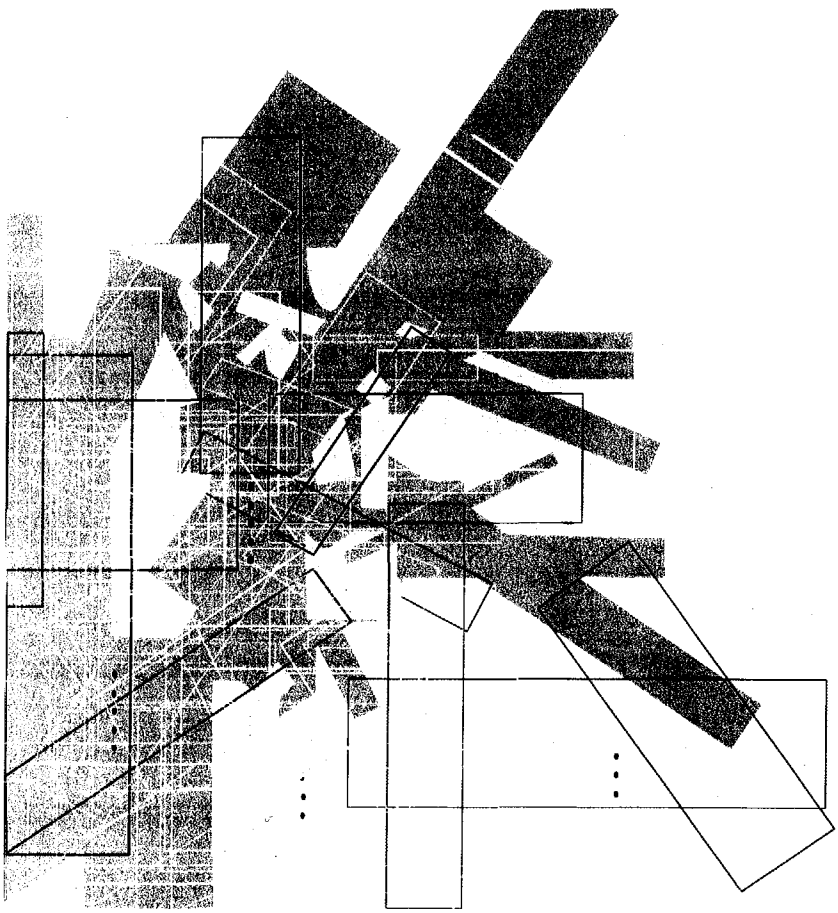
Ferris State University

College of Technology
Architectural Technology & Facility Management Department

Academic Program Review Report

Facility Management
Bachelor of Science

September 2005



APRC Questions for FM PRP

I. Program Overview

1. What would be the effect on the Facility Management BS program of adding a four-year architecture degree to the curriculum?

II. Collection of Perceptions

1. What is being done to make changes in low-rated courses like FMAN 309?

Prepared by Mel Kantor:

FMAN 309 has been a problem for several years. Attempting to teach a large number of FM application software (Autocad attribute extraction and MS Access database management, MS VISIO, GIZA, and FM Systems) in one semester is too much to get into any real depth, which frustrates students. All of these software are used within the FM profession and several of our students, in the last few years, have used them in their internships. This is in addition to exposing them to some demonstrations of other software.

"SO MUCH TO TEACH, SO LITTLE TIME".

Another frustration for the students was evident in the Winter 05 semester of FMAN 309, where major installation issues became a problem eith both GIZA (major) and FM Systems (minor). Even with major effort by Mary Holmes of Technical Services, little assistance was given to us by GIZA. The problems with FM Systems were resolved rather quickly. FM software updates occur often and sometimes it creates hardware conflict issues.

What I intend to try next semester, W 06 is to eliminate GIZA, while still making it available to the students for self-study, shortening the time spent on Autocad and ACCESS data base management, and putting much more time on FM Systems (one of the major FM software products used in the industry).

Recent studies on the learning of software indicates that self-study (learning by doing), rather than lecturing, is a more effective way developing competency. I shifted to this concept in presenting FM Systems and it seemed the interest level of the students increased.

Budget constraints are also a problem. FM software is very costly, and the FM Program is dependent on software donations. FM Systems has been incredible in their support and providing of current software. The other software used, except for GIZA, has FSU site licensing. Other FM software is available, but usually at a cost we cannot afford, and time constraints would preclude our introducing it.

While there are problems with the content of FMAN 309 that must be dealt with, two issues should be considered:

- In my contacts with other FM Programs around the country, it appears they mainly show a series of demonstration disks, and lecture. I was told by a representative of FM Systems that we were doing more with the software than most other institutions. Our students are not lecture oriented and want "hands-on" learning, which is what I am currently attempting to do.
- Students are not always the best judge of what is needed or see the importance of concepts, etc. until no longer a student.

III. Program Profile

1. Please supply graduation data for 2004 and 2005.
   - 2004 FM graduates = 15
   - 2005 FM graduates = 5

APRC Questions for FM PRP

FM Capacity & Enrollment Data						
		01/02	02/03	03/04	04/05	05/06
Capacity	3rd-year FM Capacity	20	20	20	20	25
	4th-year FM Capacity	20	20	20	20	25
	FM Certificate	20	20	20	0	20
	Total Capacity	60	60	60	40	70
Enrollment	Pre FMAN	1	0	2	1	1
	FMAN (3rd year only)	15	16	4	13	**24**
	FMAN (3rd & 4th year)	26	29	23	17	38
	FM Minor					5
	FM Certificate	2	14	13	10	15
	Total Enrollment	29	43	38	28	59
	% of Capacity	48%	72%	63%	70%	84%

- Effective, meaningful recruitment and marketing has resulted in heightened interest in the FM program both locally and nationally.
- SCH and FTEF productivity numbers have resumed the standard of academic years prior to 2003/04 and are projected to remain at this level and increase.
    - A significant increase in on-campus FM enrollment for fall of 2005 at 96% of third-year capacity supports this projection.
    - Impressive enrollment in the new Online FM Certificate program for fall of 2005 and continued interest from prospective students worldwide also supports this projection.
    - Recent interest and enrollment in the FM Minor degrees has increased SCH productivity.
    - A healthy Architectural Technology 2005 fall enrollment at 91% of first-year capacity supports this projection.

		01/02	02/03	03/04	04/05	05/06
SCH	Summer	62	104	93	26	
	Fall	241	294	267	51	**300**
	Winter	299	312	165	162	*357*
	F+W	540	606	432	213	*657*

Projected winter class enrollment:

FMAN 309 = 24 students x 3 credit hours = 72 SCH
FMAN 322 = 24 students x 3 credit hours = 72 SCH
FMAN 331 = 24 students x 3 credit hours = 72 SCH
FMAN 331 = 19 students x 3 credit hours = 57 SCH (online)
FMAN 432 = 14 students x 3 credit hours = 42 SCH
FMAN 499 = 14 students x 3 credit hours = 42 SCH

Total SCH = 357

2. Please supply the administrative program review document.
3. Please supply some sample syllabi.

APRC Questions for FM PRP

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3. Please supply some sample syllabi.

Comments on the Architectural Technology AAS degree program and the Facility Management BS program.

AT is a 2-year program. Graduates receive an AAS. Many graduates go on to get a BS in Facility Management or Construction Management. Facility Management is a 2+2 program. Students are in FM for their 3rd & 4th years.

The AT report recommends the development of a 4-year Architecture degree. They are working on such a proposal. It is not clear to me if they want to continue the 2-year program and have a 4-year Architecture degree as well, or just have a 4-year Architecture degree.

The FM report says they have been too dependent on the AT program for their students. Recently, FM has tried to promote and recruit for their program among community colleges and to graduates of other 2-year programs, with significant success.

The FM classes used to be mainly taught by one faculty member (who did have the technical expertise to teach the AT classes). Since she has retired, there is a new plan, which involves having all the AT faculty teach in the FM program. How does this correlate with the suggestion to develop an Architecture BS degree?

It is also interesting that AT is more technical, while the FM courses are less technical and more management oriented. Again, what are the implications of a 4-year Architecture degree.

As a general comment about both these reports, I found that they tried to draw conclusions from a very negligible amount of data in some places, and I don't think that is useful. If 2, 3, or 4 students reply to a survey, I think that a bunch of bar charts & graphs is superfluous.

Also, both reports neglected to include syllabi.

Both programs complain about administration effectiveness, and request more clerical support.

AT AAS degree

1. The biggest question I have is, did they make a case for offering a BS in AT?

2. The comparable programs are all at community colleges (except Delta College); should Ferris maintain a 2-year program?

SECTION 2
The AT Graduate Follow-up survey

** the range of people interviewed was very broad (1987 to 2004), so the conclusions drawn have to be considered in that light.
** Evidence for the need for a BS is seen in that 64/95 of the respondents went on for more education after graduating with the AAS.
** Some of the responses about "Preparation in specific skill areas" were somewhat negative, so we might ask what they are doing to increase students' competence in written communication skills, awareness of environmental issues, and the use of 3-D CAD software (if 3-D CAD software is something they want the students to learn.)
** They do have 38/92 say they strongly agree and 20/92 say they agree that they would have pursued a BS in Architecture if it had been available.

AT Employer Follow-up survey
** The response rate was only 11%, although at least they have 23 responses.
** Communication was noted as a problem; is there anything they can do to improve those skills?
** other low numbers – are these important & if so, how are they addressing them.

Graduate Exit Survey
** Advising problems were apparent; is this being addressed? Are they required to see their advisor?
** Facilities are graded poorly (in both programs – and in the FM report they say the FM facilities are graded poorly because they are bad in comparison with the AT facilities). However there has been some improvement recently.
** In this survey, only 2/18 strongly agree and 4/18 agree that they would pursue a BS in Architecture. 33% is a lot smaller than the alumni survey response of 58/29 = 63%. Can they explain that? It worries me because these are the actual students who you'd want to see go into a BS program.
** Student comments (p. 26), talk about tension among faculty and "constant undermining of work/teaching tactics". Is this a real problem? How are they dealing with it?
** Author's Comments (p. 26) resorts to criticizing students. This isn't helpful. They need to deal with the criticisms.

Student Program Evaluation
** There seemed to be a number of high-performing students who claimed "Junior" status. Is that because it is a 5-semester program?
** Students are critical of the program instruction equipment. What are they doing to improve it? (And, does this have bearing on the proposal for a BS?)
** Students are critical of the Placement Services. This seems to be an all-Ferris problem. Can we make a general recommendation about dealing with the problems & improving the performance?
** Among these students they have an average of 3.8/5.0 (p. 40) who say they would have pursued a BS. So why are the graduate exit survey figures lower? (see above)? This percentage is more in line with the percentage they got when they surveyed alumni.

SECTION 3

Profile of Students
** I found the numbers confusing, the "Job vs. Continuing Education" table on p.2 has 36 students for 2002, while the other demographic tables have far fewer. On p. 3, under enrollment, again it says that 30 students enrolled in Fall 2002. So why on p. 1, under Student Demographic Profile, do they only have 12 students in 2002?
** They say the way to increase growth is to have a BS, also to market. Marketing has helped, they say.
** Again, on p. 4 & 5, I don't understand the numbers. On p. 4 it says that in Fall of 2003, they had 91% of program capacity. On p. 5 they say program capacity is 106 students (66 1st year, 40 2nd year.) Fall 2003 enrollment (p. 3) says 42 freshmen, 34 2nd year & above. That is 85% of capacity in the 2nd year, but 1st year is 42/66 which is about 65%. I don't think the numbers are that critical, but I just don't understand them.
** If capacity is 66 for the 1st year & 40 for the 2nd, then they are planning on 26/66 students not coming back for the 2nd year? Is that a reasonable rate (60% retention). Can they do better?

Retention and Graduation
** OK, here things don't look so rosy. In 2001 they admitted 54 students, it looks like 40 came, 3 were dismissed, 10 changed curriculum, 5 did not return and 5 did not graduate, leaving 17 graduates. Etc.
** It looks like admitting more students is just leading to higher numbers who don't come back after the 1st year. Is that useful?
** A significant (1/4) of the students change curriculum. Where do they go? Why?

Quality of Instruction
** There are a lot of classes. What is the class size?

Section 4
Instructional Environment: They put the same section in both reports. Doesn't the AT program have more classes that need computer/lab space than FM does? Doesn't the AT program have its own rooms, at least 1 of which was recently renovated?

Section 5

This program seems well related to the FSU Mission. Although it seems like they are sending student on to additional educational programs rather than directly into jobs, they do seem to get students onto a career path at which they can succeed.

BS in Facility Management (FM)

The FM program is one of only 6 "recognized" FM programs in the US, and none of the others are anywhere near us. The FM program seems well attuned to the Ferris Mission.

Section 2

Graduate follow-up survey.
** they had 53 surveys from graduates ranging from 1991 to 2004. That is a pretty broad range and makes the results a little shaky. Would it be helpful to just pull out results from the last 5 years?
** again, there is significant criticism of the placement center, and indication that they don't do their job. See above (AT) for my suggestion that we make a general comment about the placement services.
** the survey is hard to judge because there was such a broad range of respondents. There seems to be a lack in students' ability to understand/plan/write budgets & contracts. Is there a course, or a plan to address this? Other areas also had low-ish scores. Is there a plan to address this?

Employer follow-up survey.
** Employers seem happy, but n=6 which is very small

Graduate Exit Survey
** I found this not very helpful. For the 2005 survey, 4 students is just too small a number, and many of the questions were only answered by 2 students. When they moved to comparing the various years, the graphics were much much too busy, and hard to get information from. I would have found it more helpful if they had taken an aggregate, say of 2000-2005, and given aggregate totals. We could ask for this to be done.
** 2 courses get low scores: FMAN 309: Computer Applications and FMAN 322: Project Management. They say that FMAN 322 was taught by an adjunct. But "FMAN 309's rating has declined for the last few years". Why? Can something be done? Is this related to their complaints about computer facilities later in the report? What will they do?
(it would have been nice to see syllabi)

Quality of Faculty, etc. (p. 40) and other pages
** I get the impression of some pedagogical issues, there are enough complaints that I wondered.
** I'm not sure about the facilities. Students give a poor rating to FM facilities & classrooms (p. 41) but pretty close to equally poor to non-FM course classrooms.

Faculty Perceptions
** Students need more work in writing. Will they get it?

** p. 48: why is "FM specific software" "introduced later and in a minimal manner." Is this something they could change? Should they? See later notes.

** The faculty feel that program instructional equipment is only average (p. 50). What are they doing to upgrade it? Do they have a plan?

Section 3

Profile of Students

** Do they have a plan to attract minority students? Their representation of women is commendable.

** This is a good program with high-level incoming students

** enrollment has been low but is going up. They have made commendable efforts to get out & market their program, and the efforts have paid off.

** they seem to be getting their graduates out in 2 years.

Curriculum

** on p. 8 it says "it should be noted that the full time faculty currently teaching in FM Program hold CFM designation...." Is this true, with all AT faculty teaching in FM? Does it need to be true?

** Advisory Board – questions about university support, loss of faculty....

** They use adjunct faculty. They say 3-6 credit hours per year. Do they need another faculty member?

** They say salaries are not competitive with industry.

Section 4

** They need better labs, and more computers so students can have more exposure to FM software. They talk about needed to keep it updated. They can get donations of software, so it seems to me that they should consolidate those relationships, and get hardware support from the university. Is there a plan, or dates set, for renovation of their classrooms? Can they put together an acquisitions plan for computer software & hardware? Can they consolidate relationships with people who can donate software?

Section 5.

** p.7 – discussion about factionalized faculty into 2 camps. How is it going to have AT faculty teaching FM courses? Would a new faculty member teach in both AT & FM?

Academic Program Review Panel

Facility Management
Bachelor of Science

Diane Nagelkirk, AIA
Department Chair, Associate Professor
APR Panel Chair

Mary Brayton, AIA
Associate Professor

Bruce Dilg, NCARB
Associate Professor

Gary Gerber, AIA, CSI, LEED AP
Associate Professor

Mel Kantor, AIA, CFM
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Joe Samson, CFM
Associate Professor

Donna Smith, Professor
Humanities Department

Dr. Wayne Veneklasen, Ph.D., CFM
President
Facility Solutions, Grandville MI

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Appendix

Section	Topic
A	Program Guide Sheets
B	Sample Surveys
C	Faculty Vitae

FERRIS STATE UNIVERSITY

August 30, 2005

Diane Nagelkirk, AIA
Department and ARP Panel Chair
Facility Management
Ferris State University

Donna A. Smith, Ph.D.
Professor
Communication, CAS
Ferris State University

Dear Ms. Nagelkirk,

The following is my response to the APR report on Facility Management. Since I am an 'outside' committee member, I do not possess the technical expertise of 'inside' committee members. My remarks are based on my overall observations of the APR report.

APR Report
Facility Management

I am impressed by the Facility Management Program. The curriculum appears to have been assembled with great care to best meet the needs of the students who will be seeking employment in this area.

According to the faculty survey, there seems to be some concern with the quality of the general education (3.75) and preparation for further study (3.75) of facility management graduates. As an instructor who teaches numerous general education courses annually, this is a problem across the entire university. This problem is not unique to Ferris but exists all over the United States. I suggest that it is in fact lack of student motivation in these general education courses that is the root of the problem. Many students taking such courses see no important relationship between general education and their future employment. For example, I frequently hear that a student has no interest in the public speaking course because he/she will never need to give a speech! Since many students enter Facility Management after completing the Architectural Technology Program at Ferris, the importance of the general education courses could be stressed to these students by the architectural/FM faculty. The background from general education supports all of the nine core competency areas developed by the International Facility Management Association. Because increased credit hours for a major are not often possible, better utilization of the general ed that the student is already taking seems to be the answer.

FERRIS STATE UNIVERSITY
DEPARTMENT OF HUMANITIES
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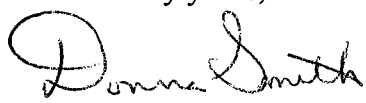
Another area of concern appears to be student enrollment. According to the report, steps are being taken for outside recruitment. I might suggest that Ferris faculty in all outside areas be made aware of the FM Program. Those of us in Arts and Science often do academic counseling for students who have not as yet decided on a major. I am certain I will be mentioning the FM Program to these students in the future. The excellent placement rate, starting salary, and the very nature of the work are very attractive. It is possible that many Ferris faculty may not even be aware that the FM Program exists at FSU.

Some of the other concerns such as lack of faculty and facilities are areas for which I am unable to suggest a solution. Otherwise, I again wish to state that the program appears well conceived and thorough. The report is well written. Facility Management faculty and students should be proud of their program. Thank you for the opportunity to learn about this excellent program.

Sincerely yours,



Donna Smith

Program Overview

Program Goals

Prepared by: Diane Nagelkirk

The Baccalaureate Program, offered through the Architectural Technology and Facility Management Department, is one of a broad array of two- and four-year programs focused on design, construction, and control of the built environment. The program has been designed as an upper division specialization for graduates of Ferris State University and community college Associate Degree Programs in Architectural Technology and related curricula. Accommodation is made for graduates of other programs outside building design and construction disciplines.

The Baccalaureate Program in Facility Management has been developed to meet the educational goals of nine distinct professional competencies. These nine core competencies have been developed by the International Facility Management Association (IFMA), the major facility management professional association that is recognized worldwide.

- Operations and Maintenance
- Real Estate
- Planning and Project Management
- Human and Environmental Factors
- Leadership and Management
- Quality Assessment and Innovation
- Finance
- Communication
- Technology

A core of general education, business studies, building technology, and facility course work provide graduates with the skills, knowledge, and abilities for employment in the growing field of corporate facility management, as well as in related areas with consulting and service firms.

Mission Statement:

The mission of the Facility Management program is to provide students with the educational concepts, skills and value necessary to, upon completion of the program, successfully enter into the employment market in facility management and related professions.

Through the career-oriented program, the Facility Management program supports the FSU mission by contributing to the workforce needs of Michigan and prepares students to be lifelong learners in a rapidly changing and diverse world. We actively engage students in the learning process, both inside and outside the classroom, in order to help each student maximize his or her potential.

Program Objectives:

Under the guidance of the faculty of professional, certified facility managers and/or licensed architects the program prepares students to:

- Obtain a foundation in mathematics and physical science, behavioral science, written and verbal communication, and computer skills.
- Obtain a solid foundation in business and management and its application to Facility Management.
- Develop an ability to use the tools and techniques of the facility manager.
- Develop an understanding of facility analysis, planning and design.
- Develop knowledge of the architectural and construction process.
- Develop knowledge of contemporary office technology and philosophy.
- Develop knowledge of building systems technology and the proper operation and care of those systems.

Program goals and objectives are established by faculty with guidance from the Facility Management advisory committee. Program goals and objectives are also responsive to the changing needs and trends of the facility management profession. Since the last program review the use and degree of the computer has impacted classroom learning and activities. The efficiency of the computer has allowed more time for engaging students in critical thinking and has resulted in a higher level of student performance and a higher level of technical sophistication.

The Facility Management program has a proud history of providing professional cutting edge education. The program is recognized nationally among facility management professionals as producing qualified, employable graduates with valued technical skills. Our graduates currently enjoy successful careers in facility management, interior design, architecture, and other areas of the built environment.

Program Visibility and Distinctiveness

Prepared by: Diane Nagelkirk

The pioneering Facility Management curriculum at Ferris State University has a proud record of providing relevant, professional facility management education. The program is recognized among professionals, corporations and associations as producing qualified, employable graduates with respected technical and management skills. As such students enter the program knowing they will obtain a valued education and will enjoy successful careers in facility management or in other professions of the built environment.

Several career path options are available to students upon completion of the baccalaureate degree in Facility Management. This distinct feature promises the following viable opportunities after 4 years of study:

- Enter into the facility management profession as a facility manager or specialist.
- Enter into the architectural profession as an architectural technician.
- Continue education in a Master of Architecture program to obtain licensure as an architect.
- Continue education in a MBA program.

The Facility Management program is one of only six programs in North America to be awarded recognition by the International Facility Management Association for meeting the highest standard in facility management education. As the demand for facility management graduates increases an education in facility management offers many opportunities. In addition, Facility Management is a dynamic, evolving profession that faces new challenges and opportunities created by technology advances and global business development which further mandates the need for appropriate education.

Ferris offers three educational programs in Facility Management designed to meet the needs of traditional and non-traditional students who plan to or currently deal with facilities: Bachelor of Science in Facility Management, Minor Degrees in Facility Management, and a Certificate Program in Facility Management.

The majority of students enrolling in the B.S. program enter from associate degree programs in architectural technology or building related programs. However, over the past several years a greater influx of students with strong academic skills, enter the program with a variety of previous educational backgrounds. Survey results indicate that students choose Ferris because of the program's reputation and because of the growing demand for graduates who hold a facility management degree.

There are 5 additional institutions throughout the United States that offer "recognized" facility management programs: Brigham Young University, Cornell University, Colorado State University, Georgia Institute of Technology, and Wentworth Institute of Technology.

In comparison to Ferris' Facility Management program, the institutions listed above offer a variety of programs that differ in scope and focus. In addition, Ferris' Facility Management program is unique in that all faculty teaching in the program are certified facility managers and/or licensed architects.

Program Relevance

Prepared by: Diane Nagelkirk

Labor Market Demand:

Source: U.S. Department of Labor, Bureau of Labor Statistics, Occupational Outlook Handbook, 2004-2005.

Job Outlook for Administrative Services Managers

Employment of administrative services managers is projected to **grow about as fast as the average** for all occupations through 2012. Like persons seeking other managerial positions, applicants face keen competition because there are more competent, experienced workers seeking jobs than there are positions available. However, demand should be strong for facility managers because businesses increasingly are realizing the importance of maintaining, securing, and efficiently operating their facilities, which are very large investments for most organizations. Administrative services managers employed in management services and management consulting also should be in demand, as public and private organizations continue to streamline and, in some cases, contract out administrative services functions in an effort to cut costs.
At the same time, continuing corporate restructuring and increasing utilization of office technology should result in a flatter organizational structure with fewer levels of management, reducing the need for some middle management positions. This should adversely affect administrative services managers who oversee first-line mangers. Because many administrative services managers have a wide range of responsibilities, however, the effects of these changes on employment should be less severe than for other middle managers who specialize in only certain functions. In addition to new administrative services management jobs created over the 2002-12 projection period, many job openings will stem from the need to replace workers who transfer to other jobs, retire, or stop working for other reasons.

Earnings for Administrative Services Managers

Earnings of administrative services managers vary greatly depending on the employer, the specialty, and the geographic area. In general, however, median annual earnings of administrative services managers in 2002 were $52,500. The middle 50 percent earned between $36,190 and $74,590. The lowest 10 percent earned less than $26,120, and the highest 10 percent earned more than $99,870. Median annual earnings in the industries employing the largest numbers of these managers in 2002 are shown below:

Management of companies and enterprises	$66,700
Elementary and secondary schools	59,220
Colleges, universities, and professional schools	56,960
State government	55,710
Local government	51,570

In the Federal Government, contract specialists in non-supervisory, supervisory, and managerial positions earned an average of $66,309 a year in 2003. Corresponding averages were $63,509 for facilities operations, $62,552 for industrial property managers, $58,880 for property disposal specialists, $62,751 for administrative officers, and $52,824 for support services administrators.

Average salaries for the following titles (Source: International Facility Management Association)

- Facility Specialists $57,000
- Facility Managers $74,000
- Facility Directors $81,000
- Facility Executives $200,000

Program response to emerging issues:

Ongoing assessment of both employer and student needs occurs through yearly advisory board meetings, student surveys, and small focus-group student meetings conducted by department chair. Comments and concerns expressed by these groups are annually reviewed by faculty and changes are implemented as appropriate. Within the past five years these changes include, but are not limited to, increased use of computer software and online resources in relevant classes, development of Online Certificate program, and minor curriculum revisions addressing relevancy of directed general education courses.

Student Attraction:

Student program survey results indicate that students choose Ferris for the professional reputation of FM program and its rank as one of only six "recognized" programs in the U.S.

Graduate survey results indicate that students choose the FM program for the opportunity to be employed in a variety of positions and geographical areas. In addition, graduates feel the program meets their expectations in terms of securing jobs, performing well, and advancing their career. Graduate salaries in general reflect the norm of the facility management profession.

Program Value

Prepared by: Diane Nagelkirk

The technical, career-oriented focus of the Facility Management program is in direct accord with and in support of the University mission statement. The success of the graduates in attaining employment in the profession with competitive salaries, in demonstrating their skills and knowledge, and in attaining advanced levels of responsibility within the workplace all point to the success and value of the program.

The program has maintained an excellent reputation and relationship with the facility management profession throughout the U.S. Over the past 17 years of the program's existence, graduates of the program have been, and are employed by reputable corporations, institutions and universities throughout the country. Support and interest in the program by facility managers is demonstrated through ongoing monetary donations to the program and student scholarships. In addition, they donate their time to visit campus to meet with students, to host student field trips to offices and building sites, and to serve on the Facility Management Advisory Committee.

The faculty group is a well-balanced mix of longevity and newness. All program faculty have strong professional experience in facility management and/or the practice of architecture and they bring this experience to the academic setting.

Program faculty has also been active in professional associations of the International Facility Management Association (IFMA), American Institute of Architects (AIA), and the U.S. Green Building Council (USBGC). In addition to being members, several faculty have served as committee chairs and directors of local chapters. Faculty and students regularly attend chapter meetings of the IFMA West Michigan Chapter in Grand Rapids.

Collection of Perceptions

Graduate Follow-up Survey

Prepared by: Joe Samson

Introduction:

As part of the program review, surveys were prepared and distributed to alumni of the Facility Management Baccalaureate Degree. Surveys were sent to alumni who graduated since 1991, the first year to graduate students with this degree. Eighteen surveys were returned by the postal service due to incorrect address. It is assumed that 232 surveys reached alums.

Sixty seven surveys were received by the department. Of these surveys, 14 were completed by alums of the Certificate Program in Facility Management. These were not compiled or included in this study for the following reasons. First, the curriculum of the certificate utilizes only four of the eight facility management courses and the survey addresses all courses. Second, the certificate is being converted to an on-line delivery method. Third, the certificate alums are already work in the field of facility management and may have attained some competencies from other sources.

The results of this survey will be commented on within this section of the Program Review.

Methodology:

The alumni survey was developed to first gather general information about the alums, their first facility management related work experience, and their current facility management work experience. Another part of the survey utilized a Leikert Scale to determine how well the alums believe they were prepared for various facility management related tasks. These statements were based on the nine competencies that the International Facility Management Associate expects facility managers to possess.

The results for questions 1-18 are presented such that the number of responses is indicated in ***Bold Italics*** directly to the right of each statement. For questions 19-61, the number of alums rating each statement is indicated in the column below the Leikert Scale, with a column to the right indicating the mean. These are also in *italics.*

A sample of the survey appears in Appendix B. The results and analysis of the survey are as follows.

Survey Results-Background Information:

1. What year did you graduate with your Bachelor of Science in Facility Management Degree?

1991	*4*	1998	*4*
1992	*3*	1999	*2*
1993	*2*	2000	*4*
1994	*4*	2001	*3*
1995	*1*	2002	*2*
1996	*7*	2003	*8*
1997	*3*	2004	*6*

2. Did you attend Ferris immediately before entering the Facility Management Program?
   a. Yes. *35*
   b. No. *18*
   What institution did you attend prior to Ferris? _____

Grand Rapids CC	***4***
Harrisburg PA CC	***4***
Delta CC	***2***
Alpena CC	***1***
Henry Ford CC	***1***
Ivy Tech	***1***
Lansing CC	***1***
Mid MI CC	***1***
Muskegon CC	***1***
University of MI Flint	***1***
University of Detroit	***1***

3. What educational background did you have prior to entering Ferris' Facility Management program?
   a. Ferris' Associate Degree in Architectural Technology Program. *33*
   b. Another Architectural Technology Program. *14*
      Name Institution: ***__GRCC-4, Harrisburg PA-4, Delta-1, Henry Ford-1, Ivy Tech-1, LCC-1,***_____
   c. Transferred from another Ferris program. *2*
      Name the program: ***__BCT-1, HVACR-1***_____
   d. Transferred from a non-architectural program at another institution. *6*
      Name Institution: ***__Alpena-1, Delta-1, GVSU-2, Muskegon-1, UofM Flint-1.***

4. How did you learn of Ferris' Facility Management Program?
   a. Through Ferris' Architectural Technology program. *35*
   b. From advisor at other school. *10*
      Name of institution: ***_Alpena-1, Delta-1, GRCC-2, Harrisburg PA-4, Henry Ford CC-1, Ivy Tech-1***_____
   c. From visit by Ferris faculty to another school. *2*
      Name of institution: ***_GRCC-1, Northview HS-1***_____
   d. From IFMA. *0*
   e. Other: _____ *7*

Visited FSU in HS-1
FSU recruiter to Muskegon CC-1
From Program/Department-2
Found info at GRCC-1
Internet-1

5. What attracted you most to Ferris' Facility Management Program?
   a. That it laddered directly from Ferris' Architectural Technology Program. ***28***
   b. That it laddered directly from another school's Architectural Tech Program. ***6***
   c. Location. ***0***
   d. Job potential and opportunities. ***10***
   e. Salary potential. ***1***
   f. Recognized by IFMA. ***0***
   g. Would enjoy that type of work. ***6***
   h. Other: ***Laddered from BCT-1***
      Related to architecture-1
      At FSU-1

6. When did you decide to pursue Facility Management as a career?
   a. In high school. ***2***
   b. While attending Ferris' Associate in Architectural Technology Program. ***31***
   c. While attending another school's Architectural Technology Program. ***11***
   d. While attending another program at Ferris. ***3***
   e. While attending a non-architectural program at another institution. ***3***
   f. Other: ***Didn't find work after AT-1***
      While working in architecture-1
      Related to job-1

7. Have you continued your education after graduation from the Facility Management Program?
   a. Yes. ***8*** Name of Program and Institution
      Management @ Spring Arbor College-1
      MBA @ Ferris State University-1
      Master of Speech @ New York University-1
      Master of Administration @ Central MI University-1
      MBA @ University of Phoenix
      Counseling @ Central MI University-1
      AAS in Business Admin @ Ferris State University-1
      MBA @ Wayne State University-1
   b. No. ***46***

8. Do you currently live in Michigan?
   a. Yes. ***41*** City: ***Grand Rapids area-9, Detroit area-6, Lansing area-3, northern MI-2, Central MI-3, West MI-2, Southern MI-4, Other-12.***
   b. No. ***13*** State: ***Florida-2, Illinois-2, Indiana-2, Pennsylania-2, Maryland-1, New Jersey-1, New York-1, Ohio-1, Oregon-1_____***

Alumni responded to the survey from all classes since the first class which graduated in 1991. About 66% of respondents entered the program after completing their associate degree in Architectural Technology at Ferris. The Bachelor of Science in Facility Management ladders directly to this program. The vast majority of students in the program have come from associate level architectural technology programs even if they transferred from another institution. The program is most successful in recruiting students from community colleges where there is a faculty advocate. These community colleges include: Grand Rapids CC and Harrisburg CC in Pennsylvania, where a former FSU AT professor teaches.

The vast majority of students become aware of FM careers while completing their first two years of college. The number one reason students choose to study FM is because it

ladders from Ferris' associate degree in Architectural Technology. This indicates, in the opinion of this faculty member, that the students do not initially have a strong desire to study FM, but rather a strong desire to attain a baccalaureate level degree related to architecture in some way. However, the field of facility management continues to offer alumni rewarding career options.

8 of the 46 respondents have continued formal education. Most focus on degrees related to management and business, such as MBA's.

41 of the 54 respondents live in Michigan.

Survey Results-Initial Employment Information:

9. How flexible were you geographically when considering job opportunities? Circle more than one if applicable.
   a. Willing to move anywhere. ***12***
   b. Willing to move to certain regions. ***28***
   c. Not willing to move to rural areas. ***0***
   d. Not willing to move to heavily populated urban areas. ***1***
   e. Not willing to move outside Michigan. ***8***
   f. Not willing to move outside home town. ***5***

10. How long after graduation were you offered a Facility Management related job?
   a. Had job prior to graduation. ***26***
   b. Had job within one month of graduation. ***4***
   c. Had job within three months of graduation. ***6***
   d. Had job within 6 months of graduation. ***9***
   e. Had job within one year of graduation. ***3***
   f. Took more than one year. ***1***
   g. Other: ***___chose other field first-4***

11. Did you use Ferris' Career Center placement services in searching for your first job?
   a. Yes. ***22***
   b. No. ***32***

11a. If you answered Yes to the previous question, did you find your first job through Ferris' Career Center placement services?
   a. Yes. ***4***
   b. No. ***20***

12. How would you categorize your first Facility Management related job?
   a. Full time. ***41***
   b. Part time. ***1***
   c. Temporary or contract. ***7***
   d. Other: ***__internship-1, never worked in FM-1***

13. What was your starting annual salary at your first Facility Management related job?

a.	Below $20,000.	*5*
b.	$20,001-$25,000.	*10*
c.	$25,001-$30,000.	*8*
d.	$30,001-$35,000.	*12*
e.	$35,001-$40,000.	*8*
f.	$40,001-$45,000.	*8*
g.	$45,001-$50,000.	*0*
h.	More than $50,000.	*0*

Most grads were willing to relocate upon graduation. The vast majority had jobs upon graduation. About 40% used Ferris' Career Center to search for their first job, but only 20% of those who used it actually found their first job through the Career Center. Average starting salaries were around $30,000, but these figures are since 1991.

14. What was your title at your first Facility Management related job?

Facility/space planner	*10*
Technician/CAD Drafter	*10*
Project Mgr/Coordinator	*8*
Facility Manager	*7*
Facility Engineer	*3*
Maintenance Supervisor	*3*
Operations Manager	*2*
Intern	*2*
Environmental Manager	*1*
Property Manager	*1*

15. Which of the following best describes your primary function at your first Facility Management related job?

a.	Facility Manager.	*10*
b.	Construction Manager.	*1*
c.	Project Manager.	*7*
d.	Operations Manager.	*5*
e.	Facility Planner.	*8*
f.	Space Planner.	*9*
g.	Facility Staff.	*2*
h.	***CAD & Drafting-4, Facility Analyst-1, Architecture-1, Facility Engineer-1.***	

Most grads worked initially with CAD or other technical aspects of facility management.

Survey Results-Current Job Information:

16. Do you still work within the field of Facility Management?

a.	Yes.	*38*
b.	No.	*14*

16a. If yes, which of the following best describes your primary function at your current job?

a.	Facility Manager.	*12*
b.	Construction Manager.	*2*
c.	Project Manager.	*12*
d.	Operations Manager.	*3*
e.	Facility Planner.	*3*
f.	Space Planner.	*1*
g.	Facility Staff.	*2*
h.	Executive (Assistant VP and above)	*0*
i.	Consultant.	*1*
j.	Other: ***Moves-1, sales-1, property manager-1, maintenance engineer-1.***	

16b. If no, why did you choose to work in a field other than Facility Management?

Like Design-1
Like software-1
No Jobs-1
Job security and money-1

17. What is your current title?

Project Manager/Coordinator	***15***
Facility Planner	***5***
Facility Manager	***4***
Operations Manager	***3***
Facility/Maint Supervisor/Engineer	***3***
Consultant	***2***
Building/Property Manager	***2***
CAD Tech/Drafter	***2***
Designer	***1***
Operations	***1***
Facility Analyst	***1***
Director of Engineering	***1***

JOBS OF ALUMNS WHO LEFT FM:

Computer/Software development, etc.	***3***
Architecture	***2***
Sales	***2***
Self Employed	***2***
Construction Manager	***1***
Design	***1***
Probation Officer	***1***

18. What is your current annual salary?

	FM Salaries	***Non-FM Salaries***
a. Under $30,000.	***3***	***2***
b. $30,001-$40,000.	***4***	***2***
c. $40,001-$50,000.	***12***	***3***
d. $50,001-$60,000.	***9***	***1***
e. $60,001-$70,000.	***5***	***2***
f. $70,001-$80,000.	***2***	
g. More than $80,000.	***5***	***3***

About 75% of responding alums currently work in facility management. The most common salary was in the $40,000-$50,000 range. Salaries of alums working in FM are comparable to those that have moved to other fields of work. Most alums working in the FM field are at the manager responsibility level.

Survey Results-Overall Satisfaction with Ferris' Facility Management Degree:

	Not at all 1	Not very 2	Neutral 3	Very 4	Extremely 5	Unsure	MEAN
19. How satisfied are you with the quality of the education you received through Ferris' Facility Management program?	*0*	*2*	*9*	*30*	*14*	*1*	***4.02***

Overall, students are very satisfied with their facility management education.

Survey Results-Satisfaction with Preparation in General and IFMA Core Competencies:
In the following part of the survey, the heading "General Skills" is a category developed by the faculty member to assess preparation in certain non-facility management related skills. All other sections: "Communication", "Finance", "Human and Environmental Factors", "Leadership and Management", "Operations and Maintenance", "Planning and Project Management", "Real Estate", "Quality Assessment and Innovation", and "Technology", are the nine competency areas developed by the International Facility Management Association. The individual statements were developed by the faculty member. The subjects were asked to respond based on preparation for an entry level facility management position.

General Skills:	Not at all 1	Poorly 2	Average 3	Good 4	Excellent 5	Unsure or not applic-able	*MEAN*
20. Responsibility, self management.	*0*	*0*	*6*	*35*	*14*	*1*	*4.14*
21. Mathematical skills.	*0*	*2*	*17*	*27*	*7*	*2*	*3.74*
22. Critical thinking and problem solving.	*0*	*0*	*8*	*29*	*18*	*0*	*4.18*
23. Ability to find, understand, and use information.	*0*	*0*	*5*	*30*	*18*	*2*	*4.24*
MEAN VALUE FOR STATEMENTS 20 THROUGH 23							*4.08*

The alumni are generally satisfied with their preparation in the area of General Skills.

Communication:	Not at all 1	Poorly 2	Average 3	Good 4	Excellent 5	Unsure or not applic-able	*MEAN*
24. Communicate effectively through writing.	*0*	*0*	*15*	*25*	*15*	*0*	*4.00*
25. Communicate effectively orally.	*0*	*1*	*9*	*29*	*16*	*0*	*4.09*
26. Ability to gain rapport with "clients".	*0*	*3*	*14*	*33*	*5*	*0*	*3.73*
27. Understand specifications.	*0*	*1*	*7*	*29*	*16*	*2*	*4.13*
28. Write specifications.	*1*	*5*	*18*	*16*	*12*	*3*	*3.70*
MEAN VALUE FOR STATEMENTS 20 THROUGH 23							*3.93*

The alumni felt their preparation was better than average in all areas.

Finance:	Not at all 1	Poorly 2	Average 3	Good 4	Excellent 5	Unsure or not applic-able	*MEAN*
29. Understand budgets.	*1*	*5*	*22*	*22*	*5*	*0*	*3.45*
30. Manage budgets.	*1*	*8*	*18*	*24*	*3*	*1*	*3.37*
31. Plan budgets.	*0*	*9*	*21*	*19*	*5*	*1*	*3.09*
32. Understand contracts.	*0*	*5*	*17*	*23*	*9*	*1*	*3.67*
33. Write contracts.	*1*	*13*	*23*	*15*	*2*	*1*	*3.07*
34. Negotiate contracts.	*2*	*12*	*27*	*12*	*2*	*1*	*3.00*
35. Develop cost estimates for construction.	*0*	*7*	*16*	*24*	*7*	*1*	*3.57*
MEAN VALUE FOR STATEMENTS 29 THROUGH 35							*3.32*

The alumni felt that their preparation was better than average in this area. However, this faculty member feels that the curriculum has focused too much on accounting vs. finance in the past and that methods to demonstrate application of budgets should be incorporated into the curriculum.

Human & Environmental Factors:	Not at all 1	Poorly 2	Average 3	Good 4	Excellent 5	Unsure or not applic-able	*MEAN*
36. Understand and deal with environmental issues.	*0*	*3*	*16*	*30*	*5*	*0*	*3.69*
37. Understand and deal with life safety issues.	*0*	*2*	*16*	*25*	*11*	*0*	*3.83*
38. Understand the effect of environment on human behavior.	*0*	*1*	*13*	*28*	*12*	*0*	*4.22*
MEAN VALUE FOR STATEMENTS 36 THROUGH 38							*3.91*

Alumni are satisfied with their preparation to address Human & Environmental Factors.

Leadership and Management:	Not at all 1	Poorly 2	Average 3	Good 4	Excellent 5	Unsure or not applic-able	*MEAN*
39. Conduct self in ethical manner.	*0*	*0*	*5*	*30*	*19*	*0*	*4.35*
40. Participate as team member.	*0*	*1*	*9*	*19*	*34*	*0*	*4.52*
41. Work with individuals of diverse backgrounds.	*0*	*1*	*8*	*20*	*24*	*0*	*4.24*
42. Manage processes effectively.	*0*	*0*	*11*	*30*	*16*	*0*	*4.15*
MEAN VALUE FOR STATEMENTS 39 THROUGH 42							*4.32*

Alumni are satisfied with their preparation in the areas of Leadership and Management.

Operations and Maintenance:	Not at all 1	Poorly 2	Average 3	Good 4	Excellent 5	Unsure or not applic-able	*MEAN*
43. Understand operations and maintenance issues.	*0*	*2*	*11*	*33*	*7*	*1*	*3.96*
44. Understand mechanical building systems.	*0*	*5*	*17*	*21*	*9*	*2*	*3.65*
45. Understand electrical building systems.	*0*	*9*	*21*	*19*	*4*	*1*	*3.34*
46. Understand HVACR building systems.	*0*	*5*	*20*	*18*	*10*	*1*	*3.62*
MEAN VALUE FOR STATEMENTS 43 THROUGH 46							*3.64*

Alumni express slightly higher than average preparation in the area of Operations and Maintenance.

Planning and Project Management:	Not at all 1	Poorly 2	Average 3	Good 4	Excellent 5	Unsure or not applic-able	*MEAN*
47. Architectural aesthetics.	*0*	*1*	*7*	*33*	*13*	*0*	*4.07*
48. Space/master planning.	*0*	*1*	*10*	*21*	*22*	*0*	*4.18*
49. Interior design.	*1*	*1*	*19*	*22*	*10*	*1*	*3.74*
50. Construction methods/practices.	*0*	*0*	*8*	*36*	*10*	*0*	*4.04*
51. Project management.	*0*	*0*	*13*	*26*	*15*	*0*	*4.04*
52. Move management.	*2*	*0*	*16*	*25*	*11*	*1*	*3.79*
MEAN VALUE FOR STATEMENTS 47 THROUGH 52							*3.98*

Alumni are generally satisfied with their preparation in the area of Planning and Project Management. It should be noted that Interior Design was added as a course several years ago and many of the respondents would not have taken this course.

Quality Assessment and Innovation:	Not at all 1	Poorly 2	Average 3	Good 4	Excellent 5	Unsure or not applic-able	*MEAN*
53. Able to understand and use industry benchmarks.	*1*	*3*	*24*	*21*	*6*	*0*	*3.51*
54. Able to monitor and assess quality of facility services.	*0*	*2*	*20*	*26*	*5*	*0*	*3.64*
55. Able to analyze and re-engineer methods to provide facility services.	*1*	*3*	*20*	*26*	*3*	*1*	*3.51*
MEAN VALUE FOR STATEMENTS 53 THROUGH 55							*3.55*

Alumni believe they were prepared slightly better than average in the area of Quality Assessment and Innovation.

Real Estate:	Not at all 1	Poorly 2	Average 3	Good 4	Excellent 5	Unsure or not applic-able	*MEAN*
56. Able to understand real estate related contracts.	*0*	*8*	*16*	*26*	*2*	*2*	*3.42*
57. Able to understand leasing process.	*0*	*9*	*15*	*27*	*2*	*1*	*3.41*
58. Able to understand the purchase and sale of real estate.	*0*	*9*	*20*	*22*	*2*	*1*	*3.32*
MEAN VALUE FOR STATEMENTS 56 THROUGH 58							*3.38*

Alumni believe they were prepared slightly better than average in the area of Real Estate.

Technology:	Not at all 1	Poorly 2	Average 3	Good 4	Excellent 5	Unsure or not applic-able	*MEAN*
59. Use of CAD software.	*1*	*2*	*5*	*15*	*31*	*0*	*4.35*
60. Use of generic software such as Microsoft Office.	*1*	*1*	*12*	*13*	*24*	*3*	*4.14*
61. Use of FM software.	*1*	*6*	*14*	*19*	*12*	*2*	*3.67*
MEAN VALUE FOR STATEMENTS 59 THROUGH 61							*4.05*

Alumni believe they were well prepared in the use of computers and technology. It should be noted that the use of CAD software scored highest ratings. This software is introduced and used extensively in the Associate of Architectural Technology degree which most facility management students complete prior to entry into the facility management program.

Comments:

Alumni were asked to comment. The comments are listed below in chronological order by the year of graduation.

1992	I have great memories of Ferris and taking classes. If you are able to increase the quality of contracts (liquidated damages of neighboring tenants, subcontractors insurance requirements, and bonding) you would really benefit your students. Overall, the program is great. I hope your student attendance and enrollment is doing well! This program was a tremendous asset to my career. I am very thankful. The instructors were outstanding. You have touched so many students in good ways. Please continue to do great things.
1996	I found that in the two FM jobs I had, my supervisors were thrilled I had the FM degree and were willing to train me in the specific areas they wanted me to be responsible for.

	Need either more construction electives or a class discussing construction methods, contracts, affected regulators and all the responsibilities of the FM after construction. Too many forget or are ignorant of how project decisions affect all that have to set up and maintain the space afterward. I have worked with and managed people from UofM, UofD, and Lawrence Tech. None have as good, well rounded education as I got at Ferris.
1997	I see the program has improved since I was here. More focus on exposure on real facilities and constant interaction with facility managers. I could have benefited from this along with more interaction with vendors associated with FM (elevators, HVACR, designers, construction contractors, kitchen/laundry equipment, etc.) Was and still are very disappointed with the career placement office at FSU. As one of the top FM programs in the country it does next to nothing in promoting the FM program or its graduates. The same thing goes for the FM program itself. I know the economy in MI is bad right now, but if nothing is done to promote the FM program or its graduates, the program will become non-effective. With the cost of education, the university and the FM program should promote itself and every opportunity.
1998	Questions 45, 46, and 47 were touched on through HVAC class only. Did not cover electrical, plumbing, fire suppression, network, security, and life safety. Question 61, didn't have this software or instructor was still learning it. Could use more ergonomic skills, could use more modular furniture exposure and touch on move management.
1999	My background is HVACR practices. I am a licensed mechanical contractor and member of Local Union 636. I am currently working for Johnson Controls Facility Management services at the GM Proving Grounds in Milford, MI. Along with my credentials, I am property owner of two rental properties.
2000	Could use more on managing/writing of facility related specifications/ estimates such as janitorial, operations and maintenance, elevator, etc.
2002	I know one thing I learned from Ferris and that was that I did not and do not want to be a facility manager. I had always wanted to be an architect. I really enjoy my two years at FSU. Joe and Vicky, you guys were great. I did learn a lot of great things while I was there. Ferris is a great school.
2003	Ferris State's Facility Design and Construction program has put me on the fast track to a successful career in the field of facilities. The education, experience and knowledge I gained while at Ferris has allowed me to obtain a career full of opportunity and growing potential. I am grateful to the

	program for helping me to develop into a desirable individual/employee. In my area I believe that an education based more on the financial and CAFM software would be more beneficial. The FM program at Ferris needs to have more classes based on these two items. CAFM systems were not even touched on and financial was very weak. Would like to have learned more FM software: Archibus, Z-Axis, etc. For interior design would have liked to study more furniture, especially Herman Miller and Steelcase and to learn more about aesthetics.
2004	There are two major aspects you need to look at in your program. One, take out the Interior Design class and put in a class that deals with custodial aspects of the facility management field. When graduates are looking for jobs, most of the entry level jobs deal with custodial. It would be nice to know what they are talking about. Second, I believe the class that deals with FM software should be a two semester class. There is just not enough time in a 16 week semester to go over all the software needed for our profession. Overall, I would recommend this program at Ferris to anyone. I feel that out of the 6 programs recognized by IFMA, Ferris prepared the student best.

Conclusion:

From the results of the alumni survey, it can be concluded that the alumni believe they are well prepared for their careers. It should be noted that the responsibilities of individual alums vary greatly and thus their individual experiences influence their perception of what the program content should be.

Employer Follow-up Survey

Prepared by: Joe Samson

Introduction:

As part of the program review, surveys were prepared and distributed to employers of alumni of the Facility Management Baccalaureate Degree. Since a database of employers did not exist, the researcher sent an e-mail message utilizing a distribution list consisting of approximately 60 alumni requesting employer information and stating the purpose of the request. Eleven responses were received. Surveys were sent to these eleven and six responded.

The results of this survey will be commented on within this section of the Program Review.

Methodology:

The employer utilizes a Leikert Scale to determine how well the employers believe alums are prepared for various facility management related tasks. These statements were based on the nine competencies that the International Facility Management Associate expects facility managers to possess.

The number of alums rating each statement is indicated in the column below the Leikert Scale, with a column to the right indicating the mean. These are also in *italics.*

A sample of the survey appears in Appendix B. The results and analysis of the survey are as follows.

Survey Results-Satisfaction with Preparation in General and IFMA Core Competencies:
In the following part of the survey, the heading "General Skills" is a category developed by the faculty member to assess preparation in certain non-facility management related skills. All other sections: "Communication", "Finance", "Human and Environmental Factors", "Leadership and Management", "Operations and Maintenance", "Planning and Project Management", "Real Estate", "Quality Assessment and Innovation", and "Technology", are the nine competency areas developed by the International Facility Management Association. The individual statements were developed by the faculty member.

General Skills:	Not at all 1	Poorly 2	Average 3	Good 4	Excellent 5	Unsure or not applic-able	*MEAN*
1. Responsibility, self management.	*0*	*0*	*0*	*3*	*3*	*0*	*4.50*
2. Mathematical skills.	*0*	*0*	*1*	*2*	*2*	*1*	*4.20*
3. Critical thinking and problem solving.	*0*	*0*	*0*	*5*	*1*	*0*	*4.17*
4. Ability to find, understand, and use information.	*0*	*0*	*0*	*4*	*2*	*0*	*4.33*
MEAN VALUE FOR STATEMENTS 1 THROUGH 4							*4.30*

The employers are generally very satisfied with alumni preparation in the area of General Skills.

Communication:	Not at all 1	Poorly 2	Average 3	Good 4	Excellent 5	Unsure or not applic-able	*MEAN*
5. Communicate effectively through writing.	*0*	*0*	*2*	*2*	*2*	*0*	*4.00*
6. Communicate effectively orally.	*0*	*0*	*2*	*3*	*1*	*0*	*3.83*
7. Ability to gain rapport with "clients".	*0*	*0*	*0*	*3*	*3*	*0*	*4.50*
8. Understand specifications.	*0*	*0*	*0*	*4*	*2*	*0*	*4.33*
9. Write specifications.	*0*	*2*	*0*	*3*	*2*	*0*	*4.00*
MEAN VALUE FOR STATEMENTS 5 THROUGH 9							*4.13*

The employers are generally satisfied with alum preparation with communication skills.

Finance:	**Not at all 1**	**Poorly 2**	**Average 3**	**Good 4**	**Excellent 5**	**Unsure or not applic-able**	***MEAN***
10. Identifies, organizes, plans, and allocates resources effectively.	*0*	*0*	*0*	*2*	*2*	*2*	*4.5*
11. Understanding of budgeting process, finance, and accounting.	*0*	*0*	*0*	*2*	*1*	*3*	*4.33*
12. Demonstrates leadership and negotiation skills.	*0*	*0*	*2*	*1*	*2*	*1*	*4.00*
13. Develop contracts and negotiate with vendors.	*0*	*1*	*0*	*0*	*2*	*3*	*4.00*
14. Develop cost estimates.	*0*	*0*	*1*	*4*	*1*	*1*	*4.00*
MEAN VALUE FOR STATEMENTS 10 THROUGH 14							*4.17*

The employers felt that most alums were well prepared for dealing with financial issues. However many statements received a "not applicable" response indicating that financial responsibilities may not be delegated to our alums. However it is also true that many of these tasks are often executed in departments other than the facility department.

Human & Environmental Factors:	**Not at all 1**	**Poorly 2**	**Average 3**	**Good 4**	**Excellent 5**	**Unsure or not applic-able**	***MEAN***
15. Understand and deal with environmental issues.	*0*	*0*	*1*	*3*	*1*	*1*	*4.00*
16. Understand and deal with life safety issues.	*0*	*0*	*1*	*3*	*2*	*0*	*4.17*
17. Understand the effect of environment on human behavior.	*0*	*0*	*1*	*3*	*1*	*1*	*4.00*
MEAN VALUE FOR STATEMENTS 15 THROUGH 17							*4.06*

Employers are generally satisfied with preparation in Human & Environmental Factors.

Leadership and Management:	**Not at all 1**	**Poorly 2**	**Average 3**	**Good 4**	**Excellent 5**	**Unsure or not applic-able**	***MEAN***
18. Chooses ethical courses of action.	*0*	*0*	*0*	*3*	*3*	*0*	*4.50*
19. Participates as team member.	*0*	*0*	*0*	*4*	*2*	*0*	*4.33*
20. Works well with individuals from diverse backgrounds.	*0*	*0*	*0*	*3*	*3*	*0*	*4.50*
21. Understands and applies strong management practices.	*0*	*0*	*1*	*1*	*3*	*1*	*4.40*
MEAN VALUE FOR STATEMENTS 18 THROUGH 21							*4.43*

Employers are satisfied with preparation in the areas of Leadership and Management.

Operations and Maintenance:	**Not at all 1**	**Poorly 2**	**Average 3**	**Good 4**	**Excellent 5**	**Unsure or not applic-able**	***MEAN***
22. Understand operations and maintenance issues.	*0*	*0*	*1*	*4*	*1*	*0*	*4.00*
23. Understand mechanical building systems.	*0*	*0*	*3*	*0*	*1*	*2*	*3.5*
24. Understand electrical building systems.	*0*	*0*	*3*	*0*	*1*	*2*	*3.5*
25. Understand HVACR building systems.	*0*	*0*	*3*	*1*	*0*	*2*	*3.25*
MEAN VALUE FOR STATEMENTS 22 THROUGH 25							*3.56*

Employers express slightly higher than average preparation in the area of Operations and Maintenance. One third responded "not applicable" to 3 of the 4 statements, possibly indicating that an in depth understanding of building systems is not critical within their department.

Planning and Project Management:	**Not at all 1**	**Poorly 2**	**Average 3**	**Good 4**	**Excellent 5**	**Unsure or not applic-able**	***MEAN***
26. Understanding of aesthetic issues.	*0*	*1*	*0*	*5*	*1*	*0*	*4.17*
27. Space/master planning abilities.	*0*	*0*	*1*	*1*	*2*	*2*	*4.25*
28. Understanding of interior design issues.	*0*	*0*	*1*	*4*	*0*	*1*	*3.8*
29. Understanding of construction methods/practices.	*0*	*0*	*1*	*3*	*1*	*1*	*4.00*
30. Ability to develop project schedules.	*0*	*0*	*2*	*2*	*2*	*0*	*4.00*
31. Project management ability.	*0*	*0*	*1*	*2*	*3*	*0*	*4.33*
32. Move management ability.	*0*	*0*	*0*	*2*	*4*	*0*	*4.67*
MEAN VALUE FOR STATEMENTS 26 THROUGH 32							*4.17*

Employers are generally satisfied with preparation in the area of Planning and Project Management. It should be noted that Interior Design was added as a course several years ago and not all employers may have alums who took this course.

Quality Assessment and Innovation:	**Not at all 1**	**Poorly 2**	**Average 3**	**Good 4**	**Excellent 5**	**Unsure or not applic-able**	***MEAN***
33. Able to understand and use industry benchmarks.	*0*	*0*	*1*	*2*	*1*	*2*	*4.00*
34. Able to monitor and assess quality of facility services.	*0*	*0*	*1*	*2*	*2*	*1*	*4.2*
35. Able to analyze and re-engineer methods to provide facility services.	*0*	*0*	*0*	*1*	*2*	*3*	*4.67*
MEAN VALUE FOR STATEMENTS 33 THROUGH 35							*4.29*

Employers express above average satisfaction with alum preparation in the area of Quality Assessment and Innovation.

Real Estate:	**Not at all 1**	**Poorly 2**	**Average 3**	**Good 4**	**Excellent 5**	**Unsure or not applic-able**	***MEAN***
36. Able to understand real estate related contracts.	*0*	*0*	*0*	*0*	*2*	*4*	*5.00*
37. Able to understand leasing process.	*0*	*0*	*0*	*0*	*2*	*4*	*5.00*
38. Able to understand the purchase and sale of real estate.	*0*	*0*	*0*	*1*	*1*	*4*	*4.50*
MEAN VALUE FOR STATEMENTS 36 THROUGH 38							*4.83*

Employers indicate satisfaction with alum preparation in the area of real estate issues. However, 4 of the 6 respondents indicated "not applicable" which implies that most of the departments which employ alums do not deal with real estate issues.

Technology:	**Not at all 1**	**Poorly 2**	**Average 3**	**Good 4**	**Excellent 5**	**Unsure or not applic-able**	***MEAN***
39. Use of CAD software.	*0*	*0*	*0*	*2*	*3*	*1*	*4.60*
40. Use of generic software such as Microsoft Office.	*0*	*0*	*0*	*1*	*5*	*0*	*4.83*
41. Use of FM software.	*0*	*0*	*0*	*1*	*3*	*2*	*4.75*
MEAN VALUE FOR STATEMENTS 39 THROUGH 41							*4.73*

Employers are very satisfied with the alum preparation in the use of computers and technology. Surprisingly, a high rating is also achieved for the use of FM related software. This software is introduced in one course. Also, since there is no single software used in FM, it is likely that alums did not receive any instruction in the specific software they go on to use in their jobs, but rather that they have received a good base to learn new softwares.

Comments:

Outstanding program...The feedback is based on the performance of one graduate. I think this person has demonstrated excellent performance in the areas of greatest importance.

Conclusion:

From the results of the employer survey, it can be concluded that the alumni are well prepared for their careers. It should be noted that the skills expected of various employers vary greatly. It should also be noted that these results are based on only six responses. However, the results for the alumni survey yielded similar results. If alums were deficient in an area, they would have discovered this in their career experiences and expressed the deficiency in their survey. Thus, the general indication is that the curriculum meets the needs of employers.

Graduate Exit Survey

Prepared by: Joe Samson

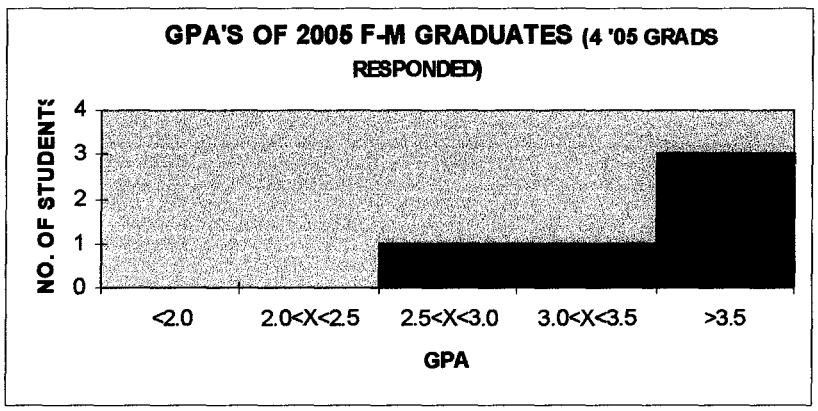
In the class of 2005, 4 of the 4 graduating students returned surveys. The Department Chair, Diane Nagelkirk distributed the surveys to graduating FM students during the last two weeks of classes. The following is a summary of the results of the survey. The questions as they appeared on the survey are listed first, followed by a summary of the responses.

The author has also made comments following the summary of responses if the results show significant difference from previous results.

This survey has been done previously in 1994, 1996, and 1998 through 2004.

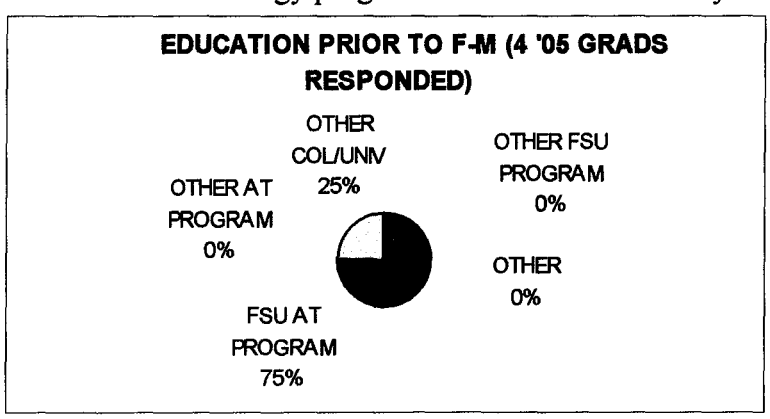
1. What is your current GPA?

Typically, most students fall in the 3.0-3.5 GPA range. Since this class is so small the higher GPA range is not significant.



2. How did you enter the F-M program?

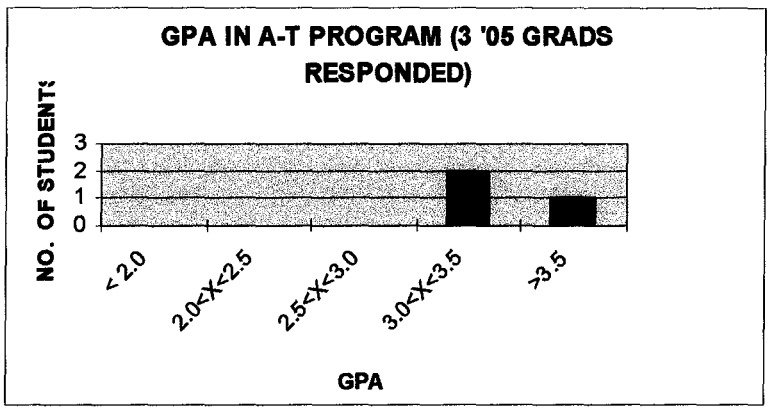
Typically, more than 75% of student in an FM class enter from Ferris' architectural technology program. This is also true this year.



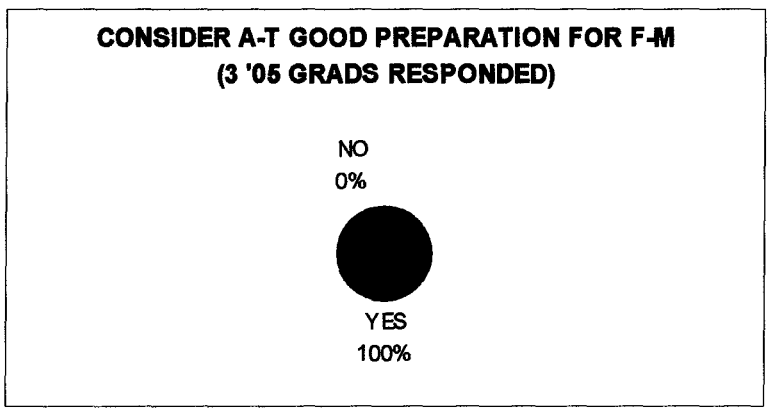
Questions 2A, 2B, and 2C were answered by graduates of the FSU architectural technology program.

2A. What was your GPA in the A-T program?

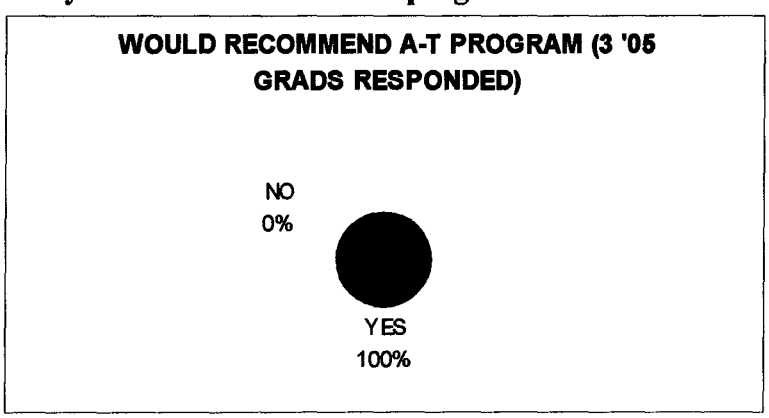
Most students in this group were much above the average for AT students.



2B. Do you consider the A-T program to be an appropriate preparation for Facilities Management?



2C. Would you recommend the A-T program to others?

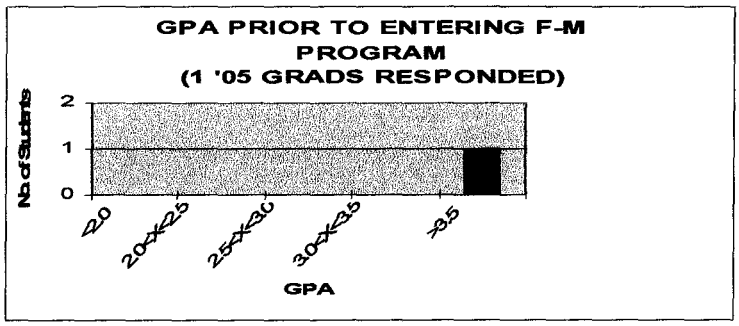


Classes since 2001 have been unanimous in recognizing the AT program as an excellent preparation for Facilities Management.

Questions 2D and 2E were answered by transfer students who did not enter F-M from the FSU architectural technology program.

2D. What was your GPA prior to entering the F-M program?

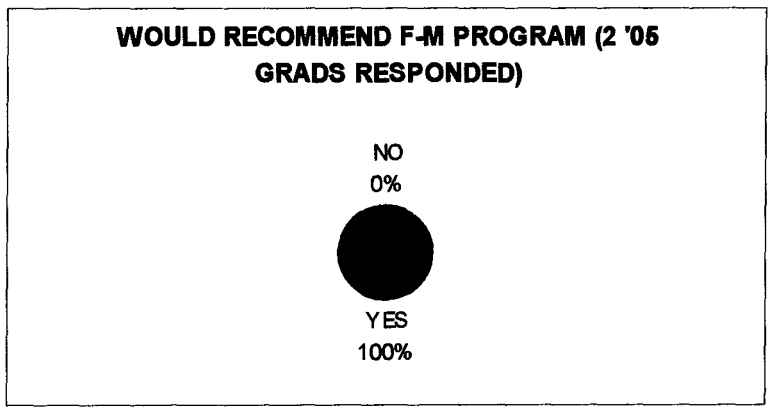
GPAs of transfer students are generally higher than those who enter from the AT program. This is true of the one student who transferred into FM from another institution.



2E. What college did you transfer from?

The one respondent transferred from Lansing Community College's Mechanical Drafting and Design Program.

3. Would you recommend the F-M program to others?



3A. Why or why not?

YES:

Recognized by IFMA (International Facility Management Association).

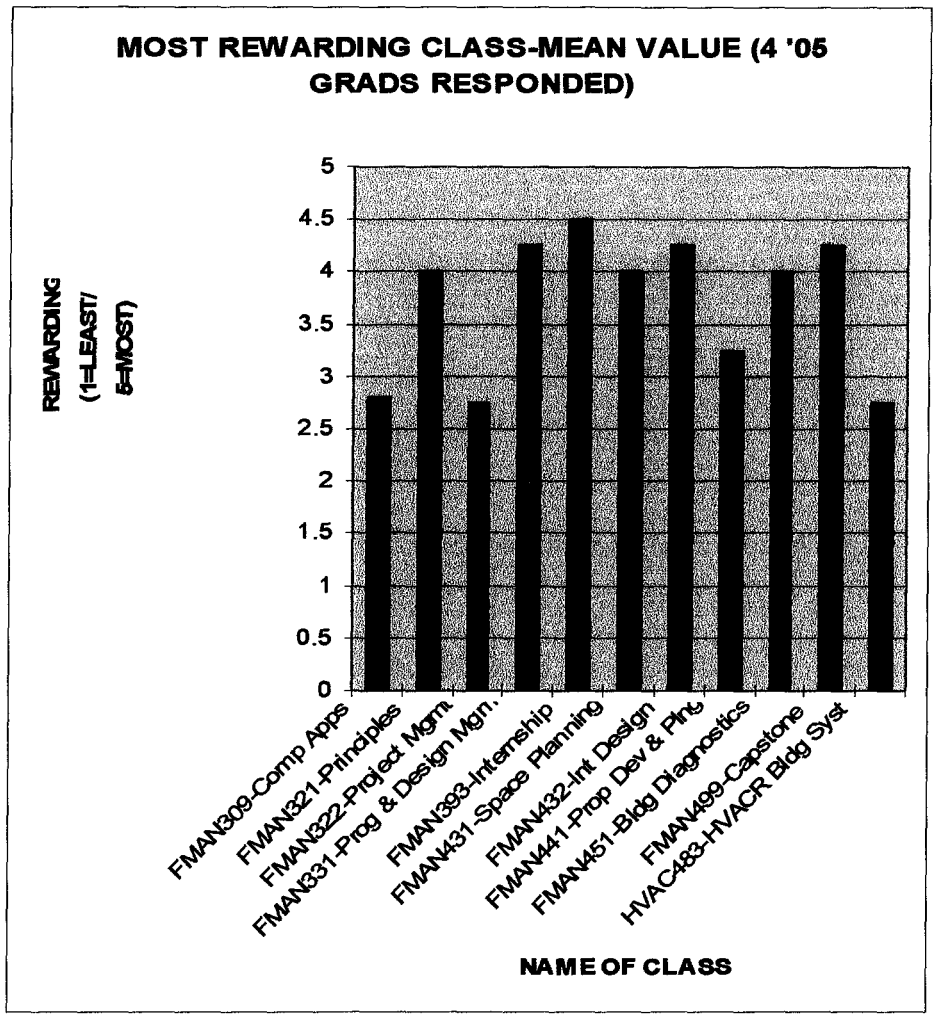
Facility Management (B.S.)

APRC 2005-2006

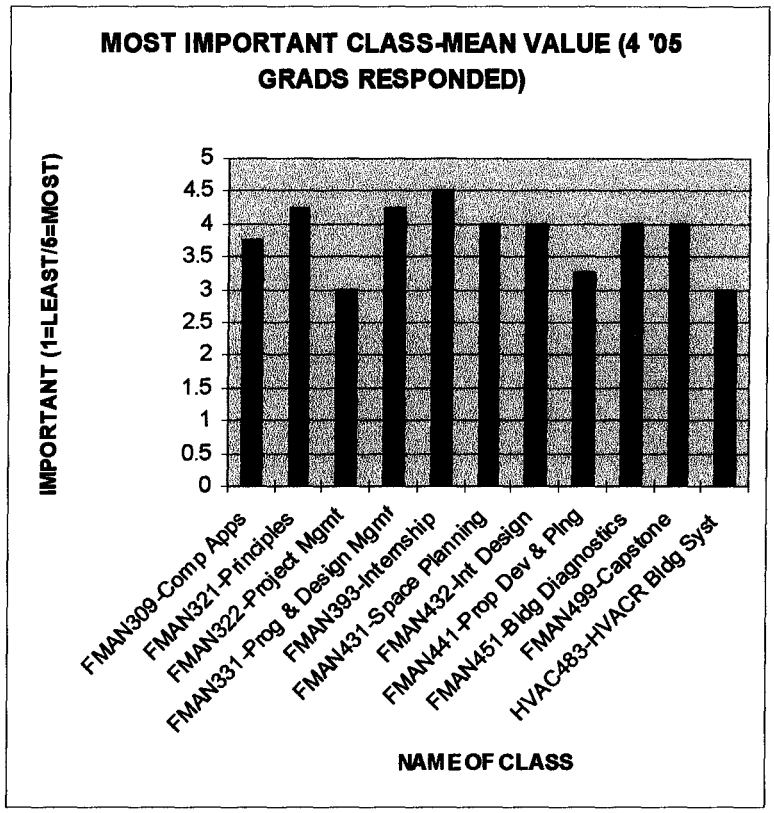
section 2

4. How rewarding were the courses?

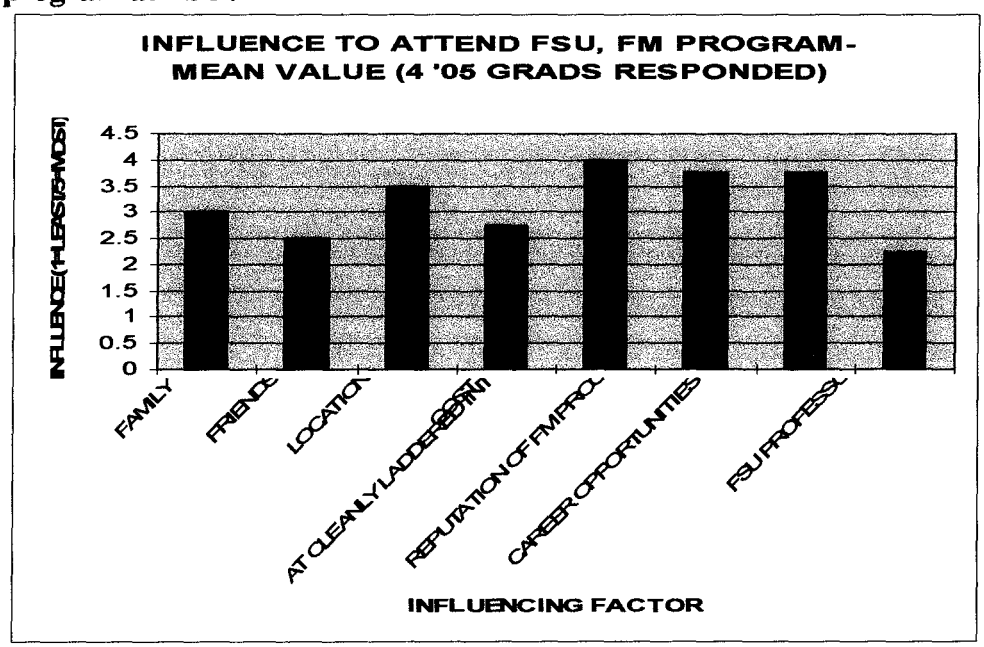
Students report lower levels of satisfaction with FMAN 309 and FMAN 322. FMAN 322 was taught by an adjunct. FMAN 309's rating has declined for the last few years.



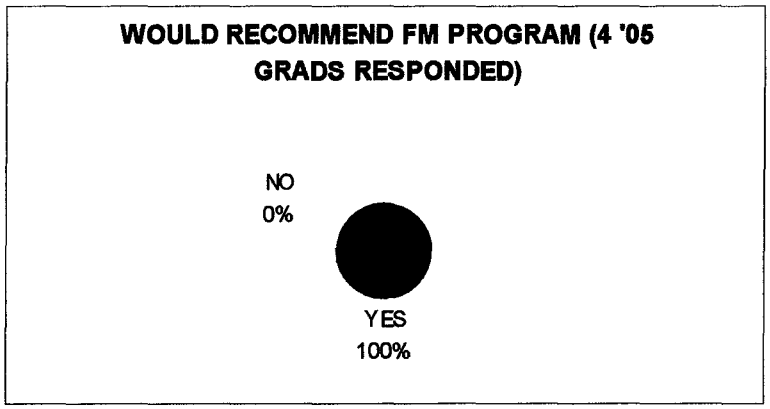
5. **What courses do you think were the most important...courses in which you learned the most?**



6. **How influential were the following factors in your decision to attend the FM program at FSU?**



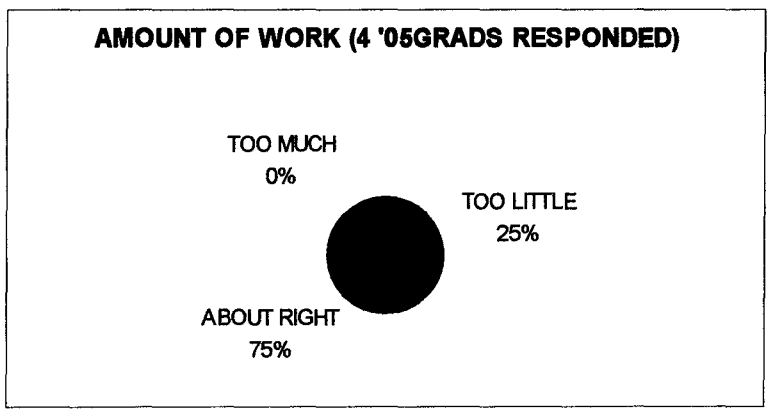
7. Would you recommend this program to others?



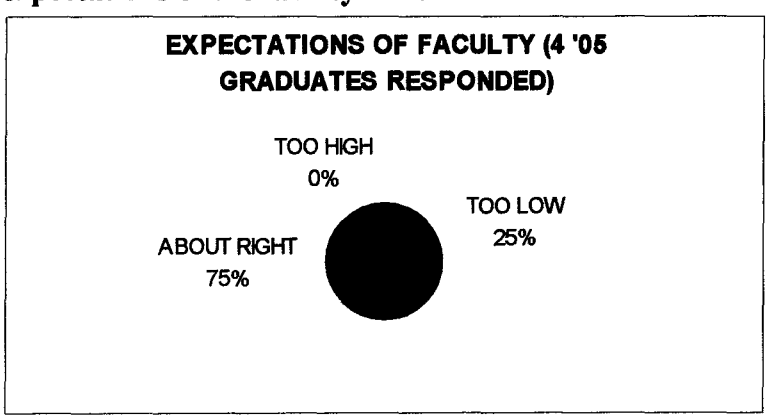
7a. If your answer was YES, why?

Location and recognized by IFMA...The program is very good and the opportunities in FM are very good...Good program...Professional application of skills learned, reputation of program, one of a kind learning.

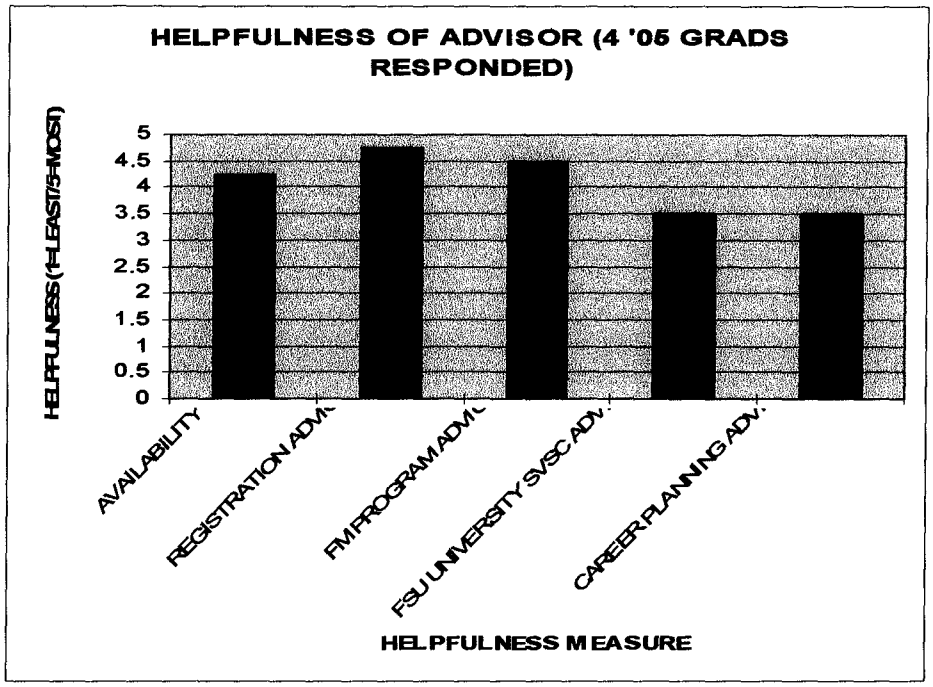
8. Considering what you have learned in you 2 years in the FM program, do you think the amount of work required in this program is...



9. The expectations of the faulty were...

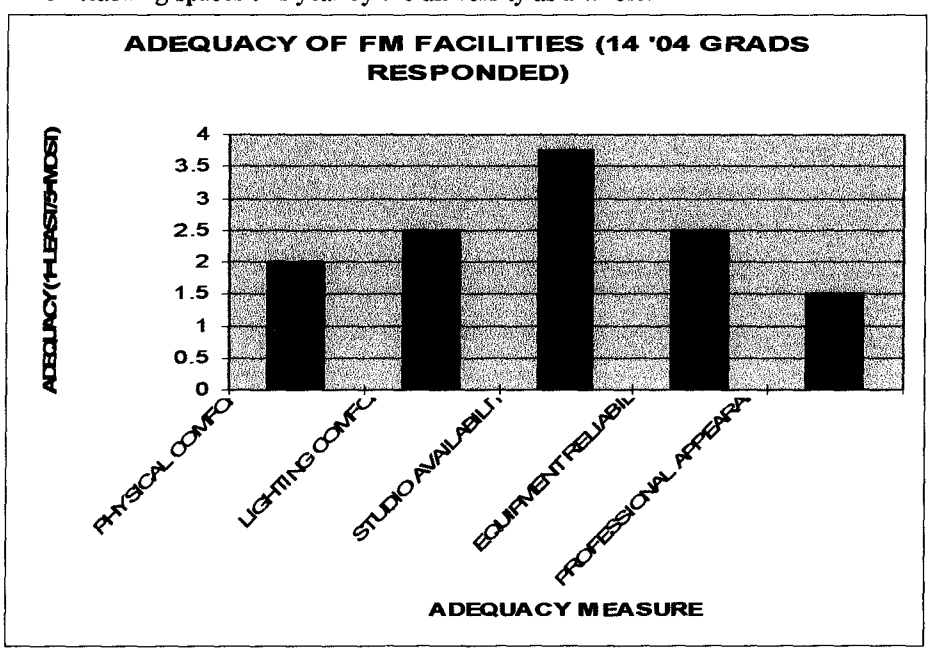


10. How helpful was your FM faculty advisor in the following areas? Please circle NA if the area does not apply.



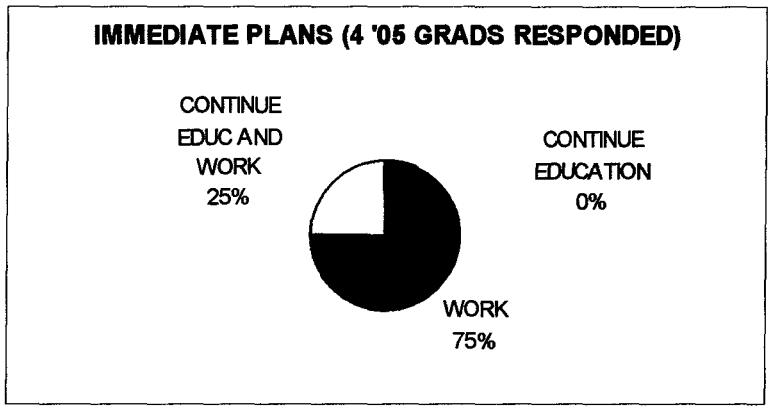
11. How adequate were the FM classrooms and studio facilities in the following area?

Students express more dissatisfaction with FM classroom facilities this year. This may be due partly because the AT program had room 205 renovated and that there has been a lot of emphasis on teaching spaces this year by the university as a whole.



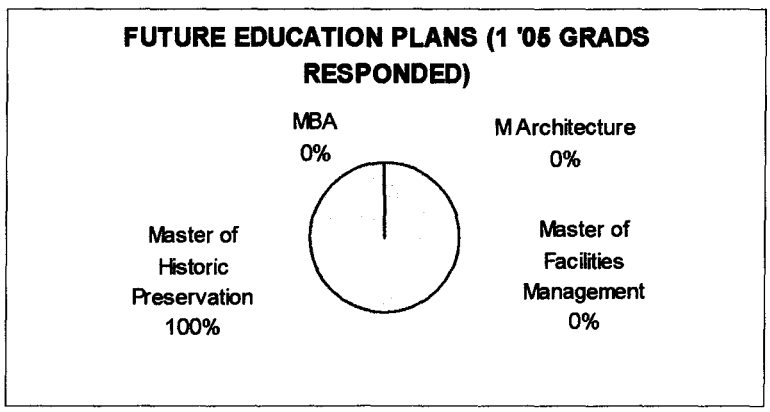
12. What are your plans upon graduation from the FM program?

Fewer students plan future degrees this year.



12a. If your answer to 12 is "B", what degree do you plan to pursue?

Students typically plan to pursue MBAs. This is not true this year. But in the comments below, some express working toward MBAs later.



13. What do you plan to be doing 5 years from now?

Master's degree and attain CFM...working in a large corporation...working.

14. What suggestions do you have for improving the FM program?

More in depth knowledge of budgeting and financial management...A change of professors and need one more added...working and maybe getting my MBA...more business and HVAC related courses would open up even more opportunities...get full faculty with FM experience, not just architectural experience.

Comments:

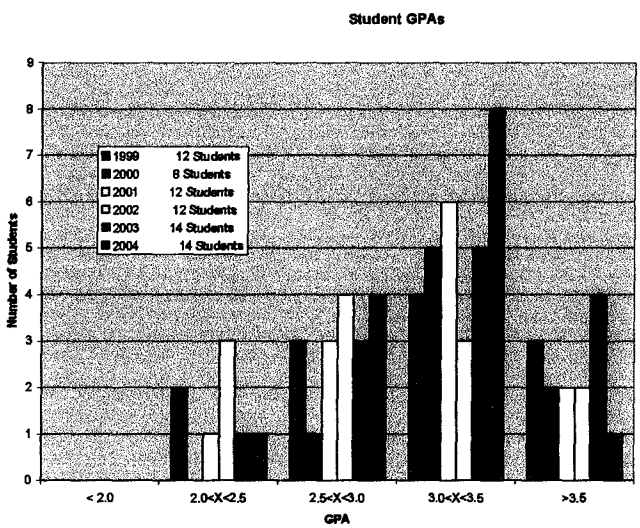
Enjoyable educational experience. I feel prepared and confident entering the professional workplace...

Summary of Graduate Exit Survey (1999-2004)

Prepared by: Joe Samson

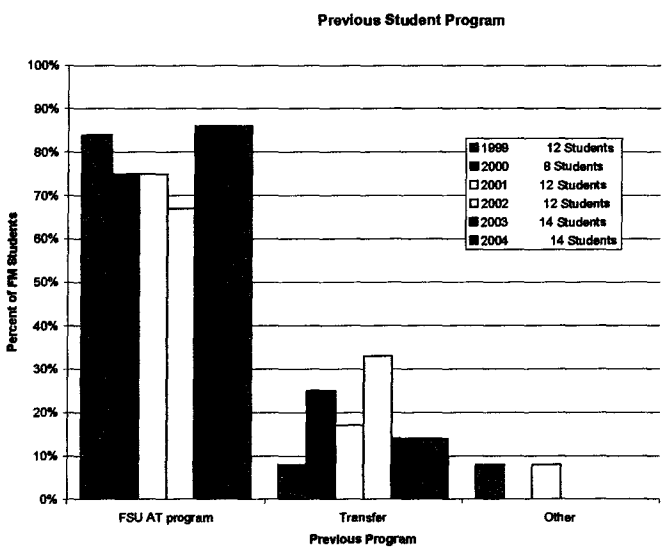
The Architectural Technology and Facility Management Department administers an annual exit survey during Winter Semester of each academic year to students expecting to graduate at the end of the semester. This survey collects information about the students, their plans for the future, and their impressions of various aspects associated with the curriculum. The identities of the students completing the surveys remain anonymous. The questions asked remain basically the same from year to year to facilitate comparison. However, please note minor changes due to the addition of new courses to the curriculum in 2000 and the addition of new survey questions in 2003.

1. What is your current GPA?



Most students complete the FM program with GPAs near 3.0 or higher.

2. How did you enter the FM program?

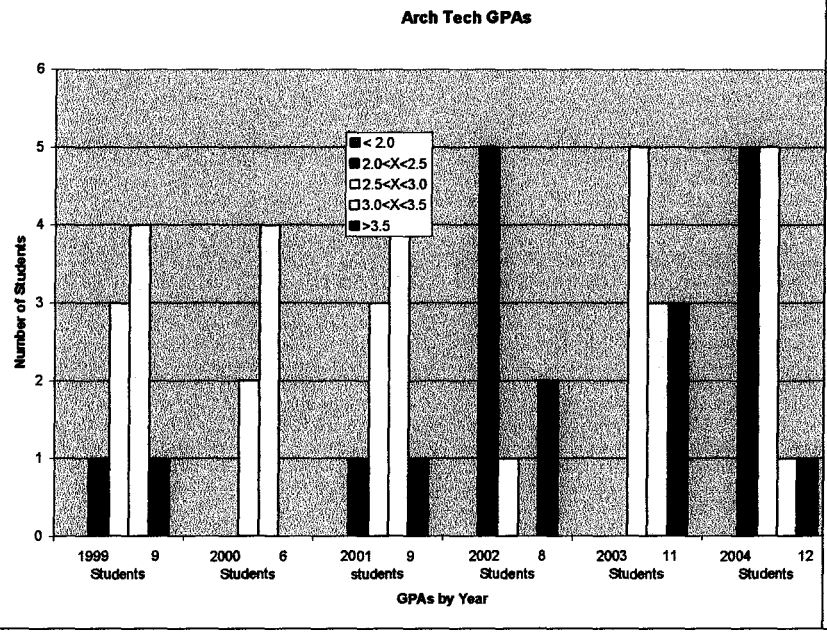


Most students continue to enter the FM program directly from Ferris' AAS degree in Architectural Technology.

New trends indicate a higher degree of interest from students in community colleges and other FSU programs. These students would start graduating in 2006.

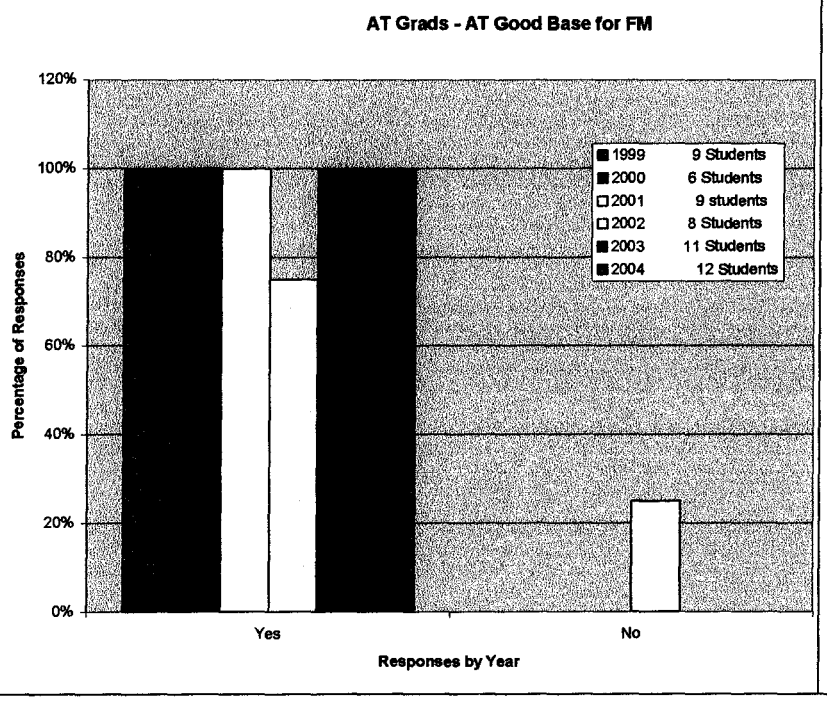
Questions 2A, 2B, and 2C were completed only by students who earned an AAS degree in Architectural Technology at Ferris .

2A. What was your GPA in Ferris' AT program?



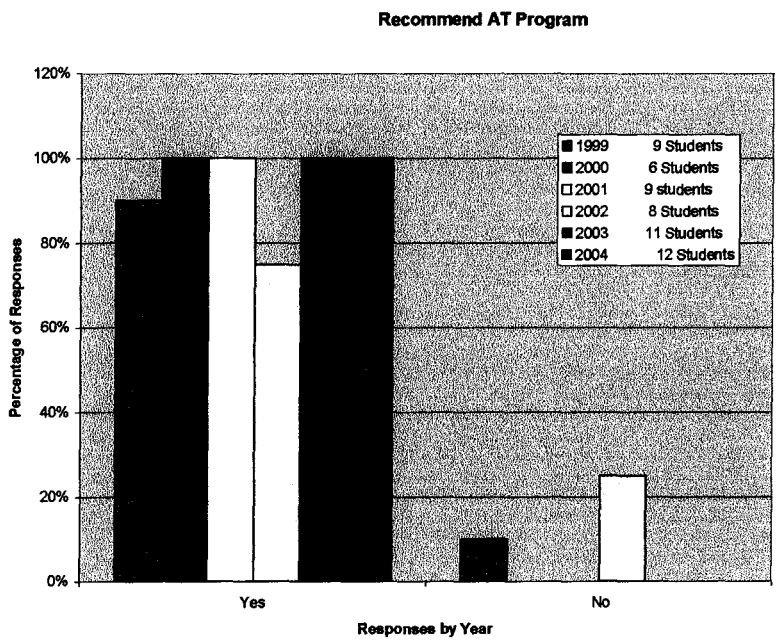
The GPAs of students entering FM from Ferris' AT program tend to be slightly better than average (2.5).

2B. Do you consider the AT program to be appropriate preparation for Facility Management?



The overwhelming majority of Facility Management students who have completed Ferris' Architectural Technology program consider it an appropriate preparation for Facility Management.

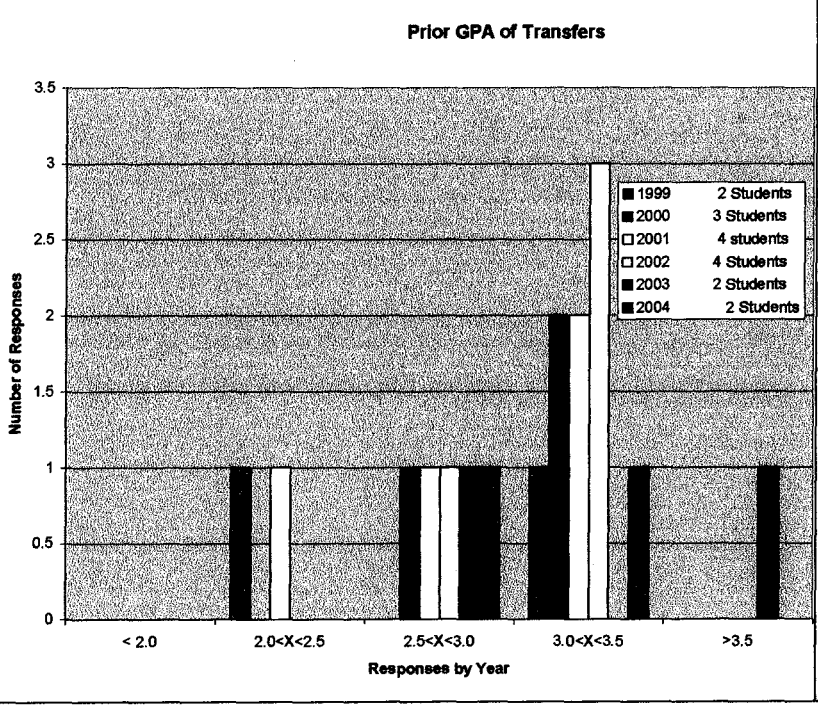
2C. Would you recommend the AT program to others?



The overwhelming majority of FM students who completed Ferris' Architectural Technology program would recommend ti to others.

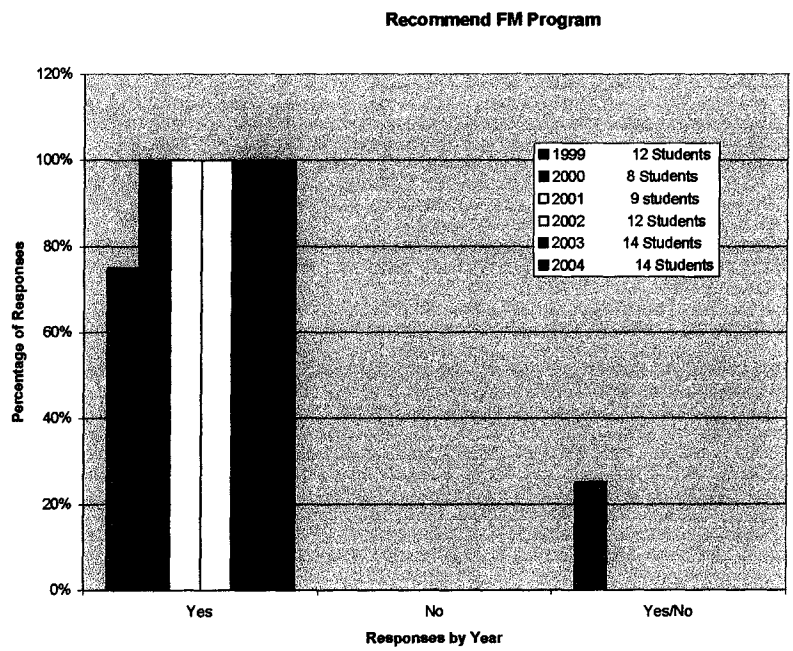
Question 2D was completed only by students who transferred to Ferris' Facility Management program from another major or institution.

2D. What was your GPA prior to entering the FM program?



Transfer students had slightly higher GPAs than students entering Facility Management directly from Ferris' Architectural Technology program.

3. Would you recommend the FM program to others?



The overwhelming majority of students completing Ferris' FM program would recommend it to others.

The results of questions 4 and 5 appear on the following pages. These questions ask students to rate each program course using a 1-5 scale, where 1 is low and 5 is high.

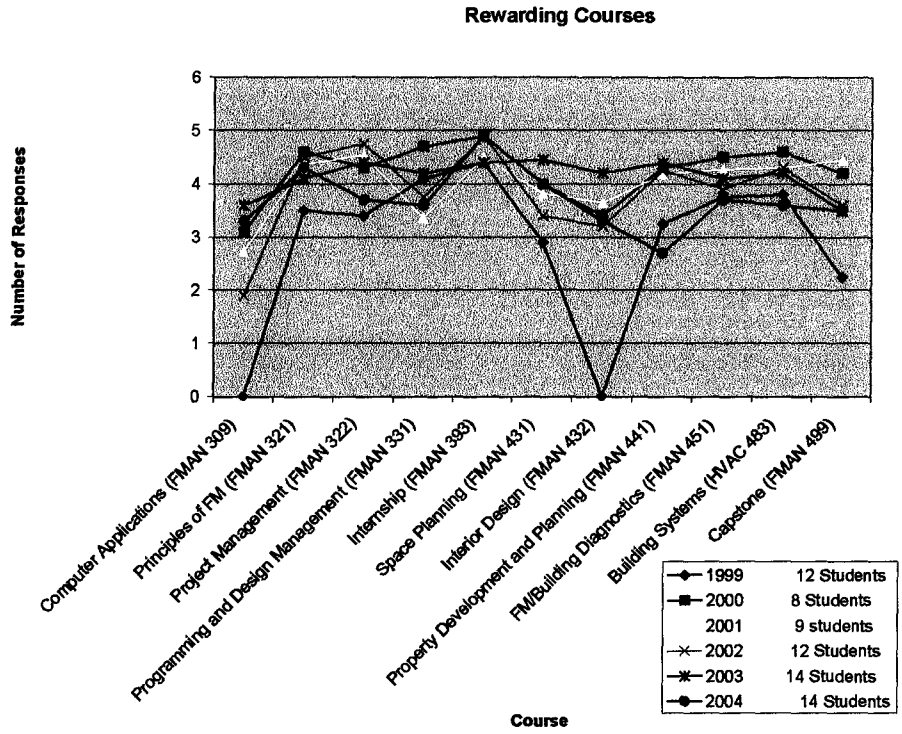
Question 4 asks how "Rewarding" the courses was. This was meant to collect information regarding if the amount of work was commensurate with the knowledge gained from the course.

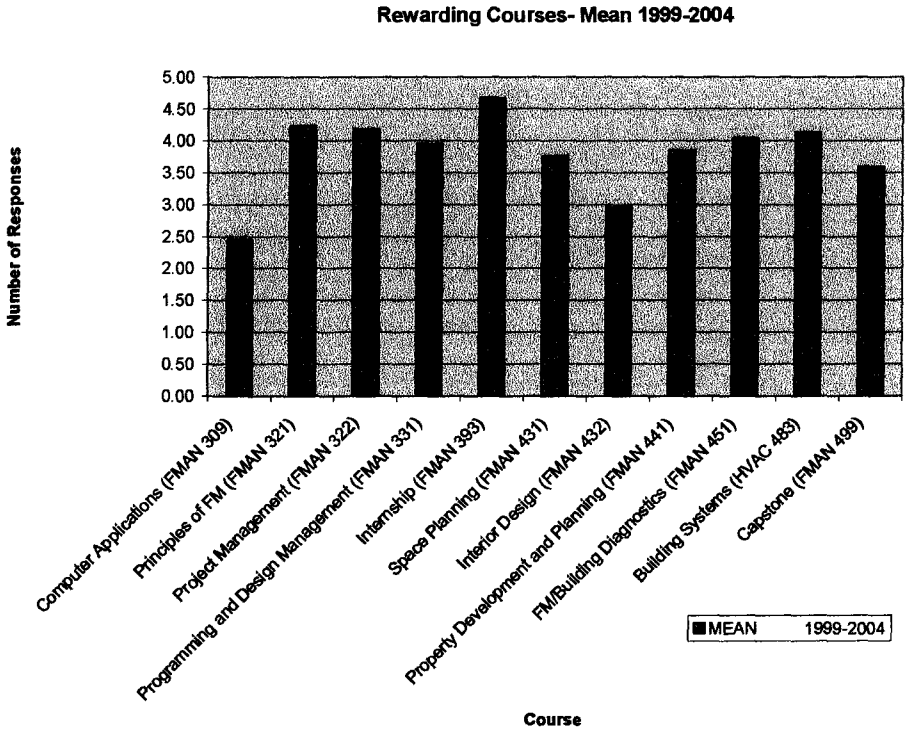
Question 5 asks how "Important" the course is. This question is meant to collect information regarding how important the student believes the content of the course will be as they begin working as Facility Managers.

Note that FMAN 309 and FMAN 432 were first taught in 2000. This is the reason for the score of 0 in 1999.

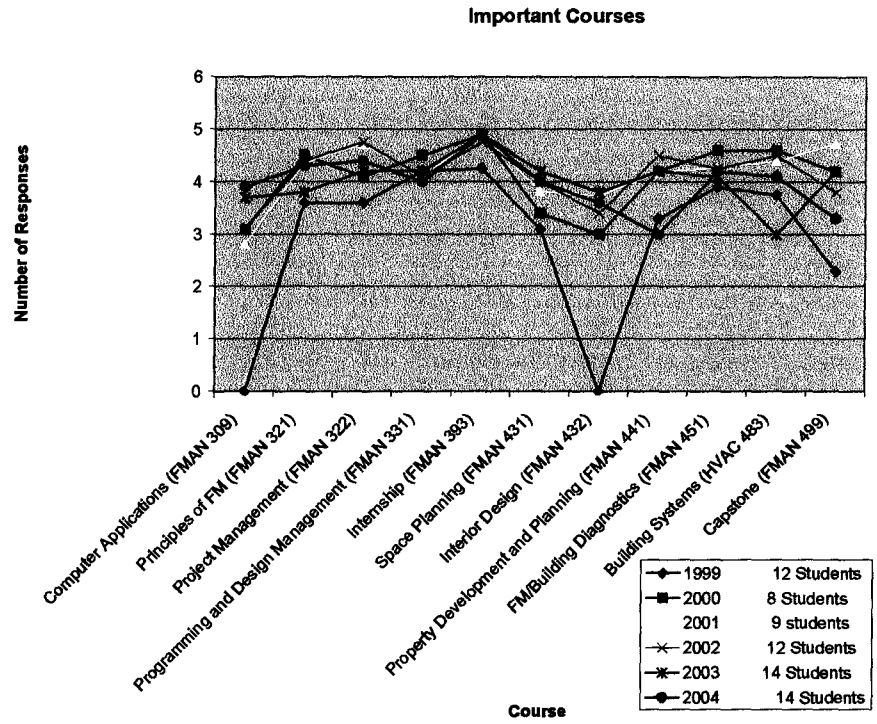
Two graphs are shown. The first shows the rating each course received broken down by year. The second graph shows the average rating for each course for the years 1999-2004.

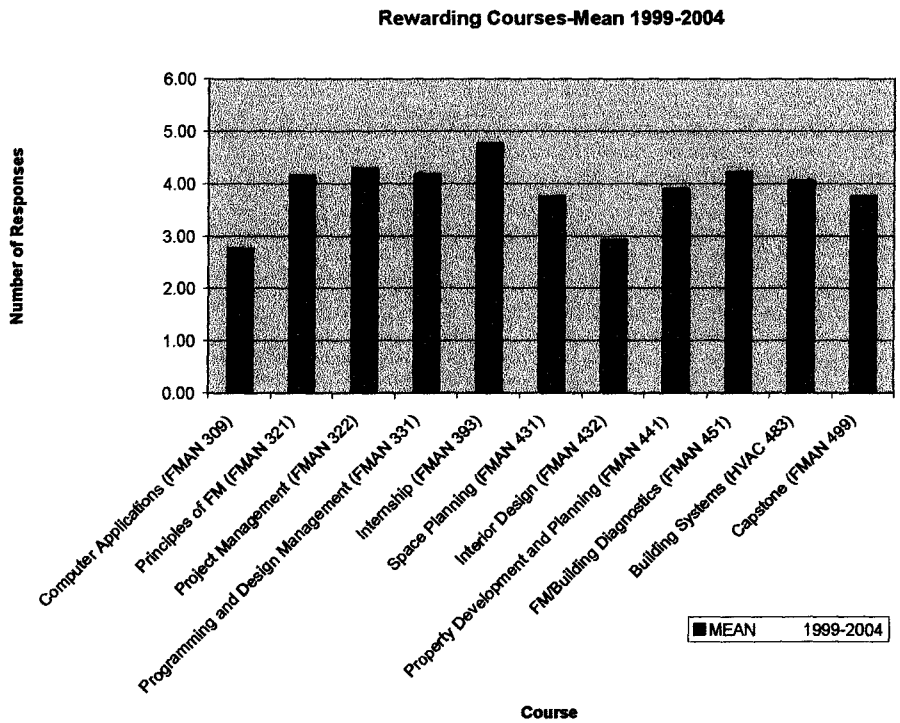
4. How rewarding were the courses?



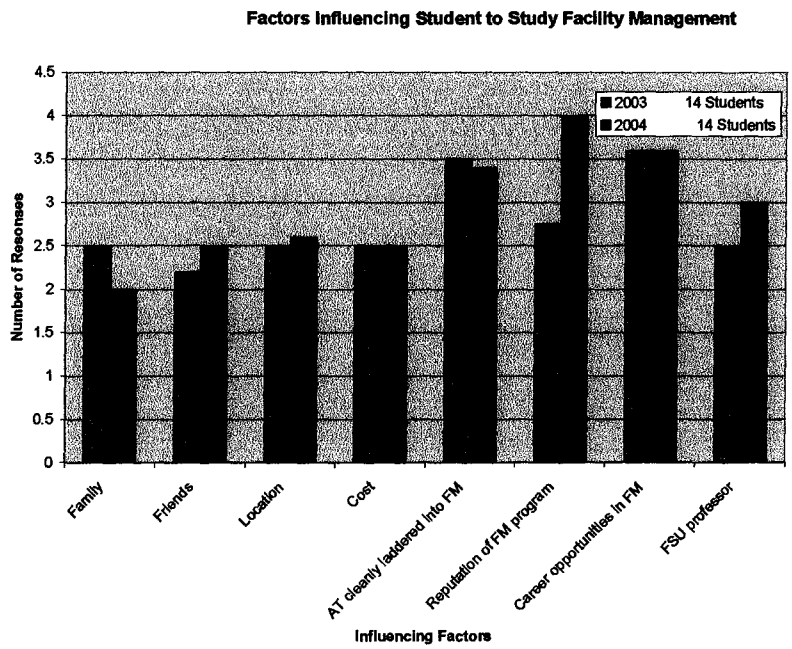


5. How important were the courses?



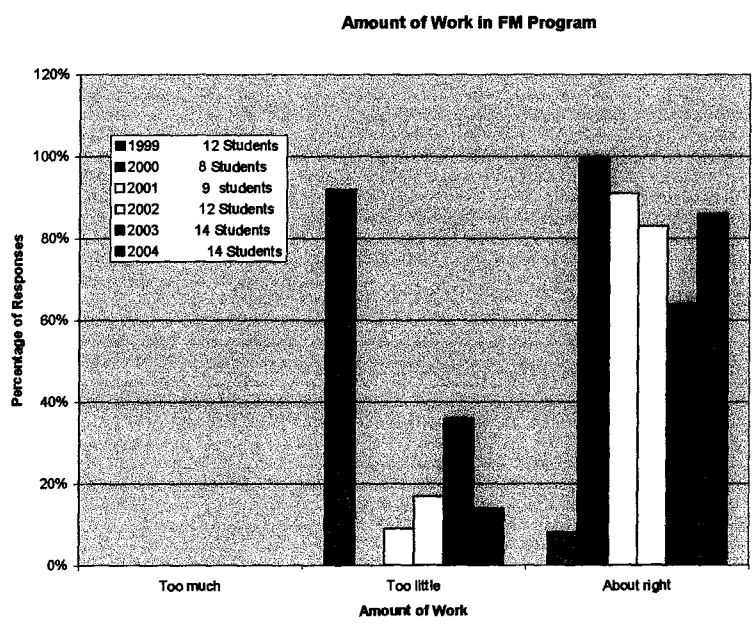


6. How influential were the following factors in your decision to attend the FM program at FSU?



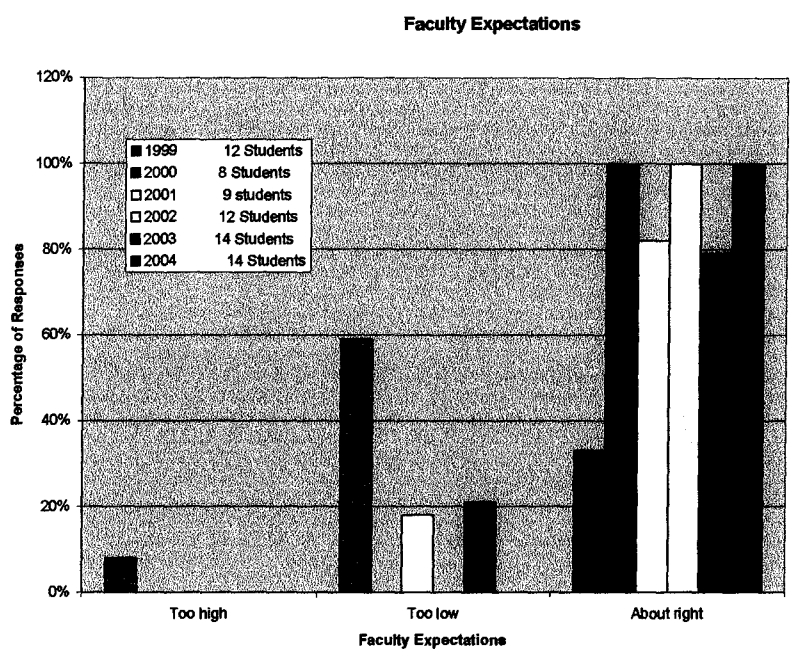
The most important factors were most related to career opportunities and that the AT program ladders directly into the FM program.

7. Considering what you have learned in your 2 years in the FM program, do you think the amount of work required in this program is...



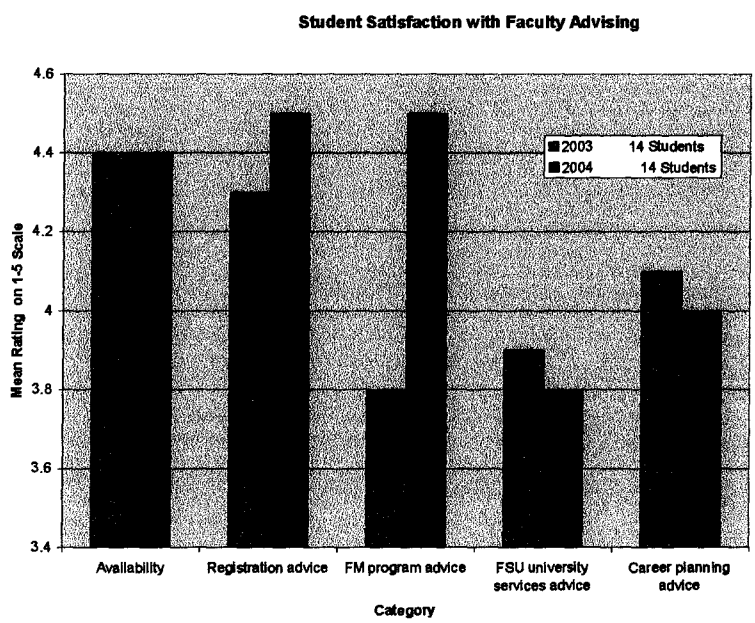
Most students felt that the amount of work required was "about right". None felt that it was "too much".

8. The expectations of the faculty were...



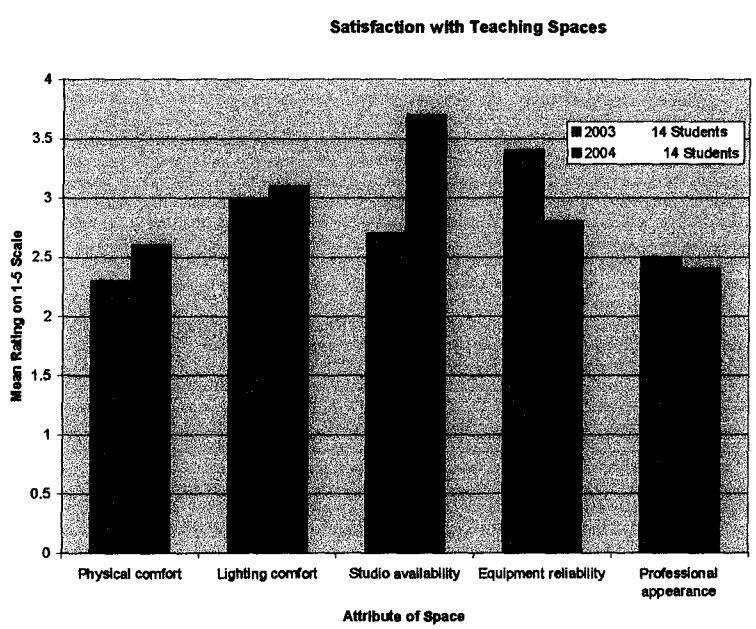
Most students felt that the expectations of faculty were "about right".

9. How helpful was your FM faculty advisor in the following areas?



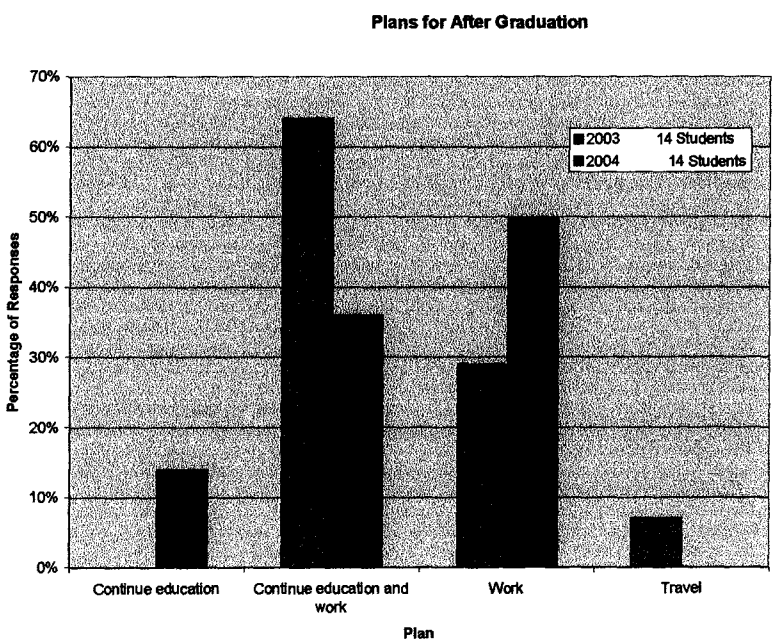
Most students felt that advisors were available and provide good registration advice. However, advisors were given lower scores for career planning advice and knowledge of other services available at Ferris.

10. How adequate were the FM classrooms and studio facilities in the following areas?



Although the spaces are generally available, the ratings for the spaces physical attributes indicate room for improvement. Most spaces have not experienced significant renovation since 1988.

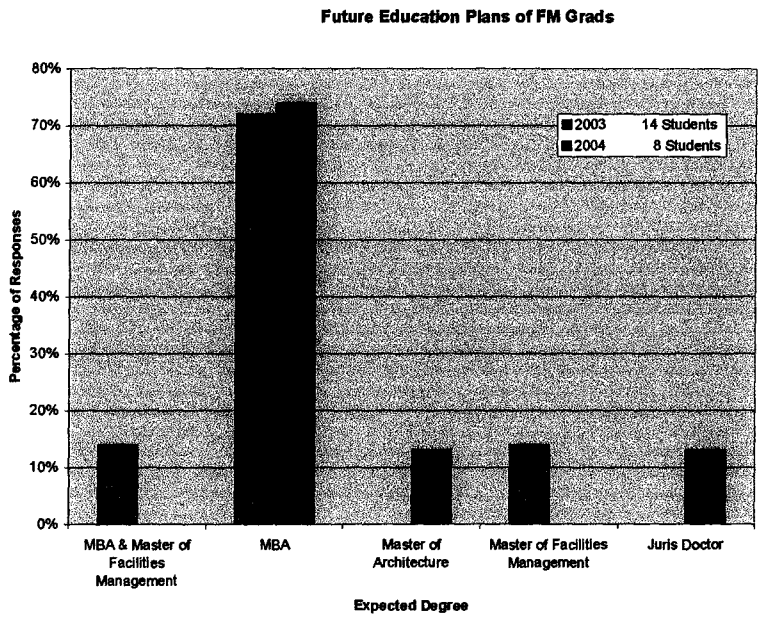
11. What are your plans upon graduation from FM program?



Most students plan to work and continue their education. Most plan to work upon completion of their Facility Management degree.

Students who answered that they planned to continue their education in question 11, answered the following question.

11A. What degree do you plan to pursue?



Most students plan to pursue MBA degrees.

Student Program Evaluation

Prepared by: Joe Samson

Introduction:

As a part of the program review, surveys were prepared and distributed to students currently pursuing baccalaureate level degrees in facility management. It should be noted that it is possible for some students to straddle the architectural technology and facility management degree programs. This is common in the case of students who transfer from other institutions.

The results of this survey will be commented on within this section of the Program Review.

Methodology:

The student survey was developed to first gather general information about the students, their experiences previous to entering facility management, and those influences which fostered their interest in facility management. Another part of the survey utilizes a Leikert Scale to gather information regarding student attitudes toward the curriculum, faculty, physical teaching spaces, instructional equipment and materials, etc. Statements were developed based on similar surveys used for Voc-Ed funding and the past program review.

The results are presented in this report such that the number of students responding is indicated to the right of each possible response. In the case statements using the Leikert Scale, a column is added to the right in which the mean response is indicated. The number of students responding to this survey was 18.

A sample of the survey appears in Appendix B. The results and analysis of the survey are as follows.

Survey Results-Background Information:

1. What is your current academic status within the FM program?
   a. Sophomore *2 (these students are straddling the programs)*
   b. Junior *12*
   c. Senior *4*

The senior class is exceptionally small. The junior class comprises a larger group and the class starting their junior year in Fall 2005 should approach 20.

2. What is your current GPA?
   a. Above 3.5 *6*
   b. 3.0 to 3.49 *7*
   c. 2.5 to 2.99 *4*
   d. 2.0 to 2.49 *1*
   e. Less than 2.0 *0*

Most students in the facility management program earn GPAs above 3.0.

3. When you *first* chose to attend Ferris, why did you choose it over other universities?
   a. Cost. *0*
   b. Location. *3*
   c. Reputation. *0*
   d. For a specific program.
      Name of program:
      Arch Tech 6
      Fac Mgmt 7
      AT/FM/CM 1
   e. Other: Explain. *All of above 1*

Most students come to Ferris for specific programs. Typically most students who enter Facility Management enter for Architectural Technology and while in that curriculum decide to continue on to pursue Facility Management degrees.

4. How did you enter the FM program?
   a. Directly from Ferris' AT program. *11*
   b. Directly from another college or university's AT program.
      LCC- Arch Tech 2
      GRCC-Arch Tech 2
      Oakland CC 1
   c. Transferred from another FSU program. *0*
      Name of Program: _____
   d. Other: Explain: *GVSU 1, Unkown university 1*

In past years virtually all students entered Facility Management from Ferris' Architectural Technology program. In recent years this has changed somewhat. In the near future it is possible that 25-30% of entering students will transfer from other institutions.

5. How did you become aware of Facility Management as a career?
   a. From advisor at Ferris. *8*
   b. From advisor at other institution.
      Name of other institution: *GRCC 1*
   c. Through career day. *0*
      Where was career day held? _____
   d. From visit of Ferris Facility Management Faculty to your previous school.
      Name of institution: *LCC 1*
   e. Other: Explain: *Teacher 2, speaker at LTU 1, Work in FM 1, FM professor 1, friend 1, students and professor 1, internet 1.*

Students hear about Facility Management from many different sources.

6. What attracted you most to Ferris' Facility Management Program?
   a. That it laddered directly from Ferris' Architectural Technology Program. *7*
   b. That it laddered directly from another school's Architectural Technology Program. *2*
   c. Location. *3*
   d. Job potential and opportunities. *6*
   e. Salary potential. *5*
   f. Recognized by IFMA. *4*
   g. Would enjoy that type of work. *4*
   h. Other: _____ *0*

The fact that Ferris' Facility Management program ladders directly from Ferris' Architectural Technology program helps attract many students.

7. When did you decide to pursue Facility Management as a career?
   a. In high school. *1*
   b. While attending Ferris' Associate in Architectural Technology Program. *10*
   c. While attending another school's Architectural Technology Program. *3*
   d. While attending another program at Ferris. *0*
   e. While attending a non-architectural program at another institution. *2*
   f. Other: *Dad works in FM* *1*
      At LTU *1*

Most students "discover" Facility Management while attending Ferris' Architectural Technology Program.

8. Are you satisfied with your decision to attend FSU?
   a. Yes. *18*

   School fits my needs for a college...career opportunities, instructor experience, opportunities to get involved at FSU...education here will help with future plans...feel I am getting good education...close to family...been good experience so far...has been accepting environment...have done much better than I expected...it will be an exciting field...it has been pleasant because the faculty have helped out when I needed it...nice location, atmosphere not too bad, good experiences so far...good experience, lot to learn...because it is my type of school; small, focused...have gained valuable experience...am graduating with great degree, have a job offer, what more could I want?...because of 99.9% placement rate...

   No. *0*

9. Are you satisfied with your decision to study Facility Management?

a. Yes. *17*

Am not sure yet...but some general issues with program and faculty...learned a lot...believe I am in correct profession for my personality and lifestyle...it is a new profession that will be growing...have only had one FM course so far but no bad experiences...exciting career...first class, seems like good career...new job opportunity...degree in FM will open up lots of opportunities...like the challenge and different opportunities...career, interesting field, instructor experience...

b. No. *1*

Still trying to figure out what it is.

Survey Results-Program Faculty and Teaching:

	Poor 1	Below average 2	Average 3	Good 4	Excel-lent 5	Don't know	*MEAN*
Courses in your program area are:							
10. Based on realistic prerequisites. Available	*0*	*1*	*5*	*9*	*3*	*0*	*3.78*
11. and conveniently located.	*0*	*0*	*4*	*5*	*9*	*0*	*4.28*
Written objectives for courses in your program:							
12. Are available to students in course syllabus.	*0*	*1*	*4*	*9*	*4*	*0*	*3.89*
13. Describe what you will learn in the course.	*0*	*0*	*5*	*9*	*4*	*0*	*3.94*
14. Are used by instructor to keep students aware of their progress.	*0*	*0*	*6*	*9*	*3*	*0*	*3.78*
Teaching methods, procedures, and course content:							
15. Meet projected student career needs, interests, and objectives.	*0*	*1*	*5*	*9*	*3*	*0*	*3.78*
16. Provide supervised practice for developing skills.	*0*	*1*	*3*	*11*	*3*	*0*	*3.89*
Program faculty:							
17. Know the subject matter.	*0*	*1*	*3*	*7*	*7*	*0*	*4.11*
18. Are available to provide help when needed.	*0*	*1*	*0*	*8*	*9*	*0*	*4.39*
19. Provide instruction so it is interesting.	*0*	*2*	*4*	*8*	*2*	*0*	*3.62*
20. Provide instruction so it is understandable.	*0*	*0*	*3*	*11*	*3*	*0*	*4.00*
21. Organize coursework well.							
22. Are prepared with clearly set goals for the course.	*0*	*1*	*3*	*11*	*3*	*0*	*3.89*
	0	*0*	*5*	*8*	*5*	*0*	*4.00*

Generally students are satisfied with the curriculum as well as the instruction they are receiving. All measures received better than average ratings.

Survey Results-Related Course Faculty and Teaching: (IE. English, Math, Science, etc.)

	Poor 1	Below average 2	Average 3	Good 4	Excel-lent 5	Don't know	*MEAN*
23. Know the subject matter.	*0*	*1*	*5*	*7*	*4*	*0*	*3.82*
24. Are available to provide help when needed.	*0*	*1*	*6*	*7*	*3*	*0*	*3.53*
25. Provide instruction so it is interesting.	*0*	*1*	*6*	*10*	*0*	*0*	*3.53*
26. Provide instruction so it is understandable.	*0*	*0*	*6*	*10*	*1*	*0*	*3.71*
Organize coursework well.							
27. Are prepared with clearly set goals for the	*0*	*0*	*5*	*10*	*2*	*0*	*3.82*
28. course.	*0*	*1*	*3*	*11*	*2*	*0*	*3.82*

Students indicated similar levels of satisfaction with General Education Courses.

Survey Results-Program Classrooms: (classrooms used solely for ATFM courses.)

		Poor 1	Below average 2	Average 3	Good 4	Excel-lent 5	Don't know	*MEAN*
29.	Are aesthetically pleasing.	*2*	*4*	*9*	*3*	*0*	*0*	*2.72*
30.	Provide appropriate lighting.	*0*	*1*	*9*	*7*	*1*	*0*	*3.44*
31.	Have equipment and furnishings that are ergonomically appropriate.	*2*	*4*	*9*	*3*	*0*	*0*	*2.72*
32.	Provide adequate ventilation.	*1*	*4*	*9*	*4*	*0*	*0*	*2.89*
33.	Are comfortable temperature.	*1*	*5*	*10*	*2*	*0*	*0*	*2.72*
34.	Include enough work stations for students enrolled in courses.	*0*	*0*	*11*	*6*	*1*	*0*	*3.44*
35.	Are safe, functional, and well maintained.	*0*	*1*	*9*	*8*	*0*	*0*	*2.94*
36.	Are open adequate hours.							
37.	Are open when students are most likely to use them.	*0*	*1*	*5*	*8*	*4*	*0*	*3.83*
		0	*1*	*4*	*8*	*5*	*0*	*3.94*
38.	Are accessible and barrier free.	*0*	*0*	*5*	*7*	*1*	*0*	*3.69*

Students indicate that they believe that the program classrooms are generally below average in the areas of aesthetics, equipment and furnishings, ventilation and air conditioning, and overall maintenance. The highest ratings are related to the function and management of these spaces.

It should also be noted that the one classroom dedicated mainly to FM instruction is obsolete and was converted from a computer lab several years ago. This contrasts with some of the AT spaces which received upgrades.

Survey Results-Related Course Classrooms: (classrooms used for non-ATFM courses.)

		Poor 1	Below average 2	Average 3	Good 4	Excel-lent 5	Don't know	*MEAN*
39.	Are aesthetically pleasing.	*2*	*5*	*5*	*5*	*1*	*0*	*2.89*
40.	Provide appropriate lighting.	*1*	*3*	*4*	*9*	*1*	*0*	*3.33*
41.	Have equipment and furnishings that are ergonomically appropriate.	*1*	*3*	*7*	*6*	*1*	*0*	*3.17*
42.	Provide adequate ventilation.	*2*	*3*	*6*	*6*	*1*	*0*	*3.06*
43.	Are comfortable temperature.	*2*	*3*	*7*	*5*	*1*	*0*	*3.00*
44.	Include enough seats, desks, tables, etc. for students enrolled in courses.	*1*	*2*	*3*	*10*	*2*	*0*	*3.56*
45.	Are safe, functional, and well maintained. Are accessible and barrier free.	*0*	*2*	*5*	*9*	*2*	*0*	*3.61*
46.		*0*	*1*	*4*	*7*	*1*	*5*	*3.61*

Students indicate higher levels of satisfaction with teaching spaces used for non-FM related courses. IE. General Education.

Survey Results-Program Instructional Equipment:

		Poor 1	Below average 2	Average 3	Good 4	Excel-lent 5	Don't know	*MEAN*
47.	Is current and representative of industry.	*0*	*1*	*9*	*6*	*2*	*0*	*3.5*
48.	Is provided in sufficient quantity to avoid long delays in use.	*0*	*2*	*9*	*6*	*1*	*0*	*3.3*

Students are generally satisfied with program instructional equipment, although the ratings are only slightly higher than an average rating.

Survey Results-Program Instructional Materials (textbooks and references):

	Poor 1	Below average 2	Average 3	Good 4	Excel-lent 5	Don't know	*MEAN*
49. Current and meaningful to the subject.	*0*	*4*	*3*	*10*	*1*	*0*	*3.44*
50. Available and conveniently located for use.	*0*	*3*	*3*	*13*	*0*	*0*	*3.61*

Students are generally satisfied with the program instructional materials, although the ratings are only slightly higher than an average rating.

Survey Results-Instructional Support Services (tutoring, lab assistance, etc.):

	Poor 1	Below average 2	Average 3	Good 4	Excel-lent 5	Don't know	*MEAN*
51. Available to meet student needs and interests.	*0*	*0*	*4*	*8*	*1*	*5*	*3.77*
52. Provided by knowledgeable and interested staff.	*0*	*1*	*4*	*9*	*0*	*4*	*3.57*

Students are relatively satisfied with instructional support services.

Survey Results-Placement Services:

	Poor 1	Below average 2	Average 3	Good 4	Excel-lent 5	Don't know	*MEAN*
53. Help students identify employment opportunities.	*0*	*4*	*4*	*6*	*1*	*3*	*3.27*
54. Help students prepare to apply for job applications.	*0*	*4*	*3*	*7*	*1*	*3*	*3.33*

Students are satisfied with placement services, although the mean is just slightly above average.

Comments:

Joe Samson is really the best person to help you get a job/internship.

I also strongly feel that some of the <u>older</u> teachers should retire, or not teach computer classes.

Faculty Perceptions

Prepared by: Joe Samson

Introduction:

As a part of the program review, surveys were prepared and distributed to department faculty. It should be noted that currently 2 of the 6 department faculty teach in this program while all 6 faculty teach in the Architectural Technology program. This accounts for the "don't know' response and possibly the "missing" survey.

It should also be noted that the faculty member who taught most of the facility management courses left the university and her position was not filled. To address this situation, by the end of academic year 2005-2006, 5 of the 6 program faculty will teach at least one course in the facility management curriculum.

The results of this survey will be commented on within this section of the Program Review. Where responses for the same questions were obtained from multiple subject groups, the similarities and differences between those groups will be discussed in a separate section.

Methodology:

The faculty survey was developed using a Leikert Scale for all responses. Statements were developed based on similar surveys used for Voc-Ed funding, the past program review, and particularly to relate to the nine competencies identified by the International Facility Management Association.

The results are presented in this report such that the number of faculty responding to each item on the Leikert Scale is indicated in the column under the rating for each statement. These are shown in *italics*. A column for the mean has been added at the right. Five of six faculty responded to the survey.

A sample of the survey appears in Appendix B. The results and analysis of the survey are as follows.

Survey Results-Curriculum and Admission Standards:

CURRICULUM AND ADMISSION STANDARDS:	Poor 1	Below ave 2	Average 3	Good 4	Excellent 5	Don't know	*MEAN*
1. Preparation of graduates for entry level Facility Management positions.	*0*	*0*	*0*	*2*	*2*	*1*	*4.5*
2. Preparation of graduates for further study. IE. MBA.	*0*	*0*	*1*	*3*	*0*	*1*	*3.75*
3. Preparation of graduates for promotion within the Facility Management profession.	*0*	*0*	*0*	*0*	*4*	*1*	*5.0*
4. Quality of the General Education of Facility Management graduates.	*0*	*0*	*1*	*3*	*0*	*1*	*3.75*
5. Ability of Facility Management graduates to work independently.	*0*	*0*	*0*	*4*	*0*	*1*	*4.0*
6. Preparation of Facility Management graduates for lifelong learning.	*0*	*0*	*0*	*4*	*0*	*1*	*4.0*

The responses to the above section which deals mainly with how well the curriculum prepares students for various options they might follow after graduation indicate that faculty believes the curriculum prepares students for all options better than average.

The weakest ratings are for further study (3.75) and the quality of the general education (3.75) of facility management graduates. Perhaps there is a relationship between these two. The main focus is not to prepare students for graduate school.

	Strongly disagree 1	Dis-agree 2	Neu-tral 3	Agree 4	Strongly Agree 5	Don't know	*MEAN*
7. The AAS in Architectural Technology provides a strong background for the study of Facility Management.	*0*	*0*	*0*	*1*	*3*	*1*	*4.75*
8. It is appropriate to accept junior level students from other programs and require only ARCH 102, 109, 112, 115, and HVAC 383.	*0*	*0*	*0*	*2*	*2*	*1*	*4.5*
9. The Certificate program will be valuable to persons working within FM who wish to expand their understanding of the profession.	*0*	*0*	*0*	*1*	*3*	*1*	*4.75*
10. The current admission standards of a 2.0 GPA are appropriate.	*1*	*0*	*1*	*3*	*0*	*0*	*3.2*

Comments: *None received.*

The results indicate that faculty believe that the architectural technology curriculum is excellent preparation for facility management and that the new on-line certificate program will be beneficial professionally to those who pursue it. The current admission standard requiring a 2.0 GPA was not appropriate for at least one respondent.

Survey Results-Student Skills and IFMA Competencies:

In the following part of the survey, the heading "General Skills" is a category developed by the faculty member to assess preparation in certain non-facility management related skills. All other sections: "Communication", "Finance", "Human and Environmental Factors", "Leadership and Management", "Operations and Maintenance", "Planning and Project Management", "Real Estate", "Quality Assessment and Innovation", and "Technology", are the nine competency areas developed by the International Facility Management Association. The individual statements were developed by the faculty member to assess the quality of instruction in each area.

General Skills:	**Not at all 1**	**Poorly 2**	**Average 3**	**Good 4**	**Excellent 5**	**Unsure/ not applic-able**	***MEAN***
11. Responsibility, self management.	*0*	*0*	*0*	*3*	*1*	*1*	*4.25*
12. Mathematical skills.	*0*	*1*	*1*	*2*	*0*	*1*	*3.25*
13. Critical thinking and problem solving.	*0*	*0*	*1*	*2*	*1*	*1*	*4.0*
14. Ability to find, understand, and use information.	*0*	*0*	*1*	*1*	*2*	*1*	*4.25*
MEAN VALUE FOR STATEMENTS11 THROUGH 14							***3.94***

The faculty is generally satisfied with the students' preparation in this area.

Communication:	**Not at all 1**	**Poorly 2**	**Average 3**	**Good 4**	**Excellent 5**	**Unsure/ not applic-able**	***MEAN***
15. Communicate effectively through writing.	*0*	*0*	*1*	*3*	*0*	*1*	*3.75*
16. Communicate effectively orally.	*0*	*0*	*1*	*2*	*1*	*1*	*4.0*
17. Ability to gain rapport with "clients".	*0*	*0*	*0*	*3*	*1*	*1*	*4.25*
18. Understand specifications.	*0*	*0*	*0*	*3*	*0*	*2*	*4.0*
19. Write specifications.	*0*	*0*	*2*	*0*	*0*	*3*	*3.0*
MEAN VALUE FOR STATEMENTS15 THROUGH 19							***3.8***

The faculty believes students are prepared better than average in the area of communication skills.

Finance:	**Not at all 1**	**Poorly 2**	**Average 3**	**Good 4**	**Excellent 5**	**Unsure/ not applic-able**	***MEAN***
20. Understand budgets.	*0*	*0*	*1*	*3*	*0*	*1*	*3.75*
21. Manage budgets.	*0*	*0*	*1*	*3*	*0*	*1*	*3.75*
22. Plan budgets.	*0*	*0*	*1*	*3*	*0*	*1*	*3.75*
23. Understand contracts.	*0*	*0*	*1*	*2*	*1*	*1*	*4.0*
24. Write contracts.	*0*	*1*	*1*	*2*	*0*	*1*	*3.25*
25. Negotiate contracts.	*0*	*1*	*1*	*1*	*1*	*1*	*3.5*
26. Develop cost estimates for construction.	*0*	*0*	*0*	*2*	*1*	*2*	*4.33*
MEAN VALUE FOR STATEMENTS 20 THROUGH 26							***3.76***

The faculty believes the students have a good foundation for working with financial issues. Developing contracts appears to be one area that faculty feel needs attention.

Human/Environmental Factors:	**Not at all 1**	**Poorly 2**	**Average 3**	**Good 4**	**Excellent 5**	**Unsure/ not applic-able**	***MEAN***
27. Understand and deal with environmental issues.	*0*	*0*	*1*	*3*	*0*	*1*	*3.75*
28. Understand and deal with life safety issues.	*0*	*0*	*1*	*3*	*0*	*1*	*3.75*
29. Understand the effect of environment on human behavior.	*0*	*0*	*0*	*4*	*0*	*1*	*4.0*
MEAN VALUE FOR STATEMENTS 27 THROUGH 29							***3.83***

The faculty are satisfied with the students' understanding of Human/Environmental Factors.

Leadership and Management:	**Not at all 1**	**Poorly 2**	**Average 3**	**Good 4**	**Excellent 5**	**Unsure/ not applic-able**	***MEAN***
30. Conduct self in ethical manner.	*0*	*0*	*0*	*4*	*0*	*1*	*4.0*
31. Participate as team member.	*0*	*0*	*0*	*3*	*1*	*1*	*4.25*
32. Work with individuals of diverse backgrounds.	*0*	*0*	*0*	*3*	*1*	*1*	*4.25*
33. Manage processes effectively.	*0*	*0*	*0*	*4*	*0*	*1*	*4.0*
MEAN VALUE FOR STATEMENTS 30 THROUGH 33							***4.12***

The faculty rate the preparation of students in the area of Leadership and Management as good.

Operations and Maintenance:	**Not at all 1**	**Poorly 2**	**Average 3**	**Good 4**	**Excellent 5**	**Unsure/ not applic-able**	***MEAN***
34. Understand operations and maintenance issues.	*0*	*0*	*0*	*3*	*1*	*1*	*4.25*
35. Understand mechanical building systems.	*0*	*0*	*0*	*4*	*0*	*1*	*4.0*
36. Understand electrical building systems.	*0*	*0*	*1*	*3*	*0*	*1*	*3.75*
37. Understand HVACR building systems.	*0*	*0*	*0*	*4*	*0*	*1*	*4.0*
MEAN VALUE FOR STATEMENTS 34 THROUGH 37							***4.00***

The faculty rates the preparation of the students in the area of Operations and Maintenance as good.

Planning & Project Mgmt:	**Not at all 1**	**Poorly 2**	**Average 3**	**Good 4**	**Excellent 5**	**Unsure/ not applic-able**	***MEAN***
38. Architectural aesthetics.	*0*	*0*	*1*	*3*	*0*	*1*	*3.75*
39. Space/master planning.	*0*	*0*	*0*	*3*	*1*	*1*	*4.25*
40. Interior design.	*0*	*0*	*0*	*4*	*0*	*1*	*4.0*
41. Construct'n methods/practices.	*0*	*0*	*0*	*4*	*0*	*1*	*4.0*
42. Project management.	*0*	*0*	*1*	*2*	*1*	*1*	*4.0*
43. Move management.	*0*	*0*	*1*	*3*	*0*	*1*	*3.75*
MEAN VALUE FOR STATEMENTS 38 THROUGH 43							***3.96***

The faculty rates the preparation of students in the area of Planning and Project Management as good.

Quality Assessment/ Innovation:	**Not at all 1**	**Poorly 2**	**Average 3**	**Good 4**	**Excellent 5**	**Unsure/ not applic-able**	***MEAN***
44. Able to understand and use industry benchmarks.	*0*	*0*	*1*	*3*	*0*	*1*	*3.75*
45. Able to monitor and assess quality of facility services.	*0*	*0*	*0*	*4*	*0*	*1*	*4.0*
46. Able to analyze and re-engineer methods to provide facility services.	*0*	*0*	*0*	*4*	*0*	*1*	*4.0*
MEAN VALUE FOR STATEMENTS 44 THROUGH 46							***3.92***

The faculty rates the preparation of students in the area of Quality Assessment and Innovation as good.

Real Estate:	**Not at all 1**	**Poorly 2**	**Average 3**	**Good 4**	**Excellent 5**	**Unsure/ not applic-able**	***MEAN***
47. Demonstrates understanding of real estate related contracts.	*0*	*0*	*2*	*2*	*0*	*1*	*3.5*
48. Demonstrates understanding of leasing process.	*0*	*0*	*2*	*2*	*0*	*1*	*3.5*
49. Demonstrates understanding of the purchase and sale of real estate.	*0*	*0*	*2*	*2*	*0*	*1*	*3.5*
MEAN VALUE FOR STATEMENTS 47 THROUGH 49							*3.5*

The faculty rates the students' preparation in the area of Real Estate as above average.

Technology:	**Not at all 1**	**Poorly 2**	**Average 3**	**Good 4**	**Excellent 5**	**Unsure/ not applicable**	***MEAN***
50. Use of CAD software.	*0*	*0*	*0*	*0*	*4*	*1*	*5.0*
51. Use of generic software such as Microsoft Office.	*0*	*0*	*0*	*0*	*4*	*1*	*5.0*
52. Use of FM software.	*0*	*0*	*2*	*2*	*0*	*1*	*3.5*
MEAN VALUE FOR STATEMENTS 50 THROUGH 52							*4.5*

The faculty rates the student preparation in the area of technology very highly. CAD and Microsoft Office skills are used all four years of the curriculum while FM specific software is introduced later and in a minimal manner.

Comments: *Students need more gen-ed to expand their world view. They often can't see the forest for the trees.*

The curriculum appears to meet the expectations the International Facility Management Association states are crucial to being a successful facility manager. The lowest rating for any particular skill was a 3.0, which is "average".

Survey Results-Resources and Administrative Support:

The following part of the survey addresses the level of support faculty believe the program receives as measured by administrative support and provision of teaching spaces and equipment.

University and College Administration:	**Not at all 1**	**Poorly 2**	**Average 3**	**Good 4**	**Excellent 5**	**Unsure/ not applicable**	***MEAN***
53. Provides the program with necessary financial resources to perform effectively.	*0*	*0*	*4*	*0*	*1*	*0*	*3.4*
54. Provides the program with necessary teaching spaces to perform effectively.	*0*	*1*	*2*	*1*	*1*	*0*	*3.4*
55. Provides the program with the necessary equipment to perform effectively.	*0*	*1*	*2*	*2*	*0*	*0*	*3.2*
56. Provides the program with the necessary instructors to perform effectively.	*1*	*3*	*0*	*1*	*0*	*0*	*2.2*
MEAN VALUE FOR STATEMENTS 53 THROUGH 56							***3.05***

The faculty felt relatively neutral about the support of university and college administration with regard to providing resources to the program with the exception of necessary instructors which faculty felt was below average. This is probably due to the loss of one position. Also, that only one current faculty member has actual practical experience as a facility manager.

Program classrooms (classrooms used solely for ATFM courses):	**Poor 1**	**Below average 2**	**Average 3**	**Good 4**	**Excellent 5**	**Don't know**	***MEAN***
57. Are aesthetically pleasing.	*0*	*3*	*2*	*0*	*0*	*0*	*2.4*
58. Provide appropriate lighting.	*0*	*3*	*2*	*0*	*0*	*0*	*2.4*
59. Have equipment and furnishings that are ergonomically appropriate.	*0*	*3*	*2*	*0*	*0*	*0*	*2.4*
60. Provide adequate ventilation.	*1*	*2*	*2*	*0*	*0*	*0*	*2.2*
61. Are comfortable temperature.	*2*	*1*	*1*	*1*	*0*	*0*	*2.2*
62. Include enough work stations for students enrolled in courses.	*0*	*0*	*0*	*4*	*1*	*0*	*4.2*
63. Are safe, functional, and well maintained.	*0*	*0*	*4*	*1*	*0*	*0*	*3.2*
64. Are open adequate hours.	*0*	*2*	*1*	*2*	*0*	*0*	*3.0*
65. Are open when students are most likely to use them.	*0*	*1*	*2*	*2*	*0*	*0*	*3.2*
66. Are barrier free and accessible.	*0*	*3*	*0*	*2*	*0*	*0*	*2.8*
MEAN VALUE FOR STATEMENTS 57 THROUGH 66							***2.8***

The faculty felt that the program teaching spaces were below average. The only area in which they felt these spaces were better than average was that they provide sufficient work stations.

Program instructional equipment is:	**Poor** 1	**Below average** 2	**Average** 3	**Good** 4	**Excellent** 5	**Don't know**	*MEAN*
67. Current and representative of industry.	*0*	*0*	*4*	*0*	*0*	*1*	*3.0*
68. Provided in sufficient quantity to avoid long delays in use.	*0*	*0*	*2*	*1*	*1*	*1*	*3.75*
MEAN VALUE FOR STATEMENTS 67 THROUGH 68							***3.4***

Faculty indicates that program instructional equipment is average to slightly above average.

Instructional materials (i.e., textbooks, reference books, etc.) are:	**Poor** 1	**Below average** 2	**Average** 3	**Good** 4	**Excellent** 5	**Don't know**	*MEAN*
69. Current and meaningful to the subject.	*0*	*0*	*1*	*1*	*1*	*2*	*4.0*
70. Available and conveniently located for use.	*0*	*0*	*1*	*2*	*0*	*2*	*3.67*
MEAN VALUE FOR STATEMENTS 69 THROUGH 70							***3.84***

Faculty indicate that instructional materials are better than average.

Instructional support services (i.e., tutoring, lab assistance, etc.) are:	**Poor** 1	**Below average** 2	**Average** 3	**Good** 4	**Excellent** 5	**Don't know**	*MEAN*
71. Available to meet student needs and interests.	*0*	*0*	*0*	*4*	*0*	*1*	*4.0*
72. Provided by knowledgeable and interested staff.	*0*	*0*	*0*	*4*	*0*	*1*	*4.0*
MEAN VALUE FOR STATEMENTS 71 THROUGH 72							***4.0***

Faculty indicate that instructional support services are better than average.

Comments: *The facilities are not uniform: some are fine and others very deficient.*

Un-air-conditioned workplaces are "repressive" in this day and age. IE. Offices, Swan 202 & 203. They are impossible for approximately 3 weeks of the school year.

The Facility Management room, Swan 111 is outdated and needs to be redone.

Conclusion:

From the results of the faculty survey, it can be concluded that the faculty feel that the students are being prepared well for their careers and that the facility management curriculum is consistent with the expectation of the International Facility Management Association.

The main areas where the faculty expresses a desire for change to for more support from the university in terms of faculty and facilities.

Advisory Committee Perceptions

Prepared by: Mel Kantor

The following is an overview of the responses received from the members of the advisory committee for the FM Program. Seven surveys were distributed to the members of the FM Advisory Committee during the annual advisory meeting in April 2005.

Copies of the original surveys with comments are included for references.

The survey responses available were as follows:

- Excellent (5)
- Good (4)
- Average (3)
- Below average (2)
- Poor (1)
- Don't know (NA)

The following are the questions asked and the average of the responses:

General:

1. Overall the FM program meets the needs of the profession
   Average response: 4.3

2. Program content provides relevant education and skills needed by the profession.
   Average response: 4.3

3. Program content is based on performance objectives required for successful entry level employment.
   Average response: 4.29

4. Program content is responsive and revised to keep current with changing job practices.
   Average response: 3.86

5. The IFMA academic "recognition" is important to the success of the program.
   Average response: 4.57

6. Ferris FM curriculum adequately integrates IFMA's nine core competencies>
   Average response: 4.0

7. Graduates of Ferris' FM program are highly regarded.
   Average response: 4.71

8. Graduates of Ferris' FM program are competitive with graduates of similar programs from other universities.
   Average response: 4.47

9. Ferris' FM program provides an adequate number of graduates.
   Average response: 2.71

10. Your company would hire a Ferris FM graduate.
    Average response: 4.71

Faculty & Classroom Facilities:

11. The program has an adequate number of faculty.
    Average response: 1.86

12. Program faculty have acceptable academic experience.
    Average response: 3.43

13. Program faculty have acceptable professional credentials.
    Average response: 3.71

14. Program faculty have adequate institutional support for professional development and continuing education.
    Average response: 3.57

15. The program receives adequate financial support from the university.
    Average response: 2.86

16. Instructional equipment is current and representative of that used on the job.
    Average response: 4.14

17. Instructional facilities provide adequate space to support quality instruction.
    Average response: 3.86

18. The program has adequate computer facilities.
    Average response: 3.86

As can be seen by the above responses, the FM Advisory Committee is very supportive of the FM Program. The only areas that fall below Average (3) are:

- The number of graduates.
- Adequate number of faculty.
- Adequate financial support from the university.

Program Profile

Profile of Students

Prepared by: Diane Nagelkirk

Student Demographic Profile:

2000-2004 Student Demographic Data Source: Architectural Technology & Facility Management Department								
Year	Gender		Race/ethnicity			In-state	Out-state	Total # of students
	Female	Male	White	Black	Asian			
2000	4	4	8			1	7	8
2001	4	7	10		1	7	4	11
2002	3	12	15			14	1	15
2003	1	3	4			4		4
2004	5	8	12	1		12	1	13

The majority of the students entering the B.S. program are traditional college students laddering from the AAS in Architectural Technology or transferring from a community college or other university. These students have an understanding that classes will be offered during the day and on-campus. As such the scheduling of classes off-campus, in the evenings and on weekends is not necessary or viable.

Quality of Students:

2000-2004 Student Quality Data Source: Architectural Technology & Facility Management Department					
Year	Average Composite ACT	Average Math ACT	Average High School GPA	Average GPA of Graduate	Total # of students
2000	21	22	2.96	3.13	10
2001	20	20	3.26	3.00	14
2002	22	22	3.34	3.20	15
2003	22	22	3.31	3.12	4

Employability of Students:

Graduate Follow-up Survey Source: Institutional Research and Testing								
Year	Degree	# of Grads	% Response	# of Responses	Placement Rate	# Job &/or CE	CE Only	Ave Salary
1999/00	BS	9	55.6%	5	100%	5	NA	NA
2000/01	BS	14	43%	6	100%	6	NA	$34,710
2001/02	BS	9	44%	4	100%	4	NA	NA
2002/03	BS	15	53%	8	100%	8	0	$31,466
2003/04	BS							

Enrollment

Prepared by: Diane Nagelkirk

Anticipated 2005 fall enrollment:

- B.S. degree = 24 juniors + 14 seniors = 38 students
- Minor degree = 4 students
- Certificate program = 15 students

Enrollment Source: Institutional Research and Testing					
	Junior On-campus	Senior On-campus	Total On-campus	Pre-FM	Off-campus
Fall 2000	11	12	23		16 (ATC)
Fall 2001	15	11	26		10 (ATC)
Fall 2002	16	15	31		10 (ATC)
Fall 2003	4	16	20	2	13 (ATC)
Fall 2004	14	4	18	1	1 (ATC)
Fall 2005	24	14	38		15 (online)

Enrollment trends:

- During the fall of 2003 program enrollment decreased in comparison to the previous 3 years. This trend has been reversed through enhanced recruitment efforts and establishment of the following measurable goals:
  - Increase FM third-year enrollment to 60% capacity (15 students) for fall semester 2004. Goal nearly reached with admittance of 14 third-year students.
  - Increase FM third-year enrollment to 75-80% capacity (18-20 students) for fall semester 2005. Goal exceeded with admittance of 24 third-year students.
  - Maintain FM third-year enrollment to 90-100% capacity (22-25 students) for fall semester 2006.
  - Offer first Online Certificate course at 80-100% capacity (20-25 students) in fall of 2005. Current enrollment for fall 2005 is 15 students.
  - Recruit students for Minor degrees. Current enrollment for fall 2005 is 4 CM students.

Enrollment goals:

- To maintain program enrollment at 90% or higher of program capacity.
- To maintain Certificate program enrollment at 90% or higher of program capacity.
- To increase number of students entering Minor degree program.

Enrollment strategy:

1. Marketing and Recruitment
    - Expanded recruitment plan was implemented during the winter semester of 2004 that included:
        - Establishment of an on campus Annual FM Open House.
        - Formation of new and renewed partnerships with community colleges.
        - Active, continuous recruitment with first and second year AT students.
        - Communication to prospective students through personalized letters, e-mail and phone calls
        - Contact with area-wide community college students through phone calls, classroom visits and career fairs
        - Enhancement of FM recruitment materials that includes information regarding:
            - Positive prospects of FM career choices
            - Student internship experiences
    - Enhanced marketing materials were designed by the Visual Design program and students during the academic year of 2004-05.

2. Curriculum enhancement and growth
    - Due to ongoing low enrollment in the Certificate program offered at the Applied Technology Center in Grand Rapids and a strong interest and ongoing requests for the Certificate program to be offered online, the FM faculty redefined the provision of educational opportunities for Facility Management professionals. The Certificate program was developed during the academic year of 2004-05. The first of the 4 program courses is being offered online fall semester of 2005.

Enrollment accomplishments:

The results were increased awareness and interest in our program by community college teachers, parents and students and increased enrollment from fall of 2003 (4 students) to 2004 (15 students) to 2005 (24 students).

Ferris State University
Administrative Program Review 2004
College of Technology
Facilities Management BS

Student Enrollment

	Fall 2000			Fall 2001			Fall 2002			Fall 2003			Fall 2004		
	On	Off	Total	On	Off	Total	On	Off	Total	On	Off	Total	On	Off	Total
Freshman Headcount		2	2		2	2		4	4		2	2			0
Freshman SCH's		9	9		6	6		12	12		6	6			0
Sophomore Headcount	1		1	1		1	1		1			0			0
Sophomore SCH's	13		13	15		15	3		3			0			0
Junior Headcount	5		5	9		9	9		9	2		2	8		8
Junior SCH's	73		73	132		132	135		135	33		33	116		116
Senior Headcount	19		19	16		16	19		19	15		15	9		9
Senior SCH's	277		277	249		249	308		308	232		232	119		119
TOTAL HEADCOUNT	25	2	27	26	2	28	29	4	33	17	2	19	17		17
TOTAL SCH's	363	9	372	396	6	402	446	12	458	265	6	271	235		235

Graduates

	Academic Yr 99/00			Academic Yr 00/01			Academic Yr 01/02			Academic Yr 02/03			Academic Yr 03/04		
	On	Off	Total	On	Off	Total	On	Off	Total	On	Off	Total	On	Off	Total
Number of Graduates	9		9	13	1	14	9		9	14	1	15	15		15

Source: 7th/4th Day Counts
Institutional Research and Testing
1/26/2005

Ferris State University
Administrative Program Review 2004
College of Technology
Facilities Management CT

Student Enrollment

	Fall 2000			Fall 2001			Fall 2002			Fall 2003			Fall 2004		
	On	Off	Total	On	Off	Total	On	Off	Total	On	Off	Total	On	Off	Total
Freshman Headcount		15	15		6	6		4	4		7	7		2	2
Freshman SCH's		54	54		18	18		15	15		30	30		6	6
Sophomore Headcount		1	1			0			0			0			0
Sophomore SCH's		6	6			0			0			0			0
Junior Headcount		1	1		1	1		1	1			0			0
Junior SCH's		3	3		6	6		6	6			0			0
Senior Headcount		2	2			0		5	5		4	4		2	2
Senior SCH's		9	9			0		24	24		19	19		6	6
TOTAL HEADCOUNT		19	19		7	7		10	10		11	11		4	4
TOTAL SCH's		72	72		24	24		45	45		49	49		12	12

Graduates

	Academic Yr 99/00			Academic Yr 00/01			Academic Yr 01/02			Academic Yr 02/03			Academic Yr 03/04		
	On	Off	Total	On	Off	Total	On	Off	Total	On	Off	Total	On	Off	Total
Number of Graduates		11	11		9	9		9	9		11	11		8	8

Source: 7th/4th Day Counts
Institutional Research and Testing
1/26/2005

Program Capacity

Prepared by: Diane Nagelkirk

Current program capacity for the B.S. program is 25 students for the third year and 25 students for the fourth year for a total of 50 students. Program capacity for the Online Certificate program is 25 students. Given our current number of faculty, physical resources, and funding this is an appropriate enrollment capacity. The factor that most limits program enrollment capacity is the number of faculty and physical resources or classroom space.

An expanded recruitment plan (as noted above) was developed during the academic year of 2003-04 to address the discrepancy between actual enrollment and program capacity. Due to these enhanced recruitment efforts a significant rise in enrollment has occurred over the past two years.

Retention and Graduation

Prepared by: Diane Nagelkirk

Retention within the B.S. program is virtually at 100%. Ongoing goals and efforts are made, however to retain students and assure student satisfaction within the program. These include:

- Maintain quality instruction and faculty commitment to program.
- Maintain relevant curriculum.
- Maintain consistent contact with students by faculty advisor through email and office visits.

Completion Rates of Graduates

Source: Architectural Technology and Facility Management Department

Class of:	< 2 years	2 years	3 years	No grad	Total # of graduates	% that graduate in 2 years or less
Fall 2000		7	1	2	10	70 %
Fall 2001	2	7	2	3	14	64 %
Fall 2002	5	10			15	100 %
Fall 2003		4			4	100 %
Fall 2004						

Access

Prepared by: Diane Nagelkirk

Students entering the B.S. program are generally traditional full-time students who are prepared to complete their coursework on the Big Rapids campus as a full-time student. Efforts to insure that the program is accessible to these students include the offering of program courses that balance with other required business and general education courses. In addition the delivery of instruction accommodates different learning styles through a mix of lecture, visual aids, small-group projects and critical thinking activities. The use of mixed delivery of instruction reinforces the program goal of simulating the real world and offers students a more accurate view of professional practice.

Due to the strong demand for the Certificate program to be offered as an Online program and on-going low enrollment in the program offered at the Applied Technology Center, the FM faculty re-defined the offering of educational opportunities for FM professionals. The on-campus offering of the Certificate program at the Applied Technology Center was discontinued during the academic year of 2003-04 with the goal of online delivery beginning fall of 2005. The Online program will provide the following benefits; provides a more convenient way for busy, working professionals to earn their certificate, increases program visibility and market share, and will attract and reach students from around the country and world.

Curriculum

Prepared by: Mel Kantor

The Baccalaureate Degree in Facilities Management is the second half of a 2 + 2 degree, the first being the AAS in Architectural Technology. The educational philosophy of the program is to provide a core of general education, business, architectural and building technology, and facilities course work to provide graduates with the skills, knowledge, and abilities for employment in the growing field of corporate facilities management, as well as in related areas with consulting and service firms.

The program was implemented in 1989 under the quarter system. Semester conversion in the Fall of 1993 necessitated revisions to the program to accommodate the conversion. In 1997 a second major revision to the program was undertaken by the faculty and approved by the university.

The FM Program offers two minor degree options, open to all students enrolled at FSU. They are the Facility Operations Management Minor and the Facility Planning Management Minor. Specific course and other requirements is available in the Curriculum Guide Sheets in Appendix C.

A one-year Certificate Program in Facilities Management has been discontinued at the FSU Grand Rapids Campus.

Course work in an online Certificate Program will be offered beginning in Fall 2005. The course work included in this program is as follows:

FMAN 321 – Principles of Facility Management
FMAN 322 – Project Management
FMAN 331 – Facility Programming and the Design Process
FMAN 451 – Building Diagnostics and Operations

In addition, support courses are provided for the Recreation and Leadership Management Program in the College of Education, and for the Resort Management Program in the College of Business.

In 1996, the Facilities Management Program applied for designation as an International Facility Management Association (IFMA) Recognized Program. IFMA is an organization made up of over 16,000 facility managers and the major professional organization for facility managers. The application consisted of a major self-study of the program and verification that the program meets the academic standards established by IFMA. The FM Program was granted this recognition and is currently one of eight facilities management programs world-wide holding this designation. The other institutions with recognized programs are Brigham Young University, Colorado State University, Cornell University, FHS Kufstein Bildungsgmbh (Austria), Georgia Institute of Technology, Hong Kong Polytechnic University, Wentworth Institute of Technology. The FM Program was granted a second six year term as a recognized program in 2002.

Program Requirements:

a) 68 semester hours beyond the AAS degree are required for graduation. Course work is broken down as follows:

Facilities Management (FMAN) courses - 31 semester hours
Business related courses - 18 semester hours
General education related courses - 16 semester hours
HVACR course - 3 semester hours

Specific course information is available in the Curriculum Check Sheet, Course Descriptions, and Sample Syllabii in the Appendices.

The FM Program and individual course work has been developed and modified as required to meet the requirements and competencies established by the International Facility Management Association within their Recognized Programs standards, as well as recommendations from our FM Advisory Board, and knowledge of the current and future trends within the profession gained through attendance at professional conferences, meetings, etc. and active membership and participation in IFMA.

It should be noted that the full time faculty currently teaching in the FM Program hold CFM (Certified Facility Manager) designation from IFMA as well as architectural licensure.

There are no "directed electives", but required business related courses, which enable students to achieve the competencies required for the FM profession.

Directed General Education courses are:

PSYC 326 – Industrial-Organizational Psychology (3 cr)
Currently within the Curriculum Review Process to be removed as a required course. (See F:3 – 10 below for rationale)

ENGL 311 – Advanced Technical Writing (3 cr)
Considered an important competency for students entering the Facilities Management profession as the ability to communicate effectively is essential.

BIOL 111 – Environmental Biology (4 cr)
Currently within the Curriculum Review Process to be removed as a required course. (See F:3 – 9 below for rationale)

Two Cultural Enrichment Electives (6 cr) meeting University standards for a Baccalaureate Degree are required, but there are no specific courses established.

b) For those students entering into the FM Program with an FSU Associates Degree in Architectural Technology there are no hidden prerequisites. All required prerequisites are indicated on the Curriculum Check Sheets. For those entering the FM Program from other FSU curriculums or from other institutions, the program is reviewed on an individual basis and any additional course work that may be required or recommended is established.

Program Changes Since the Last Review:

In order to meet industry needs and to maintain "state of the art" content in the program, potential changes are reviewed on a continuing basis. Based upon survey documents and discussions with students, graduates, employers, and the advisory board the faculty are continually reexamining the program and specific course work to implement changes to reflect current trends and needs of the profession.

Changes to the Facility Planning Management Minor and the Facility Operations Management Minor were approved and instituted for Fall 2003. (See the attached Form A documents.)

Program Changes Currently in the Review Process:

A proposal for program changes in the BS in Facilities Management is currently in the review process. It consists of the following:

1. Delete FMAN 280 as an "architectural elective" from the AT program. As an introduction course to Facility Management, FMAN 280 provided exposure and awareness for AT students interested in pursuing FM. Due to a loss in 1 FTE faculty we are no longer able to offer this course.

2. Add FMAN 321 as an "architectural elective" to replace deletion of FMAN 280. Offering FMAN 321 as an architectural elective will accommodate and provide awareness for students interested in pursuing FM.

3. Change program name from "Facilities" Management to "Facility" Management.

4. Change course titles and course descriptions to match and correspond with change in program name from "facilities" to "facility" for the following FMAN courses: 309, 321, 393, 451, and 499.

5. Change course prerequisites for the following FMAN courses: 309, 321, 322, 393 and 431.

6. Change offering from winter semester to fall semester for FMAN 322.

7. Remove ACCT 201 as a required course and substitute MGMT 350 in its place. The content of ACCT 201 is focused on the basics of accounting practice. Facility Managers

require a basic understanding of financial managerial accounting applied to business decision making practices. MGMT 350 is better suited to meet the curriculum goals of the FM program.

8. Add MGMT 350 to replace ACCT 201. MGMT 350 will better prepare FM students to review and interpret financial management data and is more appropriate for the FM curriculum. Approximately 20 FM students would be required to enroll in the course during the fall semester of their senior year.

9. Remove BIOL 111 as a required science course. Removal of specified course will provide FM students greater flexibility with course offerings, class scheduling and ability to pursue individual interests. BIOL 111 will be listed as one of several suggested courses that appropriately meet the scientific understanding requirement for FM students.

10. Remove PSYC 326 as a required social awareness course. Removal of specified course will provide FM students greater flexibility with course offerings, class scheduling and ability to pursue individual interests. This course is not critical to FM education, but will be listed as one of several suggested courses that appropriately meet the social awareness requirement for FM students.

Program Revisions in Three to Five Years:

No specific revisions are anticipated in the next three to five years, but as changes and needs occur within the profession, the FM Program will respond in kind.

Again, if a university mandate to reduce credit hour requirements for graduation is established, the program will respond to the requirement.

Quality of Instruction

Prepared by: Joe Samson

Student, Alumni, Employer, Advisor Board, and Faculty Perceptions.

Student, Alumni, Employer, Faculty, and Advisory Board surveys were designed, administered, and compiled as part of the program review process.

Alumni, Employers, and Faculty Perceptions:
The surveys for Alumni, Employers, and Faculty were designed to address several categories of competencies that are required for entry level work in the field of facility management. Nine competency areas are identified by the International Facility Management Association (IFMA). These are Communications, Finance, Human and Environmental Factors, Leadership and Management, Operations and Maintenance, Planning and Project Management, Quality Assessment and Innovation, Real Estate, and Technology. One additional category of General Skills was added to address those general academic skills expected of college graduates.

A summary of the results for each category follows. The Mean for all questions in the category is provided here. For complete results refer to Section 2.

Competency:	**Mean on 1-5 scale where 1 is low and 5 is high**		
	Alumni	**Employers**	**Faculty**
General Skills	4.08	4.30	3.94
Communications	3.93	4.13	3.8
Finance	3.32	4.17	3.76
Human and Environmental Factors	3.91	4.06	3.83
Leadership and Management	4.32	4.43	4.12
Operations and Maintenance	3.64	3.56	4.00
Planning and Project Management	3.98	4.17	3.96
Quality Assessment and Innovation	3.55	4.29	3.92
Real Estate	3.38	4.83	3.50
Technology	4.05	4.73	4.50

An additional question asking alumni how satisfied they were overall with their education in facility management at Ferris received a mean score of 4.02.

All results indicate that the program prepares students much better than average to perform as facility management professionals. Alumni indicate weak areas being Finance and Real Estate, while Employers indicate Operations and Maintenance as the weakest area. Faculty indicate Real Estate and Finance as weak areas. However, Employers give alums their highest score for Real Estate.

Student Perceptions:
Since current students have not completed the entire curriculum, a separate survey was designed, administered, and compiled to assess their feelings about the facility

management program. This survey was not designed around the competencies, but rather around various aspects of the educational experience.

A summary of the results for each category follows. The Mean for all questions in the category is provided here. For complete results refer to Section 2.

Measured area:	**Mean on 1-5 scale where 1 is low and 5 is high**
Program Faculty and Teaching	3.95
Related Course Faculty and Teaching	3.70
Program Classrooms	3.23
Non-Program Classrooms	3.28
Program Instructional Equipment	3.40
Program Instructional Materials	3.52
Instructional Support Services	3.67
Placement Services	3.30

Students rank all categories affecting their academic experience as above average. However, none rank above a 4.0 on the scale. The areas to receive the lowest ratings are Classrooms. It should be noted that the one classroom designated as a Facility Management Classroom is cluttered and obsolete with split functions as a lecture area, resource room, and computer lab. This affects student perceptions of the space. Facility Management students have also informally indicated the need for a space of their own to identify with. Another area that ranks low is Placement Services.

Advisory Board Perceptions:
A separate survey was administered to advisory board members at the annual advisory board meeting. Several concerns were discussed at this meeting and these concerns influenced the results of certain questions in the survey. In particular, the advisory board members were concerned about: the number of graduates from the program (due to low enrollment in past few years), the number of faculty (Ms. Hardy, the primary FM faculty person left Ferris and was not replaced), adequate financial aid from university (the loss of Ms Hardy's position and the condition of the FM classroom).

In all other areas the advisory board members were impressed by the curriculum, faculty, and quality of employee produced by the FM program.

Efforts to Improve Learning Environment.

- Improved Teaching Spaces: Since the Facility Management program is closely allied with the Architectural Technology program, spaces are shared. In the last few years, all spaces on the second floor that are shared by the two programs have experienced improvements ranging from new furniture to complete room renovation.
- Overhead Projectors: Several of the spaces have improved lecture stations with overhead projectors.

- Scheduled Computer Replacement: The program chair has diligently monitored computer condition and obtained funding for replacement as needed.
- More Graphic Presentation: The use of Power Point has been increased to provide students with more visual images of the course content.
- Activity Related Learning: In several courses projects have been redesigned to provide students with hands on applications to the theory presented in lectures.

Faculty Professional Development.

The faculty teaching within the Facility Management program along with the faculty teaching within the Architectural Technology program have continuously been involved in developing and enhancing their skills. Faculty development has been supported at various levels over the past few years:

- The program has budgeted $1,000 per year from S&E funds per faculty member for faculty development.
- The College of Technology has granted program faculty individual and group grants that have funded workshops and seminars as well as travel and research.
- The University has funded travel through Timme Grants as well as individual research through Faculty Research Grants.

Examples of fully or partially funded professional development activities include:

- At least one faculty member and some students participate in World Workplace, the annual convention of the International Facility Management Association.
- LEED for New Construction and Major Renovations: Technical Review Workshop. US Green Buildings Council at FSU.
- Sketching Workshop with Paul Lasseau at FSU.
- REVIT Fundamentals Seminar.
- Sabbatical field research.

See Section 3H for complete information of continuing education activities of faculty.

Efforts to Increase Interaction of Students with Faculty and Peers.

The program and department work to create opportunities for students to experience learning beyond the classroom situation by providing opportunities for students to interact with professionals. Some examples of these efforts include:

- Annual Welcome Back Reception for all AT and FM students.
    - Provides opportunity to learn about programs, faculty, student organizations, etc.
- Annual Awards and Recognition Reception for all AT and FM students.
    - Recognizes students for outstanding service and academic accomplishments.
- Facility Management Open House in Winter 2004.
    - Brought Facility Management professionals on campus to spur interest in Facility Management as a career.

- Trip to World Workplace.
    - This annual trip to the annual convention of the International Facility Management Association allows students to interact with working professionals and obtain leads for future internship or employment opportunities.
    - The student chapter of IFMA works to underwrite a portion of the cost of this trip for students.
- Guest Speakers.
    - Various guest speakers are brought in to explain how they apply the theory students are learning to everyday facility management problems.

Current Research and Practice to Infuse Teaching and Learning with Inclusive Pedagogy.

Various methods of presenting and learning materials are used to allow all students to better understand course content. IE. Lecture, discussion, readings, problem solving, individual and team activities, and oral and visual presentations are used.

In addition, the nature of facility management is to provide work environments that support the work activities of all users. This education sensitizes students to the diverse needs of individuals in the work place.

Effects of Efforts to Increase Interaction of Students with Faculty and Peers and to Infuse Teaching and Learning with Inclusive Pedagogy.

In the past few years the faculty have noted certain positive developments in student initiative and behavior. Some of these include:

- Contact with facility management professionals has increased individual student initiative in finding internship experiences.
- Contact with working facility management professionals has on occasion led to the use of facility professionals as resources.
- The involvement of architectural technology students in facility management activities has increased their awareness of facility management as a profession.
- Student work teams tend to be totally integrated by race and gender.
- Women students are often elected to leadership positions in the Ferris student chapter of the International Facility Management Association.

Composition and Quality of Faculty

Prepared by: Diane Nagelkirk

Faculty:

Mary Brayton, AIA, Associate Professor
A.A.S Arts, Grand Rapids Community College
B.S. Architecture, University of Michigan
M. of Architecture, University of Michigan

Bruce Dilg, NCARB, Associate Professor
B.S. Industrial Education, Bradley University
M.S. Occupational Education, Ferris State University

Gary Gerber, AIA, LEED AP, Associate Professor
A.A.S Architectural Technology, Ferris State University
B.S. Architecture, University of Michigan
M.B.A., Grand Valley State University

Mel Kantor, AIA, CFM, Professor
B. of Architecture, University of Illinois

Diane Nagelkirk, AIA, Associate Professor/Department Chair
B.S. Architecture, Lawrence Technological University
B. of Architecture, Lawrence Technological University

Joe Samson, CFM, Associate Professor
B. of Architecture, Kent State University
M. of Architecture, Kent State University

Promotions since last program review:

Mary Brayton
Promoted from Assistant to Associate Professor May 2004
Gary Gerber
Merit May 2005
Diane Nagelkirk
Merit May 2000
Merit May 2005
Joe Samson
Merit May 2001

Professional Activities:

Mary Brayton, Associate Professor

Continuing Education

Mike Lin Graphic Workshop
San Francisco, CA
June 19 – 25, 2005

LEED Technical Training
Big Rapids, MI
April 14, 2005

Paul Laseau Freehand Sketching Workshop
Big Rapids, MI
April 1, 2005

Building Science Seminar
Grand Rapids, MI
February 1, 2005

National AIA Convention
Chicago, Illinois
June 10-12, 2004

National Fire Sprinkler Association
Big Rapids, MI
April 13, 2004

Teaching and Preventing Brain Drain
The Center for Teaching, Learning & Faculty Development, FSU
October 20, 2003

Creativity Conference - Being a Creative Being: Our infinite Potential
Northwood Academy, Midland Michigan.
July 10-13, 2003

Revit Fundamentals Training
Sterling Systems & Consulting, Inc., Grand Rapids
June 30 – July 2, 2003

Zero Energy Homes in Michigan
Concord Grove Educational Center, Alto Michigan.
May 3, 2003

Teaching That Promotes Learning
Dr. Maryellen Weimer, director of the Instructional Development Program at PSU
March 28, 2003

The Value of Masonry – Masonry verses Steel & Studs, Masonry Institute of Michigan
Grand Rapids, MI
March 27, 2003

Horizontally Sliding Doors in a Means of Egress, The Won-Door Corporation.
Grand Rapids, MI
March 27, 2003

Glass Mat Gypsum Technology, Georgia Pacific.
Grand Rapids, MI
March 27, 2003

Roofing 101, NTH Consultants.
Grand Rapids, MI
March 27, 2003

Grand Rapids Bus Terminal, Tensile structures by Birdair Inc.
Grand Rapids, MI
February 20, 2003

WebCT Upgrade Workshop
The Center for Teaching, Learning & Faculty Development, FSU
November 27, 2002

EDIFIS Institute – 2002 Roof Seminar

Grand Rapids, MI
October 23, 2002.
Classroom Acoustics, Acoustics by Design, Inc.
Grand Rapids, MI
October 1, 2002
Firestone BPCO - Membrane roofing, Marty Wildfong Associates.
Grand Rapids, MI
October 1, 2002
Structural Insulated Panels, Resource Technologies Group & Team Industries Inc.
Grand Rapids, MI
October 1, 2002
Precast Building Systems. Kerstra / Spancrete Great Lakes.
Grand Rapids, MI
October 1, 2002
Exterior Insulating Finish Systems, The next Generation. Sto-ex Inc.
Grand Rapids, MI
October 1, 2002
Firestopping Systems & Life Safety. Specified Technologies, Inc.
Grand Rapids, MI
October 1, 2002
Hydrotect: Self-cleaning ceramic tile. DS America Inc.
Grand Rapids, MI
October 1, 2002
Tile Forensics. Laticrete International Inc.
Grand Rapids, MI
October 1, 2002
Ecological Design Conference: The Unstoppable Wave.
San Francisco Institute of Architecture
July 2002.
Expanding the Territory of Design
Julie Snow, FAIA, Grand Rapids, MI
May 16, 2002.
WebCT: Preparing for your First Semester
The Center for Teaching, Learning & Faculty Development , FSU
January 2002.
Recent Thoughts and Works
Gunnar Birkerts FAIA., Grand Rapids, MI
February 27, 2002
AIA Grand Valley Leadership Retreat
Progressive AE Inc., Grand Rapids, MI.
January 12, 2002.
Building Green, William Browning, Rocky Mountain Institute
Grand Rapids, MI
October 26, 2001.
Sustainable Architecture, The Grand Valley AIA
Grand Rapids, MI
October 10, 2001
How Students Learn
Terry Doyle of the Center for Teaching, Learning & Faculty Development, FSU
October - December 2001
National AIA Convention
Denver, Colorado
May 18-20, 2001
Stanley Tigerman, Current Work. Stanley Tigerman
Grand Rapids, MI
April 11, 2001.

AutoCAD 2000 Update.
Grand Rapids Community College, Grand Rapids, MI
July 2000
Critical Thinking Workshop. Richard Paul, author of Critical Thinking
Center for Teaching, Learning & Faculty Development, FSU
July 2000
National AIA Convention
Philadelphia, PA
May 2000

Professional Affiliations

American Institute of Architects, January 1998 – December 2004

Bruce Dilg, Associate Professor

Continuing Education

M.I.T.E.S State Skill Competition Judge
Traverse City, Michigan
May 1999
Critical Thinking Faculty Summer Institute
Dr. Richard Paul
Big Rapids, Michigan
July, 2000
AutoCad 14-2000 Upgrade 2 Day Seminar
Seattle, Washington
August 2000
M.I.T.E.S Regional Craftsman Fair Judge
Mcbain, Michigan
May 2001
A.I.A. National Convention
Denver, Colorado
May 2001
Six Degrees of Collaboration Conference
A.I.A. Headquarters, Washington, D.C.
April, 2002
Evaluator – Technical/Professional Writing Curriculum Portfolio Presentations – Ferris State University
Big Rapids, Michigan
May 2002
A.I.A. National Convention
San Diego, California
May 2003
Revit Parametric Modeling Software Training
Grand Rapids, Michigan
July, 2003
A.I.A. National Convention
Chicago, Illinois
June 2004
Technology in Architecture Conference
Las Vegas, Nevada
June, 2005
A.I.A. National Convention
Las Vegas, Nevada
June, 2005

Professional Architectural Work – Arcom Architects

1999

Fellowship Christian Reformed Church - Big Rapids, MI

Antlers Restaurant - Canadian Lakes, MI
Walker Condominiums - Big Rapids, MI
2000
Wakely Architects Consulting - Mt. Pleasant, MI
Stonehill East Vet Clinic – Remus, MI
Edwards Residence – Big Rapids, MI
2001
Gogolin Residence – Evart, MI
Wilson Residence – Horsehead Lk., MI
Stern Dental Office – Big Rapids, MI
Immanuel Lutheran Church – Big Rapids, MI
2003
Baughan Residence – Reed City, MI
Manor Residence – Big Rapids, MI
Big Jackson School – Big Rapids, MI
St. Andrew's Episcopal Church – Big Rapids, MI
2004
Riverbend Animal Clinic – Big Rapids, MI
Williams Beauty Parlor
2005
Big Rapids Band Shell – Big Rapids, MI
Country Adult Foster Care – Reed City, MI
Burke Equine Development – Lakeview, MI
Boone Residence – Kingsley, MI
Brew Residence – Rogers Heights, MI

Gary Gerber, Associate Professor

Continuing Education

Success Magazine Investor Education
Crowne Plaza Grand Rapids
August 12, 2005 (8 hours)
Get Motivated Business Seminar
Van Andel Arena
August 2, 2005 (8 hours)
Place in Mind: Building Public Awareness About Great Communities
Grand Valley Metropolitan Council
June 9, 2005
Sketching Workshop with Paul Lasseau
Ferris State University
April l, 2005
Sexual Harassment Awareness Session
Ferris State University
April 2005
New Brain Research and Its Application to Career and Technical Education
Michigan Drafting Educators Association
November 2004
United States Green Building Council Conference and Exposition
Portland Oregon
November 10-13, 2004
LEED AP training
United States Green Building Council
East Lansing MI
June 16, 2004
AIA 2004 National Convention and Design Exposition
Chicago, Illinois
June 10-12, 2004

Revit 5 Level 1 Software training
Autodesk Training Center
Grand Rapids, Michigan
June 30-July 30 2003
Ferris State University
2003 Critical Thinking Institute
May 22-23, 2003
Construction Document Technician Training
Construction Specification Institute
Grand Rapids, Michigan
February 18-April 8 2003 (16 hours)
United States Green Building Council Conference and Exposition
Austin Texas
November 13-16, 2002
Architectural Desktop 3 Level 1 Training
Autodesk Training Center
Grand Rapids, Michigan
June 11-June 14 2002
Problem Based Learning
FSU Center for Teaching, Learning and Faculty Development
July 16-18, 2001
AIA 2001 National Convention and Design Exposition
Denver, Colorado
May16-19, 2001
Michael Graves-The Design Process
Kendall College of Art and Design
April 27, 2000

Professional Memberships

Member – Grand Valley AIA (2004 - Present)
Member -- United States Green Building Council (2002 - Present)
Member -- Construction Specification Institute (1996 - Present)

Professional Architectural Work – Gerber Architectural

1999
Eagle Village Dining Center Addition and Renovation – Hersey, MI
Eagle Village Assessment Center Addition and Renovation – Hersey, MI
Michigan Works West Michigan Service Center Addition—Big Rapids, MI
Evart Public School Elementary School remodeling —Evart MI
2000
Pioneer Group Production Facility – Big Rapids, MI
Jim and Carol French cottage addition and renovation– Canadian Lakes, MI
Kim Holt cottage addition and renovation– Chippewa Lake, MI
2001
Jim and Joyce Bradley Residence – Canadian Lakes, MI
Hinkle Witbeck Insurance Agency – Reed City, MI
River's Edge Condominiums – Big Rapids, MI
2002
Reed City Fire Barn – Reed City, MI
Dr Alex Tosic Residence – Big Rapids, MI
Mitch and Carol Swayze Cottage – Beaver Island, MI
2003
Michigan Works West Michigan Service Center—Baldwin, MI
Art Works – Big Rapids, MI
Bengry Home addition and renovation – Evart, MI
Wolverton Cottage addition and renovation – Bear Lake, MI
2004
Pattie Drugs addition and renovation – Baldwin, MI

Battdorf home renovation – Big Rapids, MI
Neale Business Center – Reed City, MI
2005
Jim and Dorothy Heyart cottage addition and renovation– Canadian Lakes, MI
Jerry and Marcy Springer cottage addition and renovation– Canadian Lakes, MI
911 Dispatch Addition – Paris Michigan
Millitary Recruiting Center lease space Main Street Business Center—Grand Rapids, MI
Nail Salon lease space Main Street Business Center—Grand Rapids, MI
Crystal River Cottages – Glen Arbor, MI
Brower Home – Rodney, MI

Mel Kantor, Professor

Continuing Education

7th Annual Waste Reduction and Energy Efficiency Seminar
9/10/1999
Exploring the Eames Design Philosophy
AIA Grand Valley
9/16/1999
IFMA 1999 World Workplace Conference and Seminar
10/3 – 5/1999
Leadership in the Profession
AIA Grand Valley
10/21/1999
Michael Graves – The Design Process
4/27/2000
ADA Update and Mock Mediation
Evan Terry Associates, P.C.
5/31/2000
Critical Thinking – Basic Theory and Structure
7/11 – 12/2000
Building Science...Keeping Buildings Healthy and Dry
AIA Grand Valley
10/9/2000
Trends in Occupational Studies Conference
10/27/2000
Leadership in Architectural Education
AIA Grand Valley
1/24/2001
2001 Governor's Conference on Career Development
2/4-6/2001
Slow Design...Tod Williams & Billie Tsieh
AIA Grand Valley
2/21/2001
First Annual Technology & Workplace Conference
AIA Michigan
4/26-27/2001
Sustainable Architecture & Environmental Issues
AIA Grand Valley
5/10/2001
Problem-Based Learning
FSU Center for Teaching, learning and Faculty Develoment
7/16-18/2001
Summer University
Ferris State University
8/2/2001

IFMA 2001 World Workplace Conference and Seminar
9/23-25/2001
Sustainable Architecture
AIA Grand Valley
10/21/2001
Trends in Occupational Studies Conference
11/1-2/2001
Teaching Methods...Learning Centered Classroom
11/12,19,26/2001
Tom Buresh Presentation
AIA Grand Valley
11/27/2001
2002 Governor's Conference on Career Development
1/21-23/2002
Computer-Aided Facility Management Workshop
Michigan State University
3/6-8/2002
Eco Logic Design
AIA Grand Valley
5/9/2002
2002 AIA National Convention
American Institute of Architects
10/3-5/2002
Summer University
Ferris State University
6/6-9/2002
Employee Leadership Development Program
Ferris State University
9/2002 – 4/2003
Lilly Conference on College & University Teaching – North
9/20-21/2002
IFMA 2002 World Workplace Conference and Seminars
10/6-8/2002
Total Facility Management Conference
4/21-23/2004
Computer-Aided Facility Management Workshop
Michigan State University
5/18-20/2004
IFMA 2004 World Workplace Conference and Seminars
10/16-19/2004

Professional Memberships

Corporate member – American Institute of Architect (1961 – present)
Member – Grand Valley AIA (1975 – present)
Board Member and Continuing Education Director, Grand Valley AIA (1998 – 2002)
Member – Michigan Society of Architects (1975 – present)
Member – International Facility Management Association (IFMA) (1990 – present)
Secretary – Western Michigan Chapter of IFMA (1997 – 2000)
President – Western Michigan Chapter of IFMA (2000 – 2002)
Past President – Western Michigan Chapter of IFMA (2002 – 2003)

Professional Achievements

Certification as a Facilities Manager (CFM), IFMA by examination
AIA Grand Valley President's Award (1999)
Lifetime Certified Facility Manager status, IFMA (2000)

Professional Architectural Projects

Rustic Gate Bed & Breakfast and Conference Center
Hungerford Lake

Big Rapids, Michigan
Addition to Residence for Matthew and Nancy Klein
Big Rapids, Michigan
Space Planning Studies – Dean's Offices and Department Chair Offices
Ferris State College
College of Technology

Diane Nagelkirk, Associate Professor

Continuing Education

Sketching Workshop with Paul Lasseau. (FSU)
Big Rapids, Michigan
April 1, 2005
International Facility Management Association 2004 Conference and Expo
Salt Lake City, Utah
October 15-19, 2004
Rockhurst University
Project Management
January 31, February 1, 2004
AIA 2004 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
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
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 Lecture
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
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
March 19, 2003
Ferris State University
Center for Teaching, Learning, and Faculty Development
January 29, 2003
AIA Grand Valley
Sustainable Architecture Seminar
October 10, 2001
Calvin College Seminars in Christian Scholarship
Monks and Markets: culture, Economics, and Good Cities
July 17, 2001
Calvin College Seminars in Christian Scholarship
The Self: From the Postmodern Crisis to a Transmodern Solution
July 10, 2001
AIA Grand Valley
Architecture Lecture
November 16, 2000
Environmental Design Research Association Conference
Orlando, Florida
June 2-6, 1999

Professional Consultation

Via Design, Grand Rapids, Michigan (May 2002-August 2002, May 2003-August 2003)
Kabookies Restaurant
East Grand Rapids, Michigan
Jade Pig Headquarters
Grand Rapids, Michigan
Cheshire Village Center
Grand Rapids, Michigan
Various Residential Design Projects

Independent Architectural Projects

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
July 2002

Joe Samson, Associate Professor

Continuing Education

LEED for New Construction and Major Renovations: Technical Review Workshop. US Green Buildings Council. (FSU)
Big Rapids, Michigan
April 14, 2005

Sketching Workshop with Paul Lasseau. (FSU)
Big Rapids, Michigan
April 1, 2005

Diversity Education Session. FSU
Big Rapids, Michigan
March 25, 2005

The Intentional Campus: Everyday Opportunities to Enrich Students' Experience by Improving the Physical Environment of a Campus. Society for College and University Planning. (Teleconference)
Big Rapids, Michigan
February 17, 2005

TFM (Total Facilities Management) Show at Construct America.
Chicago, Illinois
April 21-23, 2004

Spring Learning Institute 2004: FSU.
Big Rapids, MI
April 2, 2004

FSU Seminar and Introduction to WebCT. FSU.
Big Rapids, MI
Winter 2004

REVIT Fundamentals. Autodesk Training Center.
Grand Rapids, MI
May 30, June 1-2, 2003

2002: The Annual Convention of the International Facility Management Association
Toronto, Ontario
October 6-9, 2002

ADA Seminar and Mock Mediation Program. Grand Valley AIA.
Grand Rapids, MI
May 18, 2000

AutoCAD 2000 Update. Autodesk Training Center.
Grand Rapids, MI
May 8-9, 2000

Diversity in Higher Education. FSU.
Big Rapids, MI
April 2000

Sexual Harassment Awareness Session. FSU.
Big Rapids, MI
Fall 1999

Waste Reduction and Energy Efficiency Workshop. Michigan Department of Environmental Quality.
Livonia, MI
November 10, 1999

Professional Architectural Work

Addition to Rogalke Residence
Lowell, Michigan
June-July 2003

Alber Lake House Renovation Concepts
Rockford, Michigan
August 2001

Shangraw Residence
Sparta, Michigan
June-August 2001
Robinhood Airport Expansion Presentation Drawings
Big Rapids, Michigan
May 2001
Shiawassee County Community Mental Health Center Preventive Maintenance Program Development
Owosso, Michigan
Summer 1999

Workload:

Normal teaching load follows the standards of the College of Technology and is 24 credits and/or 36 contacts per year. On a yearly basis 1-3 faculty have been assigned overloads ranging from 1-4 credits as indicated on the table below.

Overload Assignments			
Semester	**Faculty**	**Class**	**Credit Hours**
Fall 2000	Gary Gerber	ARCH 250	3 credits
Winter 2001	Vicky Hardy	FMAN 499	2 credits
	Mel Kantor	FMAN 432 + ARCH 280	4 credits
Fall 2002	Gary Gerber	ARCH 109	2 credits
Winter 2003	Vicky Hardy	FMAN 499	2 credits
	Mel Kantor	FMAN 431	3 credits
Fall 2004	Diane Nagelkirk	FSUS 100	1 credit
Winter 2005	Diane Nagelkirk	ARCH 244	3 credits
	Joe Samson	FMAN 321	3 credits

Recruitment:

All recruiting and hiring of program faculty follow the University's Affirmative Action Plan and commitment to Equal Employment Opportunity. Recruitment goals and methods are used that attract large, diverse applicant pools that result in the selection and hiring of qualified, talented faculty. Positions are posted with various off-campus organizations (publications and websites) that reach markets within Michigan and beyond.

Qualifications for new faculty include: Bachelor of Science in Architecture or Engineering and Masters in related area (or pursuit of); facility management, engineering or architectural practice experience (minimum 5 years); teaching or academic experience preferred.

Orientation:

In addition to the university activities during faculty orientation week prior to the fall semester, the department works closely with new faculty through mentoring, course collaboration and classroom observation.

Reward Structure:

The reward structure of the department follows the Promotion and Merit Policy of the College of Technology. The policy has limitations in terms of portfolio preparation guidelines, identification and recognition of quality criterion and candidate characteristics, accuracy and consistency in assessing candidate characteristics and impartial selection of candidates.

Salary structure is not competitive with the profession and does have an unfavorable impact on recruiting and retaining faculty.

Graduate Instruction:
NA

Adjunct Faculty:

During the academic years of 2003-04 and 2004-05 adjunct faculty were necessary to cover FM coursework due to the resignation in summer of 2003 of the primary FM faculty member. At that time an administrative decision was made to not fill the position in an effort to reduce expenditures.

Adjunct needs were as follows:

Fall of 2003
- FMAN 321
- FMAN 321 (Applied Technology Center)
- FMAN 322
- FMAN 441

Winter of 2005
- FMAN 322

It is anticipated that due to the loss of this FTE position adjunct needs will be ongoing and range from 3-6 credit hours per year. The use of and reliance on adjunct faculty is not acceptable for continuity and instructional quality reasons. Additionally it is difficult to attract potential candidates due to the low salary compensation.

Facility Management
(B.S.)
APRC 2005-2006
Section 3

Service to Non-majors

Prepared by: Diane Nagelkirk

Support courses are provided for the Recreation and Leadership Management Program in the College of Education, and for the Resort Management Program in the College of Business.

These non-general education courses include:

FMAN 231, Principles of Facility Management
FMAN 322, Project Management
FMAN 331, Facility Programming and the Design Process
FMAN 441, Property Development and Planning
FMAN 451, Building Diagnostics and Operations
ARCH 115, Interior & Exterior Finish Materials

The Facility Management program plans to maintain the current level of service courses.

Degree Program Cost and Productivity Data

Prepared by: Diane Nagelkirk

Architectural Technology and Facilities Management Department													
		Student Credit Hours				Full Time Equated Faculty				SCH/FTE			
Prefix	Year	Sum.	Fall	Winter	F+W (a)	Summer	Fall	Winter	Avg F+W (b)	Summer	Fall	Winter	F+W (a/b)
FMAN	2000-2001		0	293	293			2.67	1.34			109.74	**219.48**
FMAN	2001-2002	62	241	299	540	.92	1.52	2.61	2.06	67.39	158.27	114.68	**261.51**
FMAN	2002-2003	104	294	312	606	.92	2.17	2.83	2.5	113.04	135.29	110.36	**242.39**
FMAN	2003-2004	93	267	165	432	.92	1.5	.9	1.2	101.09	178	183.33	**360**

Assessment and Evaluation

Prepared by: Diane Nagelkirk

Program Learning Outcomes include:

The mission of the Facility Management program is to provide students with the educational concepts, skills and values necessary to, upon completion of the program, successfully enter into the employment market in facility management and related professions. Assessment that measures the fulfillment of this mission include:

- Student demonstration of the ability to think effectively and develop critical thinking skills partnered with vocational readiness.
- Student demonstration of awareness, knowledge and/or competency in course specific skills and content.
- Successful completion of the FM internship including positive evaluation from the intern site.
- The ability of students to successfully find employment and/or continue their education.

All course outlines are designed to engage the student in a process of thinking effectively and developing critical thinking skills. All course outlines are designed to address and weigh course content in terms of awareness, knowledge and/or competency based on the nine core competencies developed by IFMA (International Facility Management Association).

Program Assessment Mechanisms include:

- Annual SAI's. Currently results are reviewed by the Dean of the COT and forwarded to individual faculty member.
- Annual Student Exit Survey. For the past 12 years this survey has been distributed to the graduating class for program assessment and relevancy. Section 2 of this report contains the survey and results for the graduating class of 2005. Results are reviewed by faculty and when appropriate student suggestions and concerns are implemented.
- Student focus groups. A focus group discussion, developed and facilitated by department chair, with FM students was initiated in April of 2004. Results of focus group discussion are compiled and reviewed by faculty the following fall.
- Annual FM Advisory Committee. Program goals and achievements are reviewed along with professional trends and needs to assure program relevancy. Advisory committee input in terms of the changing demands within the profession results in ongoing redefinition of curricular relevancy and flow.
- Direct assessment measures include:
    - Student demonstration of knowledge and skills developed during the two-year period of the program are analyzed and applied in FMAN 499; Capstone Assessment Thesis.
    - Student progress and evaluation in individual Facility Management courses.

- Administer and review annual Exit Interviews of graduates created and generated by FM program faculty.
- Administer and review periodic alumni surveys created and generated by FM program faculty.
- Review alumni surveys provided by the University.
- Review of FM curriculum with FM Advisory Board for relevancy and appropriateness.

Application of assessment includes:

- Annual review of successes and failures is used to evaluate course content for relevancy and flow.
- Faculty involvement in professional associations, consulting, and pedagogical research, results in ongoing program curricular review and redefinition.

Administration Effectiveness

Prepared by: Diane Nagelkirk

Administrative and Clerical Support:

The faculty of the Architectural Technology & Facility Management department has the following concerns regarding administrative and clerical support:

- In addition to the critical need to appoint a Dean for the College of Technology, we feel the Dean's primary function should be visionary and futuristic rather than focusing on day to day operational issues. The absence of consistent leadership at the College level has impacted the program's ability to expand, to embrace vision and capitalize on timely opportunities.
- We feel the college does not operate in a cost-effective, comprehensive way in terms of even distribution of clerical support, building and space utilization, technology and equipment.
- The current 50% clerical support for the ATFM Department is not adequate and does not meet department goals of maintaining professionalism and serving student needs. A full-time presence of clerical support is necessary to run the department in a consistent, efficient manner. Many office management activities are overlooked without the presence of full-time clerical support.

Class and Teaching Schedules:

Program class and teaching schedules are prepared by the Department Chair. The intent is to maximize room utilization and build student schedules that are flexible and distribute classes evenly throughout the day and week. Block schedules are developed and used to guarantee that students will successfully complete the required semester courses.

Facilities and Equipment

Instructional Environment

Prepared by: Gary Gerber

The Facility Management Program primarily shares classrooms and laboratories with the Architectural Technology Program in the Swan Building (SWN). There is only one classroom that is designated for the Facility Management program—Swan 111. The classrooms that are shared with the Architectural Technology program are predominately Architectural Technology classrooms and have been reviewed in the Architectural Technology Academic Program Review report. Funding for the shared classrooms is done through the Architectural Technology program so those resources are not reviewed in this report.

The program has two laboratory courses: FMAN 309 — Computer Applications for Facility Management (1 section/year), and FMAN 499 — Capstone Assessment Thesis. The remaining program courses are lecture courses and normally taught in a standard classroom. At times lecture courses do utilize computer laboratories as needed by the instructor to best communicate the concepts in the course.

The following facilities are dedicated to the FM Program:

Facility	Capacity	Use	Condition	Lighting	Air	Floor	Walls	Windows	Storage	Ceiling
Swan 111	26 plus 4 computer work stations	Lecture with overhead instructional monitor	Good	Dimmable2x4 fluorescent	None	Carpet: Good	Painted Block: stained	Operable: Fair Condition	Shelves: adequate	Stained

Other classrooms in the Swan Building and elsewhere are used if the dedicated FM classroom or AT classrooms are not available or if the section sizes exceed their capacity.

SWN 111 is not adequate for its current usage. The space is crowded and awkwardly configured. It could stand to be updated with an overhead projection system replacing the TV monitor system.

Equipment needs primarily fall into the computer and related equipment area. Currently, AT Program computers are shared with the FM Program. At times this creates technical problems due to the specialized facility management software, which may conflict with other software programs. In addition, scheduling of class times and non-scheduled computer time becomes difficult. Currently, four computers are available in SWN 111 for student use, which is inadequate.

In addition, a dedicated computer lab with 16 stations and necessary printers would be a major asset to the program's success. We have over $250,000 worth of FM software, which has been donated to the program, and conflicts occur during its use. A new lab with the proper computers should alleviate the problems.

Equipment maintenance has been fairly consistent in recent years. There has been a consolidation of computer support services. Several years ago the Business Technology Computer Consortium was formed and implemented. A further consolidation was implemented in the past two years but technical support has remained fairly consistent. FM Faculty continues to put more and more assignments and reference material electronically accessible to students on the computer network. Students will print off a copy of this material adding to the paper consumption. Another major paper consumer is information found on the web both school and non-school related. Students tend to hit the print button without thinking through whether the copy is really needed or not. Some of the paper consumption is due to non-AT\FM student usage. Signs have been posted to attempt to alleviate this problem.

Computer Access and Availability

Prepared by: Gary Gerber

There currently is a marginal supply of computer hardware and software resources allocated to the program—4 computers and a teaching station. The AT computer resources are in much better condition which will make the FM problem less of an issue. The two computer labs SWAN 205 and SWAN 212 offer a total of 42-student computers and 2 teaching stations. The labs are open to student use when they are not scheduled for classes and the students take advantage of this opportunity. These resources will have to be shared with the AT students. Even during scheduled lab classes, most of the faculty allows students to use an open computer if they don't disrupt classroom activities. If both AT labs are occupied the 4 computers in the SWAN 111 offer a back up. These computers are approximately 2 years old so they are still in pretty good condition. Students can also use the FLITE computers. There are a number of computers on the 2nd floor of FLITE that have AutoCAD on them. FLITE also offers MS Office on its computers, which allows students to write their reports. This allows for computer access during hours when SWAN building is closed. FLITE does not offer any specialized FM software.

Our computer labs are open from 8 am until 11 pm Monday through Thursday. Saturday and Sunday they are open from Noon until 6 pm. The labs are generally closed on holiday weekends and weekends during spring break. The AT program hires student workers and they have keys to access supplies and equipment.

The following architectural and facility management software is loaded on program computers: AutoCAD 2004, Accurender, Architectural Graphic Standards, FM Systems, Visio, Giza, Timberline Cost Estimating, MasterSpec Specifications, and Microsoft Office. Computer software is fairly up to date as far as word processing, spreadsheets, presentation software and AutoCAD. The university has a Microsoft Office site license and the COT has a site license for all Autodesk products.

There currently isn't an acquisition plan to address all the needs regarding computer software and hardware. Equipment used in the AT\FM classrooms is fairly consistent with current practice and therefore representative of work sites for which students are being educated. In the past, the majority of the FM equipment was funded using year-end funds. Due to the ever-changing nature and rapid growth of technology, hardware and software equipment is required to be updated on a yearly basis. Therefore, in order to maintain state of the art equipment consistent funding must be available on a yearly basis. Currently much of the FM software is made available through donations.

The efficacy of online services is generally good. A couple faculty members use WebCT and it generally works well. Where online service falls down is with student e-mail service. A handful of students in each class have trouble getting their FSU I-mail account to work.

Equipment maintenance has been fairly consistent in recent years. There has been a consolidation of computer support services. Several years ago the Business Technology Computer Consortium was formed and implemented. A further consolidation was implemented in the past two years but technical support has remained fairly consistent.

There continues to be a need for a centralized, controlled printing and plotting facility. For the past 16 years, printer and plotters have been part of the "architectural office" concept and readily available for student use within the classrooms. However, AT\FM faculty has found that due to heavy use and inappropriate handling by students, we are continually challenged with major breakdowns and maintenance requests. Printing and plotting equipment is often inoperable and unable to meet the learning needs of the students. Discussion, between the AT Faculty and the TAC computer support organization, is underway to provide centralized printing/plotting facility operated by work-study students on the first floor of the Swan Building. In concept, this facility would be similar to the printing facility found in the FSU business program. Another major issue is the continual increased consumption of paper.

Other instructional technology

Prepared by: Gary Gerber

We utilize media distribution for slide projectors and audiovisual equipment. Their service is adequate as far as providing equipment and media that they have available. They could use more funding in purchasing new videos that relate to coursework that is covered by the FM program. At times, when a class meets in a classroom that doesn't have a teaching station and overhead monitor media distribution will provide the needed AV equipment. The program periodically purchases videos and sends them over to media distribution for them to manage the distribution. One drawback with turning over the videos to media distribution is that a request must be made 24 hours in advance in order to have the media delivered. Another drawback with media distribution is that it is difficult to provide a special showing of a video to a student that wants to make up the class where the video was played.

Another area that could be improved is secure reliable digital storage space for student work. Students are given some limited space that they can securely store their electronic work. There are a handful of students that never seem to get access to this storage due to technical issues with the university. Faculty has no ability to assist students except to show them where they can get their username and password.

Library Resources

Prepared by: Gary Gerber

The print and electronic resource available through FLITE is adequate for our program. FLITE keeps drawings of campus buildings on reserve for student research. These drawings need constant maintenance, which currently has to be done by faculty with coordination with physical plant personnel. A better scenario to this situation would be to get digital images for all the buildings on campus and make them available electronically. Another solution would be for library staff to take on the maintenance issue of the drawings and specifications. Both of these scenarios would undoubtedly require funding.

Conclusions

Relationship to FSU Mission

Prepared by: Diane Nagelkirk

The mission of the Facility Management program is to provide students with the educational concepts, skills and values necessary to, upon completion of the program, successfully enter into the employment market in facility management and related professions.

Through our career-oriented program, the Facility Management program directly supports the FSU mission by contributing to the workforce needs of Michigan and by preparing students to be lifelong learners in a rapidly changing and diverse world.

The Facility Management program demonstrates continued pursuit of technical, professional education that responds to the present and changing needs of the profession. As such there is a high demand for graduates of the program that results in a 98% graduate placement rate within the profession throughout the state and nation.

Program Visibility and Distinctiveness

Prepared by: Diane Nagelkirk

In comparison to other similar baccalaureate programs in the country, the Ferris' Facility Management program is unique by offering a curriculum that prepares the graduate to immediately enter the workforce or to continue for additional graduate level education in architecture or business. Added distinction comes from the foundation years acquired in the AAS Architectural Technology program. Faculty, graduates and employers have recognized the value of this associate program in contributing to the success and comprehensiveness of the baccalaureate program.

As such the program continues to be nationally recognized for producing graduates who possess the necessary entry level skills to be effective and successful employees. Survey results indicate that employers value the technical and practice-oriented skills students acquire along with their critical thinking and problem-solving skills.

Program distinction includes:

- Continuous provision of quality education that is responsive to student and employer needs and successfully competes with other FM recognized programs.
- Continued recognition by IFMA as one of only six programs in the U.S. for meeting the highest standard in FM education.
- Continued successful summer internship program. This program offers the student a rich and rewarding experience and enhances program recognition and respect.
- Successful student scholarship program both locally and nationally. One to three students annually receive IFMA Foundation Scholarships for academic achievement and recognition.
- All courses in the curriculum qualify for Certified Facility Manager maintenance points.
- Graduates successfully complete IFMA Certified Facility Management exam (CFM), regarded as the industry standard for ensuring the knowledge and abilities of practicing facility managers.

Program Value

Prepared by: Diane Nagelkirk

Demand for graduates of a "recognized" facility management program is growing and high. In addition to fulfilling this need for facility management education, the program also serves other programs in the College of Technology and in other Colleges in the University. Construction Management and HVACR students can supplement their education with the FM Minor degrees and students in the Recreation and Leadership Management Program in the College of Education, and the Resort Management Program in the College of Business enhance their education through appropriate FM coursework.

The program has an active Student Chapter of the International Facility Management Association (IFMA) that brings recognition to the university through their community service efforts and involvement in the professional West Michigan Chapter of the IFMA.

Enrollment

Prepared by: Joe Samson

Bachelor of Science in Facility Management.

Enrollment in Ferris' Facility Management program has varied over the last few years. These variations have mostly been due to the Facility Management Program's dependence on the Architectural Technology Program as a feeder for students. This supply has not been steady for various reasons. Some years there may be few graduates of the Architectural Technology program due to small initial class size or higher than average attrition. In other years larger numbers of students may choose other options such as to enter the workforce, pursue other degrees like Construction Management or Bachelor of Science in Architecture Degrees.

It is essential that the Facility Management Program become less dependent on the Architectural Technology Program as a source for students. Additional sources are: students currently in other programs, graduates of Architectural Technology Programs of community colleges, and students at other universities who leave architecture and interior design programs.

During the past two years marketing efforts have focused on the sources noted above. Consequently, for the past two years the Facility Management Program has seen increases in enrollment. If these efforts and their results continue the program may be at or near capacity.

Certificate in Facility Management.

The certificate in Facility Management, offered at Ferris' Grand Rapids campus, was discontinued in 2004 due to on-going low enrollment. It is likely that most potential students within driving distance of that campus had taken the courses. Another possible reason fewer students enrolled may have been that some had hoped to have the Bachelor of Facility Management degree also be available in Grand Rapids. This did not happen and perhaps some students saw this as a dead end.

Over the past several years the department office has received numerous requests regarding on-line Facility Management offerings. The department's response to this has been to adapt the Certificate in Facility Management to an on-line format with the first course to be offered in Fall 2005. It is hoped that the geographic problems solved by on-line delivery will revive this degree option.

Characteristics, quality and employability of Students

Prepared by: Joe Samson

During their two or four year tenure at Ferris, Facility Management students mature into sought after facility management professionals. Most FM students come to Ferris with the hope of becoming architectural technicians or architects. Many find that a career in architecture is not a proper fit or some have less than adequate academic skills. As such, students are drawn towards the FM program which offers many opportunities for a career in the built environment. Typically by the senior year of their academic career at Ferris they have become focused, competent, and responsible professionals.

As was mentioned in Section 2A, alumni report a doubling of salary from the time of hire. They also acquire more positions that require more responsibility. Ninety percent are employed within 6 months of graduation. Alumni are also very satisfied with their Ferris education.

In Section 2B, employers report their high satisfaction with Ferris' Facility Management graduates. As the Internship Coordinator for the past two years, I have read the comments of the interns' supervisors and all have been exceptionally impressed. Several sites have asked for additional interns next year. This year the General Accounting Office of the United States Government contacted our department, interviewed, and hired one of our graduates. They hope to do the same next year. Feedback was also received by phone from another employer who had hired two of our alums in the past 6 months. He was extremely pleased with the skills and work ethic of these alums. These are only a few examples of many successes of the facility management program's interns and alums.

In conclusion, Ferris' Facility Management graduates possess strong technical, management, and people skills; skills that help them to obtain an entry level job and provide a base to grow into future positions that require greater demands and challenges.

Quality of curriculum and instruction

Prepared by: Joe Samson

Ferris' Facility Management curriculum is designed to provide students with practical skills as well as theoretical knowledge of how to manage work environments to meet the needs of their users. The curriculum is based on a sound knowledge of buildings and how they are documented which is gained through completion of the Architectural Technology curriculum. In the two years of the Facility Management curriculum, these skills are enhanced and new concepts are added. The new concepts focus on the business and management aspects of running a facility.

A unique feature of Ferris' Facility Management curriculum is that it was originally designed to expose students to the competency areas identified by the International Facility Management Association (IFMA). Since that time it has been adjusted to keep pace with changes to the profession as identified by IFMA, advisory board members, and other facility professionals. Thus, the curriculum is not based solely on theory, but also evolved from practice.

While there is always room for improvement in curriculum content and instructional methods, the current situation is satisfactory as reported by students, alumni, employers, advisory board members and faculty in Section 2 of this report.

Composition and quality of faculty

Prepared by: Joe Samson

To date all faculty members have been licensed architects, Certified Facility Managers, or both.

From its inception until the academic year of 2005-06 the model has been to have one faculty member teach the bulk of Facility Management courses, with two faculty members teaching in both the Architectural Technology and Facility Management programs.

This model was developed for a several reasons. First, with the exception of one current faculty member, none have experience working as Facility Managers. Second, since Ms. Hardy lacked technical credentials, it was necessary to build her load with non-technical courses. Hence she taught most Facility Management courses. Third, some Architectural Technology faculty preferred to not teach in the Facility Management area.

This situation has served to factionalize the faculty into an Architectural Technology camp and a Facility Management camp. This rivalry has not been good for the department. Specifically, it has hindered building a unified department. This leads students to perceive a lack of support for Facility Management by some faculty and may impact enrollment. Also, having a limited number of faculty teaching Facility Management courses limits the students' experience, since they are deprived of a more diverse experience and of the various perspectives that are introduced when multiple faculty teach courses.

To remedy this situation, all but one departmental faculty member have agreed to teach at least one Facility Management course. These new faculty will bring new perspectives and practical experience to the program. Faculty will be phased into courses starting in Fall 2005.

With the upcoming retirement of Mel Kantor after Winter semester 2006, the selection of his replacement will be crucial to the program. The new faculty member should complement and supplement the skills of current faculty members. Thus relevant experience as a practicing Facility Manager is essential. An area in which current faculty have limited experience is Operations and Maintenance. Ideally the new faculty member will have experience in this area. Most importantly is to have someone who does more than teach and advise. Someone who is willing to put the department and its students first is essential as well as someone who is willing to work with the current faculty to form a vision of the future and work toward it.

FERRIS STATE UNIVERSITY
COLLEGE OF TECHNOLOGY

FACILITIES MANAGEMENT
BACHELOR OF SCIENCE DEGREE

Curriculum Guide Sheet

BS Degree Minimum General Education Requirements

(See the General Education webpage at www.ferris.edu/HTMLS/academics/gened/gened.html for details and acceptable courses in each program)

Communications Competence: 12 semester hours

Quantitative Skills: MATH 115 or ACT score

Scientific Understanding: 7/8 semester hours including at least one lab course

Cultural Enrichment: 9 semester hours, including at least one course 200 level or higher.

Social Awareness: 9 semester hours, including at least one Foundation course and at least one 300 level or higher.

At least one Global Consciousness (G) course and one Race/Ethnicity/Gender (REG) course (within Cultural Enrichment or Social Awareness)

Meeting all requirements for graduation is the student's responsibility. Your advisor is available to assist you.

Total semester hours required for graduation: 68

			CREDIT	GRADE
THIRD YEAR - FALL SEMESTER (15 Semester Hours)				
FMAN	321	Principles of FMAN (enrolled in FMAN or instructor's permission)	3	
ENGL	311	Advanced Technical Writing (ENGL 250)	3	
MGMT	301	Applied Management (junior standing or permission)	3	
PSYC	326	Industrial-Organizational Psychology (PSYC 150)	3	
STQM	260	Introductory Statistics (MATH 115)	3	
THIRD YEAR - WINTER SEMESTER (15 Semester Hours)				
FMAN	309	Comp Appl. for FMAN (FMAN 321, ACAD comp. or instr perm)	3	
FMAN	322	Project Management (FMAN 321 or instructor's permission)	3	
FMAN	331	Facility Prog. & Design Process (FMAN 321)	3	
BLAW	221	Elementary Business Law	3	
ECON	221	Principles of Economics 1 (MATH 110)	3	
THIRD YEAR - SUMMER SEMESTER (4 Semester Hours)				
FMAN	393	F-M Internship (completion of JR year or instructor's permission)	4	
FOURTH YEAR - FALL SEMESTER (18 Semester Hours)				
FMAN	431	Concepts of Space Planning (FMAN 331)	3	
FMAN	441	Property Development & Planning (FMAN 321, BLAW 221)	3	
FMAN	451	Bldg. Diagnostics & Operations (FMAN 321)	3	
ACCT	201	Principles of Accounting 1 (MATH 110)	3	
ECON	222	Principles of Economics 2 (ECON 221)	3	
ELECTIVE		Cultural Enrichment Elective	3	
FOURTH YEAR - WINTER SEMESTER (16 Semester Hours)				
FMAN	432	Interior Design for Facility Managers (FMAN 431)	3	
FMAN	499	Capstone Assessment Thesis (FMAN 393 and senior status)	3	
HVAC	483	HVACR Building Systems	3	
BIOL	111	Environmental Biology	4	
ELECTIVE		Cultural Enrichment Elective	3	

This Curriculum Guide is for students who have completed the Architectural Technology program at Ferris State University.

CURRICULUM REQUIREMENTS
FACILITIES MANAGEMENT
BACHELOR OF SCIENCE DEGREE

ENTRY CRITERIA:

1. Application for admission should be submitted by February 15 prior to fall semester requested.
2. Associate Degree from Architectural Technology , equivalent program, or approval of AT/FM faculty*
3. A minimum 2.0 honor point average in major coursework.
4. A minimum 2.0 honor point average in all coursework in the AAS curriculum.

TECHNICAL			CREDIT HOURS
FMAN	309	Computer Application for FMAN	3
FMAN	321	Principles of Facility Management	3
FMAN	322	Project Management	3
FMAN	331	Facility Programming & Design Proc.	3
FMAN	393	Facilities Management Internship	4
FMAN	431	Concepts of Space Planning	3
FMAN	432	Interior Design for Facility Managers	3
FMAN	441	Property Develop. & Planning	3
FMAN	451	Bldg. Diagnostics & Operations	3
FMAN	499	Capstone Assessment Thesis	3
Technical Related			
HVAC	483	HVACR Building Systems	3
ACCT	201	Principles of Accounting 1	3
BLAW	221	Elementary Business Law	3
MGMT	301	Applied Management	3
STQM	260	Introductory Statistics	3

GENERAL EDUCATION			CREDIT HOURS
Communication Competence			
ENGL	311	Advanced Technical Writing	3
Scientific Understanding			
BIOL	111	Environmental Biology	4
Quantitative Skills			
Cultural Enrichment			
Electives			6
Social Awareness			
ECON	221	Principles of Economics 1	3
ECON	222	Principles of Economics 2	3
PSYC	326	Industrial-Organizational Psychology	3

*Students not holding an AAS degree in Architectural Technology from Ferris State University may require additional courses to meet University General Education Requirements as listed in the current Ferris State University Catalog. These students must contact the Architectural Technology/Facilities Management Department Chair to determine their individual curriculum requirements prior to enrolling in the program.

Department Chair: Diane Nagelkirk
Office: SWN 312
Phone 231-591-2630
Email: nagelkid@ferris.edu

FERRIS STATE UNIVERSITY
COLLEGE OF TECHNOLOGY

FACILITY MANAGEMENT MINOR DEGREE
FACILITY OPERATIONS MANAGEMENT MINOR
Curriculum Guide Sheet
Total semester hours: 19

Name: _____ **Student ID:** _____

Admittance requirements:

This minor degree is open to all students enrolled at Ferris State University pursuing Baccalaureate or higher degrees in majors other than Facility Management. Students are expected to meet prerequisites for all courses.

Students are required to meet with their FMAN faculty advisor to plan and track their progress throughout the minor degree.

Degree requirements:

19 semester hours; GPA of 2.0 or higher in minor degree courses; 50% of credits must be 300+ level and 50% of credits must be completed at FSU.

Required Courses:

ARCH	112	Structural Materials, Systems and Codes	4 (3+2)
ARCH	115	Interior and Exterior Finishes and Systems (ARCH 112)	3 (3+0)
FMAN	321	Principles of Facility Management	3 (3+0)
FMAN	322	Project Management (co-pre. FMAN 321)	3 (3+0)
FMAN	451	Planning and Budgeting for Operations (FMAN 321)	3 (3+0)
HVAC	483	HVACR Building Systems	3 (3+0)

Suggested Course Sequence:

FALL SEMESTER (sophomore or junior year)			**Credits/Grades**
ARCH	112	Structural Materials, Systems and Codes	4
FMAN	321	Principles of Facility Management	3
WINTER SEMESTER (sophomore or junior year)			
ARCH	115	Interior and Exterior Finishes and Systems (ARCH 112)	3
HVAC	483	HVACR Building Systems	3
FALL SEMESTER (junior or senior year)			
FMAN	322	Project Management (co-pre. FMAN 321)	3
FMAN	451	Planning and Budgeting for Operations (FMAN 321)	3

FERRIS STATE UNIVERSITY
COLLEGE OF TECHNOLOGY

FACILITY MANAGEMENT MINOR DEGREE
FACILITY PLANNING MANAGEMENT MINOR
Curriculum Guide Sheet
Total semester hours: 19

Name:_____ **Student ID:**_____

Admittance requirements:

This minor degree is open to all students enrolled at Ferris State University pursuing Baccalaureate or higher degrees in majors other than Facility Management. Students are expected to meet prerequisites for all courses.

Students are required to meet with their FMAN faculty advisor to plan and track their progress throughout the minor degree.

Degree requirements:

19 semester hours; GPA of 2.0 or higher in minor degree courses; 50% of credits must be 300+ level and 50% of credits must be completed at FSU.

Required Courses:

ARCH	112	Structural Materials, Systems and Codes	4 (3+2)
ARCH	115	Interior and Exterior Finishes and Systems (ARCH 112)	3 (3+0)
FMAN	321	Principles of Facility Management	3 (3+0)
FMAN	322	Project Management (co-pre. FMAN 321)	3 (3+0)
FMAN	331	Facility Programming and the Design Process (FMAN 321)	3 (3+0)
FMAN	441	Property Development and Planning (FMAN 321)	3 (3+0)

Suggested Course Sequence:

FALL SEMESTER (sophomore or junior year)			**Credits/Grades**
ARCH	112	Structural Materials, Systems and Codes	4_____
FMAN	321	Principles of Facility Management	3_____
WINTER SEMESTER (sophomore or junior year)			
ARCH	115	Interior and Exterior Finishes and Systems (ARCH 112)	3_____
FMAN	441	Property Development and Planning (FMAN 321)	3_____
FALL SEMESTER (junior or senior year)			
FMAN	322	Project Management (co-pre. FMAN 321)	3_____
FMAN	331	Facility Programming and the Design Process (FMAN 321)	3_____

FERRIS STATE UNIVERSITY – COLLEGE OF TECHNOLOGY
Architectural Technology and Facility Management Department

Program Review Baccalaureate Degree in Facility Management
Alumni Survey

Background Information:

1. What year did you graduate with your Bachelor of Science in Facility Management Degree? _____

2. Did you attend Ferris immediately before entering the Facility Management Program?
   a. Yes.
   b. No. What institution did you attend prior to Ferris? _____

3. What educational background did you have prior to entering Ferris' Facility Management program?
   a. Ferris' Associate Degree in Architectural Technology Program.
   b. Another Architectural Technology Program.
      Name Institution: _____
   c. Transferred from another Ferris program.
      Name the program: _____
   d. Transferred from a non-architectural program at another institution.
      Name Institution: _____

4. How did you learn of Ferris' Facility Management Program?
   a. Through Ferris' Architectural Technology program.
   b. From advisor at other school. Name of institution: _____
   c. From visit by Ferris faculty to another school.
      Name of institution: _____
   d. From IFMA.
   e. Other: _____

5. What attracted you most to Ferris' Facility Management Program?
   a. That it laddered directly from Ferris' Architectural Technology Program.
   b. That it laddered directly from another school's Architectural Technology Program.
   c. Location.
   d. Job potential and opportunities.
   e. Salary potential.
   f. Recognized by IFMA.
   g. Would enjoy that type of work.
   h. Other: _____

6. When did you decide to pursue Facility Management as a career?
   a. In high school.
   b. While attending Ferris' Associate in Architectural Technology Program.
   c. While attending another school's Architectural Technology Program.
   d. While attending another program at Ferris.
   e. While attending a non-architectural program at another institution.
   f. Other: _____

GO ON TO NEXT PAGE →

7. Have you continued your education after graduation from the Facility Management Program?
   a. Yes. Name of Program: _____
      Name of Institution: _____
   b. No.

8. Do you currently live in Michigan?
   a. Yes. City: _____
   b. No. Where do you live? City: _____ State: _____

Initial Employment Information:

9. How flexible were you geographically when considering job opportunities? Circle more than one if applicable.
   a. Willing to move anywhere.
   b. Willing to move to certain regions.
   c. Not willing to move to rural areas.
   d. Not willing to move to heavily populated urban areas.
   e. Not willing to move outside Michigan.
   f. Not willing to move outside home town.

10. How long after graduation were you offered a Facility Management related job?
   a. Had job prior to graduation.
   b. Had job within one month of graduation.
   c. Had job within three months of graduation.
   d. Had job within 6 months of graduation.
   e. Had job within one year of graduation.
   f. Took more than one year.
   g. Other: _____

11. Did you use Ferris' Career Center placement services in searching for your first job?
   a. Yes.
   b. No.

11a. If you answered Yes to the previous question, did you find your first job through Ferris' Career Center placement services?
   a. Yes.
   b. No.

12. How would you categorize your first Facility Management related job?
   a. Full time.
   b. Part time.
   c. Temporary or contract.
   d. Other: _____

13. What was your starting annual salary at your first Facility Management related job?
   a. Below $20,000.
   b. $20,001-$25,000.
   c. $25,001-$30,000.
   d. $30,001-$35,000.
   e. $35,001-$40,000.
   f. $40,001-$45,000.
   g. $45,001-$50,000.
   h. More than $50,000.

GO ON TO NEXT PAGE →

14. What was your title at your first Facility Management related job? _____

15. Which of the following best describes your primary function at your first Facility Management related job?
    a. Facility Manager.
    b. Construction Manager.
    c. Project Manager.
    d. Operations Manager.
    e. Facility Planner.
    f. Space Planner.
    g. Facility Staff.
    h. Other: _____

Current Job Information:

16. Do you still work within the field of Facility Management?
    a. Yes.
    b. No.

16a. If yes, which of the following best describes your primary function at your current job?
    a. Facility Manager.
    b. Construction Manager.
    c. Project Manager.
    d. Operations Manager.
    e. Facility Planner.
    f. Space Planner.
    g. Facility Staff.
    h. Executive (Assistant VP and above)
    i. Consultant.
    j. Other: _____

16b. If no, why did you choose to work in a field other than Facility Management?

17. What is your current title? _____

18. What is your current annual salary?
    a. Under $30,000.
    b. $30,001-$40,000.
    c. $40,001-$50,000.
    d. $50,001-$60,000.
    e. $60,001-$70,000.
    f. $70,001-$80,000.
    g. More than $80,000.

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Overall Satisfaction with Ferris' Facility Management Degree:
Circle the rating that most appropriately identifies your level of satisfaction.

	Not at all	Not very	Neutral	Very	Extremely	Unsure
19. How satisfied are you with the quality of the education you received through Ferris' Facility Management program?	1	2	3	4	5	?

Preparation in specific skill areas:
Circle the rating that most appropriately identifies how well the Facility Management degree prepared you for each of the tasks listed. ***Consider the preparation as appropriate for an entry level position.***

	Not at all	Poorly	Average	Good	Excellent	Unsure or not applicable
General Skills:						
20. Responsibility, self management.	1	2	3	4	5	NA
21. Mathematical skills.	1	2	3	4	5	NA
22. Critical thinking and problem solving.	1	2	3	4	5	NA
23. Ability to find, understand, and use information.	1	2	3	4	5	NA
Communication:						
24. Communicate effectively through writing.	1	2	3	4	5	NA
25. Communicate effectively orally.	1	2	3	4	5	NA
26. Ability to gain rapport with "clients".	1	2	3	4	5	NA
27. Understand specifications.	1	2	3	4	5	NA
28. Write specifications.	1	2	3	4	5	NA
Finance:						
29. Understand budgets.	1	2	3	4	5	NA
30. Manage budgets.	1	2	3	4	5	NA
31. Plan budgets.	1	2	3	4	5	NA
32. Understand contracts.	1	2	3	4	5	NA
33. Write contracts.	1	2	3	4	5	NA
34. Negotiate contracts.	1	2	3	4	5	NA
35. Develop cost estimates for construction.	1	2	3	4	5	NA

GO ON TO NEXT PAGE →

	Not at all	Poorly	Average	Good	Excellent	Unsure or not applicable
Human and Environmental Factors:						
36. Understand and deal with environmental issues.	1	2	3	4	5	NA
37. Understand and deal with life safety issues.	1	2	3	4	5	NA
38. Understand the effect of environment on human behavior.	1	2	3	4	5	NA
Leadership and Management:						
39. Conduct self in ethical manner.	1	2	3	4	5	NA
40. Participate as team member.	1	2	3	4	5	NA
41. Work with individuals of diverse backgrounds.	1	2	3	4	5	NA
42. Manage processes effectively.	1	2	3	4	5	NA
43. *Operations and Maintenance:* Understand operations and maintenance issues.	1	2	3	4	5	NA
44. Understand mechanical building systems.	1	2	3	4	5	NA
45. Understand electrical building systems.	1	2	3	4	5	NA
46. Understand HVACR building systems.	1	2	3	4	5	NA
Planning and Project Management:						
47. Architectural aesthetics.	1	2	3	4	5	NA
48. Space/master planning.	1	2	3	4	5	NA
49. Interior design.	1	2	3	4	5	NA
50. Construction methods/practices.	1	2	3	4	5	NA
51. Project management.	1	2	3	4	5	NA
52. Move management.	1	2	3	4	5	NA
Quality Assessment and Innovation:						
53. Able to understand and use industry benchmarks.	1	2	3	4	5	NA

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		Not at all	Poorly	Average	Good	Excellent	Unsure or not applicable
54.	Able to monitor and assess quality of facility services.	1	2	3	4	5	NA
55.	Able to analyze and re-engineer methods to provide facility services.	1	2	3	4	5	NA
	Real Estate:						
56.	Able to understand real estate related contracts.	1	2	3	4	5	NA
57.	Able to understand leasing process.	1	2	3	4	5	NA
58.	Able to understand the purchase and sale of real estate.	1	2	3	4	5	NA
	Technology:						
59.	Use of CAD software.	1	2	3	4	5	NA
60.	Use of generic software such as Microsoft Office.	1	2	3	4	5	NA
61.	Use of FM software.	1	2	3	4	5	NA

Comments:

END OF SURVEY.
THANK YOU!

FERRIS STATE UNIVERSITY - COLLEGE OF TECHNOLOGY
Architectural Technology and Facility Management Department

Program Review — Baccalaureate Degree in Facility Management
Employer Survey

Please rate the overall performance of graduates of the Facility Management program in the following areas by circling the appropriate rating for each statement.

	Foundation Skills and Competencies	Poor	Below average	Average	Good	Excellent	Don't know
	General Skills:						
1.	Exhibits an appropriate level of responsibility and self management.	1	2	3	4	5	NA
2.	Possesses adequate mathematical skills.	1	2	3	4	5	NA
3.	Uses critical thinking, problem solving, and decision making skills.	1	2	3	4	5	NA
4.	Acquires, interprets, and uses information effectively.	1	2	3	4	5	NA
	Communication:						
5.	Demonstrates effective written communication skills.	1	2	3	4	5	NA
6.	Demonstrates effective oral communication skills.	1	2	3	4	5	NA
7.	Possesses the ability to gain rapport with "clients".	1	2	3	4	5	NA
8.	Demonstrates ability to understand specifications.	1	2	3	4	5	NA
9.	Demonstrates ability to write specifications.	1	2	3	4	5	NA
	Finance:						
10.	Identifies, organizes, plans, and allocates resources effectively.	1	2	3	4	5	NA
11.	Demonstrates understanding of budgeting process, finance, and accounting.	1	2	3	4	5	NA
12.	Demonstrates leadership and negotiation skills.	1	2	3	4	5	NA
13.	Ability to develop contracts and negotiate with vendors.	1	2	3	4	5	NA

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	Foundation Skills and Competencies	Poor	Below average	Average	Good	Excellent	Don't know
14.	Demonstrates ability to develop cost estimates.	1	2	3	4	5	NA
	Human and Environmental Factors:						
15.	Demonstrates understanding of environmental issues.	1	2	3	4	5	NA
16.	Demonstrates understanding of safety issues.	1	2	3	4	5	NA
17.	Demonstrates awareness of the effect of environment on human behavior.	1	2	3	4	5	NA
	Leadership and Management:						
18.	Chooses ethical courses of action.	1	2	3	4	5	NA
19.	Participates as a team member.	1	2	3	4	5	NA
20.	Works well with individuals from diverse backgrounds.	1	2	3	4	5	NA
21.	Understands and applies sound management practices.	1	2	3	4	5	NA
	Operations and Maintenance:						
22.	Demonstrates understanding of operations and maintenance issues.	1	2	3	4	5	NA
23.	Demonstrates understanding of mechanical building systems.	1	2	3	4	5	NA
24.	Demonstrates understanding of electrical building systems.	1	2	3	4	5	NA
25.	Demonstrates understanding of HVACR building systems.	1	2	3	4	5	NA
	Planning and Project Management:						
26.	Demonstrates understanding of aesthetic issues.	1	2	3	4	5	NA
27.	Possesses space/master planning abilities.	1	2	3	4	5	NA
28.	Demonstrates understanding of interior design issues.	1	2	3	4	5	NA
29.	Demonstrates understanding of construction methods and practices.	1	2	3	4	5	NA
30.	Demonstrates ability to develop project schedules.	1	2	3	4	5	NA

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	Foundation Skills and Competencies	Poor	Below average	Average	Good	Excellent	Don't know
31.	Demonstrates ability to manage projects.	1	2	3	4	5	NA
32.	Demonstrates ability to plan and manage moves.	1	2	3	4	5	NA
33.	*Quality Assessment and Innovation:* Demonstrates ability to utilize industry benchmarks.	1	2	3	4	5	NA
34.	Demonstrates ability to monitor and assess quality of facility services.	1	2	3	4	5	NA
35.	Demonstrates ability to analyze and re-engineer methods of providing facility services.	1	2	3	4	5	NA
36.	*Real Estate:* Demonstrates understanding of Real Estate related contracts.	1	2	3	4	5	NA
37.	Demonstrates understanding of the leasing process.	1	2	3	4	5	NA
38.	Demonstrates understanding of the purchase and sale of real estate.	1	2	3	4	5	NA
39.	*Technology:* Effectively utilizes CAD software.	1	2	3	4	5	NA
40.	Effectively utilizes generic software such as Microsoft Office.	1	2	3	4	5	NA
41.	Effectively utilizes FM software.	1	2	3	4	5	NA

Comments:

FERRIS STATE UNIVERSITY - COLLEGE OF TECHNOLOGY
Architectural Technology and Facility Management Department

Program Review **Baccalaureate Degree in Facility Management**

Student Survey

Background information: (circle your answer)

1. What is your current academic status within the FM program?
   a. Junior
   a. Senior

2. What is your current GPA?
   a. Above 3.5
   b. 3.0 to 3.49
   c. 2.5 to 2.99
   d. 2.0 to 2.49
   e. Less than 2.0

3. When you ***first*** chose to attend Ferris, why did you choose it over other universities?
   a. Cost.
   b. Location.
   c. Reputation.
   d. For a specific program. Name of program: _____
   e. Other: Explain. _____

4. How did you enter the FM program?
   a. Directly from Ferris' AT program.
   b. Directly from another college or university's AT program.
      Name of Institution: _____
      Name of Program: _____
   c. Transferred from another FSU program.
      Name of Program: _____
   d. Other: Explain: _____

5. How did you become aware of Facility Management as a career?
   a. From advisor at Ferris.
   b. From advisor at other institution.
      Name of other institution: _____
   c. Through career day.
      Where was career day held? _____
   d. From visit of Ferris Facility Management Faculty to your previous school.
      Name of institution: _____
   e. Other: Explain: _____

6. What attracted you most to Ferris' Facility Management Program?
   a. That it laddered directly from Ferris' Architectural Technology Program.
   b. That it laddered directly from another school's Architectural Technology Program.
   c. Location.
   d. Job potential and opportunities.
   e. Salary potential.
   f. Recognized by IFMA.
   g. Would enjoy that type of work.
   h. Other: _____

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7. When did you decide to pursue Facility Management as a career?
   a. In high school.
   b. While attending Ferris' Associate in Architectural Technology Program.
   c. While attending another school's Architectural Technology Program.
   d. While attending another program at Ferris.
   e. While attending a non-architectural program at another institution.
   f. Other: _____

8. Are you satisfied with your decision to attend FSU?
   a. Yes. Why?

   b. No. Why not?

9. Are you satisfied with your decision to study Facility Management?
   c. Yes. Why?

   d. No. Why not?

Program information:

Please rate the overall performance of Ferris and the Facility Management program in the areas listed below. Indicate your response by circling the appropriate number in the scale to the right of each statement. Circle NA if the statement does not apply to you or if you feel you do not have sufficient experience to properly respond.

	Poor	Below average	Average	Good	Excellent	Don't know
Courses in your program area are:						
10. Based on realistic prerequisites.	1	2	3	4	5	NA
11. Available and conveniently located.	1	2	3	4	5	NA
Written objectives for courses in your program:						
12. Are available to students in course syllabus.	1	2	3	4	5	NA
13. Describe what you will learn in the course.	1	2	3	4	5	NA
14. Are used by instructor to keep students aware of their progress.	1	2	3	4	5	NA
Teaching methods, procedures, and course content:						
15. Meet projected student career needs, interests, and objectives.	1	2	3	4	5	NA
16. Provide supervised practice for developing skills.	1	2	3	4	5	NA
Program faculty:						
17. Know the subject matter.	1	2	3	4	5	NA
18. Are available to provide help when needed.	1	2	3	4	5	NA
19. Provide instruction so it is interesting.	1	2	3	4	5	NA
20. Provide instruction so it is understandable.	1	2	3	4	5	NA
21. Organize coursework well.	1	2	3	4	5	NA
22. Are prepared with clearly set goals for the course.	1	2	3	4	5	NA

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	Poor	Below average	Average	Good	Excellent	Don't know
Related course faculty (such as English, Math, Science, etc.)						
23. Know the subject matter.	1	2	3	4	5	NA
24. Are available to provide help when needed.	1	2	3	4	5	NA
25. Provide instruction so it is interesting.	1	2	3	4	5	NA
26. Provide instruction so it is understandable.	1	2	3	4	5	NA
27. Organize coursework well.	1	2	3	4	5	NA
28. Are prepared with clearly set goals for the course.	1	2	3	4	5	NA
Program classrooms (classrooms used solely for ATFM courses):						
29. Are aesthetically pleasing.	1	2	3	4	5	NA
30. Provide appropriate lighting.	1	2	3	4	5	NA
31. Have equipment and furnishings that are ergonomically appropriate.	1	2	3	4	5	NA
32. Provide adequate ventilation.	1	2	3	4	5	NA
33. Are comfortable temperature.	1	2	3	4	5	NA
34. Include enough work stations for students enrolled in courses.	1	2	3	4	5	NA
35. Are safe, functional, and well maintained.	1	2	3	4	5	NA
36. Are open adequate hours.	1	2	3	4	5	NA
37. Are open when students are most likely to use them.	1	2	3	4	5	NA
38. Are accessible and barrier free	1	2	3	4	5	NA
Related course classrooms (classrooms used for non-ATFM courses. IE. Gen Ed):						
39. Are aesthetically pleasing.	1	2	3	4	5	NA
40. Provide appropriate lighting.	1	2	3	4	5	NA
41. Have equipment and furnishings that are ergonomically appropriate.	1	2	3	4	5	NA
42. Provide adequate ventilation.	1	2	3	4	5	NA
43. Are comfortable temperature.	1	2	3	4	5	NA
44. Include enough seats, desks, tables, etc. for students enrolled in courses.	1	2	3	4	5	NA
45. Are safe, functional, and well maintained.	1	2	3	4	5	NA
46. Are accessible and barrier free.	1	2	3	4	5	NA
Program instructional equipment is:						
47. Is current and representative of industry.	1	2	3	4	5	NA
48. Is provided in sufficient quantity to avoid long delays in use.	1	2	3	4	5	NA
Instructional materials (i.e., textbooks, reference books, etc.) are:						
49. Current and meaningful to the subject.	1	2	3	4	5	NA
50. Available and conveniently located for use.	1	2	3	4	5	NA

Instructional support services (i.e., tutoring, lab assistance, etc.) are:

51.	Available to meet student needs and interests.	1	2	3	4	5	NA
52.	Provided by knowledgeable and interested staff.	1	2	3	4	5	NA

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Placement services are available to:

53.	Help students identify employment opportunities.	1	2	3	4	5	NA
54.	Help students prepare to apply for job applications.	1	2	3	4	5	NA

Comments:

END OF SURVEY.
THANK YOU!

FERRIS STATE UNIVERSITY - COLLEGE OF TECHNOLOGY
Architectural Technology and Facility Management Department

Program Review **Baccalaureate Degree in Facility Management**

Faculty Survey

CURRICULUM AND ADMISSION STANDARDS:

Please rate the overall performance of Ferris and the Facility Management program in the areas listed below. Indicate your response by circling the appropriate rating to the right of each statement. Circle NA if the statement does not apply or if you feel you are not adequately familiar with the issue.

	Poor	Below average	Average	Good	Excellent	Don't know
1. Preparation of graduates for entry level Facility Management positions.	1	2	3	4	5	NA
2. Preparation of graduates for further study. IE. MBA or MArch.	1	2	3	4	5	NA
3. Preparation of graduates for promotion within the Facility Management profession.	1	2	3	4	5	NA
4. Quality of general education of Facility Management graduates.	1	2	3	4	5	NA
5. Ability of Facility Management graduates to work independently.	1	2	3	4	5	NA
6. Preparation of Facility Management graduates for lifelong learning.	1	2	3	4	5	NA

For the following statements, indicate whether you agree or disagree by circling the appropriate rating to the right of each statement.

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Don't know
7. The AAS in Architectural Technology provides a strong background for the study of Facility Management.	1	2	3	4	5	NA
8. It is appropriate to accept junior level students from other programs and only require completion of: ARCH 102, ARCH 109, ARCH 112, ARCH 115, and HVAC 337.	1	2	3	4	5	NA
9. The On-line Certificate program will be valuable to persons working within FM who wish to expand their understanding of the profession.	1	2	3	4	5	NA
10. The current admission standard of a 2.0 GPA is appropriate.	1	2	3	4	5	NA

Go on to next page →

Circle the rating that most appropriately identifies how well you believe the Ferris' Facility Management degree prepares graduates for each of the tasks listed. The first category deals with general skills only. The remaining categories are the nine competency areas the International Facility Management Association expects Certified Facility Managers to possess. ***Consider the preparation as appropriate for an entry level position.***

	Not at all	Poor	Average	Good	Excellent	Unsure or not applicable
General Skills:						
11. Responsibility, self management.	1	2	3	4	5	NA
12. Mathematical skills.	1	2	3	4	5	NA
13. Critical thinking and problem solving.	1	2	3	4	5	NA
14. Ability to find, understand and use information.	1	2	3	4	5	NA
Communication:						
15. Communicates effectively through writing.	1	2	3	4	5	NA
16. Communicates effectively orally.	1	2	3	4	5	NA
17. Ability to gain rapport with "clients".	1	2	3	4	5	NA
18. Understands specifications.	1	2	3	4	5	NA
19. Ability to write specifications.	1	2	3	4	5	NA
Finance:						
20. Understands budgets.	1	2	3	4	5	NA
21. Manages budgets.	1	2	3	4	5	NA
22. Plans budgets.	1	2	3	4	5	NA
23. Understands contracts.	1	2	3	4	5	NA
24. Ability to write contracts.	1	2	3	4	5	NA
25. Ability to negotiate contracts.	1	2	3	4	5	NA
26. Ability to develop cost estimates for construction.	1	2	3	4	5	NA

Go on to next page →

		Not at all	Poor	Average	Good	Excellent	Unsure or not applicable
	Human and Environmental Factors:						
27.	Demonstrates understanding of environmental issues.	1	2	3	4	5	NA
28.	Demonstrates understanding of safety issues.	1	2	3	4	5	NA
29.	Demonstrates awareness of the effect of environment on human behavior.	1	2	3	4	5	NA
	Leadership and Management:						
30.	Chooses ethical courses of action.	1	2	3	4	5	NA
31.	Participates as a team member.	1	2	3	4	5	NA
32.	Works well with individuals from diverse backgrounds.	1	2	3	4	5	NA
33.	Understands and applies sound management practices.	1	2	3	4	5	NA
	Operations and Maintenance:						
34.	Understands operations and maintenance issues.	1	2	3	4	5	NA
35.	Understands mechanical building systems.	1	2	3	4	5	NA
36.	Understands electrical building systems.	1	2	3	4	5	NA
37.	Understands HVACR building systems.	1	2	3	4	5	NA
	Planning and Project Management:						
38.	Architectural aesthetics.	1	2	3	4	5	NA
39.	Space/master planning.	1	2	3	4	5	NA
40.	Interior design.	1	2	3	4	5	NA
41.	Construction methods/practices.	1	2	3	4	5	NA
42.	Project management.	1	2	3	4	5	NA
43.	Move management.	1	2	3	4	5	NA
	Quality Assessment and Innovation:						
44.	Able to understand and use industry benchmarks.	1	2	3	4	5	NA

Go on to next page →

	Not at all	Poor	Average	Good	Excellent	Unsure or not applicable
45. Able to monitor and assess quality of facility services.	1	2	3	4	5	NA
46. Able to analyze and re-engineer methods to provide facility services.	1	2	3	4	5	NA
Real Estate:						
47. Demonstrates understanding of real estate related contracts.	1	2	3	4	5	NA
48. Demonstrates understanding of leasing process.	1	2	3	4	5	NA
49. Demonstrates understanding of the purchase and sale of real estate.	1	2	3	4	5	NA
Technology:						
50. Use of CAD software.	1	2	3	4	5	NA
51. Use of generic software such as Microsoft Office.	1	2	3	4	5	NA
52. Use of FM software.	1	2	3	4	5	NA

Comments:

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RESOURCES AND SUPPORT:

Please rate the overall performance of Ferris' Facility Management program in the areas listed below. Indicate your response by circling the appropriate rating to the right of each statement. Circle NA if the statement does not apply or if you feel you are not adequately familiar with the issue.

The University and College Administration:

	Not at all	Poor	Average	Good	Excellent	Unsure or not applicable
53. Provides the program with necessary financial resources to perform effectively.	1	2	3	4	5	NA
54. Provides the program with necessary teaching spaces to perform effectively.	1	2	3	4	5	NA
55. Provides the program with the necessary equipment to perform effectively.	1	2	3	4	5	NA
56. Provides the program with the necessary instructors to perform effectively.	1	2	3	4	5	NA

Program classrooms (classrooms used solely for ATFM courses):

	Poor	Below average	Average	Good	Excellent	Don't know
57. Are aesthetically pleasing.	1	2	3	4	5	NA
58. Provide appropriate lighting.	1	2	3	4	5	NA
59. Have equipment and furnishings that are ergonomically appropriate.	1	2	3	4	5	NA
60. Provide adequate ventilation.	1	2	3	4	5	NA
61. Are comfortable temperature.	1	2	3	4	5	NA
62. Include enough work stations for students enrolled in courses.	1	2	3	4	5	NA
63. Are safe, functional, and well maintained.	1	2	3	4	5	NA
64. Are open adequate hours.	1	2	3	4	5	NA
65. Are open when students are most likely to use them	1	2	3	4	5	NA
66. Are barrier free and accessible	1	2	3	4	5	NA

Program instructional equipment is:

67. Current and representative of industry.	1	2	3	4	5	NA
68. Provided in sufficient quantity to avoid long delays in use.	1	2	3	4	5	NA

Instructional materials (i.e., textbooks, reference books, etc.) are:

69.	Current and meaningful to the subject.	1	2	3	4	5	NA
70.	Available and conveniently located for use.	1	2	3	4	5	NA

Instructional support services (i.e., tutoring, lab assistance, etc.) are:

71.	Available to meet student needs and interests.	1	2	3	4	5	NA
72.	Provided by knowledgeable and interested staff.	1	2	3	4	5	NA

Comments:

END OF SURVEY.
THANK YOU!

FMFacSurPR05

FERRIS STATE UNIVERSITY - COLLEGE OF TECHNOLOGY
Architectural Technology and Facility Management Department

Program Review Baccalaureate Degree in Facility Management
Advisory Committee Survey

Please rate the overall performance of graduates of the Facility Management program in the following areas by circling the appropriate rating for each statement.

		Poor	Below average	Average	Good	Excellent	Don't know
	General:						
1.	Overall the FM program meets the needs of the profession.	1	2	3	4	5	NA
2.	Program content provides relevant education and skills needed by the profession.	1	2	3	4	5	NA
3.	Program content is based on performance objectives required for successful entry level employment.	1	2	3	4	5	NA
4.	Program content is responsive and revised to keep current with changing job practices.	1	2	3	4	5	NA
5.	The IFMA academic "recognition" is important to the success of the program.	1	2	3	4	5	NA
6.	Ferris' FM curriculum adequately integrates IFMA's nine core competencies.	1	2	3	4	5	NA
7.	Graduates of Ferris' FM program are highly regarded.	1	2	3	4	5	NA
8.	Graduates of Ferris' FM program are competitive with graduates of similar programs from other universities.	1	2	3	4	5	NA
9.	Ferris' FM program provides an adequate number of graduates.	1	2	3	4	5	NA
10.	Your company would hire a Ferris FM graduate.	1	2	3	4	5	NA

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EDUCATION

- Masters in Architecture - College of Architecture and Urban Planning, University of Michigan, 1988
- Bachelor of Science in Architecture - College of Architecture and Urban Planning, University of Michigan, 1984
- Associate Degree in Art - Grand Rapids Junior College, Michigan, 1982

PRESENT POSITION:

- Associate Professor, Architectural Technology and Facilities Management Programs, Ferris State University (2004- Present)
- Assistant Professor, Architectural Technology and Facilities Management Programs, Ferris State University (1997- 2004)

PAST POSITIONS:

- **Project Architect**, Schemata Inc., Grand Rapids, Michigan (1994 – 1997)
- **Project Architect**, Czerew Architects, Grand Rapids, Michigan (1990 to 1994)
- **Intern Architect**, Wassenaar + Czerew Architects, Grand Rapids, Michigan (1989 to 1990)
- **Intern Architect**, DeWinter Associates, Inc., Grand Rapids, Michigan (1989)
- **Intern Architect**, MHB Design Group, Inc., Grand Rapids, Michigan (Summer 1988 &1987)
- **Draftsperson,** Greiner, Inc., Grand Rapids, Michigan (1987)
- **Draftsperson,** Comp – Aire Systems, Inc., Grand Rapids, Michigan (1984 –1987)
- **Draftsperson**, M.C. Smith & Associates, Inc., Grand Rapids, Michigan (1984)

CONTINUING EDUCATION

- Ferris State University
- Northwestern Michigan University
- Northwood University
- American Institute of Architects

PROFESSIONAL REGISTRATION

- **Licensed Architect**, State of Michigan

PROFESSIONAL MEMBERSHIPS

- Grand Valley Chapter – American Institute of Architects (GVAIA) 1997-2004

ACADEMIC ACTIVITIES:

- Faculty Advisor – Women in Technology, Ferris State University. August 2003 – present.
- Judge - Student Drafting / Design Competition sponsored by NAWIC (National Association of Women in Construction). May 2003
- Judge - Regional competition for the Michigan Industrial and Technical Educational Society Craftsman Fair held at Pine River. May 2001
- Judge - The High School Michigan Industrial and Technology Education Society State Skill Competition in Traverse City. May 1999
- Judge - Grand Rapids Home Builders Association, Awards of Excellence 1998-1999
- Judge - MITES (Michigan Industrial and Technology Education Society) High School Competition 1999

BRUCE C. DILG

6710 HUNGERFORD LAKE DR..
BIG RAPIDS, MI 49307
(231)591-2488 (W) (231) 592-8265 (H) EMAIL BRUCE_DILG@HOTMAIL.COM

PROFESSIONAL EXPERIENCE

FERRIS STATE UNIVERSITY *JAN 1987 to Present*
BIG RAPIDS, MI

ASSOCIATE PROFESSOR ARCHITECTURAL TECHNOLOGY

PROGRAM COORDINATOR 1988-1991

COURSES TAUGHT INCLUDE ADVANCED ARCHITECTURAL DETAILING, ADVANCED WORKING DRAWINGS, BEGINNING-ADVANCED AND 3D MODEL/RENDERING IN AUTOCAD, MECHANICAL/ELECTRICAL SYSTEMS FOR BUILDINGS, PROFESSIONAL PRACTICE, CONSTRUCTION MATERIALS, FSUS 100, ARCHITECTURAL DESIGN FOR FACILITY MANAGERS

DEVELOPED BACHELOR OF SCIENCE DEGREE IN ARCHITECTURAL TECHNOLOGY, SUMMER 1995.

ARCOM ARCHITECTS *JUN 1979 to Present BIG RAPIDS, MI*

SOLE PROPRIETOR

BEGAN FIRM WITH PARTNER IN LANDER, WY, CONTINUED WHEN ARRIVING IN MICHIGAN. PROJECTS HAVE INCLUDED JAILS, SCHOOLS, OFFICES, CHURCHES, INTERIORS AND CUSTOM RESIDENCES UP TO 2.5 MILLION DOLLARS.

CENTRAL WYOMING COLLEGE *SEP 1985 to DEC 1986*
RIVERTON, WY 82521

INSTRUCTOR DRAFTING TECHNOLOGY

COURSES TAUGHT INCLUDED ARCHITECTURAL DRAFTING, SURVEYING, STRUCTURAL DESIGN, ENGINEERING GRAPHICS AND AUTOCAD

JOHN HACKLER AND CO. ARCHITECTS *1967 to 1969, 1971 to 1979*
PEORIA, IL 61602

SENIOR ASSOCIATE - PRODUCTION MANAGER

PROJECT MANAGER ON SEVERAL AIA AWARD WINNING PROJECTS INCLUDING NATIONAL AIA/ALA BIANNUAL AWARD FOR EXCELLENCE.

COMPONENT BUILDING SYSTEMS *1970 to 1971*
CHICAGO, IL

RESPONSIBLE FOR DEVELOPING EXTERIOR WALL DETAILS ON JOINT VENTURE OF PARIS ARCHITECTS, CHICAGO CONTRACTOR AND CONSULTING ENGINEERS ON AMERICANIZATION OF 1967 REYNOLDS ALUMINUM AWARD WINNING PROJECT IN ROUEN, FRANCE.

SCHMIDT, GARDEN AND ERIKSON ARCHITECTS *1970*
CHICAGO, IL

RESPONSIBLE FOR DEVELOPING EXTERIOR WALL DETAILS ON 40 MILLION DOLLAR HOSPITAL IN INDIANAPOLIS, INDIANA.

PROFESSIONAL EXPERIENCE (cont)

ILLINOIS CENTRAL COLLEGE *1968, 1969*
EAST PEORIA, IL
ADJUNCT INSTRUCTOR OF ARCHITECTURAL BLUEPRINT READING.

RICHARD ENGBERG AND ASSOC., CONSULTING ENGINEERS *1964 to 1967*
PEORIA, IL
INITIAL DRAFTING JOB, TURNED INTO FULL TIME DESIGNER OF HVAC AND PLUMBING SYSTEMS UP TO 150 TON ABSORPTION UNIT SYSTEMS.

REGISTRATIONS

REGISTERED PROFESSIONAL ARCHITECT - ILLINOIS, WYOMING, MICHIGAN

NATIONAL COUNCIL OF ARCHITECTURAL REGISTRATION BOARD CERTIFIED

REGISTERED TEACHER 6-12, WYOMING, ILLINOIS

EDUCATION

FERRIS STATE UNIVERSITY *1987 to 1993*
BIG RAPIDS, MI 49307
MASTER OF SCIENCE OCCUPATIONAL EDUCATION/DISTINCTION

UNIVERSITY OF ILLINOIS SCHOOL OF ARCHITECTURE *1970*
CHICAGO, IL

BRADLEY UNIVERSITY *1961 to 1965*
PEORIA, IL 61602
BACHELOR OF SCIENCE INDUSTRIAL EDUCATION

PRESENTATIONS/PUBLICATIONS

INNOVATIONS IN BUILDING DESIGN COLLECTIVE BARGAINING SEMINAR, MICHIGAN STATE BUILDING AND CONSTRUCTION TRADES COUNCIL, JAN 1989

STRUCTURAL FRAMING SEMINAR BUILDING INSPECTORS OF NORTHWESTERN MICHIGAN, JAN 1990

STRUCTURAL FRAMING SEMINAR BUILDING INSPECTORS OF SOUTHWESTERN MICHIGAN, APR 1990

C.A.D. IN ARCHITECTURE A.T.E.A. CONFERENCE, NOV 1990

ADVANCED AUTOCAD FOR HIGH SCHOOL TEACHERS FERRIS STATE UNIVERSITY, OCT 1994, 1995 *3D AUTOCAD METHODS AND ENHANCEMENTS,* PRESENTED BY **BRUCE DILG** AND **GARY GERBER,** ASSOCIATE PROFESSORS IN THE AT/FM DEPARTMENT NOV 2000

CHANGES IN ARCHITECTURE TUBELITE/INDAL SALES CONFERENCE, AUG 1993

STUDENT MOTIVATION DELTA SIGMA PI BUSINESS FRATERNITY, NOV 1993

WHAT GRADUATES DON'T KNOW SIDEBAR TO "THE SCHOOLS: HOW THEY'RE FAILING THE PROFESSION (AND WHAT WE CAN DO ABOUT IT)" BY MICHAEL CROSBIE, PROGRESSIVE ARCHITECTURE, SEP 1995

PROVIDING THE OPTIMAL LEARNING ENVIRONMENT PRESENTATION FOR CENTER FOR TEACHING AND LEARNING, FERRIS STATE UNIVERSITY, ON HOW CLASSROOMS CAN BE MOST CONDUCIVE TO COMFORT OR LEARNING. JAN 1999

MANIPULATE YOUR SPACE: TAKE CHARGE OF THE PHYSICAL CLASSROOM
MARCH 4. 1999 PRESENTATION TO CENTER FOR TEACHING AND LEARNING, FERRIS STATE UNIVERSITY.

BARN SILO HOUSE NATIONAL TELEVISION PROGRAM ON HGTV FEATURING THE CHEESEBROUGH HOUSE DESIGNED BY BRUCE DILG.

TEXT REVIEWER, THE ARCHITECT'S HANDBOOK OF PROFESSIONAL PRACTICE, STUDENT ADDITION SUMMER 2001

CROSS-SHAPED HOUSE FITS TO A "T" FEATURE ARTICLE ABOUT THE DILG RESIDENCE, DESIGNED BY BRUCE DILG, WRITTEN BY DR. ROGER GREEN, PHD, IN THE JULY.28, 2002 GRAND RAPIDS PRESS

INSTRUCTOR, COLLEGE OF TECHNOLOGY 2003 SUMMER TECHNOLOGY CAMP

DEVELOPED PROBLEM AND TAUGHT STUDENTS PARTICIPATING AT FERRIS AS PART OF MARTIN LUTHER KING/ROSA PARKS PROGRAM.

PROFESSIONAL ACTIVITIES

GERMANTOWN HILLS PLANNING COMMISSION - CHAIRMAN 1976/77

PEORIA SECTION AIA - PRESIDENT 1977

NCARB DESIGN EXAM EVALUATOR - CHERRY HILL, NJ - JUL 1978

LANDER PLANNING COMMISSION - VICE PRESIDENT 1985/86

JUDGE - MICHIGAN ASSOCIATION VOCATIONAL INDUSTRIAL CLUBS OF AMERICA - MAY 1987

A/E/C CONFERENCE - WASHINGTON, DC - JUN 1987

INSTRUCTOR - AUTOCAD FOR FERRIS INSTRUCTORS - FALL 1987

INSTRUCTOR - AUTOCAD SEMINAR - MAY 1988

TEACHING THINKING SKILLS WORKSHOP - FERRIS STATE UNIVERSITY - BIG RAPIDS, MI - SEP 1990

AMERICAN COLLEGIATE SCHOOLS OF ARCHITECTURE TECHNOLOGY CONFERENCE - HARVARD UNIVERSITY -

CAMBRIDGE, MA - FEB 1991

INSTRUCTOR FSU FACULTY AutoCAD - AUG 1991

A/E/C CONFERENCE - DALLAS, TX - JUN 1992

MEMBER - AMERICAN COLLEGIATE SCHOOLS OF ARCHITECTURE - 1992,93

MONDAY NIGHT TECHNOLOGY INSTRUCTOR - 1993,94,95,96

NEOCON - CHICAGO, IL - JUN 1993

AIAS STUDENT CHAPTER ADVISOR - 94/94, 95/96, 96/97

AAHE FORUM ON EXEMPLARY TEACHING (SELECTED REPRESENTATIVE) - WASHINGTON, D.C. - MAR 1995

AutoCAD TRAINING - HERMAN MILLER CORPORATION - HOLLAND, MI - JUL 1988

AIA CONDOC SEMINAR - BALTIMORE, MD - DEC 1989

AutoCAD TRAINING - MID MICHIGAN ENGINEERS, BIG RAPIDS, MI - FEB 1989

SPECIFICATION CONSULTANT - PROGRESSIVE ARCHITECTS - GRAND RAPIDS, MI JUL 1989

CAD EVALUATION CONSULTANT - SVERDRUP CORPORATION - ST. LOUIS, MO. AUG 1989

REVIEWER - STUDENT OCCUPATIONAL COMPETENCY ACHIEVEMENT TEST, NOCTI - JAN 1990

JUDGE ASSOCIATED BUILDING CONTRACTORS CONSTRUCTION AWARDS PROGRAM - 1989 thru 2004

PRIVATE ARCHITECTURAL PRACTICE (ARCOM ARCHITECTS) SINCE 1979

HARVARD UNIVERSITY GRADUATE SCHOOL OF DESIGN, JUL 1996 - HOW TO AVOID BUILDING ENVELOPE PROBLEMS

M.I.T.E.S. EDUCATION AWARDS PROGRAM - REGIONAL JUDGE 1996,1997, STATE JUDGE 1997

M.I.T.E.S STATE SKILL COMPETION JUDGE – MAY 1999

CRITICAL THINKING FACULTY SUMMER INSITITUTE, DR. RICHARD PAUL – JULY, 2000

AUTOCAD 14-2000 UPGRADE 2 DAY SEMINAR – SEATTLE,WA, AUGUST 2000

M.I.T.E.S REGIONAL CRAFTSMAN FAIR – MAY 2001

A.I.A. NATIONAL CONVENTION – DENVER, COLORADO, MAY 2001

SIX DEGREES OF COLLABORATION CONFERENCE – A.I.A. HEADQUARTERS, WASHINGTON, D.C., APRIL, 2002

EVALUATOR – TECHNICAL/PROFESSIONAL WRITING CURRICULUM PORTFOLIO PRESENATIONS, MAY 2002

A.I.A. NATIONAL CONVENTION – SAN DIEGO, CALIFORNIA, MAY 2003

REVIT PARAMETRIC MODELING SOFTWARE TRAINING – JULY, 2003

A.I.A. NATIONAL CONVENTION – CHICAGO, ILLINOIS, JUNE 2004

A.I.A. NATIONAL CONVENTION – LAS VEGAS, NEVADA, JUNE 2005

T.A.P. CONFERENCE – LAS VEGAS, NEVADA, JUNE 2005

RECOGNITIONS

WHO'S WHO IN THE MIDWEST - 1979

WHO'S WHO IN THE WEST - 1985

CERTIFICATE OF RECOGNITION, FERRIS STATE UNIVERSITY BOARD OF CONTROL, MAY 1993
FOR ACHIEVING NATIONAL RECOGNITION AS A RESULT OF HIS SUPERVISING STUDENTS IN THE RENOVATION OF RESIDENTIAL HOUSING FOR THE BENEFIT OF HABITAT FOR HUMANITY THUS ENHANCING THE ACADEMIC REPUTATION OF THE UNIVERSITY

DISTINGUISHED TEACHING AWARD - MILWAUKEE SCHOOL OF ENGINEERING – 1997

OUTSTANDING WORKMANSHIP AWARD – ABC CONTRACTOR ASSOCIATION – IMMANUEL LUTHERAN CHURCH - 2005

UNIVERSITY COMMITTEE ACTIVITIES

CONSTRUCTION DEPARTMENT COMPUTER COMMITTEE

COLLEGE OF TECHNOLOGY CURRICULUM COMMITTEE

PROGRAM COORDINATORS COMMITTEE

UNIVERSITY MASTER PLAN COMMITTEE

INTERNAL COMMUNICATION COMMITTEE

SYMPHONY (COMMUNITY BUILDING) COMMITTEE

UNIVERSITY SIGNAGE COMMITTEE

CENTENNIAL DINING ROOM COMMITTEE

UNIVERSITY RECREATION DIRECTOR SEARCH COMMITTEE - CHAIR

UNIVERSITY WELCOME CENTER STUDY COMMITTEE - CHAIR

UNIVERSITY GENERAL EDUCATION EVALUATION COMMITTEE

COMPUTER INFORMATION SYSTEMS PROGRAM REVIEW COMMITTEE

OTHER UNIVERSITY/CIVIC ACTIVITIES

UNIVERSITY THEATRE (ACTING)

COMMUNITY THEATRE (ACTING)

COMMUNITY BIG RAPIDS ARTS CHORALE

UNIVERSITY MENS GLEE CLUB

BIG BROTHERS/BIG SISTERS

PARTNERS IN EDUCATION - BIG RAPIDS HIGH SCHOOL

FSU FOOTBALL SCOREBOARD OPERATOR

MECOSTA/OSCEOLA MATH SCIENCE CENTER/RESEARCH PROJECT MENTOR

YOUNG LIFE - BOARD MEMBER

MECOSTA/OSECOLA MATH SCIENCE CENTER - ARCHITECTURAL DESIGN FOR GIFTED SENIORS

HOST FAMILY – FERRIS STATE INTERNATIONAL STUDENT – 2003-2005

FERRIS FESTIVAL SINGERS – PRESIDENTIAL INAUGURATION – 2003

FERRIS STATE CRITICAL THINKING INSTITUTE - 2005

REFERENCES

MS. MARY BRAYTON, A.I.A.
FERRIS STATE UNIVERSITY
BIG RAPIDS, MI 49307
(231) 592-0570 (H) (231) 591-2370

MR. DAVID HANNA, PE
FERRIS STATE UNIVERSITY
BIG RAPIDS, MI 49307
(231) 591-2680

DR. GUNDER MYRON
11342 ROYAL RD W
STANWOOD, MI 49306
(231) 972-7405

MR. MITCH LECLAIRE, PE
915 CHERRY
BIG RAPIDS, MI 49307
(231)796-0736

DR. RICHARD STERN
21095 WOODWARD
BIG RAPIDS, MI 49307
(231) 796-2587

Facility Management (B.S.)

APRC 2005-2006

section 4

GARY R. GERBER AIA, CSI, USGBC, CDT, LEED AP
ASSOCIATE PROFESSOR
FERRIS STATE UNIVERSITY
JOHNSON 208
BIG RAPIDS, MI 49307

EDUCATION:

Ferris State College 1975
Big Rapids, MI
School of Technology
Associate Degree in Architectural Drafting

University of Michigan 1978
Ann Arbor, MI
School of Architecture
B.S. in Architecture

Grand Valley State University 1995
Allendale, MI
School of Business
Masters in Business Administration

WORK EXPERIENCE:

Associate Professor
Architectural Technology
Ferris State University
Big Rapids, MI
1989 to present

Gerber Architectural
Architectural consulting
Belmont MI
1989 to present

Gerber Architectural Properties, LLC
Commercial office building development
Belmont MI
2002 to present

Architect and Director of Design Services
Square Real Estate Inc.
Grand Rapids, MI
1985-1989

Architectural Draftsperson
Daverman Associates Inc.

Grand Rapids, MI
1983-1985
Architectural Energy Specialist
Daverman Associates Inc.
Grand Rapids, MI
1980-1982

Building Designer and Construction Foreman
Gerber Construction Co. Inc.
Reed City, MI
1978-1980

Carpenter and Architectural Draftsman
North American Building Systems
Reed City, MI
1972-1978 (part time)

PROFESSIONAL ORGANIZATIONS &REGISTRATIONS:

- Registered Professional Architect
- State of Michigan
- United States Green Building Council
- American Institute of Architects
- Construction Specification Institute
- Certified Document Technician (CDT)
- Leadership in Energy & Environmental Design Accredited Professional (LEED AP)

REAL ESTATE PROJECT EXPERIENCE:

MULTI-UNIT HOUSING—

- Design Arch. - Lexington Suites Motel - Cascade, MI
- Architect - Rivers Edge Condominiums - Big Rapids, MI
- Architect - Heritage Acres Condominiums - Reed City, MI
- Architect - Crosswinds Estates Condominiums - Ludington, MI
- Architect - Pere Marquette Quad cabin - Baldwin, MI

COMMERCIAL & INSTITUTIONAL CONSTRUCTION—

- Architect - Millitary Recruiting Center lease space Main Street Business Center—Grand Rapids, MI
- Architect - Nail Salon lease space Main Street Business Center—Grand Rapids, MI
- Architect - 911 Dispatch Addition – Paris, Michigan
- Architect - Neale Business Center - Reed City, MI
- Architect - Pattie Drugs Addition & Renovation - Baldwin, MI
- Architect - Pioneer Group Production Facility – Big Rapids, MI
- Architect - Michigan Works Office Building - Reed City, MI
- Architect / Owner - Michigan Works Office Building - Baldwin, MI

- Architect - Wexford/Missaukee Family Independence Agency - Cadillac, MI
- Architect - Young Insurance \ Rockford Travel Bldg - Rockford, MI
- Architect - Reed City Public Schools - Weight Room Addn, Storage Additions, Concession Stand - Reed City, MI
- Architect - Nabco Inc. Corporate Office Remodeling - Reed City, MI
- Consultant- Hardwood Grill Restaurant - Restaurant Remodeling - Gruner Prussner and Lloyd - Mishawaka, IN
- Architect - Assessment Center Addition - Eagle Village - Hersey, MI
- Architect - Dining Center Addition - Eagle Village - Hersey, MI
- Architect - Porteous Law Office - Reed City, MI
- Architect - Reed City Fire Department - Reed City, MI
- Architect - 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 - Art Works – Big Rapids, MI
-

RESIDENTIAL—SINGLE FAMILY

- Architect - Dr Alex Tosic Residence – Big Rapids, MI
- Architect - Bill and Ann Coats Residence – Chase, MI
- Architect - Dave Residence (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 - Brower 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 - Mitch and Carol Swayze Cottage – Beaver Island, MI

CONTINUING EDUCATION:

Gary Gerber, Associate Professor, AIA, CSI, USGBC, CDT, LEED AP

- Success Magazine Investor Education- August 12, 2005 Grand Rapids MI
- Get Motivated Business Seminar- August 2, 2005 Grand Rapids MI
- Place in Mind: Building Public Awareness About Great Communities- June 9, 2005, Grand Rapids MI
- Sketching Workshop with Paul Lasseau- April I, 2005 Big Rapids MI
- Sexual Harassment Awareness Session April 2005 Big Rapids MI
- United States Green Building Council Conference-November 2004 Portland OR

- New Brain Research and Its Application to Career and Technical Education– November 2004 Big 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
- Revit 5 Level 1 Software training –July 2003Grand Rapids MI
- Critical Thinking Institute-May 22-23, 2003 Big Rapids MI
- Construction Documents Technology Program-February 2003 Grand Rapids MI
- United States Green Building Council Conference-November 2002 Austin TX
- Architectural Desktop 3 Level 1 Training (6/02) Grand Rapids MI
- Problem Based Learning-July 16-18, 2001 Big Rapids MI
- AIA 2001 National Convention and Design Exposition- May16-19, 2001 Denver, CO
- Michael Graves-The Design Process- April 27, 2000 Grand Rapids MI
- AEC Systems conference-June 1998 Chicago
- Management Computer Controls-Estimating Software Training (12/96)
- Mich. State University-Construction Cost Estimating (3/96)
- AEC Systems conference-June 1996 Anaheim CA
- AEC Systems conference-June 1994 Washington DC
- AEC Systems conference-June 1993 Anaheim CA

PUBLISHED PROJECTS:

- Kitchen remodeling at Comstock Park Residence - Better Homes and Gardens - July 1985, Grand Rapids Press - September 1986
- Whitford Residence Remodeling - Qualified Remodeler - August 1984, The Family Handyman - April 1984, Redwood News - Fall/Winter 1986
- Hot tub & screen porch at Blue Ridge Residence - Grand Rapids Press - May 1990

MEL KANTOR

4314 MILLPOND DRIVE
ROCKFORD, MICHIGAN 49341
616.866.1151 HOME
231.591.2625 OFFICE
231.591.2931 FAX

PRESENT POSITIONS:

- **Professor,** Architectural Technology and Facilities Management Programs, Ferris State University (1974 - Present)
- **Architectural/Facilities Management Consultant,** Mel Kantor, AIA Architect (Private consulting practice 1984 - Present)

PAST POSITIONS:

- **Department Chair,** Architectural Technology and Facilities Management Programs, Ferris State University (1999 - 2003).
- **Program Coordinator**, Architectural Technology and Facilities Management Programs, Ferris State University (1984 - 1987 & 1992 – 1995, 1996 – 1999)
- **Architect/Principal**, Gienapp/Kantor AIA - Architects (1976 - 1984)
- **Architect/Senior Associate,** Herbert Shaffer Associates, Chicago, Illinois (1967 - 1974)
- **Architect**, James M. Turner & Associates, Architects, Hammond, Indiana (1961 -1967)
- **Draftsperson**, Coleman & Coleman, Architects, Chicago, Illinois (1959 - 1961)

EDUCATION:

- Bachelor of Architecture Degree - University of Illinois, 1960
- Graduate courses in Sociology (18 credit hours) - Central Michigan University

CONTINUING EDUCATION:

(Institutions, Associations, Agencies attended)

- University of Wisconsin
- Federal Emergency Management Agency
- University of Michigan
- National Passive Solar Energy Conferences
- Massachusetts Institute of Technology
- Cad Design Systems, Inc.
- Rensselear Polytechnic Institute
- International Facilities Management Association
- Ferris State University
- AEC Systems, Inc. Conferences
- Lawrence Technological University
- Tennessee Valley Authority
- Northwestern Michigan University
- Microcad Institute
- Oak Ridge Associated Universities
- American Institute of Architects
- Grand Rapids Community College
- Eastern Michigan University
- Archibus FM Corporation
- NEOCON Conferences
- FM Systems
- State of Michigan

A detailed list of courses, conferences, etc. is available on request.

CONTINUING EDUCATION COURSES (1999 – 2005)

7th Annual Waste Reduction and Energy Efficiency Seminar
9/10/1999

Exploring the Eames Design Philosophy
AIA Grand Valley
9/16/1999

International Facilities Management Association
1999 World Workplace Conference and Seminars
10/3 – 5/1999

Leadership in the Profession
AIA Grand Valley
10/21/1999

Michael Graves – The Design Process
4/27/2000

ADA Update and Mock Mediation
Evan Terry Associates, P.C.
5/31/2000

Critical Thinking – Basic Theory and Structure
7/11 – 12/2000

Building Science...Keeping Buildings Healthy and Dry
AIA Grand Valley
10/9/2000

Trends in Occupational Studies Conference
10/27/2000

Leadership in Architectural Education
AIA Grand Valley
1/24/2001

2001 Governor's Conference on Career Development
2/4-6/2001

Slow Design...Tod Williams & Billie Tsieh
AIA Grand Valley
2/21/2001

First Annual Technology & Workplace Conference
AIA Michigan
4/26-27/2001

Sustainable Architecture & Environmental Issues
AIA Grand Valley
5/10/2001

Problem-Based Learning
FSU Center for Teaching, learning and Faculty Develoment
7/16-18/2001

Summer University
Ferris State University
8/2/2001

International Facilities Management Association
2001 World Workplace Conference and Seminars
9/23-25/2001

Sustainable Architecture
AIA Grand Valley
10/21/2001

Trends in Occupational Studies Conference
11/1-2/2001

Teaching Methods...Learning Centered Classroom
11/12,19,26/2001

Tom Buresh Presentation
AIA Grand Valley
11/27/2001

2002 Governor's Conference on Career Development
1/21-23/2002

Computer-Aided Facility Management Workshop
Michigan State University
3/6-8/2002

Eco Logic Design
AIA Grand Valley
5/9/2002

Employee Leadership Development Program
Ferris State University
9/2002 – 4/2003

Lilly Conference on College & University Teaching – North
9/20-21/2002

2002 World Workplace Conference and Seminars
International Facilities Management Association
10/6-8/2002

Total Facility Management Conference
4/21-23/2004

Computer-Aided Facility Management Workshop
Michigan State University
5/18-20/2004

2004 World Workplace Conference and Seminars
International Facilities Management Association
10/16-19/2004

Sketching Workshop with Paul Laseau
Ferris State University
April 1, 2005

ARCHITECTURAL REGISTRATIONS:

- National Council of Architectural Registration Boards Certification (Inactive)
- State of Illinois (Inactive)
- State of Michigan (Active)
- State of Indiana (Inactive)
- State of Ohio (Inactive)

FACILITIES MANAGEMENT CERTIFICATION:

- Certification as a facilities manager (CFM) from the International Facilities Management Association.
- Lifetime CFM granted 2000.

PROFESSIONAL MEMBERSHIPS:

- American Institute of Architects (AIA)
- Michigan Society of Architects (MSA)
- Grand Valley Chapter - American Institute of Architects (GVAIA)
- International Facilities Management Association (IFMA)
- West Michigan IFMA

RECENT PROFESSIONAL ACTIVITIES (Non-Academic):

• Director	Grand Valley Chapter - American Institute of Architects (1985 - 1987) (1993 - 1996) (1998 - 2002)
• Member	Program Committee , GVAIA (1990 - 1992)
• Chairperson	GVAIA Education Committee (1993 - 1996)
• Member	International Facilities Management Educator's Council (Council discontinued around 2000)
• Secretary	International Facilities Management Association West Michigan Chapter (1997 - 2000)
• President	International Facilities Management Educator's Council (1995 - 1997)
• Member	Grand Rapids Downtown Development Board Affordable Housing Task Force (1993 - 1995)
• Member	Urban Institute of Contemporary Art Design Committee (1996 - 1997)
• Architectural Consulting	Residential and commercial architectural, interior design consulting, Michigan and Illinois
• Facilities Management Consulting	Institutional and Corporate Facilities Management Consulting
• President	International Facilities Management Association West Michigan Chapter (1999 - 2001)
• Past President	International Facilities Management Association West Michigan Chapter (2001 - 2003)
• Member	College of Technology Services Committee
• Member	FSU Renaissance Committee
• Leader	FSU Quality Improvement 2000 Instructional Software Installation Team
• Participant	Ferris Employee Leadership Development Program Completed Program April 2003

ACADEMIC ACTIVITIES:

• Sabbatical Research	Low-cost Cadd Systems and Review of Autocad Manuals
• Basic Autocad Seminar	Presented to high school educators (1995)
• Vocational/Industrial Council of America	Wrote and proctored the architectural portion of State of Michigan exam for approximately twelve years (resigned in 1996)

- Developed the curriculum for a Baccalaureate Program in Facilities Management which began in the fall of 1989.

- Judge for the LCC High School Design Competition for seven years until Competition terminated.
- Judge of several VICA Architectural Competitions
- Judge of two Rockford High School Design Competitions
- Developed course in Advanced Architectural Presentation
- In a joint effort with two facilities management colleagues the Facilities Management program received International Facilities Management recognition for meeting their academic standards. The program was one of the initial five, internationally, to receive this honor. Recently received re-accreditation.
- Served as Chair of the B ARCH/M ARCH Committee investigating implementation a professional degree program at FSU – BR and Kendall School of Art and Design.

AWARDS:

- Received 1996 Architectural College Educator of the Year Award at the Lansing Community College Architectural Design Competition
- Received 1996 State of Michigan Vocational Industrial Councils of America Service Award
- 1999 AIA Grand Valley President's Award for extraordinary service to the Profession and the Chapter
- IFMA Lifetime Certified Facility Manager (2000)

CURRICULUM VITAE

DIANE L. NAGELKIRK

2536 Michigan N.E. · Grand Rapids, Michigan 49506 · 616 957-0276

EDUCATION

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

FERRIS STATE UNIVERSITY, Big Rapids, Michigan
Architectural Technology/Facilities Management Program
Department Chair, August 2003-present

FERRIS STATE UNIVERSITY, Big Rapids, Michigan
Architectural Technology/Facilities Management Program
Associate Professor, September 1995-present

FERRIS STATE UNIVERSITY, Big Rapids, Michigan
Architectural Technology/Facilities Management Program
Program Coordinator, Associate Professor, January 1995-August 1996

FERRIS STATE UNIVERSITY, Big Rapids, Michigan
Architectural Technology/Facilities Management Program
Assistant Professor, September 1988-December 1994

WBDC GROUP, INC., Grand Rapids, Michigan
Health Care Division
Associate Architect, August 1987-August 1988

DSO REID ARCHITECTS, INC., Grand Rapids, Michigan
Associate Architect, September 1985-July 1987

VERMURLEN ARCHITECTURE, Grand Rapids, Michigan
Associate Architect, December 1984-August 1985

LAWRENCE TECHNOLOGICAL UNIVERSITY, Southfield, Michigan
Office of Public Relations
Graphic Artist, March 1981-June 1984

PROFESSIONAL REGISTRATION

- Licensed Architect, State of Michigan

PROFESSIONAL ASSOCIATIONS

- American Institute of Architects, Grand Valley Chapter
- Michigan Society of Architects
- National Trust for Historic Preservation
- National Association of Women in Construction
- American Association of University Women

PROFESSIONAL CONSULTATION

- Via Design, Grand Rapids, Michigan
  Design and CAD Consultant
  May 2002-August 2002
  May 2003-August 2003

- Private Design Practice, Grand Rapids, Michigan
  May 1992-present
- Design Pinnacle, Grand Rapids, Michigan
  Design Consultant
  May 1998-August 1998
  May 1999-August 1999
- Dan Vos Construction, Inc., Grand Rapids, Michigan
  Design Consultant
  May 1997- July 1997
- Ferris State University, Big Rapids, Michigan
  Summer Orientation & Registration Advisor
  1993, 1994, 1995
- National Occupational Competency Testing Institute, Big Rapids, Michigan
  Architectural Drafting Test Consultant
  February 1993
- Mel Kantor, AIA, Grand Rapids, Michigan
  Design Consultant
  May 1991-August 1994
- Greiner Inc., Grand Rapids, Michigan
  Computer Aided Design Consultant
  October 1991-May 1992
- Mitch Witkowski, AIA, Grand Rapids, Michigan
  Design Consultant
  May 1991-August 1991
- Universal Forest Products, Inc., Grand Rapids, Michigan
  Structural Design Consultant
  May 1990-August 1990

PROFESSIONAL PRESENTATIONS

- Ferris State University, Architectural Graphics Design Seminar
  AutoCAD Seminar for Educators by Educators, Big Rapids, Michigan
  "AutoCAD 2000 Changes and Architectural Application", October 24, 2000
- Ferris State University, Architectural Graphics Design Seminar
  A Seminar for Educators by Educators, Big Rapids, Michigan
  "CAD Basics II", April 9, 1997
- Ferris State University, Architectural Graphics Design Seminar
  A Seminar for Educators by Educators, Big Rapids, Michigan
  "CAD Basics", October 25, 1995
- Ferris State University, Architectural Graphics Design Seminar
  A Seminar for Educators by Educators, Big Rapids, Michigan
  "How would an Architect do that?", October 25, 1994
- American Technical Education Association
  Back to the Future II Technical Update Conference, Big Rapids, Michigan
  "Drawing Techniques for Communicating Architectural and Building Technology concepts", March 11, 1993
- American Technical Education Association
  Great Lakes Regional Conference, Big Rapids, Michigan
  "Architecture of the 90's: A Vision of an Environmentally and Socially Responsible Built Environment.", November 1, 1990

COURSES TAUGHT

Quarter System

• ARC 101	Architectural Graphics
• ARC 102	Architectural Presentation
• ARC 103	Working Drawings 1
• ARC 112	Structural Materials & Systems
• ARC 109	Intro. to Computer Graphics in Architecture
• ARC 123	Structural Analysis
• ARC 205	Working Drawings 3
• ARC 209	Advanced Computer Graphics in Architecture
• ARC 223	Steel & Concrete Design
• ARC 144	Design Fundamentals

Semester System

• ARCH 101	Architectural Graphics 1
• ARCH 102	Architectural Construction Documents 1
• ARCH 109	Computer Graphics in Architecture 1
• ARCH 209	Computer Graphics in Architecture 2
• ARCH 241	Design Fundamentals
• ARCH 244	Historical Development of Western Architecture
• ARCH 290	Advance Presentation
• ARCH 280	Advance Presentation 2 (model making)

CONTINUING EDUCATION

- Sketching Workshop with Paul Lasseau. (FSU)
  Big Rapids, Michigan
  April 1, 2005
- International Facility Management Association 2004 Conference and Expo
  Salt Lake City, Utah
  October 15-19, 2004
- Rockhurst University
  Project Management
  January 31, February 1, 2004
- AIA 2004 National Convention and Design Exposition
  Chicago, Illinois
  June 10-12, 2004
- Total Facility Management Show and Exposition
  Chicago, Illinois
  April 21-24, 2004
- AIA Grand Valley – CEU Marathon
  Grand Rapids, Michigan
  October 1, 2003
- ACSA Teacher's Seminar – Sustainable Pedagogies and Practices
  Cranbrook Academy of Art
  Bloomfield Hills, Michigan
  June 12-15, 2003
- Creativity Seminar
  Northwood University
  Midland, Michigan
  July 10-13 , 2003
- FSU Critical Thinking Institute
  Big Rapids, Michigan
  May 22-23, 2003
- Revit Fundamentals Seminar
  Grand Rapids, Michigan
  July 2, 2003
- Zero Energy Homes in Michigan Seminar
  Concord Grove Educational Center
  May 3, 2003
- AIA Grand Valley - Sustainable Architecture
  Grand Rapids, Michigan
  October 10, 2001
- Environmental Design Research Conference
  Orlando, Florida
  June 2-6, 1999
- Environmental Design Research Conference
  Orlando, Florida
  June 2-6, 1999

- Survey of Western Architecture, 3 credit hour course
  Medieval Art and Architecture, 3 credit hour course
  University of North Carolina, Chapel Hill, NC
  Winter semester, 2000

- Neo Classical Architecture, 3 credit hour course
  Duke University, Durham, NC
  Winter semester, 2000

- Digital Modeling, 3 credit hour course (on-line)
  Temple University, Philadelphia, PA
  Winter semester, 2000

- Environmental Design Research Conference
  Orlando, Florida
  June 2-6, 1999

- Diversity and Learning Conference
  Philadelphia, Pennsylvania
  November 12-15, 1998

- Ferris State University
  Faculty Summer Institute: Development and Technology of Web-based instruction
  July, 1998

- CareerTrack Seminars
  How to Build a Successful Web Site
  May 8, 1998

- Ferris State University
  Computer Information Systems Management, Master of Science degree program
  CISM 615, Fall 1995
  CISM 700, Winter 1996
  CISM 710, Fall 1996

- 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
  Downers Grove, Illinois
  Infusing Critical Thinking into College and University Instruction
  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
  Milwaukee, Wisconsin
  Innovative Environments for Dementia Care: Planning, Design & Evaluation
  October 27, 1994

- University of Michigan
  Ann Arbor, Michigan
  American Institute of Architects, Design Computing in the 90's and beyond
  October 1, 1994

- Grand Rapids Community College
  AutoCAD Advance Drafting Short Course Seminar
  March 1994

- SkillPath Seminars
  Troubleshooting & Maintenance of IBM PCs & Compatibles
  February 1994

- Team Building & Personal Profile Workshop
  Applied Technology Center
  January 1993

- Niacon '92
  World Exposition of Workplace Planning and Design
  June 1992

- Women's Professional Development Conference
  Ferris State University Lifelong Learning, Leadership 2000: Preparation for the Future
  May 1, 1992

- Construction Specification Institute Product Show
  Grand Rapids, Michigan
  April 1992

- CareerTrack Seminars
  High Impact Communication Skills
  February 4, 1992

- Ferris State University
  AutoCAD Short Course Seminar
  August 1991

- Women's Professional Development Conference
  Ferris State University Lifelong Learning
  New Images of Leadership & Progressive Teaching Techniques
  April 12, 1991

- Fred Stitt Architectural Technology & Education Seminar
  April 1991

- American Institute of Architects
  Performance of Roof Systems Seminar
  January 1991

- American Institute of Steel Construction, Inc.
  Allowable Stress Design Specification & Ninth Edition Steel Manual Seminar
  March 29, 1990

- Ferris State University
  AutoCAD Short Course Seminar
  March-April 1989
- Michigan Society of Architects Convention
  1989, 1992

COMMUNITY SERVICE

- FSU 2003 Summer Technology "Fun with Math" Camp
  Presenter
- Michigan Industrial and Technology Education State Design Competition
  Judge 1997, 1999
- Michigan High School Summer Institute for Arts and Sciences
  Architectural Tour Guide 1997
- Vocational Industrial Clubs of America, Michigan Design Competition
  Project Consultant 1997
- Lansing Community College Design Competition
  Judge 1995
- Girl Scouts/Grand Valley AIA Architecture Workshop
  Presenter, Facilitator 1992
- "Girls+Math+Science=Choices" Conference for Big Rapids middle school girls.
  Presenter 1991-1992
- Architectural Services for City of Coopersville, Coopersville, MI
  Design Consultant 1991
- Architectural Services for Mel Trotter Ministries, Grand Rapids, MI
  Design Consultant 1990
- Montcalm Intermediate School District's "Challenge for Success" Conference
  Presenter 1990
- Vocational Industrial Clubs of America, Michigan Design Competition
  Judge 1990-1994
- Rockford Senior High School Architectural Design Competition
  Judge 1987-1991
  Judge & Project Consultant 1988-1991

JOE M. SAMSON

7405 Arbol Drive NE; Rockford, Michigan 49341
Phone: 616.874.8070
Registered Architect: Ohio and Michigan
Certified Facility Manager-(by International Facilities Management Association)

(Note: Achievements since last Merit shown in italics.)

TEACHING EXPERIENCE:

FERRIS STATE UNIVERSITY
College of Technology; Architectural Technology and Facilities Management Department
Big Rapids, Michigan 49307

MERIT-(September '01)

ASSOCIATE PROFESSOR-(September '94-Present)
Continue to teach Architectural Technology and Facility Management courses. Responsible for Facility Management internship program. *Worked to develop PCAF for Ferris-Kendall baccalaureate and masters level professional architectural degree programs.* Work with faculty to update courses, make curriculum changes, etc. *Responsible for 3 of the 4 courses that will be offered in On-line FM Certificate Program.*

ASSISTANT PROFESSOR-Tenured '93 (September '88-September '94)
Teach in an 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, teach facilities programming and facilities operations in a Baccalaureate Facilities Management Program.

COURSES TAUGHT:

ARCH 101 - Architectural Graphics (3 ch): *Taught every Fall Semester.*
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 every Winter Semester.*
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 Winter '02.
ARCH 109 - Computer Graphics in Architecture 1 (3 ch): *Taught some fall Semesters.*
Course revised Fall '01 to be more comprehensive and include 3D usage. (Previously 2 ch)
ARCH 241 – Design Fundamentals (3 ch): *Taught some Semesters.*
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 most fall Semesters.*
Continue to teach this course which I developed. Revised for Winter '03. (Previously 2 ch)
FMAN 321 - Principles of Facility Management (3 ch): *Taught annually starting Winter '04.*
FMAN 321 - Principles of Facility Management (3 ch)WebCT version for Certificate Program: *Developed Fall '04. Offered Fall '05.*
FMAN 331 - Facility Programming and the Design Process (3 ch): Taught Winter Semester.
FMAN 331 - Facility Programming and the Design Process (3 ch) WebCT version for Certificate Program: *Developed Winter '05. Offered Winter '06.*
FMAN 393 – Internship in Facilities Management (3 ch): *Taught Summers starting '04.*
FMAN 451 - Building Diagnostics and Operations (3 ch): Taught Fall Semester.

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:

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)

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:

- ***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. Toronto, Ontario (6-9 October '02)*
- ***TFM Show at Construct America. (Facilities Management).*** *Chicago, IL. (3 days, 21-23 April '04)*
- **World Workplace;** Annual conference and convention for the International Facility Management Association. Chicago, IL (18-20 October '98)
- **A/E/C Systems '98;** Seminar of computer and software systems for architects, engineers, and contractors. Chicago, IL (One day, June '98)
- **World Workplace:** Seminar of computer and software systems for architects, engineers, and contractors. Baltimore, MD (One day, October '94)
- **Facilities 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:

- *Developed, administered, and analyzed employer, student, and alumni data for Facility Management Program Review. (Winter 2005)*
- *Developed and maintain FM Alumni Distribution List for FM Job Opportunities. (Fall 2003-Present)*
- *Reviewed statistics on high schools with most potential for student interest in program and coordinated faculty-high school visits. (Winter '03-present)*
- *Member BS and M Arch Curriculum Development Committee. (Winter '03-Present-on hold)*
- *Organized first, and second, and third "Architectural Graphics and Design Seminar" for high school drafting instructors with presentations by FSU Architectural Technology faculty. (October '00, '95, '94) 2000 seminar was in cooperation with AT/FM and TDTD faculty for high school drafting instructors.*
- *Participated in "Autumn Adventure".* (October '93, *'94, '95, '98, '00, '01*)
- *Architectural Technology and Facilities Management Library Liaison. ('89-'00)*
- *Member lab maintenance committee. (Fall '92-Present)*
- *Faculty Advisor International Facilities Management Association, FSU Student Chapter. ('90-Present)*
- *Developed exit interview for graduating AT and FM students. Compiled results and prepared annual reports. (Spring '92-Present)*
- *Developed standards for Facilities Mgmt. transfer students with input of AT/FM faculty. ('94-Present)*
- Worked on program review content for AT and FM programs. (1999)
- Worked with architectural technology faculty to develop proposal for baccalaureate degree in architectural technology. Developed and proposed to faculty concept of tracks for the degree. (not accepted) Developed survey for professionals regarding their need for graduates of proposed program. (this proposal has not moved outside the program)
- Developed proposal for Minor Degrees in Facilities Planning Management and Facilities 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)

- 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)
- Faculty Co-advisor American Institute of Architectural Students. ('89-'90)
- AIAS student field trip to Columbus, IN. (April '91)
- Organized departmental display for Michigan Society of Architects Convention. (Fall '88-'89)
- Organized student/program advisory board interaction sessions for '89 advisory board meeting.

Department:
- *Chair of Tenure Committee for Mike Feutz. ('01-'02)*
- *Member of Tenure Committee for Mary (Bockstahler) Brayton. ('96-'01)*
- Mentor and Chair of Tenure Committee for Victoria Hardy. ('94-'99)
- Member Search Committee for Construction Department Head. (April-May '91)
- Mentor to Dave Batie. ('90-'91)
- Member of committee to write proposal for a "Summer Institute" program at FSU. (Fall '90)

College:
- *Member COT Promotion Committee. (Fall '03 – Winter '05)*
- *Member COT Faculty Research Grant Committee (Fall '02-Present)*
- *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 Physical Teaching Spaces Renovation Committee. (Winter 2005-Present)*
- *Member Physical Teaching Spaces Task Force. (Fall 2004)*
- *Member Social Awareness Sub-Committee of the General Education Outcomes Assessment Committee. ('01-Present)*
- *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:
- *4 Gallon Donor – Michigan Community Blood Centers. (August '04)*
- *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)

PROFESSIONAL ACTIVITIES AND AFFILIATIONS:

- ***Architectural Licenses current in Michigan and Ohio.***
- ***Renewed Certified Facility Manager Designation, IFMA, '00, '03.***
- ***Member,*** *International Facilities Management Association. ('89-Present)*
- **Certified Facility Manager, IFMA,** earned designation 1997.
- **Member,** Facilities Management Educators' Council. ('91-'99)
- **Secretary-Treasurer,** Facilities 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:

- ***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)*
- ***Responsible for Facility Management Internship Program (FMAN393).*** *(Summer 2004-Present)*
- ***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:

Guest Speaker, "SOCY 344: World Urban Sociology; *for Tony Baker; FSU, Winter '05.*

"Forces That Shape Vernacular Architecture: The Wooden Churches of Slovakia", *tentatively scheduled for publication in Insider.*

Guest Speaker, ARCH 112: Structural Materials; *for Bruce Dilg, FSU, Fall '04.*

"Longevity in Wood Construction", Michigan Design Educators Conference, *FSU, 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.*

Guest Speaker, "SOCY 344: World Urban Sociology; *for Tony Baker; FSU, Winter '04.*

"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 Team College of Technology Faculty Development Grant-Submitted by Mary Brayton.*** *Used to fund sketching seminar for Architectural Technology Faculty. (April '05)*
- ***Recipient of Team College of Technology Faculty Development Grant-Submitted by Gary Gerber.*** *Used to fund LEED seminar for Architectural Technology Faculty. (April '05)*
- ***Recipient Timme Grants.*** *Used to fund Fall '03 Sabbatical. Used to fund Fall '02 trip to Toronto, Ontario for World Workplace.*
- ***Recipient of Academic Senate Faculty Development Grant.*** *Used to fund Fall '03 Sabbatical.*
- ***Recipient of Individual College of Technology Faculty Research Grant.*** *Used to fund Fall '03 Sabbatical.*
- ***Recipient of Team College of Technology Faculty Development Grant-Submitted by Gary Gerber.*** *Used to fund REVIT seminar for Architectural Technology Faculty. (July '03)*