emerging issues within the profession of architecture.
- The ability of students to successfully continue their education and/or find employment.

Bachelor of Science in Architecture and Sustainability (ARST) Mission

The mission of the Bachelor of Science in Architecture and Sustainability degree program is to prepare students for innovative practice in the design professions and stewardship of their communities. The program seeks to provide a holistic, quality education in architecture; to promote excellence in architectural practice, sustainability, and preservation; and demonstrate engagement with community planning. The program also seeks to instill the value of life-long learning.

Assessment that measures the fulfillment of this mission includes:

- 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 regarding current and emerging issues within the profession of architecture.
- The ability of students to successfully find employment and/or continue their education.
- Student engagement in urban and community issues.

B. Mission Incorporation and Application

Program Mission's Alignment with the Missions of the University, College, and School

Both program missions align well with the missions of the university and college. Emphasis on critical thinking, independent learning, and continually updating the technical knowledge and skills of our students to prepare them to enter the workforce or continue on to earn graduate degrees particularly aligns with Ferris' mission of career-oriented education.

Program Mission's Incorporation into Decisions Impacting the Program Including Curricular Changes

All decisions are made with regard to the vision set out by the program mission statement. The involvement of all faculty in approving program decisions helps to ensure that alignment to the mission is addressed before changes are put forth.

How Program Mission is Communicated to Stakeholders

The mission statements appear on program webpages and brochures and other recruiting materials. They are also reviewed at Advisory Board meetings as a reminder of our programs' purpose and to focus meetings around relevant topics.

Policies and Procedures to Monitor Program's Mission and its Relationship to University, College and School

The program faculty simultaneously review the missions of the program and those of various administrative units above the program when considering curriculum change. Further, the mission statements of the programs that reside within the Architecture and Facility Management (ATFM) department are periodically reviewed for alignment with university, college, and school mission statements and updated accordingly.

How Program Furthers the University, College, and School Missions

Projects in upper level design studios (ARST), often provide service learning projects which help make students aware of the connectedness of the built environment and the larger human and natural contexts in which they are built. Ferris' commitment, as expressed in its mission statement, is not just to its students and helping them enter their chosen careers, but also to improve the community and be aware of global issues.

Graduates of the Architectural Technology (ARCH) program are successful in pursuing and completing baccalaureate level degrees, typically in ARST, FMAN, and Construction Management (CONM)

Graduates of the ARST program have been accepted at prestigious National Architectural Accrediting Board (NAAB) Master of Architecture (MArch) programs such as Ball State University, Boston Architectural College, Clemson University, University of Michigan, and University of Arizona. The majority complete their MArch degrees in two years (a three-year curriculum is required of students with baccalaureate degrees that are judged to be less rigorous).

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PROGRAM GOALS

Clearly defined goals are an integral part of program success. Program goals help direct faculty and administrative decision-making in the areas of enrollment, research, faculty development, program curriculum, and the like.

PROGRAM GOALS - AAS IN ARCHITECTURAL TECHNOLOGY

Changes in technology, globalization, and expectations within the architecture profession necessitate creation of a program with different goals from those of the architectural drafting program created in the 1950s. Many of these goals have arisen in the past decade alone. A two-year degree in architectural technology no longer affords graduates a clear path into the architecture profession. For architecture programs to effectively serve their graduates and be viable in a changing economic and cultural context, they must integrate flexibility, as well as define a clear path toward architectural licensure, thereby ensuring long-term employment for graduates. To this end, the architecture faculty have defined several goals that will contribute to the ongoing viability of the Architectural Technology program. Some of these have already been fulfilled, and a process is in place to fulfill others.

A. DESCRIBE WHAT THE PROGRAM HOPES TO ACCOMPLISH

Program Goal 1 – Preparation for baccalaureate programs

Prior to creation of the BS in Architecture and Sustainability (ARST), Architectural Technology (ARCH) students had shown an interest in obtaining baccalaureate architectural degrees. For a baccalaureate program to serve its graduates, however, it must act as a gateway to graduate education, which is commonly required for an individual to achieve licensure as an architect. To this end, modifications were made in the ARCH program to better prepare students for higher-level studies in architecture. Specifically, changes were made so that the first two years of architectural study at Ferris State University were aligned with the requirements of the National Architectural Accrediting Board (NAAB). Changes made within the ARCH program since the last APR include the following:

- Expansion of the architectural history content from a one-semester course to a two-semester sequence, adding examination of Indian, Chinese, Japanese and Islamic architecture.
- Expansion of Physics content from PHYS 211 alone; adding PHYS 212 to the curricular structure so that students will be in compliance with the common requirements of Master of Architecture programs across the country.
- Modification of Mathematics requirements to include MATH 120 to facilitate transfer credit into other universities. Previous requirement of MATH 116 did not typically transfer.
- Addition of ARTS 101 and ARTS 120 (now ARTS 220) courses to the first year to encourage early development of creative thinking.
- Creation of ARCH 119 to introduce students to principles of sustainability.

Program Goal 2 – Flexibility for ARCH graduates

Options to ladder into baccalaureate programs in Facility Management and Construction Management allow students who have an interest in working with the built environment, but not as architects, to pursue suitable careers. In addition, students may transfer to Kendall College of Art and Design's BA in Interior Design program; transfer to an architectural design program at a different institution; or enter the workforce. Student and alumni surveys have consistently indicated the need for and appreciation of these options as ARCH graduates pursue careers in the built environment.

Program Goal 3 – Development of foundational skills

Whether a student is preparing for further study or employment, the program will provide them with competency in the following areas: visual communication; technical documentation of building construction, including building materials and assembly; fundamental design skills; architectural history; and effective communication.

B. HOW DO THE DESCRIBED GOALS APPLY TO PREPARING STUDENTS?

Career Preparation

The ARCH program is the first step toward a professional career in fields related to the built environment. As noted above, the majority of graduates of the program pursue further education in architecture, facility management, construction management or interior design. The program content within the ARCH program provides students with a set of fundamental skills that prepare students for any of these professional fields.

Lifelong Learning

Each of these fields demands that participants retain currency through continuing education, whether that pursuit is informal or a requirement of licensure, as in the case of architecture.

PROGRAM GOALS - BS IN ARCHITECTURE AND SUSTAINABILITY

The second two years of the undergraduate experience lead to the BS in Architecture and Sustainability (ARST). This curriculum focuses on the process of architectural problem solving within the context of human, social, and natural ecosystems to prepare graduates to participate in the profession of architecture. The curriculum is innovative and unique in its content emphasizing sustainability; and in its studio structure, which mirrors professional practice.

A. DESCRIBE WHAT THE PROGRAM HOPES TO ACCOMPLISH

Program Goal 1 – Preparation for graduate education

Graduates of the BS in Architecture and Sustainability (ARST) should be prepared for the rigors of graduate study in architecture. To this end, the ARST program provides studio courses, courses in building systems, and elective courses in various disciplines that provide graduates with a foundation for advanced cross-disciplinary studies in pursuit of a Master of Architecture (MArch) or related degree. The course structure and content were devised to comply with requirements of the National Architectural Accrediting Board (NAAB), allowing graduates a smoother transition into MArch programs at schools across the country.

Program Goal 2 – Readiness of graduates for professional employment

Graduates who wish to delay—or choose not to pursue—graduate education, are prepared for entry-level employment in architectural firms. In past decades, attainment of an AAS degree in Architectural Technology prepared students adequately for employment, but this is no longer the case, as the profession has become more integrative and even intern architects are expected to possess a broad range of skills. The balance of design studios, building systems courses and electives provides students with the needed skills to contribute productively to their employers.

Program Goal 3 – Pursuit of continuous improvement in faculty education

As the professional field of architecture evolves, so too must faculty members engaged in architectural education. Regardless of discipline—technology, design, history, planning, building systems and materials—faculty will seek opportunities to expand their knowledge base and retain currency through attendance at conferences and engagement with professional organizations.

Program Goal 4 – Promotion of a sustainable built environment

The most compelling imperative of the 21st century is sustainability, an outgrowth of concern about global climate change. Through an interdisciplinary approach to course content, students explore aspects of sustainable design and construction, as well as social and environmental equity. Design studios (ARCH 341, 342, 441, and 499); environmental systems courses (ARCH 361 and 362); and seminar courses (ARCH 419 and 421) examine sustainability through varied means.

Program Goal 5 – Development of advanced skills

Building on the foundational skills of the ARCH program, the ARST curriculum encourages more detailed exploration in content areas. This goal is manifested in courses such as the following: ARCH 270, which expands digital visual communication skills across various software platforms; upper level design studios (ARCH 341, 342, 441 and 499) move beyond fundamentals to explore complete building design; and ARCH 246, Twentieth Century Architecture, deepens the student's exposure to historical developments.

B. HOW DO THE DESCRIBED GOALS APPLY TO PREPARING STUDENTS?

Professional Careers

The ARCH program is the first step toward a professional career in fields related to the built environment. As noted above, the majority of graduates of the program pursue further education in architecture, facility management, construction management or interior design. The program content within the ARCH program provides students with a set of fundamental skills that prepare students for any of these professional fields.

Responsible Citizenship

The ARST program encourages students and graduates to engage with their communities, as well as develop leadership roles in their professional lives through two primary mechanisms: 1) The SOCY 341 Community Studies course is integrated into the program with the goal of exposing students to community engagement beyond the boundaries of Big Rapids. Students are exposed to and engage with representatives of various communities to gain an understanding of the way that communities are shaped, and 2) ARCH 441 Architectural Design 3/The Small Town Studio (STS) in the senior year, which was developed to provide students with opportunities to provide solutions to small-town problems in planning and preservation, as well as architecture. Engagement with community leaders, organizers and commissions provides student with first-hand exposure to the workings of government and application of community resources.

Lifelong Learning

Students in the ARST program are encouraged to become members of—and pursue leadership roles in—the AIAS, the student chapter of the American Institute of Architects, or IFMA, the student chapter of the International Facility Management Association, anticipating that such professional engagement will continue throughout their professional careers.

Meeting Employer Needs or the Needs of Other Stakeholders

The foundational skills learned in the ARCH program, and advanced skills learned in the ARST program, ensure that students are prepared for employment. Graduates are called upon to use those skills to advance the technical capabilities of their employers. Components of the ARST program, including the Small Town Studio, were created to prepare students for leadership roles in their communities through service to municipal, institutional, and organizational clients that may have limited access to professional skills owing to geographic or economic limitations.

INCORPORATING PROGRAM GOALS

A. HOW ARE THE PROGRAM'S GOALS COMMUNICATED TO STUDENTS, FACULTY AND OTHER STAKEHOLDERS?

A variety of methodologies are employed to inform stakeholders regarding the goals of the architecture programs:

- Printed brochures and the program website include information about the program and how it fits into the larger construct of professional education in architecture.
- Academic advising affords the faculty members and students an opportunity to discuss in detail the requirements for ongoing education; the goals of the student; individual course offerings and program structure; as well as their academic progress and fulfillment of requirements for higher degrees.
- Faculty presentations created to assist second-year students in preparation of portfolios required when applying to the ARST program. Graphic design and written content are reviewed in the context of the program goals so that students can present their work to their advantage.
- The Architecture Advisory Board—which consists of practicing architects--meets annually to provide and receive information about, respectively, the state of the profession and the state of the program. The meetings allow program faculty to evaluate the degree to which course content and program structure are serving the needs of the professional community.
- The FSUS 100 course allows program faculty to explain program content and goals, as well as explaining the options for education beyond the ARCH program, and the path to professional licensure.

B. HOW AND WHEN ARE THE PROGRAM'S GOALS REVIEWED AND RE-EVALUATED?

Advisory Board comments

At the annual meetings of the Architecture Advisory Board, board members meet privately with students to ascertain the degree of satisfaction that students have with the program. In addition, advisory board members provide insight from active practitioners regarding the efficacy of current course work and suggest changes that might be made to more effectively prepare graduates for employment.

Comments from graduating students

Annual exit surveys conducted with graduates document the student experience and provide the faculty with insight into the degree to which program goals have been achieved. This allows for adjustments in program structure and/or material delivery.

C. How have the program's goals changed in the last five years?

The primary way in which the goals of the program has changed relates to the development of the ARST program. Prior to 2011, the stand alone ARCH program directed students toward employment, toward advanced study in architecture at another institution, or toward a bachelor's degree from Ferris in a discipline related to architecture. With the implementation of the ARST program, the goals of the ARCH program evolved to focus on preparing students for further study in architecture at Ferris, in addition to the traditional focus on employment upon completion of the AAS degree.

As outlined above, the goals of the ARCH program are essentially new goals, and therefore represent another significant change in the past five years.

Goal Attainment - Evaluation

A. AAS in Architectural Technology

Program Goal 1 – Preparation for baccalaureate programs

Since the inception of the ARST program, approximately nearly all students graduating from the ARCH program who applied to the ARST program were accepted; and through May 2017, of those accepted, all but two (2) students graduated from the program.

Program Goal 2 – Flexibility for ARCH graduates

Students have continued to take advantage of the options available to them upon completion of the ARCH program. These options—the ARST program, the BS in Facility Management, the BS in Construction Management, the dual-degree of ARST and FM degrees, and the BA in Interior Design at Kendall College of Art and Design—have been pursued by nearly all ARCH graduates, significantly increasing retention and providing a solid foundation for employment or graduate study.

Program Goal 3 –Development of foundational skills

Students graduating from the ARCH program have demonstrated a solid foundation of skills in those parts of the program which are explored further in the ARST program. The skills acquired in ARCH 101, 102, 241 and 242 have been effectively applied and expanded upon in ARCH 341, 342, 441 and 499. In addition, ARCH 246 and ARCH 270 build on knowledge and skills gained in, respectively, ARCH 244/245 and ARCH 203/204.

B. BS IN ARCHITECTURE AND SUSTAINABILITY

Program Goal 1 – Preparation for graduate education

Graduates of the ARST program have been accepted into graduate programs in architecture at institutions including the following: Illinois Institute of Technology, Clemson University, University of Colorado, SCI-ARC, Boston Architectural College, University of North Carolina at Charlotte, University of Michigan, Ball State University, and Washington University in St. Louis.

Program Goal 2 – Readiness of graduates for professional employment

Graduates of the program who choose to enter the workplace instead of pursuing graduate education have found employment in architectural firms and with employers in related fields. All graduates of the program who applied to graduate schools were accepted into at least one program.

Program Goal 3 – Pursuit of continuous improvement in faculty education

Faculty in the ARCH and ARST programs are actively engaged in ongoing education to stay abreast of changes in the architecture profession and architectural education. The primary outlets for continuing education are conferences, and faculty are also engaged in presentations and publications to interested parties beyond Ferris State University to promote the profession and the programs of the university. In addition, to retain architectural licensure in the state of Michigan, 24 continuing education units (CEUs) must be completed every two years. All faculty are currently in compliance with this requirement, but those CEUs are too numerous to list. The list below, therefore, should be considered a partial list of ongoing educational pursuits, and includes only conferences attended, presentations made and publications by program faculty:

MARY BRAYTON, PROFESSOR –

CONFERENCES AND CONVENTIONS ATTENDED:

- **"Retention and Student Success,"** 2015 Course Design Institute**,** Ferris State University, June 2015.
- **AIA Michigan Design Retreat,** Torch Lake, Michigan, September 2014
- **AIA National Convention,** Chicago, Illinois, June 2014
- **NeoCon,** Chicago, Illinois, June 2013
- **Facility Fusion,** International Facility Management Association conference, Chicago, Illinois, April 2012

CHRISTOPHER COSPER, ASSISTANT PROFESSOR –

PUBLICATIONS AND PRESENTATIONS

- ***"*At the Vital Center: The Small Town Studio at Ferris State University."** 105th Association of Collegiate Schools of Architecture Annual Meeting, Detroit, Michigan, 2017. Co-authored with Paul W. Long
- **"FM Scholarship in the University Community: Building on Boyer and Schon."** Presented at the International Facility Management Association World Workplace Conference, 2016
- **"The Expert Mind in the Age of Junk Data."** Published in *Cogent Social Sciences,* 2016

- **"Enriching Architectural Scholarship by Building on Boyer."** Presented to the 103rd Annual Meeting, Association of Collegiate Schools of Architecture, 2015
- **"Fort Maurepas: Five Manifestations of Power on the Mississippi Gulf Coast."** Presented to the University of Oklahoma *Creating Making Forum* and published in the proceedings, 2014
- **"Evaluating the Implementation of Lean Construction into a University Curriculum."** Co-authored with Tom Leathem. Published in the proceedings of the 2013 Associated Schools of Construction Conference, 2013
- **"The Client-Based Studio: Meeting Pedagogical Needs and Serving the Community."** Presented to the University of Oklahoma *Creating Making Forum* and published in the, 2011. Proceedings
- **"Scholarship Reconsidered? Ernest L. Boyer and a Broader Concept of Scholarship."** Keynote address at the Louisiana State University College of Art + Design Faculty Retreat, 2016
- **"Teaching Today's Master Builder: A Collaborative Studio in Architecture and Construction Management."** Poster presentation based on a collaborative studio taught with Alexis D. Gregory and Emily M. McGlohn. Presented to the 50th Annual International Conference of the Associated Schools of Construction, 2014

CONFERENCES AND CONVENTIONS ATTENDED:

- **Associated Schools of Construction Region 3 Conference**, October 2016
- **World Workplace**, International Facility Management Association conference, San Diego, California, October 2016
- **Associated Schools of Construction Region 3 Conference**, October 2015
- **Harvard Design: Chicago**, October 2015
- **Association of Collegiate Schools of Architecture 103rd Annual Meeting**, March 2015
- **Creating Making Conference**, Oklahoma City, November 2014
- **Associated Schools of Construction Region 3 Conference**, Chicago, Illinois, October 2014
- **Congress for the New Urbanism 22 Conference**, June, 2014
- **Associated Schools of Construction 50th Annual Conference**, March 2014

GARY GERBER, ASSOCIATE PROFESSOR –

CONFERENCES AND CONVENTIONS ATTENDED:

- **AIA National Convention,** Chicago, Illinois, June 2014
- **AIA Michigan Annual Conference,** September 2013
- **AIA Michigan Design Retreat,** Torch Lake, Michigan, September 2012
- **AIA National Convention,** Washington, DC, May 2012
- **Access for All Conference,** January 2012
- **Growing Communities Conference,** Grand Valley Metro Council, June 2010
- **Great Teachers Seminar,** Ferris State University and Grand Rapids Community College, Grand Rapids, Michigan, June 2010

DANE ARCHER JOHNSON, PROFESSOR –

PUBLICATIONS AND PRESENTATIONS

- ***"*Great Churches of Europe: A Personal (Virtual) Tour.*"*** Big Rapids Festival of the Arts, February 2016
- **"Albert Kahn: Contradictory Architect."** University of Michigan Museum of Art, March 2016
- **Editorial Review: Ingersoll, R. and Kostof, S. *World Architecture: A Cross-Cultural History,*** March, 2013
- **Editorial Review: Fazio, Michael, et al. *Buildings Across Time: An Introduction to World Architecture,*** (Fourth Edition), May 2013
- **Editorial Review: Borden, G.P. and Andrews, B.D. *Architecture Principia.*** May 2012

CONFERENCES AND CONVENTIONS ATTENDED:

- **Always Seeking Modern,** Michigan Historic Preservation Network, Midland, Michigan, May 2015
- **Micro-messaging in the Classroom,** Ferris State University, Big Rapids, Michigan, April 2015
- **Conference Co-Chair, Wright on the Inside - Frank Lloyd Wright Building Conservancy National Conference,** Grand Rapids, Michigan, October 2013
- **Michigan Modern: Design that Shaped America,** Michigan State Office of Historic Preservation, Cranbrook Academy of Art, Bloomfield Hills, Michigan, June 2013
- **Tour Coordinator, Frank Lloyd Wright in Southeast Michigan Society of Architectural Historians Annual Meeting,** Detroit, Michigan, April 2012

PAUL LONG, ASSOCIATE PROFESSOR –

PUBLICATIONS AND PRESENTATIONS

- ***"*At the Vital Center: The Small Town Studio at Ferris State University.*"*** 105th Association of Collegiate Schools of Architecture Annual Meeting, Detroit, Michigan, 2017. Co-authored with Christopher Cosper
- **"Ernest Boyer and Research as Design."** Eleventh International Conference on Design Principles and Practices, Toronto, Ontario, Canada, 2017
- **"Introduction to 3D Digital Modeling Using Sketchup."** Big Rapids Festival of the Arts, February 2017
- **"Architectural Design for Disassembly: designing for Future Adaptive Reuse."** Presented to the University of Oklahoma *Creating Making Forum*, 2014
- ***"*Working Toward a New Studio Pedagogy: the Ferris State University Small Town Studio.*"*** Presented to the University of Oklahoma *Creating Making Forum*, 2014
- **"Sustainability Assessment Methods: A Greenwich Millennium Village case study."** *From the Outside In: Sustainable Futures for Global Cities and Suburbs,* Hofstra University, 2013
- **"Small Town Studio: Student Involvement in Sustainable Urban Solutions for Michigan Small Towns."** *From the Outside In: Sustainable Futures for Global Cities and Suburbs,* Hofstra University, 2013

CONFERENCES AND CONVENTIONS ATTENDED:

- **"Historic Preservation and Green Building."** Session Chair. *From the Outside In: Sustainable Futures for Global Cities and Suburbs,* Hofstra University, 2013
- **"The Esquiline Landscape Calendar: time, nature and authority in Imperial Rome."** Archeological Institute of America Annual Meeting, Seattle, Washington, 2012. With Dr. Rachel Foulk.

DIANE NAGELKIRK, PROFESSOR –

CONFERENCES AND CONVENTIONS ATTENDED:

- **World Workplace,** International Facility Management Association conference, San Diego, October 2016
- **World Workplace,** International Facility Management Association conference, Denver, Colorado, October 2015
- **Always Seeking Modern,** Michigan Historic Preservation Network, Midland, Michigan, May 2015
- **National Alliance for Partnerships in Equity (NAPE) Seminar,** Ferris State University, March 2015
- **AIA Michigan Design Retreat,** Torch Lake, Michigan, September 2014
- **Conference Co-Chair, Wright on the Inside - Frank Lloyd Wright Building Conservancy National Conference,** Grand Rapids, Michigan, October 2013.
- **World Workplace,** International Facility Management Association conference, Philadelphia, Pennsylvania, October 2013
- **Michigan Modern: Design that Shaped America,** Michigan State Office of Historic Preservation, Cranbrook Academy of Art, Bloomfield Hills, Michigan, June 2013.
- **World Workplace,** International Facility Management Association conference, San Antonio, Texas, November 2012
- **National Conference on the Beginning Design Student,** The Pennsylvania State University, March 2012

JOSEPH SAMSON, PROFESSOR –

PUBLICATIONS AND PRESENTATIONS

- **"Discover Ferris State's Facility Management Education Options."** Southeast Michigan Chapter, International Facility Management Association, Novi, Michigan, May 2015
- **"Future of K-12 Facility Management,"** Michigan School Business Officials, Detroit, Michigan, April 2015
- **"Slovak Folk Architecture: Village Worship Spaces" and "Slovak Folk Architecture: Traditional Homes and Villages."** Slovak American Society of Washington D.C., June 2013
- Interviewed for and quoted in **"Career Credentials: Distinctions in the Dynamic Facility Management Field"** by Chris Curtland. *Buildings,* November 2013
- **"Developments in Facility Management Education and Facility Management Educational Options at Ferris State University."** Presentation via teleconference for Northwest Ohio Chapter International Facility Management Association, March 2013

CONFERENCES AND CONVENTIONS ATTENDED:

- **World Workplace,** International Facility Management Association conference, Denver, Colorado, October 2015
- **World Workplace,** International Facility Management Association conference, Philadelphia, Pennsylvania, October 2013
- **World Workplace,** International Facility Management Association conference, San Antonio, TX, October 2012
- **Facility Fusion,** International Facility Management Association conference, Chicago, Illinois, April 2012

Program Goal 4 – Promotion of a sustainable built environment

Students in the ARST program, as well as graduates, demonstrate a significant commitment to sustainability as a cultural imperative, not just as it pertains to buildings, but to the larger social and economic structure into which buildings are placed. They are well-prepared to take that commitment into the work place or graduate school.

Program Goal 5 – Development of advanced skills

Nearly all students in the ARST program demonstrate significant development of their technical skills beyond what they learned in the ARCH program. Students transferring into the program from other academic institutions are frequently functioning at a lower level of technical skills than ARST students, and ARST students have proven to be effective in disseminating their knowledge, either in a casual way or more formally as tutors. Visiting critics and advisory board members have been consistently complimentary regarding the professional level of technical skills displayed in student work.

GOAL ATTAINMENT – REFLECTION AND ACTION

The relatively small faculty cohort teaching in the ARCH and ARST programs facilitates ongoing reflection about course content, as well as perceptions of student performance. As problems arise in course content, they are quickly identified and analyzed to determine if a minor or major action is needed. Conversely, program successes may also warrant action to strengthen that which is already working. Such actions are needed because of the interdependent nature of the course structure. Within the program, there is significant cross-referencing of material, so problems can have a ripple effect. The faculty members are committed to regular evaluation of the successes and weaknesses within the program. In addition, observations by advisory members help faculty identify weaknesses that may have a negative impact on employability of graduates, so those observations are factored into any actions taken to improve course content and structure.

STRATEGIC PLAN

Short-Term Strategic Plan

At the present time, there is not an established short-term strategic plan within the ATFM program areas.

Long-Term Strategic Plan

For a number of years, the ATFM program faculty have focused on the development and evolution of a long-term strategic plan that fulfills the mission of the programs, and guides a range of activities, including course development. This plan is reviewed every two or three years to ascertain the degree to which program activities have complied with the mission and stated goals, as well as determining prospective activities for the forthcoming years. It is the belief of program faculty that the plan should be fluid and evolutionary; and should represent the goal of retaining currency within the programs, expanding the reach of the programs, and ensuring the longevity of the programs.

See **Appendix E** for the current version of the long-term strategic plan.

04

CURRICULUM

Evaluate the state of the program curriculum, including an evaluation of program policies and procedures implemented to ensure quality, consistency, and currency related to content within each course within the program and an evaluation of program policies and procedures implemented to ensure quality, consistency, and currency of the curriculum as a whole.

CURRICULUM—AAS IN ARCHITECTURAL TECHNOLOGY

Although the essential historical framework of the Architectural Technology curriculum (ARCH) remains in place, it regularly undergoes review to determine if revisions are needed. The most extensive modifications in the past five years have been undertaken in response to the development of the ARST program. These changes serve the program goals relative to preparing students for study at the baccalaureate level, reflecting the fact that few students enter the workforce upon completion of the ARCH program.

A. EVALUATE POLICIES AND PROCEDURES IMPLEMENTED TO ENSURE QUALITY WITHIN EACH COURSE

There is no stated policy within the program to evaluate the efficacy of courses. Nonetheless, the faculty undertakes a nearly constant evaluation of content within and between courses so that students are provided with the most integrated and consistent educational experience. Evaluation of student work through student presentations, particularly during Crit Week, provide faculty with insight into the strengths and weaknesses of each relevant course. This affords faculty the opportunity to evaluate content and its application across the curriculum.

B. EVALUATE EDUCATION EXPERIENCES INCORPORATED INTO THE CURRICULUM

General Education Requirements

General education courses at Ferris serve students well in a general sense. At times, it is apparent that students are frustrated with the content and delivery of certain courses over which program faculty have little control. Special attention to this issue will be paid as the new general education framework is implemented across campus in the forthcoming years.

Co-Curricular Experiences

Few opportunities for co-curricular experiences are integrated into the ARCH program, although two courses, ARTS 101 and HVAC 337 (see Section G below), are required courses currently offered by the Art Department and HVACR program, respectively.

Service-Learning and Experiential Education Experiences

These options are typically reserved for students in the ARST program. Opportunities may occasionally arise for students to pursue such options, but the students are still developing their skills in the first two years in the program, so such options are limited.

C. How is the importance of education experiences communicated to potential students, currently enrolled students, and other stakeholders?

General Education Requirements

The importance of General Education experiences is largely communicated at the University level rather than the Program level, although during academic advising program faculty do explain the sequencing of general education courses, prerequisites, and the relevancy of general education to program courses.

Co-Curricular Experiences

Architecture as a cross-disciplinary profession is communicated to students starting with the initial courses in the program, including FSUS 100. Consequently, students are well-prepared to engage in co-curricular experiences, including courses offered in the art, construction management, HVACR, and community studies program areas.

Service-Learning and Experiential Education Experiences

Service-learning is not emphasized in the ARCH program, but is extensively explored in the ARST program (see below).

D. How are program requirements communicated to potential students, currently enrolled students, and other stakeholders?

As noted in the Section 3 - Program Goals, there are a few primary methods through which information about program requirements are communicated to stakeholders:

- Printed brochures and the program website include course descriptions and prerequisites for courses, as well as graphics illustrating program structure, so potential students have detailed information about the curriculum
- Academic advising affords the faculty members and students an opportunity to discuss in detail the premise of prerequisites, order of course completion, GPA requirements and other areas of concern so that students remain informed of their progress toward graduation.
- Changes to the curriculum are communicated annually to the Architecture Advisory Board

E. EVALUATE CURRICULAR CHANGES IMPLEMENTED IN THE LAST FIVE YEARS

Curricular Change 1

ARTS 220 3-D Design was initially added to the ARCH program as a required course to provide students with a stronger foundation in creative thinking and three-dimensional ideating to prepare them for an expanded range of design courses. However, course content was inconsistently delivered, and was found to not be useful for students laddering into the FM or CM programs. Consequently, the course has been re-categorized as an architectural elective.

Curricular Change 2

ARCH 242 Architectural Design Principles was created as a recommended elective to expand on and apply fundamentals taught in the ARCH 241 Design Principles course. The course was designed for students to explore design, technical and critical thinking skills to solve architectural problems. Addition of this course was intended to better prepare students for entry into the ARST program.

Curricular Change 3

A new course, ARCH 119 Sustainability in Architecture: Introduction was created to introduce first-year students to concepts that are integrated into subsequent courses. It was created to serve as a bookend course to ARCH 419 Sustainability in Architecture: Advanced Topics, which was also created and placed into the senior year of the ARST program.

Curricular Change 4

ARCH 102 Architectural Digital Graphics was modified to de-emphasize hand drawing and introduce students to a range of software and technology that is used extensively in the ARST program; as well as being commonly used in professional architectural practice.

Curricular Change 5

The content of ARCH 203 Architectural Documentation and ARCH 204 Architectural Detailing was revised to respond to project delivery changes within the architecture profession, and to increase the emphasis on the integration of building information modeling (BIM), sustainable design principles and detailing.

Curricular Change 6

PHYS 212 was removed from the program as a required course and replaced with an architectural elective. The course was re-listed as a science elective for students in the ARST program.

Curricular Change 7

The following minor curricular changes were also made: prerequisites for elective courses ARCH 250 and ARCH 270 were modified; and MATH 120 was added as an option for fulfilling math requirements and became the recommended math course for students entering the ARST and Construction Management programs.

F. EVALUATE CURRICULAR CHANGES CURRENTLY UNDER CONSIDERATION

An ongoing debate in architectural education pertains to the validity of teaching hand-drafting. In general, the profession has abandoned the tradition in favor of computer-aided drawing. There is still validity, however, in the use of sketching as a tool in the development of architectural ideas. Consequently, the current content of ARCH 101 and ARCH 102 is being examined by program faculty in the hope that a good balance can be struck between traditional methodologies and modern technology that will serve the students effectively in their later course work and, ultimately, in their professional lives.

In addition to this, faculty are dealing with issues arising from delivery of service courses from other programs. Recently it was announced that HVAC 337 is being re-conceived as a fully on-line course. The desirability of this new course structure is currently being evaluated to ascertain if the content can be effectively delivered in this way.

G. EVALUATE PROGRAM POLICIES AND PROCEDURES IMPLEMENTED TO ENSURE QUALITY, CONSISTENCY, AND CURRENCY OF THE CURRICULUM

See Section A (ARCH program) above.

CURRICULUM - BS IN ARCHITECTURE AND SUSTAINABILITY

As a relatively new program, the ARST program has been reviewed by program faculty each year since its inception. A series of curricular changes have already been made, with additional changes currently under consideration, as noted in the Strategic Plan (see **Appendix E**). With a BArch professional degree currently being considered, it is anticipated that further modifications to the program will be implemented to comply with NAAB accreditation standards, and to allow a logical development of course content.

A. EVALUATE PROGRAM POLICIES AND PROCEDURES IMPLEMENTED TO ENSURE QUALITY WITHIN EACH COURSE

See Section A (ARCH Program) above.

B. EVALUATE EXPERIENCES INCORPORATED INTO THE CURRICULUM

General Education Requirements

In cases in which specific courses from departments across campus have been integrated into course structure, faculty within the applicable departments engage in frequent conversations to establish specific content goals, and evaluate the degree to which those goals are being met.

Co-Curricular Experiences

The core of the ARST program is the series of four studio courses (ARCH 341, 342, 441 and 499) that expose students to a broad range of design experiences. With the exception of ARCH 499, in which students develop their own capstone projects, studio courses expose students to the process of working with real-world clients, which may include working with students from other programs. Examples of this include students in the ARCH 341 Architectural Design 1 course working with students in the Automotive Management program to develop auto dealership prototypes. Students in the ARCH 362 class recently participated in the Wege Prize competition with teams of students across campus. Students in the FMAN 432 Principles of Interior Architecture course have created works for Art Prize for the past several years.

In addition, the dual-degree offerings allow students to concurrently pursue degrees in architecture and facility management, or architecture and construction management, which allows them to engage with faculty and students across curricula.

Service-Learning and Experiential Education Experiences

Service-Learning is particularly emphasized in ARCH 441 Architectural Design 3, the Small Town Studio (STS), in which students actively engage with community groups, municipal commissions and members of the general public.

C. How is the importance of education experiences communicated to potential students, currently enrolled students, and other stakeholders?

General Education Requirements

See Section C (ARCH program) above.

Co-Curricular Experiences

See Section C (ARCH program) above.

Service-Learning and Experiential Education Experiences

In addition to the cross-disciplinary aspects of the architecture profession noted above, students are exposed early on to the idea of architecture as a service profession. All marketing materials, faculty advisors and classroom presentations focus on the Small Town Studio as a primary opportunity for service-learning, and further promote the idea of architectural studios that engage with real "clients" whenever possible.

D. How are program requirements communicated to potential students, currently enrolled students, and other stakeholders?

See Section D (ARCH Program) above.

E. Evaluate curricular changes that have been implemented in the last five years

Curricular Change 1

ARCH 270 BIM and Parametric Design was re-named to reflect content updates, and re-written as to broaden student exposure to technology at a higher level and reflect current trends in architectural practice.

Curricular Change 2

When the ARST program was created, among its goals was to place architecture into a broader environmental and social context. Consequently, a number of relevant courses from within the Community Studies Minor were integrated into the curriculum. Since that time, it has been found that the content of PLSC 251 Public Administration had little relevance to the goals of the program. Consequently, PLSC 251 has been removed as a requirement in the ARST program. In addition, it was found that SOCY 344 World Urban Sociology was no longer being offered annually, creating a problem with student scheduling. Therefore, SOCY 344 was removed from the curriculum as a required course, and was replaced with a General Education Global elective, with students being encouraged to choose SOCY 344 when it is offered. In addition, the requirement to complete PLSC 121 American Government 1 **AND** PLSC 122 American Government 2 was changed to PLSC 121 **OR** PLSC 122.

Curricular Change 3

Credit hours for ARCH 341, 342, 441 and 499 were increased from four to five to more accurately reflect the goals for studio education as outlined by NAAB. It was felt that graduates applying for master's degree programs were at a disadvantage because studios were viewed as lacking in content.

Curricular Change 4

ARCH 350 Site Design was created to comply with NAAB Student Performance Criteria (SPC), which include course content in site design. The new course expands architectural elective offerings for students and reinforces site development issues being explored in the architecture studio courses.

Curricular Change 5

ARCH 419 Sustainability in Architecture: Advanced Topics was created to synthesize the student's exploration of sustainability that began in ARCH 119 (see above). This seminar course was created to complement the advanced knowledge of building systems and structures developed in the architecture studio courses.

Curricular Change 6

Content in ARCH 361 Environmental Systems 1 and ARCH 362 Environmental Systems 2, was flip-flopped to improve alignment with content of the ARCH 341 and 342 courses.

Curricular Change 7

Minor adjustments have been made to program requirements as follows: prerequisite requirements for the ARCH 285 House: An American Evolution and ARCH 361 Environmental Systems 1 courses were modified; the requirement for ENGL 323 Proposal Writing course was expanded to accept either ENGL 311, ENGL 323 or ENGL 325 as fulfilling the goals of the program; FMAN 432 and FMAN 322 were moved, respectively, to the fall semester of the junior year and the spring semester of the senior year to better align course content and balance loads.

F. EVALUATE CURRICULAR CHANGES CURRENTLY UNDER CONSIDERATION

Students in the ARST program are at a disadvantage because Ferris State does not currently offer a professional degree in architecture. Such a degree, accredited by NAAB, is one of the requirements for licensure. Currently, to fulfill this requirement, students must complete a graduate degree—either a Bachelor of Architecture (BArch) or a Master of Architecture (MArch)— at another institution, at significantly higher cost than Ferris State. To remedy this situation, program faculty have proposed offering a BArch, commonly referred to as a Fifth Year degree, which would qualify for NAAB accreditation. Should this proposal be approved by university administration, it would necessitate a realignment of existing courses in the ARST and ARCH programs, so that the five-year experience would be seamless and fulfill all the requirements of NAAB. No specific course changes have been proposed to date, but all courses will be examined to ascertain how they would be integrated into a new program structure.

G. EVALUATE PROGRAM POLICIES AND PROCEDURES IMPLEMENTED TO ENSURE QUALITY, CONSISTENCY, AND CURRENCY OF THE CURRICULUM

See Section A (ARCH Program) above.

05

ASSESSMENT OF STUDENT LEARNING

A primary goal of quality programs is student employability and continued learning beyond the classroom and graduation. It is critical for continued program growth and quality to have a full understanding of what the program wants graduates to be, to know, and to be able to do. The purpose of assessment is to inform continuous improvements designed to enhance students' learning and success. Beyond goals related to student achievement, assessment of student learning is a university-wide requirement from the Higher Learning Commission accrediting body.

A. PROGRAM LEVEL STUDENT LEARNING OUTCOMES

During the academic year of 2010/2011, program-level student learning outcomes and objectives were created to respond to current architectural practice standards, and meet and/or address Student Performance Criteria (SPC) found in the 2009 National Architectural Accrediting Board (NAAB) Conditions for Accreditation. Current student learning outcomes for the AAS and BS degrees are as follows.

AAS in Architectural Technology

1. **Visual Communication**

   Students will create and present conceptual and technical graphic information, using traditional and digital graphic skills, that complies with the standards of architectural practice.

2. **Technical Documentation**

   Students will produce technically clear drawings and models illustrating the assembly of materials, systems, and components of building design that comply with the standards of architectural practice.

3. **Fundamental Design Skills**

   Students will demonstrate effective use of basic architectural design principles.

4. **History**

   Students will develop an understanding of, and a vocabulary to discuss, the aesthetic and historical traditions of western and non-western architecture.

5. **Building Materials and Assemblies**

   Students will understand and apply basic principles utilized in the appropriate selection of construction materials, components, and assemblies, based on inherent characteristics and performance, including their environmental impact and reuse.

6. **Effective Communication**

   Students will demonstrate and apply professional techniques of oral and graphic communication.

7. **Professionalism**

   Students will be adequately prepared and demonstrate ability to successfully continue their education or find employment.

BS in Architecture and Sustainability

1. **Visual Communication**

Students will produce professional-quality graphic presentations that comply with the standards of architectural practice.

2. **Oral Presentation**

Students will present conceptual and technical information orally in a professional manner in studio presentations.

3. **Design Research**

Students will conduct independent and directed research to gather information about complex architectural and community planning problems, and synthesize that research in service of studio and technical projects.

4. **Design Principles**

Students will develop fundamental design concepts that address programmatic requirements defined by user groups.

5. **Collaboration**

Students will demonstrate collaborative skills and synthesis thinking through team engagement with classmates, instructors, and user groups.

6. **Building Envelope Systems**

Students will demonstrate an understanding of the technology and aesthetics of building envelope systems and their integration with structural and functional aspects of building design.

7. **Building Materials and Assemblies**

Students will demonstrate knowledge of building materials and assemblies and their application in solving architectural design problems.

8. **Environmental Systems**

Students will demonstrate an understanding of environmental systems and their impact on human comfort and energy consumption.

9. **Structural Systems**

Students will understand basic principles of structural behavior in withstanding gravity and lateral forces and the way they shape and are integrated with architectural design.

10. **Sustainability**

Students will understand and apply design and detail strategies that reduce the environmental impact of construction and the operation of buildings.

B. PROGRAM ASSESSMENT METHODS

Our approach to assessment of student learning begins with the belief that learning is multidimensional, integrated and revealed in performance over time. Having clear, explicitly stated program-level learning outcomes is one mechanism that provides us the means to inform and improve. A combination of **direct** and **indirect** methods of assessment are used at the program-level and at the course-level. Direct methods of assessment include: capstone courses, student portfolios, embedded questions in tests, student presentations, scoring rubrics, and pre-test/post-test evaluations. Indirect methods of

assessment include: alumni surveys, employer surveys, student surveys, student exit interviews and student focus groups. Specific program level assessment methods, method category and criterion for success can be found in **Appendix C**.

We also believe that, in addition to outcomes, assessment requires attention to the experiences that lead to those outcomes. As such, observations, and circumstances beyond the results of Trac Dat are used to inform and improve our program.

One unique aspect of learning and assessment occurs within the **studio**, where the exchange and interaction of ideas takes place among faculty and students. The studio is intended to approximate the tradition of the architect's atelier, which is to say a special place where the architect works, immersed in the design experience, surrounded by drawings, models, computers, books and other supplies of the discipline and profession.

Design studios are inherently places of exchange, and studio projects are common ground for open discussion and creative design exploration. In this setting, **critique** is an inherent and integral part of the evaluation process. Three types of critiques occur throughout the semester: desk crits, pin-up crits and final crits. Desk crits typically occur at a student's desk to discuss any number of issues about a project. Pin-ups typically occur in a review space or wall surface and very often involve two, three or more students, and may include outside critics. Final crits are held in a public setting and include faculty, invited reviewers, as well as other members of the College, profession, and outside community that deliver criticism constructively in review of student work.

These interactions are just one of the many aspects that make architectural design education unique relative to other disciplines in the university, and design reviews are a fundamental component of the assessment of student work. Design reviews provide an opportunity for students to demonstrate and improve upon their oral and visual presentation skills. They also provide students an important opportunity to learn to appreciate how their work can be interpreted from different, often unanticipated, perspectives.

The selection of Trac Dat **methods** and **criteria for success** were established by identifying the skills, and necessary level of skill, we expect graduates to achieve. In general, results have effectively assessed these identified skills, are manageable, and provide useful feedback that highlights accomplishments and identifies areas requiring attention. However, we continue to evaluate the effectiveness of some methods and criteria for success. We believe that certain methods and criteria for success can be improved so that the results provide more meaningful information that, in turn, can be used to determine whether intended outcomes are being achieved. For example, criteria for success at the senior level may be too broad or not useful in setting expectations for student success.

C. PROGRAM ASSESSMENT PROCESS

Recognizing that assessment is systematic, cumulative, and works best when it is ongoing, program faculty conduct an orderly method of collecting assessment information. Assessment information, at the program-level and course-level, is collected using the following methods: 1) The first method includes the

collection and entering of program-level data into Trac Dat by the program coordinator at the end of each academic year; 2) The second method includes the collection and entering of course-level data into Trac Dat by individual faculty members at the completion of each semester; 3) The third method includes faculty review and discussion of spring student surveys during the first weeks of the fall semester.

Trac Dat Results are reviewed each semester during faculty meetings. Accomplishments and weaknesses are discussed and when appropriate improvements and changes are made. A sampling of these changes includes: adjusting of grading rubrics; outcomes that use vague language are re-written to include specific action verbs; embedded test questions are evaluated and re-written to reflect delivery of course content; and adjusting of course content in the ARCH program to address deficiencies in skills of junior level students.

Appendix C shows Trac Dat results and action steps that demonstrate the program's continued use of assessment measures.

At the start of each new academic year, exit student surveys from the previous spring semester are reviewed by faculty. Student comments and student results regarding effectiveness of courses is discussed, and faculty weigh the results and comments to discern if changes are required. A sampling of changes made within individual courses include: faculty emphasis of core program values regarding sustainability or studio culture; emphasis of certain technical skills; implementation of student tutors and workshops to provide opportunities for student success; and integration of more guest speakers and lecturers.

D. PROGRAM IMPROVEMENTS

Through assessment, program faculty strive to meet their educational responsibility to the students and to the public. The process of measuring and monitoring program-level student learning outcomes and corresponding improvements is communicated to the following stakeholders through the following mechanisms:

- Students are informed of changes, and the rationale for the change, through syllabi, faculty lectures, and direct engagement with the curricular change.
- Architecture Advisory Board meets on an annual basis. Changes and improvements are provided through an "update and information" presentation and through round-table discussions with advisory board members and students. Advisory board members are asked to answer specific questions regarding the curriculum and ways to improve the program. They are also asked to complete surveys asking for feedback regarding the curriculum and the effectiveness of changes made over the previous years.
- Faculty within the School of Built Environment (SBE) learn of improvements through school meetings and through SBE Curriculum Committee meetings.

Over time, it has been recognized that assessment efforts build a body of evidence to validate or improve the architecture programs. The following improvements have been made in response to the measuring of student learning outcomes:

- Increased student credit hours of core architecture studio courses (ARCH 341, 342, 441, and 499) from 4 to 5 credits to meet NAAB requirements and provide graduates the ability to enter graduate school on an equal footing with other undergraduate architecture programs.

- Addition of 1-credit hour ARCH 119 and ARCH 419 courses to address absence of comprehensive understanding of sustainability in architecture. These book-end courses help students assimilate sustainability concepts learned in other courses throughout the 4 years, and reinforce, to students, the program's commitment to sustainable design. Additionally, the courses help students acknowledge their role and responsibility as future built environment professionals, and reinforces and strengthens the mission of both programs.

- Revised ARCH curriculum guide sheet to provide proper preparation for entry into the three distinct BS programs to include a placeholder for designated electives.

- Addition of a sophomore level designated elective - ARCH 242 Architectural Design Principles - to provide better preparation for students laddering into ARST program.

- Addition of a 3-credit hour course to the list of Architectural Electives: ARCH 350 – Site Design to meet the core undergraduate Student Performance Criteria (SPC) as defined by NAAB. With the addition of this course, Ferris' undergraduate study in architecture satisfies this NAAB SPC and better prepares students for transfer and entry into graduate architecture programs.

- Discussion is underway to create a 1-credit hour research course during the fall semester of the senior year to provide better preparation for the spring semester capstone course – ARCH 499.

- Integration of digital interactive exercises in ARCH 112 Methods and Materials of Construction to provide enhanced learning of course content.

E. CURRICULAR MAP

A matrix of NAAB student performance criteria can be found in **Appendix C**. The matrix identifies what courses respond to student learning outcomes, and identifies where the learning outcomes are addressed within the curriculum.

06

PROGRAM PROFILE

A. APPLICATIONS, ADMITS, ENROLLED

Table A.1 – Applied, Admits, Enrolled

Year	Prefix	Degree	Applied		Admits		Enrolled	
			AAS	BS	AAS	BS	AAS	BS
Fall 2012	ARCH	AAS	92		72		NA	
	PARC	AAS	17		14		NA	
	ARST	BS		7		2		NA
	PARS	BS		1		0		NA
Fall 2013	ARCH	AAS	70		64		NA	
	PARC	AAS	13		11		NA	
	ARST	BS		7		2		NA
	ARS	BS		0		0		NA
Fall 2014	ARCH	AAS	78		60		20	
	PARC	AAS	9		8		3	
	ARST	BS		4		2		2
	ARS	BS		0		0		0
Fall 2015	ARCH	AAS	75		65		19	
	PARC	AAS	12		12		4	
	ARST	BS		8		0		0
	ARS	BS		0		0		0
Fall 2016	ARCH	AAS	79		64		27	
	PARC	AAS	20		20		2	
	ARST	BS		5		0		0
	PARS	BS		1		1		0
Totals			465		390		75	

Source: FSU Institutional Research & Testing

Analysis

For the Architectural Technology (ARCH) program, the faculty are relatively pleased with the 84% yield of Applied to Admits (390/465 = .838), but the yield from Admits to Enrolled is much lower than expected and does not match the program goal of a 40% enrollment yield from the admit list. Since Fall of 2014 the average yield is 33% (75/229 = .327).

Ongoing efforts to move students from applied to admit to enrolled include: 1) weekly review of applicant and admit list; 2) initial mailing of letters to applied students to encourage them to complete the application process; follow-up emails that encourage them to complete the application process by sending high school transcripts or test scores. Once on the admit list, students are sent letters and emails that encourage them to schedule a visit to meet with faculty and program students, join the program's Facebook page, and sign-up for the summer orientation session. Several factors play a role in the decline of enrolled students, these include:

- Economic recession of 2008
- Fewer students are graduating from Michigan high schools
- Fewer Michigan high schools offer architectural type classes; typically, these programs and teachers promoted Ferris' program
- Poor quality of architecture facilities and equipment within the Swan Building
- Changes within the Admission Office: number of personnel, recruiting procedures, etc.
- Lack of support by college administrators during the start-up years of the BS in Architecture and Sustainability program

Prior to this APR cycle two strategies that were successful included: 1) faculty made personal contact with students on Admit list via phone calls or emails, 2) and junior and senior students acted as ambassadors for the program and recruited at their high school. The department plans to reinstitute both strategies for 2017/2018. Additionally, other strategies to enhance enrollment will be explored.

B. ENROLLMENT - HEADCOUNTS

Table B.1 – Fall Enrollment by Program

	2011/2012			2012/2013			2013/2014			2014/2015			2015/2016		
	ON	**OFF**	**OL**	**ON**	**OFF**	**OL**	**ON**	**OFF**	**OL**	**ON**	**OFF**	**OL**	**ON**	**OFF**	**OL**
Architectural Technology (AAS)	70			67			62			56			56		
Architecture & Sustainability (BS)	11			22			29			32			26		
Pre-Architectural Technology (AAS)	4			6			5			3			6		
Pre-Architecture & Sustainability (BS)	2			3			1			0			0		
Location Total	87			98			97			91			88		
Program Total	**87**			**98**			**97**			**91**			**88**		
Program Capacity	**108**			**126**			**126**			**126**			**126**		
Difference	-21			-28			-29			-35			-38		

Source: FSU Institutional Research & Testing

Analysis

The ideal number of enrolled students given NAAB requirements, the available number of faculty, and physical resources is determined as follows:

- The faculty / student ratio for the architecture program is based on NAAB recommendations of 1 faculty per 16 students for studio type classes. To boost productivity, a studio capacity of 18 students has been established as shown in Table B.2. Coupled with physical space, in terms of number of classrooms, and the number of faculty (7 FTE) the total capacity of the architecture program is 126 students. Total capacity of the facility management program is 50 on-campus and 20 online students.

Table B.2 - Ideal Enrollment per Program

Architecture			**Number of Studio sections**	**Required Studio Space**
ARCH	Year 1 (AAS)	54	3 sections of 18	3 shared spaces
ARCH	Year 2 (AAS)	36	2 sections of 18	
ARST	Year 3 (BS)	18	1 section of 18	1 dedicated space
ARST	Year 4 (BS)	18	1 section of 18	1 dedicated space
Sub-total		**126**		
Facility Management				
FMAN	Year 3 (BS)	25		1 dedicated shared space
FMAN	Year 4 (BS)	25		
FMAN Certificate (Online)		20		
Sub-total		**70**		
Total Enrollment		**196**		

Source: ATFM Department

Over the past five years the average enrollment in the AAS Architectural Technology program, which has a current program quota of 90, has been 63. In the early part of this program review cycle, enrollment was near the quota. However, enrollment from 2012 on has decreased. The faculty believes there are several factors which affect this decrease in enrollment.

1. Prior to fall of 2011 and the offering of only an AAS degree in architecture, it was becoming more difficult to compete with community colleges; several of which across the state offer programs comparable to the AAS at a significantly lower cost. Although the quality and reputation of the Ferris' AAS program remains high, the cost of tuition often plays a greater role in deciding which college to attend. The ablity to earn an associate degree at a community college at a much cheaper cost results in students enrolling in their local community college rather than coming to Ferris.

2. Approximately 25% of students leave the program after the first or second semester of study. This is typical of architecture programs in general. Many students entering an architectural program do not realize the dedication and commitment necessary to be successful in this profession. Also, some expect it to be more creative, while others expect it to be more engineering oriented.

3. For years, the architecture program did not have a sense of place or a centralized area. Studios and classrooms were scattered throughout the Swan building and the facilities were less than desirable and below par in comparison to other architecture programs in Michigan. For the past 10 years, many efforts have been made by the program coordinator to impart the importance of having the program's facilities emulate the highest qualities of design. As noted in other areas of this report, the first floor of the Swan Building is being renovated to provide the centralized, professional facilities the department needs.

Enrollment in the BS in Architecture and Sustainability (ARST) program is dependent on the ARCH program. The majority of students entering the junior year of the ARST program ladder from Ferris' ARCH program; as such the average enrollment over the past five years in the BS Architecture and Sustainability program, which has a current program quota of 36, has been 24. Excluding the first year when the program was launched, average enrollment has been 27.25 which is 76% of program capacity. The goal is to be within 90% of program capacity and faculty believe this will be achieved once program enrollment in the AAS program increases and the Swan Renovation project is complete.

In response to the decline in enrollment, a plan that includes key action items has taken place over the past seven years to reverse this trend. The goal is to increase and maintain enrollment within 85-90% of capacity.

The first action item involves the enhancement of the curriculum to include the following:

1. Creation of a baccalaureate degree in architecture (launched in fall of 2011) that attracts students seeking BS or graduate level degrees in architecture that would otherwise enroll in other architecture programs in Michigan.
2. Create an accredited degree program thereby providing graduates the opportunity to become licensed architects. Target launch date is fall of 2019.

The second action item involves enhancing the image of the programs through the creation of professionally designed brochures, posters, and web page that expresses the unique character of the programs. Enhancement of the program has also been accomplished with greater involvement in professional organizations and community outreach projects through the Small Town Studio (STS).

The third action item involves enhancing and providing dynamic, accessible learning spaces that match the design principles the program wishes to instill in the students. It is critical that program spaces and studios are of the highest design quality and include state-of-the-art equipment to compete with other architectural programs. With the recent renovation of the first floor of Swan, the program is now on par

with other state and regional architectural programs. It is anticipated that enrollment will increase substantially due to the new architecturally designed learning environment for the ATFM department.

The following **Recruitment and Retention Action Plan** reflects the above ideas and strategies. In general, faculty are pleased with the progress. Action items that were easily implemented and would be most noticeable and impactful for the students and visitors were addressed first. Action items that required a longer duration or college and university-wide support were developed, promoted, and reinforced over the past 4-5 years. Overall the goal of enhancing the program and presenting an image and brand that matches the program's reputation is underway.

Recruitment and Retention Action Plan – 2010 - 2017			
	Action Item	**Target Date**	**Status**
1	Enhance AAS in Architectural Technology by providing a baccalaureate program to compete with other undergraduate architecture programs in Michigan.	Fall of 2011	Launched in fall of 2011. First graduating class in May of 2013.
2	Hire new faculty, with advanced credentials, to teach in BS program.	January of 2011	New FTE position was filled with hiring of Paul Long
3	Hire faculty member, to replace retiring FTE faculty member, with advanced credentials to teach in new BS program.	August of 2013	Replaced retiring senior faculty member with hiring of Chris Cosper.
4	Secure facilities that match and promote the uniqueness and design aspect of the programs.	December 2017	This action item was fulfilled with Board Approval in December of 2016.
5	Create program web site that matches the uniqueness of the programs and is competitive with other undergraduate architecture programs.	July 2017	Graphic design students, in fulfillment of their senior capstone project, developed program web page during academic year of 2016/17.
6	Heighten program visibility through attendance at professional associations and special events.	Ongoing	
7	Enhance undergraduate program with the addition of a NAAB accredited Bachelor of Architecture degree that would provide the path to licensure.	PCAF submitted in Nov. 2016	PCAF re-submitted in 4/2017 with adjusted budget.
8	Continue and enhance relationship with admitted students through personal letters and telephone calls from architecture faculty.	Ongoing	

9	Continue visits to GRCC and LCC; build relationships with other Michigan community colleges.	Ongoing	
10	Update statewide high school list of potential programs and contacts for recruitment through letters, emails, and personal visits to establish and maintain active relationships.	May 2017	
11	Continue to administer exit surveys for continuous improvement and analysis of lower than desired retention rates.	May 2017	This is completed on an annual basis.

C. STUDENT CREDIT HOUR TRENDS

Table C.1 – Student Credit Hours (SCH)

Prefix	Year	Summer	Fall	Spring	F + SP (a)	% of CAP 2,117
ARCH	2011/2012	0	863	721	1,584	75%
ARCH	2012/2013	0	936	883	1,819	86%
ARCH	2013/2014	0	913	809	1,722	81%
ARCH	2014/2015	0	882	861	1,743	82%
ARCH	2015/2016	0	872	851	1,723	81%
Average	2011 - 2016				1,718	81%

Source: FSU Institutional Research & Testing

Analysis

Student credit hours based on course CAPS (at full course enrollment) for fall semester is 1010 and for spring semester is 1107 for a total of 2,117 SCH (F + SP). The average of 1,718 over the past five years is 81% of full capacity. In general, this is lower than desired but close to the program goal to be within 90% of program capacity. Again, as the department continues to enhance the program, the SCH trends will increase. The program addresses SCH trends with the goal of being as productive as possible; when appropriate, classes with low enrollment (less than 40%) are cancelled to ensure meaningful productivity.

D. PRODUCTIVITY

Table D.1 – Full time Equated Faculty (FTEF)						
Prefix	**Year**	**Summer**	**Fall**	**Spring**	**F + SP (b)**	**Univ. Ave.**
ARCH	2011/2012	0	5.67	4.32	5.00	
ARCH	2012/2013	0	6.15	4.88	5.51	
ARCH	2013/2014	0	5.33	5.21	5.27	
ARCH	2014/2015	0	4.36	5.38	4.87	
ARCH	2015/2016	0	4.91	4.96	4.93	
Average	2011 - 2016				5.12	

Source: FSU Institutional Research & Testing

Table D.2 – Student Credit Hours / Full time Equated Faculty (SCH/FTEF)							
Prefix	**Year**	**Summer**	**Fall**	**Spring**	**F + SP (a/b)**	**CET Average**	**Univ. Average**
ARCH	2011/2012	0	152.20	166.80	317.03	376.69	454.51
ARCH	2012/2013	0	152.29	181.07	330.05	380.69	462.53
ARCH	2013/2014	0	171.38	155.38	326.94	398.96	469.11
ARCH	2014/2015	0	202.38	159.96	357.87	429.34	460.26
ARCH	2015/2016	0	177.76	171.45	349.17	418.15	456.41
Average	2011 - 2016				335.80	400.20	

Source: FSU Institutional Research & Testing

Analysis

Productivity trends over the past five years have been lower than the previous APR Report (2005-2010). Average of previous five years (2005-2010) was 370. In part, due to low enrollment and in part due to the nature and number of studio type classes within architectural education. Studios are capped at 18 students and lecture classes are capped at 25 but at times reach enrollment of 35 students.

A 3-credit hour lecture course with 30 students generates 1,350 student credit hours; while a 4-credit hour studio course with 18 students only generates 1,080 student credit hours. In addition, the program offers three architectural electives each spring to provide an ample number of options for junior and senior architecture students. With low program enrollment, these elective studio courses have not met the desired enrollment of 14 to 16 students per each course. The faculty recognize that these lower enrolled classes have a negative impact on productivity, but it is important to offer a variety of elective courses to provide graduates the proper education for continuation into a Master's program or the

workplace. Once enrollment reaches 90% of capacity our productivity will match or exceed the CET average.

FTEF based on course CAPS (at full course enrollment) for fall semester is 4.77 and for spring semester is 5.26 for a total of 5.02 (F + SP), which is close to the average of 5.12 over the past five years. In general, this is lower than desired but close to the program goal to be within 90% of program capacity. Again, as the department continues to enhance the program, the SCH trends will increase. The program addresses SCH trends with the goal of being as productive as possible; when appropriate, classes with low enrollment (less than 40%) are cancelled to ensure meaningful productivity.

E. ENROLLMENT - RESIDENCY

Table E.1 – ARCH Enrollment by Residency

Prefix	Term	Resident	Midwest	Non-Resident
ARCH	201208	65	2	0
ARCH	201308	59	1	2
ARCH	201408	54	0	2
ARCH	201508	54	0	2
ARCH	201608	58	0	2

Table E.2 – ARCH Enrollment by Age

Prefix	Term	Average Age
ARCH	201208	19
ARCH	201308	19
ARCH	201408	19
ARCH	201508	20
ARCH	201608	19

Table E.3 – ARCH Enrollment by GPA

Prefix	Term	Average GPA	Min. GPA	Max. GPA
ARCH	201208	3.20	1.81	4.00
ARCH	201308	2.95	1.29	4.00
ARCH	201408	2.72	1.50	3.85
ARCH	201508	2.93	1.76	3.93
ARCH	201608	3.14	2.11	4.00

Table E.4 – ARCH Enrollment by ACT				
Prefix	**Term**	**Average ACT**	**Min. ACT**	**Max. ACT**
ARCH	201208	22.11	15	32
ARCH	201308	22.59	13	30
ARCH	201408	22.29	15	30
ARCH	201508	22.29	16	30
ARCH	201608	23.08	16	32

Source: FSU Institutional Research & Testing

Table E.5 – ARST Enrollment by Residency				
Prefix	**Term**	**Resident**	**Midwest**	**Non-Resident**
ARST	201208	21	0	1
ARST	201308	28	0	1
ARST	201408	31	1	0
ARST	201508	24	0	2
ARST	201608	19	0	1

Table E.6 – ARST Enrollment by Age		
Prefix	**Term**	**Average Age**
ARST	201208	22
ARST	201308	21
ARST	201408	22
ARST	201508	21
ARST	201608	21

Table E.7 – ARST Enrollment by GPA				
Prefix	**Term**	**Average GPA**	**Min. GPA**	**Max. GPA**
ARST	201208	3.25	2.56	3.87
ARST	201308	3.40	2.62	4.00
ARST	201408	3.44	2.65	3.98
ARST	201508	3.20	2.55	3.92
ARST	201608	3.09	2.38	3.84

Table E.8 – ARST Enrollment by ACT				
Prefix	**Term**	**Average ACT**	**Min. ACT**	**Max. ACT**
ARST	201208	23.16	12	33
ARST	201308	23.28	12	33
ARST	201408	23.14	13	33
ARST	201508	23.68	13	33
ARST	201608	22.88	16	30

Source: FSU Institutional Research & Testing

Analysis

The architecture programs typically enroll more traditional students versus non-traditional students.

F. Enrollment – Gender and Ethnicity

Table F.1 – ARCH Enrollment by Gender				
Prefix	**Term**	**Enrolled**	**Male**	**Female**
ARCH	201208	67	48	19
ARCH	201308	62	41	21
ARCH	201408	56	41	15
ARCH	201508	56	42	14
ARCH	201608	60	41	19

Table F.2 – ARCH Enrollment by Ethnicity											
Prefix	**Term**	**Enrolled**	**Unknown**	**Black**	**Hispanic**	**Native**	**Asian**	**White**	**Hawaiian**	**Multi**	**Foreign**
ARCH	201208	67	2	3	1	0	0	60	1	0	0
ARCH	201308	62	1	2	3	1	0	54	0	0	1
ARCH	201408	56	0	1	2	0	0	52	0	0	1
ARCH	201508	56	0	1	2	0	0	53	0	0	0
ARCH	201608	60	0	1	4	0	2	52	0	1	0

Table F.3 – ARCH Enrollment by Full / Part time				
Prefix	**Term**	**Enrolled**	**Full Time**	**Part Time**
ARCH	201208	67	66	1
ARCH	201308	62	61	1
ARCH	201408	56	53	3
ARCH	201508	56	54	2
ARCH	201608	60	58	2

Source: FSU Institutional Research & Testing

Analysis

In comparison to other programs within the CET, the architecture programs have a high percentage of female students, but rank low in terms of ethnic diversity. Factors that impact the lack of diversity include the location of FSU and the lack of an accredited degree. Additionally, the architecture profession, in general, is low in terms of ethnic diversity compared to other built environment professions such as engineering.

Recruiting and retention efforts that promote and encourage females and students of color to enroll in the architecture programs include:

- Offering of Architecture Summer Camp that targets a diverse group of students from the Grand Rapids Public Schools (GRPS)
- Partnering of the STS with Dr. Tony Baker and Innovation Central High School
- Involvement by faculty with the Women in Technology RSO with STEM and STEAM recruitment activities
- Involvement with activities sponsored by Leigha Compson, CET Career Program Specialist that target special populations such as females and international students

G. RETENTION

Table G – ARCH Retention and Graduation Rates of FTIAC Students								
	No.		**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Year 7**
Fall 2010	12	% Graduated by	0	42	67	83	83	83
		% Still enrolled in	83	42	17	0	0	0
		% Persisters	83	83	83	83	83	83
		% Non-Persisters	17	17	17	17	17	17
Fall 2011	29	% Graduated by	0	55	62	69	72	-
		% Still enrolled in	86	24	21	10	7	-
		% Persisters	83	83	83	83	83	-
		% Non-Persisters	17	17	17	17	17	-
Fall 2012	19	% Graduated by	0	32	37	37	-	-
		% Still enrolled in	68	32	21	21	-	-
		% Persisters	68	63	58	58	-	-
		% Non-Persisters	32	37	42	42	-	-
Fall 2013	21	% Graduated by	0	19	38	-	-	-
		% Still enrolled in	71	38	19	-	-	-
		% Persisters	71	57	57	-	-	-
		% Non-Persisters	29	43	43	-	-	-
Fall 2014	14	% Graduated by	0	36	-	-	-	-
		% Still enrolled in	71	36	-	-	-	-
		% Persisters	71	71	-	-	-	-
		% Non-Persisters	29	29	-	-	-	-
Fall 2015	14	% Graduated by	0	-	-	-	-	-
		% Still enrolled in	71	-	-	-	-	-
		% Persisters	71	-	-	-	-	-
		% Non-Persisters	29	-	-	-	-	-

Table G – ARST Retention and Graduation Rates of FTIAC Students							
	Number		**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
Fall 2012	1	% Graduated by	0	100	100	100	
		% Still enrolled in	100	0	0	0	
		% Persisters	100	100	100	100	
		% Non-Persisters	0	0	0	0	

Source: FSU Institutional Research & Testing

Analysis

Overall retention rates and trends within the program are lower than desired and do not meet program goal of retaining 80% of first year students and 90% of second year students. In contrast, the retention (and graduation) rates of students who ladder from the AAS in ARCH program into the BS in ARST, FMAN or CONM is nearly 100%. As such, the program's focus regarding retention is on retaining students from the first year to the second year. The following efforts are made to maintain a retention rate of 80%: encourage students to join AIAS or IFMA SRO groups; engage first and second year students in special events sponsored by the program; connect first and second year students with upper classmen who serve as mentors; conduct close supervision through faculty advising; identify and promote upper classmen to serve as student tutors, direct students who need academic support to Writing Center, etc.

H. PROGRAM GRADUATES

Table H.1 – ARCH Graduates

Prefix	Academic Year	On-Campus	Off-Campus	Online	Total
ARCH	2011-2012	18	0	0	18
ARCH	2012-2013	35	0	0	35
ARCH	2013-2014	24	0	0	24
ARCH	2014-2015	17	0	0	17
ARCH	2015-2016	19	0	0	19

Table H.2 – ARST Graduates

Prefix	Academic Year	On-Campus	Off-Campus	Online	Total
ARST	2011-2012	-	-	-	-
ARST	2012-2013	10	0	0	10
ARST	2013-2014	12	0	0	12
ARST	2014-2015	14	0	0	14
ARST	2015-2016	20	0	0	20

Source: FSU Institutional Research & Testing

Analysis

As to be expected, due to lower than target enrollment within the ARCH program, the graduation rate is lower than desired. The ARCH program has the capacity to graduate 36 students each year. Three of the five years is below this target.

As a new program, graduation rates within the ARST program match expectations. The ARST program has the capacity to graduate 18 students each year. The first degrees were awarded in May of 2013; over this 4-year period, the program has graduated an average of 14 students per year. Of the 56 students who began the ARST program only 1 student did not graduate.

I. SIX-YEAR GRADUATION RATE

Table I – ARCH Six Year Graduation Rate								
	No.		Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
Fall 2010	12							
		% Persisters	83	83	83	83	83	83
Fall 2011	29							
		% Persisters	83	83	83	83	83	-
Fall 2012	19							
		% Persisters	68	63	58	58	-	-
Fall 2013	21							
		% Persisters	71	57	57	-	-	-
Fall 2014	14							
		% Persisters	71	71	-	-	-	-
Fall 2015	14							
		% Persisters	71	-	-	-	-	-

Source: FSU Institutional Research & Testing

Analysis

Every effort is made by program faculty to provide a timely completion to graduation. This is done through academic advising and through the use of block schedules that regulate what classes students take in a given semester. Furthermore, the program coordinator works with the Arts, Physics, Sociology, Political Science and Management departments to either reserve seats within certain sections or coordinate time offerings of gen ed courses with core ARCH courses.

J. GRADUATE AVERAGE GPA

Table J.1 – ARCH Graduate Average GPA				
Prefix	**Term**	**Average GPA**	**Min. GPA**	**Max. GPA**
ARCH	2011-2012	3.03	2.26	3.87
ARCH	2012-2013	3.15	2.10	4.00
ARCH	2013-2014	3.23	2.06	3.86
ARCH	2014-2015	2.97	2.33	3.94
ARCH	2015-2016	3.00	1.97	3.83

Table J.2 – ARST Graduate Average GPA				
Prefix	**Term**	**Average GPA**	**Min. GPA**	**Max. GPA**
ARST	2011-2012	-	-	-
ARST	2012-2013	3.37	2.90	3.87
ARST	2013-2014	3.19	2.69	3.86
ARST	2014-2015	3.46	2.65	3.97
ARST	2015-2016	3.40	2.85	3.92

Source: FSU Institutional Research & Testing

K. GRADUATE AVERAGE ACT

Table K.1 – ARCH Graduate Average ACT				
Prefix	**Term**	**Average ACT**	**Min. ACT**	**Max. ACT**
ARCH	2011-2012	22	18	25
ARCH	2012-2013	22	12	32
ARCH	2013-2014	22	13	27
ARCH	2014-2015	24	15	30
ARCH	2015-2016	21	16	26

Table K.2 – ARST Graduate Average ACT				
Prefix	**Term**	**Average ACT**	**Min. ACT**	**Max. ACT**
ARST	2011-2012	-	-	-
ARST	2012-2013	24	18	30
ARST	2013-2014	21	12	25
ARST	2014-2015	25	17	32
ARST	2015-2016	22	13	33

Source: FSU Institutional Research & Testing

Analysis

As to be expected the average GPA and ACT of graduates of the ARST program is higher than those of the ARCH program. In part, due to the higher entry requirements, and in part due to the maturity level and focus of the students.

L. STATE AND NATIONAL EXAMINATIONS

Not applicable

07

PROGRAM VALUE (BEYOND PRODUCTIVITY AND ENROLLMENT)

Programs offer value (aka "productivity") to Ferris State University beyond what enrollment, student credit hours, and full-time equated faculty numbers oftentimes show. This section gives programs an opportunity to highlight all the difficult-to-measure contributions the program makes to the benefit of its department, college, the community, and Ferris State University.

A. PROGRAM VALUE

Architectural Technology—An Opportunity Portal

Unlike many architecture programs, which require a four to five-year commitment, the Ferris Architecture and Facility Managment programs begin with a two-year foundation, our AAS in Architectural Technology. After two years, students have the option of applying for the Architecture and Sustainability program (ARST), the Facility Management program, or the Construction Management program, allowing them to balance academic progress with academic skills, financial needs, and career goals.

Many architecture programs have notoriously difficult admissions standards. In keeping with Ferris State University's role as an opportunity university, the entrance standards for the Architectural Technology program are no more difficult than the university's general admissions standards. Entrance to the ARST program, which students apply to during their sophomore year, requires a minimum GPA, a portfolio, and an admissions essay. This standard is designed to cull unmotivated students without creating an artificial barrier to students who are working hard in school and making progress toward the profession.

Letting students into a program is only part of the equation—students with weaker academic backgrounds often need additional attention if they are going to succeed at the college level. Our faculty work hard to ensure that every motivated student has the best chance of success. Faculty often provide one-on-one mentoring inside and outside of class. Additional, the faculty group often works together to identify and to help students who are struggling.

Architecture and Sustainability—Preparing Students for the Next Step

Students who obtain the BS in Architecture and Sustainability degree have many career and education options.

To date, about half of our program graduates have gone directly into the workforce after graduation. Typically, our graduates work in architecture or engineering firms, but some are pursuing careers with "allied" companies such as construction companies, construction material manufacturers, or construction material suppliers.

The other half have chosen to continue their education by pursuing a Master of Architecture (MArch) degree. Ferris Architecture and Sustainability graduates have been accepted to numerous quality graduate programs, including the Ball State University, Boston Architectural College (BAC), Clemson

University, Illinois Institute of Technology, KCAD, SCI-Arc (the Southern California Institute of Architecture), the University of Michigan, the University of Minnesota, Washington University (St. Louis), and others.

The quality of Ferris graduates has been noticed by these graduate programs. Glen Leroy, the president of the BAC, was so impressed by a recent Ferris graduate that he traveled to Big Rapids to recruit future graduates to the BAC.

Architecture and Facility Management Department—Diversity in the College of Engineering Technology

Because the College of Engineering Technology (CET) contains many fields historically dominated by men, diversity in CET is measured in the number of female students per program.

By this measure, the ATFM department is the diversity leader in CET. In Fall 2016, 9.5% of CET students were female. That same semester, 33% of ATFM students were female. Additionally, there is room for more diversity in the ATFM department, because approximately half of architecture students, nationally, are female.

B. PROGRAM HIGHLIGHTS

Leveraging the Value of Facility Management (FM)

The Architecture program at Ferris State University is unusual, being only one of three programs in North America that is paired with an International Facility Management Association (IFMA) accredited Bachelor of Science in Facility Management program.

The curriculum for all ATFM students is essentially the same during their first two years. During their third year, however, Architecture and Sustainability students go one direction, and FM students go another. Upper class ARST students do take two FM classes: FMAN 432 Principles of Interior Architecture and FMAN 322 Project Management. Furthermore, the number of ARST students seeking an FM minor or an FM dual degree is increasing. Anecdotally, it appears that the ARST/FM dual degree is proving to be a strong pairing for students who want an FM position that emphasizes planning and other visioning skills.

The FM program at Ferris State University is the second oldest IFMA accredited program that is still in existence. The Ferris FM program has been successfully placing graduates across Michigan and nationally since the 1990. Because our relatively new ARST program is paired with an established, creditable FM program, the ARST program has gained a level of recognition and validation unusual for a new program.

The Small Town Studio

For the first time in human history, more than half of the world's population lives in cities and towns, rather than rural or agricultural settings. As the world undergoes this fundamental shift from rural to urban development, much of the focus has been on the role of large or even mega cities in ushering in this new urban era. This shift in focus means that small towns have often been overlooked or left out of the discussion, leaving unanswered the question: what is the role of small towns in this new urban age?

The Small Town Studio (STS) engages architecture students with the patterns of everyday life, integrating their studio experiences into the context of local communities as they work to explore architectural and planning issues in the struggling small towns of Michigan. Pressing issues tackled by the STS include economic hardship, decentralization, identity, pattern, context, cultural opportunity, brain drain, and opportunities for youth. The STS does not focus on the quick fix or easy solutions, but instead on systemic and sustainable change to position small towns for viable long-term stability.

The Small Town Studio (Arch 441: Architectural Design III – 5 credit hours) is taken fall semester of a student's senior year. It is the third architectural design studio offered in the curriculum and is required of all students in the ARST program.

Reflecting the implied nature of a degree titled "Bachelor of Science in Architecture and Sustainability," the STS seeks to embody a multi-scaler and holistic approach to sustainability and design education that educates future design professionals with a broad understanding of sustainability in the built environment. In doing so, it recognizes the value of Ernest Boyer's and Lee Mitgang's call for architects to "be among the most vocal and knowledgeable leaders in preserving and beautifying a world who's resources are in jeopardy."

Working with a Visiting Architect

Among the factors that keep an architecture program vital is a link to the world of practice. It is important for students to be educated in a context of stylistic and technological currency. The Architecture and Sustainability program integrates a Visiting Architect who journeys to Big Rapids on a regular schedule throughout the semester; works in tandem with a full-time faculty member to provide a framework of project creation, development and review; and brings to the studio first-hand experience with the critical professional issues of the day.

Spring 2015, the visiting architect developed two programs in the Traverse City area for the studio: a boutique hotel and an "infill" retail parcel on Traverse City's main commercial street. Spring 2016, the visiting architect provided a program for a high-rise residential complex in Grand Rapids. This year, Spring 2017, the students developed their own programs, but the visiting architect provided them feedback and practice-based experience.

Competitions

Ferris ARST students enter numerous competitions, including ACSA housing competitions, the ASC design-build competition, and the Wege Prize.

Ferris design-build teams have a history of success in the Associated Schools of Construction (ASC) Great Lakes Region, which consists of 25 schools, including Ohio State and Purdue. Since 2014, the Ferris design-build team has consisted of four construction management students and two architecture students, who work collaboratively to design and plan the construction of a large, multi-story project. In 2015, the Ferris team took second place, and in 2016, the Ferris team took third place in the competition.

08
FLEXIBILITY AND ACCESS

It is important for (ultimate) program success to be flexible and accessible to the largest number of potential students. This section provides programs an opportunity to describe how program offerings are available to the largest segment of potential students.

Offsite Locations

Courses are taught only on the Big Rapids campus, with some blended online content used in a small number of courses.

Online Availability of Course Offerings

HVAC 337 Mechanical and Electrical Systems for Buildings, which is taught by HVACR faculty, recently moved to online delivery. There are concerns about whether second year students are ready for a fully-online course, so this course will be evaluated for usefulness and relevancy. ARCH 421 Current Issues in Architecture is currently offered in a mixed-delivery format.

Evening or Weekend Classes

Neither evening or weekend classes are currently offered.

Accelerated Program Completion

Owing to the sequential nature of the core courses in both programs, accelerated program completion is not currently an option. Academic advising assists students in completing the ARCH program in two years and the ARST program in two years. The dual-degree program allows students to complete the ARCH program, and two bachelor's degrees (ARST and FMAN) in a total of five years.

Summer Course Offerings

In general terms, only general education courses are available to students during the summer. Examples of courses include ENGL 150, ENGL 250, PHYS 211, SOCY 121, COMM 105, COMM 121, PLSC 121, PLSC 122, ENGL 311, and Global general education electives. Students also have the option of pursuing equivalent general education courses at their local community colleges. Many students take advantage of this opportunity to get ahead in their studies, to lighten semester course loads, or to pursue a dual-degree program or a minor. Architecture faculty have created summer course offerings in the past, but they did not attain necessary enrollment levels and consequently did not run.

Multiple Entry Points

The ARCH and ARST programs both have fall semester entry points. Transfer students are encouraged to enter the ARCH program in the fall, but accommodations are made for spring entry, with the understanding that there may be a delay in some course sequencing. There is less flexibility in entering the ARST program, which requires fall entrance. Students can enter the ARST degree program with an AAS in Architectural Technology from Ferris or a community college.

Program Trends Related to Flexibility and Access

Among the trends that must be confronted is the increasing number of students that pursue community college enrollment, largely for economic reasons. To reduce the financial and time commitments of these students, coursework from community colleges is reviewed on an individual basis to determine equivalency to Ferris courses and maximize transfer credit. Another trend directly related to flexibility and access is online education. Program faculty are always seeking examples of effective online course delivery in the context of architectural education, and as the program development for the Bachelor of Architecture degree continues, online course offerings will be part of the conversation.

Flexibility and Access Within the Program

Faculty work closely with students and with each other to find methods through which students can complete their education. This is particularly true for transfer students, for whom individual plans are created that can turn their advance standing into an opportunity to pursue a minor or a dual-degree. Conversely, students entering the ARCH program with general education deficiencies are given PRE-ARCH status that limits their entry into core courses until they have addressed deficiencies in mathematics, reading or English. This status is designed to avoid the expense and time commitment for students who are not prepared for the rigors of architectural education.

09

VISIBILITY AND DISTINCTIVENESS

This section provides programs an opportunity to benchmark themselves against competitive institutions. In addition, programs can highlight unique program features and identify plans for improvement based on the results of their analysis.

Across the nation, college programs in architecture demonstrate a wide-range of highly individualized characteristics that augment the basic components of architectural education. These are frequently based on regional variations in architectural traditions rooted in culture, climate, materials, economics or other factors. The architecture programs at Ferris State University demonstrate such individuality based on the career-oriented culture of the university, as well as its location in rural northern Michigan.

A. VISIBILITY AND DISTINCTIVENESS

AAS in Architectural Technology

The Architectural Technology program (ARCH) is unique in its emphasis on the practice of the profession. Taught by practitioners, classes provide students with a foundation in the areas of building materials, building information modeling (BIM), building codes, presentation techniques, architectural design, sustainability, and architectural history along with a strong base in general education courses, specifically mathematics, physical science, studio art, and verbal and oral communications. The curriculum has historically provided the skills, knowledge, and the necessary preparation to allow students to become successful architectural technicians, which distinguishes it from other programs that use the first two years of study only as preparation for the next two years of study.

For those students wishing to continue into those next two years, another unique feature of the ARCH program is the opportunity to explore multiple career paths upon completion of the AAS degree in Architectural Technology. This distinct feature provides students with the following opportunities after two years of study, provided they meet the entry requirements specific to the program they desire to enter.

- Pursue a Bachelor of Science in Architecture and Sustainability degree at Ferris, which is designed to also prepare students to apply to NAAB accredited Master of Architecture degree programs
- Pursue a Bachelor of Science in Facility Management degree at Ferris
- Pursue a Bachelor of Science in Construction Management degree at Ferris
- Pursue a Bachelor of Arts in Interior Design at Kendall College of Art and Design

BS in Architecture and Sustainability

The bachelor degree program (ARST) builds on the skills developed in the ARCH program while focusing on the process of architectural problem solving within the context of human, social, and natural ecosystems. It is a continuation of the ARCH degree in terms of its focus on professional practice, rather

than the theoretical approach that characterizes many other architecture programs. Upon graduation, students can enter the workplace or continue into an accredited Master of Architecture program (MArch) that provides students the educational path to architectural licensure.

A signature of the ARST program is its Small Town Studio (STS), the development of which is rooted in the small-town location of Ferris State University. With a preponderance of students in the program historically coming to Ferris from small towns, the STS was developed, in part, to prepare graduates to play leadership roles in those small towns, to which many hope to return and develop satisfying careers.

The ARST program has resulted in more graduates of the ARCH program remaining at Ferris for four years, rather than transferring to other institutions to complete their undergraduate degrees. This program reinforces the strengths of the ARCH program for students who are more serious and academically qualified than traditional students seeking associate level degrees.

B. Marketing Policies and Procedures

A new program website is soon to be launched after a year-long collaboration with the Graphic Design students. In addition, the program degree offerings are marketed through the College of Engineering Technology (CET) website, program marketing literature, campus Dawg Days, and presentations at area community colleges. Phone calls and emails are made to newly admitted students to verify their potential plans and answer program questions. The program activities are also documented and shared through social media outlets such as Facebook.

The STS has become an effective marketing tool, and has achieved a relatively high degree of visibility through its involvement in a number of projects in small towns such as Mecosta, Whitehall, and Big Rapids, as well as Grand Rapids. In fall 2017 students will be working on a project in Frankenmuth, extending the reach of the STS—and the visibility of the architecture programs—to eastern Michigan.

The primary market for Ferris' Architectural Technology program is high school students who are interested in architecture, construction, art, and applications of computer technology. Survey results have historically indicated that students choose Ferris because of the program's reputation, cost, and technical emphasis along with the desire to study at a "traditional" university. Over the last five years, the trend to continue on to a baccalaureate level degree after attaining the associate level degree has not only continued, but intensified. It is now the exception for a student to seek employment after completing the associate degree.

B. Competitive Programs

AAS offerings

Identify and describe competing programs

There are seven institutions in Michigan offering associate level degrees in drawing, drafting, or architectural technology: Delta Community College, Grand Rapids Community College, Henry Ford

Community College, Lansing Community College, Macomb Community College, Oakland Community College, and St. Clair Community College.

Evaluate competing programs' features, benefits, or other modes of operation that represent a competitive advantage over FSU's program.

In comparison to Ferris' Architectural Technology program, the institutions listed above offer a variety of programs that differ in scope and quality, from residential design to computer aided drafting. Ferris' curriculum offers a more comprehensive architectural education in terms of breadth and depth than the institutions listed above. In addition, none of the community colleges offer an opportunity to remain at that institution and obtain a bachelor's degree; nor do they offer the "traditional" university experience that has been shown to be appealing to students.

With the implementation of the ARST program, the ARCH program was revised to integrate foundation concepts and practices of sustainability. In addition to the technical aspects of the curriculum, these new concepts will continue to match trends and needs of built environment professions and better prepare students seeking advance degrees and architectural licensure. Lastly, all faculty teaching in the program are licensed architects and former or current practitioners, bringing real-world connections to the classroom.

These represent significant advantages of the Ferris program in comparison to the community college programs. The primary competitive advantage of the community colleges is economic: tuition costs are lower, and students are able to live at home instead of in on-campus or rental housing.

What features, benefits, or other areas of competitive advantage can be emulated from competing programs that would improve the program at FSU?

In addition to cost, one feature or benefit that could be considered a competitive advantage for the community colleges has been the quality of facilities. Creation of a dynamic new space dedicated to the ATFM department has leveled the playing field in this regard. Community colleges often have more up-to-date computer technology, and transfer students may consider this to be a negative aspect of the programs at Ferris, but program faculty regularly propose updates to technology to address this issue.

Evaluate program policies and procedures at FSU designed to benchmark competitor programs.

Program faculty regularly visit and confer with representatives of the community colleges in Lansing and Grand Rapids, which have historically been the strongest competition for the ARCH program at Ferris. This allows for program faculty to keep abreast of program developments, facility upgrades and student attitudes and goals; each of which inform program development at Ferris.

Outline specific plans for program improvement based on analysis of competing programs.

As noted above, facility upgrades have been made to address the disparity between Ferris and the community colleges. Improvements in computer technology are also ongoing, and students quickly learn that the applications they engage in at Ferris are at a higher level of complexity than those offered at

community colleges, so the faculty assist in overcoming perceptions of lesser quality in technological applications.

BS offerings in Michigan

Identify and describe competing programs

Besides the ARST program at Ferris, there are four other universities in Michigan that offer bachelor level degrees in architecture: the University of Michigan in Ann Arbor offers a Bachelor of Science in Architecture; Lawrence Technological University in Southfield offers a Bachelor of Science in Architecture and a Bachelor of Science in Architectural Studies; Andrews University in Berrien Springs offers a Bachelor of Science in Architecture and a Bachelor of Science in Architectural Studies; and the University of Detroit Mercy offers a Bachelor of Science in Architecture. The University of Michigan is the only public university of those listed above, the rest being private, not-for-profit universities. It should be restated that students at Ferris can pursue a second bachelor degree in facility management or construction management. None of the competing universities have offerings in these disciplines.

Evaluate competing programs' features, benefits, or other modes of operation that represent a competitive advantage over FSU's program.

With the exception of Andrews University, these universities have the advantage of being located in large metropolitan areas, whereas for Ferris, the closest large metropolitan area is an hour away. Access to the cultural offerings and architectural context of large cities expands the educational opportunities for students. Study abroad programs at each of these institutions likewise create opportunities to understand architecture in different cultural, historical, and political contexts.

Each of these universities house their architecture program within a dedicated college, allowing for a more submersive student experience. The broader construct of the School of Built Environment may be perceived by potential students as less desirable.

What features, benefits, or other areas of competitive advantage can be emulated from competing programs that would improve the program at FSU?

Although Ferris students have the ability to take a study abroad class to satisfy a general elective course, development of an architecture-focused study abroad program would help make the program more competitive. Each class of students is taken on a class trip—Grand Rapids; Midland; Columbus, Indiana; and Chicago, Detroit or Toronto—to visit buildings of architectural significance, but opportunities for travel need to be expanded.

Evaluate program policies and procedures at FSU designed to benchmark competitor programs.

Faculty regularly attend conferences at other universities with architecture programs. Through engagement with other faculty, tours of facilities, and exploration of curricula, Ferris faculty are able to effectively evaluate and benchmark competing programs.

Outline specific plans for program improvement based on analysis of competing programs.

As noted above, facility upgrades have been completed that will bring studio spaces to a competitive level. The proposed Bachelor of Architecture degree is being developed, in part, based on curricular components of competitive programs that cannot be accommodated in the current ARST program. In addition, the program regularly seeks approval to create lab fees that would, in part, create funding for student travel beyond west Michigan.

Students pursuing the ARST program at Ferris not only acquire a strong foundation in the built environment but they also focus on the sustainability aspects related to the practice of architecture. Students also have the option of obtaining a second degree in facility management following two more semesters of coursework along with an internship.

C. PREEMINENT PROGRAM

Identify and describe the preeminent program in the country similar to the program at FSU

Architecture schools across the nation exist in a wide range of forms: Ivy League, private, public and standalone. Consequently, identification and description of the preeminent program(s) in the country may identify different programs than those that are similar to the Ferris programs. In this context, those programs that equate most strongly with the architecture programs at Ferris are those housed in Midwestern, public, regional schools, and which can be compared only at the undergraduate level. Those that have been identified by program faculty are housed at Kent State University and Bowling Green State University in Ohio, and Ball State University in Indiana. Programs that have strong curricular relationships to the Ferris programs are those at Lawrence Technological University in Michigan, and Illinois Institute of Technology; both of which are private institutions.

However, those programs that are truly preeminent include those at Harvard, University of California Berkeley, Columbia and Washington University in St. Louis. These schools have achieved national recognition based largely on their graduate programs, and thus cannot be meaningfully compared to Ferris State. Nonetheless, they represent the gold standard for architectural education in the United States.

Another differentiating factor between FSU and nationally recognized programs is the academic qualifications of students. Our students represent a wide range of skill levels. We have some very academically gifted students, who could have chosen any number of universities. We also have some students whose high school records are marginal. Working with Ferris's heritage of being an opportunity university, we are pleased that many "marginal" entering students graduate from our program and obtain good jobs in architecture and related fields, as well as admission to the graduate programs at some of the outstanding schools in the country.

What the programs at Ferris do well is provide the best value for its students. This is a quality shared with the other regional undergraduate schools, but not with the preeminent ones. Development of the Bachelor of Architecture (BArch) program would expand on this tradition of providing a quality education

at moderate cost. Ferris would be the only university in the northern Michigan to offer the BArch. The other programs are located primarily in the southeastern area of Michigan. This would offer a cost effective means for our students to obtain the necessary degree for licensure.

Evaluate how the preeminent program in the country may have risen to that level

Offering of graduate degrees is a major factor in the success of the preeminent schools. For the most part, they are also in or near major metropolitan areas, which allows them to avail themselves of large communities of practitioners who can contribute to the programs as instructors, lecturers or jurors. These institutions also have large budgets that allow them to develop extraordinary facilities for the research, exhibitions, and which contain cutting-edge technology.

What is the preeminent program in the country doing that the program at FSU could emulate to make program improvements?

With the advent of the ARST program, Ferris has moved toward higher visibility through its embryonic lecture series and its engagement of visiting professors. Each of these programs exist in greatly expanded—and richly funded—forms at preeminent schools, owing in large part to their locations, which afford easy access to the professional architectural community, as noted above.

What would the program at FSU have to do in order to become the preeminent program in the country within ten years?

Without seeming negative, it is not feasible that the architecture programs could become the preeminent programs in the country within ten years. However, there is an opportunity to become one of the preeminent undergraduate programs in the Midwest. Development of the Bachelor of Architecture program is a critical building block toward preeminence. As graduates from this proposed program, as well as the existing ARST program, develop successful professional degrees, they will expand the reputation of the programs at Ferris and help build a legacy. Development of an endowment to support visiting lecturers, visiting professors, and international travel would also raise the profile of the FSU programs.

10

PROGRAM DEMAND

Every program should ask critical questions concerning demand for the program. For example, why do students enrolled in the program choose FSU? Would students enrolled in the program choose the program at FSU if they had to do it over again? Would students enrolled in the program recommend the program at FSU to others? Additionally, the program should evaluate the projected market outlook for graduates.

This section examines nationwide employment trends. Because many Ferris architecture students are choosing to pursue the Facility Management (FM) minor or a dual degree (with Architecture and Sustainability and FM), this market outlook examines both architecture and FM.

A. MARKET OUTLOOK AND TRENDS

Architecture

In the near term, the architecture profession looks to be healthy. The most recent AIA Consensus Forecast, published January 25, 2017, says "the industry is looking forward to another couple of years of healthy growth."[1]

According to the Bureau of Labor Statistics (BLS), demand for architects will increase 7% between 2014 and 2024, which matches the average increase across all occupations. The BLS does note, however, that "[c]ompetition for jobs will be very strong because the number of applicants continues to outnumber available positions."[2]

Facility Management

The Architecture and Sustainability program may qualify a student to work in Facility Management as well as the field of architecture. Job prospects in FM for an ARST graduate are enhanced when that student pursues an FM minor or a dual degree (ARST and FM).

The BLS categorizes FM under the broader field of Administrative Services Managers. According to the BLS, demand for Administrative Service Managers will increase 8% between 2014 and 2024, which is about average across all professions. The BLS says that competition for Administrative Service Manager positions will be strong, but the BLS also notes that "an increase in the expected number of retirements in upcoming years should produce more job openings." Moreover, the BLS stresses the value of FM-specific skills, saying that "[t]asks such as managing facilities and being prepared for emergencies will remain important in a wide range of industries."[3]

The International Facility Management Association (IFMA) has warned for years that FM is understaffed worldwide. In a recent report, IFMA noted that the "average age of the [FM] workforce is currently 50.9 years."[4]

CAD Operators and BIM Modelers (Drafters)

As advancements in CAD and BIM software allow architects and engineers to more quickly envision and document their designs, the need for CAD Operators, BIM Modelers, and others who fall into the broad category of "Drafters" is diminishing. In fact, the BLS predicts a 3% decline for Drafters from 2014-2024.[5]

However, a fair number of our students (three of 16, or 19% of survey respondents) have found employment in "allied" industries—i.e. construction companies, construction sales/supply companies, or construction material manufacturers. For students who do not wish to pursue an MArch degree, or for those students whose portfolio suggests that they may not be a good candidate for graduate study, these positions provide a viable employment avenue. Anecdotally, it appears that the ARST program provides our students with skills that the allied industries value.

B. DEMAND FOR THE PROGRAM

Current Students

A total of 30 current students responded to our survey. Some respondents did not answer all questions. Rounding errors may result in percentages not equal to 100%.

If you had the opportunity to do it over, would you pick the Associate in Applied Science in Architectural Technology program at Ferris State?		
	Yes	**No**
Respondents	22	2
Percentage	92%	8%

Would you recommend the Associate in Applied Science in Architectural Technology program at Ferris State to others?		
	Yes	**No**
Respondents	22	2
Percentage	92%	8%

If you had the opportunity to do it over, would you pick the Bachelor of Science in Architecture and Sustainability program at Ferris State?		
	Yes	**No**
Respondents	13	0
Percentage	100%	0%

Would you recommend the Bachelor of Science in Architecture and Sustainability program at Ferris State to others?		
	Yes	**No**
Respondents	16	1
Percentage	94%	6%

Analysis

An overwhelming number of current students, in both the ARCH and ARST program, are satisfied with the Ferris architecture program.

Recent Graduates

A total of 30 recent graduates responded to our survey. Some respondents did not answer all questions. Rounding errors may result in percentages not equal to 100%.

If you had the opportunity to do it over, would you pick the Associate in Applied Science in Architectural Technology program at Ferris State?			
	Yes	**No**	**Maybe**
Respondents	15	9	2
Percentage	58%	35%	8%

Would you recommend the Associate in Applied Science in Architectural Technology program at Ferris State to others?			
	Yes	**No**	**Maybe**
Respondents	21	5	2
Percentage	75%	18%	7%

If you had the opportunity to do it over, would you pick the Bachelor of Science in Architecture and Sustainability program at Ferris State?			
	Yes	**No**	**Maybe**
Respondents	10	14	2
Percentage	38%	54%	8%

Would you recommend the Bachelor of Science in Architecture and Sustainability program at Ferris State to others?			
	Yes	**No**	**Maybe**
Respondents	13	7	3
Percentage	57%	30%	13%

Analysis

A majority of respondents (58%) are pleased with their experience in the ARCH program, while an overwhelming majority (75%) would recommend the ARCH program to others.

Results for the ARST program are contradictory, however. A majority of respondents (54%) would not pick the ARST program again, which is disappointing. On the positive side, a majority of the same set of respondents (57%) would recommend the program to others, suggesting that some grads see value in the program but have concerns with their individual experiences.

Of the 14 respondents who said they would not attend the ARST program if they had the opportunity to do it over:

- 5 students explicitly said that the lack of an accredited degree was their concern. As discussed in Section 1, the Bachelor of Science in Architecture and Sustainability is not a professional degree, so students graduating from Ferris require an additional two or more years in college to obtain an MArch degree, if they wish to become licensed architects. The proposed BArch would address this concern.
- 1 student is employed in CM and said he/she should have gone that direction
- 1 student is employed in FM and said he/she should have gone that direction
- 1 student did not like Big Rapids but said he/she had no problem with "the curriculum"

Thus, eight of the 14 students who would not select ARST again have concerns other than the quality of the program.

It is also worth remembering that many college graduates are not fully satisfied with their educational experience. In fact, a recent Gallup poll shows that 51% of U.S. adults are dissatisfied with a major aspect of their college experience: their choice of college, degree type, or major.[6]

That said, the architecture faculty plan to address the concerns the survey raises.

Employers

Although the survey was sent to numerous employers, no survey respondents indicated that they employ Ferris graduates.

[1] Baker, K. (2017). Even with uncertainties looming, healthy gains projects for 2017 building activity. Washington, D.C.: American Institute of Architects.

[2] Bureau of Labor Statistics, U.S. Department of Labor, Occupational Outlook Handbook, 2016-17 Edition, Architects, on the Internet at https://www.bls.gov/ooh/architecture-and-engineering/architects.htm (visited March 26, 2017).

[3] Bureau of Labor Statistics, U.S. Department of Labor, Occupational Outlook Handbook, 2016-17 Edition, Administrative Services Managers, on the Internet at https://www.bls.gov/ooh/management/administrative-services-managers.htm (visited March 26, 2017).

[4] http://www.ifma.org/

[5] Bureau of Labor Statistics, U.S. Department of Labor, Occupational Outlook Handbook, 2016-17 Edition, Drafters, on the Internet at https://www.bls.gov/ooh/architecture-and-engineering/drafters.htm (visited March 27, 2017).

[6] Marken, S., & Auter, Z. (2017). Half of US Adults Would Change at Least One Education Decision. Washington, D.C.: Gallup. Retrieved from Gallup http://stradaeducation.gallup.com/poll/211529/half-adults-change-least-oneeducation-decision.aspx

11

STUDENT ACHIEVEMENT

Student success and involvement in activities that make a positive impact on their future are a positive reflection on the program. This section gives programs an opportunity to highlight activities and achievements of students within the program currently and from the previous five years.

A. STUDENT ACHIEVEMENT

The information in this section is combined for the AAS Architectural Technology (ARCH) and BS Architecture and Sustainability (ARST) degrees due to the integrated nature of the student body across the two degrees.

Students in the ARCH and ARST degree programs participate in a variety of activities that complement and enhance their academic and professional formation. In addition to a curriculum rooted in a project-based learning pedagogy that often includes Academic Service Learning components, in the survey below 69% of current student respondents identified themselves as active members of a registered student organization (RSO). Within the program area, students participate in three distinct RSOs, and are often members of all three: Ferris State Chapter of the American Institute of Architecture Students (AIAS), Women in Technology (WIT), and Ferris State Chapter of the International Facility Management Association (IFMA). Student achievement and service activities are further described below.

Student Achievement Survey Results

In addition to referencing internal program records and data, alumni and current students were surveyed to gather information regarding their achievements, service activities, RSO and student government membership, and paid employment. Surveys were sent to ARCH and ARST stakeholders in May 2017 and were administered online. Samples of the surveys as well as the tabulation of survey results are provided in Appendix G. Survey results are indicated in the following table with additional summaries and elaboration provided below.

	2012/2013	2013/2014	2014/2015	2015/2016	2016/2017
Registered Student Organization Membership	19*	21*	26*	21*	20*
Student Government Membership	1*	1*	0	0	0
Honors Program Membership	5*	7*	7*	2*	8*
	Freshmen	**Sophomore**	**Junior**	**Senior**	**-**
Percentage of Respondents who Engaged in Paid Employment	29%	34%	49%	40%	-
Reported Average Weekly Hours Engaged in Paid Employment	22 Weekly Hours	21 Weekly Hours	18 Weekly Hours	18 Weekly Hours	-
• Total Number of Survey Respondents (69 current and former students responded to the survey)					

Student Achievement in Research

The professional, practice-based nature of the ARCH and ARST degree programs does not naturally create research opportunities for students. In keeping with the history and mission of Ferris State, the ARCH/ARST programs emphasize preparing graduates for employment upon graduation. While continuation in higher education for graduate degrees is a worthy goal, our focus is preparing career-ready graduates. However, there have been clear examples of student achievement in research within the program, and research opportunities are pursued and supported by the faculty when available. A summary of select student achievements in research are as follows:

Student Research Fellowship Program: In May 2012, three individual students in the ARST program were awarded Student Research Fellowship grants for research proposals related to the built environment.

ARCH 441 (Small Town Studio): The Small Town Studio typically engages in academic service learning projects with community partners. These projects often include research components and have led to actionable community projects. Two such examples stand out: 1) In 2012 student research in ARCH 441 led to the writing and passing of the Big Rapids Bicycle and Pedestrian Plan, and 2) in 2013 student research aided in the writing and development of a community master plan for Mecosta Village, Michigan.

Juried Competitions: Within both the professional and academic realms of architecture, juried competitions have traditionally been seen as a form of "research" in their own right. In this capacity the ARCH and ARST students continually engage in a variety of juried competitions. These have included, but are not limited to, the 2017 American Collegiate Schools of Architecture (ACSA) HERE+NOW: A House for the 21st Century, the 2017 Wege Prize, the 2016 ACSA Steel Competition, and the Associated Schools of Construction (ASC) Region 3 Design Build competition (2016, 2015, 2014).

Student Honors and Awards

There are many external scholarships and award opportunities for students pursuing the ARCH and ARST degrees, which program students have been consistently successful in receiving. (Internal awards and scholarships only available to ARCH and ARST students are not included in this discussion.) Five Ferris State University ARCH and ARST students were awarded external scholarships during the review cycle described in this APR. These scholarships include the National Association of Women in Construction (NAWIC) Founders' Scholarship Foundation (NFSF), the Construction Specifications Institute (CSI) Grand Rapids Chapter James (Hojo) Hojnacki Scholarship, and the American Institute of Architecture (AIA) Grand Rapids Student Scholarship.

In addition to the successful receipt of scholarships, ARCH students have been regularly recognized by outside professional organizations. In each of the last three years (2015, 2016, and 2017), an outstanding ARST senior has been recognized by the Association of Licensed Architects with Student Merit Awards. And of particular note, during the summer of 2014, two ARST students were awarded the nationally competitive William Jefferson Clinton Scholarship to the American University in Dubai. In

addition. In 2011 an ARCH student won the Skills USA Michigan state competition and placed second at the Skills USA national competition in architectural design and drafting.

Michigan Energy Conference Poster Competition: In 2012, ARST students competed in the "Research to Reality," Michigan Energy Conference research poster competition. In this competition, which was open to all university students in the State of Michigan, ARST students took 1st, 2nd, and 4th place.

2015 Solar Decathlon: In 2015, ARCH and ARST students, in a collaborative partnership with students from Lansing Community College, and Kendall College of Art and Design of Ferris State University were awarded a U.S. Department of Energy: Energy Efficiency and Renewable Energy grant for $50,000 to compete in the 2015 U.S. Solar Decathlon. Twenty teams were selected from universities across the country and globe, and included teams from universities such as California Polytechnic, Clemson, Stanford, and Yale. Unfortunately the team was forced to withdraw its submission after Lansing Community College pulled its support for the collaborative effort.

Student Community and Volunteer Service

Students in the ARCH and ARST programs regularly participate in community and volunteer service in both their courses and through RSO volunteer activities. In 2015, 2016, and 2017, ARCH and ARST courses were awarded Ferris State Academic Service Learning grants, and in 2016, ARCH 441: Architectural Design III was awarded the Ferris State Academic Service Learning Student/Class Excellence Award.

Students also directly engage in community and volunteer service activities through RSOs associated with the program. AIAS students regularly participate in the Big Event, have worked on home construction projects with Habitat for Humanity, and over five years have hosted seven different community events associated with the Big Rapids Festival of the Arts.

The Women in Technology (WIT) members have participated in community activities such as the Relay for Life, Ferris sponsored Mother/Daughter Technology Engineering Aptitude events, the Veteran's Recognition Breakfast, the Family Engineering Night, Rake and Run, the Big Rapids Area Crop Hunger Walk, as well as the Big Event. For the college, WIT members have volunteered at the CET Chili Cook-off and the Construction Hall of Fame recognition dinner.

Student Achievement Trends

When the ARST degree was launched in 2011, it was anticipated it would attract more serious and academically qualified students than traditional students seeking associate level degrees. This has been the case as the program regularly attracts a significant number of honors students

The quality and quantity of program students is dependent on enrollment, and may vary from year to year, but the trend of student achievement appears to be consistent, and trending upward. This is a reflection of the quality of the education provided (as evident in student success post-graduation—see Section 12).

Program Response to Student Achievement Trends

As mentioned above, the development of the ARST degree has improved the quality of students in the architecture program at Ferris by appealing to students who may be more serious and/or academically gifted; however, this has created some difficulty in balancing the needs of the overall student body, which still includes many students who did not demonstrate a high level of academic success in high school. The program often has wide discrepancies in the quality of students and faces the task of keeping the top students motivated and engaged while trying to accommodate students at the other end of the spectrum. Providing opportunities for student achievement and awards is important in maintaining high levels of engagement among the best students. Moving forward, the program hopes to more directly work with the Honors Program to engage our better students in this regard. (It has traditionally been difficult for ARST and ARCH students to fully engage in the Honors Program due to limited course offerings.) The program will continue to seek external opportunities to engage our top students. And finally, it is believed the pursuit of a BArch will further raise the bar by providing a direct path to licensure, which is a critical professional achievement and the ultimate goal of many students.

12

EMPLOYABILITY OF GRADUATES

A key indicator of the overall success of a program is the quality of employment enjoyed by graduates. This section gives programs an opportunity to outline key indicators of the quality and availability of work for students after graduation.

A. EMPLOYMENT – POST GRADUATION

The information in this section is combined for the both the AAS degree in Architectural Technology (ARCH) and the BS degree in Architecture and Sustainability (ARST). Industry changes over the last 20+ years have resulted in few job opportunities for students who only complete the ARCH degree. It is now rare for a student to seek employment after completing the AAS. As a result, there is minimal employment data available for students with only the ARCH degree.

Students who complete the ARST degree have two primary paths post-graduation: they can either enter the workforce or continue their education in pursuit of a graduate degree. Survey results discussed below indicate ARST graduates have been successful pursuing both paths. Architecture and Sustainability graduates surveyed have a 100% placement rate when entering the workforce within one year of graduation and a 100% acceptance rate when pursuing a graduate degree. In addition, students who pursue the ARST and BS in Facility Management (FM) dual degree program, have a 100% placement rate when entering the workforce post-graduation.

It is important to note both the employment and graduate school placement rates of the ARST graduates. As discussed in Section 01, becoming a licensed architect requires a professional, NAAB-accredited degree. The current ARST degree does not fulfill this requirement. This means ARST graduates, long term, are at a disadvantage in the workforce, when compared to those with a NAAB-accredited degree—an issue that the establishment of a BArch degree would alleviate. In spite of the current disadvantage, the program is strong, as evidenced by the significant success of our graduates in finding employment.

Post-Graduation Employment Survey Results

Surveys were sent to ARCH and ARST stakeholders May 2017 and were administered online. Samples of the surveys as well as the tabulation of survey results are provided in **Appendix G**. Survey results are indicated in the following table with additional summaries and elaboration provided below.

	Number	Percentage
ARST Alumni respondents out of those surveyed	27/54*	50%
ARST Program graduates employed in their field of study one year post-graduation	25/27	93%
ARST Program graduates employed full time in their field of study overall	25/27	93%
ARST Program graduates employed full time in their field of study overall who did not attend graduate school	17/17	100%
ARST Program graduates employed part time in their field of study overall	2†/27	7%
ARST Program graduates employed outside their field of study one year post-graduation	0/27	0%
ARST Program graduates employed outside their field of study overall	0/27	0%
ARST Program graduates accepted to graduate school one-year post graduation	14 ‡/27	52%
ARST Program graduates attending graduate school one-year post graduation	10/27	37%
Median yearly salary range for ARST program graduates who have graduated within the last three years	$40,001 – $50,000	

* May 2017 graduates or 2017 ARST graduates pursuing the dual degree in Facility Management are not included in this total.
† Students were attending graduate school.
‡100% of students who applied to graduate school were accepted.

Post-Graduation Employment Trends

Evaluate program trends related to "employment post-graduation."

Architecture and Sustainability graduates have been successful in obtaining employment in their field of study as evident by the fact that 100% of respondents who entered the workforce immediately after graduation found employment within one year of graduation. Furthermore, 100% of graduates who applied to graduate school were accepted to one or more graduate programs.

Most graduates reported salaries in the $40,001 – $50,000 range. Of the respondents who reported their salary range, 14% reported $60,001 – $70,000, 14% reported $50,001 – $60,000, 38% reported $40,001 – $50,000, and 33% reported $30,001 – $50,000.

Program Response to Employment Trends

How does the program address "employment post-graduation" trends within the program (general) and how will the program address "employment post-graduation" trends reported (specific).

The program undertakes ongoing assessment of both employer needs and student skill sets. This assessment takes place through advisory board meetings, ongoing contact between faculty and alumni, and through discussions with regional employers. Comments and concerns expressed by these groups are reviewed by faculty and changes implemented as appropriate. These changes have included such things as updating course content to address industry changes, adjusting teaching assignments based on faculty areas of expertise, and the development of new degree options e.g., FM/ARST dual degree, the ARST degree itself, and the proposed BArch.

The ARST degree is an example of such a change that was partially a response to ongoing industry and student requests. As it became evident industry changes required more than an AAS for students to gain entry level employment in built environment industries, the program responded by creating the BS in Architecture and Sustainability. However, while the current ARST degree provides opportunity for students to succeed in the built environment professions without further education, becoming a licensed architect requires a professional, NAAB-accredited degree. To

provide additional employment opportunities for our graduates, the program is currently looking into the development of a NAAB accredited Bachelor of Architecture (see Section 01). This degree will allow our graduates to become licensed architects in any U.S. state or territory. Graduates would also be able to become licensed architects in Canada, Australia, and New Zealand through reciprocity agreements.

Additionally, the program has addressed employment trends through the following specific actions:

- In response to industry modernization, the program has been a leading adopter in the use of Building Information Modeling (BIM). Specifically, the following courses were updated to incorporate current BIM industry practices: ARCH 203, ARCH 204, and ARCH 270. These changes have helped make our students more competitive in the job market.
- In addition to course updates related to BIM, ARCH 102 was also updated to reflect current graphic, presentation, and 3D modeling skills required of many entry level positions.
- In ARCH 499, the Visiting Professor program brings a practicing architect into the classroom multiple times over the course of the semester. This program exposes students to the demands of the architectural profession while also helping local employers become more familiar with our students and program.
- To further increase our graduates' employability, a dual degree option was developed that allows students to receive BS degrees in ARST and Facility Management in five years. To date, 11 students have pursued this degree and we have found these students are highly sought after in the job market due to their unique combination of skills.
- Three students have also pursued dual degrees in Architecture and Construction Management.

B. STAKEHOLDER PERCEPTIONS OF EMPLOYABILITY OF GRADUATES

How does the program address "Stakeholder Perceptions of the Employability of Graduates" trends within the program (general) and how will the program address "Stakeholder Perceptions of the Employability of Graduates" trends reported (specific).

Similar to Section A above, the information in this section is combined for the both the ARCH and ARST programs. This is due to industry changes that have resulted in few job opportunities for AAS graduates without a BS degree.

Stakeholder Perceptions of the Employability of Graduates

Surveys were sent to ARCH and ARST stakeholders May 2017 and administered online. Samples of the surveys as well as the tabulation of survey results are provided in **Appendix G**. Survey results are indicated in the following table with additional summaries and elaboration provided below.

Mean scores on a 1 – 5 scale: 1 – Poor, 2 - Below Average, 3 – Average, 4 – Above Average, 5 – Excellent	Number of Respondents	Average Score
Current student perceptions of the program's ability to prepare graduates for a career	31	3.1
ARST Alumni perceptions of the program's ability to prepare graduates for a career	28	3.1
Advisory board perceptions of the program's ability to prepare graduates for a career	8	3.6
Employer perceptions of the program's ability to prepare graduates for a career	0[§]	0
Faculty perceptions of the program's ability to prepare graduates for a career	4	3.75
[§]No survey respondents specifically identified themselves as employers or program graduates.		

Current Student Perceptions of the Employability of Graduates: Twenty-nine current students responded to the survey. This represents 38% of current students in both the ARST/ARCH degree programs. Students on rated the program as average in its ability to prepare graduates for a career, but their written comments generally reflected satisfaction with the program.

Alumni Perceptions of the Employability of Graduates: 33 out of 112 ARCH and 27 out of 54 ARST alumni responded to the survey. This represents 30% of ARCH Alumni and 50% of ARST alumni. ARCH alumni generally felt the program prepared them for success in their later studies and employment, particularly in technical matters. Alumni from the ARST degree reflected similar sentiments and generally felt the program prepared them for success in graduate school and/or employment.

Faculty Perceptions of the Employability of Graduates: Four of the seven faculty assigned to the ARCH/ARST program area responded to the survey. Overall, the faculty felt the program prepares graduates for an architecture related career but had minimal written comments to infer additional information from.

Advisory Board Perceptions of the Employability of Graduates: Eight of 12 ARCH/ARST advisory board members responded to the survey. Overall, the responding advisory board members have a positive impression of ARCH/ARST students. One hundred percent of advisory board respondents expressed a conviction that the programs prepare graduates for an architecture related career in the specific area of technical/production skills (detailing, drawing production, Revit, AutoCAD, etc).

Employer Perceptions of the Employability of Graduates: No respondents directly identified themselves as employers of ARCH/ARST graduates; however three advisory board members identified that they currently employ Ferris graduates. (We do not have an explanation for this discrepancy.) When surveyed, all three of these advisory board members said they plan to continue to hire Ferris graduates.

Career Assistance Opportunities Available to Students

In addition to career assistance available to all students through the Career Center in the Center for Leadership, Activities, and Career Services (CLACS) office, the program works to facilitate career placement for its students in a number of key ways. The program regularly receives requests from companies looking for employees. These requests are made available to students and alumni through an email list the program maintains of graduates. In addition, beginning in 2015 a series of three workshops

have been held annually for graduating seniors discussing graduate school and job application procedures. These workshops cover topics such as cover letter writing, resume writing, professional communication, portfolio development, etc. Outside of these workshops, individual faculty also regularly meet with students to write letters of recommendation, review resumes, cover letters, and portfolios.

Evaluation of Trends Related to Stakeholder Perceptions of Graduate Employability

Survey data indicates an overall perception of the employability of graduates is positive. This is reflected in the fact that many students are able to find internships during their studies, as well as in the 100% employment rate of graduates, who responded to the survey, within one year of completing their degree.

Program Response to Stakeholder Perceptions of Graduate Employability

Ongoing assessment of student, advisory board, faculty, and employer concerns occurs through yearly advisory board meetings, student surveys, and small focus group student meetings conducted by the program coordinator. Comments and concerns expressed by these groups are annually reviewed by faculty and changes are implemented if appropriate.

13

FACULTY COMPOSITION AND ENGAGEMENT

Academic, work, and other accomplishments of faculty have a direct positive impact on overall program quality. A fully engaged faculty in all dimensions of teaching, research, and service is vital for student success. This section gives programs an opportunity to highlight current faculty accomplishments.

A. ORGANIZATION

	Full-time Tenured	Tenure Line	Adjunct	Online Delivery	Majority of Load on Big Rapids Campus	Part-time Temporary	Full-time Temporary
Faculty	6	1	0	1	7	0	0

Evaluate the efficiency and effectiveness of the current structure

The current faculty structure is effective and efficient in delivering program content.

Evaluate positive aspects of the current structure

The most positive aspect of the current structure is that all the faculty are tenured or tenure-track and are committed to the programs and the faculty group. One benefit of full time faculty is weekly faculty meetings during the school year that allow for program review and issue resolution.

Evaluate opportunities for improving the current structure

Opportunities for improving the current structure include more collaboration with other programs within the School of Built Environment and College of Engineering Technology. For example, programs such as the Construction Management (CM) and Heating Ventilation Air Conditioning (HVACR) programs teach related curricula that could benefit students through shared learning and teaching efforts. Other programs in the College of Engineering Technology that offer opportunities for collaboration include Plastics Engineering and Welding Engineering Technology. Collaboration with these programs would create potential for more hands-on materials knowledge through design/build courses that would improve the technical skills of students.

B. CURRICULUM VITAE

See **Appendix D** for complete faculty Curricula Vitae.

Highest Degree Earned

Mary Brayton	Master of Architecture	University of Michigan
Chris Cosper	Master of Design Studies Master of Arts, English	Harvard University Mississippi State University
Dane Archer Johnson	Master of Architecture Master of Science in CTE	Lawrence Technological University Ferris State University
Gary Gerber	Master of Business Administration	Grand Valley State University
Paul Long	Master of Science City Design Master of Architecture	London School of Economics University of Idaho
Diane Nagelkirk	Master of Architecture	Lawrence Technological University
Joseph Samson	Master of Architecture	Kent State University

Average Semester Loads

Faculty	Average Semester Credit Hours	Average Semester Contact Hours
Mary Brayton	11.4	17.3
Chris Cosper	10.8	15
Gary Gerber	10	16.8
Dane Archer Johnson	11.7	15.3
Paul Long	11	18.6
Diane Nagelkirk	11.6	17
Joe Samson	12	14.1

C. SERVICE

Mary Brayton

Faculty Advisor, Women in Technology RSO, 2006-Present
College of Engineering Technology Sabbatical Committee, 2015–Present
College of Engineering Technology Assessment and Accreditation Committee, 2012 – 2015
University Committee on Discipline, 2010 – 2012

School of Built Environment Strategic Planning Committee, 2011
College of Engineering Technology Promotion Committee, 2010-2011

Chris Cosper

University Graduate Studies Committee, December 2016-present
Chair, University Library/Historical/Archival Committee, October 2015-present)
School of Built Environment (SBE) Curriculum Committee, December 2013-present
Architecture & Facility Management Curriculum Committee, August 2013- present
Coach (with Suzanne Miller) Associated Schools of Construction (ASC) Region 3 Competition, September 2014-present - Third place (2016), Second place (2015)
Coach, Associated Schools of Construction (ASC) Region 2 Competition, 2012 and 2010

Gary Gerber

Scholarship Committee College of Engineering Technology, 2010-present
Judge, Spaghetti Bridge Competition, 2010-present
Architecture and Facility Management Tenure Committee, 2006-present

Dane Archer Johnson

Diversity Committee, College of Engineering Technology, 2014-present
Sabbatical Committee, College of Engineering Technology, 2013- 14
Co-Chair, Place-Matters Lecture and Film Series, 2011-present
Member, University Diversity Committee, 2008-2015
Faculty Advisor, American Institute of Architecture Students RSO, 2006-present
Liaison to FLITE, Architecture and Facility Management, 2006-present

Paul Long

The Beyond Initiative Advisory Board, 2016-present
College of Engineering Recruiting Committee, 2016-present
Faculty Research Committee, 2015-present
Cultural Enrichment Sub-Committee, 2015-present
University Academic Service Learning Steering Committee, 2015-present
Advisor, Club Hockey, RSO, 2015-present
Curriculum Committee, School of Built Environment, 2012-present

Diane Nagelkirk

Chair, Assessment Committee, Architecture and Facility Management, 2013-present
Chair, Trac Dat Assessment Committee, Architecture and Facility Management, 2012-present
Curriculum Committee, College of Engineering Technology, 2010-2012
Facility Management Accreditation Committee, 2013-2014
Author, Facility Management Accreditation Report, 2013-2014
Strategic Planning Committee, School of Built Environment, 2012-present
Curriculum Committee Member, School of Built Environment, 2010-2012
Strategic Planning Curriculum Committee, College of Engineering Technology, 2012-2014
Promotion Committee, College of Engineering Technology, 2015-present
Global Consciousness / University Diversity Committee, 2001-current

Joseph Samson

Assessment and Accreditation Committee, College of Engineering Technology, 2015-present
Promotion Committee, College of Engineering Technology, 2011-2015
Chair, Facility Management Program Review, 2013-2014
Chair, Facility Management Committee, 2013-2014
Liaison for job placements and internships, 2006-present
Chair, Tenure Committee, Architecture and Facility Management Department, 2006-present
Developed Facility Management Alumni Distribution List of job opportunities, 2003-present
Faculty Advisor to International Facility Management Association RSO, 1996-present

D. RESEARCH

Mary Brayton

Professor Brayton has recently taken a sabbatical and researched Building Information Modeling (BIM) and its applications in professional practice and the classroom.

Chris Cosper

Assistant Professor Cosper's research has resulted in numerous presentations and published papers, including: "At the Vital Center: The Small Town Studio at Ferris State University"; "FM Scholarship in the University Community: Building on Boyer and Schon"; "The expert mind in the age of junk data"; "Enriching Architectural Scholarship by Building on Boyer"; "Fort Maurepas: Five Manifestations of Power on the Mississippi Gulf Coast"; and "Evaluating the implementation of Lean Construction into a University Curriculum."

Gary Gerber

Associate Professor Gerber's research interests include adaptive reuse of buildings to create spaces that are energy efficient, spatially effective and aesthetically pleasing. Other research interests include utilizing BIM to model buildings for energy efficiency and aesthetic appeal, leading to his role as half-owner, architect and developer for the re-development of a foreclosed building in Big Rapids. This project has been used for field trips for students who might not otherwise experience an actual development project.

Dane Archer Johnson

Professor Johnson completed a sabbatical in December 2015. An extensive tour of five European countries resulted in a project entitled "Exploration of European Architectural Landmarks". During the trip, dozens of historically significant buildings were visited and documented in more than 2000 digital photographs. This content has been integrated into the ARCH 244, ARCH 245 and ARCH 246 architectural history courses. In addition, the research was the source of a presentation to the 2016 Big Rapids Festival of the Arts entitled "Great Churches of Europe: A Personal (Virtual) Tour". In addition, Professor Johnson conducted research into the work of Detroit architect Albert Kahn, and presented a paper, "Albert Kahn: Contradictory Architect" at the University of Michigan Museum of Art in March, 2016.

Paul Long

Associate Professor Long's research interests include design for adaptive reuse/disassembly as an approach to sustainable design, as well as the study of BIM in the promotion of cross-discipline collaboration in built environment curricula. His other interests include the integration of design analysis and computation into professional design workflows. Another aspect of his research is examination of social and environmental justice within architecture and the built environment, including the integration of economic and social sustainability with environmental sustainability within the discourse of sustainable design, as well as sustainability assessment methods within the built environment; effectiveness of sustainability assessments in achieving holistic, tri-partite [economic, environmental, social] sustainable development; and the relationships between urban form and the visual, physical, social and political aspects of cities.

Diane Nagelkirk

Professor Nagelkirk's recent research has grown from a sabbatical project entitled "Shifting from an Ego-Centric to an Eco-Centric Practice of Architecture". The three main areas of focus in this research were: 1) developing a comprehensive curricular model that gives students the values and skills to create a more environmentally and socially sustainable world; 2) exploring the role of architects not only as designers but as citizens, and communicating this new role to students; and 3) examining a new paradigm in architecture grounded in an evolutionary and ecological perspective, in which buildings are good for both planet and people.

Joseph Samson

As the lead faculty member in the Facility Management (FM) program, Professor Samson's interests lie primarily within that discipline. He has served on the Facility Management Accreditation Commission to align the International Facility Management Association (IFMA) accreditation standards with those of the Commission on Higher Education Accreditation. He has also been an external evaluator for numerous FM programs in the United States and Canada.

E. Continuing Education

Because the faculty members are all registered architects, each must pursue two tracks of continuing education. The first applies to their ongoing development as faculty, and the need to retain currency within the classroom. The second track requires that each registered architect must complete 24 hours of continuing education every two years to maintain their licenses with the state of Michigan. Continuing education that has been undertaken since the last APR is shown in the individual faculty CVs included in Appendix D of this report. Some recent highlights are noted below.

Mary Brayton

Professor Brayton attended a Course Design Institute titled "Retention and Student Success," offered by Ferris State University. For several years she has also attended the Michigan Design Retreat at Torch Lake, sponsored by AIA MIchigan.

Chris Cosper

Chris Cosper has participated in numerous educational seminars at Ferris State Unviersity, including "Teaching the Research Process" and "Designing Online Courses." His professional activities include attended ASC Region 3 Conferences in 2015 and 2016, and the 2016 International Facility Management Association World Workplace Conference in San Diego, California.

Gary Gerber

Gary Gerber attended the AIA National Convention Chicago Illinois. He also attended the Lilly Conference on College and University Teaching and Learning in Traverse City, Michigan.

Dane Archer Johnson

Professor Johnson presented "Great Churches of Europe: A Personal (Virtual) Tour" at the 2016 Big Rapids Festival of the Arts, as well as "Albert Kahn: Contradictory Architect" at the University of Michigan Museum of Art. He has also completed numerous online professional courses offered through the PDH Academy.

Paul Long

Paul Long presented "Architectural Design For Disassembly: designing for future adaptive re-use" and "Working Toward a New Studio Pedagogy: the Ferris State University Small Town Studio," both at the Creating Making Forum sponsored by the University of Oklahoma. He also completed the Facility Management Professional Credential Program through IFMA, as well as Placemaking Strategy Development Training through the Michigan State Housing Development Authority.

Diane Nagelkirk

Professor Nagelkirk has been pursuing a Master of Science in Green Building at the San Francisco Institute of Architecture, with completion expected in May, 2018. She has also attended numerous seminars including the National Alliance for Partnerships in Equity (NAPE) Seminar at Ferris State University; and "Wright on the Inside," sponsored by the Frank Lloyd Wright Building Conservancy.

Joseph Samson

Professor Samson wrote and presented "Slovak Folk Architecture: Village Worship Spaces" and "Slovak Folk Architecture: Traditional Homes and Villages" at the Slovak American Society of Washington, DC. He has also attended numerous IFMA World Workplace conferences, and completed online continuing education courses through *Licensed Architect* magazine and the PDH Academy.

F. Stakeholder Perceptions of the Quality and Composition of Faculty

Students, alumni, and advisory board members were surveyed to ascertain their perceptions of faculty members. Of the 42 survey questions, seven pertained to faculty. Results of those questions are documented below. The entire survey can be seen in **Appendix G**.

Question	Average Student rating	Average Alumni rating	Average Advisory Board member rating
28. Please rate the overall quality of faculty group as a whole	*3.7/5*	*3.25/5*	*3.9/5*
29. Please rate the quality of faculty on their knowledge of current trends and issues within architecture and allied fields	*3.8/5*	*3.05*	*3.7/5*
30. Please rate the quality of faculty on their ability to teach design (conceptual design, schematic design, design development, etc.)	*3.9/5*	*2.9/5*	*3.5/5*
31. Please rate the quality of faculty on their ability to teach technical/production skills (detailing, drawing production, Revit, AutoCAD, etc.)	*3.8/5*	*3/5*	*3/5*

32. Please rate the quality of faculty on their ability to teach graphic/presentation skills (presentation layout, renderings, model building, etc.)	*3.8/5*	*2.9/5*	*4.0/5*
33. Please rate the quality of faculty on their ability to teach professional skills, often referred to as "soft skills" (verbal communication, time management, written communication, project management, etc.)	*3.3/5*	*2.8/5*	*3.9/5*
34. Please rate the quality of faculty on their ability to teach critical thinking skills as related to architecture and design	*3.4/5*	*3.1/5*	*3.4/5*
Average of 7 questions	***3.7/5***	***3.0/5***	***3.6/5***

Students and alumni rate the faculty group as approximately average. Although written comments are negative about the current knowledge of and abilities to use software, the lowest overall average pertained to faculty ability to teach "soft skills." This was also the category rated lowest by alumni, although their ratings in the areas of design teaching and technology were also relatively low. Across the board, Advisory Board members rated the faculty as average, with no significant outliers

Currently there are three faculty members nearing retirement. A succession plan is being developed to hire new faculty with advanced skills in those areas found to be weak, particularly software applications. The proposed BArch program will include content specifically aimed at teaching professional skills, addressing in part the expressed concern about "soft skills." The other areas of concern—verbal communication, written communication, time management and project management—have been addressed to a strong degree in the relatively new ARST program. Other actions designed to address concerns include creation of a critical thinking seminar offered at the start of the fall semester, which was designed to improve inquiry and evaluation skills. The intent is that the content of the seminar will be augmented with content in additional classes and assignments throughout the students' time in the architecture program.

G. Program Policies and Procedures

How does the program provide opportunity and encouragement for program faculty to fully engage in teaching improvement activities, research and service?

Faculty members must develop a professional development plan which is reviewed by the Director of the School of the Built Environment and CET associate dean. In pursuit of the goals of that plan, each faculty member can apply for professional development funds from the College of Engineering Technology or from a variety of University grant programs. Professional development proposals must be reviewed by the director and associate dean for compliance with goals of the program and/or the faculty member's professional development plan.

How does the program provide opportunity and encouragement for program faculty to fully engage in student advising?

When students enter the program, they are assigned to a faculty advisor, with the hope that the advisor will guide the student through completion of the program, to ensure continuity. It is required that students meet with their faculty advisors each semester to review their progress and be cleared for registration. To ease the advising process, ensure adequate progress toward degree completion and balance faculty loads, the Program Coordinator creates block schedules that are distributed to students and reviewed during advising appointments.

Evaluate the minimum qualifications for a tenure-line faculty within the program

Minimum qualifications for tenure-line faculty positions include the following: Master of Architecture, or a professional degree in architecture with master's degree in a related field; five years of work experience in the field of architecture; teaching experience in architecture or a related field; and attainment of or pending architectural licensure is also a requirement.

Evaluate the minimum qualifications for a full time temporary faculty within the program

Minimum qualifications for full time temporary faculty positions include the following: Master of Architecture, or a professional degree in architecture; and five years of work experience in the field of architecture. Attainment of or pending architectural licensure is preferred.

Evaluate the minimum qualifications for an adjunct faculty within the program

The primary qualification for adjunct faculty is expertise in a specific component of the program curriculum based on the needs at the time, i.e. presentation software, construction documents, architectural design. A degree in architecture and work experience are preferred, but required qualifications required will vary based on need.

H. HIRING AND RETENTION

Recent faculty searches have been successful in terms of hiring qualified faculty to fill positions. Each search has yielded multiple qualified candidates that have been brought to campus for interviews. Retention has been strong within the program, with faculty members achieving the following years of service: Mary Brayton, 21 years; Chris Cosper, 4 years; Gary Gerber, 27 years; Dane Archer Johnson, 11 years; Paul Long, 6 years; Diane Nagelkirk, 29 years; and Joseph Samson, 29 years. Chris Cosper is currently the only faculty member pursuing tenure, and he will apply for tenure in fall 2017.

14

PROGRAM ADMINISTRATION AND SUPPORT

This section provides programs an opportunity to describe the current administrative and support structure impacting the program, the perceived effectiveness of the structure, and suggestions for improvement.

A. PROGRAM ADMINISTRATION

The architecture programs are housed within the Architecture and Facility Management (ATFM) Department within the School of Built Environment (SBE). The SBE is one of four schools within the College of Engineering Technology (CET).

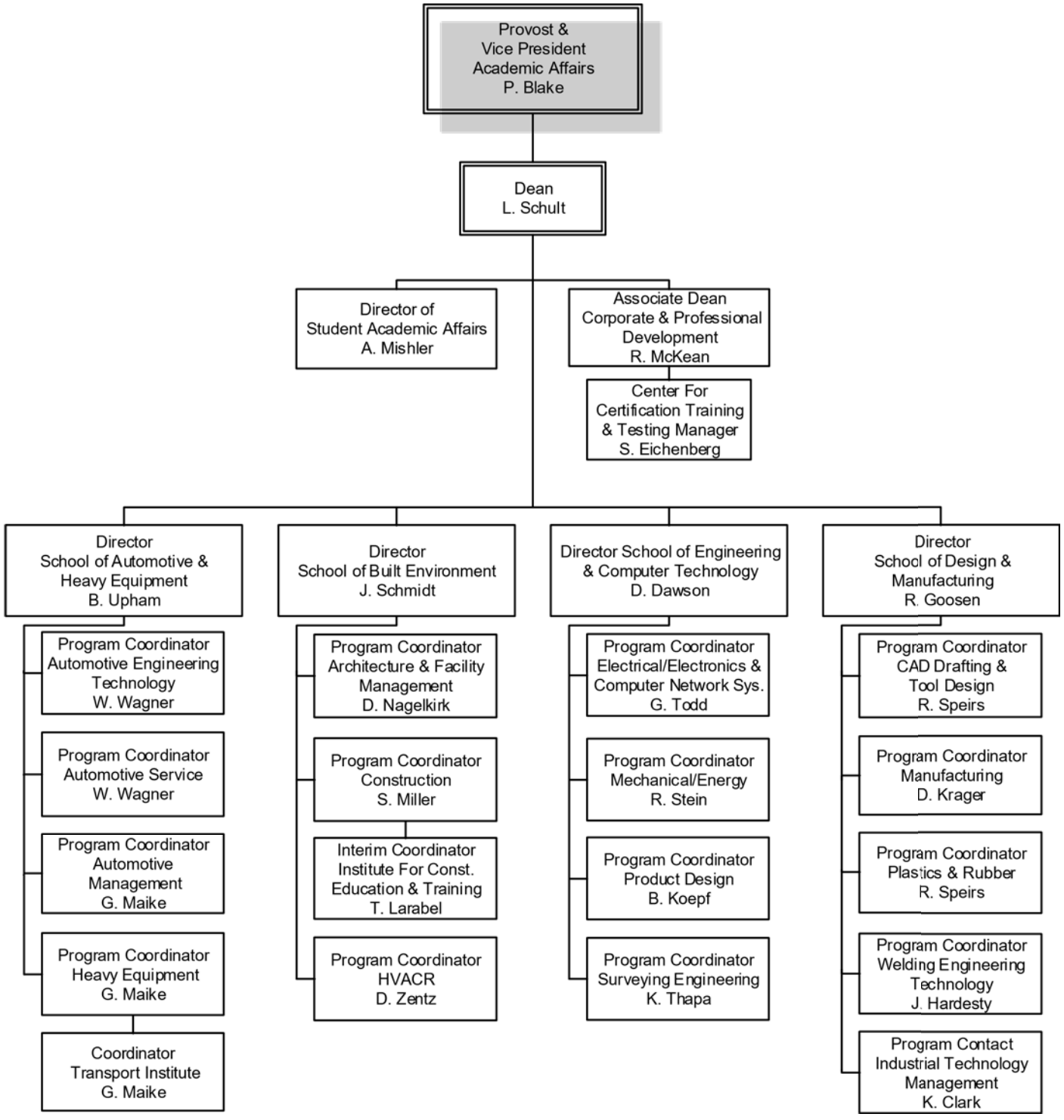
Program oversight positions are as follows:

Larry L. Schult, Dean of College of Engineering Technology
- Highest degree earned:
  - Master of Arts in Occupational Education
- Academic Administrative Experience:
  - Director, August 2011 - March 2013
  - CET Associate Dean of Operations, February 2013 - December 2013
  - CET Dean, December 2013 - current

Dr. John Schmidt, Director of School of Built Environment
- Highest degree earned:
  - Ph.D. Civil Engineering, University at Buffalo (SUNY)
- Academic Administrative Experience:
  - SBE Interim Director, 2009-2010
  - SBE Director, July 2013 – June 2017

Diane Nagelkirk, Program Coordinator of Architecture and Facility Management
- Highest degree earned:
  - Master of Architecture, Lawrence Technological University
- Academic Administrative Experience:
  - ATFM Program Coordinator, 1995 - 1996
  - ATFM Department Chair, 2003 – 2010
  - ATFM Program Coordinator, 2011- current

COLLEGE OF ENGINEERING TECHNOLOGY



Efficiency and Effectiveness of Current Structure

During the 2009-2010 academic year, the name of the college was changed from the College of Technology to the **College of Engineering Technology** (CET). Additionally, the twelve departments within the college were combined into four schools, each administered by a School Director. The Architecture and Facility Management Department was placed in the School of Built Environment (SBE), which also houses the Construction Management, and HVACR departments.

As a result of the restructuring, the Department Chair position was changed to Program Coordinator (PC). Department Chairs had 75% release time (typically taught one course/semester) and received a summer stipend to deal with departmental administrative issues, marketing of programs, recruitment, and curricular development. In the new structure, the release time for program coordinators was reduced to 50% (may teach two to three courses/semester) and the summer stipend was reduced by 66%.

The following includes a list of concerns regarding the current "school" structure:

1) Less time for program coordinator to address program issues and effectively market the program. The college reorganization has limited the program coordinator's ability to adequately perform day-to-day operations and find sufficient time to attend to program needs, including marketing and recruiting efforts. The most productive entity and champion of each program (namely the Chair) has been burdened with a greater work load.
2) Additional layer of bureaucracy has resulted in the following:
    a) Ineffective communication from the Dean's office through the School's office to the department level and vice versa.
    b) Redundancy of, or uncertainty of, task assignments (as evident in the duplication of responsibilities listed in Director's and Coordinator's written position descriptions).
    c) Inconsistency in how each Director manages and leads their School which results in lack of accountability of each school to the Dean's office and faculty.
    d) Ineffective budget management and distribution of funds.
3) Inefficiency of operations and procedures within Dean's and School's office that includes:
    a) Inadequate communication of information, delegation, and follow-up.
    b) Slow response time to questions, requests and approvals.
4) Ineffectiveness in recruitment, marketing, and fund-raising. These critical tasks are expected to be performed at the School or Department level without any additional support staff and budget resources.
5) Increased oversight by administrators who do not understand the unique qualities of the architecture programs.

Positive aspects of Current Structure

1) Two champions – the program coordinator and director – exist to promote and fight for program resources and initiatives.
2) Provides autonomy for faculty within the departments.

Opportunities for improving Current Structure

1) Continue to create and establish effective operations, policies, and procedures to increase productivity, efficiency and communication within the schools and college. Communication, policies, and procedures could be strengthened to help, not hinder, the day-to-day operations of schools and departments and their desire to move forward.
2) Conduct a needs analysis of individual programs within each school to identify the unique characteristics and differences of each. Provide additional support for new programs and programs that provide special and online offerings. If resources are not available for new programs and those with special offerings, then adjustments to school resources and leadership should be implemented.
3) Identify signature programs – programs that rise above the rest. Rather than advancing all programs equally, which, while being democratic, proves to be grossly inefficient, a signature program works on the premise that additional marketing and operational resources should be directed at programs that show special promise (rising stars and bright ideas). This requires dedicated resources to enhance the quality of these programs, resources which can be used for developing new curricula, hiring faculty, hiring support staff, upgrading facilities, and purchasing equipment.
4) Develop a business approach with dedicated resources for new programs. As a relatively new program, the ARST program has been hit with roadblock after roadblock due to unfulfilled promises, ineffective processes, and poor communication. The new program has attracted more and better students and gained attention from the professional community; however, the lack of a sound business approach, support, and committed resources has jeopardized growth and the ability to succeed.
5) Examine the possibility of eliminating the School/Director structure and consider restoring the individual Department/Chair structure which proved to be a more productive model. Without the four schools and directors, each department would have a direct line of communication to the Dean, stronger command of day-to-day operations, and an increased budget, since the dedicated school budgets could be dispersed and shared among the individual departments. Additionally, the cost savings of removing the director positions could be used to re-institute a marketing and recruitment specialist at the college level to help departments with those critical tasks.

How does the program provide opportunities for program faculty and staff to discuss the program's place within the current structure with administrators who have program oversight?

Since the restructuring in 2009-2010 faculty have expressed concerns to the Director, Dean and Provost regarding the "school" structure. On three separate occasions committees were formed to discuss the structure and provide alternative options. Nothing transpired from the work these committees produced. In the fall of 2016, the Provost formed a re-structuring committee made up of PCs and faculty members to review the current structure and propose viable options. To date, no results, conclusions, or proposals have been formulated.

The ATFM Department faculty group meets once a week for a minimum of 60 minutes. Communication and review of program procedures is a priority and made possible through these weekly meetings. The

School meets once a semester or year; the College meets one to two times a semester to review university wide announcements and initiatives.

B. PROGRAM STAFF

A full-time secretary provides a continuous office presence and contact person to field telephone calls, assist program students and visitors. In theory, a dedicated full-time secretary provides opportunities to create and manage a functional office that addresses day-to-day operations in an efficient fashion. Full-time secretarial support should also provide opportunities to enhance recruitment and marketing efforts. At present, however, this is not the case in the architecture programs, owing to a series of detrimental administrative decisions.

In 2003, with the moving of the Construction Management Program—part of the Construction Department, which included Architecture—to the Granger Center, the two dedicated Construction Department secretaries also moved to the Granger Center, leaving the architecture programs without proper secretarial support. The problem was momentarily resolved when the College provided Architecture the opportunity to hire a full-time secretary in 2007. However, the problem resurfaced in 2010 with the creation of the Schools and the shifting of the full-time secretary to the School of Engineering and Computing Technology.

In 2016, a decision was made to transfer a dedicated secretary level 2 position to the architecture programs. Concerns arose, however, that the individual assigned was not qualified to perform with the capabilities of a secretary level 2 position. These concerns were discussed with the Director and Dean, and alternate options were proposed by the department, with the expectation that Administration would comply with Section 15.1.1.2 of the FSU-CTA contract, which states: “qualifications of applicant will be referred to and evaluated by the department where the vacancy exists, to determine that the applicants meet the qualifications of job postings.” These discussions were not productive, however, and in the intervening months the concerns regarding abilities have evolved into serious problems, including unprofessional behavior; writing and typing errors; struggles with software programs including Outlook, Banner, and Concur; difficulty in identifying the differences between and generating lists of applied, admitted, and enrolled students; difficulty in generating Web Focus reports; and difficulty in filling in travel forms and excused absence forms, etc.

These administrative decisions regarding secretarial support have had a significant impact on the programs. The lack of consistent and competent secretarial support has prevented the office from maintaining fluid operations and procedures. If the problem is not addressed in the near-term, faculty productivity and delivery of student services will be increasingly problematic.

15

SUPPORT SERVICES

Successful programs rely on support services provided by the University in order to deliver the highest quality product for students. This section gives programs an opportunity to speak to both the positive attributes of university support services and opportunities for improvement.

A. FERRIS SUPPORT SERVICES

FLITE

Library Information Resources

FLITE maintains a print book collection, with additional titles purchased upon faculty request. This is important, since NAAB accreditation requirements dictate an on-campus presence of printed architecture books. In addition to books housed in FLITE, faculty and students can use MeLCat, a state-wide book catalog, to find and request print books. Through MeLCat, faculty and students have access to the book collections of all the academic and major public libraries in the state. FLITE also provides InterLibrary Loan services for use if a book cannot be retrieved through MeLCat.

FLITE also maintains a bound periodical collection that mainly includes content not available through databases and online subscriptions. In addition, FLITE maintains subscriptions to a small number of useful journal and magazine titles, including a number that relate specifically to architecture.

The largest collection of material at FLITE is the electronic journal collection. This is an often-changing mixture of "owned" content (for which FLITE maintains perpetual access rights) and "not-owned" content, which comes from databases, packages, and other sources and includes a wide range of open-access and historical content. FLITE provides access to the full collections of many important journal publishers and vendors, including Wiley, Elsevier, Sage, Springer, and Oxford University Press.

FLITE's resources that are especially useful for students and faculty in Architecture and Facility Management include: Art and Architecture Complete, Avery Index to Architectural Periodicals, the complete set of International Building Codes, and ArtStor. In addition, FLITE provides streaming video access to a large collection of documentaries and other materials.

In-library resources and services

FLITE is an important campus space for individual studying, group work, and instruction. Reference and research assistance is available at the Oval Information Desk, and also by chat, text, email, and telephone. FLITE makes study rooms available, and provides open study spaces; students can check out laptops and use AV equipment. FLITE also has a small number of computers available with Adobe and AutoDesk software installed on them for use by program students.

FLITE works with faculty to determine what programs need, and how FLITE can best meet that need.

Faculty Center for Teaching and Learning

Program faculty regularly participate in workshops and training events offered through the Faculty Center for Teaching and Learning (FCTL). Professional development funds made available from workshop participation have been used for the purchase of classroom tools and instructional aids such as cameras, calculators, and a microphone for use with Tegrity to record class lectures.

Tutoring Center

Of the various tutoring services, offered by the Tutoring Center, the two that serve our students best are the Workshop Tutoring, specifically for ARCH 112, and the Flex Tutoring. The classes that students most commonly seek tutoring for are ARCH 102, 112, and 115, courses taken during a student's first year, and ARCH 203, 223, 244, and 245, courses taken during a student's second year. Typically each semester a handful of students utilize the services of the writing center when working on a class research paper.

Technology Assistance Center (TAC)

The on-line Ferris Technology Service Portal is convenient and easy to use with good response time from the technicians. Our program operates two classroom computer labs so it is typical for the instructor, as opposed to the student, to submit a work order to correct software or operating issues at a student computer station. Response times for correcting computer issues impeding a class lecture in progress are consistently acceptable. TAC adequately serves program needs for loading program software onto lab and faculty computers as well as providing competent support service of the computers and software.

Birkam Health Center

Students have easy access to the services offered through the Birkam Health Center, as do faculty for annual flu shots. The center is conveniently located within walking distance of the program classrooms as well as the faculty offices.

Media Production

Construction videos are a frequently utilized teaching aid in the ARCH program classroom. Services provided by Media Production that have been utilized by program faculty include the conversion of VHS tapes to DVD format. More recently it has become necessary to have DVDs converted to an mph5 format to make the videos accessible to students through Blackboard. Media Production has also provided closed captioning of videos to help faculty provide universal access to students with disabilities. Students frequently make use of Media Production for the printing of presentation boards. They offer a timely, professional, and reasonably priced service.

Institutional Research Board (IRB)

Much of the research conducted by faculty and/or architecture students addresses the built environment and does not directly involve human subjects, so IRB approval is not required. When appropriate, however, architecture faculty do seek IRB approval for projects. For example, Chris Cosper conducted research that involved interviewing architects concerning their experience on the Mississippi Gulf Coast after Hurricane Katrina, and that research was approved by the Ferris IRB.

Center for Leadership, Activities and Career Services

Students take advantage of the job fairs offered through the Career Center to explore potential career interests, apply for internship opportunities, and even find full time employment opportunities. It also gives them an opportunity to apply their soft skills and network with successful graduates from various programs within the CET. The job fairs likewise give program faculty an opportunity to catch up with graduates and hear how they are applying valuable skills that they learned while in the program.

Through the Registered Student Organizations (RSO) and Career Center, students have opportunities to engage with their classmates as well as program faculty outside the classroom. The RSOs that serve the architecture programs are the American Institute of Architecture Students (AIAS), the International Facility Management Association (IFMA), for dual majors, and Women in Technology (WIT).

Institutional research and testing

Program students have often utilized the services of the Institutional Research and Testing center through the College-Level Examination Program (CLEP) for course credit, most commonly ENGL 150. Faculty members make use of the Testing Office for test scanning and production of statistical reports used to improve course content.

University Advancement and Marketing (including web content)

The program coordinator has been working extensively to update current website content and develop new content to promote the ARST program.

Diversity and Inclusion Office

The program does not currently utilize the services of the Diversity and Inclusion Office although as a program it does strive to recruit, retain, and graduate a diverse student population.

Educational Counseling and Disabilities Services

Students regularly require or request the services of Educational Counseling and Disabilities Services, either for extended test time or to request a designated note taker during lecture. Additional arrangements must be made to get a test delivered and then picked up from the ECDS office.

Grounds and maintenance

Winter presents a challenge for faculty and students who have to navigate ice- and snow-covered sidewalks across campus. This is a problem that has worsened in the past several years. Heating and cooling in the Swan Building are inconsistent, and students complain frequently about the inadequacy of these systems. In several classrooms, cooling is provided through window AC units, which are noisy and distracting while faculty attempt to lecture. Other rooms have inadequate heating, and students bring blankets to class. Swan Building is generally clean and well-maintained, but in Johnson Hall, where faculty offices are housed, cuts to janitorial staff mean that program faculty must empty their own office trash, and office carpets are only vacuumed once a year.

B. OTHER SUPPORT SERVICES

The American Institute of Architects (AIA) Grand Rapids, Michigan

This Grand Rapids chapter of the AIA is a professional organization made up of licensed architects and other affiliates. The chapter provides the opportunity for the program students to network with their professional piers through free admittance to monthly meetings and programs. Students are also invited to attend and assist with the annual awards ceremony each fall. The chapter has financially supported the Ferris AIAS chapter for the past several years, and each year holds a monthly board meeting on the Ferris campus, allowing students and faculty to attend and witness the processes of chapter governance. AIA Grand Rapids also offers a scholarship to students studying in a Michigan four year architecture program.

16

FACILITIES AND EQUIPMENT

The quality and availability of facilities and equipment is an important component of a quality program. Not only does the proper physical environment allow for cutting edge pedagogy, but serves as a marketing and promotion tool for potential students and other stakeholders. This section provides programs an opportunity to describe the current resources available for program operations, an analysis of the quality of program resources and their impact on program quality, and program plans and actions for acquiring the appropriate and necessary program resources that enables delivery of the highest quality program.

The Architecture and Facility Management Department (ATFM) was displaced from some spaces indicated in the tables below due to the Swan Building Renovation and Expansion. This has primarily involved relocation of functions housed in SWN 218, SWN 225, SWN 226, and spaces located on the third floor of Swan Building to the first floor of Swan Building. The faculty believes the new spaces, which were occupied in Fall 2017 will be adequate and due to the adjacency of the spaces, provide better function and interaction between faculty and students.

A. SPACES

Teaching and Studio Space Used by the Program

(* indicates rooms which will be replaced)

Rm Number	Room Purpose	Lecture Capacity	Studio Capacity	Notes
SWN 202	Lecture	36	0	Used primarily for materials classes
SWN 203	Design Studio	20	20	
SWN 205	Lecture/Computer Studio	22	22	Primarily 1st and 2nd year ARCH
SWN 212	Lecture/Computer Studio	20	20	Primarily 1st and 2nd year ARCH
SWN 218*	Lecture	32	0	Primarily used for Facility Management
SWN 225*	3rd Year ARST Studio	18	18	
SWN 226*	4th Year ARST Studio	18	18	
SWN 313	Lecture	32	0	

Furnishings and equipment can be arranged to accommodate minor adjustments in space capacity.

Support Space Used by the Program

(* indicates rooms which will be replaced)

Rm Number	Room Purpose	Notes
SWN 208	Student Printing	For independent student printing.
SWN 208A	Resource Room	Interior Design samples are kept here and space is used as informal group work/meeting space.
SWN 307*	Model Workshop	Typically small groups or work is sent here digitally for student workers to process.
SWN 308*	Digital Center	

Classes are not held in these spaces. They contain program equipment shared by students.

Office and Meeting Space Used by the Program

(* indicates rooms which will be replaced)

Rm Number	Room Purpose	Notes
SWN 314*	Secretary/Reception	
SWN 314A*	Program Coordinator Office	
SWN 312B*	Conference Room	Shared with School of Computer-EET-Energy-Mech-Surveying
JHN 202	Faculty Office	Samson
JHN 206	Faculty Office	Brayton
JHN 208	Faculty Office	Gerber
JHN 209	Faculty Office	Johnson
JHN 216	Faculty Office	Cosper
JHN 220	Faculty Office	Long

Storage Space Used by the Program

(* indicates rooms which will be replaced)

Rm Number	Room Purpose	Notes
SWN 202A	Material and Student Project Storage	Adjacent to SWN 202, the teaching space in which materials courses are taught/adjustable shelving
SWN 308	Project Storage	For archival storage of student projects.

Miscellaneous short term storage space is located in some classrooms for student projects. Student lockers are located in Swan 203.

"Other" Space Used by the Program

(* indicates rooms which will be replaced)

Rm Number	Room Purpose	Notes
SWN 226A*	Student Meeting/Lounge	Upper Level Students.

Adequacy of Space Available for Use by the Program

The spaces available are adequate in terms of area. However, prior to the relocation to the first floor spaces, adjacencies were poor with spaces being located on three different floors and two different wings. It is believed that the new departmental spaces on the first and second floors of Swan Building will be a great improvement. Students continue to comment that faculty offices in Johnson Hall are not conducive to student/faculty interaction.

The second floor teaching spaces are somewhat out of date. Some spaces are not air-conditioned and air quality and climate are poorly controlled resulting in hot and humid or very cold spaces. The spaces that do have air-conditioning utilize window units which are inefficient and produce noise which interferes with faculty/student communication.

The faculty offices in Johnson Hall have not been renovated since 1988 and finishes and furnishings date to that time. The offices are not air-conditioned except for some that have window units. The offices are often hot or cold.

Program Plan to Address Potential Negative Program Impact as a Result of the Current State of Space Available for Use by the Program

It is hoped that the climate control on the first floor of Swan Building will prove to be adequately addressed during the renovation of those spaces. Johnson Hall is on a list of spaces the College of Engineering Technology (CET) hopes to address. Furnishings in student areas are typically replaced periodically using S&E or Development Funds.

The students that the ATFM department seeks to attract are strongly influenced by the built environment. It is hoped that the newly renovated spaces provided on the first floor of Swan will help recruit and retain students. It is believed that updating other departmental spaces to this quality level would be of further benefit.

Changes to the Space Available for Use by the Program that would have a Positive Impact on Program Quality

Updated facilities (especially those on the second floor of Swan Building) and the installation of central air conditioning would raise the quality of the spaces to the expectations of current and potential students. Students often comment on how hard it is to concentrate when it is hot and humid, or so cold they keep their hats and gloves on. Artificial and natural light that is controllable (options to switch various fixtures, dim fixtures, etc.) would be simple improvements that would help students focus on academics and provide an environment that they would choose to spend additional time in.

The carpet in Swan 203 and 212 is outdated, in poor condition, and requires replacement.

B. COMPUTERS

Accounting of Computers Available for Use in the Teaching and Studio Spaces

(* indicates rooms which will be replaced)

Rm Number	Room Purpose	Teaching Computers	Student Use	Notes
SWN 202	Lecture	1	0	w/projector
SWN 203	Design Studio	1	0	w/projector
SWN 205	Lecture/Computer Studio	1	22	w/projector
SWN 212	Lecture/Computer Studio	1	20	w/projector
SWN 218*	Lecture	1	1	This student computer is mainly used to send prints and plots. Teaching computer has projector
SWN 225*	3rd Year ARST Studio	1	0	Large HD Monitor
SWN 226*	4th Year ARST Studio	1	0	Large HD Monitor
SWN 313	Lecture	1	0	w/projector, document camera, and DVD player

WiFi is available in all spaces. Some students use personal devices to follow lectures using Blackboard or to take notes. Juniors and seniors in SWN 225 and SWN 226 use their own computers and are made aware of computer requirements when enrolling in the ARST.

All teaching spaces have a projection system or large screen digital monitor.

The main issues with the computers and related technology are slow internet access, slow log in, etc. This interferes with efficient use of class time.

Computers Available for Use in the Support Spaces

(* indicates rooms which will be replaced)

Rm Number	Room Purpose	Notes
SWN 208	Student Printing	Printer
SWN 208A	Resource Room	1 desktop and 2 scanners
SWN 307*	Model Workshop	1 desktop to operate CNC router
SWN 308*	Digital Center	2 desktops to operate 2 laser printers, 1 3D printer, 2 plotters, and a printer.

Computers Available for Use in Faculty Offices

(* indicates rooms which will be replaced)

Rm Number	Room Purpose	Notes
SWN 314*	Secretary/Reception	1 desktop and printer for secretary 1 printer/copier for department
SWN 314A*	Program Coordinator Office	1 desktop for program coordinator
JHN 202	Faculty Office	Faculty has laptop with docking device and external monitor
JHN 206	Faculty Office	Faculty has laptop with docking device and external monitor
JHN 208	Faculty Office	Faculty has laptop with docking device and external monitor
JHN 209	Faculty Office	Faculty has laptop with docking device, external monitor, and printer
JHN 216	Faculty Office	Faculty has desktop with two monitors.
JHN 220	Faculty Office	Faculty has laptop with docking device and external monitor

Adequacy of the Computers (including software) Used by the Program

The computers used by the program are mostly adequate. Students and faculty do report issues with computers being slow, especially when on the Big Rapids campus. It is difficult to determine if the issue is actually the hardware or the network. Another issue is that some of the software requires the license to be reactivated and this can only be done on campus, so it can be inconvenient if this happens on a evening, weekend, or holiday.

Program Plan to Address Potential Negative Program Impact as a Result of the Current State of Computers Available for Use by the Program

Faculty and staff computers are replaced on a five-year schedule, which is adequate for most faculty. The schedule for faculty computers and teaching computers seems for the most part adequate and is handled by university policy.

The requirement for juniors and seniors to have personal laptops has been in place for six years and has been successful. It was implemented in part to reduce departmental costs for providing computers, but also to allow students to utilize their equipment and software off campus and to remain skilled or gain additional skills and familiarity outside of class.

The computers in the student computer studios are replaced with Voc-Ed funding, one time university funding, or at times with department S&E or development funds. This does not seem adequate at times.

Changes to the Computers Available for Use by the Program that would have a Positive Impact on Program Quality

Since the main issue with computers appears to be with the network, it is hoped that the university would address this issue.

Another change that would be helpful to the program and its students would be university permission to charge a technology fee to students. This would allow the department to purchase equipment and supplies as well as service existing equipment used by students to present design concepts.

C. EQUIPMENT

A wide variety of equipment is available within the department for faculty and student use. The following table identifies items that are room-specific.

Room-specific Equipment Available for Use in Teaching and Studio Spaces

(* indicates rooms which will be replaced)

Rm Number	Room Purpose	Equipment	Notes
SWN 202	Lecture	Sink, storage cabinets, and counter	
SWN 203	Design Studio	Sink, storage cabinets, and counter, 20 work stations	
SWN 205	Lecture/Computer Studio	Storage cabinets and counter, 22 computer stations	
SWN 208	Student Printing	Flat file, storage cabinet, recycling	
SWN 208A	Resource Room	4 bookshelves, lounge seating	
SWN 212	Lecture/Computer Studio	Sink, storage cabinets, and counter, 20 computer stations	
SWN 218*	Lecture	Additional tables and chairs, microwave, refrigerator	
SWN 225*	3rd year ARST studio	Utility tub, 18 work stations, misc. tables and chairs	
SWN 226*	4th year ARST studio	18 work stations, misc tables and chairs, lounge seating, microwave, refrigerator	
SWN 307*	Model Workshop	Router/misc workshop tools, work tables	
SWN 308*	Digital Center	1 printer/3 plotters/1 3D printer/2 laser cutters/photo backdrop and lighting	

Adequacy of Equipment Used by the Program

Faculty and student attitudes about the adequacy of the equipment is not uniform. Some faculty use specialized equipment more and feel what is available is inadequate. Others do not utilize all that is

available. This is true for students as well. This is normal in architecture programs, where the important thing is to have various types of technologies for students to experiment with and build new skills.

Students would like more direct access to equipment. However, due to the high cost of some equipment, the high cost of maintenance to the equipment, and possible hazards due to use of the equipment, the department has chosen to limit direct use of some equipment by students. For example, processes have been established to train student workers to manage the laser cutter, router, and 3D printers in order to ensure the safe and efficient production of work digitally created and requested by students.

Program Plan to Address Potential Negative Program Impact as a Result of the Current State of Equipment Available for use by the Program

The department maintains a prioritized list of equipment it wishes to obtain. Equipment is purchased using VocEd funding, donated funds, and when necessary with S&E funds.

Changes to the Equipment Available for Use by the Program that would have a Positive Impact on Program Quality

Due to the nature (some of the equipment may be hazardous if used without supervision, while other equipment requires specialized training) of some of the equipment located in the Model Workshop and Digital Center, they are only open when Student Lab Monitors are available to work in them. Currently, the department seeks to hire ATFM students who qualify for work study, in order to stretch S&E dollars. However, this severely limits hours of operation of these spaces. Students would benefit from extended hours of operation.

With extended hours in mind, an adult, part-time tech would benefit the program by providing an enhanced layer of supervision and consistency from year to year.

Many of the spaces mentioned previously are outdated or worn out. Namely, the faculty offices, and spaces on the second floor of Swan Building. The faculty believes upgrading these spaces would benefit the student learning experience and aid in recruitment and retention of quality architectural students.

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PERCEPTIONS OF OVERALL QUALITY

This section provides the program, program administration, and interested individuals from outside the program an opportunity to grade their impression of overall program quality. An overall rating should be assigned in consideration of the following: Relationships of program's mission to the department, college and university; Program visibility and distinctiveness; Enrollment; Quality and employability of students; Quality of curriculum and assessment; Composition and quality of faculty and program administration; and Overall value of program to Ferris State.

1. DIANE NAGELKIRK

Throughout the past 28 years, I have watched our students embrace and develop the necessary skills to become successful young professionals that epitomize the mission of the College of Engineering Technology and Ferris State University. In short, our professional, career-oriented architecture programs prepare students for successful careers, responsible citizenship, and lifelong learning.

Moreover, our students develop the capacity to see the world in news ways through a design discovery process that is unique to architecture. Our students learn how to analyze client needs, discover and explore solutions, synthesize problems into effective solutions, and professionally present schematic and final designs. Throughout this process students demonstrate the ability to effectively manage the process and understand the needs of "clients". They conduct themselves in a professional manner that is focused on sustainability and stewardship of the built environment.

In particular, our students demonstrate the following skills: academic rigor and responsibility; problem-solving skills; ability to work independently and collaborate as team members; ability to find, understand and use information in creative ways; ability to communicate effectively both orally and graphically; and ability to use professional tools such as architectural software and resources.

I believe that the above hard and soft skills are a testament to the quality of the curriculum and to the quality, composition, and dedication of the faculty. In general, the quality of core classes is good to excellent as evident by the work the students produce, their success in graduate school and in the workplace. Faculty bring real-world learning into the classroom and provide collaborative, unique learning experiences with local clients and agencies. Program instructional use of software tools is current and representative of the industry. As such, the preparation of graduates for entry level positions is excellent and graduates are prepared to advance quickly and successfully in the built environment professions. Over the past three decades, I have watched many of our graduates secure and launch successful roles and careers in the built environment professions.

On a scale of 1 – 100, I rate the overall quality of the program with an 89. I believe the program is within close reach of a rating between 90 and 95 with the addition of the following:

1. Offering of an accredited Bachelor of Architecture program (fifth year)
2. The advancement of digital technology; this could be achieved thought the securing of an adult part-time Digital Center Technician and development of digital technical skills by more faculty members

The recent renovation of the first floor of the Swan building will advance the rating significantly as we now have a dynamically-designed, centralized space that will enhance student pride and learning. Most importantly, the new space has placed the program and its facilities on par with other state and regional programs, thereby promising an increase in enrollment.

In addition to the new space, other features that students appreciate about our program include: the geographical location and size of Ferris; the dedication of the faculty group; the small size of the program and the resulting close association between students and faculty; the impressive job placement rate and being prepared for the workplace. These features brand our program as distinct and one that Ferris should be proud of.

Sincerely,
Diane L. Nagelkirk
Professor and Program Coordinator
Architecture and Facility Management Department

2. BOB EASTLEY

As a faculty member in the College of Engineering Technology for over 30 years, I have had the opportunity to observe the growth and evolution of the architecture programs. As the newly elected Director of the School of Built Environment, I'd like to offer my perceptions of these programs.

The architecture programs at Ferris are very versatile and offer students a range of opportunities. The AAS degree provides a strong foundation in the fundamentals of architectural principles, design and sustainability. Students may leave Ferris with this degree and go to work for an architectural firm. In addition, they may ladder into the four-year Bachelor of Science Construction Management program. The CM program at Ferris is nationally accredited by ACCE. Students with an architectural foundation are especially valuable to design-build general contractors.

Students with the AAS degree also pursue the BS Architecture and Sustainability degree. Graduates from this program are prepared to work in the industry, or they may pursue an architectural Master's degree (M.Arch), such as the degree offered at Kendall. This degree allows students to earn a professional license.

The future of architecture at Ferris is the proposed B.Arch, or Bachelor of Architecture. This new degree will allow a student to earn a professional license and prepare for professional practice, all on the Ferris campus and at affordable undergraduate tuition rates.

In my opinion, the package of courses and degrees offered by this program area are absolutely in keeping with the mission of Ferris State University and the College of Engineering Technology. Students earn an AAS degree and are immediately employable. Or, they continue their education and become even more valuable to firms not only in Michigan, but throughout the United States and abroad.

The architectural faculty have strong credentials and real-world experience. They are forward thinkers who continue to bring the future into the classroom. They have recently added new coursework in design principles and sustainability. Several continue to practice professionally in addition to teaching, and others regularly publish in professional journals.

Thanks to an active industry advisory committee, input is regularly offered regarding curriculum and other matters pertinent to the programs. This committee also helps to increase the visibility of the architectural programs to employers across the state and region, and improves the employability of students.

There are a couple areas of concern regarding the architecture programs. The first is a general downtrend in the number of incoming freshman students. The second is the quality of space and facilities dedicated to these programs. It is felt that these issues are linked. Until recently, the portion of the Swan Building dedicated to these programs was old and rather uninspiring. This may have contributed to diminished numbers of incoming freshmen. The recent renovation of the first floor in Swan has greatly improved the professionalism of studio spaces, and should result in increased competitiveness and enrollment.

Another area of concern with some faculty is administrative effectiveness. There is some thought that the latest School model inserts a Director, another layer of administration between the Dean and faculty. In fact, the Director is essentially the same entity as a Department head in other areas. As the new

Director, I hope to promote some school-wide initiatives and improve the cohesiveness of the programs within the School.

Therefore, all things considered, I give the architecture programs a grade of 90 out of 100.

Sincerely,

Robert Eastley, P.E. Associate Professor
Director, School of Built Environment

3. DR. TONY BAKER

I have been very impressed with the overall quality, especially the growth of success, of the Architecture program over the past five years. I know the program as an instructor of their Junior year students in my SOCY 341 course, a collaborator in their community engagement, and as "client" of their summer camp outreach efforts. In these capacities I have observed their vision for preparing future architects, their impressive fulfillment of the University's core values, and the preparedness of their students.

I am introduced to the Architecture students when they arrive as a cohort in their second semester of their junior year, to my SOCY 341 Community Studies class. This class is a required course that expects that students will learn to engage with diverse communities as they later embark on creating the built environments of places they do not yet know. The students arrive with a great knowledge of technical skills in architectural design, awareness of great architects and their products, and a strong ability to do the academic course work that I require. My course does require grappling with cultural diversity in ways that these students, due to their background and the location of Ferris, are rarely prepared for. This is especially true when encountering communities in Chicago that are racially different from their own, but it is also true even when encountering high school students in Grand Rapids. They respond well and are very open to the experiences. However, I believe that the nature of the architectural field will require these students to search for a broad array of cultural challenges. I am confident that the experiences the students have later in their education, especially in their "small-town" studio course allows them this opportunity. However, my lone critique of the program is the structuring of cohorts that discourage students from encountering the much more broad diversity of the Ferris campus.

Over the past few years I have witnessed an ever increasing investment of their community engagement that I believe is very impressive at challenging both the faculty, as well as the students of the program. Diane Naglekirk has been a strong advocate for finding the necessary resources to assist the funding required for my community sociology course. Paul Long has been consistently looking for ways to engage students, through service learning, in communities of Mecosta County and Grand Rapids. Chris Cosper, Paul, Mary Baynton and others contribute significantly to expanding the program by offering a summer camp to area high school students – which I support by connecting Grand Rapids Public School students to. And I believe most impressively is their work with the small town studio.

In the fall of 2016, Paul Long connected his senior Small Town studio class to an initiative in Grand Rapids to redevelop an abandoned elementary school, Eastern Elementary, into a community based housing program. He worked with the Inner City Christian Federation, Rockford Construction, Innovation Central High School and the city of Grand Rapids planning department to create an incredible experience for his students. These students learned valuable collaboration skills, expanded their experiences with diversity and examined the breadth of professional engagement to complete a "real" community architecture project. And these students **shined**. Their final product showed extensive skill development, creativity, vision and awareness of the surrounding community they worked in. The "building" community of Grand Rapids was incredibly impressed with the outcome of their work myself included.

Chris Cosper is following up with a similar collaboration with Innovation Central High School, Grand Rapids Public Schools, and Downtown Grand Rapids, Inc. I believe that these outcome experiences of the students illustrate strongly the impact and professional growth of the students and the program.

With these comments in mind, I would rank the program with a score of 87 out of a total of 100. I believe the program can achieve a perfect score with the following improvements:

1. Continued investment in collaboration. Essentially, I encourage them to keep heading in the same direction and continue to build on past successes.

2. Recruit a broader base of students to create a more global awareness of culture and lifestyles that will likely impact their work in the profession over the next 50 years.

3. Work to create a more global experience for current students by connecting them with more opportunities to know culturally diverse students on campus, expand intercultural experiences in rural and urban areas of the U.S. and to incorporate an international experience into the course.

I certainly hope to continue my collaboration with this great team of colleagues. Their efforts and successes should be a campus model for program reflection and development as well as student development.

Thanks for this opportunity to express my observations.

Sincerely,

Tony Baker, Ph.D.
Professor of Sociology
Director of Community Engagement

AAS in Architectural Technology
BS in Architecture and Sustainability
Swan 314 Big Rapids, MI 49307
231-591-3100

My signature below indicates that I was a contributing member of the Program Review Panel responsible for completion of the final Academic Program Review report submitted for review by the Academic Program Review Council, Academic Senate, Provost, and President of Ferris State University and attest to its completeness and soundness.

_____ Signature and Date	Mary Brayton, PRP Chair 231-591-3584, braytonm@ferris.edu
_____ Signature and Date	Chris Cosper, Program Faculty 231-591-3113, cosperc@ferris.edu
_____ Signature and Date	Gary Gerber, Program Faculty 231-591-2631, gerberg@ferris.edu
_____ Signature and Date	Dane Johnson, Program Faculty 231-591-2625, danejohnson@ferris.edu
_____ Signature and Date	Paul Long, Program Faculty 231-591-2370, paullong@ferris.edu
_____ Signature and Date	Diane Nagelkirk, Program Coordinator 231-591-2630, nagelkid@ferris.edu
_____ Signature and Date	Joe Samson, Program Faculty 231-591-2517, samsonj@ferris.edu
_____ Signature and Date	Dr. Tony Baker, College of Arts and Sciences Faculty from Outside the College
_____ Signature and Date	John VanHouten, AIA, Principal Progressive AE, Grand Rapids, MI Individual with Special Interest in the Program

My signature below indicates that I have reviewed the Academic Program Review report submitted for review by the Academic Program Review Council, Academic Senate, Provost, and President of Ferris State University and attest to its completeness and soundness.

_____
Signature and Date

Bob Eastley
Director of School of Built Environment
231-591-2369, eastleyb@ferris.edu

_____
Signature and Date

Larry Schult
Dean of College of Engineering Technology
231-591-2898, schultl@ferris.edu

Ferris State University
Architectural Technology
Associate in Applied Science Degree
Curriculum Check Sheet - Total credit hours = 67

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 (C)	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 (17 credits)				
ARCH 102	Architectural Digital Graphics (ARCH 101, 112 or permission)	4	_____	
ARCH 115	Interior & Exterior Materials (ARCH 112)	3	_____	
ARCH 119	Sustainability in Architecture: Introduction	1	_____	
Elective	Architectural Elective	3	_____	
COMM 121	Fundamentals of Public Speaking **OR**	3	_____	
COMM 105	Interpersonal Communication			
SOCY 121	Introduction to Sociology (S, REG, F)	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 (C) (ENGL 150)	3	_____	
HVAC 337	Mechanical & Electrical Systems	3	_____	
PHYS 211	Introductory Physics 1 (Z) (C- in MATH 116, 120 or 26 Math ACT)	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 (C) (ARCH 244)	3	_____	
Elective	Architectural Elective	3	_____	
ENGL 250	English 2 (ENGL 150)	3	_____	

Note:

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

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

Architectural Electives				**Recommended Course/Path**
ARCH 242	Architectural Design Principles	3	(2+2)	Architecture & Sustainability
ARCH 250	Systems Cost Estimating (MATH 116 or 120, ARCH 203)	3	(2+2)	Facility Management
ARCH 270	BIM and Parametric Design (ARCH 102, 115, 203)	3	(2+2)	Architecture & Sustainability
ARTS 220	3D Design/Beginning Sculpture	3	(2+2)	Architecture & Sustainability
COHP 330	OSHA Law	2	(2+0)	Facility Management
CONM 211	Construction Quantity Estimating (ARCH 115, 203, MATH 120)	3	(2+2)	Construction Management
CONM 212	Soils and Foundations (ARCH 112, MATH 120)	3	(2+2)	Construction Management
CONM 222	Construction Administration (ARCH 102, 115, CONM 211, MATH 120)	3	(3+0)	Facility or 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 119 Sustainability in Architecture: Intro	1	_____	_____	
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**
COMM 105 or 121	3	_____	_____	
ENGL 150 English 1	3	_____	_____	
ENGL 250 English 2	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	_____	_____	☐ REG

Unofficial Performance Statistics:

Major Total Credits/ Earned Credits/Honor Points 41 GPA Major _____

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

Approved – Spring 2015

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

FERRIS STATE UNIVERSITY

Architecture and Sustainability

Bachelor of Science Degree

Curriculum Check Sheet

Total credit hours = 64

Student Name: _____ **Student ID**: _____

Faculty Advisor: _____

Year 3 – Fall Semester (17 credits)		**Credits**	**Grade**	**Notes**
ARCH 341	Architectural Design 1	5	_____	
ARCH 323	Structural Design (ARCH 223)	3	_____	
ARCH 361	Environmental Systems 1 (HVAC 337, PHYS 211)	3	_____	
ENGL elective	ENGL 311, 323, OR 325 (ENGL 250)	3	_____	
PLSC 121	American Government 1 – People and Politics **OR**	3	_____	
PLSC 122	American Government 2 – Policy Making			
Year 3 – Spring Semester (17 credits)				
ARCH 342	Architectural Design 2 (ARCH 341)	5	_____	
ARCH 362	Environmental Systems 2 (ARCH 361)	3	_____	
ARCH elective	Architectural elective	3	_____	
FMAN 432	Principles of Interior Architecture	3	_____	
SOCY 341	Community Studies (S) (SOCY 121)	3	_____	
Year 4 – Fall Semester (16 credits)				
ARCH 441	Architectural Design 3 (ARCH 342)	5	_____	
ARCH 421	Current Issues in Architecture (ARCH 342, SOCY 341)	3	_____	
ARCH 419	Sustainability in Architecture: Advanced Topics (ARCH 342)	1	_____	
PLSC 411	Urban and Regional Planning (S) (PLSC 121 or 122)	3	_____	
Science elective	Science elective (Z)	3/4	_____	

☐ Graduation Application Submitted

Year 4 – Spring Semester (14 credits)			
ARCH 499	Architectural Design 4 (ARCH 441)	5	_____
ARCH elective	Architectural elective	3	_____
FMAN 322	Project Management	3	_____
Elective	Global General Education elective (G)	3	_____

Architectural Electives:

ARCH 246	Twentieth Century Architecture (ARCH 245)	3 credits (3+0)
ARCH 270	BIM and Parametric Design (ARCH 102, 115, 203)	3 credits (2+2)
ARCH 285	House: An American Evolution (ARCH 203, 241, 245)	3 credits (2+2)
ARCH 350	Site Design (ARCH 204)	3 credits (2+2)

Note: Students planning to transfer into Master of Architecture programs should obtain information from desired college(s) and consult with their program advisor to determine possible course modifications to above and applicable transfer equivalencies.

Architecture and Sustainability

Admission & Graduation Requirements

Admission Requirements:

1.) Application for admission should be submitted by February 1 prior to fall semester requested
2.) AAS in Architectural Technology or approved equivalent degree; GPA of 2.75; College transcripts
3.) Design Portfolio (refer to www.ferris.edu/BSArch for portfolio guidelines); Letter of intent/personal statement

General Education Requirements:

1.) 12 credit hours of Communication
2.) 9 credit hours of each: Cultural enrichment (C) and Social Awareness (S)
3.) 7/8 credit hours of Scientific Understanding (Z)
4.) One course of each: Global Consciousness (G) and Race/Ethnicity/Gender (REG)

Graduation Requirements:

1.) Minimum of 120 credit hours
2.) Minimum of 2.0 cumulative GPA

Major	**Credits**	**Grade**	**Transfer School**	**Notes/Approved Substitutions**
ARCH 341 Architectural Design 1	5	_____	_____	_____
ARCH 342 Architectural Design 2	5	_____	_____	_____
ARCH 441 Architectural Design 3	5	_____	_____	_____
ARCH 499 Architectural Design 4	5	_____	_____	_____
ARCH 323 Structural Design	3	_____	_____	_____
ARCH 361 Environmental Systems 1	3	_____	_____	_____
ARCH 362 Environmental Systems 2	3	_____	_____	_____
ARCH 421 Current Issues in Architecture	3	_____	_____	_____
ARCH 419 Sustainability in Arch: Advanced Topics	1	_____	_____	_____
ARCH elective	3	_____	_____	_____
ARCH elective	3	_____	_____	_____

Technical (Outside Major)	**Credits**	**Grade**	**Transfer School**	**Notes/Approved Substitutions**
FMAN 322 Project Management	3	_____	_____	_____
FMAN 432 Principles of Interior Design	3	_____	_____	_____

Communication Competence	**Credits**	**Grade**	**Transfer School**	**Notes/Approved Substitutions**
* ENGL 150 English 1	-	_____	_____	_____
*ENGL 250 English 2	-	_____	_____	_____
ENGL 3xx _____	3	_____	_____	_____
* COMM 105 or 121	-	_____	_____	_____

Cultural Enrichment (C)	**Credits**	**Grade**	**Transfer School**	**Notes/Approved Substitutions**
*ARTS 101Basic Art (C)	-	_____	_____	_____
*ARCH 244 Architectural History 1 (C)	-	_____	_____	_____
*ARCH 245 Architectural History 2 (C)	-	_____	_____	_____

Quantitative Skills	**Credits**	**Grade**	**Transfer School**	**Notes/Approved Substitutions**
*MATH 116 OR				
*MATH 120 Trigonometry	-	_____	_____	_____

Scientific Understanding (Z)	**Credits**	**Grade**	**Transfer School**	**Notes/Approved Substitutions**
*PHYS 211 Introductory Physics 1 (Z)	-	_____	_____	_____
PHYS 212 Introductory Physics 2 (Z)	4	_____	_____	_____

Social Awareness (S)	**Credits**	**Grade**	**Transfer School**	**Notes/Approved Substitutions**
PLSC 121 OR 122 (S, F, REG)	3	_____	_____	☐ REG
PLSC 411 Urban and Regional Planning (S)	3	_____	_____	_____
SOCY 341 Community Studies (S)	3	_____	_____	_____
_____ Gen Ed Global	3	_____	_____	☐ Global

*General Education courses fulfilled in AAS program.

Unofficial Performance Statistics:

Major Total Credits/ Earned Credits/Honor Points 39 GPA Major _____
Degree Total Credits/Earned Credits/Honor Points 64 GPA Degree _____

Approved – Spring 2015

Architecture and Sustainability Program
Telephone: (231) 591-3100
Email: atfm@ferris.edu www.ferris.edu/atfm

FERRIS STATE UNIVERSITY **FALL 2016**
COLLEGE OF ENGINEERING TECHNOLOGY
ARCHITECTURE & FACILITY MANAGEMENT

SYLLABUS: ARCH 101 - ARCHITECTURAL GRAPHICS
INSTRUCTOR: Mary Brayton
OFFICE: Room 302 Johnson Hall
OFFICE PHONE: (231) 591-3584
HOME PHONE: (231) 592-0570 (No calls after 10:00pm please)
E-MAIL: braytonm@ferris.edu
OFFICE HOURS: **MW** 1:00 - 1:50 PM, **TR** 12:00 – 12:50 AM
Other times available by appointment.

CREDIT HOURS: 3
CONTACT HOURS: 2 Lecture hours - 4 Studio hours
PREREQUISITES: Enrolled in AAS in Architectural Technology or permission of program faculty.

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 INTRODUCTION:

The ability to communicate through drawing is an essential skill of the architect or design professional. Whether making a presentation to a corporate board, or meeting a client for coffee and sketching on a napkin, the architect needs to be armed with an ability to explain a building by drawing it. In our digital age, the temptation is to assume that a computer can do the work for you, but this is a misinterpretation of what a computer can do. A computer, like a pencil, is only a tool: it cannot do anything unless you direct it to. Without a foundation in drawing by hand, an architect cannot prepare drawings aided by a computer – he or she simply does not know where to begin. Also, whether a set of construction drawings are prepared by hand or by computer, a builder expects drawings to contain a certain kind of organization and standards of presentation.

COURSE FORMAT:

This course will be divided between lectures and studio sessions. Each aspect of the drawing discipline will be introduced with a lecture and explored during in-class studio work. It is expected that students come to class prepared to draw with all necessary tools.

REQUIRED TEXTBOOKS:

Chapters in Architectural Drawing, McNeill & Stine, SDC Publications
101 Things I Learned in Architecture School, Matthew Frederick, The MIT Press

ADDITIONAL MATERIALS: Instructor prepared handouts.

EQUIPMENT: A list of drafting equipment appears below. ***All students are to have their own equipment. It is important to have the correct equipment in order to successfully complete the course.*** If you already have equipment, ask the instructor if it is appropriate. ***You may require more than 1 of some items such as art markers.***

The following items are available in the Ferris Bookstore in a "kit". They may also be available at other local bookstores. If you purchase a "kit", make sure that all the materials are correct per this list and that you have all items listed.

- 45 degree 10" triangle
- mechanical pencil .5mm
- mechanical pencil .7mm
- 5mm 2H lead
- 7mm H lead
- 6B, 3B,HB & 2H Wood sketch pencils
- 30/60 degree 12" triangle
- 12" Architect's scale
- 12" Engineer's scale
- Metal erasing shield
- Drafting brush
- Drafting tape or Drafting dots
- Plumbing template
- Circle template
- 24" Roll of sketch (trace) paper (yellow or white)
- 24" metal ruler with cork back
- White eraser (block type)
- Uni-ball Micro Pen (fine point)
- Sharpie Fine point marker (black)
- Microperm 3 pk set black (01,03,05)
- Tacky glue, clear gel
- Sobo glue 2 oz
- Loctite (gel control)
- Strathmore 9" x 12" Sketch pad
- X acto blade and replacement blades
- Utility knife
- Prismacolor Premier Colored Pencils, 12 Assorted Colors (set)
  - White
  - Grass Green
  - Canary yellow
  - True blue
  - Dark Brown
  - Orange
  - Black
  - Apple Green
  - Crimson Red
  - Violet Blue
  - Sienna Brown
  - Violet
- Prismacolor art marker – Warm Gray 30%

Other items to be purchased separately

- Individual sheets of vellum
- Pocket folder for assignment handouts
- Pencil sharpener
- Chipboard, foamcore, and basswood for models
- Additional paper for presentations as required by the project.

OPTIONAL EQUIPMENT:

- Drafting board or table for use outside of class (24" x 36" minimum; 32" x 48" preferred) with T-square or parallel rule
- Tackle box
- Straight pins
- Drafting tube or transporting and storing work

COURSE REQUIREMENTS:

COURSE ORGANIZATION:

The purpose of this course is to develop basic architectural drawing and drafting skills that are necessary when solving architectural problems, communicating architectural designs and drawings, and communicating spontaneously with clients, contractors, etc. This is achieved through sketching and "hard-line" drawing.

A series of projects (sketches, exercises, assignments) will be undertaken to allow the student to develop the basic skills addressed in this course. Each project will be evaluated based on specific criteria described in handouts and verbal instruction. All projects are to be of professional quality and are to be executed in the architectural format as shown in this course. **Projects of unacceptable quality will be returned to students ungraded.**

INFORMATION ORGANIZATION:

Successful people are organized and have information available when they need it. You are to take notes and sketch concepts in a sketchbook, and organize handouts in a pocket folder or a three ring binder. Your instructor will note your organization throughout the semester. You will also want to make it a habit of saving your work in a secure location for future use in a portfolio.

HOME WORK:

There is a large amount of work to do in a short amount of time. Don't get behind. There won't be time to catch up. 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 instructor.

Use your time efficiently. In addition to class studio time, be prepared to spend **additional hours outside of class studio time** on projects. Work is due on the day and time assigned.

EVALUATION POINTS:

Exercises	350 points
Models	100 points
Projects	500 points
Quizzes	50 points
Textbook exercises	100 points
Final Project	300 points
Sketchbook	50 points
Portfolio	100 points
Attitude / Attendance	150 points
Total	+/-**1,700 points**

GRADING SCALE:

A	94-100	B+	87-89	C+	77-79	D+	67-69
A-	90-93	B	83-86	C	73-76	D	63-66
		B-	80-82	C-	70-72	D-	60-62
						F	0-59

GRADING CRITERIA: Projects and quizzes will be awarded points based on the following criteria:

Technical Accuracy:

- Drawn accurately
- Meets project objectives
- Follows written and oral instructions

Graphic Criteria:

- Professional appearance
- Sheet layout and composition
- Legibility (definition and contrast of lineweights)
- Linework and lettering quality

All exercises and projects are to be submitted with a grade sheet. Assignments submitted without a grade sheet will result in a loss of 5 points. All exercise and project grade sheets can be found in electronic form on Ferris Blackboard Learn.

GOALS FOR STUDIO EXERCISES:

1. Ability to utilize both hard line and sketch techniques to develop two and three dimensional drawings in presentation and working drawing format.
2. Ability to plan and organize both graphic and text information for presentation and working drawings.
3. Ability to use freehand sketching methods to lay-out, organize, and study projects.
4. Develop quality architectural style lettering.
5. Ability to represent buildings in presentation and working drawings format utilizing the orthographic projection method.
6. Ability to represent buildings in presentation format utilizing axonometric drafting and perspective techniques.
7. Utilize entourage to enhance orthographic, axonometric and/or perspective drawings.
8. Create hand crafted study and presentation style models.

LATE WORK:

Assignments are due at the beginning of class. 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 instructor.

Unexcused late assignments will result in the forfeit of five (5) points after the time and date due. **Five points** will be deducted per class period that work is late to a maximum of **25** points (for assignments work 100 pts, all others will be prorated). Weekends and holidays do not count as days.

No late work will be accepted after 5 days from the due date.

Tracing of drawings or parts of drawings, and copying of papers, computer graphics, etc. from other students is strictly prohibited unless approved by the instructor. **Copying and/or plagiarism will result in the loss of total points for the assignment for both parties.**

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.

ATTENDANCE:

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.

In addition, 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. In order to encourage you to develop these habits, the instructor will monitor attendance daily.

- Lectures, which are missed for any reason other than a signed doctor's excused absence, cannot be made up.
- It is your responsibility to get notes, ask for handouts, etc. for classes missed.

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. 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 class period. Only medical and other official university excuses will be accepted as an excused absence.

Students with a perfect attendance will receive an additional 15 points. Students missing more than 8 classes will fail the course.

TARDINESS AND LEAVING EARLY:

Students are expected to be in class the complete time period. Many announcements and special instructions are given outside specific lectures. Students are responsible for knowing this information. **If you are late or leave early, you may be marked absent.** Students who are late or leave early will lose points 7 ½ points each time.

STUDIO MAINTENANCE:

The appearance of the studio tells of the attitudes of those who use it. Abuse of the studio will result in loss of the privilege of using the studio. (ie. There will be shorter hours the studios are open after classes.) Please follow these guidelines:

1. Clean up after yourself.
   - Wash your drafting table
   - Place all trash in the waste baskets
2. Protect drafting table cover with a piece of cardboard or masonite prior to using colored markers or glue.
3. Protect drafting table cover with a cutting board prior to using an X-acto blade.
4. Inform instructor of broken equipment.

STUDENT RESPONSIBILITIES and INSTRUCTOR POLICIES: (Your attendance, participation, exercise work, etc. all affect your 150 point attitude grade.)

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.
- 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.

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.

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.feris.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 CLASS:

Please discuss this matter with your instructor and/or advisor prior to making the decision.

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.

Notes

digital archGraphics

Ferris State University
College of Engineering Technology
Department of Architecture and Facility Management
Arch 102: Digital Architectural Graphics – Section 221, Spring 2017

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 8:00 – 10:50 , W 8:00 – 10:50, F 9:00 – 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 12:00 – 13:50 / Wednesday 12:00 – 13:50
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 up to 24 hours in advance. 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/class discussion to present technical knowledge and skills through a computer presentation. Students are expected to take notes during all lectures and class discussions. Following the lecture/class discussion 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 Blackboard 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. Email 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 Blackboard and email. Reference materials, mandatory supplemental readings, assignments, professor messages and other information will be provided in class and/or via Blackboard.

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:

Course Website -	**Paullong.com**
Google+ Community -	**https://plus.google.com/u/0/communities/105949205405483234231** (Community Name: *Arch 102: Digital Architectural Graphics*)
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. CRUISE, J., & ANTON, K. K. (2012). *Adobe InDesign CS6: classroom in a book : the official training workbook from Adobe Systems*. San Jose, California, Adobe Press.
3. ADOBE SYSTEMS. (2012). *Adobe Illustrator CS6: classroom in a book : the official training workbook from adobe systems*. WILLIAMS, R. (2014). *The non-designer's design book design and typographic principles for the visual novice*. Berkeley (Calif.), Peachpit.
4. STINE, D. J. (2015). *Residential design using AutoCAD 2016*. Mission, Kan, SDC Publications.

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 2015, 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, trace, 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 has 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 and Quizzes (Missed In-Class Exercises/Quizzes 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 (i.e. once the grade is posted) 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). **The instructor likewise reserves the right to reduce a student's final grade by up to 10% for circumstances and behavior not taken into account through the assignments and grading schemes above.**

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 / HP (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 / P (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 / LP (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.) 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

For Pass/Fail Assignments: DI (Distinction) = 100, HP (High pass) = 95, P (Pass) = 85, LP (Low Pass) = 75, I (Incomplete) =65. Late work for Pass/Fail Assignments will receive no higher than a LP grade.

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. **Students missing more than 20% of the course will automatically fail the course (9 Absences). For each unexcused absence a student's final grade will be deducted according to the following schedule:**

1 Absence = 1% Deduction	**5 Absences = 15% Deduction**
2 Absences = 3% Deduction	**6 Absences = 21% Deduction**
3 Absences = 6% Deduction	**7 Absences = 28% Deduction**
4 Absences = 10% Deduction	**8 Absences = 35% Deduction**

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 will be marked absent**. **For each (3) late arrivals or leaving class early w/o permission, (1) absence will be recorded**. Students not prepared to take notes and sitting at the front of the class when class begins will be marked late. 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 material. If you are to 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 Blackboard or as noted by the instructor. 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 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 and at my discretion be available on Blackboard **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 classmate.**

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** (see syllabus attachment for additional course communication information)**:** 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 and Final Project.

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 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. **Missed quizzes cannot be made up.**

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 bound to give an extension for improperly saved work**. The computer hard drives may be purged regularly or without warning. It is strongly recommended that you do not work directly form 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 backup 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.

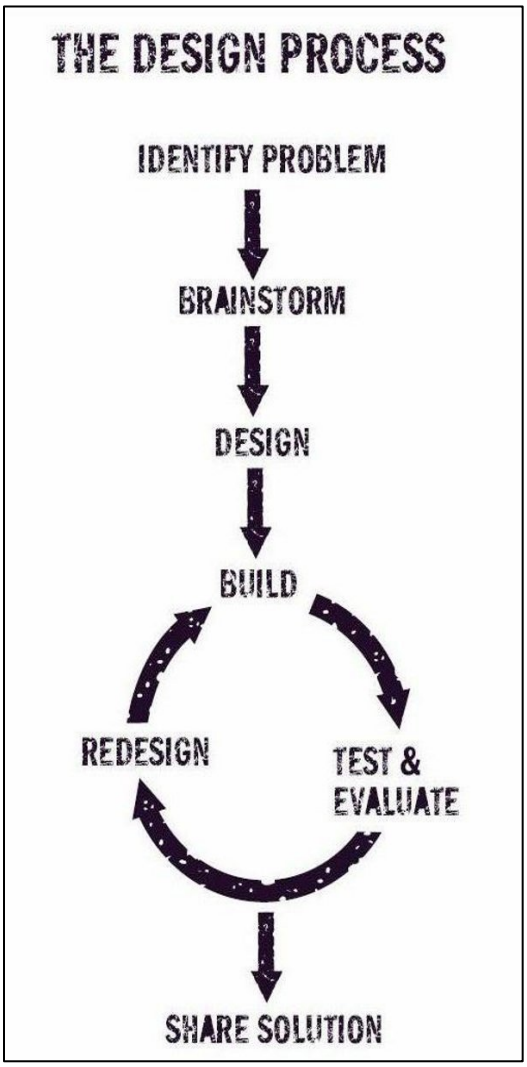
03.12 **Studio Maintenance:** The appearance of the studio tells of the attitudes of those who use it. While studios are inherently spaces of energy, creativity, and some form of chaos, they also represent professional workplaces. It is expected that the studio be maintained with level of professionalism 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, Blackboard or announced in class. Missing class is not an acceptable excuse for being unaware of changes made to the syllabus.

04.0 **Design Thinking**: In this course you will be asked to engage in collaborative and interdisciplinary design thinking methods that emphasize producing unique, feasible, and implementable outcomes that can be applied to real world projects. Students will complete projects by generating a variety of ideas, applying and synthesizing knowledge from their discipline, building prototypes, and evaluating with critical thinking.

Often the Design Process is presented as a series of steps that you go through in developing an idea or product. They (usually) include: **Identify** a problem, **Gather information**, **Propose solutions**, **Choose** the best idea, **Test** the idea, **Evaluate** and **Communicate**. There are many different versions: no set list covers all the ways people interpret the Design Process. As you get more familiar with the use of the process, you tend to skip around inside it as your project needs dictate.



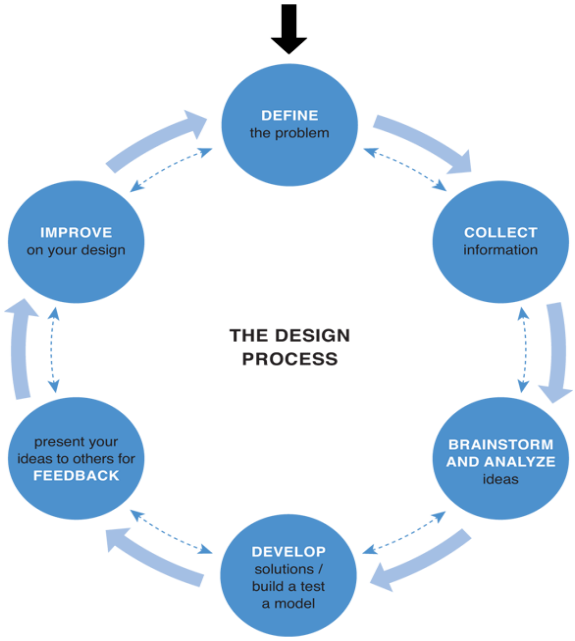
Looping: In the image to the right, and in many other descriptions of the Design Process, it is shown as a **loop**. In considering a project to work on, you find a problem to solve, gather information, try out an idea, test it and evaluate. If you solve the problem, move on to another problem or aspect of the project that needs attention. If you don't solve the problem, you have some more information about what won't work. That information gets incorporated in your next go-round.

Making it right: As you cycle through the Design Process, your product should be getting better as you go. The more you identify problems, pose solutions, test them and implement them, the device, program, product or project gets better. New problems arise the more you work the process. If you nail the biggest ones first, eventually you have something that works pretty well and are fine tuning after a while. It is possible to overdo this fine tuning part, causing the project to never see the light of day. It is also possible to short circuit this phase. Ebay, second hand stores and the dump are full of examples of products which did not get enough exposure to this phase.

Delivering: When your product is sufficiently complete, and you have resolved the most pressing problems determined in the process, it is time to deliver. This does not mean that the project is done forever, instead, it means that it is ready for more testing in a real world environment. As you (and your team, as may be the case) see the product in the world, you will hopefully be looking at it for examples of where it can be changed and improved. As you find aspects of the project that need refinement, you make a plan for revision and implement it. One hopes that the flaws you find at this point are not significant enough to seriously stall or ruin the project.

http://makezine.com/2008/11/16/using-the-design-process/

These looping steps of the Design Thinking process can be further defined as:



1. **Define the Problem:** You can't find a solution, until you can spell out what the problem is. Architects work with the client to define the project. The problem may be something like "A new school kitchen with cafeteria that seats 300 students" or "A new high school for 1,000 students."

2. **Collect Information:** Once the problem is defined, architects will spend time gathering information to help them understand the neighborhood, the site, the users of the building, any existing buildings, and other critical information. Typically this means taking photographs, sketching, and interviewing the client. It's also valuable to collect information on the natural environment, so architects may gather data on the path of the sun around the site, the direction of the wind, the climate, as well as what types of plants are currently growing around the site.

3. **Brainstorm/Analyze:** During this stage of the process, architects may begin sketching or making diagrams to help them understand how all the data and information they've collected may impact the design of the building. These early drawings – which may include bubble diagrams, for example – will help the architects document their ideas, because it's likely the solution will change as they go along.

4. **Develop Solutions:** At this stage in the design process, architects will create drawings with specific solutions to be shown to the client. Schematic drawings, as these are typically called, help illustrate the big ideas and space requirements of the project. Schematic drawings usually do not include dimensions or other construction-related notes.

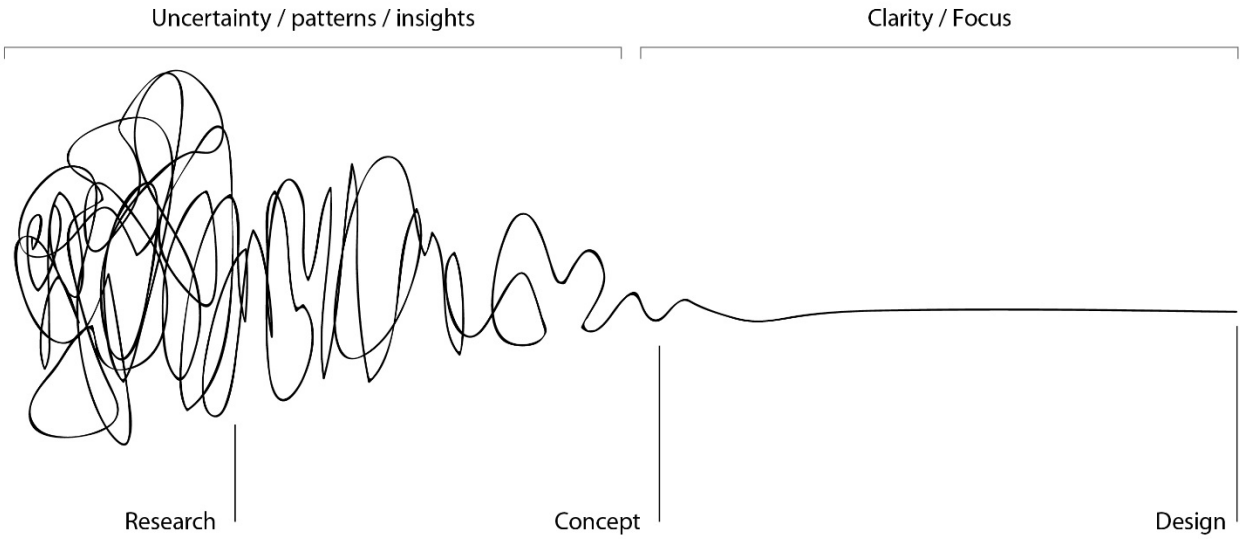
5. **Feedback:** No solution is perfect the first time around, so it's critical that the architects continue the discussion with the client to receive feedback.

6. **Improve:** With feedback in hand, the architects will go back and continue to revise and improve the final solution. Over the next several months, or even years, the architecture firm will work with the client to refine the original design. Based on an analysis of cost vs. needs, the firm and the client together will closely review the solutions and make balanced decisions on which features will stay, which will be redesigned, and which may be eliminated. The architecture firm will also work closely with the general contractor responsible for constructing the building.

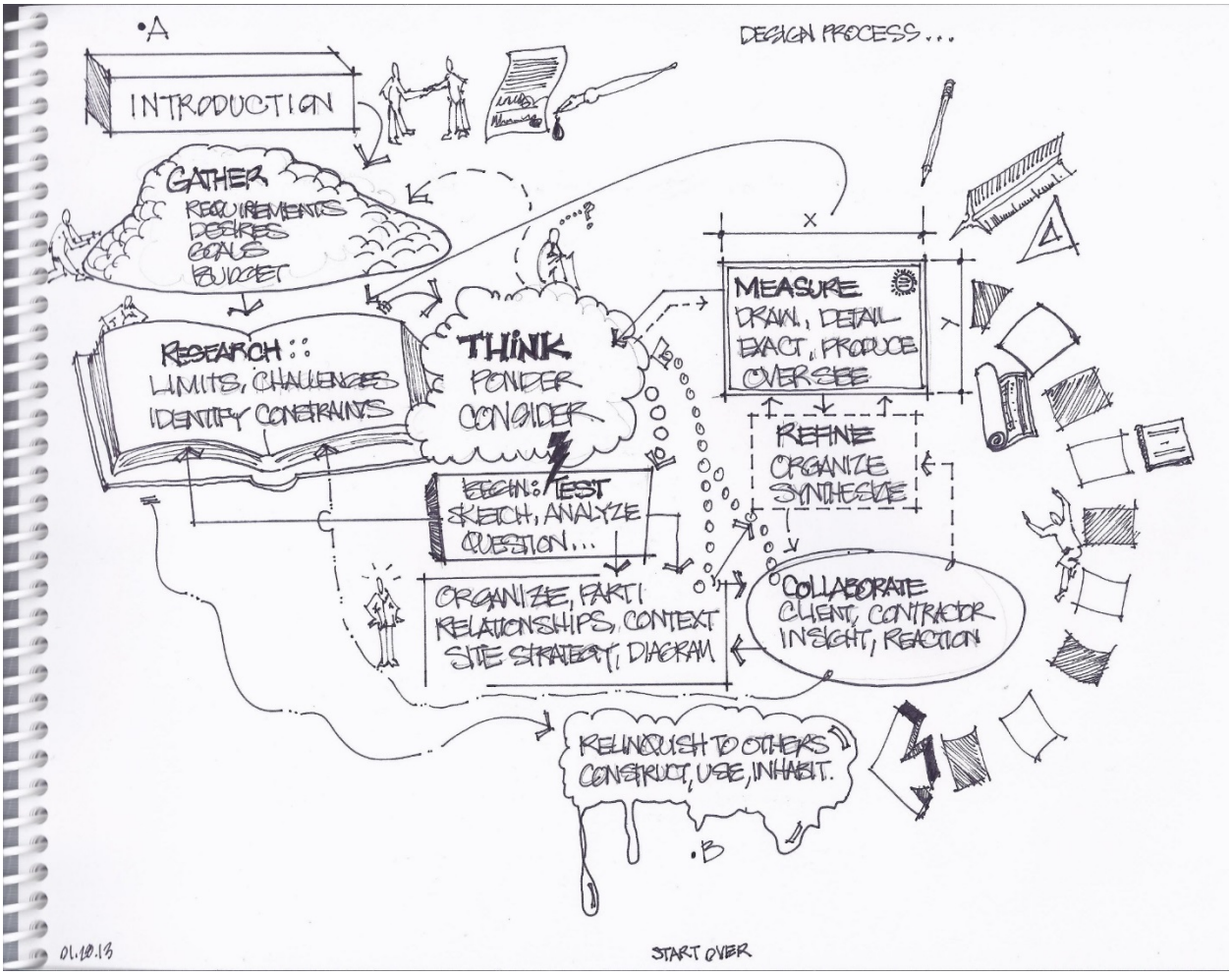
7. **Build It:** The precise details of the building will determined over several months while the firm is developing a set of construction drawings and specifications – called construction documents – which will be part of the legal contract between the architect and client. These construction documents will be used by the contractor to construct the building.

http://discoverdesign.org/design/process

Additional visual representations of the Design Thinking Process are provided on the following page:



http://designsojourn.com/design-processed-explained/



https://thinkarchitect.wordpress.com/2013/01/31/design-process/

05.0 Other

05.1 **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

05.2 **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 at:

http://www.ferris.edu/htmls/colleges/artsands/DeptLink_desc.cfm?DeptLinkID=53&DepartmentID=3misconduct

05.3 **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/

05.4 **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

05.5 **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.

Please see syllabus attachment and safety flyer posted at the front of the classroom for additional building safety information.

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 are 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. All cutting should be done on cutting mats.**

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/)

05.6 **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

05.7 **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 is 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.

05.8 **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 **FALL 2016**
COLLEGE OF ENGINEERING TECHNOLOGY
ARCHITECTURE AND FACILITY MANAGEMENT
COURSE SYLLABUS

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: **MW** 1:00 - 1:50 PM, **TR** 12:00 – 12:50 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, Sixth Edition – **New**, if you purchase a "used" copy it will be your responsibility to replace the missing pages.

ADDITIONAL REFERENCES: (available electronically and on line)

International Building Code
Sweets.com and ARCAT.com
Manufacturer's Catalog websites
Selected building Plans and Specifications available electronically through Ferris Blackboard Learn and on reserve at the Ferris Library (FLITE) as well as FSU General Services Building.

ADDITIONAL EQUIPMENT/SUPPLIES:

- Small sketch pad (5 ½ x 9)
- Calculator
- Scissors
- Additional materials depending on lab activity

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 become familiar with the sustainability aspects of a material.
3. To do research involving these materials.
4. To be able to identify and extract applicable building drawings from a construction document set.
5. To be able to identify and extract applicable information from a project specification.
6. To be able to identify use restrictions due to code requirements.
7. To be able to accurately draw materials and assemblies studied in the course.

Course work will consist of individual study, lectures, material resource research, exercise assignments, field sketches, reading quizzes, guest presentation summaries, term project and presentation, 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. Again, if you purchase a "used" copy it will be your responsibility to replace the missing pages. 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:

Assigned work (exercise book, sketchbook, assignments, research papers, etc.) 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. Copying 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 you 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 - Midterm review	=	75
Lab assignments and Exercise book - Final review	=	75
Architectural Resource Assignment	=	20
Term Project and Presentation	=	140
Field Sketchbook – Midterm review	=	100
Field Sketchbook – Final review	=	100
4 Tests @ 70 Points	=	280
Final Test	=	100
Total possible points	**= +/-**	**940 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 is 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.feris.edu/htmls/colleges/university/disability/.

Any student registered with Disabilities Services should contact the instructor as soon as possible for assistance with classroom accommodations.

Notes

FERRIS STATE UNIVERSITY **Winter 2016**
COLLEGE OF ENGINEERING TECHNOLOGY
ARCHITECTURAL TECHNOLOGY AND FACILITY MANAGEMENT
COURSE SYLLABUS

COURSE: ARCH 115 - INTERIOR & EXTERIOR FINISHES & SYSTEMS

INSTRUCTOR: Mary Brayton
OFFICE: 302 Johnson
OFFICE HOURS: **MW** 2:30 – 3:30 pm, **TR** 1:00 – 1:50 pm
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 (Sixth Edition)

EXERCISES IN BUILDING CONSTRUCTION, Edward Allen (Sixth Edition) –if you purchase a "**used**" copy it will be your responsibility to replace any missing pages.

ADDITIONAL REFERENCES:

Building Construction Illustrated & Building Codes Illustrated, Francis D.K. Ching

ADDITIONAL MATERIALS:

Calculator
Stapler with staples
Small ruler
Notebook or Sketchbook with Grid (preferred)

STUDENT LEARNING GOALS:
The students will be expected to accomplish the following:

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.

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 besides the fact that you will not be allowed to make up a missed quiz. Students achieving perfect attendance will receive an additional 15 points (MWF classes).

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 <u>required and expected</u> 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. Sketchbooks will also be collected twice during the semester and reviewed for completeness.

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 <u>not be accepted</u> 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
Term Project Product Research Report	=	120
Exercise book + attitude	=	150
Sketchbook	=	100
5 Tests	=	285
Total possible points	=	+/- **725** 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.

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 without permission 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 is 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.

RELIGIOUS HOLIDAYS (University):

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Units of Instruction and Student Learning goals:

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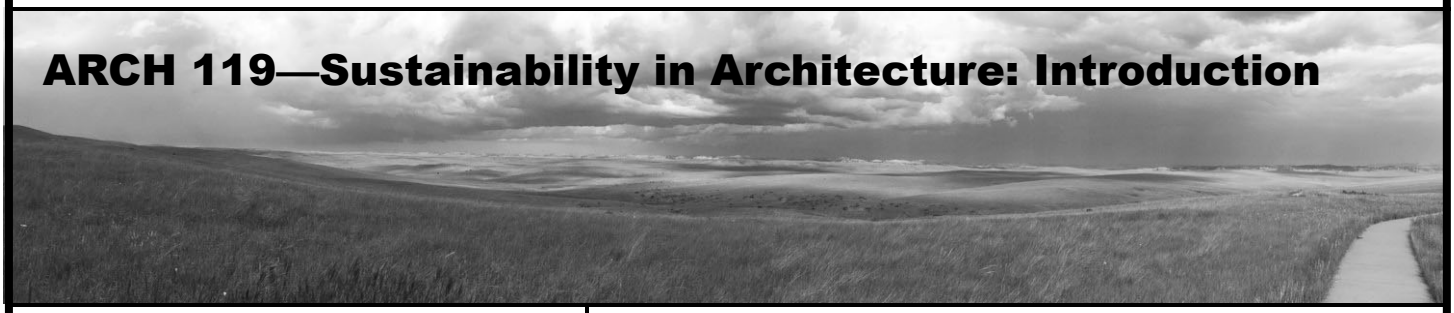
Ferris State University | College of Engineering Technology | Architecture & Facility Management

ARCH 119—Sustainability in Architecture: Introduction



Basic Information

Class Hours:	Wednesday 12-12:50pm
Room:	SWAN 202
Credit Hours:	1
Contact Hours:	1 lecture hour
Prerequisites:	Admission into the ARCH program or permission of instructor

Instructor

Christopher Cosper, Assistant Professor

Phone:	231-591-3113
Email:	cosperc@ferris.edu
Office:	Johnson Hall 216
Student hours:	Tuesday 2-4pm Wednesday 9-11am By appointment

Course Description

An overview of the history of sustainability with an emphasis on the built environment. Lecture topics range from the roots of environmental thought to contemporary challenges .

Learning Outcomes

Students satisfactorily completing this course will:

- Identify key ideas, events, people, and organizations associated with Western environmental thought
- Define "sustainability" as it relates to the triple bottom line
- Explain the key concepts of climatology as they relate to arguments concerning global climate change
- Identify concrete steps that one can take on a personal basis to embrace sustainability

Texts

Bill McKibben, editor

American Earth: Environmental Writing Since Thoreau

ISBN 978-1-59853-020-9

Library of America, 2008

You will also need a Turning Technologies clicker and a current license

Some simple rules for doing well in this class*

1. Read the assigned material
2. Turn in quality work, on time, every time
3. Show up for class (only one unexcused absence is allowed)
4. Check your Ferris email every day—I will use it to communicate to you
5. Don't cheat—this includes claiming someone else's idea as your own

* See the Syllabus Addendum on Blackboard for the full set of terms and conditions

	Date	Lecture	Reading		Due
1	Jan 11	Course Introduction			
2	Jan 18	The Roots of American Environmentalism: Laws and Ideas	*American Earth* pp. 1-2, 9-26, 84-85, 104-112		
3	Jan 25	Progressivism and Conservation: Teddy Roosevelt, Aldo Leopold, and Ducks Unlimited	*American Earth* pp. 129-133, 265-294		Fake news discussion board post
4	Feb 1	Disappearing Birds and Burning Rivers: The Real, Visible Consequences of Environmental Degradation	*American Earth* pp. 365-376, 609-621		
5	Feb 8	Environmental Degradation continued / Hippies and Nixon: Earth Day and Environmental Legislation	*American Earth* pp. 454-468, 1970 State of the Union 6-11		Reading Response draft
6	Feb 15	Nixon continued / The Global Politics of Energy: The 1973 OPEC Oil Embargo as Wake-Up Call	*American Earth* pp. 438-450, *The Long Emergency* excerpt		
7	Feb 22	Oil continued / Defining Sustainability: The Brundtland Commission and Beyond (also discuss questions on final exam)	TBD		Reading Response final
8	Mar 1	Defining Sustainability: The Triple Bottom Line	TBD		
	Mar 8	**Spring Break**			
9	Mar 15	The Scientific Case for Global Climate Change	*American Earth* pp. 855-859, "The New Optimism of Al Gore"		
10	Mar 22	The Scientific Case for Global Climate Change II			Film worksheet
11	Mar 29	It is Your Problem: The Impact of the Built Environment on a Sustainable Culture	TBD and Ford Dearborn Truck Plant article		Letter draft
12	Apr 5	Trust but Verify? LEED and Other Green Rating Systems	Summary 1 and Living Building Challenge (designated pages)		Footprint Calculation
13	Apr 12	The Anthropocene: The Earth is What We Make It	*American Earth* pp. 718-724, Revkin		
14	Apr 19	The Ozone Hole: A Global Problem Addressed	"Reflections on the ozone hole"		Letter final
15	Apr 26	Summary Lecture			
M	May 1	Final Exam (12-1:40 pm)			

Point Values

Point values	
Daily grades	300
Reading response draft	25
Reading response	65
Letter draft	50
Final letter	100
Final exam	60
TOTAL	600

Architectural Documentation

Ferris State University
College of Engineering Technology
Department of Architecture and Facility Management
Arch 203: Architectural Documentation – Section 221, Fall 2016

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 205 / Section 221 / M 8:00 – 10:50 , W 8:00 – 10:50, F 9:00 – 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: Wednesday 12:00 – 12:50 / Wednesday 11:00 – 11:50 / Friday 11:00 –12:50

If I am not in my office during the hours posted, I can usually be found in Swan 205, 226, 307, or 308.

00.5 **Course Prerequisites**: ARCH 102, ARCH 112, Arch 115

00.6 **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.

00.7 **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 and construction principles.
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.

00.8 **Course Format**: This course will be a combination of lecture and studio/lab time. Typically each class period will begin with a lecture (through a computer presentation) to introduce technical knowledge and skills. Following the lecture students may be asked to complete a brief in-class exercise which will cover the skills and topics discussed in class that day. When assigned these pass/fail exercises allow the student to learn, experiment, and make mistakes while the instructor is present to answer questions. Following an in-class exercises a homework assignment will be given allowing students to further develop the skills learned in each class or over the course of the semester. **The majority of the course will be dedicated to a semester long, cumulative project. Adequate completion of this project will be required to pass the course.**

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 easily communicate with me. Please get in the habit of checking your email regularly as I will often send 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.

01.0 Course Materials

01.1 **Required Textbooks:**

1. CHING, F., & WINKEL, S. R. (2016). *Building codes illustrated: a guide to understanding the 2015 international building code*. John Wiley & Sons.

2. STINE, D. J. (2015). *Commercial design using Autodesk Revit Architecture 2016*. Mission, KS, SDC Publications. (Make sure you get the 2016 Version)

3. KILMER, R., & KILMER, W. O. (2016). *Construction Drawings and Details for Interiors, 3rd Edition*. John Wiley & Sons.

01.2 **Suggested Textbooks:**

1. CHING, F. (2014). *Building construction illustrated*. Hoboken, N.J, Wiley.

01.3 **Additional References / Readings:** Additional course references and required readings will be provided as necessary.

01.4 **Reference Materials:** Will be provided as needed.

01.5 **Required Materials and Supplies:** Computer programs used will be available in course computer lab: Revit Architecture 2016 (If you are working from home it is imperative that you work in Revit Architecture 2016 and NOT an older version). USB flash drive, backup storage device, note taking material, digital camera, sketchbook, drafting equipment, etc.

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.

01.6 **Additional Required Supplies:** During the course of the semester students will be required to acquire additional architectural supplies which may include, but are not limited to, the following:

- Sketchbook and drawing materials
- 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. 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 has 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/Quizzes (Missed In-Class Exercises and Quizzes cannot be made up)	10%
Homework Assignments	20%
Class Projects (Term Project)	60%
TOTAL	**100%**

02.3 **Assignment Weighting:** 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 **Contested Grades:** Contested grades must be brought to the instructor's attention within one week of the grade being posted. If a student contests a grade more than one week after its original posting, the instructor will not consider their appeal.

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. Assignments, projects and papers will primarily be graded on:

- 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). The instructor likewise reserves the right to reduce a student's final grade by up to 10% for circumstances and behavior not taken into account through the assignments and grading schemes above.

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

For Pass/Fail Assignments: HP (High pass) **= 100, P** (Pass) **= 85, LP** (Low Pass) **= 75, I** (Incomplete) **=65.** Late work for Pass/Fail Assignments will receive no higher than a LP grade.

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. **Students missing more than 20% of the course will automatically fail the course (9 Absences). For each unexcused absence a student's final grade will be deducted according to the following schedule:**

1 Absence = 1% Deduction	**5 Absences = 15% Deduction**
2 Absences = 3% Deduction	**6 Absences = 21% Deduction**
3 Absences = 6% Deduction	**7 Absences = 28% Deduction**
4 Absences = 10% Deduction	**8 Absences = 35% Deduction**

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 will be marked absent**. **For each (3) late arrivals or leaving class early w/o permission, (1) absence will be recorded**. Students not prepared to take notes and sitting at the front of the class when class begins will be marked late. 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.

03.2 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 material. If you are to be successful in this class it is essential that you attend.

03.3 **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 a new, complex computer programs 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:

- Projects: Last_First_Proj_XXX
- Homework Assignments: Last_First_HA_XXX#x
- In-Class Exercise: Last_First_IE_XXX#x

Example for a Building Code based In-Class Exercise #1 and Revit Lesson #1:

- **Long_Paul _Proj_Floorplan**
- **Long_Paul _HA_Lesson#1**
- **Long_Paul_ IE_Codes#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. **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.**

03.4 **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.

03.5 **University Classroom Learning Civility Clause**: In any environment in which people gather to learn, it is essential that all members feel as free and safe as possible in their participation. To this end, it is expected that everyone in this course will be treated with mutual respect and civility, with an understanding that all of us (students, instructors, professors, guests, and teaching assistants) will be respectful and civil to one another in discussion, in action, in teaching, and in learning.

In helping to create a respectful and healthy learning environment, all students are asked to abide by the following pledge:

Respect your fellow students

- Respecting the rights of others to express their views, regardless of what you may think of them.
- Respecting the rights of others by voicing your own observations in a clear, concise and precise manner, and by not dominating the conversation.
- And adhering to common courtesies and civilities, such as coming to class on-time, turning off cell phones, listening and not talking while others "have the podium," etc., in short, "do onto others as you would have them do to you."

Should you feel our classroom interactions do not reflect an environment of civility and respect, you are encouraged to meet with your instructor during office hours to discuss your concern.

03.6 **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)

03.7 **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.

03.8 **Course Schedule:** Over the course of the semester long investigation, we will explore the ideas of visual communication, architectural language, and the architectural documentation 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, etc.

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).

03.9 **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 during a lecture or hears a cell phone anytime 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.

03.10 **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.

03.11 **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 form 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.

03.12 **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

03.13 **Studio Policies***:* Please refer to *School of Built Environment: Architecture and Facility Management Department Studio Policies, 2016* for department wide studio policies. These policies fully apply to this course and should be considered part of the course syllabus.

03.14 **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**

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 may integrate 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 are 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 a 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. (For our program this is the Director of the School of Built Environment – **Dr. John Schmidt. E-mail Address: JohnSchmidt@ferris.edu, Office Location: 227A Granger Center, Office Phone: 231-591-5283**.) 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, 2010-201)

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 is 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.
- 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.

05.0 Student Work

05.1 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.

06.0 Syllabus Changes

06.1 **Course Changes:** As he sees fit, the professor reserves the right to make changes to this syllabus and the course format, structure, requirements, etc. 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.

SYLLABUS ATTACHMENT
COLLEGE OF ENGINEERING TECHNOLOGY – FERRIS STATE UNIVERSITY
FALL 2016

IMPORTANT DATES		
Late registration	Wed. – Fri.	Aug. 24 – 26
First day of classes	Monday	Aug. 29
Last day for Drop/Add	Thursday	Sept. 1
Labor Day (no classes)	Monday	Sept. 5
Mid-term grades due	Monday	Oct. 17
Last day for "W" grades	Thursday	Nov. 3
Thanksgiving recess begins (no classes)	Wed (noon)	Nov. 23
Thanksgiving recess ends (classes resume)	Monday	Nov. 28
Last day of classes	Friday	Dec. 9
Examination Week	Mon – Fri	Dec. 12 – 16
Commencement	Saturday	Dec. 17
Final grades due by 1:00 pm	Monday	Dec. 19
Grades available to students on MyFSU	Tuesday (after 8AM)	Dec. 20

Sessions	Dates	Last Day to Withdraw
Full Session	Aug. 29 – Dec. 9	Nov. 3
Session A	Aug. 29 – Oct. 18	Sept. 29
Session B	Oct. 19 – Dec. 19	Nov. 18
Session D	Aug. 29 – Sept. 30	Sept. 19
Session E	Oct. 3 – Nov. 3	Oct. 21
Session F	Nov. 4 – Dec. 9	Nov. 28

College of Engineering Technology School Offices		
Automotive &Heavy Equipment	AUT 101	591-2655
Built Environment	GRN 227	591-3773
Engineering & Computing Technology	SWN 312	591-2068
Design & Manufacturing	NEC 211	591-2640
Dean's Office	JOH 200	591-2890

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, 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 201. 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.

STUDENT COMPLAINT POLICY
http://www.ferris.edu/HTMLS/administration/academicaffairs/Forms_Policies/Documents/Policy_Letters/AA-Student-Complaints.pdf

GRADUATION
Students should apply for their degree audit the semester prior to the degree completion term. To obtain a degree audit and clearance for your associate or bachelor degree for you must meet with your assigned academic advisor. In addition an online graduation application is REQUIRED and deadlines will be ENFORCED per the Provost's Office and Records Office. **ONLINE APPLICATION DEADLINE** for participation in Fall Commencement Ceremony: **OCTOBER 1, 2016**

Online application is accessed by logging into your MyFSU, (click on Student tab, My Records link, Degree Progress and Graduation, Apply to Graduate link). For more information, contact the Dean's Office.

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 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 Engineering Technology 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 Engineering Technology 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.

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, log in to MyFSU, (click on the Student tab, My Registration, Advisor Information, Select Term, Submit).

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 are in immediate crisis, call 911.***

EDUCATIONAL & CAREER COUNSELING ……STR 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.

CAREER SPECIALIST – Leigha Compson ……JOH 200 – 591-3549

Valuable support services and events are offered for students currently or previously enrolled in associate degree programs. To lean more visit: http://www. ferris.edu/HTMLS/colleges/technolo/ Career-Programs-Support/index.htm

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 – 5:00 p.m.
Sunday . . . . . .1:00 p.m. – MIDNIGHT
Extended Studies Court will begin late night hours September 13, 2016
*Sunday-Thursday/MIDNIGHT to 7:30 a.m. *Friday/6 p.m. to MIDNIGHT
*Saturday/5 p.m. to MIDNIGHT)

FSU BOOKSTORE……UNIVERSITY CENTER 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

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-_____.

Arts & Sciences/General Education 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

College of Engineering Technology Diversity Statement

The College of Engineering Technology provides a dynamic experiential learning environment that is inclusive, equitable and just for all individuals, regardless of human differences.

Ferris State University is an equal opportunity institution. For information on the University's Policy on Non-Discrimination, visit http://www.ferris.edu/non-discrimination

Updated 8.18.2016 alm

Architectural Documentation

Ferris State University
College of Engineering Technology
Department of Architecture and Facility Management
Arch 203: Architectural Documentation – Section 221, Fall 2016

07.0 Course Syllabus Signature Form

07.1 Student Name: _____

07.2 I have read and understand all of the policies and procedures laid out in this syllabus and the ATFM program studio policies available on Ferris Connect/Blackboard. I understand in particular that plagiarism or cheating of any kind will result in an automatic zero on the assignment, and/or the course, with referral for administrative discipline. I am aware that all deadlines must be maintained. Assignments are due at the beginning of class as assigned unless noted otherwise by the professor. Late work will receive one full letter grade deduction if turned in within one week of the assigned due date, after which it cannot be turned it. Midterm and Final project deadlines are mandatory – no exceptions. If I miss class, it is my responsibility to get the assignment from the Professor – during his office hours – or another student– work from a missed class will be due as assigned in class unless noted otherwise. It is my responsibility to regularly save and back up my work. Lost or corrupt digital files are not acceptable reasons for not turning in assignments on time.

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.

07.3 Student Signature: _____ Date: _____

Witness: _____ Date: _____

architectural Documentaion

Ferris State University
College of Engineering Technology
Department of Architecture and Facility Management
Arch 203: Architectural Documentation – Section 221, Fall 2016

00.0 Student Information Sheet

00.1 Name _____

00.2 Phone # _____

00.3 Emergency Contact # _____

00.4 Living on campus or commuter? (please circle one)

00.5 What are your career goals while here at Ferris?

00.6 Is this your second year of College? If no, please explain.

00.7 Please describe any previous construction or architectural work you may have done? This would also include any other related classes prior to attending Ferris.

00.8 What do you think that you will be doing in this class?

00.9 What would you like to learn in this class?

00.10 What questions would you like the professor to answer in class?
(Course specifics, Student activities, Architectural Technology program, Professor's background, etc.)

FERRIS STATE UNIVERSITY
COLLEGE OF ENGINEERING TECHNOLOGY
SCHOOL OF THE BUILT ENVIRONMENT
ARCHITECTURE AND FACILITY MANAGEMENT

SYLLABUS: COURSE ARCH204 SPRING 2016

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: MTR 1:00-1:50PM, R12:00-12:50PM (Individual appointments available)
COURSE TITLE: Architectural Construction Detailing

PREREQUISITE: ARCH 203

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.

CREDIT HOURS: 4

REFERENCES: "BUILDING CONSTRUCTION ILLUSTRATED" Francis D.K. Ching

"AEC Drafting Fundamentals", Jules Chiavaroli, AIA, NCARB

"MICHIGAN BUILDING CODE 2012"

"ARCHITECTURAL GRAPHIC STANDARDS", Ramsey and Sleeper

"FUNDAMENTALS OF BUILIDNG CONSTRUCTION-MATERIALS AND METHODS", Edward Allen

"Accessible and Usable Buildings and Facilities", ANSI A117.1-2009.

REQUIRED TEXT: "ARCHITECTURAL DETAILING", Edward Allen, Latest Edition
ADDITIONAL MATERIALS: All drafting equipment from Arch 101 and CAD supplies called for in ARCH 109. It is recommended that 24"x36" sheets or presentation boards be used.

8 1/2"x11" (8x8) grid 1000H paper (fade out grid)
Small (1") three ring binder with dividers for organizing course materials
Misc. materials per instructor
Roll of sketch (onion skin, bumwad, flimsy) paper
Computer data storage medium—thumb drive

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 3 class periods (12% of the course) will start to lose points. Each day missed beyond 3 days will result in 15 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 student that has more than 10 absences (33% of the course) will automatically fail the course.

UNITS OF INSTUCTION AND STUDENT LEARNING GOALS FOR EACH UNIT:

Learning Outcomes for each Instructional Unit	
	Upon Completion of each instructional unit, the learner will be able to satisfactorily:
I.	Course Introduction and Project Overview 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.	Working Drawing Theory and Organization 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.	Principles of Detailing 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: • 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.	Site Detailing 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.	Structural Detailing 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.	Exterior Detailing 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.	Roof Detailing 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, equipment, hatches, etc. 5. Demonstrate understanding of the principles of sustainability pertaining to roofs, including reflectivity, heat loss/gain, etc.
VIII.	Finish Details and Millwork 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.	Sketching 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.	Architectural Presentation 1. Prepare a rendered architectural presentation. 2. Present architectural drawings, progress reports, team activities, etc.

XI.	Evaluation and Critique

DETAIL PATTERNS

A. Student will demonstrate an awareness of principles of:
    1. Controlling water leakage pp 5-42 *(team 1)*
    2. Controlling air leakage and heat flow pp 43-61*(team 2)*
    3. Controlling water vapor pp 63-72*(team 3)*
    4. Controlling sound pp 73-80*(team 4)*
    5. Accommodating movement pp81-102*(team 1)*
    6. Providing structural support & passages for mechanical and electrical services pp 103-111 *(team 2)*
    7. Health and safety pp 113-124*(team 3)*
    8. Providing for the aging of the building pp125-145*(team 4)*
    9. Ease of assembly pp147-161*(team 1)*
    10. Forgiving details pp163-183*(team 2)*
    11. Efficient use of construction resources pp185-198*(team 3)*
    12. Aesthetics pp199-209*(team 4)*

% 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:

Article Reviews (7) @ 20 pts (individual)	140 points
12 Quizzes @ 20 points (averaged)	120 points
7 Detail Assignments @ 60 points	470 points
3 Chapter(s) Presentations (Team)	150 points
Final exam	150 points
TOTAL POINTS	1030 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 drawing submitted after 1 week (3 class days) from the due date will not be graded and receive a "0". The last drawing must be submitted no later than during the final exam. 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.

READING ASSIGNMENTS: Each student is expected to read the section in the textbook prior to the Tuesday lecture on that topic. For example, on the Wednesday January 21, you are to have already read the section on water leakage. There will be class discussion after each lecture and participation of every student is expected.

CHAPTER PRESENTATIONS: Students will be assigned to groups of 2 people and develop a presentation on the 12 sections of the textbook. Mondays will be presentation days a team will be presenting a chapter. These same teams will be used when taking the quizzes. Detail 1 will be using these same teams for the beginning of the Detail. You are to submit your presentation on Blackboard.

ARTICLE REVIEWS: Each student is expected to read each week's handout 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 points. The first article is "Where Zero Is the Top Score: An ultra-energy-efficient building defines a new paradigm for New York's schools" from January 2016 Architectural Record.

QUIZZES: Every presentation day except for next week starting on January 21 each student will individually take a quiz following the presentation and discussion of each chapter. Basically one week after the team presentation you will take a quiz on the chapter. Each team will then take the quiz as a team after the individual quiz. You are all encouraged to discuss and participate in the formation of answers on the team quiz. Each person will receive an average of their individual and their team scores.

COPYING: Tracing of drawings or parts of drawings, other than those specifically approved by the instructor for the purpose of production efficiency, will deprive the student of a proper learning experience. It is anticipated that no student will want to be deprived. If a student does decide to deprive him or herself in this manner, AUTOMATIC FAILURE of the course will occur. Extenuating circumstances will not be considered. This policy applies to the copier and the person whose work is copied.

PEER EVALUATION: Each team member will be asked to do an evaluation on his or her other team member. The instructor will use this information along with his own observations to arrive at project scores and grades. Each team member is strongly urged to pull his own weight and be a committed team player. You will be expected to work with your team members outside of class. It is very important that you communicate outside of class. Collect and organize your teammate's e-mail and telephone numbers. This situation is much like you will experience in a work situation. You will have people on your team with different motivation levels. You will have to develop a working professional relationship and somehow produce the work. If you have a non-performing member, they need to be asked to perform or get off the team.

arch Detailing

Ferris State University
College of Engineering Technology
Department of Architecture and Facility Management
Arch 204: Architectural Detailing – Section 221, Spring 2017

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 2:00 – 5:50, W 2:00 – 5:50

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 12:00 – 13:50 / Wednesday 12:00 – 13:50

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 up to 24 hours in advance. 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:

Course Website -	**Paullong.com**
Google+ Community -	**https://plus.google.com/communities/115827317495689698534** (Arch 204: Architectural Detailing)
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
4. Lewis, P., Tsurumaki, M., & Lewis, D. J. (2016). *Manual of section.*

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 InDesign CS6, Adobe Illustrator CS6, AutoCAD 2016, Sketchup, and Rhino 3d v4.

USB flash drive, backup storage device, note taking material, digital camera, sketchbook, drafting equipment from ARCH 101, and **model making supplie**s.

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, **¼" graph paper**, trace paper, 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 has 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 (i.e. once the grade is posted) 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). **The instructor likewise reserves the right to reduce a student's final grade by up to 10% for circumstances and behavior not taken into account through the assignments and grading schemes above.**

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 / HP (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 / P (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 / LP (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.) 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

For Pass/Fail Assignments: DI (Distinction) = 100, HP (High pass) = 95, P (Pass) = 85, LP (Low Pass) = 75, I (Incomplete) =65. Late work for Pass/Fail Assignments will receive no higher than a LP grade.

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. **Students missing more than 20% of the course will automatically fail the course (9 Absences). For each unexcused absence a student's final grade will be deducted according to the following schedule:**

1 Absence = 1% Deduction	**5 Absences = 15% Deduction**
2 Absences = 3% Deduction	**6 Absences = 21% Deduction**
3 Absences = 6% Deduction	**7 Absences = 28% Deduction**
4 Absences = 10% Deduction	**8 Absences = 35% Deduction**

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 will be marked absent**. **For each (3) late arrivals or leaving class early w/o permission, (1) absence will be recorded**. Students not prepared to take notes and sitting at the front of the class when class begins will be marked late. 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 material. If you are to 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 Blackboard or as noted by the instructor. 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 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 and at my discretion be available on Blackboard **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 classmate.**

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** (see syllabus attachment for additional course communication information)**:** 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 and Final Project.

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 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. **Missed quizzes cannot be made up.**

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 bound to give an extension for improperly saved work**. The computer hard drives may be purged regularly or without warning. It is strongly recommended that you do not work directly form 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 backup 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.

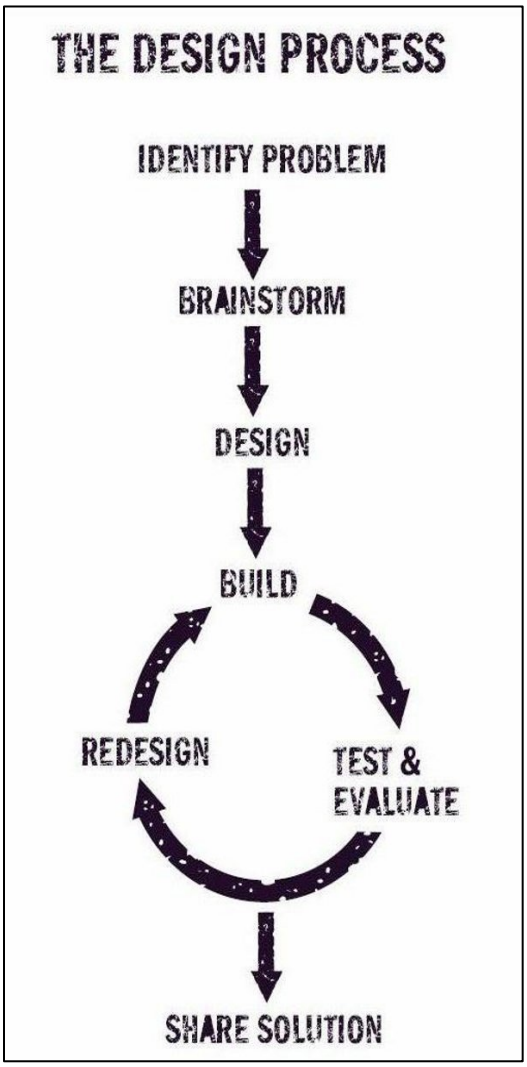
03.12 **Studio Maintenance:** The appearance of the studio tells of the attitudes of those who use it. While studios are inherently spaces of energy, creativity, and some form of chaos, they also represent professional workplaces. It is expected that the studio be maintained with level of professionalism 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, Blackboard or announced in class. Missing class is not an acceptable excuse for being unaware of changes made to the syllabus.

04.0 **Design Thinking**: In this course you will be asked to engage in collaborative and interdisciplinary design thinking methods that emphasize producing unique, feasible, and implementable outcomes that can be applied to real world projects. Students will complete projects by generating a variety of ideas, applying and synthesizing knowledge from their discipline, building prototypes, and evaluating with critical thinking.

Often the Design Process is presented as a series of steps that you go through in developing an idea or product. They (usually) include: **Identify** a problem, **Gather information**, **Propose solutions**, **Choose** the best idea, **Test** the idea, **Evaluate** and **Communicate**. There are many different versions: no set list covers all the ways people interpret the Design Process. As you get more familiar with the use of the process, you tend to skip around inside it as your project needs dictate.



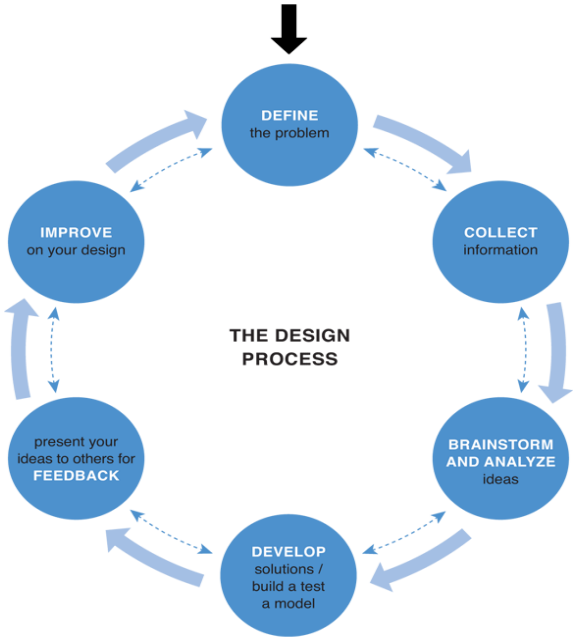
Looping: In the image to the right, and in many other descriptions of the Design Process, it is shown as a **loop**. In considering a project to work on, you find a problem to solve, gather information, try out an idea, test it and evaluate. If you solve the problem, move on to another problem or aspect of the project that needs attention. If you don't solve the problem, you have some more information about what won't work. That information gets incorporated in your next go-round.

Making it right: As you cycle through the Design Process, your product should be getting better as you go. The more you identify problems, pose solutions, test them and implement them, the device, program, product or project gets better. New problems arise the more you work the process. If you nail the biggest ones first, eventually you have something that works pretty well and are fine tuning after a while. It is possible to overdo this fine tuning part, causing the project to never see the light of day. It is also possible to short circuit this phase. Ebay, second hand stores and the dump are full of examples of products which did not get enough exposure to this phase.

Delivering: When your product is sufficiently complete, and you have resolved the most pressing problems determined in the process, it is time to deliver. This does not mean that the project is done forever, instead, it means that it is ready for more testing in a real world environment. As you (and your team, as may be the case) see the product in the world, you will hopefully be looking at it for examples of where it can be changed and improved. As you find aspects of the project that need refinement, you make a plan for revision and implement it. One hopes that the flaws you find at this point are not significant enough to seriously stall or ruin the project.

http://makezine.com/2008/11/16/using-the-design-process/

These looping steps of the Design Thinking process can be further defined as:



1. **Define the Problem:** You can't find a solution, until you can spell out what the problem is. Architects work with the client to define the project. The problem may be something like "A new school kitchen with cafeteria that seats 300 students" or "A new high school for 1,000 students."

2. **Collect Information:** Once the problem is defined, architects will spend time gathering information to help them understand the neighborhood, the site, the users of the building, any existing buildings, and other critical information. Typically this means taking photographs, sketching, and interviewing the client. It's also valuable to collect information on the natural environment, so architects may gather data on the path of the sun around the site, the direction of the wind, the climate, as well as what types of plants are currently growing around the site.

3. **Brainstorm/Analyze:** During this stage of the process, architects may begin sketching or making diagrams to help them understand how all the data and information they've collected may impact the design of the building. These early drawings – which may include bubble diagrams, for example – will help the architects document their ideas, because it's likely the solution will change as they go along.

4. **Develop Solutions:** At this stage in the design process, architects will create drawings with specific solutions to be shown to the client. Schematic drawings, as these are typically called, help illustrate the big ideas and space requirements of the project. Schematic drawings usually do not include dimensions or other construction-related notes.

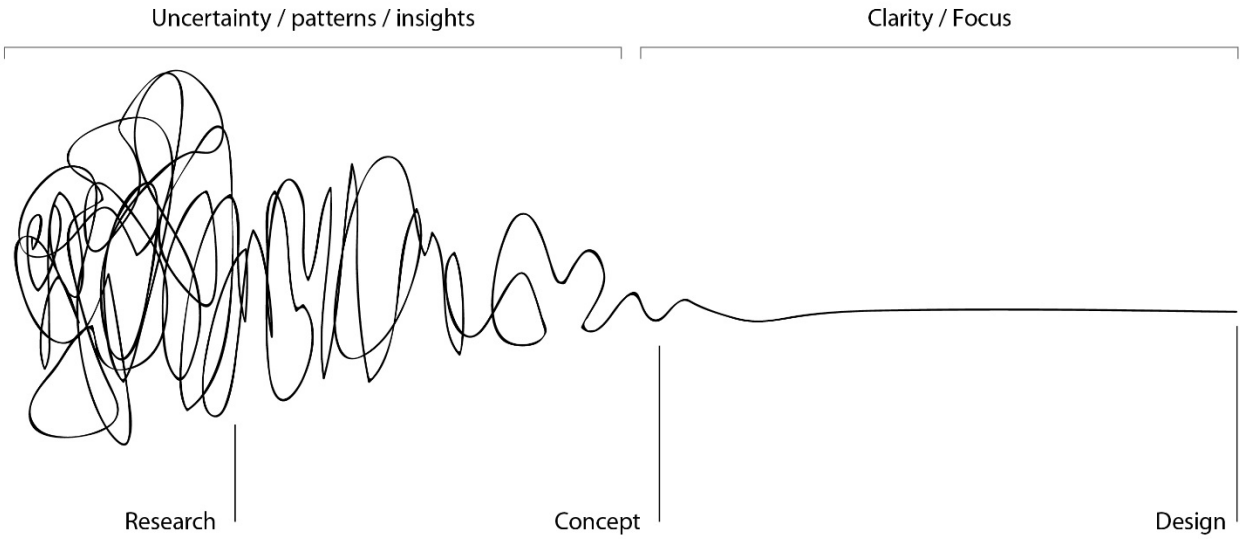
5. **Feedback:** No solution is perfect the first time around, so it's critical that the architects continue the discussion with the client to receive feedback.

6. **Improve:** With feedback in hand, the architects will go back and continue to revise and improve the final solution. Over the next several months, or even years, the architecture firm will work with the client to refine the original design. Based on an analysis of cost vs. needs, the firm and the client together will closely review the solutions and make balanced decisions on which features will stay, which will be redesigned, and which may be eliminated. The architecture firm will also work closely with the general contractor responsible for constructing the building.

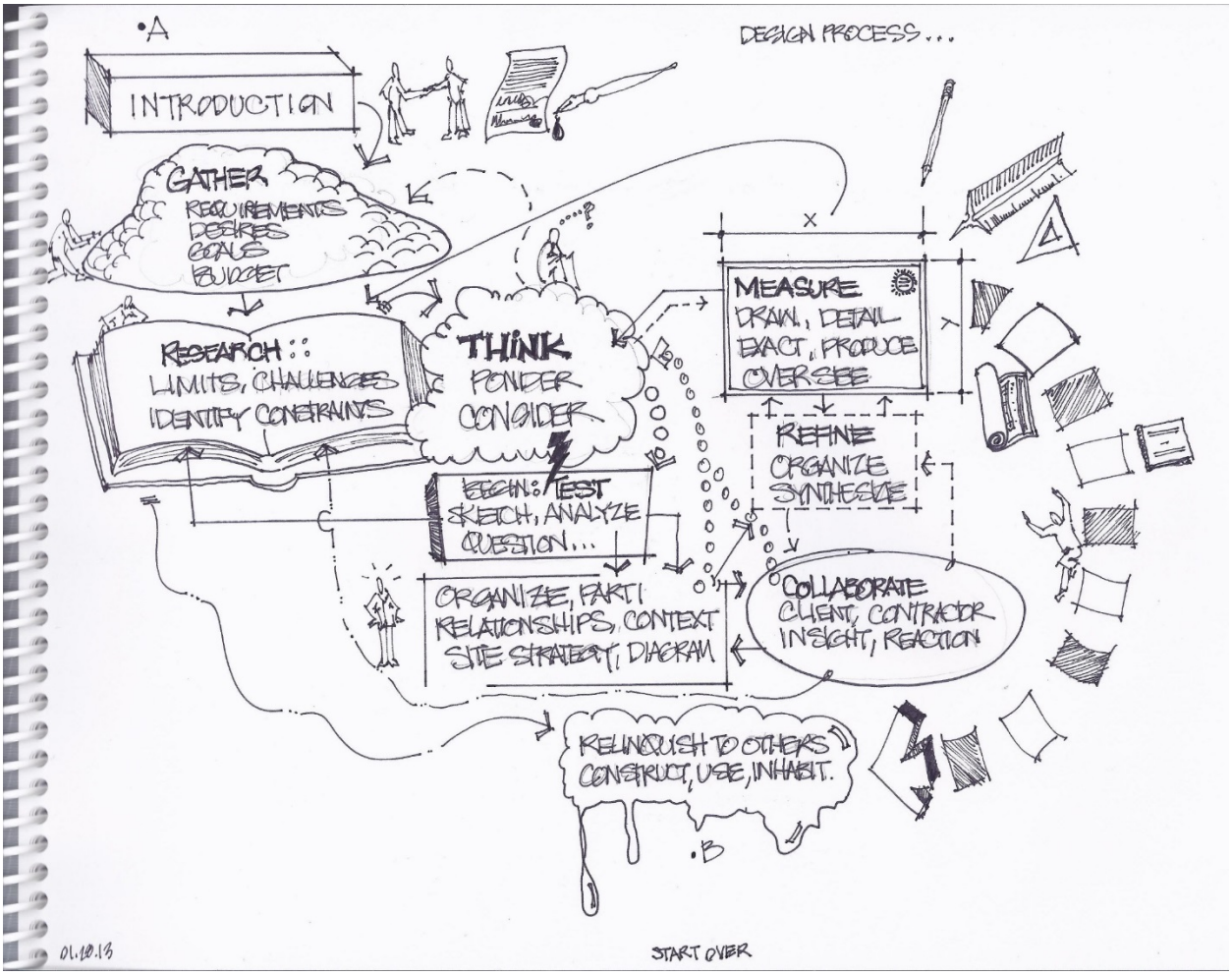
7. **Build It:** The precise details of the building will determined over several months while the firm is developing a set of construction drawings and specifications – called construction documents – which will be part of the legal contract between the architect and client. These construction documents will be used by the contractor to construct the building.

http://discoverdesign.org/design/process

Additional visual representations of the Design Thinking Process are provided on the following page:



http://designsojourn.com/design-processed-explained/



https://thinkarchitect.wordpress.com/2013/01/31/design-process/

05.0 Other

05.1 **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

05.2 **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 at:

http://www.ferris.edu/htmls/colleges/artsands/DeptLink_desc.cfm?DeptLinkID=53&DepartmentID=3misconduct

05.3 **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/

05.4 **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

05.5 **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.

Please see syllabus attachment and safety flyer posted at the front of the classroom for additional building safety information.

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 are 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. All cutting should be done on cutting mats.**

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/)

05.6 **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

05.7 **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 is 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.

05.8 **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 2016

Dane Archer Johnson, 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 Texts: Ching, Francis D.K. *Architecture: Form, Space and Order.* Wiley, 4th edition, 2014

Readings: Additional readings assigned as needed.

Participation: Active engagement with the class and with the world of design are important skills for the design student to develop. To this end, part of your grade will be based on the degree to which you participate in class discussions and crits, but also with the larger discussion of design that takes place in public, here defined by the internet. Each student will therefore be required to subscribe to and read at least one design blog, and be prepared to discuss what they read with the class whenever asked to do so.

Equipment: Student will make use of equipment purchased for ARCH 101. Additional equipment requirements will be announced as needed. It is assumed that students are trained and capable of using presentation software and the laser cutter, in addition to traditional hand skills.

Grades: Grades will be calculated based on a course total of 1,000 points, based on the following formula:

Projects -	1 at 50 points	50 points
	3 at 100 points each	300 points
	1 at 150 points each	150 points
	1 at 300 points	300 points
Participation -		100 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.

ARCH 241 **Design Principles**
Fall 2016 **Course Lecture and Project Schedule**

	DATE	ACTIVITY	SUPPORT
Week 1	Aug 29	**CRITICAL THINKING SEMINAR 1**	**MEET IN UC 217**
	Aug 31	Introduction to the course Video: *Inspiration*	
Week 2	Sep 05	**NO CLASS – LABOR DAY**	Reading: Bias, Tolerance, Taste
	Sep 07	Lecture: Good Design?	Reading: Emotional Design
Week 3	Sep 12	**CRITICAL THINKING SEMINAR 2**	**MEET IN UC 217**
	Sep 14	Lecture: Primary Elements, Pattern, Texture	Project 1 handout (100)
Week 4	Sep 19	Studio: Pattern and Texture	
	Sep 21	**Project 1 due – CRIT**	
Week 5	Sep 26	Lecture: Color and Light	Project 2 handout (50)
	Sep 28	Studio: Color and Light	
Week 6	Oct 03	**Project 2 due – CRIT**	
	Oct 05	**NO CLASS – FIELD TRIP**	
Week 7	Oct 10	VIdeo: Form and Meaning	Project 3 handout (100)
	Oct 12	Lecture: Form and Meaning	
Week 8	Oct 17	Studio: Form and Meaning	
	Oct 19	Studio: Form and Meaning	
Week 9	Oct 24	**Project 3 due - CRIT**	
	Oct 26	Lecture: Form and Function	Project 4 handout (100)
Week 10	Oct 31	Studio: Form and Function	
	Nov 02	Studio: Form and Function	
Week 11	Nov 07	**Project 4 due – CRIT**	
	Nov 09	Studio: Form and Function 2	Project 5 handout (150)
Week 12	Nov 14	Studio: Form and Function 2	
	Nov 16	Studio: Form and Function 2	
Week 13	Nov 21	**Project 5 due – CRIT**	
	Nov 23	**NO CLASS – THANKSGIVING**	
Week 14	Nov 28	Studio: Harmony	Project 6 handout (300)
	Nov 30	Studio: Harmony	
Week 15	Dec 05	Studio: Harmony	

	Dec 07	Studio: Harmony
FINALS	Dec 14	**Project 6 due – CRIT – 12:00 pm**

Ferris State University - ARCH 242
Architectural Design Principles – Spring 2017

Dane Archer Johnson, Professor
danejohnson@ferris.edu

Johnson Hall 209
231-591-2625

Introduction to the course

In ARCH 241, you explored some of the fundamental issues and principles that guide designers toward their goal; but your examination was, to a great extent, conceptual.

This course will examine those principles as well as others, and how they are manifested in more specifically architectural projects. The elements of this course will expand on the vocabulary that every designer should be comfortable with, even though the language each designer speaks will be different. Material decisions and how materials shape form; more sophisticated exploration of space as the shaper of form; site, entry, and proportional systems are some of the things that will be examined in this course. The course will be broad, but also focused, as each student continues to develop a personal approach to design that still yields universal solutions.

Editing, discarding, reinvention – components of the process discussed last semester – will be explored in a deeper way. Much of the work of this course will be devoted to expanding your approach to design as a process of invention, not of selection. You are the designer, not the software engineers. You must master technology to serve your goals, and not let your tools carry the load.

Structure of the course

This course will be divided between lectures, studios and crit sessions. Design challenges will be introduced with a lecture; each will be explored during in-class studio work and development of solutions. 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 you should bring whatever tools are needed to complete the tasks before you 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 your design decisions to your 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 skills. 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 Texts: Ching, Francis D.K. *Architecture: Form, Space and Order* (Fourth edition, 2014). Wiley.

Readings: Instructor handouts will be provided, and additional readings assigned as needed.

Equipment: Student will make use of equipment purchased for ARCH 101 and ARCH 241. 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 -	2 at 150 points each	300 points
	1 at 100 points	100 points
	2 at 200 points each	400 points
Commitment -		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

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.

ARCH 242 Architectural Design Principles
Spring 2017 Course Lecture and Project Schedule

	DATE	ACTIVITY	
Week 1	Jan 10	Introduction to the course Video – *Sketches of Frank Gehry*	
	Jan 12	Lecture: Precedent and Transformation	**Project 1 Handout (150)**
Week 2	Jan 17	Studio: Precedent and Transformation	
	Jan 19	Studio: Precedent and Transformation	
Week 3	Jan 24	Studio: Precedent and Transformation	
	Jan 26	**Project 1 due - CRIT**	
Week 4	Jan 31	Lecture: Application of Principles	**Project 2 Handout (150)**
	Feb 02	Studio: Application of Principles	
Week 5	Feb 07	Studio: Application of Principles	
	Feb 09	Studio: Application of Principles	
Week 6	Feb 14	**Project 2 due - CRIT**	
	Feb 16	Lecture: Site and Entry	**Project 3 handout (100)**
Week 7	Feb 21	Studio: Site and Entry	
	Feb 23	Studio: Site and Entry	
Week 8	Feb 28	Studio: Site and Entry	
	Mar 02	**Project 3 due - CRIT**	
Week 9		**SPRING BREAK – NO CLASS MEETING**	
Week 10	Mar 14	Lecture: Proportion and Ordering	**Project 4 handout (200)**
	Mar 16	Studio: Proportion and Ordering	
Week 11	Mar 21	Studio: Proportion and Ordering	
	Mar 23	Studio: Proportion and Ordering	
Week 12	Mar 28	Studio: Proportion and Ordering	
	Mar 29	**Project 4 due - CRIT**	
Week 13	Apr 04	Lecture: Harmony	**Project 5 handout (200)**
	Apr 06	Studio: Harmony	
Week 14	Apr 11	Studio: Harmony	
	Apr 13	**NO CLASS – MID SEMESTER BREAK**	
Week 15	Apr 18	Studio: Harmony	
	Apr 20	Studio: Harmony	
Week 16	Apr 25	Studio: Harmony	
	Apr 27	Studio: Harmony	
FINALS	May 1	**Project 5 due – CRIT – 2:00 pm**	

Ferris State University - ARCH 244 Architectural History 1 - Fall 2016

Dane Archer Johnson, Professor
danejohnson@ferris.edu
209 Johnson Hall
231-591-2625

Introduction to the course

Architectural history is one of the most important and least understood components of an architectural education, or actually, of any general educational program. In modern educational programs, history is often de-emphasized in favor of technical or practical courses. HIstory is not technical, although the technology of architectural history is critical to our existence. Nor is the study of architectural history practical, and yet it grew out of the practical goal of serving our day to day needs. To ignore architectural history does a tremendous injustice to the student of architecture and other students as well. What the study of architectural history gives to the student is nothing less than an understanding of what advances shaped the world in which he or she lives. The student is given an understanding of important ways in which architects shape and reflect the world around them. This will hopefully make for citizens with a more profound respect for history and the world around them.

Importantly, in an era of great interest in the conservation of resources, an understanding of architectural history can also be a valuable professional tool in the practice of responsible resource management. This means that the student educated in architectural history may also be more sensitive and caring in the preservation of increasingly rare and valuable historic buildings.

This course is the first half of a year-long survey of western and non-western architectural history. It is a course designed in keeping with principles of architectural and cultural study that date back for centuries. Those who intend to extend their education into a four-year architecture or related degree program will continue with this survey next semester. Those who pursue a different educational direction will at least carry a broader world view into their future endeavors.

Structure of the course

The core of this course will be lectures that will explain the visual history of architecture. Each lecture, or group of lectures, will cover a different period or style in architectural history, and the lectures will move chronologically, as much as possible. The styles of architecture will be linked to the culture from which they grew, and technological advances will be explored where appropriate. The lectures will be supported by readings from the text, which are noted in the course schedule. Students should remain current in the readings so that the text can supplement the lectures.

Requirements of the course

The primary responsibility of the student in this course will be attendance, attention and note-taking at the lectures. Although readings from the text have been outlined in the course schedule, the material in the lectures rules, so your note-taking should be thorough and detailed. Lectures, however, should be viewed separately from the content of the reading; supportive of one another but not redundant.

There will, of course, be actual work in the course. Students will be required to complete six quizzes, three exams, and a project, all of which will be explained in more detail as needed.

Required Text: Moffet, Marion; Fazio, Michael; Wodehouse, Lawrence. *Buildings Across Time.* (3rd edition) McGraw Hill, 2009.

Study Guides: Study guides have been created for each subject area of the course. They are available on the Blackboard site for the course.

Grades: Grades will be calculated based on a course total of 1,000 points, based on the following formula:

Quizzes (6) -	25 points each	150 points
Exams (3) -	150 points each	450 points
Project	300 points	300 points
Attendance -	100 points	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

Quizzes: There will be regular quizzes in the course, each covering the material of the previous week or two. Students will identify works of architecture, define terminology, etc. studied in the course during the period in question. Information required for the quizzes will be announced before each quiz. Quizzes will be delivered through Blackboard.

Project: There will be one research project in this course. Details will follow in an individual project handout.

Electronics: Cell phone use, including texting, 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. Sending texts or tweeting suggests a lack of interest in the material. I-Pods, MP3 players, etc., are not allowed in class at any time.

Attendance: Attendance at lectures 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 in this course. As an adult, however, the choice of attending is yours, but a price will be paid for frequent absences, in the form of a lowered grade in the course. 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:

It is understood that students are not immune to the circumstances of life. Sometimes stuff happens. 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 calendar day late.

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, obituary, etc. 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.

Missed Exams and Quizzes:

Should a situation occur in which you are unable to attend class on an exam day, such as severe illness or injury, a makeup exam will be scheduled. It is the responsibility of the student, however, to request such a makeup no later than the date at which you return to class. After this, no makeup exams will be scheduled.

If a student misses a quiz due to such a situation as outlined above, the quiz will be reopened upon a request from a student no later than the date at which you return to class. If a quiz is reopened, only those students with permission to take the quiz will be allowed to do so. If you miss a quiz without notifying the instructor of a special circumstance, no make-up will be offered. In this case, if you find that the quiz has been reopened, and take that quiz hoping for credit, the credit will not be granted. Makeup quizzes will not be granted for any other reason, including, but not limited to: poor internet connectivity, forgetfulness, etc. The only excpetion to this rule is if the Blackboard system indicates a documented technical problem with the quiz. In this instance, the quiz will be reopened.

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. Written 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.

ARCH 244 Architectural History 1
Fall 2016 Course Lecture and Reading Schedule

			Study Guide	Text
Week 1	Aug 30	Introduction / Review of Class Requirements		
	Sep 01	The Study of Architectural History		pps. 1-7
Week 2	Sep 06	Prehistoric Architecture	1	pps. 8-21
	Sep 08	Ancient Near Eastern Architecture	2	
Week 3	Sep 13	Egyptian Architecture	3	pps. 23-33
	Sep 15	Egyptian Architecture **(QUIZ #1)**		
Week 4	Sep 20	Aegean Architecture	4	pps. 34-61
	Sep 22	Greek Architecture **(QUIZ #2)**	5	
Week 5	Sep 27	Greek Architecture	5	
	Sep 29	Review for Exam		
Week 6	Oct 04	**EXAM #1**		
	Oct 06	**EXAM REVIEW AND PROJECT DISCUSSION**		
Week 7	Oct 11	Architecture of Ancient India and Southeast Asia	6	pps. 62-79
	Oct 13	Traditional Architecture of China **(QUIZ #3)**	7	pps. 80-103
Week 8	Oct 18	Traditional Architecture of Japan	7	
	Oct 20	Roman Architecture	8	pps. 104-131
Week 9	Oct 25	Roman Architecture	8	
	Oct 27	Roman Architecture **(QUIZ #4)**	8	
Week 10	Nov 01	Early Christian Architecture	9	pps. 132-138
	Nov 03	Review for Exam	9	
Week 11	Nov 08	**EXAM #2**		
	Nov 10	Byzantine Architecture	10	
Week 12	Nov 15	Byzantine Architecture	10	pps. 139-151
	Nov 17	Islamic Architecture **(QUIZ #5)**	11	pps. 153-175
Week 13	Nov 22	Architecture of the Middle Ages	12	pps. 176-211
		PROJECT DUE		
	Nov 24	**NO CLASS MEETING - THANKSGIVING**		
Week 14	Nov 29	Architecture of the Middle Ages	12	
	Dec 01	Gothic Architecture in France	13	pps.. 212-226
Week 15	Dec 06	Gothic Architecture in France	13	
	Dec 08	Gothic Architecture in England **(QUIZ #6)**	13	
FINALS	Dec 12	**EXAM #3 - 10:30 am**		

Ferris State University - ARCH 245 – Spring 2017
Architectural History 2

Dane Archer Johnson, Professor
danejohnson@ferris.edu
209 Johnson Hall
231-591-2625

Introduction to the course

In the first half of this year-long survey course, you explored the beginnings of architecture and its evolution through a number of historical periods. From a period before written history, we learned to make suppositions about the function and meaning of structures, sometimes with little to go on but their construction. Nonetheless, you learned about the relationship between structure and aesthetics and the unique ways they were brought together by different cultures.

In this semester, we enter a new era, in which we know a great deal more about buildings, and specifically about the individuals who designed them, commissioned them, and built them. Starting with the Renaissance, buildings are no longer anonymously created, and they take their place among the great works of art alongside paintings and sculptures. As this evolution continues, we will see the emergence of those technological and aesthetic principles that shape the architecture of the present times, and hopefully end the course with an understanding of how we got to where we are.

Structure of the course

The core of this course will be lectures that will explain the visual history of architecture. Each lecture, or group of lectures, will cover a different period or style in architectural history, and the lectures will move chronologically, as much as possible. The styles of architecture will be linked to the culture from which they grew, and technological advances will be explored where appropriate. The lectures will be supported by readings from the text, which are noted in the course schedule. Students should remain current in the readings so that the text can supplement the lectures.

Requirements of the course

The primary responsibility of the student in this course will be attendance, attention and note-taking at the lectures. Although readings from the text have been outlined in the course schedule, the material in the lectures rules, so your note-taking should be thorough and detailed. Lectures, however, should be viewed separately from the content of the reading; supportive of one another but not redundant.

There will, of course, be actual work in the course. Students will be required to complete six quizzes, three exams, and one research project, all of which will be explained in more detail as needed.

Required Text: Moffet, Marion; Fazio, Michael; Wodehouse, Lawrence. *Buildings Across Time.* (4th edition) McGraw Hill, 2008.

Study Guides: Study guides have been created for each subject area of the course. They are available on the Blackboard site for the course.

Grades: Grades will be calculated based on a course total of 1,000 points, based on the following formula:

Quizzes (6) -	25 points each	150 points
Exams (3) -	150 points each	450 points
Project	300 points	300 points
Attendance -	100 points	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

Quizzes: There will be regular online quizzes in the course, each covering the material of the previous week or two. Students will identify works of architecture, define terminology, etc. studied in the course during the period in question. Information required for the quizzes will be announced before each quiz.

Project: There will be one research project in this course. Details will follow in an individual project handout.

Electronics: Cell phone use, including texting, 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. Sending texts or tweeting suggests a lack of interest in the material. I-Pods, etc. are not allowed in class at any time.

Attendance: Attendance at lectures 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 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 seventeen percent of the time, your attendance grade will be lowered seventeen percent, allowing you a maximum of 83 out of 100 points possible for this portion of your grade, using the outline for grading noted above.

Missed Deadlines and Excused Absences:

It is understood that students are not immune to the circumstances of life. Sometimes stuff happens. 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, including papers, that are turned in late will be marked down ten percent (10%) for each day late.

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, obituary, etc. 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.

Missed Exams and Quizzes:

Should a situation occur in which you are unable to attend class on an exam day, such as severe illness or injury, a makeup exam will be scheduled. It is the responsibility of the student, however, to request such a makeup no later than the date at which you return to class. After this, no makeup exams will be scheduled.

If a student misses a quiz due to such a situation as outlined above, the quiz will be reopened upon a request from a student no later than the date at which you return to class. If a quiz is reopened, only those students with permission to take the quiz will be allowed to do so. If you miss a quiz, and find that it has been reopened, and take that quiz hoping for credit, the credit will not be granted. Makeup quizzes will not be granted for any other reason, including, but not limited to: poor internet connectivity, forgetfulness, etc. The only exception to this rule is if the Blackboard system indicates a documented technical problem with the quiz. In this instance, the quiz will be reopened.

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.

Written 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.

ARCH 245 Architectural History 2
Spring 2017 Course Lecture and Reading Schedule

			Study Guide	Text
Week 1	Jan 10	Renaissance Architecture in Italy	1	pps. 285-328
	Jan 12	Renaissance Architecture in Italy	1	
Week 2	Jan 17	Renaissance Architecture in England and France	2	pps. 328-339
	Jan 19	Baroque Architecture in Italy	3	pps. 341-359
		(QUIZ #1)		
Week 3	Jan 24	Baroque Architecture in Italy	3	
	Jan 26	Baroque Architecture in France and England	3	pps. 365-379
		(QUIZ #2)		
Week 4	Jan 31	Baroque Architecture in Austria and Germany	3	pps. 359-365
	Feb 02	Review for Exam		
Week 5	Feb 07	**EXAM #1**		
	Feb 09	Neo-Classical Architecture: Europe	4	pps. 381-400
Week 6	Feb 14	Indigenous Architecture of the Americas & Africa	5	pps. 251-284
	Feb 16	American Colonial Architecture **(QUIZ #3)**	6	
Week 7	Feb 21	American Colonial Architecture	6	
	Feb 23	Neo-Classical Architecture: US	7	pps. 401-403
Week 8	Feb 28	Industrial Revolution	8	pps. 411-420
	Mar 02	The Arts and Crafts Movement	10	pps. 420-433
Week 9		**NO CLASS – SPRING BREAK**		
Week 10	Mar 14	Tradition: Beaux-Arts Architecture	11	pps. 435-438
	Mar 16	Review for Exam		
Week 11	Mar 21	**EXAM #2**		
	Mar 18	Innovation: The Chicago School	12	pps. 439-466
		(QUIZ #4)		
Week 12	Mar 28	Innovation: The Chicago School	12	
	Mar 30	Innovation: The Chicago School	12	
Week 13	Apr 04	International Style Architecture in Europe	13	pps. 476-492
	Apr 06	International Style Architecture in the U.S.	14	
		(QUIZ #5)		
Week 14	Apr 11	Modernism	15	pps. 510-516
		RESEARCH PROJECT DUE		
	Apr 13	**NO CLASS – MID-SEMESTER BREAK**		
Week 15	Apr 18	Modernism	15	
	Apr 20	Modernism 15		
Week 16	Apr 25	Post-Modernism	16	pps. 517-534
	Apr 27	Post-Modernism	16	
FINALS	May 01	**EXAM #3**		
		(QUIZ #6)		

Ferris State University - ARCH 246 – Spring 2017
Twentieth Century Architecture

Dane Archer Johnson, Professor
danejohnson@ferris.edu
209 Johnson Hall
231-591-2625

Introduction to the course

If you are enrolled in this course, you have already taken a course (or courses) that surveyed the entire history of Western architecture.. A few weeks of that suvey were devoted to the architecture of the twentieth century. Is that enough? Hardly!

The fact is that most of the architecture that surrounds us and with which we interact every day was built in the twentieth century. We take most of our visual cues from this architecture, regardless of historic precedent: twentieth century architecture is the context of our lives.

This course, therefore, will allow us all to explore this context in more detail, with a broader range of styles and movements than were examined in our survey course. Some of the material will be familiar to you, but much will be new; will look deeper; will create more discussion about why architects do things, and not just about what they do.

Structure of the course

The core of this course will be lectures and discussions that will explore European and American architecture in the twentieth century. Each lecture, or group of lectures, will cover a different period or style, but the lectures may not move chronologically, overlapping as we explore parallel developments in architecture. We will, however, attempt to link movements in a logical fashion. The styles of architecture will be linked to the culture from which they grew, and technological advances will be explored where appropriate. The lectures will be supported by readings from the text, which are noted in the course schedule. Students should remain current in the readings so that the text can supplement the lectures.

The course will be loosely divided into four sections, focusing on the following periods of development:

I.	**Fundamental**	Industrial Revolution, Chicago School, Arts and Crafts, Secession, Futurism, De Stijl,
II.	**International**	Deutscher Werkbund, Bauhaus, International Style
III.	**Modern**	Art Deco, Skyscrapers, Master Builders, Modernism
IV.	**Post-Modern**	Louis Kahn, Post-Modernism, Deconstruction

Requirements of the course

The primary responsibility of the student in this course will be attendance, attention and note-taking at the lectures, and participation in discussions. Although readings from the text have been outlined in the course schedule, the material in the lectures rules. It should be viewed separately from the content of the reading; supportive of one another but not redundant.

There will, of course, be actual work in the course. Students will be required to complete slide quizzes, a series of exams, and a term project, all of which will be explained in more detail as needed.

Required Text: Curtis, William J.R. *Modern Architecture Since 1900.* (3rd edition) Phaidon.

Grades: Grades will be calculated based on a course total of 1,000 points, based on the following formula:

Quizzes (5) -	40 points each	200 points
Exams (4) -	100 points each	400 points
Term Paper	250 points	250 points
Term Paper prep (2)	25 points each	50 points
Attendance -	100 points	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

Slide Quizzes: There will be regular slide quizzes in the course, each covering the material of the previous two weeks. Students will be asked to identify or answer questions about works of architecture studied in the course during the period in question. Information required for the quizzes will be announced before each quiz.

Powerpoints of study images will be posted online before each quiz.

Exams: There will be four examinations in this course. Each will cover the preceding section of the course. Each will be given as a take-home essay exam. Additional information will be given prior to the first exam.

Term Paper: There will be one term paper required in this course. Two preparatory elements are required: selection of a paper topic by the student and approved by the instructor; and a bibliography of research sources on that topic. Refer to the course schedule for due dates for these components.

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 or a student texting is a disruption to the room and demonstrates a lack of respect for your classmates and the instructor. Repeated cell phone use may result in students being asked to leave the class. I-Pods, etc. are not allowed in class at any time.

Attendance: Attendance at lectures 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 in this course. As an adult, 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 seventeen percent, allowing you a maximum of 83 out of 100 points possible for this portion of your grade, using the outline for grading noted above.

Missed deadlines and Excused Absences:

It is understood that students are not immune to the circumstances of life. Sometimes stuff happens. 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, work turned in late will be marked down ten percent (10%) for each day late. All assignments 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. If an excused absence coincides with an examination or quiz date, a makeup will be scheduled at the student's request.

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.

Written 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.

ARCH 246 Twentieth Century Architecture
Spring 2017 Course Lecture and Reading Schedule

		Fundamental	
Week 1	Jan 10	Introduction to the course	Chapters 1,2
	Jan 12	Frank Lloyd Wright 1880-1915	Chapter 7
Week 2	Jan 17	Frank Lloyd Wright 1880-1915	
	Jan 19	The Arts and Crafts Movement	Chapter 5
Week 3	Jan 24	The Arts and Crafts Movement	
	Jan 26	Influence of the Arts and Crafts Movement	Chapter 3
Week 4	Jan 31	Other Voices: Loos, Perret	Chapters 6,9
	Feb 02	Other Voices: De Stijl, Futurism	
		EXAM #1	
		TERM PAPER TOPIC DUE	
		International	
Week 5	Feb 07	The Deutscher Werkbund	
	Feb 09	The Bauhaus	Chapter 11
Week 6	Feb 14	Mies van der Rohe 1900-1930	
	Feb 16	Le Corbusier 1900-1930	Chapters 10,16
Week 7	Feb 21	Architecture of Tyranny	Chapter 20
	Feb 23	Architecture of Tyranny	
Week 8	Feb 28	The International Style	Chapter 15
	Mar 02	The International Style	
		EXAM #2	
		TERM PAPER BIBLIOGRAPHY DUE	
Week 9		**NO CLASS MEETING – SPRING RECESS**	
		Modern	
Week 10	Mar 14	Art Deco	
	Mar 16	The American Skyscraper	Chapter 13
Week 11	Mar 21	Master Builders: Frank Lloyd Wright	Chapter 18
	Mar 23	Master Builders: Frank Lloyd Wright	
Week 12	Mar 28	Master Builders: Le Corbusier	Chapter 23
	Mar 30	Master Builders: Mies van der Rohe	
Week 13	Apr 04	Modernism	Chapter 22
	Apr 06	High Modernism	
		EXAM #3	
		Post-Modern	
Week 14	Apr 11	Louis Kahn	Chapter 28
	Apr 13	**NO CLASS – MID-SEMESTER BREAK**	
Week 15	Apr 18	Fading Lights of Modernism	
		TERM PAPER DUE	
	Apr 20	Louis Kahn	

Week 16	Apr 25	Robert Venturi: Emergence of Post-Modernism	Chapter 30
	Apr 27	Post-Modernism in the mainstream	Chapter 32
FINALS	May 03	**EXAM #4 DUE**	

FERRIS STATE UNIVERSITY
Architecture & Facility Management Programs
School of Built Environment
College of Engineering Technology

ARCH 250 SYSTEMS COST ESTIMATING Spring 2016

Section 211 Lec M 2:00-3:50 PM Lab W 2:00-3:50 PM

INSTRUCTOR: Gary Gerber 3 Cr. Hrs. (2 LEC& 2 LAB)

Office - Johnson 208 Office hours – MTR 1:00-1:50 PM
R 12:00-12:50 PM
(Individual appointments available)

Phone - 591-2631
Home 616 363-6805 Email: gerberg@ferris.edu

TEXT: MEANS SQUARE FOOT COSTS 2016

REQUIRED MATERIALS: Calculator, architects scale and 8 1/2"x 11" lined paper, thumb drive, 3 ring binder with tab organizer inserts

REFERENCE: Instructor handouts

COURSE DESCRIPTION: A course in basic methodology of construction cost estimating based on a systems approach. Problems will include takeoff and preparation of estimates that would be appropriate for use during the design stage of a project.

PROCEDURE: The class will be conducted through a combination of lectures, student discussions, and lab exercises. Students will be allowed to work as teams on lab projects. Each member of the team must understand the problems being solved. Lab time is to be used to answer questions that come up in the problem solving process. The correct answer is not sufficient on homework, the student must show their work and be able to explain the process that he has just went through in solving a problem. **Homework should be organized and neat so it can be easily understood.** Two papers are required during the semester, which will entail research into industry practices in estimating.

GRADING:

Tests 3 @ 150 ea	450pts
Homework	220pts
Reports	100pts
Final Project	150pts
Final Exam	200pts
TOTAL PTS	**1120pts**

%	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

LATE ASSIGNMENTS: A late assignment will receive an automatic 5% deduction per school class day. An assignment turned in more than seven class days late will be reviewed for completeness only and receive a maximum score of 50% of the maximum available points. Work turned in after the homework has been graded and returned will not be accepted.

HOMEWORK: Students will be given homework problems that can be started in the lab sessions. Students are responsible for completing their homework problems outside of the lab session and turning in the work on the due date at the beginning of the hour. Copying of another person's homework is strictly prohibited. Anyone caught copying will be given **0 points** for the assignment as well as the person allowing the copying of their work. Some assignments will be done in assigned groups and 1 copy will be submitted. It is each group member's responsibility to have a record of each of these group projects complete with any instructor corrections. Homework assignments will be returned before the homework topic is placed on a test.

ATTENDANCE: Lack of attendance will affect the quality of work and the final evaluation in the course. Any person missing more than 2 class periods (5% of the class) 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. 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. It is the responsibility of the student to obtain class notes and assignments for any class missed from other students. Materials for this course will be gathered from several sources; handouts, overheads, architectural prints, and white board examples. Class participation will be graded, so it will be important that you attend each class. Make up assignments and tests will not be accepted unless there are exceptional circumstances. Any student missing class due to an excused absence must present the written excuse at the next session following the absence. Any person missing more than 25% of the class (7 absences) will fail the course.

BIM

Ferris State University
College of Engineering Technology
Department of Architecture and Facility Management
Arch 270: Building Information Modeling – Section 211, Spring 2017

00.0 General Course Info

00.1 **Credits**: 3 Hours

00.2 **Contacts**: 2 Lecture, 2 Studio Hours per Week

00.3 **Meeting Time / Location**: Swan 212 / Section 211 / T 9:00 – 10:50, TH 9:00 – 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 12:00 – 13:50 / Wednesday 12:00 – 13:50

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 up to 24 hours in advance. 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**: 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

00.7 **Student Learning Outcomes:** Students satisfactorily completing this course will:

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

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.

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 will be made available to you as necessary.

01.0 Course Materials

01.1 **Required Textbooks:** I will provide any required text materials and readings

GARBER, R. (2014). BIM design: realizing the creative potential of building information modelling. http://site.ebrary.com/id/10960599.

BRISCOE, D., & MARBLE, S. (2015). *Beyond BIM: architecture information modeling*.

01.2 **Recommended Textbooks:**

WOODBURY, R. (2010). Elements of parametric design. London, Routledge.

01.3 **Additional References / Readings:** Additional course references and required readings will be provided as necessary.

01.4 **Required Materials and Supplies:** Access to: Revit Architecture 2016, the latest version of Dynamo, Adobe Photoshop CS6, Adobe IndDesign CS6, Adobe Illustrator CS6, AutoCAD 2013, Sketchup, and Rhino 3d v4.

USB flash drive, backup storage device, note taking material, digital camera, sketchbook, drafting equipment from ARCH 101, and **model making supplie**s.

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.

01.5 **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, ¼" graph paper, trace, 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 has 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 (i.e. once the grade is posted) 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). **The instructor likewise reserves the right to reduce a student's final grade by up to 10% for circumstances and behavior not taken into account through the assignments and grading schemes above.**

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 / HP (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 / P (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 / LP (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.) 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

For Pass/Fail Assignments: DI (Distinction) = 100, HP (High pass) = 95, P (Pass) = 85, LP (Low Pass) = 75, I (Incomplete) =65. Late work for Pass/Fail Assignments will receive no higher than a LP grade.

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. **Students missing more than 20% of the course will automatically fail the course (9 Absences). For each unexcused absence a student's final grade will be deducted according to the following schedule:**

1 Absence = 1% Deduction	**5 Absences = 15% Deduction**
2 Absences = 3% Deduction	**6 Absences = 21% Deduction**
3 Absences = 6% Deduction	**7 Absences = 28% Deduction**
4 Absences = 10% Deduction	**8 Absences = 35% Deduction**

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 will be marked absent**. **For each (3) late arrivals or leaving class early w/o permission, (1) absence will be recorded**. Students not prepared to take notes and sitting at the front of the class when class begins will be marked late. 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 material. If you are to 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 Blackboard or as noted by the instructor. 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 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 and at my discretion be available on Blackboard **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 classmate.**

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** (see syllabus attachment for additional course communication information)**:** 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 and Final Project.

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 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. **Missed quizzes cannot be made up.**

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 bound to give an extension for improperly saved work**. The computer hard drives may be purged regularly or without warning. It is strongly recommended that you do not work directly form 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 backup 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.

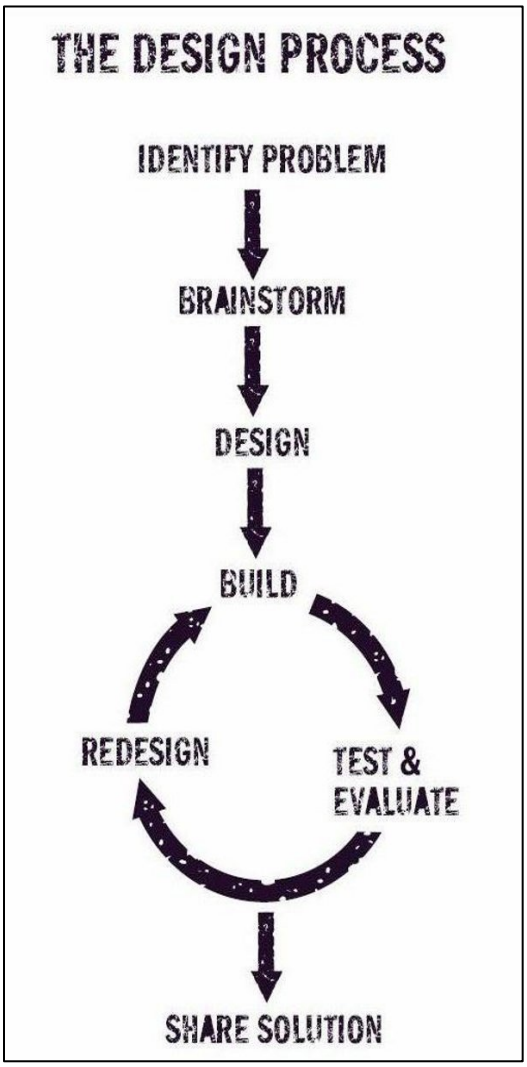
03.12 **Studio Maintenance:** The appearance of the studio tells of the attitudes of those who use it. While studios are inherently spaces of energy, creativity, and some form of chaos, they also represent professional workplaces. It is expected that the studio be maintained with level of professionalism 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, Blackboard or announced in class. Missing class is not an acceptable excuse for being unaware of changes made to the syllabus.

04.0 **Design Thinking**: In this course you will be asked to engage in collaborative and interdisciplinary design thinking methods that emphasize producing unique, feasible, and implementable outcomes that can be applied to real world projects. Students will complete projects by generating a variety of ideas, applying and synthesizing knowledge from their discipline, building prototypes, and evaluating with critical thinking.

Often the Design Process is presented as a series of steps that you go through in developing an idea or product. They (usually) include: **Identify** a problem, **Gather information**, **Propose solutions**, **Choose** the best idea, **Test** the idea, **Evaluate** and **Communicate**. There are many different versions: no set list covers all the ways people interpret the Design Process. As you get more familiar with the use of the process, you tend to skip around inside it as your project needs dictate.



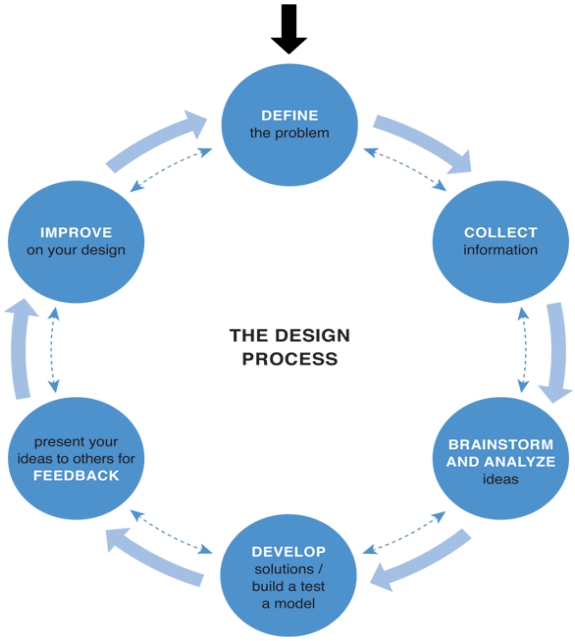
Looping: In the image to the right, and in many other descriptions of the Design Process, it is shown as a **loop**. In considering a project to work on, you find a problem to solve, gather information, try out an idea, test it and evaluate. If you solve the problem, move on to another problem or aspect of the project that needs attention. If you don't solve the problem, you have some more information about what won't work. That information gets incorporated in your next go-round.

Making it right: As you cycle through the Design Process, your product should be getting better as you go. The more you identify problems, pose solutions, test them and implement them, the device, program, product or project gets better. New problems arise the more you work the process. If you nail the biggest ones first, eventually you have something that works pretty well and are fine tuning after a while. It is possible to overdo this fine tuning part, causing the project to never see the light of day. It is also possible to short circuit this phase. Ebay, second hand stores and the dump are full of examples of products which did not get enough exposure to this phase.

Delivering: When your product is sufficiently complete, and you have resolved the most pressing problems determined in the process, it is time to deliver. This does not mean that the project is done forever, instead, it means that it is ready for more testing in a real world environment. As you (and your team, as may be the case) see the product in the world, you will hopefully be looking at it for examples of where it can be changed and improved. As you find aspects of the project that need refinement, you make a plan for revision and implement it. One hopes that the flaws you find at this point are not significant enough to seriously stall or ruin the project.

http://makezine.com/2008/11/16/using-the-design-process/

These looping steps of the Design Thinking process can be further defined as:



1. **Define the Problem:** You can't find a solution, until you can spell out what the problem is. Architects work with the client to define the project. The problem may be something like "A new school kitchen with cafeteria that seats 300 students" or "A new high school for 1,000 students."

2. **Collect Information:** Once the problem is defined, architects will spend time gathering information to help them understand the neighborhood, the site, the users of the building, any existing buildings, and other critical information. Typically this means taking photographs, sketching, and interviewing the client. It's also valuable to collect information on the natural environment, so architects may gather data on the path of the sun around the site, the direction of the wind, the climate, as well as what types of plants are currently growing around the site.

3. **Brainstorm/Analyze:** During this stage of the process, architects may begin sketching or making diagrams to help them understand how all the data and information they've collected may impact the design of the building. These early drawings – which may include bubble diagrams, for example – will help the architects document their ideas, because it's likely the solution will change as they go along.

4. **Develop Solutions:** At this stage in the design process, architects will create drawings with specific solutions to be shown to the client. Schematic drawings, as these are typically called, help illustrate the big ideas and space requirements of the project. Schematic drawings usually do not include dimensions or other construction-related notes.

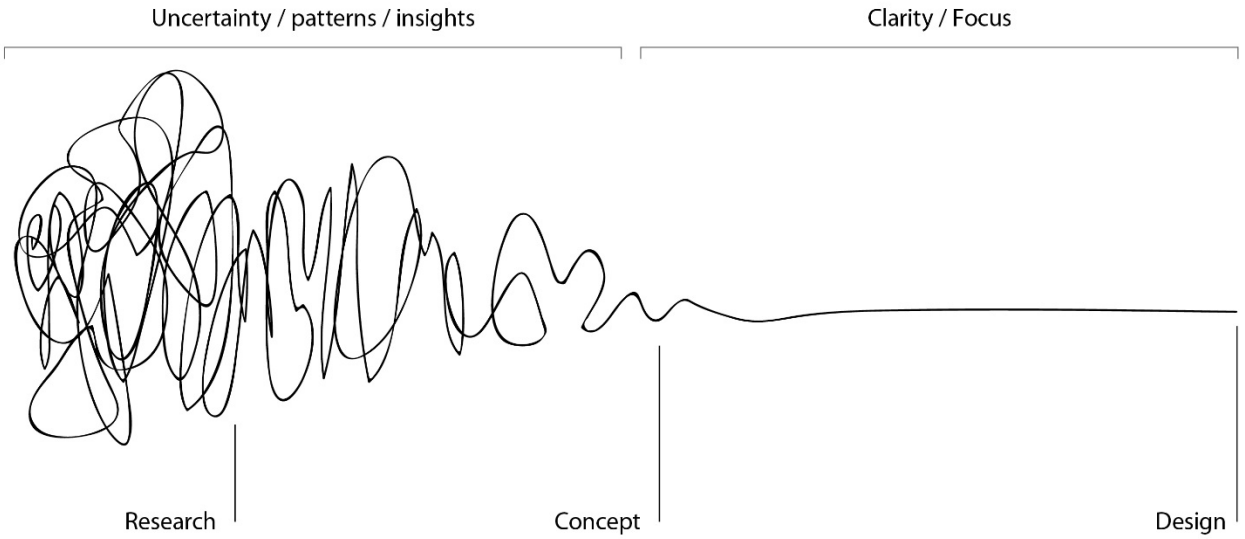
5. **Feedback:** No solution is perfect the first time around, so it's critical that the architects continue the discussion with the client to receive feedback.

6. **Improve:** With feedback in hand, the architects will go back and continue to revise and improve the final solution. Over the next several months, or even years, the architecture firm will work with the client to refine the original design. Based on an analysis of cost vs. needs, the firm and the client together will closely review the solutions and make balanced decisions on which features will stay, which will be redesigned, and which may be eliminated. The architecture firm will also work closely with the general contractor responsible for constructing the building.

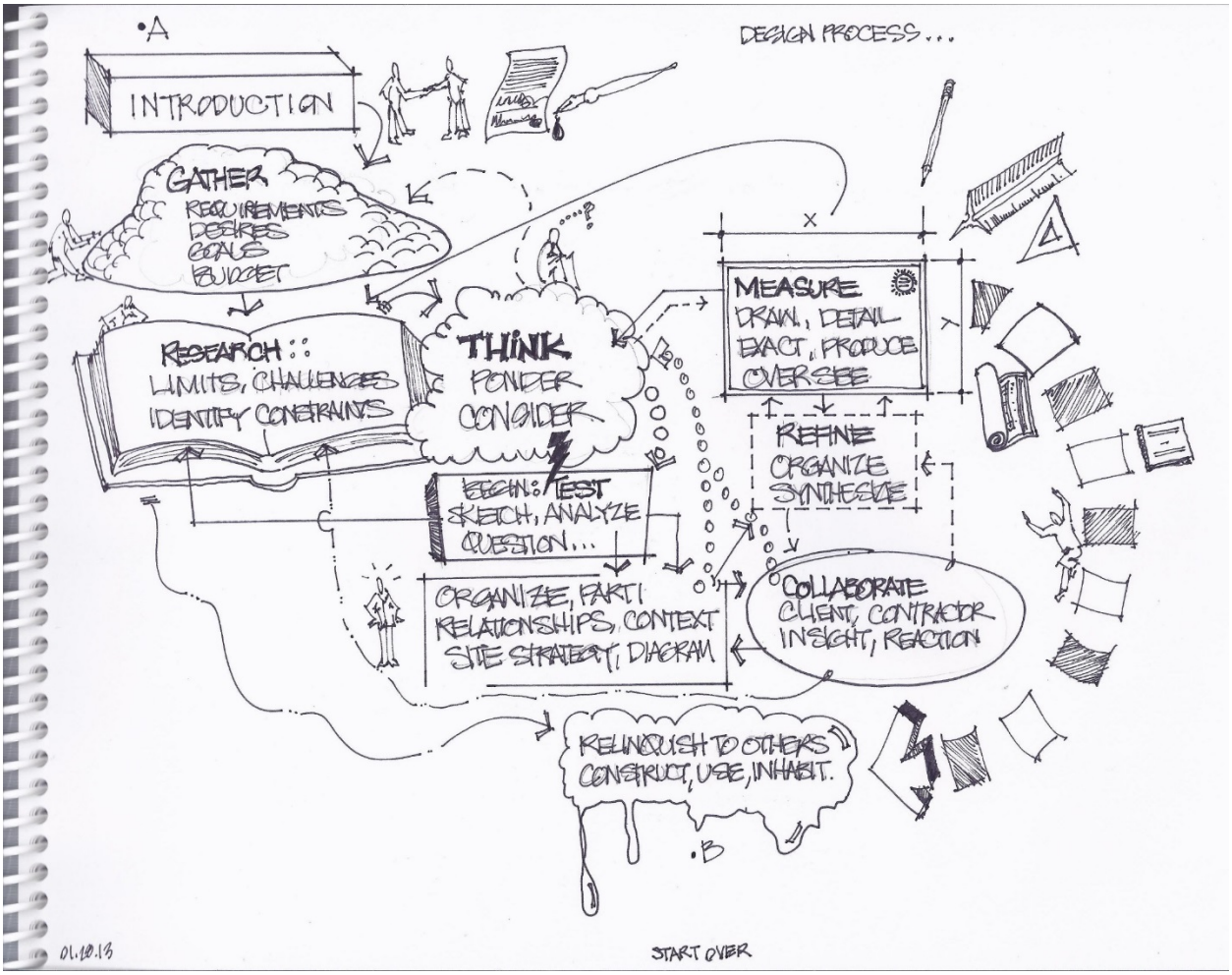
7. **Build It:** The precise details of the building will determined over several months while the firm is developing a set of construction drawings and specifications – called construction documents – which will be part of the legal contract between the architect and client. These construction documents will be used by the contractor to construct the building.

http://discoverdesign.org/design/process

Additional visual representations of the Design Thinking Process are provided on the following page:



http://designsojourn.com/design-processed-explained/



https://thinkarchitect.wordpress.com/2013/01/31/design-process/

05.0 Other

05.1 **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

05.2 **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 at:

http://www.ferris.edu/htmls/colleges/artsands/DeptLink_desc.cfm?DeptLinkID=53&DepartmentID=3misconduct

05.3 **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/

05.4 **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

05.5 **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.

Please see syllabus attachment and safety flyer posted at the front of the classroom for additional building safety information.

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 are 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. All cutting should be done on cutting mats.**

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/)

05.6 **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

05.7 **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 is 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.

05.8 **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

Syllabus: Course ARCH 285

Instructor: Joe M. Samson
Office: 202 Johnson Hall
Phone: 591-2517 (Office)
E-mail: samsonj@ferris.edu

Office Hours: See posting on door or by appointment

Course Title: House: An American Evolution

Prerequisite: ARCH 101, ARCH 241, ARCH 244.

Course Description: A survey of the development of various housing styles in the USA and their relationship to each other as well as social and economic developments. Students study the essence of architectural elements common in successful residential design. Students will design a house following the design conventions of the style of their choice for a given program.

Course Format: A lecture/studio course in which students will explore the development of housing in America and how it has changed to respond to real and perceived needs. Students will develop a broader knowledge base and apply analysis, design and technical skills to solve a residential design project.

Credit Hours: 3

Contact Hours: 2 lecture hours + 2 lab hours per week

Text and Written Materials:

Optional Texts: A Field Guide to American Houses; Virginia and Lee McAlster, Alfred A. Knopf, NY, NY, 1993.

A Place of My Own: The Architecture of Daydreams; Michael Pollan, Penguin Press, 1997, 2008.

The Most Beautiful House in the World; Witold Rybczynski, Penguin Press,1989.

Additional Materials:	Instructor prepared handouts. Drawing and presentation materials as required by project.

Course Requirements and Policies:

Students are expected to fully participate in all class activities and be prepared for all classes. Poor attendance, late projects, etc. will significantly affect the student's grade.

Depending on class size, each student will be required to present one or more of their projects to the class informally on the date it is due. Students who are not prepared will lose points and will not get another chance to make up the missed opportunity.

The instructor will typically have the work graded by the next class period so comments can be applied and acted on.

Late Work Policy:

It is the instructor's belief that anyone involved in coursework should have that coursework as a major priority in their life. Further, the instructor expects students enrolled in an elective course to be especially interested in the outcome of the course.

Work is to be completed PRIOR to coming to class unless stated otherwise by the instructor.

The policy for late work is:

1. Work handed in after the time it is collected will be penalized 10% of the original project point value.
2. Students who are not ready to present will loose any presentation points or be penalized 20% of the original project point value.
3. Work handed in at the class period following that at which it was due will be penalized 20% of the original project point value.
4. Work handed in on or after the second class period following that at which it was due will be penalized 50% of the original project point value.
5. In no case will work be accepted after the last day of classes. (This means the last day of classes, not the last day of finals week.)
6. Students anticipating an absence should discuss this with the instructor prior to the class(es) which will be missed.
7. Please keep the instructor advised, if possible in advance, of valid problems or conflicts you may have so an alternative plan for project submission and/or course completion may be developed. Also, so you are not penalized.

Attendance Policy:

Attendance and participation in classes is part of the learning experience. Students learn a great deal from interacting with other students. Likewise, work periods are designed for the instructor to provide input to students before they hand in their projects for a grade. *In short, attendance is expected.*

The policy for attendance in my classes this semester will be:

1. It is the student's responsibility to obtain copies of notes, handouts, assignments, etc. for the class period that they missed.
2. Students missing more than 25% of the class (8 classes) periods (excused and unexcused) will fail the course regardless of the quantity or quality of their work.
3. Points may be awarded for "attitude". This means productivity, attendance, on-time, stay whole class, apply critique input to future iterations of project, etc.
4. Although the instructor wishes to maintain an informal classroom atmosphere, the instructor also expects students to be productive in class. This means actively working on projects.

Optional Text:

The text used for this course categorizes the various housing styles in the USA throughout history. It is intended as a reference whereby you can review the various styles, their attributes, and their context in the development of housing in the USA with regard to their precedents and antecedents.

Information Organization:

The people who are most successful are capable of organizing information and having it when they need it. You are expected to take notes, keep handouts, gather additional information and organize it in files or binders. Your instructor will note your organization throughout the semester and consider it when determining your final grade.

Dropping Class:

Discuss this matter with your instructor and/or advisor prior to making this decision.

Communication:

If you wish to discuss any problems or concerns you may have regarding this class, your grade, or if you require additional information, please see me. I can only help solve problems if I know about them.

Tobacco:

It is a policy of the university that tobacco products (including chewing tobacco and snuff) will not be permitted within classrooms.

Religious Holidays:
FSU 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, 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 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.

Evaluation:

Points:	Projects 900 points Attitude 100 points **Total Points: 1,000 points**
Final Grade:	A 933-1000 A- 900-932 B+ 866-899 B 833-865 B- 800-832 C+ 766-799 C 733-765 C- 700-732 D+ 666-699 D 633-665 D- 600 632 F <600

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.

Student Learning Outcomes:

Students satisfactorily completing this course will:

1. Understand the European Colonial roots of American architecture and the economic, technical, cultural, and social factors that contributed to the evolution of distinct American architectural styles.
2. Understand the motivators that have traditionally shaped residential design and the changing trends that will shape future residential design.
3. Understand the design process as related to housing: Based on a program, a design that accommodates functional and economic needs, a design that integrates the solutions to the various needs expressed in the program.
4. Understand how the design solution must address the site and the climate.
5. Demonstrate ability to utilize conceptual methods such as matrices, bubble diagrams, etc. to analyze building requirements.
6. Apply and understand standards for design such as standard sizes of components, standards for kitchen and bath design, etc.
7. Demonstrate ability to conceptualize and develop a design for a residence based on a program.
8. Demonstrate ability to effectively present design concepts and solutions.

UNITS OF INSTRUCTION:		**TIME WEIGHT**	
		Lecture	**Lab**
I.	Introduction and Orientation	2	
II.	General Introduction to American Housing	2	
III.	Overview of the Design Process as Related to Housing	4	
IV.	Overview of American Housing Styles	4	
V.	Room Design	3	6
VI.	Kitchen Design	2	6
VII.	Site Design	2	2
VIII.	The Building Program and Design	1	
IX.	Bubble Diagrams	1	2
X.	Preliminary Design	3	5
XI.	Revisions to Design	3	5
XII.	Final Development and Presentation	3	4
Total Hours:		30	30
		60 Total	

Ferris State University | College of Engineering Technology | Architecture & Facility Management

ARCH 323—Structural Design

Basic Information

Class Hours: M & W 8:30-9:45am
Room: SWAN 202
Credit Hours: 3
Contact Hours: 3 lecture hours

Instructor

Christopher L. Cosper, Assistant Professor

Phone: 231-591-3113
Email: cosperc@ferris.edu
Office: Johnson Hall 216

Student hours: M 1:30-2:30pm
Tu & Th 1:30-3pm
By appointment

Course Description

Expansion of general structural principles and methods of analysis from prior course work in statics and strength of materials with advanced analysis and design of steel, concrete, and masonry systems. Material properties and structural behavior of each are examined in terms of safety, sustainability, economy, planning and construction. Prereq. ARCH 223.

Learning Outcomes

Students satisfactorily completing this course will:

- Acquire a practical understanding of structural behavior and systems.
- 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.
- Demonstrate the visualization and layout of basic masonry, steel and concrete structural design solutions.

Texts

Applied Statics, Strength of Materials, and Building Structure Design

by Wujek

ISBN 0-13-674631-4
Prentice Hall, 1999

This is the book you used in ARCH 223

Some simple rules for doing well in this class*

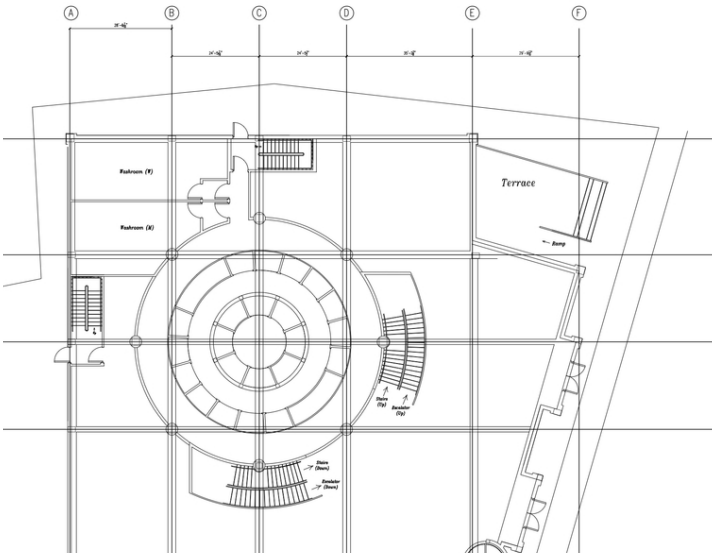
1. Read the assigned material
2. Turn in quality work, on time, every time
3. Show up for class (only three unexcused absences are allowed)
4. Check your Ferris email every day—I will use it to communicate to you
5. Don't cheat—this includes claiming someone else's idea as your own

* See the Syllabus Addendum on Blackboard for the full set of terms and conditions

Schedule

Date	Activity	Reading	Date	Projects
Aug 29	Class Introduction			
Aug 31	Loading Conditions	Wujek Ch. 15		
Sept 5	**Labor Day (No Class)**			
Sept 7	Foundations	Allen & Iano (PDF)	07	Worksheet due, Proj. #1 assigned
Sept 12	Foundations			
Sept 14	Steel and SED structure demo	Wujek Ch. 16-18	14	Project #2 assigned
Sept 19	Project #1 lab		19	Project #1 due
Sept 21	Steel	Wujek Ch. 19-20		
Sept 26	Steel	Wujek Ch. 21		
Sept 28	Steel		28	Project #2 due
Oct 3	Exam #1			
Oct 5	**No Class**			
Oct 10	Concrete	Wujek Ch. 26	10	Project #3 assigned
Oct 12	Concrete—working stress	Wujek Ch. 27		
Oct 17	Concrete—ultimate strength	Engel Ch. 15 (PDF)		
Oct 19	Concrete	Wujek Ch. 28		
Oct 24	Concrete			
Oct 26	Masonry	Wujek Ch. 29	26	Project #3 due
Oct 31	Masonry	Wujek Ch. 30		
Nov 2	Masonry			
Nov 7	Exam #2			
Nov 9	Wood structural systems	Wujek Ch. 22-25	09	Project #4 assigned
Nov 14	Selection of structural systems			
Nov 16	Lateral forces	TBD		
Nov 21	Lateral forces			
Nov 23	Final Project crit day			
Nov 28	Lateral forces			
Nov 30	Project #4 lab		30	Project #4 due
Dec 5	Long spans	TBD		
Dec 7	Class review lecture			
Dec 14	Final exam time (8-9:40 pm)		14	Final Project due

Point values	
Exam #1	100
Exam #2	100
Final Exam	100
Project #1	50
Project #2	50
Project #3	100
Project #4	50
Project #5	150
Worksheets / In-class problems	100
TOTAL	800



http://archinect.com/people/project/49877400/nyc-skyscraper/50265771

Ferris State University
College of Engineering Technology
Architecture & Facility Management

Fall Semester 2016

Syllabus: **ARCH 341 Architectural Design 1**

Instructor: Professor Diane L. Nagelkirk
Office: Swan 314
Office Phone: (231) 591-2630
Office Hours: M & W 9:00 – 10:00 am; T & TH 1:00 – 2:00 pm
Email: nagelkid@ferris.edu

Credit Hours: 5 credit hours
Contact Hours: 3 lecture hours, 6 studio hours
Prerequisites: Enrolled in BS program

Course Description:

Students will utilize basic architectural design concepts to explore architectural form and space. Program requirements and user needs are addressed in a manner that sustains and enhances the natural and social environment.

Student Learning Outcomes:

Students satisfactorily completing this course will:

1. Design a space that satisfies user requirements as defined by an architectural program.
2. Respond to the natural environment by integrating sustainable techniques and technologies into design at a conceptual level.
3. Develop designs that respond to and enhance the community and its context.
4. Prepare professional quality oral and graphic presentations.

Course Format:

This course will be divided between lectures, videos, readings, discussions, studio sessions, crits and presentations. Course content and design problems will be introduced with a lecture and readings, and explored through discussions and in-class studio work and outside studio work.

For each class session, it is expected that students come prepared to discuss and review the readings, and to discuss individual design ideas and concepts. Pin-up crits will occur throughout the semester to review and explore student work. Final critiques/presentations will be held for each project. Specifically, the purpose of this course is to:

- Develop your basic architectural design skills that are necessary when solving architectural problems
- Enhance your visual communication skills through sketching, design graphics and creation of professional presentations
- Think and see like a designer
- Read and discuss ideas about architecture and the philosophy of architecture

Three architectural design projects will be undertaken to allow the student to develop the basic skills addressed in this course. Each project will be evaluated on specific criteria described in handouts and verbal instructions. All projects are to be of professional quality and are to be executed in the architectural format as shown in this course.

Required Textbooks:

Mills, Criss B. Designing with Models, Third edition. Wiley and Sons, Inc., 2011.
Pressman, Andrew. Designing Architecture: The Elements of Process. Routledge, New York. 2011.

Additional Readings & References:

Ching, Francis. Architecture: Form, Space, and Order.
Ching, Francis. Building Construction Illustrated.
De Botton, Alain. The Architecture of Happiness, first edition. Vintage Books, New York. April, 2008.
McMorrough, Julia. Materials, Structures and Standards. Rockport Publishers, 2006.
Architectural Record - https://www.mcgraw-hill-sales.com/arenrstudentmgh.htm
Metropolis or Dwell

Required Equipment:

Laptop with required software (see attachment)
Sketch book (unlined moleskin soft bound book)
24" roll tracing paper
Basic Drafting tools

- Mechanical pencils
- Sketch pencils and pens
- 30/60 degree 12" triangle
- Architect's scale
- Engineer's scale
- White eraser (block type)
- Prismacolor art pencils and markers
- Additional paper and materials for presentations as required by the project

Model making tools

STUDENT RESPONSIBILITIES and INSTRUCTOR POLICIES:

Studio Culture:

Working in the Studio

An enormous amount of learning takes place in the studio among faculty and students. To facilitate the exchange and interaction of ideas students should actively participate in the studio community. All studio participants are expected to respect the property of their peers. The studio is intended to approximate the tradition of the architect's atelier, which is to say a special place where the architect works, immersed in the design experience, surrounded by drawings, models, computers, books and other supplies of the discipline and profession. This atmosphere should be encouraged and nourished; it is vital for each student to contribute to and maintain this creative working environment. Every member of the studio is expected to use it daily.

Time Management

Time management is central to the success of a rewarding design education. Students are entitled to an appropriate balance between design studio, other classes, and aspects of university life. Students should expect that the creative act of design and visual representation entails a commitment to time in the studio outside of regular class hours. This is an inherent part of studio culture and its central role in the architecture curriculum. However, conflicts can and do arise. Instructor will advise students in learning how to prioritize their activities and assignments.

Intellectual Diversity

We value the intellectual diversity of our faculty and students, and we support diverse approaches to studio instruction. The personal and intellectual rights of every person in our community will be respected. All members of our community will conduct themselves with the highest ethical principles and regard for others. Faculty are expected to teach foundational knowledge of the discipline and professional conventions while introducing students to, and encouraging them to explore, new theories, methods, strategies, and architectural techniques.

Theory and Practice

Each student is asked to frame his/her design project as a critical investigation, working in the space between architecture as a critical discipline and architecture as a critical practice. Special field trips, seminars and lectures are scheduled to expose students to both theory and practice; attendance is required at such events.

Collaborative Design

Design studios should promote collaborative learning experiences that prepare graduates for professional teamwork; as such some studios will incorporate collaborative exercises. We value the involvement of other disciplines, outside professionals, and client representatives who contribute knowledge and different perspectives to the project at hand.

Constructive Criticism

Critique is an inherent and integral part of the evaluation process in design education. Faculty and invited reviewers are encouraged to deliver criticism constructively when engaging students in the review of student work. Design studios are inherently places of exchange, and studio projects are common ground for open discussion and creative design exploration. We encourage all studio participants to exchange ideas, opinions, and experiences in a collegial manner.

Desk Crits and Pin-Ups

Desk crits typically occur at a student's desk to discuss any number of issues about a project. Pin-ups typically occur in a review space or wall surface and very often involve two, three or more students, and may include outside critics. Students are

expected to prepare visual material and questions for the instructor in advance of a desk crit or pin-up. Desk crits and pin-ups are generally the most common, informal, and personal forms of interaction between students and faculty. These interactions are just one of the many aspects that make architectural design education unique relative to other disciplines in the university.

Design Reviews

Design reviews are a fundamental component of the assessment of student work. Design reviews provide an opportunity for students to demonstrate and improve upon their oral and visual presentation skills. They also provide students an important opportunity to learn to appreciate how their work can be interpreted from different, often unanticipated, perspectives. Faculty are encouraged to hold formal reviews in a public setting and involve members of the academic faculty, as well as other members of the College, profession, and outside community. Students are required to attend, present, and participate in all design reviews organized by their instructor. Students should be active participants in the reviews of their peers.

Sketchbook

Students are required to maintain an architect's sketchbook to catch ideas, record and reflect on designs, experiment with designs and to store information from a mixture of sources that might be relevant to your work. Keeping a sketchbook is a serious and enjoyable activity, but does require commitment.

> *"Keeping a sketchbook is essential to becoming an architect. We learn to do things not so much by being told or shown how to do them (although both listening and watching play their part) but most effectively by engaging our minds and bodies with the medium in which we want to work and discovering for ourselves what we can do with it. Very young children do this with language. In their minds they collect words and ideas, and put them together in their attempts to talk. Gradually their language becomes more and more sophisticated. You need to do something similar to learn the "language" of architecture. Like the child with ideas and words, you should collect architectural ideas and the forms by which they are manifest and experiment with them in your own work. But (unlike the child and language) you cannot do this just in your mind. Architecture depends on physical manifestation or representation. You need an appropriate "arena" in which to engage with it. A sketchbook is a good arena in which to collect and experiment with architectural ideas and forms. Engaging with architecture in this way, you will increase your appreciation of its powers and possibilities. Keeping a sketchbook should become a habit you continue throughout your career."* Exercises in Architecture: Learning to Think as an Architect. Simon Unwin

Working freehand, in pencil or ink, use the book for sketches and drawings that you generate to formulate and document your ideas and experiences as you move through the semester and around the urban landscape.

Include the following: class lecture notes; notes and site images for each Project; concept sketches; if appropriate include (tape) relevant precedent concepts and works of architecture, etc.

Electronic Portfolio

Students are required to create and maintain an electronic portfolio of studio work. At the end of the semester, students are required to submit electronic work to instructor.

Attendance:

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.

In addition, 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. To encourage you to develop these habits, the instructor will monitor attendance daily and the progress of your work.

- It is your responsibility to acquire notes, ask for handouts, etc. for classes missed.
- Poor attendance will adversely affect your grade. Students who are tardy or leave early may be marked absent.
- Students missing more than 10 classes will fail the course.

Tardiness and Leaving Early:

Students are expected to be at class for the complete time period. Many announcements and special instructions are given outside specific lectures. Students are responsible for knowing this information. If you are late or leave early, you may be marked absent.

Late Work:

There is a large amount of work to do in a short amount of time. Don't get behind. There won't be time to catch up. 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 instructor.

Projects are due at the beginning of the class period; students are to be prepared for presentations and crits on project due dates. Generally, there will not be time during the class period when the work is due to complete it unless announced otherwise by the instructor. Five points will be deducted for the first-class period the work is late. Ten points for the second-class period the work is late. Work handed in on or after the third-class period will be critiqued, but will be worth 50%.

Electronics:

Cell phone use is not allowed in the classroom during lectures or discussions and students are asked to turn their cell phones off at these times. A ringing cell

phone or a texting student is a disruption to the class and demonstrates a lack of respect for your classmates and the instructor.

I-pods, etc. will be allowed during studio sessions, but students may be asked to limit their use if the flow of information between instructor and student becomes difficult.

Academic Dishonesty:

Trust between student and instructor is critical to the success of any course. As an instructor, I pledge to conduct myself with honesty, integrity, and respect. In turn, I ask that you pledge the same. If cheating is discovered, the result will be, at a minimum, no credit for the project in question. If deemed appropriate, issues of dishonesty will be referred to Student Judicial Services for further action.

EVALUATION :

Grades are based on a course total of 1,000 points as follows:

5 x 7	50 points
Project 1	100 points
Project 2	250 points
Project 3	400 points
Sketchbook	50 points
Electronic portfolio	50 points
Attitude/Attendance/Effort/Process	100 points
Total	**1,000 points**

Projects will be evaluated as follows:

- Design
  - Conceptualization
  - Depth and range of solutions
  - Resolution
  - Clarity of the results
  - Comprehensiveness
- Representation
  - Clarity
  - Communication of ideas
  - Craftsmanship
  - Level of control of media and tools of presentation
  - Quality of oral and graphic communication

Final Grade:

Final grades are based on the percentage of points you earn per the following table.

	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%
	F = < 60%	

Meaning of Grades:

- **"A" Work:** Superior work that exceeds expectations in substance and presentation.
- **"B" Work:** Work that is above average in substance and presentation, which demonstrates understanding and ability to apply concepts creatively and consistently.
- **"C" Work:** Work of average quality in substance and presentation, which meets the requirements of the project but does not demonstrate innovation, creativity, or consistency.
- **"D" Work:** Below average work that 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 copied or plagiarized work.

Ferris State University - ARCH 342
Architectural Design 2 – Spring 2017

Dane Archer Johnson, Professor
danejohnson@ferris.edu
209 Johnson Hall
231-591-2625

Introduction to the course

The architectural design studios in this program have been designed to give the student as broad a basis in design as is possible in a small number of courses. This course has a specific structure within this context: existing buildings and dealing with architectural context issues. Since approximately 80 percent of the work that architects do relates to existing buildings, it is appropriate to spend at least one semester looking at the challenges inherent in working within an existing context.

These ideas have particular resonance in an age in which sustainability of resources has become a critical building block of architectural design. The age of planned obsolescence has ended; the idea that we should simply tear down and build new no longer has long-term viability; the idea that we should keep chewing up open land and spread asphalt across fields is no longer responsible; the idea that we should ignore what has come before us denies the importance of history. Through the projects undertaken this semester, this course will deal with these issues and hopefully broaden the student's perception of the tasks that architects deal with in their professional lives.

An additional idea that will be reinforced this semester is the importance of site. The impact of architecture does not end at the wall of a building; it extends beyond onto the site, into the neighborhood, etc. The site determines access to and impressions of buildings, and cannot be ignored or treated as an issue removed from the realm of architecture. So site context will be another aspect of context to be explored in projects this semester.

Structure of the course

This is, of course, a studio course, which means that students will work independently or in groups to solve architectural problems in a moderately unstructured setting. Since the creative process develops in each student at a different pace, there will be many weeks of self-directed work in this course. However, there will also be deadlines to be met and an expectation that regular progress is being made toward meeting the goals of the projects assigned.

There will be three projects in this course: one quick project to get things going, and two larger projects created to promote deeper development of ideas and solutions on the part of the student.

Requirements of the course

The primary responsibility of the student in this course will be attendance, compliance with deadlines, productive team work as needed, creativity and investigation, and commitment to the process. .

To this end, the following requirements should be understood:

Required Text: Byard, Paul Spencer (1998). *The Architecture of Addition: Design and Regulation.* New York: W.W. Norton.

Readings: Readings may be assigned at the discretion of the instructor. These will be linked to the course website when feasible.

Grades: Grades will be calculated based on a course total of 1,000 points, based on the following formula:

Project 1	**200 points**
Design	100 points
Group Engagement	50 points
Commitment	50 points
Project 2	**400 points**
Field Work	50 points
Preliminary Design	100 points
Final Design	200 points
Commitment	50 points
Project 3	**400 points**
Field Work	50 points
Preliminary Design	100 points
Final Design	200 points
Commitment	50 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

Electronics: Cell phone use, including texting, 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. Sending texts or tweeting suggests a lack of interest in the material. I-Pods, etc., are not allowed during lectures or discussions, but may be used during individual studio work sessions.

Commitment: The Commitment component of each project grade will be based on several factors, including attendance (see below). It will also take into account the degree to which you make regular progress on each project; the frequency with which you discuss your work with the instructor and seek guidance in improving your work; and your ability to handle

critical appraisals in one-on-one conversations and in class critiques. There is an expectation that you will seek guidance during work sessions. Avoidance of interaction with the instructor suggests a lack of progress, an attitude of disrespect for the advice of the instructor, or an inability to accept guidance. Each of these will result in weaker performance on projects, so you should seek engagement with the instructor as often as possible.

Attendance: Attendance is a primary requirement of this course. Since course information will be delivered in lectures and during studios, absence will place the student at a significant disadvantage in this course. Since some components of the course will be conducted in teams, absence is a sign of disrespect toward teammates. As an adult, however, the choice of attending is yours. However, a price will be paid for absences, in the form of a lowered grade in the Commitment category.

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, obituary, etc. to receive an excused absence. A maximum of two excused absences will be permitted before any reduction in grade.. Students will be responsible for all course material covered in their absence, and will be responsible for finding notes, getting handouts, etc.

Field Work / Field Trips / Site Visits:

Sites will not be imaginary in this course, but will be real places to be explored, documented and analyzed. Much of the most critical information in the course will be derived from site visits and field work. Attendance is MANDATORY on these days. Additional individual or group site visits may be made during studio time with the permission of the instructor.

Missed Deadlines and Excused Absences:

It is understood that students are not immune to the circumstances of life. Sometimes stuff happens. 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, or deadlines that are missed, will result in a ten percent (10%) reduction in the grade for the component in question.

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. 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.

Design work presented as one's own in the context of this course 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.

ARCH 342 Architectural Design 2
Spring 2017 Course Schedule

Week 1	Jan 09	Introduction to the course **PROJECT 1 ASSIGNED / DEEP DIVE DISCUSSION** Findings Discussion
	Jan 11	Studio
Week 2	Jan 16	**NO CLASS MEETING – MARTIN LUTHER KING DAY**
	Jan 18	Studio
Week 3	Jan 23	Studio
	Jan 25	**PROJECT 1 PRESENTATION**
Week 4	Jan 30	**PROJECT 2 ASSIGNED** Field Work / Findings Discussion/ Studio
	Feb 01	Studio
Week 5	Feb 06	Studio
	Feb 08	Studio
Week 6	Feb 13	**PROJECT 2 PRELIMINARY PRESENTATION**
	Feb 15	Studio
Week 7	Feb 20	Studio
	Feb 22	Studio
Week 8	Feb 27	Studio
	Mar 01	**PROJECT 2 FINAL PRESENTATION**
Week 9		**SPRING RECESS – NO CLASS MEETING**
Week 10	Mar 13	**PROJECT 3 ASSIGNED** Field Work / Findings Discussion
	Mar 15	Studio
Week 11	Mar 20	Studio
	Mar 22	Studio
Week 12	Mar 27	Studio
	Mar 29	**PRELIMINARY PRESENTATION**
Week 13	Apr 03	Studio
	Apr 05	Studio

Week 14	Apr 10	Studio
	Apr 12	Studio
Week 15	Apr 17	Studio
	Apr 19	Studio
Week 16	Apr 24	**NO CLASS – CRIT WEEK**
	Apr 26	**PROJECT 3 FINAL PRESENTATION**
FINALS	TBD	

FERRIS STATE UNIVERSITY **Winter 2016**
COLLEGE OF ENGINEERING TECHNOLOGY
ARCHITECTURAL TECHNOLOGY AND FACILITY MANAGEMENT
COURSE SYLLABUS

COURSE: ARCH 350 – SITE DESIGN

INSTRUCTOR: Mary Brayton
OFFICE: 302 Johnson
OFFICE HOURS: **MW** 2:30 – 3:30 pm, **TR** 1:00 – 1:50 pm
OFFICE PHONE: (231) 591-3584
HOME PHONE: (231) 592-0570 (no calls after 10:00pm please)
E-MAIL ADDRESS: braytonm@ferris.edu

COURSE DESCRIPTION:
A study of the physical, biological, and cultural aspects of a site and its development, with emphasis placed on connecting a site to its surrounding context through the use of sustainable design principles. Analysis, technical and legal knowledge, and design skills are used to prepare site development plans.

COURSE PREREQUISITES: ARCH 204 – Architectural Detailing

REQUIRED TEXTBOOKS:
SITE ANALYSIS: Diagramming Information for Architectural Design, Edward T. White (reprint 2013) Available through www.archibasics.com/publications.html
Basics Landscape Architecture 02: Ecological Design, Nancy Rottle, Ken Yocom, (2010) AVA Publishing

ADDITIONAL REFERENCES:
SITE ANALYSIS, James A. LaGro Jr. (Third Edition)
PLAN AND SECTION DRAWING, Thomas C. Wang
PLAN GRAPHICS, D. Davis and T. Walker, (Fifth Edition)

ADDITIONAL MATERIALS:
Calculator
Drafting tools and Tracing paper
Color pencils and color markers
Sketchbook and Graph paper

STUDENT LEARNING GOALS:
The students will be expected to accomplish the following:

1. Read and interpret topographic surveys and site plans.
2. Prepare grading plans which consider basic earthwork and cut and fill concepts.
3. Gather information, evaluate, and document a site through research, code review, and site visits.
4. Prepare site development plans that respond to site features, codes, accessibility and life safety requirements.
5. Illustrate techniques and methods to minimize the impact of development on the environment.

PROCEDURE:
The class will be conducted through a combination of any of the following; lectures, individual study, guest speakers, graphic technique videos, calculations, sketches, research and presentations, and tests.

ATTENDANCE POLICY:
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 percentage 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.

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.

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:

2 Case Study Presentations	=	40 points
3 projects @ 100 points each	=	300
Final Project and Presentation	=	200
2 Tests	=	60
Attitude and participation	=	100
Total possible points	=	**700** 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

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.

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 is 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.

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.feris.edu/htmls/colleges/university/disability/.

Any student registered with Disabilities Services should contact the instructor as soon as possible for assistance with classroom accommodation.

SYLLABUS ATTACHMENT
COLLEGE OF ENGINEERING TECHNOLOGY – FERRIS STATE UNIVERSITY
Spring 2016

IMPORTANT DATES		
Late Registration	Wednesday – Friday	January 7, 8, 9
First Day of Classes	Monday	January 11
Last Day for Drop/Add	5 pm Thursday	January 14
Martin Luther King Day (no classes)	Monday	January 18
Spring Recess Begins	Saturday	March 5
Mid-Term Grades Due	Monday	March 7
Spring Recess Ends (classes resume)	Monday	March 14
Last Day to Withdraw from Classes	5 pm Wednesday	March 23
Mid-Semester Break Begins (no classes)	Thursday	March 24
Mid-Semester Break Ends (classes resume)	Monday	March 28
Last Day of Classes	Friday	April 29
Examination Week	Monday - Friday	May 2 - 6
Commencement	Friday & Saturday	May 6 & 7
Final Grades Due by 1:00 pm	Monday	May 9
Grades available to students on MyFSU	Tuesday (after 8 am)	May 10

Ferris State University | College of Engineering Technology | Architecture & Facility Management

ARCH 361—Environmental Systems 1

Basic Information

Class Hours: Tu & Th noon-1:15pm
Room: SWAN 203
Credit Hours: 3
Contact Hours: 3 lecture hours

Instructor

Christopher Cosper, Assistant Professor

Phone: 231-591-3113
Email: cosperc@ferris.edu
Office: Johnson Hall 216

Student hours: M 1:30-2:30pm
Tu & Th 1:30-3pm
By appointment

Course Description

An exploration of sustainable building strategies and practices. Topics covered include climate and site analysis, water and energy conservation, sustainable materials, alternative energy sources, rating systems and code requirements for building energy conservation.

Learning Outcomes

Students satisfactorily completing this course will:

- Understand and describe how climate and site selection effect energy consumption.
- Understand and illustrate how to reduce water and energy consumption in buildings.
- Understand and compare traditional and alternative energy sources.
- Identify and apply building code requirements and rating systems such as LEED.

Texts

Heating, Cooling, Lighting: Sustainable Design Methods for Architects

by Lechner
ISBN 978-0-470-04809-2
Wiley, 4th Edition, 2014

You will need this textbook for ARCH 362, as well

You will also need a Turning Technologies clicker and a current license

Some simple rules for doing well in this class*

1. Read the assigned material
2. Turn in quality work, on time, every time
3. Show up for class (only two unexcused absences are allowed)
4. Check your Ferris email every day—I will use it to communicate to you
5. Don't cheat—this includes claiming someone else's idea as your own

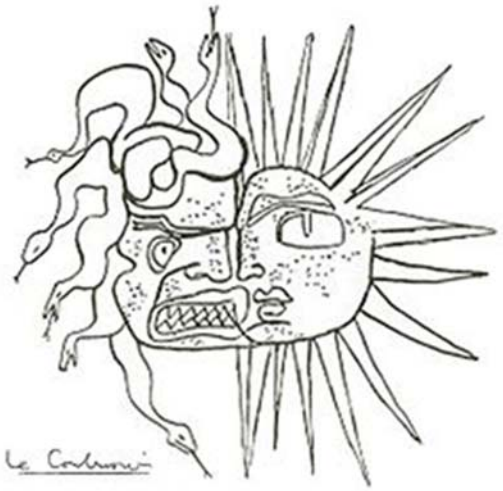
* See the Syllabus Addendum on Blackboard for the full set of terms and conditions

Schedule

Date	Topic	Reading	Date	Projects
Aug 30	Course introduction			
Sept 1	ARCH 119 review			
Sept 6	Sustainability as form giver	Lechner Ch. 1-2	06	Assign Projects #1, #3
Sept 8	Heat and thermal comfort	Lechner Ch. 3-4 and excerpt from *Thermal Delight*		
Sept 13	Student presentations	Lechner Ch. 5	13	Project #1 due
Sept 15	Student presentations			
Sept 20	Solar geometry	Lechner Ch. 6		
Sept 22	Passive solar heating	Lechner Ch. 7		
Sept 27	PV and active solar	Lechner Ch. 8		
Sept 29	Exam #1			
Oct 4	The thermal envelope		04	Assign Project #2
Oct 6	**No class**			
Oct 11	Passive cooling			
Oct 13	No class			
Oct 18	Shading	Lechner Ch. 9		
Oct 20	Project #2 test (weather permitting)		20	Project #2 prototype due
Oct 25	Regulatory environment & IGCC	Prah v Maretti		
Oct 27	Using green rating systems	TBD		
Nov 1	Lighting overview	Lechner Ch. 12 and 14		
Nov 3	Project #2 test #2 (weather permitting)		03	Project #2 due
Nov 8	Exam #2			
Nov 10	Project #3 progress review		10	Project #3 progress due
Nov 15	Energy modeling		15	Assign Project #4
Nov 17	Energy modeling workshop			
Nov 22	Daylighting I	Lechner Ch. 13	22	Project #3 due
Nov 24	**Thanksgiving (no class)**			
Nov 29	Daylighting II			
Dec 1	Energy modeling workshop			
Dec 6	Sustainable sites			
Dec 8	Class review lecture		08	Project #4 due
Dec 13	Final exam (12-1:40pm)			

Point Values

Point values	
Exam #1	100
Exam #2	100
Final Exam	200
Project #1	50
Project #2	100
Project #3	150
Project #4	150
Clicker Questions	150
TOTAL	1000



Ferris State University | College of Engineering Technology | Architecture & Facility Management

ARCH 362—Environmental Systems 2

Basic Information

Class Hours: Tu & Th noon-1:15pm
Room: SWAN 313
Credit Hours: 3
Contact Hours: 3 lecture hours
Prerequisites: ARCH 361

Instructor

Christopher Cosper, Assistant Professor

Phone: 231-591-3113
Email: cosperc@ferris.edu
Office: Johnson Hall 216

Student hours: Tuesday 2-4pm
Wednesday 9-11am
By appointment

Course Description

Course Description: An exploration of electrical systems, power distribution, communication systems and building controls. Other environmental factors explored include illumination and acoustics. Special emphasis will be placed on sustainable practices.

Learning Outcomes

Students satisfactorily completing this course will:

- Understand basic electrical theory and systems.
- Recognize and translate basics of illumination and acoustics.
- Describe methods to reduce energy consumption of electrical and lighting systems.
- Describe and illustrate alternative energy sources.

Texts

By Lechner:

Plumbing, Electricity, Acoustics: Sustainable Design Methods for Architects
ISBN 978-1-118-01475-2
Wiley, 2012

Heating, Cooling, Lighting: Sustainable Design Methods for Architects
ISBN 978-0-470-04809-2
Wiley, 4th Edition, 2014

You will also need a Turning Technologies clicker and a current license.

Some simple rules for doing well in this class

1. Read the assigned material
2. Turn in quality work, on time, every time
3. Show up for class (only two unexcused absences are allowed)
4. Check your Ferris email every day—I will use it to communicate to you
5. Don't cheat—this includes claiming someone else's idea as your own

* See the Syllabus Addendum on Blackboard for the full set of terms and conditions

Point values

Exam #1	100
Exam #2	100
Final Exam	200
Project #1	50
Project #2	100
Project #3	100
Daily grade (including clicker)	100
TOTAL	750

See the Project Options sheet for project options, extra credit options, and point values.

	Date	Lecture	Reading		Due
	Jan 10	Course introduction			
1	Jan 12	Basic electricity	Lechner PEA Ch. 1		Assign Project #1
2	Jan 17	Basic II/circuiting/transformers/Kill-A-Watt demo	Lechner PEA Ch. 2		
3	Jan 19	Circuiting II			
	Jan 24	Project #1 crit day			Project #1 progress
4	Jan 26	Electricity (conclusion) & communication systems	Lechner PEA Ch. 6 + MEEB ex.		
5	Jan 31	Code overview & fire protection			Project #1 due
	Feb 2	Kara Pellerito (guest speaker)			
	Feb 7	Exam #1			
6	Feb 9	Electric lighting	Old Lechner Ch. 14		Assign Project #2
7	Feb 14	Electric lighting II			
	Feb 16	Project #2 Crit Day			Project #2 design drawings
	Feb 21	Dr. Sarah Hinkley (guest speaker)			
8	Feb 23	Mechanical equipment	Old Lechner Ch. 16		
9	Feb 28	Mechanical equipment II			
	Mar 2	**No Class** (Cosper out)			
	Mar 6-10	**Spring Break**			
	Mar 14	HVAC problem in class			
10	Mar 16	Acoustics	Lechner PEA Ch. 5		
	Mar 21	Project #2 demonstrations			Project #2 due
	Mar 23	**No Class** (Cosper at ACSA)			
11	Mar 28	Architectural acoustics & noise control			Assign Project #3
	Mar 30	Exam #2			
12	Apr 4	Plumbing supply and fixtures	Lechner PEA Ch. 3		
13	Apr 6	Plumbing continued			
14	Apr 11	Plumbing waste	Lechner PEA Ch. 4		
W	Apr 12	Kendall Lighting Center field trip (9-10:30am)			
	Apr 13	**No Class** ("mid-semester recess")			
	Apr 18	TBD			
	Apr 20	Project #3 demonstrations			Project #3 due
15	Apr 25	Transportation	Lechner PEA Ch. 7		
16	Apr 27	Class review lecture (last day of class)			
Tu	May 2	Final exam 12-1:40pm			

Fall 2016, Swan 205, W 12:00 – 12:50

Ferris State University – ARCH 419 Sustainability in Architecture: Advanced Topics

Office Hours: Monday 12:00 – 12:50 / Wednesday 11:00 – 11:50 / Friday 11:00 –12:5

Paul Long, Assistant Professor
PaulLong@Ferris.edu

Johnson Hall 220
231-591-2370

Introduction to the course

Rooted in a topical, deep reading, this seminar critically considers holistic strategies for sustainability within the built environment and how these strategies contextually relate to architectural problem solving. Through independent research, analysis, critical readings, and peer review, students develop – and defend in writing – their own professional and personal sustainability ethic. Student led discussion, presentations, and individual research projects will require active student engagement.

Student Learning Outcomes

1. Read and discuss major texts on the topic of sustainability.
2. Think critically about sustainability in a holistic manner while contextually placing one's architectural education within broad issues of sustainability.
3. Develop decision-making processes and approaches to architectural design that facilitate the integration of holistic concepts of sustainability.
4. Defend in writing a professional and personal sustainability ethic.

Structure of the course

The course will consist of a series of instructor and student led presentations and seminar discussions related to the topic of sustainability. Projects and exercises will also be undertaken in and out of class, consisting of research and presentations designed to fulfill the goals of the course stated above.

As open discussions are inherent in the nature of a seminar class, it will be essential that each of you come prepared to class having done the assigned readings and assignments and **actively particpate in** class discussions.

Requirements of the course

Required Texbook: Readings are based on the required textooks:

- KIBERT, C. J. (2012). *Working toward sustainability*. Hoboken, NJ, Wiley.
- WALKER, S. (2014). *Designing sustainability: making radical changes in a material world*. Ney York., Routledge.

Occasional Web sites and papers will be discussed in class when required. Additional texts maybe required over the course of the semester. Students will be expected to obtain access to these texts as necessary.

Suggested Texts:

- WALKER, S. (2006). *Sustainable by design: explorations in theory and practice*. London, Earthscan.
- WALKER, S. (2014). *Designing sustainability: making radical changes in a material world*. New York, Routledge.
- STARKE, L. (2013). *Is sustainability still possible*? Washington, DC, Island Press.

Additional Materials: Ferris e-mail account, notebook in which to collect information (bring to class) Planner / Calendar, electronic or analog.

Assignments and Readings:
Readings – Readings must be completed before the class period for which they are assigned.

Assignments
1) **Activities** – Throughout the semester, you will be asked to complete brief in-class or take home exercises, to prepare for an interesting class discussion. These activities will typically be worth 10 points each and instructions will be provided when the activity is required. As they are essentially participation activities, you will receive full credit as long as you thoughtfully complete the assignment according to instructions. Short writing assignments will also be assigned on accasion over the course of the semester. These assignments are tentatively scheduled for the following weeks (subject to change):

Models of Environmental Impact	Class 4
What Constitutes an Ethic of Sustainability?	Class 5
Your Environmental Ethic	Class 7
Patagonia Footprint Chronicles	Class 8
Evaluating Hardin's Lifeboat Ethics	Class 9
Personal Sustainability Measures	Class 12
A Multi-stakeholder Process	Class 13

2) Midterm Paper – Ethics of Architecture and Sustainability (Due 5:00pm, Friday, October 28th, 2016)
For this assignment you will write an approximately 2,500 word double-spaced essay which develops and defends your own professional and personal sustainability ethic. (All papers must be within 10% +/- of the 2,500 word count to receive credit for the assignment.) Based on topics discussed both in this class and over the course of your education at Ferris State University in the Architecture and Sustainability program, your essay should clearly describe your own understanding of sustainability, including ecological, economic, and social facets, and how they apply to architecture and the built environment. In writing your essay, you should demonstrate an ability to think critically about sustainability in a holistic manner while contextually placing your architectural education within broad issues of sustainability.

To facilitate the writing of your essay (recommended), you may choose to base your essay on the sustainability and ethical components of a contemporary problem related to architecture and the built environment. If you choose to follow this route, you must select from the following list of issues before Week 5, 10/2/15. (If you would like an alternative topic, please consult the instructor. All alternative topics must be approved in advance by the instructor to receive credit for the assignment.)

1. Climate change
2. Resilancy and the built environment
3. Social Justice and the City
4. Sustainable energy production / Green energy
5. What is "Green Architecture"?
6. Cap and Trade

A suggested approach to a topic based essay would be to first clearly describe your selected issue/topic, including the ecological, economic, and social facets. You should then describe which ethical principles of sustainabilty apply to the topic, how those ethical principles are being followed or ignored, suggestions for better implementation of ethical principles in order to achieve a more sustainable solution, and finally – and perhaps most importantly – how your discussion informs your own professional and personal sustainability ethic. See Ferris Connect for final assignment requirements.

3) Final Paper – Sustainable Decision Making Process (Due 5:00pm, Friday, December 18th, 2016)
The final project will require you to apply knowledge gained in this course to develop a personal, professional sustainable decision-making processes. The intent of this paper is for you to defend an approach to architectural design that facilitates the integration of holistic concepts of sustainability. Your approach/decision-making process should provide a set of principles that can help guide you in the inherent decisions associated with the design process, both as students and future professionals.

In developing your process, it will help to identify a problem of interest to you, develop a decision making process to address that problem, describe how your process uses ethical principles, and explain how behavior change strategies can help in the adoption of your plan. This plan will be presented to the entire class with a media component (e.g., poster, video, or activity during the final exam period reserved for the course. Your paper will be individually written and approximately 3,000 words. (All papers must be within 10% +/- of the 3,000 word count to receive credit for the assignment.) All Topics must be approved by the instructor in advance to receive credit for the assignment. See Ferris Connect for final assignment requirements.

Course Assessment:

EVALUATION ACTIVITIES	**% of Final Grade**
Participation	25%
Homework Assignments	25%
Midterm and Final Projects	50%
TOTAL	**100%**

The instructor likewise reserves the right to raise or reduce a student's final grade by up to 10% for circumstances and behavior not taken into account through the assignments and grading schemes above.

Grade Breakdown:

A	95 – 100 %	A-	90 – 94.9%
B+	86 – 89.9%	B	83 – 85.9%
B-	80 – 82.9%	C+	76 – 79.9%
C	73 – 75.9%	C-	70 – 72.9%
D+	66 – 69.9%	D	63 – 65.9%
D-	60 – 62.9%	F	59.9% and below

Participation: Learning happens when you are present in mind, body and spirit. University students are expected to engage in thoughtful discussions in class. You are expected to bring content related issues to class for discussion. It is expected that you will have read any assigned materials before attending class so that you will have a knowledge base from which to draw for those discussions.

Attendance: Attendance is required at this class for several reasons: important information will be presented during class periods; assignments will be distributed during class meetings; and some class assignments will require completion during the class meetings. Absence from lectures will place the student at a significant disadvantage in this course. As an adult, however, the choice of attending is yours; but a price will be paid for frequent absences, in the form of a lowered grade in the course. **Each class session is worth ten (10) attendance points; missed classes will have an impact on your final grade in the course.**

Lateness: The entire time period will be used to accomplish the objectives of the course, **consequently, anyone who is ten or more minutes late will be marked late. Two late marks count as one absence.** Lateness communicates a lack of interest, commitment and dependability. It also demonstrates a lack of respect for your peers and your instructors, since late arrivals can be a significant disruption to classroom activities.

Excused Absences: 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.

Missed Deadlines: Projects that are turned in late will be **marked down ten percent (10%) for each calendar day late**. **Late work will not be accepted for Midterm and Final papers.**

E-Mail and Ferris Connect: All students have e-mail accounts at Ferris State University. You should check this e-mail account regularly, it will be the official campus pipeline for sending class information, assignments, etc. E-mail for this class will not be sent to any other address you might have. If you cannot access your e-mail account, speak to the instructor.

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. 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 or via Ferris Connect.

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.

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, texting, and tweeting are all disruptive to the room and demonstrate a lack of respect for your classmates and the instructor. I-Pods, MP3 players, etc., are not allowed in class at any time. If the instructor sees a cell phone being used or hears a cell phone during class you will receive a deduction of from Participation Points worth 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.

Disabilities: Students with a documented disability (physical, learning, mental, emotional) requiring aclassroom accommodation should contact the Disabilities Services Office (231-591-3057), located in Arts and Sciences, Starr 313.

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

Honesty: Honesty is of utmost value in learning. 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. That is why each instructor and student must pledge to eachother that they will conduct themselves with honesty, integrity and respect.

Being who you are and allowing others to view, evaluate and offer feedback about your true level of ability will facilitiate your personal, academic, social and professional growth. Think for yourself! Take credit for your own ideas: defend them or change them, but give others credit for their ideas!

In this spirit, dishonesty in any form will not be considered acceptable in this course. If cheating is discovered, the result will be, at a minimum, no credit for the work in question. If deemed appropriate, issues of dishonesty will be referred to Student Judicial Services for further action.

Syllabus Changes: Reading the Syllabi is the student's responsibility. Changes to the Syllabi are at the discretion of the instructor 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.

SYLLABUS ATTACHMENT
COLLEGE OF ENGINEERING TECHNOLOGY – FERRIS STATE UNIVERSITY
FALL 2016

IMPORTANT DATES		
Late registration	Wed. – Fri.	Aug. 24 – 26
First day of classes	Monday	Aug. 29
Last day for Drop/Add	Thursday	Sept. 1
Labor Day (no classes)	Monday	Sept. 5
Mid-term grades due	Monday	Oct. 17
Last day for "W" grades	Thursday	Nov. 3
Thanksgiving recess begins (no classes)	Wed (noon)	Nov. 23
Thanksgiving recess ends (classes resume)	Monday	Nov. 28
Last day of classes	Friday	Dec. 9
Examination Week	Mon – Fri	Dec. 12 – 16
Commencement	Saturday	Dec. 17
Final grades due by 1:00 pm	Monday	Dec. 19
Grades available to students on MyFSU	Tuesday (after 8AM)	Dec. 20

Sessions	Dates	Last Day to Withdraw
Full Session	Aug. 29 – Dec. 9	Nov. 3
Session A	Aug. 29 – Oct. 18	Sept. 29
Session B	Oct. 19 – Dec. 19	Nov. 18
Session D	Aug. 29 – Sept. 30	Sept. 19
Session E	Oct. 3 – Nov. 3	Oct. 21
Session F	Nov. 4 – Dec. 9	Nov. 28

College of Engineering Technology School Offices		
Automotive &Heavy Equipment	AUT 101	591-2655
Built Environment	GRN 227	591-3773
Engineering & Computing Technology	SWN 312	591-2068
Design & Manufacturing	NEC 211	591-2640
Dean's Office	JOH 200	591-2890

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, 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 201. 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.

STUDENT COMPLAINT POLICY
http://www.ferris.edu/HTMLS/administration/academicaffairs/Forms_Policies/Documents/Policy_Letters/AA-Student-Complaints.pdf

GRADUATION
Students should apply for their degree audit the semester prior to the degree completion term. To obtain a degree audit and clearance for your associate or bachelor degree for you must meet with your assigned academic advisor. In addition an online graduation application is REQUIRED and deadlines will be ENFORCED per the Provost's Office and Records Office. **ONLINE APPLICATION DEADLINE** for participation in Fall Commencement Ceremony: **OCTOBER 1, 2016**

Online application is accessed by logging into your MyFSU, (click on Student tab, My Records link, Degree Progress and Graduation, Apply to Graduate link). For more information, contact the Dean's Office.

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 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 Engineering Technology 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 Engineering Technology 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.

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, log in to MyFSU, (click on the Student tab, My Registration, Advisor Information, Select Term, Submit).

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 are in immediate crisis, call 911.***

EDUCATIONAL & CAREER COUNSELING ……STR 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.

CAREER SPECIALIST – Leigha Compson ……JOH 200 – 591-3549

Valuable support services and events are offered for students currently or previously enrolled in associate degree programs. To lean more visit: http://www. ferris.edu/HTMLS/colleges/technolo/ Career-Programs-Support/index.htm

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 – 5:00 p.m.
Sunday . . . . . .1:00 p.m. – MIDNIGHT
Extended Studies Court will begin late night hours September 13, 2016
*Sunday-Thursday/MIDNIGHT to 7:30 a.m. *Friday/6 p.m. to MIDNIGHT
*Saturday/5 p.m. to MIDNIGHT)

FSU BOOKSTORE……UNIVERSITY CENTER 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

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-_____.

Arts & Sciences/General Education 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

College of Engineering Technology Diversity Statement

The College of Engineering Technology provides a dynamic experiential learning environment that is inclusive, equitable and just for all individuals, regardless of human differences.

Ferris State University is an equal opportunity institution. For information on the University's Policy on Non-Discrimination, visit http://www.ferris.edu/non-discrimination

Updated 8.18.2016 alm

Ferris State University | College of Engineering Technology | Architecture & Facility Management

ARCH 421—Contemporary Issues

Basic Information

Class Hours:	Wednesday, 10-11:50am Plus one online hour
Room:	Swan 202
Credit Hours:	3
Contact Hours:	2 lecture hours 1 online hour
Prerequisites:	ARCH 342, SOCY 341

Instructor

Christopher Cosper, Assistant Professor

Phone:	231-591-3113
Email:	cosperc@ferris.edu
Office:	Johnson Hall 216
Student hours:	M 1:30-2:30pm Tu & Th 1:30-3pm By appointment

Course Description

A seminar that responds to the issues of the day and how they relate to architecture; this course integrates ecology, sociology, history, literature and technology, allowing students to apply what they are learning to the conditions of the times in which we live.

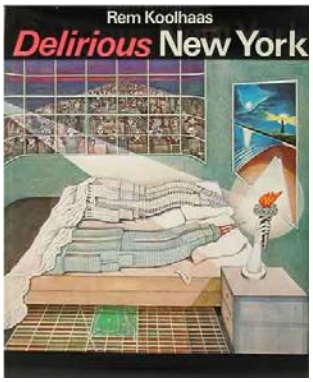
Learning Outcomes

Students satisfactorily completing this course will:

1. Achieve an understanding of architecture through examination and discussion of ecological, sociological, and technological forces that shape current culture.
2. Read and discuss major works of architectural literature.
3. Demonstrate an ability to think critically about their environment and place their architectural education into a contemporary context.
4. Recall in writing the major philosophical and technological trends in architecture.

Text

Texts (PDFs) will be available on Blackboard



Some simple rules for doing well in this class*

1. Read the assigned material
2. Turn in quality work, on time, every time
3. Show up for class (only one unexcused absences is allowed)
4. Check your Ferris email every day—I will use it to communicate to you
5. Don't cheat—this includes claiming someone else's idea as your own

* See the Syllabus Addendum on Blackboard for the full set of terms and conditions

Schedule and Point Values

Weekly Schedule

Friday 5pm	Post reaction to assigned reading
Monday 7pm	Post meaningful comments on two colleague's posts
Wednesday 10am	Ready for class discussion

Week	Date	Reading	Due	Points
01	Aug. 31	N/A		
02	Sept. 7	Vitruvius pp. 3-17 and 170-182		
03	Sept. 14	*Seven Lamps of Architecture* pp. 85-122		
04	Sept. 21	*Towards a New Architecture* pp. 1-64		
05	Sept. 28	*Complexity and Contradiction...* pp. 16-33		
06	Oct. 5	*The Death and Life...* pp. 3-7 and 29-50		
		Suburban Nation pp. 3-20		
07	Oct. 12	"The End of the Classical"		
08	Oct. 19	"Architecture has a woman problem"….	"Rethink" paper	50
		"I am not the decorator"		
09	Oct. 26	"Why Now, More Than Ever…."		
10	Nov. 2	*Historic Preservation* pp. 11-31……..	P, A, or D presentation	50
		On Restoration pp. 9-22		
		"Preservation is overtaking us"		
11	Nov. 9	Marc Kushner TED talk		
		Delirious New York pp. 9-27……	Paper/program draft	100
12	Nov. 16	TBD		
13	Nov. 23	N/A (Paper/program workshop)		
14	Nov. 30	*Yes is More!* pp. TBD		
15	Dec. 7	N/A (Class summary discussion)		
Exam	TBD	N/A (Paper/program presentations)…….	Final paper/program	200

Other point values	
Attendance/attitude	50
Weekly discussion board posts	100
Classroom discussion / reading "check in"	100
TOTAL	650

Weekly Reading Reaction

- Find a critical article or a work of architecture that reacts to the assigned reading
- On the appropriate weekly discussion board, post your work to claim it (students may not use the same work)
- Give enough bibliographic information (including websites, if appropriate) so others can find your article or work of architecture
- Discuss *how* the article or work of architecture reacts to the assigned reading
    - Do not tell us if you like or dislike the article or work of architecture—that is irrelevant from an argumentative standpoint
- Provide meaningful comments to two of your colleague's posts (being sure to distribute the love)

Classroom Discussion

- Bring the assigned reading in some form (i.e. printed out or on screen) every Wednesday
- Be ready to contribute to the class discussion every Wednesday—I will expect at least one substantial argument from you every class period

Small Town Studio

arch Design III

Ferris State University
College of Engineering Technology
Department of Architecture and Facility Management
Arch 441: Architectural Design III – Section 211 – Fall 2016

00.0 General Course Info

00.1 **Credits**: 5 Hours

00.2 **Contacts**: 3 Lecture, 6 Studio Hours per Week

00.3 **Meeting Time / Location**: Swan 226/ Section 211 / MWF 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: Wednesday 12:00 – 12:50 / Wednesday 11:00 – 11:50 / Friday 11:00 –12:50

If I am not in my office during the hours posted, I can often be found in Swan 205, 226, 307, or 308.

00.5 **Course Prerequisites**: Arch 341

00.6 **Course Description**: A course that addresses a real world architectural problem in its social and environmental context. Students will research and analyze existing conditions and client needs, define project requirements, and develop macro level schematic solutions based on input and feedback of a client community. Emphasis is placed on the analysis, process, and synthesis of architectural problems and their solutions.

00.7 **Student Learning Outcomes:** Students satisfactorily completing this course will:

1. Apply skills necessary to obtain information from “real” clients to identify and document the issues and needs of a real community.
2. Program an architectural design problem in terms of spatial, environmental, and community needs.
3. Research and document architectural precedents, sustainable development options, and relevant community development options.
4. Conceptualize a solution that satisfies user requirements as defined by the architectural program.
5. Utilize techniques and technologies that sustain the natural environment.
6. Develop designs that respond to and enhance the community and context.
7. Prepare professional quality oral and graphic presentations.

00.8 **Course Format**: Throughout the semester we will be working on a number of community projects directly with members of the public. This will require a level of professionalism and student engagement not seen in previous courses. This course will be divided between class discussions and studio sessions. Each design problem will be introduced with a class discussion and explored through research and the development of studio projects. For class sessions to be effective, it is required that students come to each class prepared with all necessary tools. Failure to be prepared for class will result in the loss of points. This course will also require a number of field trips and attendance at public meetings, which will be held both during and after scheduled class time. Every attempt will be made to make students aware of field trips with advanced notice but it may not always be possible to do so. **All at all field trips will be required unless prior arrangements are made with the professor, and agreed upon, more than one week in advance.**

00.9 **Course Project Structure**: Inspired by the interdisciplinary City Design Research Studio, in the London School of Economics, Cities Programme - City Design and Social Science, this course is based on an architectural studio pedagogy grounded in academic service learning, design research, problem-solving, communication, and ethics. Working directly with community partners on projects identified as needs by these same partners, this pedagogical framework integrates interdisciplinary research components into the traditional design-based studio. The goals of this research component is for students to:

1. **understand** the relationship of architecture and urban design to the social and built environment;
2. **appreciate** the complexities of place making;
3. **address** design as a mode of research and practice that shapes the built and social environments;
4. **interact** in an interdisciplinary manner with community members, professionals, and students outside the architecture degree program, with a focus that integrates the economic, social, political, and cultural aspects of the built environment; and
5. **communicate** to clients and communities, clearly and concisely in a public forum, the full implications of design proposals, with the goal of working towards a more sustainable built environment and better human condition.

Following the research component of the studio, students will be asked to compile their findings visually, textually, and verbally. In public forums and meetings with community partners and interested members of the public, students will propose design interventions for their projects. This combined approach will enable students to think both holistically and critically about architectural interventions in relation to a site, the larger environment, sustainability, and society as a whole. Following these public presentations, and at the end of each service learning project, studio work will be compiled into a written and graphical text provided to the community partners.

00.10 **General Course Methods:** This course will require a substantial dedication and investment of student time, skill, and critical thought both during and after official studio hours. Students are required to participate in all studio activities including critiques, lectures, discussions, and field trips. Production and hard work are expected. Extensive use of the laser cutter and model shop may be required for fabrication of architectural models. Studio will typically begin with a group pinup followed by assignments, lectures, presentations, demonstrations, discussions, or individual critiques of project work as needed. During group pinups individuals are expected to understand and apply criticisms of other students' work relevant to their own work. Many times during a pinup it will not be necessary to talk about every project but all students should be prepared to do so. Only serious and significant new work that contributes and moves forward the general progress of the studio will be discussed. You are expected to have all of your previously completed prints and models available in studio, for all studio periods, because we will need to refer to these works from time to time (Tsubaki, 2007). Regardless of whether the studio is working in a collaborative effort, it is well documented that critiques among students is a healthy and immensely beneficial enterprise when undertaken in a caring and thoughtful manner (Pastre, 2012).

00.11 **Course Expectations:** The studio will function like an office in that its professor will, in many regards, function as a team leader and each student will be expected to contribute, according to her own gifts and abilities, to a group effort. As in practice, those who show initiative and produce results will earn greater responsibility. The work will therefore be a combination of individual and collaborative work; a mix of creation and development. The Small Town Studio will continue to develop studio projects until they have reached a high level of excellence; after which, the work of the several-semester effort compiled and published in an endeavor to influence the development of the built environment (Pastre, 2012).

The studio will meet 9 hours a week, three days a week for 3 hours at a time. While this represents a significant amount of "in-class" time, it will be necessary for you to work diligently outside of class. Studio class time should not be seen exclusively as free work time. There will be many class periods dedicated to lecture, class discussions, meetings, field trips, etc. You should not plan to work exclusively during scheduled class time. Doing so will result in a low standard of work and may result in failure of the course.

00.12 **Academic Service Learning**: In working directly with community partners on a range of studio projects, this course is rooted in a pedagogical approach to design education referred to as Academic service learning (ASL). Ferris State University defines ASL as:

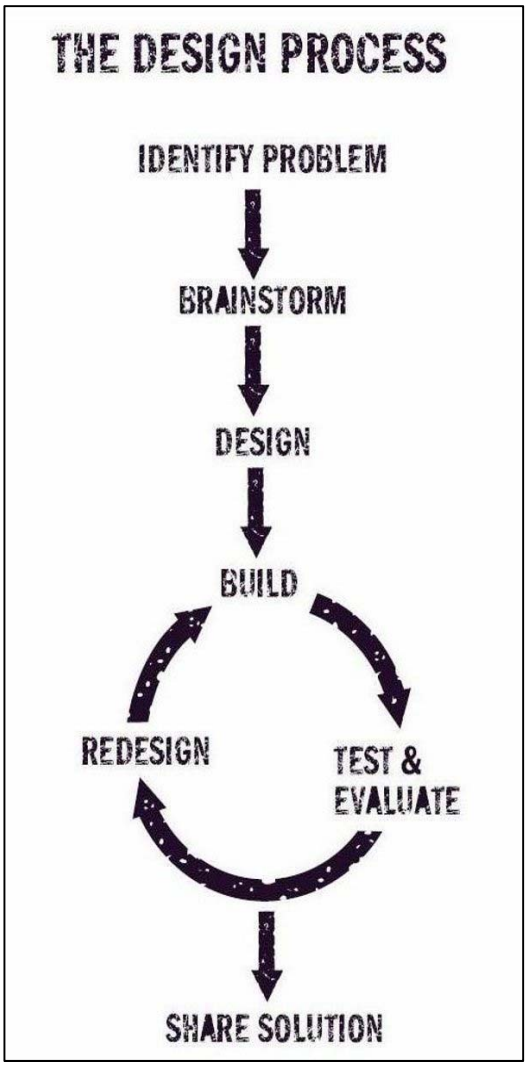
> *…a method of teaching that allows students to connect – and thus, learn more deeply – concepts, skills, and other course content with needs and goals of community organizations and agencies. While making this connection, students learn from and provide meaningful service to the community organization or agency.*

Each of our Academic Service Learning projects will include the following five elements:

1. **Address a community need that is identified by the community**
   Students will engage with a number of community organizations agencies to address their needs related to the built environment.
2. **Orient and train students before engaging with the community**
   Students will be introduced to the organization or people with whom they will be working before starting the project. This helps develop mutual understanding and shared goals for the collaboration.
3. **Engage students in thoughtful and meaningful action**
   After developing an appreciation and understanding of a community need, students will directly address and support that need.
4. **Allow students to reflect on their experiences**
   A hallmark of service learning pedagogy is reflecting on the experience. Students will be asked to reflect upon and process their learning, thereby making connections among prior knowledge, new knowledge, and their community service experiences. Means for reflection include, for example, journals, essays, blogs, oral reports, speeches, group presentations, and academic papers. (Written reflections will be a required at the end of each studio project.)
5. **Measure course outcomes through assessment and evaluation**
   The instructor will evaluate the students' cognitive and personal growth throughout the service learning experiences. In addition to tests and quizzes, journaling, oral presentations, writing projects, art projects, and debates are other useful assessment methods. Faculty, students, and community partner surveys will also aid in evaluating the ASL project.

00.13 **Design Thinking**: In this course you will be asked to engage in collaborative and interdisciplinary design thinking methods that emphasize producing unique, feasible, and implementable outcomes that can be applied to real world projects. Students will complete projects by generating a variety of ideas, applying and synthesizing knowledge from their discipline, building prototypes, and evaluating with critical thinking.

Often the Design Process is presented as a series of steps that you go through in developing an idea or product. They (usually) include: **Identify** a problem, **Gather information**, **Propose solutions**, **Choose** the best idea, **Test** the idea, **Evaluate** and **Communicate**. There are many different versions: no set list covers all the ways people interpret the Design Process. As you get more familiar with the use of the process, you tend to skip around inside it as your project needs dictate.



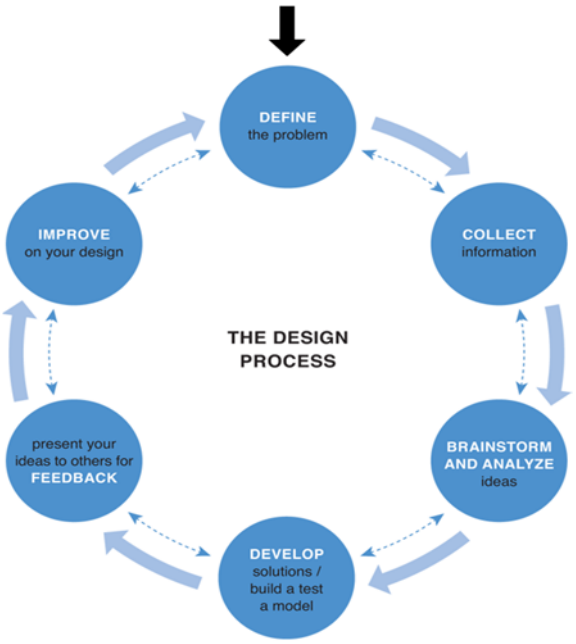
Looping: In the image to the right, and in many other descriptions of the Design Process, it is shown as a **loop**. In considering a project to work on, you find a problem to solve, gather information, try out an idea, test it and evaluate. If you solve the problem, move on to another problem or aspect of the project that needs attention. If you don't solve the problem, you have some more information about what won't work. That information gets incorporated in your next go-round.

Making it right: As you cycle through the Design Process, your product should be getting better as you go. The more you identify problems, pose solutions, test them and implement them, the device, program, product or project gets better. New problems arise the more you work the process. If you nail the biggest ones first, eventually you have something that works pretty well and are fine tuning after a while. It is possible to overdo this fine tuning part, causing the project to never see the light of day. It is also possible to short circuit this phase. Ebay, second hand stores and the dump are full of examples of products which did not get enough exposure to this phase.

Delivering: When your product is sufficiently complete, and you have resolved the most pressing problems determined in the process, it is time to deliver. This does not mean that the project is done forever, instead, it means that it is ready for more testing in a real world environment. As you (and your team, as may be the case) see the product in the world, you will hopefully be looking at it for examples of where it can be changed and improved. As you find aspects of the project that need refinement, you make a plan for revision and implement it. One hopes that the flaws you find at this point are not significant enough to seriously stall or ruin the project.

http://makezine.com/2008/11/16/using-the-design-process/

These looping steps of the Design Thinking process can be further defined as:



1. **Define the Problem:** You can't find a solution, until you can spell out what the problem is. Architects work with the client to define the project. The problem may be something like "A new school kitchen with cafeteria that seats 300 students" or "A new high school for 1,000 students."

2. **Collect Information:** Once the problem is defined, architects will spend time gathering information to help them understand the neighborhood, the site, the users of the building, any existing buildings, and other critical information. Typically this means taking photographs, sketching, and interviewing the client. It's also valuable to collect information on the natural environment, so architects may gather data on the path of the sun around the site, the direction of the wind, the climate, as well as what types of plants are currently growing around the site.

3. **Brainstorm/Analyze:** During this stage of the process, architects may begin sketching or making diagrams to help them understand how all the data and information they've collected may impact the design of the building. These early drawings – which may include bubble diagrams, for example – will help the architects document their ideas, because it's likely the solution will change as they go along.

4. **Develop Solutions:** At this stage in the design process, architects will create drawings with specific solutions to be shown to the client. Schematic drawings, as these are typically called, help illustrate the big ideas and space requirements of the project. Schematic drawings usually do not include dimensions or other construction-related notes.

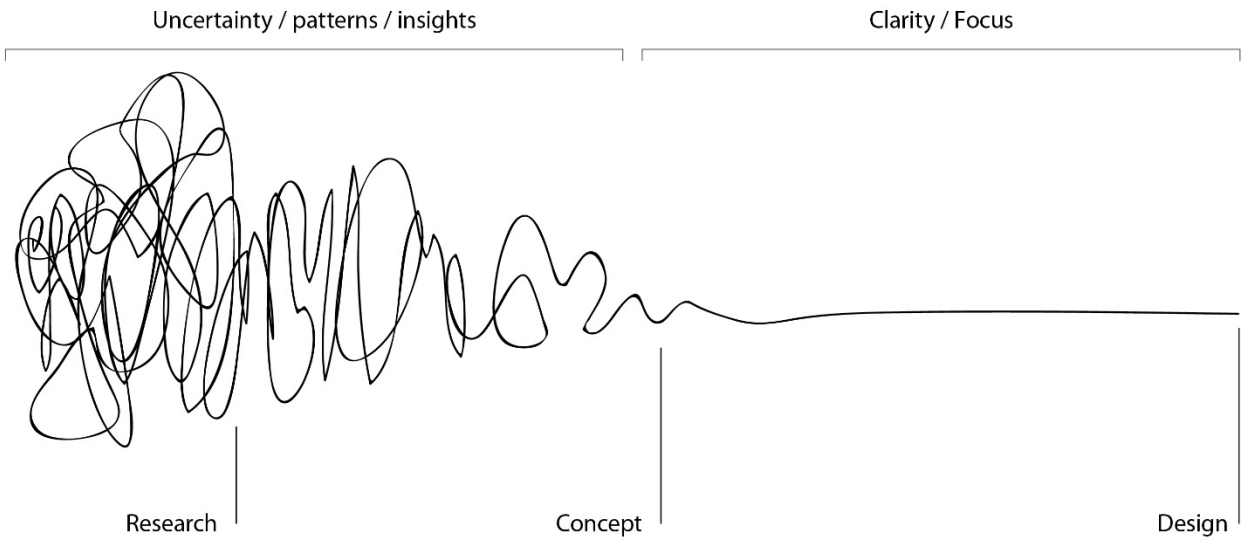
5. **Feedback:** No solution is perfect the first time around, so it's critical that the architects continue the discussion with the client to receive feedback.

6. **Improve:** With feedback in hand, the architects will go back and continue to revise and improve the final solution. Over the next several months, or even years, the architecture firm will work with the client to refine the original design. Based on an analysis of cost vs. needs, the firm and the client together will closely review the solutions and make balanced decisions on which features will stay, which will be redesigned, and which may be eliminated. The architecture firm will also work closely with the general contractor responsible for constructing the building.

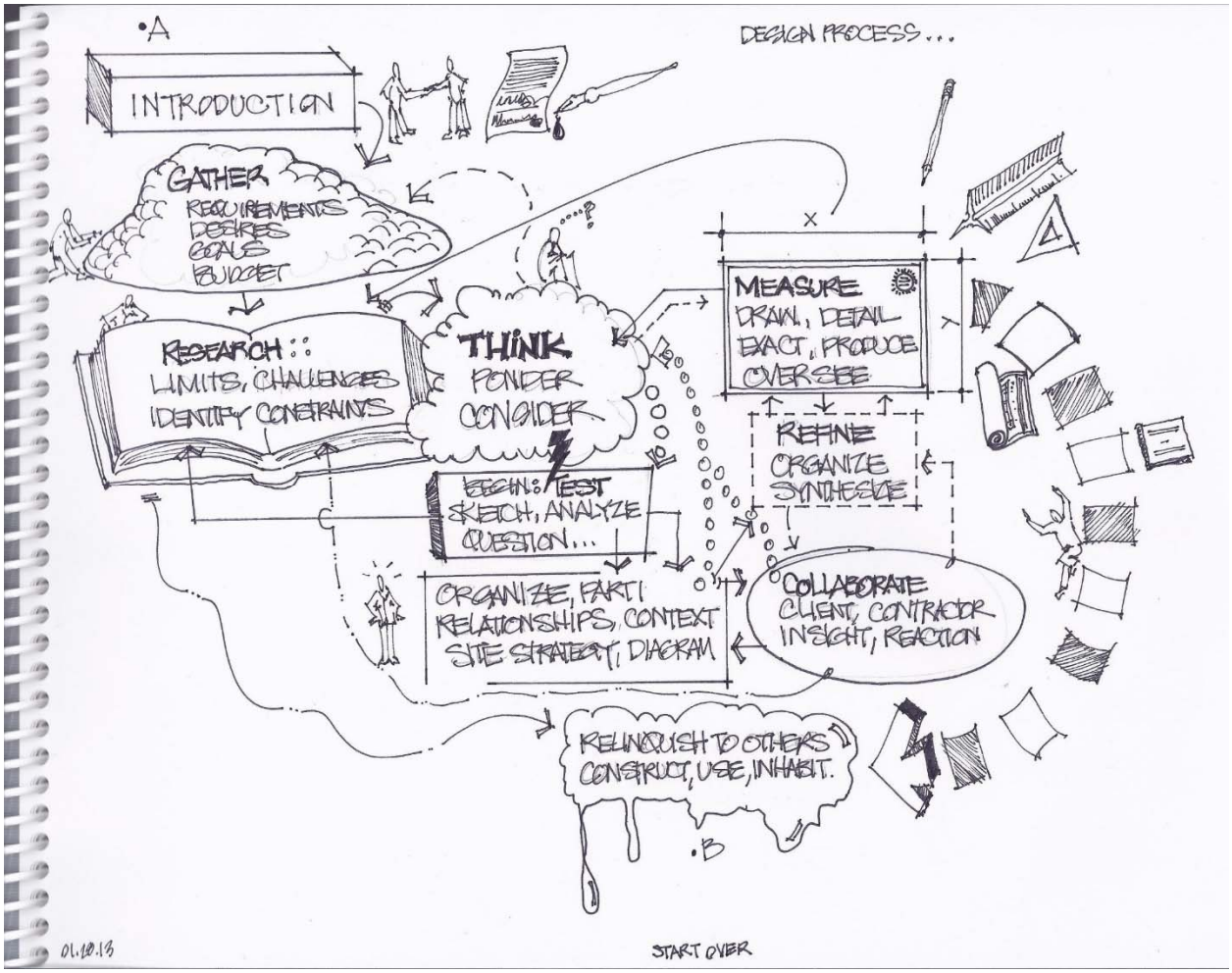
7. **Build It:** The precise details of the building will determined over several months while the firm is developing a set of construction drawings and specifications – called construction documents – which will be part of the legal contract between the architect and client. These construction documents will be used by the contractor to construct the building.

http://discoverdesign.org/design/process

Additional visual representations of the Design Thinking Process are provided on the following page:



http://designsojourn.com/design-processed-explained/



https://thinkarchitect.wordpress.com/2013/01/31/design-process/

01.0 Course Materials

01.1 **Required Textbooks**: ABENDROTH, L. M., & BELL, B. (2016). *Public interest design practice guidebook: SEED methodology, case studies, and critical issues*.

GEHL, J., & SVARRE, B. (2013). *How to study public life*. Washington, Island Press

STEINER, F., BUTLER, K., & SENDICH, E. (2007). *Planning and urban design standards*. Hoboken, N.J, John Wiley & Sons.

You may be required to acquire additional texts as they become necessary during the semester.

01.2 **Strongly Encouraged Readings**: DUANY, A., PLATER-ZYBERK, E., & SPECK, J. (2000). *Suburban nation: the rise of sprawl and the decline of the American Dream*. New York, North Point Press.

LYNCH, K. (1960). *The image of the city*. Cambridge, Mass, MIT Press.

JACOBS, J. (1961). *The death and life of great American cities*. [New York], Random House.

VENTURI, R., SCOTT BROWN, D., & IZENOUR, S. (1977). *Learning from Las Vegas: the forgotten symbolism of architectural form*. Cambridge, Mass, MIT Press.

01.3 **Additional References**: (2010). *ICE manual of highway design and management*. London, ICE Publ.

DUANY, A., SPECK, J., & LYDON, M. (2010). *The smart growth manual*. New York, McGraw-Hill.

GEHL, J. (2010). *Cities for people*. Washington, Island Press.

GEHL, J. (1987). *Life between buildings: using public space*. New York, Van Nostrand Reinhold.

GEHL, J., & GEMZØE, L. (2003). *New city spaces*. Copenhagen, Danish Architectural Press.

GIRARDET, H. (1999). *Creating sustainable cities*. Totnes, Devon, Published by Green Books for The Schumacher Society.

HAMDI, N. (2004). *Small change about the art of practice and the limits of planning in cities*. London, Earthscan. http://search.ebscohost.com/login.aspx?direct=true&scope=site&db=nlebk&db=nlabk&AN=126148.

HARVEY, D. (1973). *Social justice and the city*. [Baltimore], Johns Hopkins University Press.

HOMES & COMMUNITIES AGENCE (2012). *Urban Design Compendium.* http://udc.homesandcommunities.co.uk/urban-design-compendium?page_id=&page=1

JACOBS, A. B. (1993). *Great streets*. Cambridge, Mass, MIT Press.

WHYTE, W. H. (1980). *The social life of small urban spaces*. Washington, D.C., Conservation Foundation.

SUCHER, D., & KANE, K. (1995). *City comforts: how to build an urban village*. Seattle, City Comforts Press.

TACHIEVA, G. (2010). *Sprawl repair manual*. Washington, Island Press. http://site.ebrary.com/id/10437875.

TONKISS, F. (2005). *Space, the city and social theory*. Cambridge, Polity.

01.4 **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 every weekday 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, reminders, etc via Ferris Connect and email.

The course will also be using Google+ and a shared Google drive folder to facilitate the dissemination and submitting of large digital files. Students will be required to sign up for a Ggmail account and to join the **Google+** community associated with the course. The use of Google drive and Google+ will be discussed during the first day of class.

Google+ Community: **https://goo.gl/cPMYUT**

Reference materials, mandatory supplemental readings, assignments, professor messages and other information will be provided in class, via Google+, Google Drive, and/or Ferris Connect.

During the semester I will maintain a **Tumblr** page and a **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:

General Inspiration: **http://arch441.tumblr.com/**
http://pinterest.com/long_pw/small-town-studio/

01.5 **Materials and Supplies:** The materials required for this course include those typical of many architectural design studios. You may need to purchase several drawing and model-making tools and additional consumables as the course progresses and assignments are made. Materials may include, but are not limited to: pens, pencils, paint, gesso, vellum, tracing paper, bond paper, acetate, acrylic sheet, plastic, fabric, metal, basswood, mdf, plywood, blue or pink foam, foam-core, paper, cardboard, chipboard, museum board, hyrdocal, etc.; healable cutting boards, metal straight edges, triangles, x-acto knives, etc. In addition you will be making extensive use of scanning, laser cutter, color ink jet and laser printing, etc (Tsubaki, 2007).

It is the student's responsibility to acquire the materials necessary to fulfill all assignment requirements. Failure to acquire necessary supplies and materials may result in failure of the course.

Materials provided by the Architecture and Facility Management Department may include plotters, printers, scanners, laser cutters, foam cutters, digital camera, digital video cameras, and basic model making tools.

01.6 **Required at Student's Desk:** Despite the fact that you may be using computers and printers extensively in this course, each student must have at a minimum the following readily available at his/her desks: Sketching materials and sketchbook, architect's scale, engineering scale, rolls of white or yellow trace along with the materials mentioned above (Tsubaki, 2007). Failure to do so will result in the loss of points.

01.7 **Required Sketchbook:** Students are required to keep a **fresh/new** journal/sketchbook, **dedicated solely to this course**. In this sketchbook students are to record studio thoughts and ideas (sketches, drawings, notes, articles, photos, xeroxes). The journal is crucial to reflective thinking and a vital record of key concepts and explorations considered in your projects. You should have your journal available in class every day (Tsubaki, 2007). The sketchbook/journal should be no less than 8 ½" +/- x 11" +/- minimum but not so large that it cannot easily fit into an average backpack.

01.8 **Required Computer/Software:** As a student in the Architecture and Sustainability program you are required to own a laptop computer complete with hardware and software listed in your original acceptance letter to the program. Technical difficulties, viruses, crashes, server and print bureau problems, or corrupted files will not be accepted as legitimate excuses. **ALL WORK SHOULD BE CONTINUOUSLY SAVED AND REGULARLY BACKED UP.** Required software listed in your original acceptance letter includes but is not limited to the following:

1. Microsoft Office Suite
2. Anti Virus software
3. SketchUp Pro
4. Autodesk Products (i.e., AutoCAD 2015 (min), Autodesk Revit Architecture 2015 (min))
5. Adobe CS6 Design Premium (Photoshop Extended, Illustrator, InDesign, Flash Catalyst, Flash Professional, Dreamweaver, Fireworks, and Acrobat Pro)

Additional software may be required during the course of the semester. All students will be required to acquire any and all software, as necessary.

01.9 **Required Digital Portfolio:** Students will be required to maintain a digital portfolio over the course of the semester. This will be used to produce a webpage(s) showcasing work from the semester and other digital or printed documents. This will require student access to a digital camera of high quality. Be aware, cell phone cameras will unlikely be found acceptable. Digital scans, drawings, and images of physical models will be submitted according to specified formats at designated times throughout the semester.

01.10 **Required File Formats:** During the semester, all design boards are required to be developed using Adobe Indesign. Each project will also require the development of at least one conceptual diagram developed using Adobe Illustrator. **Projects not submitted using Illustrator and InDesign will receive no better than a PASSing grade.**

01.11 **Additional Supplies:** Throughout the course of the semester students will be required to acquire additional supplies as necessary or deemed required by the professor.

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 has 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 grades will be determined according to a point system. Final grades 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%**
Sketchbook/Journal (Must be completed with a passing grade or better to pass the course)	10%
Design Process (All class projects must be completed with a passing grade or better to pass the course)	20%
Research Process (All class projects must be completed with a passing grade or better to pass the course)	10%
Studio Projects (All class projects must be completed with a passing grade or better to pass the course)	40%
Project Presentations (All class projects must be completed with a passing grade or better to pass the course)	10%
Project Reflections (Must be completed for each project)	**0 to -100%**
TOTAL	**100%**

02.3 **Assignment Weighting:** 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 final grade will reflect a whole semester's work (Pastre, 2012).

02.4 **Contested Grades:** Contested grades must be brought to the instructor's attention within one week of posting for consideration. If a student contests a grade more than two weeks after its original posting, the instructor will not consider their appeal.

02.5 **Grading Criteria**: The following represent some of the methods of assessment for this course: class projects, assignments, in-class exercises, critiques, exams, homework, participation, class presentations, term project, quizzes, and public presentations. 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. Assignments, projects and papers may be graded on:

- 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

02.6 **Effort vs Product:** Assessments will be based primarily on a 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 assessment 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, if necessary.

In some cases, but not all, grades will be calculated in 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 a student's 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 up to a full-letter grade modification, and is thus weighted up to 10% 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). The instructor likewise reserves the right to reduce a student's final grade by up to 10% for circumstances and behavior not taken into account through the assignments and grading schemes above.

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 studio 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 final grades 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. 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.

Pass (60): Work that meets the assignment's requirements for completeness, but was turned in more than one week late. All class work, other than In-Class Exercises, MUST be completed with a PASS or higher to pass the course. Projects not submitted using Illustrator and Indesign will receive no better than a PASSing grade.

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 Structure and Policies

03.1 **Attendance:** University 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 classes or laboratory sessions except as stated in the syllabus for each course; 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. During the course of the semester students will also be required to attend meetings and/or make presentations to the general public in the evenings after typical studio hours. Every attempt will be made to schedule these required meetings well in advance to facilitate your schedules. In addition, 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 half (5%) letter grade reduction of the semester's final grade. Each additional unexcused absence, after the first two, will result in an additional half (5%) 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.

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. 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 **Course Schedule**: The attached course schedule is tentative in nature only and makes a "best guess" at how the semester will play out. It will likely evolve and change as the semester progresses but is provided to give you an initial overview of how the semester will be structured. **The schedule will change based on individual project needs.**

03.3 **Field Trips and Class Travel**: This course will also require a number of field trips, Saturday activities, out of class field work, attendance at public meetings, and one overnight (2 nights) trip to Columbus, Indiana. These field trips, work sessions, and meetings will take place both during and outside of regularly scheduled class times and will be required of all students. In extenuating circumstances, **if a student cannot attend a required activity outside of class time, arrangements must be made minimum of one week in advance of the scheduled activity**. All field work and/or field trips which take place during regularly scheduled class times will be required for all students.

The community partner and academic service learning nature of this course often requires work outside of class and spur of the moment trips. Every attempt will be made to make students aware of field trips with advanced notice but it may not always be possible to do so. It may also be necessary, depending on your own work ethic, efficiency, ability to complete work during class trips, etc. to travel on your own time to project sites in fulfillment of homework and course assignments. Tentative field trip and out of class work sessions dates, **subject to change** (additions and subtractions) include the following:

- **8/31, Wednesday**: Project Launch, Katke Golf Course (during class)
- **9/14, Wednesday**: Progress Presentations, Katke Golf Course (during class)
- **9/21, Wednesday**: Project Presentations, Katke Golf Course (during class)
- **9/23, Friday**: Project Launch, Eastern Elementary, Grand Rapids, MI (may extend beyond class)
- **10/01, Saturday:** Community Meeting, Eastern Elementary, Grand Rapids, MI (time TBD)
- **10/11, Tuesday**: Mecosta Youth and Family Center, Mecosta MI (2 – 5ish TBD)
- **10/19, Wednesday**: Progress Crit, Eastern Elementary (during class – likely on campus)
- **10/19-10/21, Thurs – Sat**: Columbus, Indiana (Including Ball State) Field Trip
- **10/25, Tuesday**: Mecosta Youth and Family Center, Mecosta MI (2 – 5ish TBD)
- **11/04, Friday**: Progress Crit, Eastern Elementary, Grand Rapids, MI (may extend beyond class)
- **11/11?, Friday?**: Final Public Presentations, Eastern Elementary, Grand Rapids, MI time and date TBD – will likely take place during an evening)
- **11/14, Monday**: Project Launch, Big Rapids, MI (during class)
- **11/30, Monday**: Progress Crit, Big Rapids, MI City Hall (during class)
- **12/9, Friday**: Crit Week Presentations, 9:00am – 1:00pm (On campus)

Please be aware that the standards for academic performance during the field trip are consistent with the requirements for class and are governed by Ferris State University policies. Students should also be aware that they may also be governed by the civil and criminal code of a particular jurisdiction. Field trip sponsor(s) and/or site owner(s) may also have separate requirements for faculty and students and in such cases will communicate those requirements. We all benefit from a classroom environment where differences of opinion, background and experience are respected. It is expected that students will be especially respectful, courteous and attentive during field trips and fieldwork visits. All program-sponsored travel is considered "class time" and is educational rather than recreational in its intent. Because the trips themselves can only offer an introduction to each site, students are encouraged to revisit on their own.

Private vehicles – When possible, university vehicles will be used for transportation, but in some instances private vehicles will be necessary for transportation to and from project site visits. For field trips and other class activities that require private vehicles be used for transportation, the official field trip will begin and end at the site. In these situations travel time to and from the site (as well as between sites if there is more than one) is not considered part of the official field trip. It is to be assumed that the owner's insurance of a private vehicle insurance will cover the driver and passengers.

Prior to travel on required field trips, students are to sign a Ferris State University *Assumption of risk and Release, Waiver, Discharge* form (Please see attached).

It is to be assumed that all field trips and site visits will be self-funded. When possible program funds may be used to offset expenses, but this cannot be assumed for all instances. Please plan accordingly.

03.4 **Assignments/Late Work**: There is a large amount of work to do in a short amount of time. You are admonished to not get behind. There won't be time to catch up. 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. Grade consideration will be based on the completion of all assignments, class participation and lab/studio time. Work turned in after the beginning of class or improperly prepared work will be considered late.

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 at which point it cannot be turned in. **Midterm and Final Project deadlines are mandatory – no exceptions – and late work will not be accepted.** All homework assignments and class projects must be completed with a passing grade in order to pass the course.

Assignments will typically be given in class and may, at my discretion, be available on Ferris Connect, Google+, or Google Drive **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.**

03.5 **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.

03.6 **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)

03.7 **University Classroom Learning Civility Clause**: In any environment in which people gather to learn, it is essential that all members feel as free and safe as possible in their participation. To this end, it is expected that everyone in this course will be treated with mutual respect and civility, with an understanding that all of us (students, instructors, professors, guests, and teaching assistants) will be respectful and civil to one another in discussion, in action, in teaching, and in learning.

In helping to create a respectful and healthy learning environment, all students are asked to abide by the following pledge:

Respect your fellow students

- Respecting the rights of others to express their views, regardless of what you may think of them.
- Respecting the rights of others by voicing your own observations in a clear, concise and precise manner, and by not dominating the conversation.
- And adhering to common courtesies and civilities, such as coming to class on-time, turning off cell phones, listening and not talking while others "have the podium," etc., in short, "do onto others as you would have them do to you."

Should you feel our classroom interactions do not reflect an environment of civility and respect, you are encouraged to meet with your instructor during office hours to discuss your concern.

03.8 **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.

03.9 **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 an introductory project, Midterm Project, and a Final Project.

This course will include open studio, lectures, desk critiques, field trips, field work, public and client meetings, 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 and the nature of our service leaning and community partner driven projects. 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 9 hours per week, the outside of class work time expected is a minimum average of 3 times contact time or 27 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).

03.10 **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 a time to be 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.

03.11 **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.

03.12 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.

03.13 **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 form 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.

03.14 **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 will involve 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

03.15 **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.

Student Organization: Throughout the semester, students will be required to keep a sketchbook as noted above. Your sketchbook will act as a journal in which you are required to keep studio thoughts and ideas (sketches, drawings, notes, articles, photos, xeroxes). The journal is crucial to reflective thinking and a vital record of key concepts and explorations considered in your project. The sketchbook should be no less than 8 ½" x 11" minimum but not so large that it cannot easily fit into an average backpack. Students should have their sketchbook/journal available in class everyday (Tsubaki, 2007). You may want to use your sketchbook to record notes and instructions given in class. A sketchbook can be used as a diary to document your sketching progress and as a catalog of architectural interests that you may want to recall for future use.

Documentation of one's work is a critical aspect of being a professional and building a career. In many ways, the documentation is the culmination of the design process and the final manifestation of the work itself. It is, ultimately, the only thing that survives. Successful people are organized and have information available when they need it. I will note and grade you on your organization throughout the semester.

03.16 **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 desks 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 may FAIL the course.**
- **Cutting on, or damaging your 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**

04.0 Other

04.1 **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. (For our program this is the Director of the School of Built Environment – **Dr. John Schmidt. E-mail Address: JohnSchmidt@ferris.edu, Office Location: 227A Granger Center, Office Phone: 231-591-5283**.) 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

04.2 **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 is 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.
- 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 can be reached at 591-3543.

04.3 **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.

04.4 **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

05.0 **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:

http://www.ferris.edu/htmls/colleges/artsands/DeptLink_desc.cfm?DeptLinkID=53&DepartmentID=3misconduct

05.1 **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/

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

05.2 **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 are 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/)

06.0 Syllabus Changes

06.1 **Course Changes:** As he sees fit, the professor reserves the right to make changes to this syllabus and the course format, structure, requirements, etc. 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.

SYLLABUS ATTACHMENT
COLLEGE OF ENGINEERING TECHNOLOGY – FERRIS STATE UNIVERSITY
FALL 2016

IMPORTANT DATES		
Late registration	Wed. – Fri.	Aug. 24 – 26
First day of classes	Monday	Aug. 29
Last day for Drop/Add	Thursday	Sept. 1
Labor Day (no classes)	Monday	Sept. 5
Mid-term grades due	Monday	Oct. 17
Last day for "W" grades	Thursday	Nov. 3
Thanksgiving recess begins (no classes)	Wed (noon)	Nov. 23
Thanksgiving recess ends (classes resume)	Monday	Nov. 28
Last day of classes	Friday	Dec. 9
Examination Week	Mon – Fri	Dec. 12 – 16
Commencement	Saturday	Dec. 17
Final grades due by 1:00 pm	Monday	Dec. 19
Grades available to students on MyFSU	Tuesday (after 8AM)	Dec. 20

Sessions	Dates	Last Day to Withdraw
Full Session	Aug. 29 – Dec. 9	Nov. 3
Session A	Aug. 29 – Oct. 18	Sept. 29
Session B	Oct. 19 – Dec. 19	Nov. 18
Session D	Aug. 29 – Sept. 30	Sept. 19
Session E	Oct. 3 – Nov. 3	Oct. 21
Session F	Nov. 4 – Dec. 9	Nov. 28

College of Engineering Technology School Offices		
Automotive &Heavy Equipment	AUT 101	591-2655
Built Environment	GRN 227	591-3773
Engineering & Computing Technology	SWN 312	591-2068
Design & Manufacturing	NEC 211	591-2640
Dean's Office	JOH 200	591-2890

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, 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 201. 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.

STUDENT COMPLAINT POLICY
http://www.ferris.edu/HTMLS/administration/academicaffairs/Forms_Policies/Documents/Policy_Letters/AA-Student-Complaints.pdf

GRADUATION
Students should apply for their degree audit the semester prior to the degree completion term. To obtain a degree audit and clearance for your associate or bachelor degree for you must meet with your assigned academic advisor. In addition an online graduation application is REQUIRED and deadlines will be ENFORCED per the Provost's Office and Records Office. **ONLINE APPLICATION DEADLINE** for participation in Fall Commencement Ceremony: **OCTOBER 1, 2016**

Online application is accessed by logging into your MyFSU, (click on Student tab, My Records link, Degree Progress and Graduation, Apply to Graduate link). For more information, contact the Dean's Office.

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 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 Engineering Technology 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 Engineering Technology 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.

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, log in to MyFSU, (click on the Student tab, My Registration, Advisor Information, Select Term, Submit).

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 are in immediate crisis, call 911.***

EDUCATIONAL & CAREER COUNSELING ……STR 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.

CAREER SPECIALIST – Leigha Compson ……JOH 200 – 591-3549

Valuable support services and events are offered for students currently or previously enrolled in associate degree programs. To lean more visit: http://www. ferris.edu/HTMLS/colleges/technolo/ Career-Programs-Support/index.htm

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 – 5:00 p.m.
Sunday . . . . . .1:00 p.m. – MIDNIGHT
Extended Studies Court will begin late night hours September 13, 2016
*Sunday-Thursday/MIDNIGHT to 7:30 a.m. *Friday/6 p.m. to MIDNIGHT
*Saturday/5 p.m. to MIDNIGHT)

FSU BOOKSTORE……UNIVERSITY CENTER 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

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-_____.

Arts & Sciences/General Education 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

College of Engineering Technology Diversity Statement

The College of Engineering Technology provides a dynamic experiential learning environment that is inclusive, equitable and just for all individuals, regardless of human differences.

Ferris State University is an equal opportunity institution. For information on the University's Policy on Non-Discrimination, visit http://www.ferris.edu/non-discrimination

Updated 8.18.2016 alm

arch Design III

Ferris State University
College of Engineering Technology
Department of Architecture and Facility Management
Arch 441: Architectural Design III – Section 211 – Fall 2016

07.0 Course Syllabus Signature Form

07.1 Student Name: _____

07.2 I have read and understand all of the policies and procedures laid out in this syllabus.

I understand in particular that plagiarism or cheating of any kind will result in an automatic zero on the assignment, and/or the course, with referral for administrative discipline. I am aware that all deadlines must be maintained. Assignments are due at the beginning of class as assigned unless noted otherwise by the professor. Late work will receive one full letter grade deduction if turned in within one week of the assigned due date, after which it cannot be turned in. All homework assignments and class projects must be completed with a passing grade in order to pass the course. Final project deadlines are mandatory – no exceptions. I am expected to attend class and that doing so will result in a deduction of my grade per course policies. If I miss class, it is my responsibility to get the assignment from the Professor or another student– work from a missed class will be due as assigned in class unless noted otherwise. It is my responsibility to regularly save and back up my work. Lost or corrupt digital files are not acceptable reasons for not turning in assignments on time.

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.

07.3 Student Signature: _____ Date: _____

Witness: _____ Date: _____

Ferris State University | College of Engineering Technology | Architecture & Facility Management

ARCH 499—Architectural Design 4

Basic Information

Class Hours:	Monday 1-5:50pm
	Wednesday 1-4:50pm
Room:	Swan 226
Credit Hours:	5
Contact Hours:	3 lecture hours
	6 studio hours
Prerequisites:	ARCH 441

Instructor

Christopher Cosper, Assistant Professor

Phone:	231-591-3113
Email:	cosperc@ferris.edu
Office:	Johnson Hall 216

Student hours: Tuesday 2-4pm
Wednesday 9-11am
By appointment

Course Description

A capstone course that comprehensively addresses a real world architectural problem in its social and environmental context. Students will focus on the detailed development of a specific architectural problem integrating knowledge, skill and content gained in previous courses. Projects require students to consider issues of building science, environmental responsibility, and community planning.

Learning Outcomes

Students satisfactorily completing this course will:

1. Define the capstone design problem in terms of spatial, environmental, and community needs based on input from a client community.
2. Demonstrate research and documentation skills.
3. Develop design solutions that integrate programmatic issues in a manner that demonstrates quality design, technical competence, sensitivity to context, while integrating techniques and technologies that sustain the environment throughout the building's life cycle.
4. Prepare professional quality oral and graphic presentations .

Texts

As selected by students

Some simple rules for doing well in this class*

1. Take charge of your education—this is a capstone course
2. Show up for class (only three unexcused absences are allowed)
3. Meet every deadline with quality work
4. Check your Ferris email every day—I will use it to communicate to you
5. Don't cheat—this includes claiming someone else's idea as your own

* See the Syllabus Addendum on Blackboard for the full set of terms and conditions

Schedule

Date	Activity	Note	Date	Projects
Jan 9	Course Introduction	Review programs from ARCH 421	09	
Jan 11	Field trip to GR (tentative)		11	Portfolio slideshow (alt.)
Jan 16	**MLK (no class)**		16	
Jan 18	Portfolio presentations		18	Portfolio slideshow due
Jan 20 (Fri)	Visit Hamilton Anderson (Detroit)	with Mark Farlow	20	Project overview ready
Jan 23	Research presentations		23	Research/competition due
Jan 25	Case study presentations		25	Case studies due
Jan 30	Crit/work day		30	Reading list due
Feb 6	Crit/work day		06	SD code review
Feb 10 (Fri)	Schematic design review	with Mark Farlow	10	Schematic design due
Feb 24 (Fri)	DD progress review (tentative)	online with Mark Farlow	24	DD progress due
March 1	Abbreviated class	Cosper out mid afternoon	01	
March 6-10	**Spring Break (no class)**		Var.	
March 15	Crit/work day		15	DD code review
March 29	Possible abbreviated class	Cosper out mid afternoon?	29	Reading summary due
April 7 (Fri)	Desk Crits	with Mark Farlow	07	DD final due
April 17	Crit/work day		17	Preliminary board design due
April 28 (Fri)	Final Reviews	with Mark Farlow	28	Project due
May 3 (Wed)	Final Exam period 12-1:40pm	Studio clean-up and debrief	03	Final boards due

Point values	
Portfolio slideshow	25
Project overview	50
Research	50
Competition (Blackboard discussion board)	25
Case studies	50
Reading list	25
SD code review	25
Schematic design	50
DD progress	50
Reading summary	100
DD code review	25
DD final progress (April 7)	100
Preliminary board design	25
Final project (including boards)	400
TOTAL	1000

Please note:

1. As per the syllabus addendum, I reserve the right to raise or lower a final grade as much as one letter grade to reflect circumstances not properly addressed by the numerical grading system.
2. It is essential that the capstone project be of the highest quality of which a student is capable. Thus, a student must pass the final project in order to pass the class (i.e. an "F" on the final project grade will result in an "F" in the class).

I was interested in doing my job better and being great. Not good...great. Whatever it took, I was in. Now, if you don't have raw talent, you can't will yourself there. But if you have the talent, then will, ambition and the determination to expose yourself to new thoughts, counterargument, new influences, will strengthen and fortify your work, driving you closer to home. —Bruce Springsteen

Ferris State University | College of Engineering Technology | Architecture & Facility Management

Syllabus Addendum — ARCH 119, 362, and 499

Spring 2017 — **Prof. Cosper**

Basic Information

Instructor: Christopher Cosper, Assistant Professor | phone: 231-591-3113 | email: cosperc@ferris.edu
Office: Johnson Hall 216
Student Hours: Tuesday 2-4pm, Wednesday 9-11am, and by appointment

Course Description

See syllabus

Student Learning Outcomes

See syllabus

Course Materials & Administration

Texts

See syllabus

Materials

See syllabus

Class Hours & Attendance

Want to pass your classes and graduate on time? The easiest, simplest route to success is attending every class and turning in work on time.

Exceeding the allowed number of unexcused absences may lower your final grade by as much as one letter grade (e.g. final grade is an 'A' but your reported grade will be a 'B' due to absences). Being tardy during roll call or leaving early may result in an absence being recorded.

Excused absences include the following: approved university-related travel, illness, or a death in the student's immediate family. In all cases, the student must provide appropriate documentation (travel excuse form, signed doctor's excuse, or published obituary).

E-mail

Check your Ferris e-mail address daily; I will use it to communicate with you.

Students occasionally ask me grade-related questions via email. I have no objection to this; however, FERPA frowns on the use of email to discuss grades because email is not considered secure (which strikes me as somewhat paranoid). Thus, please consider your reading and accepting this syllabus as a waiver of FERPA in regards to email discussions of grades. If you prefer NOT to discuss grade-related questions via email, please provide a written statement to that effect during the first week of class.

Academic Misconduct

The general public has the right to expect competence and integrity from building industry professionals, including architects, construction managers, and facility managers. If you cannot do the work of this class on your own, you should seek another major or withdraw from the university.

You are encouraged to network with others in the class to help you clarify instructions and review lecture or class materials. However, do not confuse normal and healthy networking (very important to success in most organizations) with plagiarism or academic misconduct. If the instructor is convinced academic misconduct has occurred, a range of remedies is available, including reporting the misconduct to appropriate university administration officials.

Specifically, representing someone else's work as your own will not be tolerated in this course. Examples include but are not limited to the following:

1. Submitting an assignment substantially created by another (using a current or former student's work).
2. Taking material from a published source and not documenting the source.
3. Modeling the language of your work after the examples in your textbook or any other text.
4. Obtaining or attempting to obtain access to an exam or quiz prior to its being given.

Course Schedule

The course schedule gives all of us a way to plan for other classes and deadlines. Please let me know during the first week of class if you have any conflicts between due dates in other classes and this schedule. Events occasionally occur which require a change in the class schedule. Thus, I reserve the right to change the schedule at any time.

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.

Each student will be treated with respect. Each student is expected to respect all others in the classroom. A student is responsible, 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 in the Student Handbook). Disruptive students will be removed and only allowed to return at the discretion of the instructor.

Use of profanity, tobacco products, or sexually suggestive or profane clothing in the classroom is not allowed.

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.

Cell Phones and Other Distractions

If you need to do something more important than this class, please do it. If you are in the classroom, you should give your full, professional attention to the material. Please turn off all cell phones and other communication devices during lectures or other group time.

Religious Holidays (university 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 the day(s) of religious observance. Upon formal notification, the faculty will excuse the student from class, labs, and clinics for the holiday(s) and allow the student to make up missed exams; however, the student is responsible for completing all missed work within a reasonable time as determined by the faculty.

Requests for absences 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 his or her discretion. If the instructor approves such an absence, the student is responsible for completing 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.

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.

Course Requirements and Grading

Class Period

The class period will consist of lectures, informal discussions, group and individual crit times, and/or work time. Lectures are designed to highlight critical information and major points. Crit days may include the introduction of project concepts or the demonstration of properly completed assignments. Some class time may also be used for review and critique of projects.

Readings (if applicable—see syllabus)

Reading assignments from the textbook are shown on the course schedule. The content of the readings will be critical to your success in the class. Readings should be completed before class on the scheduled day.

Projects and/or Papers (if applicable—see syllabus)

Projects are exercises in which you take knowledge from the readings and the lectures and apply this knowledge to specific problems. Papers require you to research a subject to a year-appropriate level of detail.

Late Assignments

Unless otherwise stated, assignments are due at the beginning of class on the due date.

Assignments will be accepted one class period late without a penalty if the assignment is accompanied with documentation showing a legitimate reason (i.e. a valid university excuse) for the late work. A one-letter grade penalty will be assessed if the assignment is submitted one class period late without appropriate documentation.

Assignments will not be accepted more than one class period late without significant documentation and discussion with the instructor. Submit assignments early if you must be away from campus on an authorized school trip.

Grading

The point values for the projects are given in the syllabus to help you calculate your grade and track your progress. However, situations may occur during the semester that require an adjustment to the number and type of assignments. Thus, I reserve the right to change the number, type, and point value of assignments.

Grades may be reported on a returned assignment, a printed grade sheet, via Blackboard, or a combination of the previous methods. I may or may not use Blackboard to calculate final grades, so I will not necessarily report every grade there.

I reserve the right to raise or lower a student's final grade by as much as one letter grade to reflect circumstances not properly addressed by the numerical grading system.

Definition of Grades

Letter Grade	Term	Numerical Range	Definition
A	Excellent	90-100	• Advances CET standards • Challenges conventional design knowledge, techniques, management, and/or practice • Provokes questions and brings new insights to problem • Shows a degree of competence and professionalism significantly above expectations
B	Good	80-89	• Above CET standards • Advances conventional design knowledge, techniques, management, and/or practice • Beyond competent; solves the problem with a high degree of skill
C	Satisfactory	70-79	• Acceptable to CET standards • Within conventional design knowledge, techniques, management, and/or practice • Competent solution to the problem
D	Poor	60-69	• Below CET standards • Misapplies or ignores conventional design knowledge, techniques, management, and/or practice • Solves only some parts of the problem
F	Failure	0-59	• Unacceptable to CET standards • Demonstrates little or no awareness of or regard for conventional design knowledge, techniques, management, and/or practice • Not competent
F-0	F-Zero	0	• No work

Mary E. Brayton, AIA, LEED Green Assoc.
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

Grand Rapids Junior College - Grand Rapids, Michigan
Associates in Art, 1982

Ferris State University – Big Rapids
College of Arts and Sciences
Associates in Applied Science in Ornamental Horticulture Technology, 2008

TEACHING EXPERIENCE

Ferris State University, Big Rapids, Michigan
Architectural Technology and Facilities Management Programs
Professor, 2009 - Present

Ferris State University, Big Rapids, Michigan
Architectural Technology and Facilities Management Programs
Associate Professor, 2004 - 2009

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 (Prior to 2011)
Arch 102 – Architectural Digital Graphics (After 2011)
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
Arch 350 – Site Design
Fman 432 – Principles of Interior Architecture

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

- McGraw-Hill Construction Continuing Education Center
  - Multi-Slide Glass Doors, November 17, 2016
  - Performance Matters!, July 27, 2016
  - Disruptive – and Green, July 26, 2016
  - Building Materials Matter, July 25, 2016
  - Pushing the (Brick) Envelope, July 25, 2016
  - Masonry and LEED V4, June 17, 2016
  - Fenestration: Solving Renovation Issues, June 13, 2016
  - Moving Masterworks, June 8, 2016
  - The Health and Design Benefits of Accessing Daylight and Views with Dynamic Glass, June 5, 2016
  - Twenty-First Century Schools Are Green, June 4, 2016
  - Sustainability, Modular Design, and BIM, June 4, 2016
  - Where Zero is the Top Score, May 30, 2016
  - Poppers and Floppers and Porches, Oh, My, May 29, 2016
  - Building Integrated Photovoltaics, May 27, 2016
  - NSF/ANSI 347: The Architect's Guide to Specifying Sustainable Single-Ply Roofing Membranes, July 7, 2015
  - Green Building and Wood Products, June 16, 2015
  - High-performance Coatings for Commercial applications, June 11, 2015
  - Using 3D Printers to Create Architectural Models, June 9, 2015
  - Building Information Modeling as a Design Process, June 3, 2015
  - Adapting to New Environs May 25, 2015
  - Folding Glass Doors are an Asset for Commercial Spaces, May 31, 2015
  - Stone Wool Acoustical Ceilings, September 30, 2014
  - Sculptural Skins, September 29, 2014
  - Nuanced Solutions for Greener Facades, September 26, 2014
  - The Engineering of Art, August 30, 2014
  - Going with the Flow, June 5, 2014
  - BIM Comes to Masonry, May 31, 2014
- Continuing Education – Hanley Wood University
  - Modern Building Codes: Keeping Pace with the Wood Revolution, Aug 07, 2016
  - Mid-Rise Wood Construction: A Cost-Effective and sustainable Choice for Achieving High-Performance Goals, Aug 04, 2016
  - Residential Water Heaters under the New 2015 Federal Standards, July 1, 2015
  - Sustainability and Glass Facades, June 30, 2015
  - Learning Can Happen Anywhere, May 28, 2015
  - Glass Block: High Performance, Sustainable Design & Daylighting, May 21, 2015
  - Rethinking Wood as a Material of Choice, May 21, 2015
  - Specifying Sustainable Insulation for Thermal and Acoustic Control, August 26, 2014
  - Innovations in HVAC Design, May 28, 2014
- 2015 Course Design Institute
  - Ferris State University, Faculty Center for Teaching and Learning
  - Retention and Student Success
  - June 15-18, 2015
- AIA 2014 Design Retreat
  - American Institute of Architects, Torch Lake, MI
  - Sessions attended:
  - 21st Century Higher Education Buildings
  - Adaptive Reuse of Historic Buildings
  - Community Places/ Community Spaces
  - Exploring Small Projects
  - September 20, 2014

- AIA 2014 National Convention
  American Institute of Architects, Chicago, Illinois
  Seminars attended:
  Evidence-based Lighting
  Creating Superior Acoustic Environments
  New Hybrid Drawing Techniques for the Design Process
  Designing Climates
  Timber Structures and Sustainable City Design
  Daylighting and Energy Optimization with Automated Shades
  June 25 - 26, 2014
- 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?

Christopher L. Cosper

18890 205th Avenue, Big Rapids, MI 662-418-5960 email: cosperc@ferris.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

Scholarship

Publications

- "At the Vital Center: The Small Town Studio at Ferris State University"—places the work of the STS in the context of *Building Community*, the latest major third party review of architectural education, which was authored by Ernest L. Boyer and Lee Mitgang. Co-authored paper with Paul W. Long (2017).
- "FM Scholarship in the University Community: Building on Boyer and Schön"—argues that Boyer and Schön provide an appropriate intellectual framework for FM scholarship. Presented at the 2016 World Workplace Conference, sponsored by the International Facility Management Association (IFMA). Scheduled for publication in the conference proceedings (2017).
- "The expert mind in the age of junk data"—examines the use and misuse of big data in the field of architecture, arguing that the expert mind of the architect is uniquely positioned to distinguish valuable data from junk data. Published in *Cogent Social Sciences* (2016).
- "Enriching Architectural Scholarship by Building on Boyer"—explores Boyer's seminal 1990 report *Scholarship Reconsidered* and its potential impact on architectural scholarship. Presented to the 103rd Annual Meeting of the ACSA and published in the proceedings (2015).
- "Fort Maurepas: Five Manifestations of Power on the Mississippi Gulf Coast"—explores the history of Fort Maurepas through the lenses of colonial power, memory, heritage, nature, and democracy. Presented to the University of Oklahoma Creating_Making Forum and published in the proceedings (2014).
- "Evaluating the Implementation of Lean Construction into a University Curriculum"—examines three curricular options for integrating Lean Construction principles into a

building construction curriculum: a lecture or "silo" class, a studio, or a special summer class. Coauthored with Tom Leathem. Published in the proceedings of the 2013 Associated Schools of Construction Conference (2013).

- "The Client-Based Studio: Meeting Pedagogical Needs and Serving the Community"—argues that reality-based projects with real clients do not inhibit students' creativity. Presented to the University of Oklahoma Creating_Making Forum and published in the proceedings (2011).

Invited Presentations

- Presented keynote address titled "Scholarship Reconsidered? Ernest L. Boyer and a Broader Concept of Scholarship" at the Louisiana State University (LSU) College of Art + Design Faculty Retreat (January 2016).

Poster Presentations

- "Teaching Today's Master Builder: A Collaborative Studio in Architecture and Construction Management"—a poster presentation based on a collaborative studio taught with Alexis D. Gregory and Emily M. McGlohn. Presented to the 50th Annual International Conference of the Associated Schools of Construction (2014).

Other Papers

- "Not drowning in nostalgia: Diversity of design in post-Katrina Mississippi"—examines the aesthetic impact of the Mississippi Renewal Forum by proposing TOMAS, the Traditional or Modern Analysis Scale, which ranks buildings from one (most traditional) to five (most modern) using a clear set of descriptions and exemplars from post-Katrina projects.
- "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.
- "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 the destroyed replica.
- "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.

Service

Committee Work

- Graduate Studies Committee (December 2016-present)
- Chair of the Senate Library/Historical/Archival Committee (October 2015-present)
- School of Built Environment (SBE) Curriculum Committee (December 2013-present)
- Architecture & Facility Management Program Curriculum Committee (August 2013-present)

Other Service

- Student Advising (August 2014-present)
  - Currently advise 17 students
- Student Recruiting (August 2013-present)
  - Participate in Ferris Dawg Days recruiting events
  - Participate in Chicago Architecture + Design College Day
- Associated Schools of Construction (ASC) Region 3 Competition—coached design-build team with Suzanne Miller from Construction Management (September 2014-present)
  - Third place (2016)
  - Second place (2015)
- Associated Schools of Construction (ASC) Region 2 Competition—coached teams in 2012 and 2010

Teaching Experience

Ferris State University, Big Rapids, MI
Assistant Professor, August 2013-present

- ARCH 101—Architectural Graphics. Reworked existing class to emphasize creativity over mimicry. At the same time, met course outline requirements to introduce specific graphic techniques and conventions.
- ARCH 119— Sustainability in Architecture: Introduction. Created new lecture-based course to address the lack of sustainability in a degree program titled "Architecture & Sustainability." Used the Turning Technologies classroom response system (clickers) and peer instruction to promote student engagement and to provide weekly assessment.
- ARCH 241—Design Principles. Developed unique approach to material based on course outline and class schedule provided by colleague. Experimented with new (to me) projects, including the "Recycled Runway," which required students to create garments from recyclables.
- ARCH 290 (now ARCH 242)—Architectural Design Principles. Developed new course based on course outline. Created projects focused on design principles as described in Ching's *Architecture: Form, Space & Order*. Adjusted course based on projects given in prerequisite class (ARCH 241).
- ARCH 361—Environmental Systems 1. Developed course based on course outline. Revised course content so ARCH 361 covers passive building systems. Used the Turning Technologies classroom response system (clickers) and peer instruction to promote

student engagement. Introduced a new energy modeling project.

- ARCH 362—Environmental Systems 2. Adapted previously taught material (Electrical Systems and Active Building Systems) based on Ferris course outlines. Revised course content so ARCH 362 covers active building systems. Added field trips, guest speakers, and active exercises to augment lecture-based content delivery.
- ARCH 421—Contemporary Issues. Devoted first half of semester to theoretical foundations, recognizing that Ferris has no other theory course. Devoted second half of semester to "contemporary issues," including the role of women in architecture. For the final project, required students to program and develop an idea-based research agenda for their capstone projects, which they will design during the spring semester.
- ARCH 499—Architectural Design 4. Worked with visiting professor to develop program options for capstone design course. Balanced need for students to work in a self-directed manner with their ability to do so.
- CONM 116—Construction Graphics. Taught class to help Construction Management program, which is short staffed. Followed course as designed by Suzanne Miller. At appropriate opportunities, discussed relationship of architects and constructors.
- FMAN 489—Capstone Research. Co-taught one-hour FM research course with Diane Nagelkirk. Developed lectures to help students understand the research process. Worked one-on-one with students to develop their specific research agendas.
- FMAN 499—Capstone Thesis. Co-taught course with Diane Nagelkirk. Managed group of advisees as they worked on their capstone theses or capstone projects. Helped students with individual questions or problems. Developed a series of lectures concerning evidence and writing.

Mississippi State University, Starkville, MS
Visiting Assistant Professor and **Instructor,** August 2006-May 2013

- ARCH 1536—Architectural Design I-A (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.
- ARCH 2536—Architectural Design II-A. 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.
- ARCH 3546—Architectural Design III-B. Worked with studio coordinator and other instructors to develop course content. Developed plan for final reviews to address student and faculty concerns.
- ARCH 3723—Active Building Systems. Revised course content to better coordinate with Passive Building Systems course. Integrated course content into Third Year Design Studio. Used eInstruction audience response system (clickers) to improve content delivery.
- ARCH 4536/4546—Architectural Design IV-A/B (Fourth Year EDI Design Studio). Created collaborative studio with the College of Education, School of Architecture, Educational Design Institute (EDI) in 2008 plus the Interior Design Department in 2010. Emphasized planning, programming, code reviews, and architect-client interaction.
- ARCH 4536—Architectural Design IV-A. Designed content of course. Adjusted pedagogy to reflect strengths and weaknesses of class. Designed collaborative project with Interior Design.
- BCS 1116—Building Construction Studio A. Designed new course to introduce incoming

freshmen to studio-based learning and professionalism. Incorporated an introduction to BIM into course.
- BCS 2226—Building Construction Studio 2. Worked with architecture faculty to develop joint tectonic studio. Emphasized construction means and materials, construction sequencing, scheduling, and cost estimating.
- BCS 3213—Electrical Systems. Redesigned course to examine advanced building systems and to complement concepts learned in the prerequisite course, Active Building Systems. Emphasized construction-phase issues.
- BCS 4126—BCS Studio VI. Taught 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.
- ID 2103—CAD for Interior Design. Adjusted established course content to meet needs of first year students.
- ID 3633—Detailing and Construction Documents for Interior Design. Designed course content, starting with a basic outline. Developed new projects and lectures. Integrated class project with students' studio field trip to Atlanta.

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.

Continuing Education

- 2016 ASC Region 3 Conference (October 2016). Attended construction tour of an apartment project and heavy civil (bridge and viaduct) project.
- 2016 International Facility Management Association (IFMA) World Workplace (October 2016). Attended keynote speeches and academic paper session.
- Crystal Lameman Wege Foundation Lecture (April 2016). Attended lecture focused on environmental degradation in Canada.
- Designing Online Courses (February 2016-April 2016). Participated in an online course developed by the FCTL focused on designing online courses.
- Teaching the Research Process (April 2016). Attended research program presented by FLITE.
- 2015 ASC Region 3 Conference (October 2015). Attended construction tour of apartment project and civil project (Chicago Riverwalk).
- Junior Faculty Fellows Program (October 2014-October 2015). Researched history of energy modeling in architecture schools. Developed new energy modeling project for ARCH 361, which was deployed Fall 2015.

- Harvard Design: Chicago (October 2015). Attended curated museum tour, four panel discussions, and a tour of five recent projects. Sponsored by the Harvard Graduate School of Design.
- Edward Mazria Lecture (April 2015). Attended lecture sponsored by the Wege Foundation.
- ACSA 103rd Annual Meeting (March 2015). Attended walking tour, four paper sessions, and Topaz Medallion keynote.
- Click, Click, Boom! (January 2015-April 2015). Examined the use of an audience response system (clickers) and peer instruction in the classroom, which I have integrated into ARCH 119, ARCH 361, and ARCH 362.
- 2014 Creating_Making Conference (November 2014). Attended five keynote addresses, four paper sessions, and an architectural tour of a Bruce Goff house and an Oklahoma City office building.
- ASC Region 3 Conference (October 2014). Attended downtown Chicago construction tour and paper presentations.
- MyDegree New User Training (August 2014). Ferris-sponsored training session focused on advising software.
- Congress for the New Urbanism (CNU) 22 Conference (June 2014). Attended conference sessions and made contacts relevant to my research on the Mississippi Renewal Forum.
- Reflection & Reconstruction—Improving the Classroom (April 2014).
- Associated Schools of Construction 50th Annual Conference (March 2014).
- The Scholarship of Teaching and Learning (March 2014).
- Integrating FLITE Resources…into Your Teaching (February 2014). Ferris-sponsored training session focused on library resources.
- Getting Inside Your Student's Heads – Literally! (February 2014). Ferris-sponsored session that looked at education from a student's perspective.
- Using Socratic Questioning to Develop Critical Thinking (January 2014). Ferris-sponsored session that examined ways to better probe students' knowledge in a lecture-style class.
- Presentation ZEN (November-December 2013). Ferris-sponsored session that focused on improving PowerPoint presentations
- Active Learning Strategies (November 2013).
- Learner-Centered Teaching (November 2013.
- ARCH 361 Guest Speaker: Kara Pellerito (October 15, 2013). Kara discussed Ferris State's efforts to reduce energy and water consumption on the Big Rapids campus.
- New Faculty Transition Program: Motivating Students (October 10, 2013). Julie Rowan discussed the Expectancy Theory of Motivation and presented several concrete ways instructors can encourage their students.
- Kendall Lighting Center field trip (October 8, 2013). With my ARCH 361 class, I toured the Kendall Lighting Center, seeing demonstrations of lamps (i.e. light bulbs), lighting control systems, outdoor lighting, and high-bay lighting.
- Architectural Film Series: *Unfinished Spaces* (October 2, 2013). Watched documentary that traced the design, construction, abandonment, and partial completion of Cuba's National Arts Schools.
- Alden B. Dow Home and Studio tour (October 2, 2013). With my ARCH 241 class, I toured the Alden B. Dow Home and Studio. Points of emphasis included Dow's use of color and texture.
- Meyer May House tour (September 26, 2013). With my ARCH 101 class, I toured the Frank Lloyd Wright designed Meyer May House in Grand Rapids. The tour included a

film which documented the extensive restoration of the house.
- James Timberlake lecture (September 25, 2013). I attended the James Timberlake lecture sponsored by the Grand Rapids AIA. Points of emphasis included the increasing technical complexities of practice and how the firm of Kieran Timberlake addresses those complexities.
- Active Listening: Seven Ways to Help Your Students Listen, Not Just Hear (September 13, 2013). Brooke Moore discussed seven strategies to engage students, and the audience worked in teams to expand upon those strategies.
- New Faculty Transition Program: Assessment of and Feedback on Student Learning (September 12, 2013). Professor Matt Wagenheim shared his experience with assessment, both at the classroom and university levels.
- Wiley Plus and Blackboard Integration (September 10, 2013). Wiley, arguably the most important publisher of architectural textbooks, demonstrated their electronic resources available through Blackboard.
- New Faculty Orientation Week (August 12-16, 2013). Attended all relevant sections, including numerous sections design to improve teaching effectiveness.

Work Experience

Ferris State University, Big Rapids, MI
Assistant Professor, Architecture & Facility Management, August 2013-present

- Full-time tenure-track position focused on teaching.
- Research agenda currently includes the following:
  - The challenges of integrating structural and environmental building systems into design studio classes
  - The effect of slowing population growth on the built environment
  - The role of big data in architecture

Mississippi State University, Starkville, MS
Visiting Assistant Professor, Building Construction Science, August 2012-May 2013

- Full-time position focused on teaching and research.
- Taught BCS courses including BCS Studios and Electrical Systems.
- Applied 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-July 2013

- Worked 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

- 2013 ASID South Central Region Gold Design Award for Adaptive Reuse—The Lofts at Central Station (with Lyndsey Miller, Interior Designer)
- 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

Intermediate skill level

- Adobe Premiere
- Revit
- SketchUp

Registration

- Registered architect, Michigan #1301061307, 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 (2000-2013). Worked with other club members in the Humphrey Coliseum concession stands to raise money (typically more than $50,000 annually) for local charities.

Interests

- Reading, bicycling, backcountry hiking, gardening

FERRIS STATE UNIVERSITY
College of Engineering Technology
School of Built Environment
Architecture and Facility Management Department

FMAN 322 SYLLABUS
Spring 2017

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: Overview of facility project management concepts, phases, and processes. Course topics include: development of project plans and teams, sequencing of activities, development of schedules, estimating of resources, coordinating and monitoring of facility projects, and review of project delivery methods and contracts.

Credit Hours: 3
Contact Hours: 3 lecture hours
Prerequisite: FMAN 321
Required Text: Heldman, Kim; *Project Management: Jump Start*, 3rd Edition; Wiley Publishing, 2011.
Recommended Text: Construction Specifications Institute; Project Delivery Practice Guide; Wiley Publishing, 2011.
https://books.google.com/books?id=KTdF1J947h0C&printsec=frontcover#v=onepage&q&f=false

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, renovation, and relocation projects.
5. Demonstrate effective communication in the following areas: writing, speaking, presentations, and small group interaction.
6. Produce project plans using various facility management and project management software.

Units of Instruction:

		Time Weight: Lecture Hours
I.	Course introduction	1.5
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 and managing risk	1.5
X.	Coordination of consultants	1.5
XI.	Estimating and budgeting	3
XII.	Purchasing and contract administration	3
XIII.	Controlling and monitoring the project	1.5
XIV.	Closing the project	1.5
XV.	Project Delivery	3
XVI.	Construction, renovation, and relocation management	3
XVII.	Ethical responsibilities	1.5
XVIII.	Evaluation	3
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. When using laptops it is expected that students are taking notes for the class, rather than internet surfing, working on other classes, emailing, etc.

Idea of the Week:

This is an option for extra credit. It is a verbal and visual report to the class on a topic that is related to the course. The topic should be an idea or development of current interest that effects project management (sustainability, project process and delivery, etc.).

The topic and scheduling require advance approval. Presentations will be made at the start of class on the agreed date. One presentation maximum per student per semester.

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 both of us. 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.

Course Evaluation:

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 (8 @ 25 points)	200 points (**NO MAKE-UP QUIZZES**)
Assignments (individual and team)	400 points
Final Project	100 points
Attendance/participation/effort	100 points
Total	**1000 points**

Grading Scale:

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

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 most 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.

Reservation Statement:

I reserve the right to make adjustments to this syllabus and the course schedule as needed and appropriate.

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:	**M**onday & **W**ednesday 2:30 – 3:30 pm, **T**uesday & Thu**R**sday 1:00 -1:50 pm, Other times available by appointment.
Telephone:	Office: 591-3584 Home: 231-592-0570 (until 10:00 PM only)
Email:	braytonm@ferris.edu

REQUIRED TEXT: The Fundamentals of Interior Design, 2nd Edition, Dodsworth; Fairchild Books, Bloomsbury 2015
Basics Interior Architecture 05, 2nd Gagg, AVA Publishing, 2012

REFERENCES: Human Dimensions and Interior Space; Panero & Zelnik
Time-saver Standards for Interior Design and Space Planning; De Chiara, Panero, & Zelnik. McGraw-Hill, 2001

ADDITIONAL MATERIALS: Instructor prepared handouts.
Drafting Equipment plus

- Colored pencils
- 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.	Lighting for interiors	2	2
IX.	Interior materials and components	2	2
X.	Architectural systems and interior finishes	4	8
Xl.	Furniture, furnishings and equipment	4	8
Xll.	Current trends and topics	2	
Xlll.	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 ordering systems to meet client and program needs.

IV. Color in Interior Design
- Define and 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
Project 1	100 Points
Project 2	100 Points
Project 3	100 Points
Code Research	50 Points
Project 4	100 Points
Sustainability Exercise	50 Points
Final Project	200 Points
Tests	100 Points
Total	+/- 1000 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 percentage 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.feris.edu/htmls/colleges/university/disability/.

Any student registered with Disabilities Services should contact the instructor as soon as possible for assistance with classroom accommodations.

SYLLABUS ATTACHMENT
COLLEGE OF ENGINEERING TECHNOLOGY – FERRIS STATE UNIVERSITY
Spring 2016

IMPORTANT DATES		
Late Registration	Wednesday – Friday	January 7, 8, 9
First Day of Classes	Monday	January 11
Last Day for Drop/Add	5 pm Thursday	January 14
Martin Luther King Day (no classes)	Monday	January 18
Spring Recess Begins	Saturday	March 5
Mid-Term Grades Due	Monday	March 7
Spring Recess Ends (classes resume)	Monday	March 14
Last Day to Withdraw from Classes	5 pm Wednesday	March 23
Mid-Semester Break Begins (no classes)	Thursday	March 24
Mid-Semester Break Ends (classes resume)	Monday	March 28
Last Day of Classes	Friday	April 29
Examination Week	Monday - Friday	May 2 - 6
Commencement	Friday & Saturday	May 6 & 7
Final Grades Due by 1:00 pm	Monday	May 9
Grades available to students on MyFSU	Tuesday (after 8 am)	May 10

Gary R. Gerber AIA, CSI, USGBC, CDT, LEED AP

ASSOCIATE PROFESSOR
FERRIS STATE UNIVERSITY
JOHNSON 208
BIG RAPIDS, MI 49307

EDUCATION

Ferris State University, 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

TEACHING EXPERIENCE

Associate Professor
Architectural and Sustainability
School of the Built Environment
College of Engineering Technology
Ferris State University
Big Rapids, MI
1989 to present

Courses taught

ARCH 102 Architectural Construction Documents 1
ARCH 109 Introduction to Computer Graphics in Architecture
ARCH 110 Introduction to Computer Graphics for HVACR
ARCH 112 Structural Materials /Systems & Codes
ARCH 115 Interior and Exterior Finishes and Systems
ARCH 203 Architectural Documentation
ARCH 204 Architectural Detailing
ARCH 250 Systems Cost Estimating
FSUS 100 Ferris State University Seminar
FMAN 322 Project Management
FMAN 441 Property Development and Planning

REAL ESTATE DEVELOPMENT EXPERIENCE

Gerber Brother Ventures Works, LLC
Commercial office building development and ownership
Belmont MI
2016 to present

Gerber Brother Ventures, LLC
Commercial office building development and ownership
Belmont MI
2008 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

PROFESSIONAL INDUSTRY EXPERIENCE

Gerber Architectural
Architectural consulting
Belmont MI
1989 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)

SERVICE

Service to Ferris State UniversitySince last promotion

Scholarship Committee College of Engineering Technology since 2010
Judge of Spagetti Bridge Authentic Bridge Competition annually since 2010
Architecture and Sustainability and Facility Management Faculty Group annual participation
College of Engineering Technology annual participation in meetings and events
Faculty Advisor to Architectural Technology, ARSU advisees continuously since 1990

Service to Community since last promotion

Eagle Village Hersey Michigan Board of Directors which meets quarterly since November 2011
Eagle Village Finance and Facilities Committee which meets quarterly since November 2011
Eagle Village Phase II Task Force Committee 2013 & 2014
Canadian Lakes Reuther Pavilion donated architectural services
Canadian Lakes Restroom Building for Reuther Pavilion Beach had students develop restroom
scheme
Plainfield Township Planning Commission 2010
Reed City Chamber of Commerce member since 2010
Womens Information Service Inc - Donated architectural services to study how to make their existing Victorian residiential facility more efficient for their staff and secure for their residents. Summer and Fall 2016

Professional Organization Service

AIA Grand Rapids Continuing Education Director 2010 to present. This involves arranging speakers each month during the school year for AIA continuing eduction credits. Each year I provide 16 learning unit hours of credit to attendees. Another

responsibility is our AIA scholarship for a student study architecture. Our students have applied and even been awarded this scholarship.
AIA Michigan Continuing Education Task Force 2011

ARCHITECTURAL 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 \Developer\Partial Owner–Big Rapids Social Security Administration Building adaptive reuse of Pioneer Building at 502 North State Street
- Architect – Immanual Lutheran Church Bell Tower- Big Rapids, MI
- Architect – Canadian Lakes Reuther 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\Developer\Partial Owner - Michigan Works West Central Office Building Renovation- Big Rapids, MI
- Architect – Crankers Brewery Addition—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 - 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 - Evart Products Material Marshalling Area - Evart, 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\Developer\Owner - Michigan Works West Central Office Building – Baldwin, 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
- Architect - Northland United Methodist Church Addition – Standwood MI
- Architect - First United Methodist Church Addition - Big Rapids MI
- Architect - Hunington Bank Façade Renovation – Saulte Ste Marie MI
- Architect - Seven Slots Grille Façade Renovation – Reed City MI

RESIDENTIAL—SINGLE FAMILY

- Architect - Cindy and Mick Lowe Cottage – White Cloud, MI
- Architect - Dr Alex Tosic 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 – Evart, 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
- Architect - Tim and Beth Jacobs home – Big Rapids, MI

- Architect - Dave and Diane Spieker Studio and Workshop – Stanwood, MI

RESEARCH

- Sabbatical to Study adding on and rentovating a campus apartment building. In this study LEED, BIM and digital energy analysis were researched and utilized. Fall 2008 to Spring 2009. This study was presented at Michigan Design Educators conference and Ferris Energy Conference.

CONTINUING EDUCATION

- AEC Systems conference-June 1993 Anaheim CA
- AEC Systems conference-June 1994 Washington DC
- Mich. State University-Construction Cost Estimating (3/96)
- AEC Systems conference-June 1996 Anaheim CA
- Management Computer Controls-Estimating Software Training (12/96)
- AEC Systems conference-June 1998 Chicago
- AIA Grand Valley - Michael Graves-The Design Process- April 27, 2000
- AIA 2001 National Convention and Design Exposition - May16-19, 2001 Denver, CO
- Problem Based Learning-July 16-18, 2001 Big Rapids MI
- Architectural Desktop 3 Level 1 Training (6/02) Grand Rapids MI
- United States Green Building Council Conference-November 2002 Austin TX
- Construction Documents Technology Program-February 2003 Grand Rapids MI
- Critical Thinking Institute-May 22-23, 2003 Big Rapids MI
- Revit 5 Level 1 Software training –July 2003 Grand Rapids MI
- AIA 2004 National Convention and Design Exposition - June 10-12, 2004 Chicago, Illinois
- United States Green Building Council LEED AP training East Lansing MI-June 2004
- United States Green Building Council Conference-November 2004 Portland OR
- New Brain Research and Its Application to Education-November 2004 Big Rapids MI
- AIA Grand Rapids –Sarah Suzanka Lecture-Good Design for the Not So Big House February 17, 2005
- Sexual Harassment Awareness Session April 2005 Big Rapids MI
- Sketching Workshop with Paul Lasseau- April l, 2005 Big Rapids MI
- Get Motivated Business Seminar- August 2, 2005 Grand Rapids MI
- Success Magazine Investor Education- August 12, 2005 Grand Rapids MI
- AIA Grand Rapids - Being the Client, Basic Services Provider by the Architect September 21, 2005
- AIA Grand Rapids - Design of a Downtown Marriot & Selectected Projects November 27, 2005
- Fred Pryor Seminars – Facilities Management Seminar - January 25, 2006
- Advanced Fenestrration Technology March 31, 2006
- Climate Specific Considerations for Moisture Management March 31, 2006
- Windows and Green Building March 31, 2006
- Integrated Door Assemblies March 31, 2006
- AIA Grand Rapids – Multicultural Modernism Steven Ehrlich April 6, 2006

- Architectural Recod Continuing Ed - Getting on Board with Building Information Modeling, April 30 2006
- Urban Land Institute - Basic Real Estate Development May 30 -31 2006
- AIA Grand Rapids – Neighborhood Design Featuring Mark Cameron, ASLA September 21 2006
- AIA Grand Rapids – Cohousing, Building Back Old-Fashioned Sense of Neighborhood October 19 2006
- AIA Grand Rapids –- Jan Gehl Lecture - Between Buildings; Human Dimension in Urban Planning November 9 2006
- USGBC Existing Building LEED Technical Review April 30 2007
- AIA Grand Rapids – Hugh Newell Jacobsen Lecture September 20, 2007
- Architectural Recod Continuing Ed – An Abondoned Airport Takes Off September 30 2007
- Architectural Recod Continuing Ed - (Mis)Leading Green Materials November 30 2007
- AIA Grand Valley – Tour of Grand Rapids Art Museum February 13 2008
- Architectural Recod Continuing Ed – Building Even Better Concrete February 29 2008
- Architectural Recod Continuing Ed – Architecture, Hot and Cold February 29 2008
- Architectural Recod Continuing Ed - Building Commisioning March 31, 2008
- Architectural Recod Continuing Ed – Getting Aggressive About Passive Design April 30 2008
- Architectural Recod Continuing Ed – Rapidly Renewable Materials Complex Calculus April 30 2008
- AIA 2008 National Convention and Design Exposition- May 15-17, 2008 Boston, MA
- AIA Grand Valley - Kirk Blunck Design Series Lecture - May 8, 2008
- AIA Grand Valley - Haworth Corporate Headquarters Tour - May 7, 2008
- AIA Grand Valley - Steven Ehrlich FAIA Muticultural Modernism Lecture - April 6, 2006
- AIA Grand Valley - Mark Cameron, AIA - Neighborhood Design Lecture - September 21, 2006
- AIA Grand Valley Human Dimension in Urban Planning and Design -November 9, 2006
- AIA Grand Valley - Steve Faber and Marty Morgan - Cohousing Development - October 19, 2006
- AIA Grand Valley - Michael F. Kaufman, AIA - Grand Rapids J.W. Marriot Hotel – October 27, 2005
- Grand Valley Metropolitan Council – Building Public Awareness About Great Communities – June 9, 2 2005
- Grand Valley Metropolitan Council – Prospering Through Partnerships – June 8, 2006
- Grand Valley Metropolitan Council –Growing Communities Conference - June 14 2007
- FSU Festival of the Arts - James Timberlake FAIA Lecture - February 4, 2008
- AIA Grand Valley – Tour of Grand Rapids Art Museum – February 8, 2008
- IFMA West Michigan – Dean T. Kashiwagi Ph.D., PE – How to Implement Best Value in Public & Private Sector – September 20, 2006
- AIA Michigan leadership retreat January 18-19, 2008 Traverse City, MI
- Architectural Record Continuing Ed - An Abandoned Airport Brownfield Takes Off – April 15, 2008
- Architectural Record Continuing Ed – Building Even Better Concrete – February 29, 2008
- Architectural Record Continuing Ed – (Mis) Leading Green Materials – November 30, 2007
- Architectural Record Continuing Ed – Architecture Hot and Cold – February 29, 2008

- Architectural Record Continuing Ed – The Case For Commissioning – March 31, 2008
- Architectural Record Continuing Ed – Getting Aggressive About Passive Design – April 15, 2008
- Architectural Record Continuing Ed – Rapidly Renewable Materials Complex Calculus– April 15, 2008
- Ferris Connect training – February 11 & 13, 2008
- Architectural Record Continuing Ed – Building Commissioning March 31 2008
- AIA Grand Rapids - Kirk Blunck, FAIA Design Lecture – May 8, 2008
- Grand Valley Metro Council Annual Growing Communities Conference May 12, 2008

- AIA National Convention 2008 Boston MA – May 15 -17, 2008
- AIA Convention – Solar and Wind Powered Buildings May 15, 2008
- AIA Convention – Preparing the Next Generation of Archiltects May 15, 2008
- AIA Convention – Best Practices in Small-Project Design May 16, 2008
- AIA Convention – Adaptive Use: Preserving the Past while Embracing the Future May 16, 2008
- AIA Convention – Understanding Design Controls in Local Land Deveopment May 16, 2008
- AIA Convention – Architecture Education Around the World May 17, 2008
- AIA Convention – Value Proposition: Moving gteh Profession May 15, 2008
- AIA Convention – Housing Trends of the 21st Century May 15, 2008
- Sustainability by Design: Haworth's May 31, 2008 WORKSPACE CASE STUDY
- Designing Healthy Livable Communities Conference May 29, 2008 Lansing MI
- CSI Converntion - BIM Legal Issues and Risk June 5 2008
- CSI Convention - Adding Elegance and Privacy with Decorative Windos June 6 2008
- CSI Convention – Air Barrier Fundamentals, Design & Practice June 5 2008
- CSI Convention – Design\Build Practice June 5 2008
- CSI Convention – Accessibility: Design, Disconnects and Specification June 6 2008
- CSI Convention – Air Barrier Fundamentals, Design & Practice June 6 2008
- CSI Convention – Carbon Neutral Construction June 6 2008
- CSI Convention – Building information Modeling in Construction Operations June 6 2008
- CSI Convention – Elevator Technology: The latest Advancements June 7 2008
- CSI Convention – Navigating Multigenerational Workplace June 7 2008
- CSI Convention – Powerful Language for Constructors June 7 2008

- CSI Convention 2008 June 5-7, 2008 Las Vegas, NV

- Lilly North Conference September 18-21, 2008 Traverse City MI
- Intergrated Project Delivery October 1, 2008 AIA Grand Valley
- Precast Concrete Components October 2, 2008 AIA Grand Valley
- L. William Seidman Who's going to Help Michigan More? October 9, 2008 GVSU
- Urban Land Institute Real Estate Conference Grand Rapids, MI October 15-16, 2008

- Webinar on Certified Wood November 12, 2008
- AIA Grand Valley - Commercial Building Insulation Applications for XPS December 31 2008

- AIA Grand Valley - High Performance Sheathings Designed for Todays Exterior Building Systems December 31, 2008
- AIA Grand Valley – Construction Practices; Mold / Mildew Resistant Systems December 31, 2008
- AIA Grand Valley – Managing Radiant Heat in Buildings December 31 2008
- AIA Grand Valley – The Challenges of Installing Large Format Porcelain Tile December 31, 2008
- AIA Grand Valley - Advanced Ceramic Tile Methods, Standards & Materials December 31, 2008
- Plainfield Township Training session on Formed Based Zoning
- AIA Michigan Leadership Retreat January 16-17, 2009 Traverse City MI
- AIA Grand ValleyAcoustically Enhanced Gypsum Board for High STC Wall Partitions February 27 2009
- AIA Grand Valley - An Overview of Insulated Concrete Forms February 28, 2009
- CSI Construction and Design Professionals' Expo 2009
- Plainfield Township Training session on walkable communities March 31, 2009
- Design lecture on two local buildings winning design awards April 3, 2009
- Design lecture on two local buildings winning sustainable design awards April 17, 2009
- AIA Grand Valley - Introduction to underfloor air delivery systems April 24, 2009

- AIA Grand Valley - City Flats Hotel Holland MI Building Tour April 28, 2009
- The New ADA Standards: What You Need to Know AIA Webinar May 1, 2009
- The Beauty of Zero: The Design of a Zero Energy Building AIA Webinar May 1, 2009
- Architectural Record Continuing Ed - Towards a Carbon Neutral Future: Making Dramatically Better Buildings Affordably
- Focus on Contemporary Architecture: Critical and New Opinions AIA Convention Webinar
- AIA Michigan - Positioning Michigan in an Era of Climate Change by Glen Le Roy May 7, 2009
- Plainfield Township - Training on billboards & digital sign technology May 11, 2009
- Plainfield Township - Developing and Funding Trailways and Bike paths May 12, 2009
- AIA Michigan - Historic Preservation and Green Architecture: Friends or Foe? May 15, 2009
- Architectural Record Continuing Ed - The Green Side of Polished Concrete May 20, 2009
- Tour of Phillip Johnson's Glass House New Canaan, Connecticut May 23, 2009
- Tour of Frank Lloyd Wright's Guggenhiem Museum May 24, 2009
- Grand Valley AIA Van Andel Institute Tour May 27, 2009
- Form Based Codes and New Urbanism May 29, 2009
- Grand Valley Metro Council Annual Growing Communities Conference June 5, 2009
- AIA Grand Valley - Building Tour of Cathedral Square June 23, 2009
- Urban Spawl Lecture at Calvin College September 14, 2009
- Plainfield Township Training on billboards & digital sign technology September 14, 2009
- Architectural Record Continuing Ed - Understanding Solid Surface in Interiors September 25, 2009

- Architectural Record Continuing Ed - Helping Your Clients Create Healthy Indoor Air September 25, 2009
- Lecture on Cost Management at FSU by Gardiner and Theobald NYC September 29, 2009
- AIA Grand Valley - Design Thunk--Chad Gould lecture on MSU Dining Hall design October 2, 2009
- Architectural Record Continuing Ed - Preventing Moisture-Related Problems in Res Framing October 5, 2009
- Architectural Record Continuing Ed - An End in Sight for a Centuries-Old Building Project October 5, 2009
- Architectural Record Continuing Ed - From the Ground Up: The Complexities of Geothermal October 5, 2009
- Architectural Record Continuing Ed - Intrinsic Materials: Modernism, Sustainability and Fiber Cement Panels October 5, 2009
- LEED for Existing Buildings October 5, 2009
- Architectural Record Continuing Ed - Technologies for Energy Efficiency October 5, 2009
- Architectural Record Continuing Ed - Transparency: Literal and Sustainable October 5, 2009
- Architectural Record Continuing Ed - When the Whole Is Greater Than the Sum of Its Parts October 5, 2009
- AIA Grand Rapids - Classic Labs Ascribe Professional Service Marketing November 20 2009
- AIA Grand Rapids - Legal Risks and Responsibilities in Building Green March 25 2010
- AIA Grand Rapids - Risk Drivers: Understanding the Dynamics of Risk in the A/E Industry April 29 2010
- Faculty BIM May 12-14 2010
- AIA Grand Rapids - Avian Lightweight Boards May 28 2010
- Grand Valley Metro Council Annual Growing Communities Conference June 10 2010
- FSU\GRCC Great Teachers Seminar June 28-30 2010
- AIA Grand Rapids - Builders Exchange of West Michigan September 24 2010
- AIA Grand Rapids - Manmade Stone Fundamentals October 29, 2010
- AIA Grand Rapids - Alternative Energy Site Selection Consultants October 29, 2010
- AIA Grand Rapids - How to select the right architectural aluminum product January 23, 2011
- Architectural Record Continuing Ed - Optimizing Performance in Commercial Fenestration January 23, 2011
- Architectural Record Continuing Ed - Building Movement Joints and BIM February 2, 2011
- AIA Grand Rapids - Spray Polyurethane Foam (SPF) Insulation Systems February 25, 2011
- AIA Grand Rapids - Maximizing Benefits of EPAct February 25, 2011
- AIA Grand Rapids - Building Movement Joints and BIM February 2, 2011
- AIA Grand Rapids - Using Google SketchUp for Design and Presentations March 25, 2011
- AIA Grand Rapids - Top Ten Legal Issues Facing Design Professionals May 27, 2011
- AIA Grand Rapids - Convia-enabled Wiremold Energy Management April 27, 2011
- AIA Grand Rapids - Utilizing Revit in production of working drawings April 29, 2011
- AIA Grand Rapids - Building Information Modeling in the Building Life September 30, 2011

- Access for All January 20, 2012
- Restaurant consultants and restaurant equipment suppliers and their work January 27, 2012
- Architectural Record Continuing Ed - Lighting within Limits February 11, 2012
- Roofing Options February 22, 2012
- AIA Grand Rapids - Hang, Lock, Control and Protect the Door February 24, 2012
- AIA Grand Rapids - Core Values March 6, 2012
- AIA Grand Rapids - Deal Maker and Deal Breaker Contract Clauses March 23, 2012
- AIA Grand Rapids - Changes on windows in residential construction April 27, 2012
- AIA Grand Rapids - Sustainable Carpets April 27, 2012
- AIA National Convention Connecting Education and Practice May 18, 2012
- AIA National Convention - Opening Keynote Presentation David McCullough May 17, 2012
- AIA National Convention - Digital Connections: Better Designs, Better Buildings May 16, 2012
- AIA National Convention - Keynote Presentation Hon. Shaun Donovan May 17, 2012
- AIA National Convention - Research and the Academy: Academic Research May 17, 2012
- AIA National Convention - Bridging the Gaps: A Collaborative Discussion on May 16, 2012
- AIA National Convention - Connecting State, Local, and Federal Energy Policy May 17, 2012
- AIA Grand Rapids - Achieving Thermal Integritiy and Spray Applied Acoustical Finish September 20, 2012
- AIA Grand Rapids - Top 20 Contract Clauses September 20, 2012
- AIA Grand Rapids - Integrated Project Delivery September 20, 2012
- AIA Grand Rapids - The Nail Beats the Hammer: Getting Tax Dollars September 20, 2012
- AIA Michigan Design Retreat Torch Lake MI Septerber21-22, 2012
- AIA Grand Rapids - Daylighting with Prismatic Skylights September 28, 2012
- AIA Grand Rapids - Locally Manufactured Insulating Materials September 28, 2012
- AIA Grand Rapids - Blue Book Building Construction Network January 25, 2013
- AIA Grand Rapids - Building Services and Hazardous Materials January 25, 2013
- M AIA Grand Rapids - anaging Hazardous Materials in Buildings January 25, 2013
- AIA Grand Rapids - Solar Wall and Solar Duct February 22, 2013
- AIA Grand Rapids - Ways To Achieve High Density, High Performance The February 22, 2013
- AIA Grand Rapids - Scanning Existing Construction for your BIM Model March 22, 2013
- Architectural Record Continuing Ed - Bracing for Climate Change April 3, 2013
- Architectural Record Continuing Ed - Wood's New Wave April 3, 2013
- Architectural Record Continuing Ed - Acoustical Control with Gypsum Board April 10, 2013
- AIA Grand Rapids - Lightning Protection Basics April 19, 2013
- AIA Grand Rapids - Next Generation Machine-Roomless Elevators April 19,2013
- AIA Michigan - A Force of Nature April 22, 2013
- AIA Michigan - Cultural Places in Urban Centers September 21, 2013
- AIA Michigan - Iconic Structures September 21, 2013
- AIA Michigan - Modest Wood Structures September 21, 2013
- AIA Grand Rapids - Prefabricated Package Custom Shelters September 27, 2013

- AIA Grand Rapids - Architectural Metal Wall Panel System September 27, 2013
- AIA Grand Rapids - KieranTimberlake: Inquiry September 25, 2013
- Paradigm Shift October 23, 2012
- AIA Grand Rapids - Movement Control in Masonry November 23, 2013
- AIA Grand Rapids - Energy Code Compliance for Single Wythe Concrete Masonry November 23, 2013
- AIA Grand Rapids - Air Movement for Energy-Efficient Comfort January 24, 2014
- AIA Grand Rapids - Using SketchUp and Energy Plus for Building Energy Modeling January 28, 2014
- Lunch and Learn on MSU's Eli Broad Art Museum February 28, 2014
- AIA Grand Rapids - Basilica of St Adalbert Tour May 6, 2014
- AIA National Convention Chicago June 26 to June 28 2014
- AIA National Convention Chicago Open Keynote Presentation June 26, 2014
- AIA National Convention New Developments in Digital Design June 26 2014
- AIA Grand Rapids - Prefabricated Foundation System September 26 2014
- AIA Grand Rapids - Structural Insulated Panels for Residential and Commercial Buildings, September 26, 2014
- AIA Grand Rapids - Abrasive Etching & Paint Techniques on Glass October 24, 2014
- AIA Grand Rapids - Designing with Daylight October 24, 2014
- AIA Grand Rapids - Dynamic Glass November 21, 2014
- AIA Grand Rapids - Design in the Post-Disaster Environment November 21, 2014
- AIA Grand Rapids - lectronic Diagnostics on Existing Buildings December 12, 2014
- AIA Grand Rapids - Thin-Clad Stone Design December 12, 2014
- AIA GR Tour of FSU University Center December 18, 2014
- Architectural Record Continuing Ed - Why Galvanize? February 25, 2015
- Architectural Record Continuing Ed - Frank Lloyd Wright:American Icon, Architectural Master, Modern Dreamer" February 25, 2015
- AIA Grand Rapids - What is your EUI? February 27, 2015
- AIA Grand Rapids - Architectural Design for Adaptability and Deconstruction February 17, 2015
- AIA Grand Rapids - Understanding Mortarless Stone Veneer and other Stone Veneer Products March 27, 2015
- AIA Grand Rapids - Construction Tour of Rowe House April 7, 2015
- AIA Grand Rapids - Architectural Tour of Ehler Amtrak Station April 9, 2015
- AIA Grand Rapids - Marble Fairbanks Lecture: Search and Research April 16 2015
- AIA Grand Rapids - Chilled Beams Come of Age April 16, 2015
- Hanley Woods - Feedback Loop September 16, 2015
- Hanley Woods - Constructability Dreams October 14, 2015
- AIA Grand Rapids - Preparing for Post Occupancy BIM, AIA Grand Rapids, October 30, 2015
- AIA Grand Rapids - ASHRAE 90.1-2013, AIA Grand Rapids, November 20 2015
- AIA Grand Rapids - Understanding the Changes to the MI 2015 Energy Building Code December 18, 2015
- Architectural Record Continuing Ed - Where Zero is the Top Score January 20 2016
- AIA Grand Rapids - Manufactured Stone Veneer Advantages and Installation Processes January 29, 2016

- AIA Grand Rapids - Daylighting and Sustainable Design February 26, 2016
- Architectural Record Continuing Ed - Moving Masterworks March 2 2016
- AIA Grand Rapids - Lighting—Where We've Been and Where We're Headed, AIA Grand Rapids, April 1 2016
- AIA Grand Rapids - Insulated Metal Wall and Roof Panels for Sustainablity and Energy Efficiency April 6 2016
- AIA Grand Rapids - New Building Envelope Materials Available Locally, AIA Grand Rapids, April 22, 2016
- AIA Grand Rapids - Architectural Coatings for Aluminum Clad Wood Windows and Doors April 22 2016
- AIA Grand Rapids - Porous Pavement, AIA Grand Rapids, May 27, 20166
- AIA Grand Rapids - Product Selection for Architectural Aluminum Fenestration May 27, 2016
- AIA Grand Rapids - Modular Skylights for Commercial Buildings August 26, 2016
- Architectural Record Continuing Ed - 3D Printing: Beyond the Prototype September 14, 2016
- Architectural Record Continuing Ed - Prefabrication September 28, 2016
- AIA Grand Rapids - Open Air Steel Structures: Benefits of Working with Prefabricated Structures September 30, 2016
- AIA Grand Rapids - School Security – A Look at Classroom Door Locking September 30, 2016
- AIA Grand Rapids Honor Awards October 6, 2016
- AIA Grand Rapids - Saving Energy with Masonry October 28, 2016
- AIA Grand Rapids - Masonry Flashing October 28, 2016
- AIA Grand Rapids - Marlon Blackwell Lecture January 17, 2017
- Advantages of Using Thin Brick Veneer January 27, 2017
- Architectural Record Continuing Ed - Biophilia February 1, 2017
- Architectural Record Continuing Ed – The Benefits of a Performance – Based Deign Process Februrary 15, 2017

Dane Archer Johnson, Professor

Architecture and Facility Management
Ferris State University

Curriculum Vitae

EDUCATION

Ferris State University, Big Rapids, Michigan
College of Education and Human Services

Master of Science in Career and Technical Education, with Highest Distinction

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 – 1988 - present
Certified Historical Architect, U.S. Department of Interior – 1990

ACADEMIC EXPERIENCE

Ferris State University – College of Engineering Technology
Professor in Architecture and Facility Management - 2006-present

Architecture Courses taught: ARCH 101, *Architectural Graphics*; ARCH 102, *Architectural Construction Documents 1*; ARCH 241, *Design Principles*; ARCH 242, *Architectural Design Principles*; ARCH 244, *Architectural History 1*; ARCH 245, *Architectural History 2*; ARCH 246, *Twentieth Century Architecture*; ARCH 342, *Architectural Design 2*

Facility Management Courses taught: FMAN 321*, Introduction to Facility Management*; FMAN 331, *Programming and the Design Process*; FMAN 431, *Principles of Space Planning*; FMAN 489, *Capstone Research*; FMAN 499, *Capstone Assessment Thesis*

General Education Courses taught: 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, and 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 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 AND SEMINARS

"Great Churches of Europe: A Personal (Virtual) Tour." Presentations, Big Rapids Festival of the Arts, February 2016

"Albert Kahn: Contradictory Architect." Presentation, University of Michigan Museum of Art, March 2016

"Always Seeking Modern." Michigan Historic Preservation Network, Midland, Michigan, May 2015.

"Micro-messaging in the Classroom." Ferris State University, Big Rapids, Michigan, April 2015

"Wright on the Inside." Conference Co-Chair. Frank Lloyd Wright Building Conservancy National Conference, Grand Rapids, Michigan, October 2013.

"Michigan Modern: Design that Shaped Americ." Michigan State Office of Historic Preservation, Cranbrook Academy of Art, Bloomfield Hills, Michigan, June 2013.

"Wright on the Inside." Tour Coordinator. Society of Architectural Historians Annual Conference, Detroit, Michigan, April 2012.

"Relearning² – Learning to Unlearn and Relearn." CEFPI Midwest Great Lakes Regional Conference. May, 2010, Grand Rapids, Michigan

AIA Michigan Design Retreat, September, 2010, 2009, 2008, Torch Lake, Michigan

"Big Rapids – Patterns of a Michigan Town." Presentation, Big Rapids Festival of the Arts, February, 2008

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, Cranbrook Academy of Art, Bloomfield Hills, Michigan, June 2007

Midwest Regional Conference, Visual Resources Association, Michigan State University, East Lansing, Michigan, October 2005

National Conference, Visual Resources Association, Miami Beach, Florida, March 2005

Midwest Regional Conference, Visual Resources Association, Oberlin College, Oberlin, Ohio, October 2004

National Conference, Visual Resources Association, Houston, Texas, March 2004

EDITORIAL REVIEWS

Ingersoll, R. and Kostof, S. ***World Architecture: A Cross-Cultural History,*** March, 2013

Fazio, Michael, et al. ***Buildings Across Time: An Introduction to World Architecture,*** (Fourth Edition), May 2013

Borden, G.P. and Andrews, B.D. ***Architecture Principia.*** May 2012

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

Member, Diversity Committee, College of Engineering Technology, 2014-

Member, Sabbatical Committee, College of Engineering Technology, 2013-14

Co-Chair, *Place-Matters* Lecture and Film Series, 2011-

Dean's Advisory Council, College of Engineering Technology, 2010-11

Coordinator, AT Advisory Board Meeting, April 2010

Member, Diversity Committee, Academic Senate, 2008-

Secretary, Library/Archival/Historic Committee, Academic Senate, 2007-08

Faculty Advisor, American Institute of Architecture Students, 2006-present

Departmental Liaison to FLITE, Architecture and Facility Management, 2006-

Faculty Advisor, Design Competition USGBC West Michigan Chapter, 2007, 2008

Team Leader, Design Charrette, AT Advisory Board Meeting, April 2007

Festival of the Arts, Guest Lecturer, 1991

Kendall College of Art and Design of 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, 2005-06
Chair, Staff Senate, 2003-05

University of Michigan, Department of Art History, Guest Lecturer, 1983

ACTIVITIES

DOCOMOMO, member 2015-present

Society of Architectural Historians, member 2013 –present

Frank Lloyd Wright Building Conservancy, 2013

Michigan Historic Preservation Network, 2010-

Council of Educational Facility Planners International, member 2010-13

Association of Licensed Architects, member 2010-14

Visual Resources Association, member 2000-06

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

CURRICULUM VITAE

PAUL W. LONG

Registered Architect, AIA, NCARB, LEED AP, FMP, SFP
Associate Professor of Architecture and Sustainability
School of Built Environment, Ferris State University

Education

2008 **Master of Science City Design and Social Science**, Merit
Cities Programme, Department of Sociology, London School of Economics and Political Science
Thesis: Sustainability Assessment Methods: a Greenwich Millennium Village case study, Distinction

2002 **Master of Architecture**
College of Art and Architecture, University of Idaho

2002 **Bachelor of Science, *summa cum laude,* in Architecture**
College of Art and Architecture, University of Idaho

1998 **Associates of Sciences and Arts**, General Studies Performance/Fine Art
Brigham Young University – Idaho [Formerly Ricks College]

Academic Positions

2011 - Present **Ferris State University**, Big Rapids, MI
Tenured associate professor, Bachelor of Science in Architecture and Sustainability, Architecture and Facility Management Program, School of Built Environment, College of Engineering Technology

2008 - 2011 **Art Institute of Colorado**, Denver, CO
Instructor, Bachelor of Arts in Interior Design [CIDA Accredited degree program]

Professional Work Experience

2015 - 2016 **Architectural Design Consultant**, Varies
Architectural designer and consultant for private clients

2005 - 2011 **Innovative Interiors**, Evergreen, CO
Architectural design consultant

2002 - 2010 **Chamberlin Architects**, Lakewood, CO
Architectural designer and project team leader

2007 - 2010 **Think-Design Build**, Golden, CO
Co-founder and partner

2001 **XX Architecten**, Delft, South Holland, Netherlands
Architectural Intern

PHONE 231.591.2370
MAIL 915 Campus Drive, SWN 314 | Big Rapids, MI 49307
EMAIL PaulLong@Ferris.Edu

Publications: articles / book chapters / conference proceedings

2014 Architectural Design For Disassembly: designing for future adaptive re-use
Creating_Making Forum, University of Oklahoma

2014 Working Toward A New Studio Pedagogy: the Ferris State University Small Town Studio
Creating_Making Forum, University of Oklahoma

2008 Emerging Typologies and Densities. In *Outer City*
Cities Programme, London School of Economics
http://www2.lse.ac.uk/LSECities/citiesProgramme/citiesStudioPublications.aspx

2003 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.

Conference Papers

2013 Sustainability Assessment Methods: A Greenwich Millennium Village case study
From the Outside In: Sustainable Futures for Global Cities and Suburbs, Hofstra University

2013 Small Town Studio: student involvement in sustainable urban solutions for Michigan small towns
From the Outside In: Sustainable Futures for Global Cities and Suburbs, Hofstra University

Manuscripts in Submission and Preparation

Accepted At the Vital Center: the Small Town Studio at Ferris State University
105th Association of Collegiate Schools of Architecture [ACSA] Annual Meeting, Detroit, MI

Accepted Ernest Boyer and Research as Design
Eleventh International Conference on Design Principles and Practices, Toronto, Ontario, Canada

In Preparation A Study of Mormon Settlements and the Spatial Manifestations of Utopian Communities in America
The Plan Journal, Bologna, Italy

Professional Publications [publicly available]

2010 Facility Master Plan Colorado Northern Community College, Rangely, CO
[Lead Author with Chamberlin Architects]

2006 Alan Bible Visitor Center Condition Assessment Report, Lake Mead National Recreation Area, NV
[with Chamberlin Architects]

2004 Bathhouse Row Historic Structures Reports, Hot Springs National Park, Hot Springs, AR
[with Chamberlin Architects]

2004 Adaptive Reuse Feasibility Study, Old Stoney School, National Forest Service, Sundance, WY
[with Chamberlin Architects]

Select Awards and Honors

2016 **Registered Student Organization Adviser Award of Excellence**, AIAS, Ferris State University

2015 **Academic Service Learning Faculty Excellence Award**, Ferris State University

2015 **Academic Service Learning Student/Class Excellence Award**, ARCH 441, Ferris State University

2015 **Nominated for Non-Traditional Student Advocate of the Year**, Ferris State University

2015 **Author Celebration - Third Annual**, Ferris State University

2008 **Housing Colorado's 2008 Eagle Award**, St. Benedict Place Apts, Chamberlin Architects, Grand Junction, CO

2002 **College of Art and Architecture Faculty Book Award**, University of Idaho, Moscow, ID

2000 **AIA/AAF Scholarship for First Professional Degree Candidate**, University of Idaho

2000 **H.L. & W.L, Catherine Brandt Scholarship**, University of Idaho

2000 **Swisher Hall, AIA Scholarship**, University of Idaho

1999 **Lloyd E. Stalker Architectural Scholarship**, University of Idaho

1999 **Student Memorial Scholarship**, University of Idaho

1999 **3rd Place, Idaho Concrete Masonry Design Competition [ICMA]**, University of Idaho

1998 **Presidential Scholar**, University of Idaho, University of Idaho

1994, 1997, 1998 **Presidential Scholar**, Ricks College

Grant Proposals

Under Review **A Comparative Survey of Select UK, European, and US University Programs Examining the Cross-Discipline Integration of Building Information Modeling in Built Environment Curricula**, Sabbatical Leave Application

2016 **An Examination of Building Information Modeling in US and UK Built Environment Curricula**, United Kingdom Fulbright Scholar Grant, University of Strathclyde for £12,700 renewable; not awarded.

2016 **Ferris State Academic Service Learning Grant**, ARCH 441: Arch Design III for $500; awarded.

2016 **Timmie Travel Grant**, International Conference on Design Principles and Practices for $1,200; awarded.

2016 **Ferris State Academic Senate Professional Development Grant**, Facility Management Professional and Sustainability Facility Professional training for $3,833; awarded.

2016 **Ferris State College of Engineering Technology Professional Development Grant,** Association for Computer Aided Design in Architecture [ACADIA] Annual Conference for $1,985; awarded.

2015 **Ferris State Academic Service Learning Grant**, ARCH 441: Arch Design III for $500; awarded.

2014 **College of Engineering Tech. Professional Development Grant**, Creating_Making Forum for $2,000; awarded.

2014 **Ferris State Academic Service Learning Grant**, ARCH 441: Arch Design III for $500; awarded.

2014 **US Solar Decathlon**, U.S. Department of Energy: Energy Efficiency and Renewable Energy for $50,000; George Berghorn, Brian Craig, and Paul Long, principle investigators; awarded, not funded.
[After selection the team was forced to withdraw]

2013 **College of Engineering Technology Student Innovation Center CNC Router**, Office of Academic Affairs grant proposal for $15,000; awarded; Larry Langell, Gary Gerber, Paul Long, principle investigators.

2013 **College of Engineering Technology Professional Development Grant**, From the Outside In: Sustainable Futures for Global Cities and Suburbs for $1,600; awarded.

2012 **College of Engineering Technology Student Innovation Center**, Office of Academic Affairs grant proposal for $218,900; not awarded; Larry Langell, Gary Gerber, Paul Long, principle investigators.

2012 **Design-Build Studio and Model Shop**, Office of Academic Affairs grant proposal for $21,000; not awarded.

2012 **A Comparison of the Accuracy of Architectural Daylighting Analysis Methods**, Ferris State University Student Research Grant proposal for $5,500; awarded.

2012 **A Comparative, Case Study Analysis of Industry Standard Sustainability Assessment Methods and their Application to Sustainable Architecture and Urban Development In Michigan**, Ferris State University Student Research Grant proposal for $5,500; awarded.

2012 **Design for Disassembly**, Ferris State University Student Research Grant proposal for $5,500; awarded; Awarded, not funded.

2012 **College of Engineering Technology Professional Development Gran**t, National Conference on the Beginning Design Student for $1,200; awarded.

2011 **Architecture Model Shop and Design-Build Studio**, Ferris Foundation Grant for $21,000; not awarded.

2011 **College of Engineering Technology Professional Development Grant**, Permanent Change: Plastics in Architecture and Engineering for $1,600; awarded.

Invited Lectures, Workshops, and Presentations

2017 **Erasmus Program Visiting Academic** [Scheduled for 4/10 /2017 – 4/15/2017]
University of Liechtenstein Institute of Architecture and Planning

2017 **Introduction to 3D Digital Modeling Using Sketchup** [Scheduled for 2/13/17]
Big Rapids Festival of the Arts, Big Rapids, MI

2017 **An Introduction to Architectural Design: an exploration through Lego** [Scheduled for 2/01/17]
Big Rapids Festival of the Arts, Big Rapids, MI

2015 **Social Sustainability within the Built Environment**
KGAR 531 Immersion III: Critique of Architecture, Kendall College of Art and Design

2015 **Design for Adaptive Reuse**
AIA Grand Valley, Grand Rapids, MI

2014 **Adult FestLab: Introduction to 3D Digital Modeling Using Sketchup**
Big Rapids Festival of the Arts, Big Rapids, MI

2014 **Youth FestLab: Introduction to 3D Digital Modeling Using Sketchup**
Big Rapids Festival of the Arts, Big Rapids, MI

2013 **Presenting the Small Town Studio**
Rotary Club of Big Rapids, Big Rapids, MI

2011 **An Introduction to Revit Architecture**
AIA Grand Valley, Grand Rapids, MI

Invited External Juror and Reviews

2017 **Mid-semester review**, University of Liechtenstein, Vaduz, Liechtenstein [Scheduled for 4/10 – 4/15/2017]

2017 **Master of Architecture NAAB Criteria Assessment**, Kendall College of Art and Design

2016 **Master of Architecture thesis final reviews**, Kendall College of Art and Design

2016 **Systems Thinking for Sustainable Architecture final review**, Kendall College of Art and Design

2016 **Systems Thinking for Sustainable Architecture progress reviews (2)**, Kendall College of Art and Design

2013 **Paper reviewer**, Architecture and the Biology of Consciousness. In *arq: Architectural Research Quarterly* Cambridge University Press.

2013 **Guest critic**, Bachelor of Architecture, University of Maine

Conference Activities and Participation

2014 **Architectural Design For Disassembly: designing for future adaptive re-use**
Creating_Making Forum, University of Oklahoma

2014 **Working Toward A New Studio Pedagogy: the Ferris State University Small Town Studio**
Creating_Making Forum, University of Oklahoma

2013 **Sustainability Assessment Methods: A Greenwich Millennium Village case study**
From the Outside In: Sustainable Futures for Global Cities and Suburbs, Hofstra University

2013 **Small Town Studio: student involvement in sustainable urban solutions for Michigan small towns**
From the Outside In: Sustainable Futures for Global Cities and Suburbs, Hofstra University

2013 **Session chair**, Historic Preservation and Green Building, From The Outside In: Sustainable Futures for Global Cities and Suburbs, Hofstra University

2013 **Discussant**, Historic Preservation and Green Building, From The Outside In: Sustainable Futures for Global Cities and Suburbs, Hofstra University

2012 **The Esquiline Landscape Calendar: time, nature, and authority in imperial Rome**
Archeological Institute of America Annual Meeting, Seattle, WA
[with Dr. Rachel Foulk]

Internal Workshops and Presentations

2017 **The Small Town Studio: a case study of an academic service learning design studio pedagogy**, Compelling Approaches to Teaching & Learning Series, Ferris State University [Schedule 4/20/2017]

2016 **Graduate School Application Letter Writing Workshop**, Ferris State University

2016 **Graduate School Application Portfolio Workshop**, Ferris State University

2016 **Architecture Student Portfolio Workshop**, Ferris State University

2016 **Graduate School Application Workshop**, Ferris State University

2016 **Triple Bottom Line: social and economic concerns within built environment sustainability discourse**
ARCH 119: Sustainability in Architecture - Introduction, Ferris State University

2015 **Graduate School Application Letter Writing Workshop**, Ferris State University

2015 **Graduate School Application Portfolio Workshop**, Ferris State University

2015 **Architecture Student Portfolio Workshop**, Ferris State University

2015 **Graduate School Application Workshop**, Ferris State University

2015 **Triple Bottom Line: social and economic concerns within built environment sustainability discourse**
ARCH 119: Sustainability in Architecture – Introduction, Ferris State University

2014 **Sustainability in the Built Environment Poster Presentation**, with Chris Cosper
Beyond Diversity Initiative, Ferris State University

2014 **Architecture Student Portfolio Workshop**, Ferris State University

2014 ***Archiculture*, Film Screening and Discussion Panel**, Ferris State University

2013 **Architecture Student Portfolio Workshop**, Ferris State University

2013 **Team Sustainable Michigan – 2015 Solar Decathlon Design Workshop**, Ferris State University

2013 **Team Sustainable Michigan – 2015 Solar Decathlon Design Workshop**, Lansing Community College

2013 **Team Sustainable Michigan – 2015 Solar Decathlon Design Workshop**, Kendall College of Art and Design

2013 **Architecture Student Portfolio Tutorial Session II**, Ferris State University

2013 **Architecture Student Portfolio Tutorial Session I**, Ferris State University

2013 **Architecture Student Portfolio Workshop**, Ferris State University

2013 **The Art of Architecture**, Curator, Rankin Gallery, Ferris State University

2012 **Architecture Student Portfolio Workshop**, Ferris State University

2012 **Adobe Indesign for Architects Workshop**, Ferris State University

2012 **Adobe Illustrator for Architects Workshop**, Ferris State University

2012 **Experiments in Digital Fabrication Workshop**, Ferris State University

2011 **Introduction to Laser Cutter Student Workshop**, Ferris State University

2011 **Architecture Student Portfolio Workshop**, Ferris State University

2011 **Architecture Student Portfolio Photo Workshop**, Ferris State University

Teaching Experience

2011 - Present **Bachelor of Science in Architecture and Sustainability**, Associate Professor, Ferris State University
Courses taught:

- ARCH 101: Architectural Graphics – 2011, 2012
- ARCH 102: Digital Architectural Graphics – 2011, 2012, 2013, 2014, 2015, 2016
- ARCH 203: Architectural Documentation [Revit] – 2012, 2013, 2014, 2015, 2016

- ARCH 204: Architectural Detailing – 2014, 2015, 2016
- ARCH 270: Building Information Modeling [Advanced Revit] – 2012, 2014
- ARCH 270: BIM and Parametric Design [Revit/Dynamo, Rhino/Grasshopper] – 2015, 216
- ARCH 297: Special Studies in Architecture, Digital Presentations – 2011
- ARCH 361: Environmental Systems I – 2011, 2012
- ARCH 362: Environmental Systems II – 2012, 2013
- ARCH 397: Architectural Special Studies, Digital Fabrication – 2015
- ARCH 397: Architectural Special Studies, Exploration in Architectural Fabrication – 2015
- ARCH 397: Architectural Special Studies, Energy Star Portfolio Manager – 2014
- ARCH 419: Sustainability in Architecture – Advanced Topics – 2014, 2015, 2016
- ARCH 421: Current Issues in Architecture – 2012
- ARCH 441: Architectural Design III – Small Town Studio – 2012, 2013, 2014, 2015, 2016
- FMAN 432: Principles of Interior Architecture – 2011
- ARCH 499: Architectural Design IV – 2013

Courses developed or redeveloped:

- ARCH 102: Digital Architectural Graphics
- ARCH 203: Architectural Documentation [Revit Architecture]
- ARCH 270: BIM and Parametric Design
- ARCH 297: Special Studies in Architecture
- ARCH 299: Sustainable Design Build
- ARCH 419: Sustainability in Architecture, Advanced Topics

2015 - Ongoing **Master of Architecture**, Professor, Kendall College of Art and Design

Courses taught:

- KGAR 612 Studio V: Urban Collaborative [Co-taught] – 2015
- KGAR 541 Immersion IV: Building Systems Integration – Scheduled Spring 2017 [Co-taught]
- KGAR 503 Elective/Special Topic: Design/Build: A Sustainable Approach – Scheduled Summer 2017

Courses developed:

- KGAR 611 Immersion V: Critical Travel
- KGAR 612 Studio V: Urban Collaborative
- KGAR 621 Thesis Preparatory Seminar
- KGAR 623 Thesis Proseminar

2008 - 2010 **Bachelor of Arts in Interior Design**, Instructor, Art Institute of Colorado

Courses Taught:

- RS1301: Architectural Drafting [Hand Drafting] – 2008, 2009 (2x)
- ID3305: Revit Architecture – 2010 (2x)
- ID3359: Fundamentals of Working Drawings – 2009, 2010 (3x)
- ID3384: Computer Rendering [Photoshop, Sketchup, 3ds Max, Revit] – 2008, 2009 (3x), 2010 (3x)
- ID3347: Building Codes and Barrier Free Design – 2008, 2009 (3x), 2010 (2x)
- ID4364: Advanced Construction Documents – 2010
- ID4371: Interior Architectural Detailing – 2010

Courses developed:

- ID3305: Revit Architecture

2001 **Master of Architecture**, Teaching assistant, University of Idaho

Courses Assisted:

- 3ds Max

Teaching Areas / Courses Prepared to Teach

Visual communication [digital and traditional]
Design fundamentals
Design thinking
3d Modeling
Computational design
Technical documentation
Design research / Architectural research methods
Codes and regulations
Comprehensive design
Sustainable design / Ethics and theories of sustainability
Passive building systems
Urban design / Urban theory
Design-build

Research Interests

Design for adaptive reuse/disassembly as an approach to sustainable design.

The use of BIM to promote cross-discipline collaboration in built environment curricula.

The integration of design analysis and computation into professional design workflows

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 design.

Sustainability assessment methods and the built environment: effectiveness of sustainability assessments in achieving holistic, tri-partite [economic, environmental, social] sustainable development.

The relationships between urban form and the visual, physical, social and political aspects of cities: sociopolitical influences on the form of the built environment.

Sustainability and architectural design education: the education of 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.

Research Experience

2012 **Research Lab Director**, Student research fellowship program, Ferris State University
[Supervised two student research assistants examining: 1) the accuracy of architectural daylighting analysis methods and 2) industry standard sustainability assessment methods as they apply to sustainable architecture and urban development in rural Michigan.]

2001 **Research Assistant Spatial Cognition Lab,** Dr. Steffen Werner, Department of Psychology and Communication Studies, University of Idaho
[Worked as a research assistant utilizing virtual reality technology to study way-finding and cognition related to architectural floor plans. Co-authored textbook chapter relating cognition and architectural design.]

2000 - 2001 **Research Assistant,** Professor Steve Thurston, College of Art and Architecture, University of Idaho
[Documented medieval French towns known as Bastides by providing technical support and performing digital video cinematography and editing for documentary film.]

External Service: academic / professional / community

2014 - Present **Zoning Board of Appeals**, Big Rapids, MI

2013 - Present **Mecosta County Youth and Family Center**, Mecosta County, MI

2013 **Master of Architecture Admissions Review**, Kendall College of Art and Design

2012 - Present **Master of Architecture Board of Formation**, Kendall College of Art and Design

2012 - 2013 **Master of Architecture Curriculum Development**, Kendall College of Art and Design

2013 - 2014 **Property Maintenance Board of Appeals**, Big Rapids, MI

2012 **Habitat for Humanity home energy audits**, Big Rapids, MI

2011 & 2012 **Box City Architecture Co-chair**, Festival of the Arts, Big Rapids, MI

2009 - 2010 **Planning Commission Vice Chair**, Golden, CO

2007 **Downtown Character Committee**, Golden, CO

2005 - 2007 **Planning Commission**, Golden, CO

2005 **Colorado Renewable Energy Society [CRES] Annual Conference**, Fort Collins, CO

2002 - 2003 **The College of Art and Architecture Foundation**, University of Idaho Alumni

1995 – 1997 **Poland, Warsaw Mission**, Church of Jesus Christ of Latter Day Saints, Warsaw, Poland

Internal Service: university / college / school / program

2016 - Present **The Beyond Initiative Advisory Board**, Ferris State University

2015 - Present **Faculty Research Committee**, Ferris State University

2015 - Present **Cultural Enrichment Sub-Committee**, Ferris State University

2015 - Present **Academic Service Learning Steering Committee**, Ferris State University

2016 - Present **College of Engineering Recruiting Committee**, Ferris State University

2015 - 2016 **Adviser club hockey registered student organization**, Ferris State University

2013 **Programming Ad Hoc Committee Faculty Center for Teaching and Learning**, Ferris State University

2013 **Advisory Board Faculty Center for Teaching and Learning**, Ferris State University

2012 – 2013 **Hiring Committee, Architecture and Facility Management Program**, Ferris State University

2012 – Present **Curriculum Committee, College of Engineering Technology**, Ferris State University

2012 – Present **Curriculum Committee, School of Built Environment**, Ferris State University

2012 – 2015 **Arts and Lectures Committee**, Ferris State University

2012 **Student Research Assistant Grant Review Committee**, Ferris State University

2012 **Judge, Research to Reality**, Michigan Energy Conference Poster Competition, Ferris State Univ.

2011 – Present **Adviser, American Institute of Architecture Students [AIAS]**, Ferris State University

2012 – Present **Academic adviser, Architecture And Facility Management**, Ferris State University

2011 – Present **"Place Matters" film and lecture series co-chair**, Ferris State University

2009 **Council for Interior Design Accreditation [CIDA] Visit Preparation Committee**, Art Institute Of Colorado

Related Professional Skills

Expert	Revit Architecture
Expert	Autodesk AutoCAD
Expert	Adobe Photoshop, Illustrator, and InDesign
Expert	Sketchup
Expert	Autodesk Formit
Advanced	Autodesk Dynamo Studio and Dynamo BIM
Advanced	3ds Max
Advanced	Rhinoceros 3d
Advanced	Grasshopper for Rhino 3d
Advanced	Adobe Premiere
Advanced	Final Cut Pro
Proficient	Autodesk Navisworks
Proficient	Autodesk Ecotect
Proficient	Autodesk Fusion 360
Proficient	RhinoCAM
Proficient	ESRI ArcGIS

Media Coverage

2016 **Program Spotlight: Architecture**, Ferris State University Media Production
https://www.youtube.com/watch?v=UlQnZwWAwME

2016 **Work Begins for New Welcome Center**, *Big Rapids Pioneer*
http://news.pioneergroup.com/bigrapidsnews/2016/08/31/work-begins-new-welcome-center/

2015 **Lego Architecture Encourages Kids to Build, Experiment Like Architectural Greats**, *Big Rapids Pioneer*
https://www.youtube.com/watch?v=xF_ZjsStQ4U
http://news.pioneergroup.com/bigrapidsnews/2015/02/17/building-tomorrows-architects/

2015 **Making space for Bikes**, *Big Rapids Pioneer*
http://news.pioneergroup.com/bigrapidsnews/2015/04/06/making-space-for-bikes/

2015 **Building Blocks to Inspiration**, *Big Rapids Pioneer*
http://news.pioneergroup.com/bigrapidsnews/2015/02/12/building-blocks-inspiration/

2014 **Big Rapids Hears from Ferris Students About Depot**, *Big Rapids Pioneer*
http://news.pioneergroup.com/bigrapidsnews/2014/12/10/big-rapids-hears-ferris-students-depot/

2014 **Depot Renovation Ideas Underway**, *Big Rapids Pioneer*
http://news.pioneergroup.com/bigrapidsnews/2014/11/17/depot-renovation-ideas-underway/

2014 **Ferris considers transforming Big Rapids old railroad depot**, *Big Rapids Pioneer*
http://news.pioneergroup.com/bigrapidsnews/fb/2014/08/ferris/files/assets/basic-html/page8.html

2014 **20 Teams to Compete in 2015 U.S. Solar Decathlon**, Archdaily.com
http://www.archdaily.com/476913/20-teams-to-compete-in-2015-u-s-solar-decathlon

2014 **Energy Department Announces Student Teams for Solar Decathlon 2015**, US Department of Energy
http://energy.gov/eere/sunshot/articles/energy-department-announces-student-teams-solar-decathlon-2015
http://energy.gov/articles/energy-department-announces-student-teams-location-solar-decathlon-2015

2014 **Solar Decathlon Announces Revised 2015 Team Lineup,** US Department of Energy Solar Decathlon
http://www.solardecathlon.gov/blog/archives/3002

2013 **Ferris, KCAD, LCC Collaborate to Apply for U.S. Department of Energy Solar Decathlon**, Ferris.edu
http://www.ferris.edu/HTMLS/news/archive/2013/october/decathlon.htm

2013 **KCAD Collaborates to Apply for 2015 U.S. Department of Energy Solar Decathlon**, KCAD.edu
http://www.kcad.edu/news/solar-decathlon/

2013 **Research: Architecture and Sustainability**, Ferris State University Media Production
https://www.youtube.com/watch?v=rFRsPm5vYyo

2013 **Ferris Students Have Bold Ideas about Future of Small Towns**, *Ferris Magazine*
This story originally appeared in the Spring 2013 edition of Ferris Magazine. View it online here:
http://www.ferris.edu/HTMLS/alumni/ferrismagazine/ or
http://www.ferris.edu/HTMLS/news/archive/2013/august/studio.htm

2013 **Calculation Meets Creativity**, *Big Rapids Pioneer*
http://news.pioneergroup.com/bigrapidsnews/2013/04/09/calculation-meets-creativity/

2013 **Accomplishing an Art Form**, *Ferris State Torch*
http://fsutorch.com/2013/04/17/accomplishing-an-art-form/

2012 **Students Look at Alternate Routes**, Big Rapids Pioneer
http://news.pioneergroup.com/bigrapidsnews/2012/12/03/students-look-at-alternate-routes/

2012 **Light Research Study**, Ferris State University Media Production
https://www.youtube.com/watch?v=tbtFQyVcytk&feature=share&list=UUAxQZuw6gILT4ciCK949gQg

2012 **Community Participation Encouraged**, Big Rapids Pioneer
http://news.pioneergroup.com/bigrapidsnews/2012/01/21/community-participation-encouraged/

2011 **Festival of the Arts: Area students create Box City**, *Big Rapids Pioneer*
https://www.youtube.com/watch?v=VM-IrxVLCMk

2010 **Sketchup in Higher Education**, Google Sketchup, Mountain View, CA
Video interview can be found at: https://www.youtube.com/watch?v=-jXKC4CU5hg

Language Skills

Intermediate Conversational Polish language skills

Non-Academic Work: select professional projects

2015 **Private residential addition and workshop**, Boise, ID
Designed residential addition, outdoor kitchen, workshop, and outdoor sports court for existing Boise home.

2011 **Residential Addition – Design Build**, Evergreen, CO
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.

2010 **Rocky Mountain Research Station**, Fort Collins, CO
Project designer and oversaw construction documents for comprehensive remodel of a 32,000 U.S. Forest Service Research Lab. The rehabilitated structure was designed to achieve a LEED® Silver rating.

2010 **US Forest Service Great Plains Dispatch Center**, Rapid City, SD
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.

2008 **Private Residence – Design Build**, Alta, WY
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 and beam construction to fit in with the farmhouse vernacular of the area. Project was developed as part of a design-build project delivery.

2008 **Kelly Hall Renovation**, Western State College, Gunnison, CO
Project Designer for comprehensive remodel of a 25,000 sq. ft. 1950s classroom building. The rehabilitated structure achieved a LEED® Gold rating.

2008 **St. Benedict Place Apartments**, Grand Valley Catholic Outreach, Grand Junction, CO
Team leader for Housing Colorado's 2008 Eagle Award winning 23 unit [3 building] apartment complex for chronically homeless and disabled persons.

2007 **Private Residence – Design Build**, Golden, CO
Designed and supervised construction of renovated townhouse. Project was developed in conjunction with Innovative Interiors and Think-DB as part of a design-build project delivery.

2007 **Alan Bible Visitor Center Rehabilitation**, Lake Mead National Recreation Area, Boulder City, NV
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 historic character and achieve LEED® Silver for Existing Buildings.

2007 **Maintenance Facility, Colorado Department of Military and Veterans Affairs**, Grand Junction, CO
Participated in schematic design and design development of Department of Military and Veterans Affairs maintenance facility. Qualified for LEED® Silver rating but was not registered with USGBC.

2006 **Pear Park / Rim Rock Elementary Schools**, Mesa County School District, Grand Junction / Fruita, CO
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.

2005 **Bent's Old Fort National Historic Site**, National Park Service, La Junta, CO
Produced construction documents, detailed daylighting components, and supervised construction administration for new park administration building and restoration of historic military fort.

2005 **Bathhouse Row – Hot Springs National Park**, National Park Service, Hot Springs, AR
Project designer for the restoration of three historic bathhouses placed on the 2003 National Trust for Historic Preservation's list of 11 Most Endangered Sites.

2002 **Bureau of Land Management Field Office**, Craig, CO
Produced construction documents, detailed daylighting components, and participated in design of LEED Gold qualifying building. Project was not formally registered with USGBC.

Digitally Published Design Studio Projects

2016 **Eastern Elementary Adaptive Reuse**, Grand Rapids, MI
[with select Small Town Studio students]
ISSUU link: http://issuu.com/smalltownstudio-fsu/docs/2016_sts_iccf_final_book_reduced

2015 **Bromley Park Master Plan**, Mecosta Village, MI
[with select Small Town Studio students]
ISSUU link: https://issuu.com/smalltownstudio-fsu/docs/bromley_park_concptual_plan

2013 **Revitalizing Mecosta: village master plan**, Mecosta Village, MI
[with select Small Town Studio students]
ISSUU link: https://issuu.com/smalltownstudio-fsu/docs/revitalizing_mecosta

2012 **Bicycle and Pedestrian Master Plan**, Big Rapids, MI
[with select Small Town Studio students]
http://cityofbr.org/publications/forms/misc/pedestrian_plan.pdf

Publicly Presented Academic Service Learning / Community Engagement Studio Projects

2016 **Eastern Elementary Revitalization**
Community partner: Inner City Christian Federation [ICCF], Grand Rapids, MI

2016 **Katke Golf Course Outdoor Dining Pavilion**
Community partner: Iaz Ziska, Manager and Head Course Professional, Big Rapids, MI

2015 **Bromley Park Bandshell**
Community partner: Revitalize Mecosta community organization

2015 **Mecosta County Visitors Center**
Community partners: Mecosta County Chamber of Commerce and Mecosta County Conventions and Visitors Bureau, Big Rapids, MI

2015 **Bromley Park Masterplan**
Community partner: Revitalize Mecosta community organization

2015 **Katke Golf Course Starter Shed**
Community partner: Iaz Ziska, Manager and Head Course Professional, Big Rapids, MI

2014 **Big Rapids Railroad Depot Revitalization Plan**
Community partner: Big Rapids City Commission, Big Rapids, MI

2014 **Existing Condition Drawings: Howmet Playhouse 2016 vision plan**
Community partner: City of Whitehall, MI and Howemet Playhouse management, Whitehall, MI

2014 **Highland View Cemetery Historic Restoration Options**
Community partner: Big Rapids Township Cemetery Committee, Big Rapids, MI

2014 **Little Muskegon River Park Master Plan**
Community partner: Morton Township planning staff, Mecosta Village, MI

2013 **St. Peter's Conceptual Plan**
Community partner: St. Peter's Lutheran Church and School Building Committee, Big Rapids, MI

2013 **Mecosta Village Community Plan**
Community partner: Revitalize Mecosta community organization, Mecosta Village, MI

2013 **Design for A Community Center**
Community partner: Big Rapids Parks and Recreation Commission, Big Rapids, MI

2012 **Big Rapids Bicycle and Pedestrian Plan**
Community partner: Department of Neighborhood Services, Big Rapids, MI

2012 **Brutus Dog Park Conceptual Plan**
Community partner: Big Rapids Parks and Recreation Commission, Big Rapids, MI

2012 **Clay Cliffs Nature Park Bridge Proposal**
Community partner: Big Rapids Parks and Recreation Commission, Big Rapids, MI

Student awards under tutelage

2012 **Silver – Skills USA, National Architectural Drafting & Design**, Kansas City, MO

2012 **Gold – Skills Michigan, Architectural Drafting & Design**, Lansing, Michigan

2012 **1st Place – Research to Reality, Michigan Energy Conference Poster Competition**, Grand Rapids, MI

2012 **2nd Place – Research to Reality, Michigan Energy Conference Poster Competition**, Grand Rapids, MI

2012 **4th Place – Research to Reality, Michigan Energy Conference Poster Competition**, Grand Rapids, MI

Additional Training / Conferences Attended

2017 **Facility Management Professional Credential Program**, International Facility Management Association

2017 **Sustainable Facility Professional Credential Program**, International Facility Management Association

2016 **Association for Computer Aided Design in Architecture** [**ACADIA**] **2016 Annual Meeting**, University of Michigan

2016 **Global Questions in Professional and Academic Work Across Campus**, Faculty Center for Teaching and Learning, Ferris State University

2016 **2nd Annual Course Design Institute**, Faculty Center for Teaching and Learning, Ferris State University

2014 **Creating_Making Forum**, College of Architecture, University Of Oklahoma

2014 **Placemaking Strategy Development Training II**, Michigan State Housing Development Authority, Big Rapids, MI

2014 **Placemaking Strategy Development Training I**, Michigan State Housing Development Authority, Big Rapids, MI

2013 **Practice, Education, and the Future of Architecture Education**, Kendall College of Art And Design

2013 **The Courthouse is Now in Session**, Kendall College of Art And Design

2013 **From the Outside In: sustainable futures for global cities and suburbs**, Hofstra University

2012 **National Conference on the Beginning Design Student**, Pennsylvania State University

2012 **Inquiries into Teaching and Learning**, Faculty Center for Teaching and Learning, Ferris State University

2011 **Lilly Conference North University Teaching and Learning Conference**, Traverse City, MI

2011 **Training Wheels On-Road Bicycle Facility Design**, Michigan Department of Transportation, Big Rapids MI

2011 **AIA Michigan Annual Design Retreat**, Torch Lake, MI

2011 **Permanent Change: Plastics in Architecture and Engineering**, Columbia University

2011 **Advancing Architectural Praxis**, University of Michigan

2011 **The 3 R's: Rubrics, Readability = Retention**, Ferris State University

2009 **Transit Alliance Citizens' Academy**, Regional Transit of Denver, Denver, CO

Professional Licensure, Accreditation, and Current Organization Memberships

2011 - Ongoing **Registered architect**, Colorado registration # ARC.00402450

2002 - Ongoing **National Council of Architectural Registration Boards** [NCARB] Certified

2016 - Ongoing **International Facility Management Association** [IFMA], Individual member

2017 - Ongoing **IFMA Facility Management Professional** [FMP], Certified

2017 - Ongoing **IFMA Sustainable Facility Professional** [FMP], Certified

Ongoing **Association for Computer Aided Design in Architecture** [ACADIA], Individual member

Ongoing **Michigan Association of Planning**, Individual member

Ongoing **Leadership in Energy and Environmental Design** [LEED], Accredited professional

Ongoing **U.S. Green Building Council** [USGBC] **West-Michigan**, Individual member

Ongoing **Association of College Schools of Architecture** [ACSA], Basic member

Ongoing **Association of Pedestrian and Bicycle Professionals** [APBP], Professional member

Ongoing **Alliance for Biking and Walking**, Individual supporter

Ongoing **League of American Bicyclists**, Individual member

Ongoing **League of Michigan Bicyclists**, Individual member

Diane L. Nagelkirk, RA

Professor, Architecture and Facility Management

CURRICULUM VITAE

Education

San Francisco Institute of Architecture
Master of Science in Green Building, pending May 2018

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, and Program Coordinator

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

Independent Architectural Projects

StoneCastle Dentistry – Historic Preservation
Addition of Porch Entry
Heritage Hill Historic District, Grand Rapids, Michigan
August 2014

Addition and Remodeling of Residence for I. Jensen
Rockford, Michigan
March 2014

Addition and Remodeling of Residence for J. Feinhauer
Grand Rapids, Michigan
April 2011

StoneCastle Dentistry – Historic Preservation
Second Floor Renovation
Heritage Hill Historic District, Grand Rapids, Michigan
June 2009

HHS – Interior Renovation
Grand Rapids, Michigan
July 2008

Home Design of Residence for R. Rhupp
Grand Rapids, Michigan
September 2005

Addition and Remodeling of Residence for J. Granger
Lansing, Michigan
May 2005

Home Design of Residence for B. Teegardin
Hastings, Michigan
June 2004

Home Design of Residence for C. Cook
Grand Rapids, Michigan
June 2003

Addition and Remodeling of Residence for D. Zoeterman
Saugatuck, Michigan
August 2002

Addition and Remodeling of Residence for S. Sunden
Howard City, Michigan
March 2002

Addition and Remodeling of Historic Residence for M. Wilson
Heritage Hill Historic District, Grand Rapids, Michigan
June 2001

Addition and Remodeling of Residence for M. Pulte
Grand Rapids, Michigan
June 2000

Addition and Remodeling of Yarrow Lodge
Augusta, Michigan
June 2000 and July 2002

Courses Taught

Since 2007

ARCH 101	Architectural Graphics 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 204	Architectural Documentation
ARCH 241	Design Fundamentals
ARCH 244	Architectural History 1
ARCH 341	Architectural Design 1
FMAN 322	Project Management
FMAN 393	Facility Management Internship
FMAN 489	Capstone Research
FMAN 499	Capstone Thesis
FSUS 100	FSU Freshman Seminar

Courses Developed

Since 2007

ARCH 341	Architectural Design 1 (authored)
ARCH 342	Architectural Design 2 (c0-authored)
ARCH 441	Architectural Design 3 (co-authored)
ARCH 499	Architectural Design 4 (co-authored)
ARCH 323	Structural Design (authored)
ARCH 361	Environmental Systems 1 (co-authored)
ARCH 362	Environmental Systems 2 (co-authored)
ARCH 421	Current Issues in Architecture (editor)

University Committee Participation

Department

AT/FM Strategic Plan Committee	Member
AT/FM Recruitment/Retention Committee	Chair
AT/FM Baccalaureate/Master's Degree Committee	Chair
AT/FM Advisory Board Planning Committee	Chair
AT/FM Studio Planning & Maintenance Committee	Member
AT Program Review Committee	Member
AT/FM Candidate Tenure Committee	Member
AT/FM Trac Dat Assessment Committee	Chair
AT/FM Curriculum Committee	Chair
FM Accreditation Committee	Member/author

School

SBE Strategic Planning Committee	Member
SBE Curriculum Committee	Member

College

CET Scholarship Committee 2005-2010	Member
CET Accreditation and Assessment Committee 2007-current	Member
CET Diversity Committee 2007-current	Member
CET Marketing Office Selection Committee 2008	Chairperson
CET Curriculum Committee 2010-2013	Member
CET Strategic Planning Committee 2012-2014	Member
CET Promotion Committee 2015-current	Member

University

FSU Dean's Search Committee 2004-2005, 2012	Member
FSU Cultural Enrichment Committee 2011-2013	Member
FSU Global Conscientious/Diversity Committee 2001-current	Member

Continuing Education

Engineering Self-Efficacy: What it is, Why it Matters, and How to
CET Professional Development Webinar
November 4, 2016

IFMA World Workplace Conference
San Diego, California
October 5 – 7, 2016

Construction Law Seminar
HalfMoon Education Inc.
Grand Rapids, MI
December 15, 2015

IFMA World Workplace Conference
Denver, Colorado
October 6 – 9, 2015

Michigan Historic Preservation Conference
Midland, MI
May 13-15, 2015

National Alliance for Partnerships in Equity (NAPE) Seminar
Ferris State University
March 20, 2015

AIA Michigan Design Retreat
Bellaire, MI
September 19-20, 2014

Frank Lloyd Wright Building Conservancy: Wright on the Inside
Grand Rapids, Michigan
October 16 – 20, 2013

IFMA World Workplace Conference
Philadelphia, Pennsylvania
October 2 – 4, 2013

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 Info 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
AIA, 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 & 9th 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.)

RED = After Sept 2015

TEACHING EXPERIENCE:

FERRIS STATE UNIVERSITY
College of Technology; Architectural Technology and Facility Management Department
Big Rapids, Michigan 49307

MERIT- *(September '16)*
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 Spring 2012, Spring 2014.
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.
ARCH 341 – Architectural Design 1 (4ch): *first taught Fall 2015.*
FMAN 321 - Principles of Facility Management (3 ch): Taught Fall Semester
FMAN 321 - Principles of Facility Management (3 ch)Web version for Certificate Program: Developed Fall '04. First taught Fall '05. Taught Spring Semester.
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 and Spring 2015.*
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. Taught Fall Semester.
FMAN 489 – Capstone Research (1ch): Taught Fall '12 – '14.
FMAN 499 – Capstone Thesis (3 ch): Taught Spring '09-'15.

PROFESSIONAL ACTIVITIES AND AFFILIATIONS:

- ***Architectural Licenses current in Michigan, allowed Ohio to expire in 2012.***
- ***Member,*** *International Facility Management Association.* ('89-*Present)*
- ***Certified Facility Manager, IFMA,*** *earned designation 1997. Most recently renewed July 2015.*
- ***As member of Facility Management Accreditation Commission served on task force to rewrite the IFMA Foundation Accreditation Standard to comply with CHEA (Commission on Higher Education Accreditation).*** *(2012-2014)*
- ***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).*
  - ***Visitation Committee:*** *Conestoga College, Kitchener, Ontario. (July 2014)*
  - ***Member:*** *Temple University Accreditation Committee – Reviewer (Summer 2013)*
  - ***Member:*** *Missouri State University Accreditation Committee - Reviewer (Summer 2012)*
  - ***Member:*** *University of Minnesota Accreditation Committee - Reviewer. (Fall 2011)*
  - ***Member:*** *Southern Polytechnic State University Accreditation Committee - Reviewer. (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).
- ***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)*
- ***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).*
- 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.
- **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:

- ***Responsible for Facility Management Internship Program (FMAN393).*** *(Summer 2004-Present)*
- ***Chair of Re-Accreditation for BS in Facility Management Program. (Academic year 2013-2014)***
- ***Chair of Facility Management Academic Program Review. (Academic year 2013-2014)***
- ***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. (Spring 2013 and Spring 2015)

- ***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)***
- **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:

"Discover Ferris State's Facility Management Education Options"; *SE MI Chapter of IFMA, Novi, MI, 21 May 2015.*

"Future of K-12 Facility Management"; *Michigan School Business Officials, Detroit, MI, 28 April 2015.*

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

Interviewed for and quoted in ***"Career Credentials: Distinctions in the Dynamic Facility Management Field", Buildings;*** *Chris Curtland; November 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 World Workplace 2015 and Academic Programs Committee Meeting (Accreditation) in Denver, CO. (6-9 October '15).*
- ***Recipient of College of Engineering Technology Faculty Development Grant.*** *To fund travel to World Workplace 2013 and Academic Programs Committee Meeting (Accreditation) in Philadelphia, PA (1-4 October '13)*
- ***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 Timme Grants**.
  - *Fall'15 trip to Denver for World Workplace.*
  - *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 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 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:

- ***Mass Timber in North America; Rethink Wood.*** *Licensed Architect: Vol. 20., No. 3, Winter 2016. (31 December 2016, 1 Learning Unit (HSW))*
- ***Cool Roofs Stand Up to Scientific Scrutiny; Stanley P Graveline, SIKA.*** *Licensed Architect: Vol. 20., No. 2, Summer 2016. (31 December 2016, 1 Learning Unit (HSW))*
- ***Building Code Compliance for Renovations; Richard A Piccolo.*** *Licensed Architect; Vol. 20., No. 1, Spring 2016. (1 April 2016, 1 Learning Unit (HSW)*
- ***Architectural Coatings; Tammy Schroeder.*** *Licensed Architect; Vol. 19., No. 3, Winter 2016. (18 January 2016, 1 Learning Unit (HSW)*
- ***Maximizing Reliability with Enterprise Asset Management; Erica Schatte. DEMATIC.*** *IFMA World Workplace. Denver, CO (7 October, 2015, 1 hour)*
- ***Preparing for POE BIM; Brian Haines, FM: Sytems.*** *Denver, CO (7 October, 2015, ½ hour)*
- ***Workplace Detox: 7 Things You Could Be Getting All Wrong; Angie Earlywine, Sr VP, Cannon Design.*** *Denver, CO (8 October, 2015, 1 hour)*
- ***FM Pipeline: Tapping Your IFMA Chapter's High School Reservoir; James Zerbel, Sr Principal, FM Pipeline team, Elizabeth Cram, Workplace Strategist/Healthcare Specialist, Building Services, Inc., Carolyn McGary, CFM, FMP, SFP, FM, Jones Lange LaSalle .*** *Denver, CO (8 October, 2015, 1 hour)*
- ***Walk a Mile in Their Shoes: The Art and Science of Workplace Observations; Jodi Williams, Sr Workplace Strategist, Stefana Scinta, Workplace Strategist, TRKL Architects.*** *Denver, CO (8 October, 2015, 1 hour)*
- ***Green Building Guidelines for New Home Construction;*** *PDH Academy (Online), 4 June 2015 (4HSW)*
- ***Chilled Beams Come of Age; Price Industries,*** *AIA Grand Valley, Grand Rapids, MI 29 May 2015 (1 HSW)*
- ***Tectum – The Noise Control Solution; Steven Udolph, Tectum, Inc,*** *AIA Grand Valley, Grand Rapids, MI 29 May 2015 (1 HSW).*

- ***Understanding Mortarless Stone Veneer and Other Stone Veneer Products; Adam Smith, Boral Versetta Stone.*** *AIA Grand Valley, Grand Rapids, MI 27 March 2015 (1HSW).*
- ***Understanding Polyash Siding and Other Categories of Siding Market; Adam Smith, Boral TRU Exterior Siding.*** *AIA Grand Valley, Grand Rapids, MI)27 March 2015 (1HSW).*
- ***Micro-Messaging to Reach and Teach Every Student; Meagan Pollock, PhD.*** *Ferris State University, Big Rapids, MI (4.5 hours; 20 March 2015)*
- ***Geothermal Heat Pump Technology: The Green Standard for Energy-Smart Heating, Cooling, and How Water; Scott Niesen, WaterFurnace International.*** *Licensed Architect; Vol. 18., No. 4, Winter 2014. (30 December 2014, 1 Learning Unit (HSW)*
- ***Designing with Daylight; Velux of America Inc.*** *AIA Grand Valley, Grand Rapids, MI (24 October 2014, 1 Learning Unit (HSW)*
- ***Abrasive Etching and Paint Techniques on Glass.*** *AIA Grand Valley, Grand Rapids, MI (24 October 2014, 1 Learning Unit (HSW)*
- ***Prefabricated Foundation System for Residential and Commercial Applications.*** *AIA Grand Valley, Grand Rapids, MI (26 September 2014, 1 Learning Unit (HSW)*
- ***Designing with Structural Insulated Panels Advanced; Structural Insulated Panel Association.*** *AIA Grand Valley, Grand Rapids, MI (26 September 2014, 1 Learning Unit (HSW)*
- ***The Ins and Outs of Engineered and Composite Wood Doors; Yuri Nekrasov – Doors for Builders, Inc.*** *Licensed Architect; Vol. 18., No. 3, Fall 2014. (15 September, 2014, 1 Learning Unit (HSW)*
- ***Open Cell Spray Foam Insulation in Commercial Buildings; Peter J. Arsenault, FAIA, NCARB, LEED-AP – Icynene, Inc***. *Licensed Architect; Vol. 18., No. 2, Summer 2014. (11 July, 2014, 1 Learning Unit (HSW)*
- ***Designing Wood Floors for Optimal Performance; Tomo Tsuda, P. Eng, PE – Weyerhaeuser Trus-Joist.*** *Licensed Architect; Vol. 18., No. 1, Spring 2014. (15 April, 2014, 1 Learning Unit (HSW)*
- ***Significant Changes to ICC A 117.1 – Accessibility Standard 2009 Edition; Metro Building Inspectors Association.*** *AIA Grand Valley, Grand Rapids, MI (13 March, 2014, 6 AIA/CES Learning Units (HSW))*
- ***Using SketchUp and Energy Plus for Building Energy Analysis; Chris Cosper, Ferris State University.*** *AIA Grand Valley, Grand Rapids, MI (24 January, 2014, 1 AIA/CES Learning Unit)*
- ***Air Movement for Energy-Efficient Comfort; Kevin Ruchinski, BigAssFans.*** *AIA Grand Valley, Grand Rapids, MI (24 January, 2014, 1 AIA/CES/PDH Learning Unit (HSW))*
- ***5 Ways to Optimize Framing; Bob Clark, APA, The Engineered Wood Association.*** *Licensed Architect; Vol. 17., No. 4, Winter 2013. (21 January, 2014, 1 Learning Unit (HSW)*
- ***Site Visit Training for Facility Management Academic Committee.*** *IFMA World Workplace. Philadelphia, PA (November 2013, 8 hours)*
- ***How Do You Move from Good to Great as a Leader, Mary Gauer, CFM, IFMA Fellow, Group Manager, Health Sciences Center, Office of Capital Projects, University of New Mexico and Peter Winters, CFM, FAIA, IFMA Fellow, Consultant.*** *IFMA World Workplace. Philadelphia, PA (4 November, 2013, 1 hour)*
- ***Net Zero Buildings: A Federal Mandate; Eric Truelove, PE, GGA, LEED AP, H&H Energy Services, Director, Sustainability Design Services.*** *IFMA World Workplace. Philadelphia, PA (3 November, 2013, 1 hour)*
- ***Project Programming: The Basis of Good Design and Best Value for your Facility Investment, Richard Sievert, PhD, CFM, PMP, CVS, CCC, President, The Sievert Group.*** *IFMA World Workplace. Philadelphia, PA (3 November, 2013, 1 hour)*
- ***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)*
- ***Employer Internship Training;*** *West Michigan Strategic Alliance, Grand Rapids, MI (16 November 2010, 1.5 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)
- **Realligning 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 2005,1hour)
- **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. Denver, CO (6-9 October '15)*
- ***World Workplace:*** *Annual conference and convention for the International Facility Management Association. Philadephia, PA (1-4 October '13)*
- ***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:

- *Developed and maintain FM Alumni Distribution List for FM Job Opportunities. (Fall 2003-Present)*
- *Liaison for job placements and internships. (2006-present)*
- *Chair Department Tenure Committee (2006-present)*
- *Chair of Paul Long Tenure Committee (2011-present)*
- *Faculty Advisor to FSU Student Chapter of International Facility Management Association. (1996-Present)*
- *Participate in DAWG Days. Typically once per academic year.*
- *Member lab maintenance committee. (Fall '92-Present)*
- *Developed exit interview for graduating AT and FM students. Compiled results and prepared annual reports. (Spring '92-2012)*
- *Advise Facility Mgmt. transfer students as assigned. ('94-Present)*
- *Responsible for BS in Facility Management Re-Accreditation. (Academic Year 2013-2014)*
- *Chair, Facility Management Program Review. (Academic Year 2013-2014)*
- *Represented FSU Architecture and Facility Management programs at Kenowa Hills Career Night, Fall 2013.*
- 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)
- 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)
- 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)
- 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 Assessment and Accreditation Committee (Fall ’15-)*
- *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:

- *50 year member – JEDNOTA (First Catholic Slovak Union of US and Canada (2015)*
- *9 Gallon Donor – Michigan Community Blood Centers. (Fall 2011)*
- Volunteer Soccer Coach YMCA. (Spring 2006-Spring 2007)
- 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 E

STRATEGIC PLAN

OUR MISSION

Associate in Applied Science in Architectural Technology

The mission of the Architectural Technology associate degree program is to provide students with a foundation of architectural concepts, skills and values necessary to continue education for advanced degrees, leading to careers in architecture and professions related to the built environment.

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.
- The ability of students to successfully continue their education.

Bachelor of Science in Architecture and Sustainability

The mission of the Bachelor of Science in Architecture and Sustainability degree program is to prepare students for innovative practice in the design professions and stewardship of their communities. The program seeks to provide a holistic, quality education in architecture; to promote excellence in architectural practice, sustainability, and preservation; and demonstrate engagement with community planning. The program also seeks to instill the value of life-long learning.

Assessment that measures the fulfillment of this mission includes:

- 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 regarding current and emerging issues within the profession of architecture.
- The ability of students to successfully find employment and/or continue their education.
- Student engagement in urban and community issues.

OUR GOALS (2015-2020)

1. Increase enrollment to within 85% of capacity.
2. Create a professional degree program to create greater opportunity for students.
3. Assess and enhance current architecture curriculum (AAS and BS).
4. Enhance image and recognition of program.
5. Develop and implement marketing plan.

6. Explore opportunities for the offering of the BS in Architecture and Sustainability at the Grand Rapids campus.
7. Develop hiring plan for retiring faculty.

GOAL 1

Increase and maintain enrollment within 85% of capacity.

STRATEGIES / ACTION STEPS

1. Expand scope of Architecture Summer Camp to attract prospective students
2. Develop and promote accredited Bachelor of Architecture degree

GOAL 2

Create a professional degree program to create greater opportunity for students.

STRATEGIES / ACTION STEPS

1. Write and submit PCAF for Bachelor of Architecture degree (NAAB accredited degree) by May 2017
2. Develop curriculum and deliver letter of intent to seek accreditation to NAAB by May 2018.

GOAL 3

Assess and enhance current architecture curriculum to reflect trends of architectural practice.

STRATEGIES / ACTION STEPS

1. Convert to laptop program for 2nd, 3rd and 4th year students
2. Evaluate course content with regards to traditional vs. digital methodologies

GOAL 4

Enhance image and recognition of program

STRATEGIES / ACTION STEPS

1. Renovate the first floor of Swan Building to provide a centralized, visible space for the programs to include the following:
    a. Studio space for junior and senior ARST program
    b. FM lecture/learning lab
    c. Student lounge and offices for AIAS and Ferris Student IFMA chapters
    d. Department office
    e. Crit / gallery space
    f. Digital Center
    g. Model Shop
2. Expand scope of Place-Matters Lecture and Film Series and Visiting Professor programs:

    a. Develop an endowment to fund visits from nationally prominent lecturers and visiting professors
3. Increase visibility of Small Town Studio
    a. Establish off-campus studio space to increase interaction with the public

GOAL 5

Develop and implement marketing plan:

STRATEGIES / ACTION STEPS

1. Create endowments to support:
    a. Architecture lecture series and visiting professor program
    b. Student scholarships
2. Solicit gifts to support:
    a. Student travel
    b. Junior and Senior Studios
    c. Digital Center equipment

GOAL 6

Explore alternative methodologies for the offering of the BS in Architecture and Sustainability on the Grand Rapids campus.

STRATEGIES / ACTION STEPS

GOAL 7

Develop hiring plan for retiring faculty.

STRATEGIES / ACTION STEPS

1. Identify desirable faculty skills (required and recommended)
2. Write faculty position description(s)
3. Write rationale for replacement of retiring faculty members

ARCH/ARST STAKEHOLDER EMPLOYABILITY SURVEY

Dear Ferris State AAS Architectural Technology (ARCH) and/or BS Architecture and Sustainability (ARST) Stakeholder:

Ferris State University is currently conducting an academic review of our Architectural Technology and Architecture and Sustainability degree programs. The purpose of the academic review is to assess the performance of graduates, monitor the quality of the program, and provide a framework for future enhancements and revisions of the curriculum and programs.

We request your input concerning the performance of the faculty and graduates of our program and ask if you would please complete the attached survey by June 5th, 2017. (You only need to complete the survey one time.)

Your opinions and experiences are very important to us as we strive to provide a high quality architectural education. Thank you for your time and support of our program.

* Required

Background Info

The following question will help us analyze information gathered in this survey. You may select as many options as necessary.

1. Please identify each of the following that will apply to you beginning August 2017 (Fall Semester). If you are a dual degree student, please check each of the bachelor degrees you are pursuing. *

   Check all that apply.

   - [ ] A continuing AAS in Architectural Technology student
   - [ ] A continuing BS in Architecture and Sustainability student
   - [ ] A continuing Facility Management student
   - [ ] A continuing BS in Construction Management student
   - [ ] Pursuing the Facility Management Minor
   - [ ] Pursuing another degree at Ferris State, Kendall College of Art and Design, or other university not listed above
   - [ ] A member of the AAS in Architectural Technology alumni
   - [ ] A member of the BS in Architecture and Sustainability alumni
   - [ ] A member of the BS in Facility Management alumni
   - [ ] A member of the BS in Construction Management alumni
   - [ ] An Advisory Board member
   - [ ] An employer of a Ferris State graduate
   - [ ] None of the above

Background Info - Current Status

The question below will direct you to the appropriate sections of the survey. Please only select one option. If multiple options apply to you, please select the option that most accurately describes your current situation.

2. Please identify which of the following most directly applies to you. Your answer to this question will direct you to the appropriate sub-sections of the survey. (Please only select one option.) *

Mark only one oval.

- I am a current student Skip to question 3.
- I am a 2012 or later graduate of the Associate in Applied Science in Architectural Technology Program (ARCH Program). (Please only select this option if you graduated with AAS degree in 2012 or later.) Skip to question 3.
- I am a graduate of the Bachelor of Science in Architecture and Sustainability (ARST Program) Skip to question 3.
- I am a graduate of both the Associate in Applied Science in Architectural Technology Program (AT Program) and the Bachelor of Science in Architecture and Sustainability (ARST Program) Skip to question 3.
- I am an Advisory Board Member Skip to question 28.
- I am an employer of a Ferris ARCH or ARST graduate Skip to question 28.
- I am a Faculty Member Skip to question 28.
- Other: _____ Skip to question 28.

Questions for Current Students and Alumni

Please answer the following questions based on your experience as a current or former student of the Ferris State AAS Architectural Technology and/or BS Architecture and Sustainability degree programs.

3. Please check each of the years you were a member of a Registered Student Organization (RSO) during your studies at Ferris State. (This can be any student organization on campus and does not have to be limited to AIAS.)

Check all that apply.

- [ ] Not Applicable
- [ ] 2011/2012
- [ ] 2012/2013
- [ ] 2013/2014
- [ ] 2014/2015
- [ ] 2015/2016
- [ ] 2016/2017
- [ ] Other: _____

4. Please check each of the years you were a member of Student Government during your studies at Ferris State.
   Check all that apply.

   - [ ] Not Applicable
   - [ ] 2011/2012
   - [ ] 2012/2013
   - [ ] 2013/2014
   - [ ] 2014/2015
   - [ ] 2015/2016
   - [ ] 2016/2017
   - [ ] Other: _____

5. Please check each of the years you were a member of the Honors Program during your studies at Ferris State.
   Check all that apply.

   - [ ] Not Applicable
   - [ ] 2011/2012
   - [ ] 2012/2013
   - [ ] 2013/2014
   - [ ] 2014/2015
   - [ ] 2015/2016
   - [ ] 2016/2017
   - [ ] Other: _____

6. If you currently work, or worked, while attending Ferris State, please estimate the number of hours a week you were engaged in paid employment during your Freshman Year in the program. (If you did not work, please enter NA in the field below.)

   _____

7. Sophomore Year - see above. (If you did not work, please enter NA in the field below.)

   _____

   _____

   _____

   _____

   _____

8. Junior Year - see above. (If you did not work, please enter NA in the field below.)

9. Senior Year - see above. (If you did not work, please enter NA in the field below.)

10. Any Additional Years - see above. (If you did not work, please enter NA in the field below.)

11. Please list any honors or awards you received, or have received, during your studies at Ferris State.

Questions for Alumni

If you are an alumnus/alumna of either the AAS in Architectural Technology or the BS in Architecture and Sustainability, please answer these questions based on your opinion of how well the degree prepared you in the following areas. If you are a current Freshmen, please answer the questions that relate to you.

12. What year did you graduate with your Associate in Applied Science in Architectural Technology?
Mark only one oval.

- Not Applicable
- 2012
- 2013
- 2014
- 2015
- 2016
- 2017
- Other: _____

13. What year did you graduate with your Bachelor of Science in Architecture and Sustainability degree?
Mark only one oval.

- Not Applicable
- 2013
- 2014
- 2015
- 2016
- 2017
- Other: _____

14. The following question is for AAS grads, and/or students who are scheduled to obtain their AAS May 2017. Within one year of completing your Associate in Applied Science in Architectural Technology at Ferris State, were you (or do you plan to be):
Mark only one oval.

- Not Applicable
- Working full time
- Pursuing the Bachelor of Science in Architecture and Sustainability at Ferris State
- Pursuing the Bachelor of Science in Facility Management at Ferris State
- Pursuing a non-architecture or facility management degree at Ferris Sate
- Pursuing a degree at another university
- Other: _____

15. Within one year of completing your Bachelor of Science in Architecture and Sustainability at Ferris State, did you:
Mark only one oval.

- Not Applicable
- Pursue a degree in Facility Management at Ferris State
- Apply to and attend graduate school
- Apply to and was accepted, but did not attend graduate school
- Apply to but was not accepted to graduate school
- Did not apply to graduate school
- Other: _____

16. Are you currently employed: (Please select one)
Mark only one oval.

- Not Applicable
- Full time in an Architecture related field
- Full time in an Architectural “Allied” company, including but not limited to: a construction company, a construction sales/supply company, or a construction material manufacturer
- Full time in a Facility Management related field
- Part time in an Architecture related field
- Part time in an Architectural “Allied” company, including but not limited to: a construction company, a construction sales/supply company, or a construction material manufacturer
- Part time in a Facility Management related field
- Either full time or part time in a non-Architecture (or Facility Management) related field
- Other: _____

17. Within one year of graduation (from Ferris State with your Bachelor of Science in Architecture and Sustainability), were you:
Mark only one oval.

- Not Applicable
- Employed in an Architecture related field
- Employed in an Architectural “Allied” company, including but not limited to: a construction company, a construction sales/supply company, or a construction material manufacturer
- Employed in a Facility Management related field
- Employed in a non-architecture or Facility Management related field
- Had been accepted to or were attending graduate school
- Completing a dual degree in Facility Management
- Other: _____

18. If you are working and not currently attending graduate school, what is your average yearly salary?
Mark only one oval.

- Not Applicable
- < $20,000
- $20,001 – $30,000
- $30,001 – $40,000
- $40,001 – $50,000
- $50,001 – $60,000
- $60,001 – $70,000
- $70,001 – $80,000
- >$80,001

19. At any time after attending Ferris State, did you fulfill, or are you currently fulfilling, any of the following graduate degrees?
Mark only one oval.

- Not Applicable
- Master of Architecture (MArch)
- Master of Business Administration (MBA)
- Master of Sciences (Ms)
- Doctorate of Philosophy or other Doctorate degree
- Other: _____

20. If you had the opportunity to do it over, would you pick the Associate in Applied Science in Architectural Technology program at Ferris State?
Mark only one oval.

- Yes
- No
- Other: _____

21. Please explain your answer to the above question.

_____

_____

_____

_____

_____

22. Would you recommend the Associate in Applied Science in Architectural Technology program at Ferris State to others?
Mark only one oval.

- Yes
- No
- Other: _____

23. Please explain your answer to the above question.

_____

_____

_____

_____

_____

24. If you had the opportunity to do it over, would you pick the Bachelor of Science in Architecture and Sustainability program at Ferris State?
Mark only one oval.

- Not Applicable
- Yes
- No
- Other: _____

25. Please explain your answer to the above question.

_____

_____

_____

_____

_____

26. Would you recommend the Bachelor of Science in Architecture and Sustainability program at Ferris State to others?
Mark only one oval.

- Not Applicable
- Yes
- No
- Other: _____

27. Please explain your answer to the above question.

Questions for All Stakeholders:

Please answer the following questions based on the composition of the faculty group in the Associate in Applied Science in Architectural Technology and the Bachelor of Science in Architecture and Sustainability programs.

28. Please rate the overall quality of faculty group as a whole based on the following scale:
    Mark only one oval.

- 0 - Cannot Judge
- 1 - Poor
- 2 - Below Average
- 3 - Average
- 4 – Above Average
- 5 – Excellent

29. Please rate the quality of faculty on their knowledge of current trends and issues within architecture and allied fields.
    Mark only one oval.

- 0 - Cannot Judge
- 1 - Poor
- 2 - Below Average
- 3 - Average
- 4 – Above Average
- 5 – Excellent

30. Please rate the quality of faculty on their ability to teach design (conceptual design, schematic design, design development, etc).
    Mark only one oval.

- 0 - Cannot Judge
- 1 - Poor
- 2 - Below Average
- 3 - Average
- 4 - Above Average
- 5 – Excellent

31. Please rate the quality of faculty on their ability to teach technical/production skills (detailing, drawing production, Revit, AutoCAD, etc).
Mark only one oval.

- 0 - Cannot Judge
- 1 - Poor
- 2 - Below Average
- 3 - Average
- 4 - Above Average
- 5 – Excellent

32. Please rate the quality of faculty on their ability to teach graphic/presentation skills (presentation layout, renderings, model building, etc).
Mark only one oval.

- 0 - Cannot Judge
- 1 - Poor
- 2 - Below Average
- 3 - Average
- 4 - Above Average
- 5 – Excellent

33. Please rate the quality of faculty on their ability to teach professional skills, often referred to as "soft skills" (verbal communication, time management, written communication, project management, etc).
Mark only one oval.

- 0 - Cannot Judge
- 1 - Poor
- 2 - Below Average
- 3 - Average
- 4 - Above Average
- 5 – Excellent

34. Please rate the quality of faculty on their ability to teach critical thinking skills as related to architecture and design.
Mark only one oval.

- 0 - Cannot Judge
- 1 - Poor
- 2 - Below Average
- 3 - Average
- 4 - Above Average
- 5 – Excellent

35. Please provide any additional comments you would like to share regarding the composition of the faculty group.

36. Please rate the program on its overall ability to prepare graduates for an architecture related career.

Mark only one oval.

- 0 - Cannot Judge
- 1 - Poor
- 2 - Below Average
- 3 - Average
- 4 - Above Average
- 5 – Excellent

37. Please rate the program on its overall ability to prepare graduates for an architecture related career in the specific area of design (conceptual design, schematic design, design development, etc).

Mark only one oval.

- 0 - Cannot Judge
- 1 - Poor
- 2 - Below Average
- 3 - Average
- 4 - Above Average
- 5 – Excellent

38. Please rate the program on its overall ability to prepare graduates for an architecture related career in the specific area of technical/production skills (detailing, drawing production, Revit, AutoCAD, etc).

Mark only one oval.

- 0 - Cannot Judge
- 1 - Poor
- 2 - Below Average
- 3 - Average
- 4 - Above Average
- 5 – Excellent

39. Please rate the program on its overall ability to prepare graduates for an architecture related career in the specific area of graphic/presentation skills (presentation layout, renderings, model building, etc).

Mark only one oval.

- 0 - Cannot Judge
- 1 - Poor
- 2 - Below Average
- 3 - Average
- 4 - Above Average
- 5 – Excellent

40. Please rate the program on its overall ability to prepare graduates for an architecture related career in areas of professionalism often referred to as "soft skills" (verbal communication, time management, written communication, project management, etc).

Mark only one oval.

- 0 - Cannot Judge
- 1 - Poor
- 2 - Below Average
- 3 - Average
- 4 - Above Average
- 5 – Excellent

41. If you employ graduates of the Associate in Applied Science in Architectural Technology or the Bachelor of Science in Architecture and Sustainability program at Ferris State, do you plan to continue hiring Ferris graduates?

Mark only one oval.

- Not Applicable
- Yes
- No
- Other: _____

42. Please explain your answer to the above question.

_____

_____

_____

_____

_____

Timestamp	Students	Grads	Please identify each of the following that will apply to you beginning August 2017 (Fall Semester). If you are a dual degree student, please check each of the bachelor degrees you are pursuing.
5/2/2017 8:14:44		1	A continuing BS in Architecture and Sustainability student, A member of the AAS in Architectural Technology alumni
5/2/2017 8:17:46		1	A continuing BS in Architecture and Sustainability student
5/2/2017 8:17:48		1	A continuing BS in Architecture and Sustainability student, A continuing Facility Management student
5/2/2017 8:19:40		1	A continuing BS in Architecture and Sustainability student
5/2/2017 8:20:04		1	A continuing AAS in Architectural Technology student, A member of the BS in Architecture and Sustainability alumni
5/2/2017 8:20:44		1	A continuing BS in Architecture and Sustainability student, A continuing Facility Management student
5/2/2017 8:21:31			An employer of a Ferris State graduate
5/3/2017 9:50:47		1	A continuing AAS in Architectural Technology student, A continuing Facility Management student
5/3/2017 9:51:09		1	A continuing AAS in Architectural Technology student
5/3/2017 9:51:45		1	A continuing AAS in Architectural Technology student
5/3/2017 9:52:05		1	A continuing AAS in Architectural Technology student
5/3/2017 9:52:09		1	A continuing BS in Construction Management student
5/3/2017 9:52:24		1	A continuing AAS in Architectural Technology student, A continuing BS in Architecture and Sustainability student, A continuing Facility Management student
5/3/2017 9:52:42		1	A continuing AAS in Architectural Technology student
5/3/2017 9:53:48		1	A continuing AAS in Architectural Technology student
5/3/2017 9:53:52		1	A continuing BS in Architecture and Sustainability student
5/3/2017 9:54:39		1	A continuing BS in Architecture and Sustainability student
5/3/2017 9:54:41		1	A continuing AAS in Architectural Technology student
5/3/2017 9:56:24		1	A continuing AAS in Architectural Technology student
5/3/2017 9:56:37		1	A continuing AAS in Architectural Technology student
5/3/2017 9:56:50		1	A continuing AAS in Architectural Technology student
5/3/2017 9:59:08		1	A continuing AAS in Architectural Technology student, A continuing Facility Management student
5/8/2017 12:09:52			None of the above
5/10/2017 14:19:51			None of the above
5/11/2017 11:15:26			None of the above
5/12/2017 11:44:09		1	A member of the BS in Architecture and Sustainability alumni
5/12/2017 11:46:23		1	A member of the BS in Facility Management alumni
5/12/2017 11:51:36		1	A member of the AAS in Architectural Technology alumni, A member of the BS in Architecture and Sustainability alumni
5/12/2017 11:56:45		1	A member of the AAS in Architectural Technology alumni, A member of the BS in Architecture and Sustainability alumni
5/12/2017 11:59:51		1	A member of the AAS in Architectural Technology alumni, A member of the BS in Architecture and Sustainability alumni
5/12/2017 12:02:50		1	A member of the AAS in Architectural Technology alumni, A member of the BS in Architecture and Sustainability alumni
5/12/2017 12:14:03		1	A member of the BS in Architecture and Sustainability alumni
5/12/2017 12:15:01		1	A member of the AAS in Architectural Technology alumni, A member of the BS in Architecture and Sustainability alumni
5/12/2017 12:55:05		1	A member of the BS in Architecture and Sustainability alumni
5/12/2017 12:55:56		1	Pursuing another degree at Ferris State, Kendall College of Art and Design, or other university not listed above, A member of the AAS in Architectural Technology alumni, A member of the BS in Architecture and Sustainability alumni
5/12/2017 13:07:34			An Advisory Board member
5/12/2017 13:17:38		1	A member of the AAS in Architectural Technology alumni, A member of the BS in Architecture and Sustainability alumni
5/12/2017 13:33:57			A member of the BS in Facility Management alumni
5/12/2017 14:45:38		1	A continuing BS in Construction Management student, Pursuing the Facility Management Minor, A member of the AAS in Architectural Technology alumni
5/12/2017 16:35:40		1	A member of the AAS in Architectural Technology alumni, A member of the BS in Architecture and Sustainability alumni
5/12/2017 17:30:17		1	A member of the BS in Architecture and Sustainability alumni
5/12/2017 19:35:08		1	A continuing BS in Architecture and Sustainability student
5/12/2017 20:24:19			None of the above
5/13/2017 9:15:26		1	A continuing BS in Architecture and Sustainability student, A continuing Facility Management student
5/14/2017 11:40:14		1	A continuing BS in Architecture and Sustainability student
5/14/2017 14:40:35		1	A member of the BS in Facility Management alumni
5/14/2017 15:30:37		1	A member of the BS in Facility Management alumni
5/14/2017 21:22:08			None of the above
5/15/2017 9:23:51			An Advisory Board member
5/15/2017 10:20:55			An Advisory Board member
5/15/2017 10:43:51			None of the above
5/15/2017 11:04:48		1	A member of the AAS in Architectural Technology alumni, A member of the BS in Architecture and Sustainability alumni, A member of the BS in Facility Management alumni
5/15/2017 14:06:35		1	A member of the AAS in Architectural Technology alumni, An Advisory Board member
5/15/2017 14:51:33		1	A continuing BS in Architecture and Sustainability student
5/15/2017 16:45:01		1	A continuing BS in Architecture and Sustainability student
5/16/2017 21:46:07		1	A member of the AAS in Architectural Technology alumni, A member of the BS in Architecture and Sustainability alumni
5/18/2017 14:47:39			None of the above
5/19/2017 10:53:54			An Advisory Board member
5/20/2017 11:37:24		1	A member of the AAS in Architectural Technology alumni, A member of the BS in Architecture and Sustainability alumni, A member of the BS in Facility Management alumni
5/20/2017 21:34:12			None of the above
5/22/2017 8:59:13		1	A member of the AAS in Architectural Technology alumni, A member of the BS in Facility Management alumni, An Advisory Board member
5/23/2017 8:28:15		1	Pursuing another degree at Ferris State, Kendall College of Art and Design, or other university not listed above, A member of the AAS in Architectural Technology alumni, A member of the BS in Architecture and Sustainability alumni
5/23/2017 20:29:21		1	A member of the BS in Facility Management alumni
5/25/2017 8:29:26		1	A member of the AAS in Architectural Technology alumni, A member of the BS in Architecture and Sustainability alumni
6/1/2017 10:16:50			An Advisory Board member
6/1/2017 10:23:48		1	A member of the BS in Architecture and Sustainability alumni
6/1/2017 10:34:06		1	A member of the AAS in Architectural Technology alumni, A member of the BS in Facility Management alumni
6/1/2017 11:16:08			A continuing Facility Management student
6/1/2017 11:58:10		1	A member of the AAS in Architectural Technology alumni
6/1/2017 12:51:05		1	A member of the AAS in Architectural Technology alumni, A member of the BS in Architecture and Sustainability alumni
6/2/2017 21:44:39		1	A continuing BS in Architecture and Sustainability student
6/4/2017 19:11:09		1	A member of the AAS in Architectural Technology alumni, A member of the BS in Architecture and Sustainability alumni
6/5/2017 7:42:03			An Advisory Board member
6/5/2017 10:58:10		1	A member of the AAS in Architectural Technology alumni, A member of the BS in Architecture and Sustainability alumni, A member of the BS in Facility Management alumni
6/5/2017 13:11:05		1	A continuing BS in Architecture and Sustainability student, Pursuing the Facility Management Minor
6/5/2017 20:46:04		1	A member of the AAS in Architectural Technology alumni, A member of the BS in Architecture and Sustainability alumni
6/6/2017 1:58:49		1	A continuing BS in Architecture and Sustainability student

30 30

Respondants color coding

A continuing AAS in Architectural Technology student

A continuing BS in Architecture and Sustainability student

A continuing BS in Construction Management student

A member of the AAS in Architectural Technology alumni

No color = other

Please identify which of the follo	Please check each of the years you were a member of	Please check each of the y	Please check each of the y	If you curren	Sophomore Y	Junior Year - see above. (If	Senior Year - see above. (If	Any Additional Years - see	Please list any honors or a	What year did you graduat	What year did you graduate	
I am a 2012 or later graduate of the	Not Applicable	Not Applicable	Not Applicable		0	15	15	15		2016	Not Applicable	
I am a current student	2014/2015	Not Applicable	Not Applicable	10 hours a we	NA	NA	NA	NA	Deans List fall 2014, spring 2	2016	Not Applicable	
I am a current student	2014/2015, 2015/2016, 2016/2017	Not Applicable	Not Applicable		28	30	25	NA	NA	2016	Not Applicable	
I am a current student	2014/2015, 2015/2016, 2016/2017	Not Applicable	Not Applicable	na	na	na	na	na	ACHA Academic All America	2016	Not Applicable	
I am a current student	2013/2014, 2014/2015, 2015/2016, 2016/2017	Not Applicable	Not Applicable	6-8 hours a w	NA	8 hours a week	6 hours a week	NA	Outstanding Student Award (	2017		2017
I am a current student	2013/2014, 2014/2015, 2015/2016	Not Applicable	Not Applicable	NA	NA	12 hrs	NA	NA	Deans List 2013/2014	2015		2017
I am a current student	2016/2017	Not Applicable	Not Applicable		25	25	20	25 NA	Dean's Scholarship	Not Applicable	Not Applicable	
I am a current student	Not Applicable	Not Applicable	Not Applicable							Not Applicable	Not Applicable	
I am a current student			2016/2017									
I am a current student	Not Applicable	Not Applicable	2016/2017	NA					NA	Not Applicable	Not Applicable	
I am a current student	2016/2017	Not Applicable	2016/2017	NA	NA	NA	NA	NA				
I am a current student	Not Applicable	Not Applicable	Not Applicable	estimated 10	20 hours a week					Not Applicable	Not Applicable	
I am a current student	Not Applicable	Not Applicable	Not Applicable	NA	NA					Not Applicable	Not Applicable	
I am a current student	Not Applicable	Not Applicable	Not Applicable	30-35 hours a	30-35 hours a	NA	NA	NA	NA	Not Applicable	Not Applicable	
I am a current student	Not Applicable	Not Applicable	Not Applicable	NA	NA	NA	NA	NA		Not Applicable	Not Applicable	
I am a current student	2016/2017		2016/2017							Not Applicable	Not Applicable	
I am a current student	Not Applicable	Not Applicable	Not Applicable	NA	NA	NA	NA	NA	NA	Not Applicable	Not Applicable	
I am a current student	2016/2017	Not Applicable	2016/2017		1 NA	NA	NA	NA	NA	Not Applicable	Not Applicable	
I am a current student	2016/2017	Not Applicable	2016/2017	NA	NA	NA	NA	NA	I was nominated for the outst	Not Applicable	Not Applicable	
I am a current student	Not Applicable	Not Applicable	Not Applicable	na	na	na	na	na	na	Not Applicable	Not Applicable	
I am a current student	2016/2017	Not Applicable	2016/2017	N/A						Not Applicable	Not Applicable	
I am a current student	2016/2017	Not Applicable	Not Applicable		25	25 NA	NA	NA	NA	2017	Not Applicable	
I am a Faculty Member												
I am a Faculty Member												
I am a Faculty Member												
I am a graduate of both the Associ	2011/2012, 2012/2013, 2014/2015, 2015/2016	Not Applicable	Not Applicable		20	20	20	35		2013		2016
I am a 2012 or later graduate of the	2014/2015, 2015/2016, 2016/2017	Not Applicable	Not Applicable		10	5 NA	NA		5	2016	Not Applicable	
I am a graduate of both the Associ	2011/2012, 2012/2013		2011/2012	NA	NA	NA	NA	NA		2011		2013
I am a graduate of both the Associ	2011/2012, 2012/2013, 2013/2014, 2014/2015	Not Applicable	Not Applicable	NA	NA	15-20	15-20			2013		2015
I am a graduate of both the Associ	2011/2012, 2012/2013	Not Applicable	2009/2010		15	20	20	23 NA	0	2011		2013
I am a graduate of both the Associ	2011/2012, 2013/2014, 2014/2015, 2015/2016	Not Applicable	Not Applicable	na	na		4	10 na	academic award from the Fe	2014		2016
I am a graduate of both the Associ	2014/2015, 2015/2016	Not Applicable	Not Applicable	NA	NA	NA		10 NA		2014		2016
I am a graduate of both the Associ	2013/2014, 2014/2015	Not Applicable	Not Applicable	30-35	30-35		11	11		2013		2015
I am a graduate of both the Associ	2013/2014	Not Applicable	Not Applicable	NA	NA	NA	NA	NA	NA	2014		2016
I am a graduate of both the Associ	2013/2014, 2014/2015, 2015/2016	Not Applicable	Not Applicable	NA	NA		12	12 NA		2014		2016
I am an Advisory Board Member												
I am a graduate of both the Associ	2011/2012, 2012/2013, 2013/2014	Not Applicable	Not Applicable	NA		25	8	8 NA	NA	2012		2014
I am a 2012 or later graduate of the	2013/2014, 2014/2015	Not Applicable	Not Applicable	Na	Na	Na	Na	Na		2015	Not Applicable	
I am a current student	2015/2016, 2016/2017	Not Applicable	Not Applicable	Na	Na		12	Na	Na	2016	Not Applicable	
I am a graduate of both the Associ	2011/2012, 2012/2013, 2013/2014, 2014/2015		2011/2012, 2012/2013, 2013		10	10	12	15		2013		2015
I am a graduate of both the Associ	Not Applicable	Not Applicable	Not Applicable		20 N/a		30	30		2014		2015
I am a current student	2015/2016, 2016/2017	Not Applicable	2013/2014, 2014/2015		50	50	50		Dean's list	2016	Not Applicable	
I am a graduate of both the Associ	2012/2013	2011/2012, 2012/2013	Not Applicable		20	20	20	20 Na	Na	2013		2013
I am a current student	2013/2014, 2014/2015, 2015/2016, 2016/2017	Not Applicable	2013/2014, 2014/2015	NA		10	12	12 NA	NA	2015		2017
I am a current student	2014/2015, 2015/2016, 2016/2017	Not Applicable	Not Applicable	NA	NA		12	NA	NA	Freshman/Sophomore Essay	2016	Not Applicable	
I am a 2012 or later graduate of the	Not Applicable	Not Applicable	Not Applicable	N/A	N/A		15	15 N/A		2016	Not Applicable	
I am a 2012 or later graduate of the	2016/2017	Not Applicable	Not Applicable		20	20	25	30		2015	Not Applicable	
I am a graduate of both the Associ	2012/2013	Not Applicable	Not Applicable		30	30	24	24		2004		2013
I am an Advisory Board Member												
I am an Advisory Board Member												
I am a 2012 or later graduate of the	2011/2012	Not Applicable		20 hours per v	20 hours per v	20 hours per week	20 hours per week			2015	Not Applicable	
I am a graduate of both the Associ	2013/2014, 2014/2015, 2015/2016	Not Applicable	Not Applicable	NA	NA		24	NA	NA	Deans List (2012, 2013, 201	2014		2016
I am an Advisory Board Member												
I am a graduate of both the Associ	2011/2012, 2012/2013	Not Applicable	Not Applicable		18	18	18	18		Honor roll	2012		2014
I am a current student	Not Applicable	Not Applicable	Not Applicable	NA	NA	NA	NA	NA			2016	Not Applicable	
I am a graduate of the Bachelor of	2012/2013, 2013/2014, 2014/2015, 2015/2016	Not Applicable	Not Applicable	NA	NA	NA	NA	NA		Irrelevant, this is supposed t	2014		2016
I am a Faculty Member												
I am an Advisory Board Member												
I am a graduate of both the Associ	2011/2012, 2012/2013, 2013/2014, 2014/2015, 2015/2016	Not Applicable	Not Applicable	NA	NA		25	25	25	Staples FM scholarship, Lars	2013		2015
I am a graduate of both the Associ	Not Applicable	Not Applicable	Not Applicable	NA	NA	NA	NA	NA	NA		2012		2014
I am an Advisory Board Member													
I am a graduate of both the Associ	2012/2013, 2013/2014, 2014/2015, 2015/2016	Not Applicable	2012/2013, 2013/2014	NA		20	10	25 NA		4.0 GPA sophomore year	2014		2016
I am a 2012 or later graduate of the	2011/2012, 2012/2013, 2013/2014, 2015/2016		2011/2012, 2012/2013, 2013	NA	15 hrs	12 hrs	16 hrs			Deans list.	2012	Facility management	
I am a graduate of both the Associ	2011/2012, 2012/2013, 2013/2014, 2014/2015	Not Applicable	2011/2012, 2012/2013, 2013	NA		10	20	20		Dean's list 4 years, 5+ schola	2013		2015
I am an Advisory Board Member													
I am a graduate of both the Associ	2010-2012	Not Applicable	2008-2013	N/A	N/A	N/A	N/A	N/A		1st Place 2011 ASC Design/	2010		2013
I am a 2012 or later graduate of the	Not Applicable	Not Applicable	Not Applicable		0	0	12	12	12		2012	Not Applicable	
I am a current student	2014/2015, 2015/2016, 2016/2017	Not Applicable	2014/2015, 2015/2016, 2016	NA							2016	Not Applicable	
I am a graduate of both the Associ	2013/2014, 2014/2015, 2015/2016, 2016/2017	Not Applicable	Not Applicable	NA	1 Hour	8 Hours	6 Hours	NA		Outstanding Student Award (	2015		2017
I am a graduate of both the Associ	2011/2012, 2012/2013	Not Applicable	2008/2009, 2009/2010	10-15	10-15	10-15	10-15	10-15		SkillsUSA Michigan 1st place	2010		2013
I am a current student	2014/2015, 2016/2017	Not Applicable	2014/2015	Na		25	25 na	na			2016	Not Applicable	
I am a graduate of both the Associ	2011/2012, 2012/2013	Not Applicable	Not Applicable	NA	NA		12	12 NA		Dean's List and AT's Most O	2011		2013
I am an Advisory Board Member													
I am a graduate of both the Associ	2012/2013, 2013/2014, 2014/2015, 2015/2016	Not Applicable	2012/2013, 2013/2014, 2014	N/A		10	20	20		DEAN'S LIST, HONORS ME	2014		2016
I am a current student	2016/2017	Not Applicable	Not Applicable	30 -40	30-40	30-40	30-40	30-40		None	2014	Not Applicable	
I am a graduate of the Bachelor of	2012/2013, 2013/2014, 2014/2015	Not Applicable	Not Applicable	NA		8	8	8			2013		2015
I am a graduate of the Bachelor of	Not Applicable	Not Applicable	Not Applicable		30	10	20	30	0		2014		2016

The following question is for AAS grads, and/or s	Within one year of complet	Are you currently employe	Within one year of graduati	Not allied	Allied	If you are working and not	At any time after attending	If you had the opportunity t	Yes	No	Yes	No	Maybe	Please explain your answe
Pursuing the Bachelor of Science in Architecture and	Not Applicable	Either full time or part time in	Not Applicable			Not Applicable	Not Applicable	Yes	1					I was originally in another pro
Pursuing the Bachelor of Science in Architecture and	Not Applicable	Not Applicable	Not Applicable			< $20,000	Not Applicable	Yes	1					Architecture has been my pa
Pursuing the Bachelor of Science in Architecture and	Not Applicable	part time in a non-architectur	Not Applicable			< $20,000	Not Applicable	Yes	1					I attended a community colle
Pursuing the Bachelor of Science in Architecture and	Not Applicable	Part time in an Architecture r	Not Applicable			Not Applicable	Not Applicable	Yes	1					I learned a lot of valuable tec
Pursuing the Bachelor of Science in Architecture and	Did not apply to graduate sc	Part Time Working for a Ferr	Employed in an Architecture related field			< $20,000	Master of Architecture (MArc	Yes	1					It's a good program, and I lea
Pursuing the Bachelor of Science in Architecture and	Pursue a degree in Facility M	Not Applicable	Not Applicable			Not Applicable	Not Applicable	Yes	1					I like the Program here, class
I will be receiving both my Associate's and Bachelor'	Did not apply to graduate sc	Either full time or part time in	Not Applicable			$20,001 – $30,000	Not Applicable	Yes						I think it was a good start to t
Not Applicable	Not Applicable	Not Applicable	Not Applicable			Not Applicable	Not Applicable	Yes	1					
Not Applicable	Not Applicable	Not Applicable	Not Applicable			Not Applicable	Not Applicable							
Not Applicable	Not Applicable	Not Applicable	Not Applicable			Not Applicable	Not Applicable	haven't had the opportunity	1					
Not Applicable	Not Applicable	Not Applicable	Not Applicable			Not Applicable	Not Applicable	Yes	1					Yeah I like it
Not Applicable	Not Applicable	Either full time or part time in	Not Applicable			Not Applicable	Not Applicable	Yes	1					Yes, just was not ready for th
Not Applicable	Not Applicable	Not Applicable	Not Applicable			Not Applicable	Not Applicable	Haven't finished yet.						
Not Applicable		Not Applicable	Not Applicable			Not Applicable	Not Applicable							
Not Applicable	Not Applicable	Not Applicable	Not Applicable			Not Applicable	Not Applicable	Yes	1					I'm still a current student
Not Applicable	Not Applicable	Not Applicable	Not Applicable			Not Applicable	Not Applicable	Yes	1					
Not Applicable	Not Applicable	Not Applicable	Not Applicable			Not Applicable	Not Applicable	Yes	1					I enjoy the subject
Not Applicable	Not Applicable	Not Applicable	Not Applicable			Not Applicable	Not Applicable	Yes	1					
Not Applicable	Not Applicable	Not Applicable	Not Applicable			Not Applicable	Not Applicable	No		1				I feel I put in the time for the
Pursuing the Bachelor of Science in Facility Manager	Not Applicable	Either full time or part time in	Not Applicable			Not Applicable	Not Applicable	Yes	1					I am a transfer student, and s
Pursuing the Bachelor of Science in Architecture and	Did not apply to graduate sc	Full time in an Architectural "	Employed in an Architecture	1		$30,001 – $40,000	Not Applicable	Yes				1		
Not Applicable	Not Applicable	Not Applicable	Not Applicable			Not Applicable	Not Applicable	Yes				1		
Pursuing the Bachelor of Science in Architecture and	Apply to and attend graduate	Full time in an Architecture re	Had been accepted to or were attending graduate school			$60,001 – $70,000	Master of Architecture (MArc	Maybe					1	The skills in the programs ar
	Did not apply to graduate sc	Full time in an Architecture re	Employed in an Architecture	1		$60,001 – $70,000	Not Applicable	Yes				1		
Not Applicable	Did not apply to graduate sc	Full time in an Architecture re	Employed in an Architecture	1		$40,001 – $50,000	Not Applicable	Yes				1		
Not Applicable	Apply to and was accepted, I	Full time in an Architecture re	Employed in an Architecture	1		$30,001 – $40,000	Not Applicable	No					1	Would have liked to go out of
	Apply to and was accepted, I	Full time in an Architecture re	Employed in an Architecture	1		$40,001 – $50,000	Not Applicable	No					1	I would have went to a Unive
Pursuing the Bachelor of Science in Architecture and	Did not apply to graduate sc	Full time in an Architecture re	Employed in an Architecture	1		$50,001 – $60,000	Not Applicable	maybe					1	Not having an accredited dec
Pursuing the Bachelor of Science in Architecture and	Apply to and attend graduate	Full Time Summer Internship	Had been accepted to or were attending graduate school				Master of Architecture (MArc	No					1	See answer to choosing bac
Pursuing the Bachelor of Science in Architecture and	Apply to and attend graduate	Part time in an Architecture r	Had been accepted to or were attending graduate school			Not Applicable	Master of Architecture (MArc	No					1	I would've gone to a School t
Pursuing the Bachelor of Science in Architecture and	Apply to and attend graduate	Full time in an Architecture re	Had been accepted to or were attending graduate school			Not Applicable	Master of Architecture (MArc	Yes						This program gave me a stro
Pursuing a non-architecture or facility management d	Not Applicable	Full time in a Facility Manag	Not Applicable			$70,001 – $80,000	Not Applicable	Yes						Good foundation for understa
Pursuing a non-architecture or facility management d	Not Applicable	Full time in a Facility Manag	Not Applicable			< $20,000	Not Applicable	Yes	1					
Pursuing the Bachelor of Science in Architecture and	Apply to and attend graduate	Part time in an Architecture r	Had been accepted to or were attending graduate school			Not Applicable	Master of Architecture (MArc	No					1	I would have chosen a schoo
	Did not apply to graduate sc	Full time in an Architectural "	Employed in an Architectural "Allied" compa		1	$40,001 – $50,000	Not Applicable	Yes				1		
Pursuing the Bachelor of Science in Architecture and	Not Applicable	Not Applicable	Not Applicable			Not Applicable	Not Applicable							
Pursuing the Bachelor of Science in Architecture and	Started working in design rel	Full time in an Architecture re	Employed full time in design field			$40,001 – $50,000	Not Applicable	Yes						The technical information is r
Pursuing the Bachelor of Science in Architecture and	Pursue a degree in Facility M	Not Applicable	Not Applicable			Not Applicable	Not Applicable	No			1			Having had architecture class
Not Applicable	Not Applicable	Full time in an Architecture re	Not Applicable			Not Applicable	Not Applicable	Yes	1					pick it and continue
Not Applicable	Not Applicable	Not Applicable	Not Applicable			Not Applicable	Not Applicable	Yes				1		Learned how to create buildi
Not Applicable	Not Applicable	Full time in an Architectural "	Not Applicable			$40,001 – $50,000	Not Applicable	Yes				1		
	Apply to and was accepted, I	Full time in an Architectural "	Employed in an Architecture related field			$30,001 – $40,000	Not Applicable	Yes						
Not Applicable	Not Applicable	Full time in a Facility Manag	Not Applicable			$40,001 – $50,000	Not Applicable	Yes						
Pursuing the Bachelor of Science in Architecture and	Did not apply to graduate sc	Full time in an Architecture re	Employed in an Architecture	1		$40,001 – $50,000	Not Applicable	Yes				1		Easy transition to BS in Archi
Not Applicable	Apply to and attend graduate	Full time in an Architecture re	Employed in an Architecture related field			$40,001 – $50,000	Master of Architecture (MArc	Yes	1					
Pursuing the Bachelor of Science in Architecture and	Not Applicable	Part time in an Architectural	Not Applicable			Not Applicable	Not Applicable	Yes	1					The program teaches solid fu
Pursuing the Bachelor of Science in Architecture and	Did not apply to graduate sc	Full time in an Architectural "	Employed in an Architectural	1	1	$30,001 – $40,000	Not Applicable	Yes				1		While I do believe that I could
Not Applicable	Pursue a degree in Facility M	Full time in a Facility Manag	Completing a dual degree in Facility Management			$50,001 – $60,000	Not Applicable	Yes				1		Provided a solid baseline edu
Pursuing the Bachelor of Science in Architecture and	Did not apply to graduate sc	Full time in an Architecture re	Employed in an Architecture related field			$30,001 – $40,000	Not Applicable	Yes						Great background informatio
Not Applicable	Apply to and attend graduate	Full time in an Architecture re	Attending grad school and working full time in an architect			$40,001 – $50,000	Master of Architecture (MArc	Yes				1		Good fit for me at the time. C
Not Applicable	Not Applicable	Full time in a Facility Manag	Employed in a Facility Manag	1		$30,001 – $40,000	Not Applicable	Yes, but more time/attention should be provided to last 2				1		Architecture classes helped r
Not Applicable	Apply to and was accepted, I	Full time in an Architecture re	Employed in an Architecture	1		$30,001 – $40,000	Not Applicable	No					1	Knowing what I know now ab
Pursuing the Bachelor of Science in Architecture and	Apply to and attend graduate	Full time in an Architecture re	Had been accepted to or were attending graduate school			$50,001 – $60,000	Master of Architecture (MArch)							Potentially if the information
Not Applicable	Did not apply to graduate sc	Full time in a Facility Manag	Employed in a Facility Manag	1		$40,001 – $50,000	Not Applicable	Yes				1		I was a beginner when startin
Pursuing the Bachelor of Science in Facility Manager	Not Applicable	Either full time or part time in	Not Applicable			Not Applicable	Not Applicable	Not sure yet becasue I am not graduated.						
Pursuing the Bachelor of Science in Architecture and	Did not apply to graduate sc	Not Applicable	Not Applicable			Not Applicable	Not Applicable	Yes				1		It's a good school that has re
Not Applicable	Apply to and attend graduate	Full time in an Architecture re	Had been accepted to or were attending graduate school			Not Applicable	Master of Architecture/Maste	No					1	
	Either full time or part time in	Not Applicable				< $20,000	Not Applicable	Yes	1					Great program, wonderful tea
Not Applicable	Did not apply to graduate sc	Full time in an Architectural "	Employed in an Architectural "Allied" compa		1	$60,001 – $70,000	Not Applicable	No					1	Many of the classes/skills we
Working full time	Did not apply to graduate sc	Full time in an Architecture re	Employed in an Architecture	1		$30,001 – $40,000	Master of Architecture (MArc	No					1	Had I known more about the
Pursuing the Bachelor of Science in Architecture and	Did not apply to graduate sc	Part time in an Architectural '	Employed in an Architectural "Allied" company, including t			$20,001 – $30,000	Not Applicable	Yes	1					The program prepared the st
Pursuing the Bachelor of Science in Architecture and	Apply to and attend graduate	Full time in an Architecture re	Employed in an Architecture	1		$40,001 – $50,000	Master of Architecture (MArc	Yes				1		
Pursuing the Bachelor of Science in Architecture and	Did not apply to graduate sc	Full time in an Architecture re	Employed in an Architecture related field			Not Applicable	Not Applicable	Yes	1					
				13	3				22	2	15	9	2	
				81%	19%				92%	8%	58%	35%	8%	

Would you recommend the	Yes	No	Yes	No	Maybe	Please explain your answe	If you had the opportunity t	Yes	No	Yes	No	Maybe	Please explain your answe	Would you recommend the	Yes	No	Yes	No	Maybe
Yes		1				It's a truly amazing program.	Yes	1					It's fantastic. Believe me.	Yes		1			
Yes		1				Its great for the price and i w	Yes	1					Its a well rounded program th	Yes		1			
Yes		1				Your able to learn the practic	Not Applicable						have not graduated yet	Not Applicable					
Yes		1				As I mentioned before, it is a	Yes	1					the studio classes were a bla	Yes		1			
Yes						it's a good school that encou	Yes	1					It helped me become oriente	Yes		1			
Yes		1				I would recommend it to othe	Yes	1					I would pick it because I alwa	Yes		1			
Yes						I think it is a good starting po	Yes						I enjoy the atmosphere that i	Yes		1			
Yes		1					Not Applicable							Not Applicable					
														Yes		1			
							Not Applicable												
Yes		1				its a good program	Not Applicable							Not Applicable					
Yes		1				Very sound and good progra	Not Applicable						NA	Not Applicable					
Yes		1				I really enjoy the program.								Not Applicable					
Yes		1				Prof. Long	Yes	1					Prof. Long	Yes		1			
Yes		1					Yes	1						Yes		1			
Yes		1				It's pretty self explanatory	Not Applicable						NA	Not Applicable					
Yes		1				its fun and you learn a lot	Not Applicable							Not Applicable					
Yes		1				Small class sizes allow for te	Not Applicable						N/A	Not Applicable					
Yes		1				Considering Ferris is one of I	Not Applicable						NA	Not Applicable					
Yes				1			Yes			1				Yes				1	
Yes				1			No				1			No					1
Yes				1			No				1		I would have gone to a bigge	Yes				1	
Yes				1			Yes			1				Yes				1	
Yes				1		For anyone interested in goir	Yes			1			I think it was a great program	Possibly					1
yes and no					1	Good technical program. Like	No				1		Would have liked to go out of state primarily for location reasons; did not like Big Rapids. I	mainly wouldn't go back due to the fact t					
No					1		No				1		I would have went to a Unive	No					1
Depends					1	If they are looking to get licer	Maybe					1	See answers from AAS ques	Depends					1
Yes				1		I think it is a good program if	No				1		I would not because the prog	No				1	
Yes				1		Yes but the only reason wou	No				1		I would have gone to a different school to become licensed quicker and get more involved in a true architecture community.						
No					1	The small staff and limitation	No				1		Did not challenge the level of	No					1
Yes						If they wanted to be an archi	No						Not a in demand profession i	No					
Yes		1				As long as the classes are ta	Not Applicable							Not Applicable					
No					1	I don't believe that the assoc	Yes			1			I really enjoyed Ferris State t	Yes			1		
Yes				1			No				1		I would have looked for a sch	Yes			1		
No			1											No					
Yes						Great professors	Yes						Great atmosphere and great	Yes					
No			1			The is a huge disconnect of v	Yes	1					Having been able to pick my	Yes		1			
Yes		1				it was, if related to your inten	Yes	1					beneficial, interesting, great t	Yes		1			
Yes				1		I would recommend it for any	Not Applicable						N/A	Not Applicable					
Yes				1		Great program just needs an	Facility Management						I enjoyed the FM program an	Not Applicable					
Yes							Yes							Yes					
Yes							No							Not Applicable					
No					1	Everything in the two years c	No				1		Probably not, because I feel l	No					1
Yes		1					Yes	1					accredited degree would be t	Yes		1			
Yes		1					Not Applicable							Yes		1			
Yes				1		I would recommend this prog	Yes			1			While I do believe that I coul	Yes			1		
Yes				1		Provided a solid baseline ed	Yes			1			Provided great design experi	Yes			1		
Yes						It would only strengthen the i	Yes						This program filters toward le	Yes					
Yes as long as you take Long over Gerber				1		If you take the right professo	Yes			1			Felt well prepared for grad sc	Yes			1		
Yes				1		I enjoyed the drafting classes	No				1		I would consider BS in const	Yes			1		
Yes				1		Depending on their career gc	Maybe					1	I loved my experience and it	Maybe					1
Yes				1		Valuable construction/mater	Yes			1			My knowledge from this prog	Yes			1		
Yes				1		It is a good program and the	No				1		I knew I wanted to go into FN	Not Applicable					
Yes							Not Applicable							Not Applicable					
Yes				1		It is very good about design	Yes			1			Small town studio and choos	Yes			1		
No					1		No				1			No					1
Yes		1				The program is well done an	Yes	1						Yes		1			
Yes				1		There is good information in	No				1		Not due to the curriculum, bu	Yes			1		
Yes				1		I believe that it does offer son	No				1		Same as AAS answer, not ac	No					1
Yes		1				Professors there are well eq	Yes	1					The Design classes were a b	Yes		1			
Yes				1			Yes			1				Yes			1		
Yes		1					Yes	1						Yes		1			
	22	2	21	5	2			13	0	10	14	2			16	1	13	7	3
	92%	8%	75%	18%	7%			100%	0%	38%	54%	8%			94%	6%	57%	30%	13%

Please explain your answe	Please rate the overall qua	Please rate the quality of fa	Please rate the quality of fa	Please rate the quality of fa	Please rate the quality of fa	Please rate the quality of fa	Please rate the quality of fa	Please provide any additio	Please rate the program on	Please rate the program on	Please rate the program on	Please rate the program on
It's big league.	5 – Excellent	5 – Excellent	5 – Excellent	3 - Average	4 - Above Average	3 - Average	5 – Excellent		5 – Excellent	5 – Excellent	4 - Above Average	4 - Above Average
Its a good program that is ve	3 - Average	4 – Above Average	5 – Excellent	4 - Above Average	3 - Average	3 - Average	3 - Average	I believe that one particular pa	4 - Above Average	4 - Above Average	3 - Average	3 - Average
have not graduated yet	4 – Above Average	3 - Average	4 - Above Average	4 - Above Average	4 - Above Average	3 - Average	4 - Above Average		4 - Above Average	4 - Above Average	4 - Above Average	4 - Above Average
It is a great program to get vi	3 - Average	4 – Above Average	4 - Above Average	4 - Above Average	4 - Above Average	5 – Excellent	3 - Average		4 - Above Average	4 - Above Average	5 – Excellent	4 - Above Average
It teaches us a lot about sust	4 – Above Average	3 - Average	4 - Above Average	3 - Average	5 – Excellent	4 - Above Average	4 - Above Average		4 - Above Average	4 - Above Average	5 – Excellent	4 - Above Average
I really enjoyed the senior pr	3 - Average	3 - Average	2 - Below Average	2 - Below Average	2 - Below Average	3 - Average	1 - Poor	The faculty group is too differ	2 - Below Average	2 - Below Average	3 - Average	2 - Below Average
I think it a good program and	4 – Above Average	4 – Above Average	4 - Above Average	4 - Above Average	3 - Average	3 - Average	3 - Average	I think each professor has his	3 - Average	3 - Average	3 - Average	3 - Average
	3 - Average	4 – Above Average	4 - Above Average	4 - Above Average	4 - Above Average	4 - Above Average	4 - Above Average		4 - Above Average	4 - Above Average	4 - Above Average	4 - Above Average
	4 – Above Average	5 – Excellent	4 - Above Average	4 - Above Average	4 - Above Average	4 - Above Average	4 - Above Average		4 - Above Average	4 - Above Average	4 - Above Average	4 - Above Average
	4 – Above Average	4 – Above Average	4 - Above Average	3 - Average	3 - Average	3 - Average	3 - Average		4 - Above Average	4 - Above Average	0 - Cannot Judge	0 - Cannot Judge
	3 - Average	2 - Below Average	4 - Above Average	4 - Above Average	3 - Average	3 - Average	2 - Below Average	Paul Long is the best teacher	3 - Average	3 - Average	3 - Average	3 - Average
	4 – Above Average	4 – Above Average	4 - Above Average	4 - Above Average	4 - Above Average	3 - Average	5 – Excellent		5 – Excellent	3 - Average	4 - Above Average	3 - Average
	4 – Above Average	4 – Above Average	4 - Above Average	4 - Above Average	4 - Above Average	4 - Above Average	4 - Above Average	Prof Long is awesome	4 - Above Average	4 - Above Average	4 - Above Average	4 - Above Average
NA	4 – Above Average	4 – Above Average	5 – Excellent	4 - Above Average	5 – Excellent	4 - Above Average	4 - Above Average		4 - Above Average	4 - Above Average	4 - Above Average	5 – Excellent
	4 – Above Average	5 – Excellent	4 - Above Average	5 – Excellent	4 - Above Average	3 - Average	4 - Above Average	Professor Paul Long, has diff	4 - Above Average	4 - Above Average	4 - Above Average	4 - Above Average
	4 – Above Average	4 – Above Average	4 - Above Average	4 - Above Average	4 - Above Average	4 - Above Average	4 - Above Average					
Prof. Long	4 – Above Average	4 – Above Average	5 – Excellent	5 – Excellent	5 – Excellent	4 - Above Average	4 - Above Average	Prof. Long needs a raise	3 - Average	4 - Above Average	4 - Above Average	5 – Excellent
	3 - Average	3 - Average	3 - Average	3 - Average	3 - Average	3 - Average	3 - Average		3 - Average	3 - Average	3 - Average	3 - Average
NA	3 - Average	4 – Above Average	4 - Above Average	4 - Above Average	3 - Average	2 - Below Average	3 - Average	There are a lot of great teach	0 - Cannot Judge	0 - Cannot Judge	0 - Cannot Judge	0 - Cannot Judge
	4 – Above Average	4 – Above Average	3 - Average	4 - Above Average	4 - Above Average	3 - Average	3 - Average		0 - Cannot Judge	0 - Cannot Judge	0 - Cannot Judge	0 - Cannot Judge
N/A	5 – Excellent	5 – Excellent	5 – Excellent	5 – Excellent	5 – Excellent	4 - Above Average	4 - Above Average	They show interest in the stu	0 - Cannot Judge	0 - Cannot Judge	0 - Cannot Judge	0 - Cannot Judge
NA	4 – Above Average	4 – Above Average	4 - Above Average	3 - Average	4 - Above Average	3 - Average	3 - Average	Some professors are a lot mo	4 - Above Average	4 - Above Average	4 - Above Average	4 - Above Average
	4 – Above Average	3 - Average	4 - Above Average	3 - Average	3 - Average	4 - Above Average	3 - Average		4 - Above Average	3 - Average	3 - Average	4 - Above Average
	4 – Above Average	3 - Average	4 - Above Average	2 - Below Average	4 - Above Average	4 - Above Average	3 - Average	The faculty group is balance	4 - Above Average	4 - Above Average	3 - Average	3 - Average
	4 – Above Average	4 – Above Average	4 - Above Average	3 - Average	4 - Above Average	4 - Above Average	4 - Above Average		4 - Above Average	4 - Above Average	4 - Above Average	4 - Above Average
	3 - Average	4 – Above Average	4 - Above Average	2 - Below Average	3 - Average	3 - Average	3 - Average		3 - Average	3 - Average	3 - Average	3 - Average
	3 - Average	3 - Average	2 - Below Average	2 - Below Average	2 - Below Average	4 - Above Average	3 - Average		0 - Cannot Judge	0 - Cannot Judge	0 - Cannot Judge	0 - Cannot Judge
	4 – Above Average	3 - Average	3 - Average	4 - Above Average	4 - Above Average	2 - Below Average	2 - Below Average		4 - Above Average	2 - Below Average	5 – Excellent	3 - Average
	4 – Above Average	4 – Above Average	4 - Above Average	4 - Above Average	3 - Average	4 - Above Average	4 - Above Average		5 – Excellent	4 - Above Average	5 – Excellent	4 - Above Average
It depends on what type of a	3 - Average	4 – Above Average	2 - Below Average	4 - Above Average	3 - Average	2 - Below Average	3 - Average		3 - Average	2 - Below Average	4 - Above Average	3 - Average
Good technical program. Like	3 - Average	3 - Average	2 - Below Average	1 - Poor	3 - Average	3 - Average	3 - Average	The faculty really needs to br	3 - Average	3 - Average	3 - Average	3 - Average
A lot of the professors are to	2 - Below Average	1 - Poor	3 - Average	1 - Poor	3 - Average	3 - Average	2 - Below Average	The faculty group should all t	2 - Below Average	2 - Below Average	3 - Average	3 - Average
See answers from AAS ques	3 - Average	3 - Average	4 - Above Average	3 - Average	3 - Average	2 - Below Average	3 - Average	I think Ferris has some very g	4 - Above Average	3 - Average	2 - Below Average	3 - Average
There are way better prograr	1 - Poor	1 - Poor	2 - Below Average	3 - Average	1 - Poor	3 - Average	3 - Average	The professors can teach yo	2 - Below Average	2 - Below Average	3 - Average	1 - Poor
Depends on their goals and s	2 - Below Average	2 - Below Average	2 - Below Average	3 - Average	2 - Below Average	3 - Average	2 - Below Average	There was only 1 or 2 profes	2 - Below Average	1 - Poor	3 - Average	1 - Poor
	3 - Average	3 - Average		4 - Above Average	3 - Average	4 - Above Average	3 - Average		3 - Average	3 - Average	4 - Above Average	3 - Average
Did not challenge the level of	3 - Average	2 - Below Average	3 - Average	3 - Average	2 - Below Average	2 - Below Average	3 - Average	not as diverse in types of des	2 - Below Average	3 - Average	3 - Average	3 - Average
The faculty really pushes the	4 – Above Average	3 - Average	4 - Above Average	4 - Above Average	4 - Above Average	4 - Above Average	4 - Above Average	Good mix of faculty with som	0 - Cannot Judge	0 - Cannot Judge	0 - Cannot Judge	0 - Cannot Judge
	4 – Above Average	4 – Above Average	4 - Above Average	4 - Above Average	4 - Above Average	3 - Average	3 - Average		0 - Cannot Judge	0 - Cannot Judge	0 - Cannot Judge	0 - Cannot Judge
	3 - Average	3 - Average	3 - Average	2 - Below Average	3 - Average	3 - Average	3 - Average	Faculty should be more inspi	3 - Average	3 - Average	3 - Average	4 - Above Average
	3 - Average	3 - Average	3 - Average	3 - Average	4 - Above Average	4 - Above Average	4 - Above Average	More time should be spent in	3 - Average	3 - Average	2 - Below Average	4 - Above Average
	2 - Below Average	3 - Average	2 - Below Average	4 - Above Average	3 - Average	2 - Below Average	2 - Below Average		3 - Average	3 - Average	3 - Average	3 - Average
Great teachers and great infc	4 – Above Average	4 – Above Average	4 - Above Average	4 - Above Average	4 - Above Average	4 - Above Average	4 - Above Average		3 - Average	3 - Average	3 - Average	4 - Above Average
The program itself is setup fa	4 – Above Average	2 - Below Average	3 - Average	3 - Average	4 - Above Average	3 - Average	3 - Average	I put average for most of the	3 - Average	3 - Average	4 - Above Average	4 - Above Average
great opportunities	4 – Above Average	4 – Above Average	4 - Above Average	5 – Excellent	4 - Above Average	3 - Average	4 - Above Average		3 - Average	3 - Average	4 - Above Average	3 - Average
N/A	4 – Above Average	3 - Average	3 - Average	3 - Average	5 – Excellent	4 - Above Average	4 - Above Average		4 - Above Average	4 - Above Average	4 - Above Average	5 – Excellent
	3 - Average	3 - Average	4 - Above Average	2 - Below Average	3 - Average	4 - Above Average	4 - Above Average	Some professors are not in t	0 - Cannot Judge	0 - Cannot Judge	0 - Cannot Judge	0 - Cannot Judge
	3 - Average	3 - Average	3 - Average	3 - Average	3 - Average	3 - Average	3 - Average		4 - Above Average	3 - Average	4 - Above Average	3 - Average
	4 – Above Average	4 – Above Average	3 - Average	5 – Excellent	4 - Above Average	4 - Above Average	4 - Above Average		3 - Average	3 - Average	4 - Above Average	4 - Above Average
	4 – Above Average	3 - Average	3 - Average	4 - Above Average	4 - Above Average	3 - Average	3 - Average		4 - Above Average	3 - Average	4 - Above Average	4 - Above Average
	4 – Above Average	4 – Above Average		3 - Average	4 - Above Average	3 - Average	4 - Above Average		3 - Average		3 - Average	4 - Above Average
Other degrees are more adv	2 - Below Average	2 - Below Average	3 - Average	2 - Below Average	3 - Average	3 - Average	2 - Below Average		3 - Average	3 - Average	2 - Below Average	3 - Average
	4 – Above Average	4 – Above Average	4 - Above Average	4 - Above Average	3 - Average	0 - Cannot Judge	4 - Above Average		4 - Above Average	2 - Below Average	4 - Above Average	3 - Average
	3 - Average	3 - Average	3 - Average	3 - Average	2 - Below Average	3 - Average	4 - Above Average		3 - Average	3 - Average	3 - Average	3 - Average
Upper level classes focus on	4 – Above Average	4 – Above Average	4 - Above Average	5 – Excellent	3 - Average	3 - Average	4 - Above Average		0 - Cannot Judge	0 - Cannot Judge	0 - Cannot Judge	0 - Cannot Judge
I would recommend this prog	2 - Below Average	2 - Below Average	2 - Below Average	1 - Poor	1 - Poor	2 - Below Average	2 - Below Average	The faculty group always see	2 - Below Average	2 - Below Average	2 - Below Average	2 - Below Average
	3 - Average	3 - Average	3 - Average	3 - Average	4 - Above Average	4 - Above Average	3 - Average		3 - Average	3 - Average	3 - Average	4 - Above Average
	5 – Excellent	5 – Excellent	4 - Above Average	4 - Above Average	4 - Above Average	4 - Above Average	5 – Excellent		4 - Above Average	4 - Above Average	4 - Above Average	4 - Above Average
	4 – Above Average	4 – Above Average	4 - Above Average	3 - Average	4 - Above Average	3 - Average	3 - Average		3 - Average	3 - Average	3 - Average	3 - Average
I would like to see more arch	5 – Excellent	4 – Above Average	5 – Excellent	4 - Above Average	4 - Above Average	4 - Above Average	5 – Excellent	I feel like they could connect	3 - Average	3 - Average	4 - Above Average	4 - Above Average
	3 - Average	3 - Average	3 - Average	4 - Above Average	3 - Average	3 - Average	3 - Average		4 - Above Average	3 - Average	4 - Above Average	3 - Average
It's a good program that prep	3 - Average	2 - Below Average	3 - Average	4 - Above Average	4 - Above Average	3 - Average	3 - Average	Gerber is your weakness. Ge	3 - Average	3 - Average	4 - Above Average	4 - Above Average
		3 - Average	3 - Average	1 - Poor	3 - Average	3 - Average	3 - Average	I feel like I was cheated wher	2 - Below Average	2 - Below Average	1 - Poor	2 - Below Average
It is a good degree for those	4 – Above Average	4 – Above Average	3 - Average	2 - Below Average	2 - Below Average	2 - Below Average	4 - Above Average		3 - Average	2 - Below Average	3 - Average	3 - Average
	4 – Above Average	4 – Above Average	4 - Above Average	4 - Above Average	5 – Excellent	4 - Above Average	4 - Above Average		4 - Above Average	4 - Above Average	4 - Above Average	4 - Above Average
Yes. However it cannot be ta	3 - Average	2 - Below Average	2 - Below Average	3 - Average	3 - Average	2 - Below Average	2 - Below Average	Selections based on 2008-20	3 - Average	2 - Below Average	3 - Average	0 - Cannot Judge
	4 – Above Average	4 – Above Average	3 - Average	3 - Average	3 - Average	3 - Average	4 - Above Average		3 - Average	3 - Average	3 - Average	3 - Average
	4 – Above Average	3 - Average	3 - Average	3 - Average	4 - Above Average	4 - Above Average	2 - Below Average		2 - Below Average	0 - Cannot Judge	0 - Cannot Judge	3 - Average
It's a good program	3 - Average	2 - Below Average	4 - Above Average	4 - Above Average	3 - Average	3 - Average	3 - Average	There is a need for learning r	4 - Above Average	4 - Above Average	4 - Above Average	3 - Average
	3 - Average	2 - Below Average	2 - Below Average	3 - Average	2 - Below Average	2 - Below Average	2 - Below Average	The students are not pushed	2 - Below Average	2 - Below Average	2 - Below Average	2 - Below Average
	4 – Above Average	5 – Excellent	4 - Above Average	4 - Above Average	5 – Excellent	3 - Average	3 - Average		4 - Above Average	4 - Above Average	4 - Above Average	4 - Above Average
As mentioned above, the cur	4 – Above Average	3 - Average	4 - Above Average	4 - Above Average	4 - Above Average	3 - Average	3 - Average		3 - Average	3 - Average	3 - Average	3 - Average
	3 - Average	3 - Average	3 - Average	4 - Above Average	3 - Average	2 - Below Average	3 - Average		3 - Average	3 - Average	4 - Above Average	0 - Cannot Judge
While having an opportunity t	3 - Average	3 - Average	3 - Average	2 - Below Average	3 - Average	2 - Below Average	4 - Above Average	It probably would have been	3 - Average	4 - Above Average	4 - Above Average	4 - Above Average
Small town studio was the fir	4 – Above Average	5 – Excellent	4 - Above Average	4 - Above Average	4 - Above Average	4 - Above Average	4 - Above Average	Professors where great here.	2 - Below Average	3 - Average	4 - Above Average	4 - Above Average
	3 - Average	3 - Average	2 - Below Average	4 - Above Average	3 - Average	2 - Below Average	3 - Average		5 – Excellent	3 - Average	5 – Excellent	3 - Average
	4 – Above Average	4 – Above Average	5 – Excellent	3 - Average	4 - Above Average	5 – Excellent	4 - Above Average		4 - Above Average	5 - Excellent	5 – Excellent	3 - Average

Please rate the program on	If you employ graduates of	Please explain your answer to the above question.
4 - Above Average	Not Applicable	
3 - Average	Not Applicable	NA
3 - Average	Not Applicable	I do not employ students
5 – Excellent	Yes	I have been through the program, i know the education they will be provided and i think they do an excellent job preparing students for the profession.
4 - Above Average	Not Applicable	
2 - Below Average	Not Applicable	I don't have a company.
2 - Below Average	If I believe they are applicabl	Exactly what I said.
4 - Above Average	Not Applicable	
4 - Above Average		
0 - Cannot Judge	Not Applicable	
3 - Average		
4 - Above Average	Not Applicable	
4 - Above Average	Not Applicable	
4 - Above Average	Not Applicable	NA
3 - Average	Not Applicable	
4 - Above Average	Yes	
3 - Average	Yes	
0 - Cannot Judge	Not Applicable	NA
0 - Cannot Judge	Not Applicable	
0 - Cannot Judge	Not Applicable	N/A
4 - Above Average	Not Applicable	NA
4 - Above Average	Not Applicable	
4 - Above Average	Not Applicable	
4 - Above Average	Not Applicable	
3 - Average	Not Applicable	
0 - Cannot Judge	Not Applicable	
2 - Below Average	Not Applicable	
5 – Excellent	Not Applicable	
2 - Below Average	Not Applicable	
3 - Average	Not Applicable	
3 - Average	Not Applicable	
2 - Below Average	Not Applicable	I think Ferris has some very good faculty, ones both liked by the students and ones that are great at teaching. I think as a whole there are some staff that could be changed out or retrained to improve the overall experience of the students significantly. I think this we express pretty out right while I was attending classes and afte
3 - Average	Not Applicable	
3 - Average	Not Applicable	
3 - Average	Yes	
3 - Average	Not Applicable	
0 - Cannot Judge	Yes	One of the only fm programs in country. Very picky on graduates knowing the program. Looking for students involved in extra curriculars
0 - Cannot Judge	Not Applicable	
3 - Average		
4 - Above Average	Not Applicable	
3 - Average	Not Applicable	
4 - Above Average	Not Applicable	
3 - Average	Not Applicable	I can't say if what I have learned is applicable to the actual field because I am still in school. One of the positives of the program is the wide range of programs and softwares that we can learn.
3 - Average	Not Applicable	
4 - Above Average	Not Applicable	N/A
0 - Cannot Judge	Not Applicable	
3 - Average	Not Applicable	
5 – Excellent	Not Applicable	
3 - Average	Not Applicable	i am nit hiring students at this timwe
4 - Above Average	Not Applicable	
2 - Below Average	Not Applicable	
0 - Cannot Judge	Yes	
3 - Average	Not Applicable	
0 - Cannot Judge	Not Applicable	
2 - Below Average	Not Applicable	
4 - Above Average	Not Applicable	
4 - Above Average	Yes	First we need interns on the west side of the state to support our office, this would be during the school year and also the summer. it also help us and the student to understand each others needs and talent for the future. I believe the program is heading in the right direction!
3 - Average	Not Applicable	
3 - Average	Not Applicable	
3 - Average	Not Applicable	I am the only Ferris graduate where I work and we have not had any interview for a position so I cannot provide feedback.
2 - Below Average	Not Applicable	
3 - Average	Not Applicable	
3 - Average	Not Applicable	
4 - Above Average	Not Applicable	
2 - Below Average	Not Applicable	
3 - Average	maybe	They would have to be a good fit for my company. Just because they went to Ferris doesnt make them a shoe in for the job.
3 - Average	Not Applicable	
3 - Average	Not Applicable	NA
2 - Below Average	Not Applicable	
4 - Above Average	Not Applicable	
3 - Average	Not Applicable	
3 - Average	Not Applicable	
3 - Average	Not Applicable	
4 - Above Average	Yes	On the sheer fact that in order for them to fully understand their degree they need real-word experience that they may not get from the program. Understanding what it means to have a real life application makes a big difference and a better understanding .
2 - Below Average	Yes	
4 - Above Average	Yes	

2014 NAAB Conditions: Educational Realms and Student Performance Criteria

REQUIRED NAAB MATRIX OF ABILITY AND UNDERSTANDING CORRELLATED WITH FERRIS STATE UNIVERSITY ARCHITECTURAL CURRICULUM

For the purposes of accreditation and transfer into BArch or MArch programs, graduating students must demonstrate ability or understanding in the following areas:

Ability (orange) | Understanding (blue)

GENERAL EDUCATION / STUDIES and **PROFESSIONAL STUDIES – YEAR ONE**

	Student Performance Criteria (SPC)	FSUS100 FSU Seminar	COMM 105 Interpersonal Comm. **OR**	COMM121 Fund. of Public Speaking	ENGL 150 English 1	ENGL 250 English 2	ENGL 3XX	MATH 120 Trigonometry	PHYS 211 Introductory Physics 1	PHYS 212 Introductory Physics 2	PLSC 121 Am. Govt. 1 - People&Politics **OR**	PLSC 122 Am. Govt. 2 - Policy Making	SOCY 121 Intro to Sociology	SOCY 344 World Urban Sociology		ARCH 101 Architectural Graphics (Fall)	ARCH 112 Mat'ls & Methods of Constr. (Fall)	ARTS 101 Basic Art (Fall)	ARCH 102 Architectural Digital Graphics (Spring)	ARCH 115 Int. & Ext. Finishes (Spring)	ARCH 119 Sustainability in Arch.: Intro (Spring)	ARCH Architectural Elective (Spring)
Realm A - Critical Thinking and Representation																						
Ability	A.1 Professional Communication Skills		Understanding	Understanding	Understanding	Understanding	Understanding									Understanding	Understanding	Understanding	Understanding	Understanding		
Ability	A.2 Design Thinking Skills															Understanding		Understanding				
Ability	A.3 Investigative Skills																					
Ability	A.4 Architectural Design Skills															Understanding						
Ability	A.5 Ordering Systems																					
Ability	A.6 Use of Precedents																					
Understanding	A.7 History and Global Culture																				Understanding	
Understanding	A.8 Cultural Diversity and Social Equity												Understanding	Understanding								
Realm B - Building Practices, Technical Knowledge and Skills																						
Ability	B.1 PreDesign																					
Ability	B.2 Site Design																					
Ability	B.3 Codes and Regulations																Understanding			Understanding		
Ability	B.4 Technical Documentation																Understanding		Understanding	Understanding		
Ability	B.5 Structural Systems																					
Ability	B.6 Environmental Systems																					
Understanding	B.7 Building Envelope Systems and Assemblies																Understanding			Understanding		
Understanding	B.8 Building Materials and Assemblies																Understanding			Understanding		
Understanding	B.9 Building Service Systems																					
Understanding	B.10 Financial Considerations																					
Realm C - Integrated Architectural Solutions																						
Understanding	C.1 Research																					
Ability	C.2 Integrated Evals & Decision-Making Dsgn Process																					
Ability	C.3 Integrative Design																					
Realm D - Professional Practice																						
Understanding	D.1 Stakeholder Roles																					
Understanding	D.2 Project Management																					
Understanding	D.3 Business Practices																					
Understanding	D.4 Legal Responsibilities																					
Understanding	D.5 Professional Conduct																					

PROFESSIONAL STUDIES – YEAR TWO and YEAR THREE

	Student Performance Criteria (SPC)	ARCH 203 Architectural Documentation (Fall)	ARCH 241 Design Principles (Fall)	ARCH 244 Architectural History 1 (Fall)	HVAC 337 Mech & Elec. Systems (Fall)	ARCH 204 Architectural Detailing (Spring)	ARCH 242 Architectural Design Principles (Spring)	ARCH 245 Architectural History 2 (Spring)	ARCH 223 Statics & Strength of Materials (Spring)	ARCH 341 Architectural Design 1 (Fall)	ARCH 323 Structural Design (Fall)	ARCH 361 Environmental Systems 1 (Fall)	ARCH 342 Architectural Design 2 (Spring)	ARCH 362 Environmental Systems 2 (Spring)	FMAN 432 Principles of Interior Architecture (Spring)	SOCY 341 Community Studies (Spring)	ARCH Architectural Elective (Spring)
Realm A - Critical Thinking and Representation																	
Ability	A.1 Professional Communication Skills	Understanding	Understanding			Understanding	Understanding			Understanding			Understanding		Understanding		
Ability	A.2 Design Thinking Skills		Understanding				Understanding			Understanding			Understanding		Understanding		
Ability	A.3 Investigative Skills									Understanding			Understanding				
Ability	A.4 Architectural Design Skills		Understanding				Understanding			Understanding			Understanding		Understanding		
Ability	A.5 Ordering Systems						Understanding			Understanding			Understanding				
Ability	A.6 Use of Precedents														Understanding		
Understanding	A.7 History and Global Culture			Understanding				Understanding								Understanding	
Understanding	A.8 Cultural Diversity and Social Equity															Understanding	
Realm B - Building Practices, Technical Knowledge and Skills																	
Ability	B.1 PreDesign																
Ability	B.2 Site Design						Understanding			Understanding			Understanding				
Ability	B.3 Codes and Regulations	Understanding				Understanding				Understanding			Understanding				
Ability	B.4 Technical Documentation	Understanding				Understanding											
Ability	B.5 Structural Systems								Understanding		Understanding						
Ability	B.6 Environmental Systems				Understanding							Understanding		Understanding			
Understanding	B.7 Building Envelope Systems and Assemblies					Understanding											
Understanding	B.8 Building Materials and Assemblies					Understanding											
Understanding	B.9 Building Service Systems										Understanding		Understanding				
Understanding	B.10 Financial Considerations																
Realm C - Integrated Architectural Solutions																	
Understanding	C.1 Research									Understanding			Understanding				
Ability	C.2 Integrated Evals & Decision-Making Dsgn Process																
Ability	C.3 Integrative Design																
Realm D - Professional Practice																	
Understanding	D.1 Stakeholder Roles																
Understanding	D.2 Project Management																
Understanding	D.3 Business Practices																
Understanding	D.4 Legal Responsibilities																
Understanding	D.5 Professional Conduct																

PROFESSIONAL STUDIES – YEAR FOUR and **OPTIONAL STUDIES**

	Student Performance Criteria (SPC)	ARCH 441 Architectural Design 3 (Fall)	ARCH 421 Current Issues in Architecture (Fall)	ARCH 419 Sust. in Arch: Advanced Topic (Fall)	PLSC 411 Urban and Regional Planning (Fall)	ARCH 499 Architectural Design 4 (Spring)	FMAN 322 Project Management (Spring)	ARCH Architectural Elective (Spring)	ARCH 246 20th Century Architecture	ARCH 250 Systems Cost Estimating	ARCH 270 BIM: Parametric Design	ARCH 285 House: An American Evolution	ARCH 350 Site Design	ARTS 220 3D Design	COHP 330 OSHA Law	CONM 211 Construction Quantity Estimating	CONM 212 Soils and Foundations	CONM 222 Construction Administration
Realm A - Critical Thinking and Representation																		
Ability	A.1 Professional Communication Skills	Ability	Understanding	Understanding		Ability	Understanding			Understanding	Ability	Ability	Ability					
Ability	A.2 Design Thinking Skills	Ability				Ability						Ability	Ability					
Ability	A.3 Investigative Skills	Understanding				Ability						Ability						
Ability	A.4 Architectural Design Skills	Understanding				Ability					Understanding	Ability	Ability					
Ability	A.5 Ordering Systems	Understanding				Understanding						Ability						
Ability	A.6 Use of Precedents	Understanding				Understanding						Ability						
Understanding	A.7 History and Global Culture		Understanding	Understanding					Ability									
Understanding	A.8 Cultural Diversity and Social Equity				Understanding													
Realm B - Building Practices, Technical Knowledge and Skills																		
Ability	B.1 PreDesign	Understanding										Ability						
Ability	B.2 Site Design	Understanding				Understanding						Ability	Ability				Understanding	
Ability	B.3 Codes and Regulations	Understanding				Ability						Ability						
Ability	B.4 Technical Documentation																	
Ability	B.5 Structural Systems					Understanding												
Ability	B.6 Environmental Systems					Ability												
Understanding	B.7 Building Envelope Systems and Assemblies					Ability												
Understanding	B.8 Building Materials and Assemblies					Ability												
Understanding	B.9 Building Service Systems					Understanding												
Understanding	B.10 Financial Considerations						Understanding			Understanding						Understanding		
Realm C - Integrated Architectural Solutions																		
Understanding	C.1 Research	Understanding				Understanding												
Ability	C.2 Integrated Evals & Decision-Making Dsgn Process					Understanding												
Ability	C.3 Integrative Design					Understanding												
Realm D - Professional Practice																		
Understanding	D.1 Stakeholder Roles																	
Understanding	D.2 Project Management						Understanding											Understanding
Understanding	D.3 Business Practices																	
Understanding	D.4 Legal Responsibilities																	
Understanding	D.5 Professional Conduct						Understanding								Understanding			

Understanding The capacity to classify, compare, summarize, explain, and/or interpret information.

Ability Proficiency in using specific information to accomplish a task, correctly selecting the appropriate information, and accurately applying it to a solution of a specific problem, while also distinguishing the effects of its implementation.

FERRIS STATE UNIVERSITY
COLLEGE OF ENGINEERING TECHNOLOGY

Perceptions of Overall Quality

Program: Architecture

Overall Rating: 87

Supportive Background:

Program Mission Relation to School, College, University:

- Both degreed Architecture Programs (AAS & BS) are career oriented.
- The faculty are pursuing a Master Degree in Architecture.
- The program belongs to The School of Built Environment that houses all of the CET building development and construction programs for the sake of synergies and collaboration.

Program Visibility and Distinctiveness:

- Program instructional use of current and industry relative software tools.
- Works with local clients and agencies.
- Maintains a current and relative advisory board.
- Has a new home in the first floor of the Swan Building giving it excellent and appropriate visibility.

Enrollment:

- Programs have been maintaining a steady enrollment since 2014.
- Growth is expected from the proposed Master Degree as well as the facilities upgrade.
- Seeking to be accredited with a fifth year BA which is even more attractive to the industry.

Characteristics, Quality, and Employability of Students:

- Student work demonstrates the quality of the core curriculum.
- Students have very good success in graduate school.
- Students learn to analyze client needs, develop solutions, implement solutions and present professional representations of the final product.

1009 Campus Drive, Johnson 200
Big Rapids, MI 49307-2280

Phone: (231) 591-2890
Fax: (231) 591-2946
Web: www.ferris.edu/technolo

Quality of the Curriculum, Administration and Faculty:

- The program continually updates the curriculum to reflect industry needs.
- The leadership of Diane as a coordinator has proved a true asset to the programs. She brings both industry and leadership experience and seeks to improve all aspects.
- The faculty have industry experience that collectively cover all areas of Architecture as an industry.
- Proper and effective assessment is demonstrated by their accreditation efforts.

Overall Value to Stakeholders:

- Contemporary curriculum and faculty.
- Provides the student many options to pursue within the industry.
- True spirit of hands-on learning and implementation of knowledge and skills for the real world.
- Updated facilities that reflect the industry's environment.

Next Steps:

- Implement new curriculum - proposals and changes.
- Optimize use of new facilities for recruitment and program effectiveness.
- Implement bridges to advanced sectors of the industry as well as advanced degrees.

Larry Schulte 9/6/17

Larry Schult, Dean Date
College of Engineering Technology