Ferris State University
College of Technology
Construction and Facilities Department

ACADEMIC PROGRAM REVIEW REPORT

BS, Facilities Management

Program Review Panel

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September, 1999

ACADEMIC PROGRAM REVIEW REPORT
BS, FACILITIES MANAGEMENT

Table of Contents

Table of Contents, Continued

Ferris State University has offered construction-related education for over 50 years. Initial programming began at the associate degree level with HVACR Technology in 1945, adding Architectural Technology in 1952, Surveying Technology in 1958, Highway Technology (later Construction Engineering Technology and now Civil Engineering Technology) in 1960 and Building Construction Technology in 1968. Baccalaureate programming began in 1973 with Surveying (now Survey Engineering), adding Construction Management in 1981, HVACR Engineering Technology in 1984 and Facilities Management in 1989.

The AAS Architectural Technology and the BS Facilities Management make up a combined program area offering incoming first-year students the opportunity to earn both an associate and baccalaureate degree in a related area. Upon completion of the second year of the AT Program students may transfer to the FM program and earn a baccalaureate in FM in an additional two years. They also have the option of entrance into the BS in Construction Management.

This report will only deal with the BS Facilities Management Program. The AAS Architectural Technology Program will be dealt with in a separate report.

Each program is viewed as a separate entity, but at the same time is viewed as part of a closely related program area. This relationship is apparent in the mission statement of the programs:

> The mission of the Architectural Technology and Facilities Management Programs is to educate students in a spectrum of technical programs critical to Michigan's economic future and to provide technology transfer of information to the construction industry. This curricula's focus on Architectural Technology and Facilities Management integrates the appropriate general education courses needed to prepare today's graduates with a foundation of knowledge required to cope with advancing technology within their professional careers.

> The Architectural Technology and Facilities Management Programs are committed to providing a diverse student body with quality technical curricula emphasizing professional, practical, and usable skills that prepare the graduate to analyze, synthesize, problem solve, and communicate within their discipline. This is accomplished in an environment that is one of respect for our students and their field of study. Students are perceived as products of the Architectural Technology and Facilities Management Programs and employable and prepared for advancement in their chosen careers after graduation.

The technical, technological and career-oriented nature of the two programs is very much in accord with and in support of the university mission. The success of the graduates in attaining employment in their profession at competitive salaries, in demonstrating their skills and knowledge and in attaining advanced levels of responsibility all point to the success of the programs.

There is one other institution in Michigan offering a Baccalaureate in Facilities Management, Eastern Michigan University. While our program evolves from an architectural technology base, Eastern's grew from a heating, ventilating, and air conditioning base.

The program holds a unique position, as being one of five programs worldwide holding Recognition by the International Facility Management Association (IFMA) as meeting the academic standards established by the organization for industry education. The other four programs holding this designation are: Cornell University, Eastern Michigan University, University of Southern Colorado, and the University of Strathclyde-Scotland.

In addition to on-campus programming, the FM Program has offered a Certificate in Facilities Management at the Grand Rapids campus since 1995 and is investigating reinstitution of the BS in Facilities Management at the Grand Rapids campus. See the proposal in Appendix J.

The program is taught by a group of three faculty. Two faculty, Mel Kantor and Joseph Samson teach in both the AT and FM programs and Victoria Hardy teaches full time in Facilities Management. Faculty resumes are contained in Appendix I. A brief list of the faculty, their credentials and date of initial employment follows:

- Victoria Hardy, MM, CFM, Assistant Professor   1994

- Mel Kantor, B Arch, AIA, CFM, NCARB, Professor   1974

- Joe Samson, M Arch, CFM, Associate Professor   1988

The faculty group is a well-balanced mix of longevity and newness. All of the faculty have strong professional experience in facilities management and architecture and bring their expertise into the academic setting. Turnover of faculty is low. Since the program's inception only one faculty member has left to return to the private sector.

It should be noted that all faculty teaching within the FM Program hold Certified Facility Manager (CFM) designation achieved by national examination by the International Facility Management Association (IFMA).

Faculty are very active within the professional organizations. All are members of IFMA; all have served as officers within the Facility Management Educators' Council of IFMA, president, vice-president/president-elect (current), and treasurer; one on the IFMA National Board of Directors; and two currently serve as officers in the West Michigan Chapter of IFMA, as president and vice-president.

The program students are a diverse group. Women and minority students make up approximately 30 percent of FM students. Most students have a strong architectural technology and computer background and through a summer internship between the third and fourth year blend this expertise with principles of facilities management to make a very successful entry into the profession of facilities management.

The program has an active student chapter of the International Facility Management Association and maintains a very close relationship with the West Michigan Chapter of IFMA. Each year several of our students are awarded scholarships through both the national and local chapters of IFMA. Each year, several students and faculty attend IFMA's World Workplace, a four-day international conference dealing with facilities management issues.

The program has an excellent relationship with corporations and institutions in Michigan and nationally. Placement of interns and graduates is very successful. Our graduates and interns are employed in the facilities areas of such companies as:

- Amway Corporation
- Meijers Inc.
- Johnson Controls
- Herman Miller
- Steelcase
- American Seating
- Harvard University
- University of Iowa
- Culver Academy
- Anderson Consulting
- Department of the Navy
- Detroit Edison
- Pharmacia-Upjohn
- Hyatt Corporation
- Bissell Inc.
- Intel Corporation
- EDS

Corporations have also been generous with their time, allowing facilities professionals to serve on our FM advisory board, meet with students, and host field trips at their corporate headquarters and other facilities.

The program has maintained a technological position that in most instances parallels or exceeds the profession. Through the generosity of companies such as FM Systems, Archibus, and Facet, Inc. over $250,000 in facilities management software has been donated to the program. This software, along with access to the AT/FM computer labs has enabled our FM students to develop competencies not readily available in the private sector, and creates a demand for them in the market place.

A graduate survey was administered to a list provided by the alumni association that included 102 names; 80 Bachelor and 22 certificate graduates. 15 of the addresses were deemed unusable due to out-of-date information. It should be noted that this list does not comprise the entire list of graduates from the bachelor's and certificate programs, as some graduates do not belong to the alumni association. However, based on the numbers from the registrar's office, it is a substantial majority. The survey that was mailed to the remaining 87 addresses was designed using input from prior surveys in the Construction and Facilities Department, as well as for the Advertising Program in the College of Business. The instrument was mailed with a cover letter, and was designed to be folded and mailed back (return postage paid) with just a few minutes required to fill it out. This design is responsible for the excellent return of 36%; with 22 bachelor graduates and 10 certificate graduates responding. The respondents spanned the entire range of the program with '91 graduates as well as the class of '98. A complete copy of the survey form, and the cover letter is included in Appendix B.

Currently, only one of the respondents is not actively working in the facility management field (insurance agent). The remaining respondents hold titles including: project manager (8); facility planner (6); facility manager (4); interior planner; Senior Facility Manager; Plant Manager; CAD Manager; and Scheduling Clerk.

The salary ranges were very interesting. Those bachelor's degree people who chose career paths in Facility Management Departments of larger corporations had the highest salaries with firms such as Detroit Edison, K-Mart, and Citizens Bank. The bachelor's graduates who chose to go to work with architectural or design firms had the lowest range. The salaries of the certificate graduates had a wider range, reflecting the years of experience in the group. However, it should be noted that six of the ten certificate respondents had salaries above $50,000. This is important in that it indicates that the enrollees in the certificate program are not always lower level management looking to improve their skills. Senior managers are taking the certificate program for professional development.

The following chart lists the bachelor degree respondents' answers to this question (not all respondents chose to reveal their salary range). The chart depicts the range of salaries (in thousands) listed in the survey across the top and the year of the graduate in the left column.

	25-30	30-35	35-40	40-45	45-50	50-60	60-70
91	X	X					
92	X			X	X		
93		X					
94						X	
95			XX			X	
96	XXX			X		X	
97		XX		XX			
98	XX	X					

In the section of the survey addressing program and technical topics, the respondents were asked to evaluate a list of topics as to the *relevance* of the topic to their work and the *preparation* that they received from the FM Program. It should be noted that, like all technical programs, the FM course of study includes a number of courses from the College of Business as well as Arts and Sciences. The complete list and the average scores are included in this section, but several items are worth noting. First, in the topics covered in the FM courses the average *preparation* score was 3.26. One of the two lowest scores for *relevance*, for Physics, has already been addressed with a program change. The students are now required to take Environmental Biology, which covers topics much more pertinent to their degree work. The other low score for *relevance* in Economics – Macro is under review for possible replacement with a second semester of accounting.

The three items with the widest discrepancy between *relevance* and *preparation* were Budgeting and Finance; Estimating-Costing; and Vendor Relationships. Budgeting and Finance are addressed partially by the College of Business course work, but it is the intent of the FM faculty to introduce more material in this area into the capstone course. Estimating-Costing is taught in the Architectural Technology curriculum and can be addressed internally in collaborative efforts. The Vendor Relationships item is reflective of the increased emphasis on this issue in today's market and should be addressed more fully in FMAN 321 – Principles of Facility Management.

FERRIS STATE UNIVERSITY - COLLEGE OF TECHNOLOGY
CONSTRUCTION AND FACILITIES DEPARTMENT

Program Review - Results of Employer Survey
Baccalaureate Degree in Facilities Management

A survey was sent to 25 persons identified by program faculty as employers of graduates of the Facilities Management program. Twelve responses were received. Two of the respondents noted that they had experience only with interns and had not hired graduates. The tabulated results include these two respondents.

The graduates scored better than average in all areas. No respondents reported any skills of graduates as being "below average" or "poor".

The three areas in which respondents reported the most "average" skill levels were:
- "critical thinking, problem solving, and decision making skills", 3.92. mean score.
- "ability to gain rapport with "clients"", 3.91 mean score.
- "leadership and negotiation skills", 3.75 mean score.

The areas in which the respondents reported the highest skill levels were:
- "uses technology effectively", 4.75 mean score.
- "participates as a team player", 4.58 mean score.
- "works well with individuals from diverse backgrounds", 4.50 mean score.

The results indicate that overall the graduates of the facilities management program are well prepared to enter the work force. The graduates seem to be especially well prepared for entry level work, while also possessing a strong base to build additional skills in the areas of decision making, people skills, and management skills.

A "Question by Question Tabulation of the Employer Survey" is in Appendix C.

Methodology:

A survey of facilities management students was conducted in the second week of February 1999. The purpose of the survey was to determine satisfaction and perceptions of the facilities management program and faculty, equipment and facilities, as well as support coursework and services provided by FSU.

The survey was distributed to all facilities management students. Care was taken to ensure that each student received only one copy of the survey and that only facilities management majors received the survey. The results of the survey were tabulated separately for juniors and seniors and then combined. The number of respondents in each category are as follows:

    Juniors:10
    Seniors: 11
    TOTAL: 21

Questions 2 through 5 of the survey were fill in. The results of the student responses were classified into groups and tabulated. The main body of the survey requested that students respond to each statement by assigning a rating based on a 5 point scale. The rating system is as follows:

    5 = excellent
    4 = good
    3 = average
    2 = below average
    1 = poor
    ? = don't know (not counted when means were calculated)

At the end of the survey a space was provided for student comments. These are recorded verbatim in Appendix D.

Results:

Most students were satisfied with their choice of Ferris State University. Most came to FSU for "hands on" experience in architectural technology. Most dissatisfaction was expressed regarding the community, facilities, etc.

Most students were satisfied with courses and faculty within facilities management. The lowest ratings were for "use of written objectives to keep students aware of their progress" (3.8), "providing supervised practice" (3.9), "interesting and understandable instruction" (3.1). However, even these areas were above average.

Students were less satisfied, as a group, with related courses and faculty.

Students also expressed lower satisfaction ratings for various aspects of program computer laboratories. Problems were expressed with "maintenance" (3.2), "adequate hours" (3.0), and "when labs were open" (2.9).

An item by item summary of survey results follows with a sample of a blank survey in Appendix D.

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The Facilities Management faculty were asked to complete a questionnaire rating their perceptions of the Facilities Management program. The survey instrument selected was the Program Review in Occupational Education (PROE). All three faculty members completed the survey. Criteria for excellent and poor ratings were provided for each item on the questionnaire. Respondents were asked to rank each category on a scale of 1-5.

> 5 = Excellent means ideal, top 5 to 10%
> 4 = Good is a strong rating, top 1/3rd
> 3 = Acceptable is average, the middle 1/3rd
> 2 = Below expectations is only fair, bottom 1/3rd
> 1 = Poor is seriously inadequate, bottom 5 to 10%

A sample survey and average numerical results for each question are included in Appendix E. Survey results are summarized below.

<div align="center">
Areas Rated High
(Scores between 4 and 5)
</div>

Goals and Objectives

• Program goals	4.3
• Course objectives	4.7
• Use of information on labor market needs	5.0
• Use of information on job performance requirements	4.7
• Use of profession/industry standards	5.0
• Use of student follow-up information	4.7

Processes

• Adaptation of instruction	4.3
• Relevance of supportive courses	5.0
• Provision for work experience, cooperative education or clinical experience	5.0
• Program availability and accessibility	4.7
• Provision for the disadvantaged	4.5
• Provision for the handicapped	4.3
• Efforts to achieve sex equity	4.7
• Provision for program advisement	5.0
• Provision for career planning and guidance	5.0

- Adequacy of career planning and guidance 5.0
- Provision for employability information 5.0
- Placement effectiveness for students in program 5.0
- Student follow-up system 4.0
- Promotion of program 4.0

Resources

- Provision for leadership and coordination 4.3
- Qualifications of administrators/supervisors 4.7
- Instructional staffing 5.0
- Qualifications of instructional staff 5.0
- Professional development opportunities 4.0
- Adequacy of instructional facilities 4.3
- Scheduling of instructional facilities 4.3
- Adequacy and availability of instructional
  materials and supplies 4.0
- Adequacy and availability of learning resources 4.3
- Use of advisory committees 5.0

Based on the findings of this survey, it appears that the Facilities Management program has an excellent plan for preparing students for careers in the field. This program is recognized by its professional association, the International Facility Management Association, as one of only four programs in North America meeting industry guidelines. Industry standards, as identified by current data on labor market needs and advisory committees, are used in planning and evaluating the program and the content of its courses. Supportive courses were also viewed as relevant and excellent. The internship experience is considered the key element in meeting employer needs.

Successful student advising and career planning were stated to be due to faculty involvement, rather than university support. A major strength of the program is the trained and educated professional faculty who are all certified facilities managers. Other strengths identified were the availability of computer technology, strong computer skills, strong architectural foundation, and a broad management base.

Areas Rated Low
(Scores below 3)

Resources
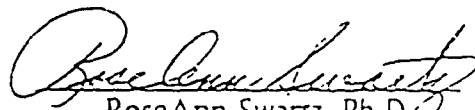
- Use of instructional support staff   1.3
- Use of clerical support staff   1.7
- Adequacy and availability of instructional equipment   2.7
- Provisions in capital outlay budget for equipment   2.7

All of the areas identified at the "below acceptable level" were in the resource category. The faculty believe that instructional support staff, technical support, and clerical support are below acceptable levels. The entire Construction and Facilities Department in the College of Technology has only two full-time support staff to service the needs of four programs offering nine degrees.

While the learning resources for this program were considered "good," there is a need for more access to computers and highly specialized FM software in order to maintain the effectiveness of this program. Access to more computers could be accomplished through a centralized computer facility with Auto CAD and FM programs, more FM computers for the program, or a requirement that students purchase their own computers and software.

Comments were also received about the need to improve recruiting efforts, especially at community colleges. Another suggestion was to move the FM bachelor's degree to Grand Rapids because of the larger base of potential traditional and nontraditional students. The need for upgrading facilities and furnishings was also identified.

Submitted by

RoseAnn Swartz, Ph.D.
College of Business

Ferris State University

Advisory Committee Survey for the Facilities Management (FM) Program

The following is an overview of the responses received from the members of the 1999 advisory committee for the FM program. Eleven surveys were sent to advisory board members with nine responding. The original surveys with comments are included for reference. The responses available ranged from excellent ....good....average....below average...poor...and N/A

- The majority of opinions in relation to the skills and training provided by the program were rated in the *good* category.

- There was consensus that there is an *excellent* to *good* demand for students involved in the FM program.

- There was a positive response to the hiring of the Ferris FM student in the *excellent* to *good* range with comments from committee members that this practice has already taken place with some of their companies in the past.

- A wide range of responses in regards to the adequate number of graduates ranged from *good* to *below average*.

- It was the opinion that the program has *good* computer facilities with a *third of the responses not sure*.

- The response for adequate laboratory facilities was similar to the response regarding computer facilities with a rating of *good* to a *third not sure*.

- A slight majority rated *good* to *average* when asked the question of "an adequate number of faculty" for the FM program. A third of the responses were poor to not enough information available.

- The majority of those surveyed replied *good* in regards to the curriculum meeting the needs of the industry.

- A rating of *good* met the response for the quality of the academic credentials and experience of the program's faculty.

- The advisory members felt that there was *good* institutional support for professional development and continuing education.

- A majority responded that there is a *good* rating in regards to the graduates of the program being prepared to inter the work place.

- There is an *excellent* perception that the FM graduate is competitive with other graduates from similar FM programs.

- The majority of those responding *did not feel they had enough information* to evaluate if the FM program was receiving adequate financial support from the university.

- The responses were equal from *excellent* to *good* in that the recognition from IFMA is vital to the success of the Ferris FM program.

Comments:

A few of the members expressed a desire to meet with more students and to visit the campus. The possibility of having the next advisory board meeting on campus was discussed at the meeting on 4/23 and will be reviewed.

The need to put more emphasis on the "manager" in facility management was discussed by encouraging students to add more business focus to their electives.

There is strong support for the internship programs.

Prepared by:
Ferris State University FM Advisory Board
Janice K. Fryling
Manager, Facility Administrative Support
Amway Corporation
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The facilities management field is continuing to provide excellent job prospects for the graduate with a bachelor's degree. In 1991, when the FM Program graduated its first students, the International Facility Management Association had a membership of 8,969. Today, the Association numbers more than 16,000 members in 37 countries. The average total compensation for facility managers has jumped 18 percent in the last four years, from $58,800 to $69,000, according to the most recent industry survey conducted by IFMA of more than 4,400 facility management professionals.

The IFMA survey also noted that increasingly, the facility management professional must have a building industry related college degree, and in fact, the survey showed that the percentage of professionals who have FM Bachelor degrees has grown from 3% to 7% in the last four years. The salary for entry level positions ranges from $25,000 to $35,000, depending on prior experience and education. FM graduates at Ferris have been averaging $32,000 for the last several years.

The Bureau of Labor Statistics predicts that employment of "administrative services managers" (the title that encompasses facility managers) is expected to grow about as fast as the average for all occupations through the year 2006. The significant change in this field is the introduction of out-sourced service providers. These firms contract directly with organizations and companies to provide facility management services. "As it becomes more common for firms and governments at all levels to contract out administrative services, demand for administrative services managers will increase in the management services, management consulting, and facilities support services providing these services." (Bureau Statistics Handbook) In fact, this prediction is already coming true for Ferris FM graduates. Firms including Koll Facilities Services, ENGA, and EDS have hired recent graduates to join teams of people providing services for clients such as Ford, GM, Dow Chemical, and NBD Bank.

Recent interviews with European employers and representatives from eight European university programs in facilities (or assets) management also indicated a strong market for graduates, particularly those who may have competency in one or more languages. These interviews took place at the Futures in Facility and Property Management Conference in London, England during the last week of June, 1999.

The Facilities Management Program primarily shares classrooms and laboratories with the Architectural Technology Program in the Swan Building (SWN).

The program has two laboratory courses: FMAN 309 – Computer Applications for Facilities Management (1 section/year), and FMAN 499 – Capstone Assessment Thesis. The remaining program courses are lecture courses and normally taught in a standard classroom.

The following facilities are dedicated to the FM Program:

Facility	Capacity	Use
SWN 111	26	Classroom and Resource Room

Computer laboratory courses and other classes inappropriate for a classroom setting primarily use the Architectural Technology Program's laboratory facilities.

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 was recently refurbished and is adequate for its current usage.

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 facilities management software which may conflict with other software programs. In addition, scheduling of class times and non-scheduled computer time becomes difficult. Currently, four out-of-date computers are available in SWN 111 for student use, but they need to be replaced with more powerful ones.

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.

A structured plan and identified, dependable funding for new computers, replacement of worn out and/or obsolete computer and other equipment, the purchase of newly developed equipment, and the necessary support of the equipment is needed.

The Baccalaureate Degree in Facilities Management is the second half of a 2 + 2 degree, the first half 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 facility 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 rationale for this revision was, as stated in the Revisions to the Facilities Management Program:

> In order to meet industry needs and to maintain "state of the art" content in the program, changes are necessary on a continuing basis. The following changes and their rationale reflect this need. Other considerations are the integration of new courses, the order and continuity of topics, and the wish to distribute the amount of credit hours more equitably during each semester of the Junior and Senior years of the curriculum.

Specific changes to the program may be seen in the document "Revisions to the Facilities Management Program" with is submitted as a separate document. No revisions have been made since 1997, but based upon survey documents from students, graduates, employers, and advisory board the faculty are currently reexamining the program to implement changes to reflect current needs of the profession.

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 and Course Descriptions in Appendix G.

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 G.

A one-year Certificate Program in Facilities Management is offered at the Grand Rapids Campus. Enrollment criteria and course information is available in Appendix G.

In addition, support courses are provided for the Recreation and Leadership Management Program in the College of Education, and for the new 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 five facilities management programs world-wide holding this designation. The other four institutions with recognized programs are Cornell University, Eastern Michigan University, the University of Southern Colorado, and the University of Strathclyde-Scotland. A copy of the Self-Study Report is provided separately.

Enrollment data for the BS Facilities Management is tabulated below. Detailed information on enrollment by class year is available at Appendix A.

	Fall 1994	Fall 1995	Fall 1996	Fall 1997	Fall 1998
On Campus:					
BS FM	25	21	13	18	20
Pre-Tech	2	4	1	4	2
Off-Campus:					
BS FM	5	5	1	0*	0*
FM Certificate	0	4	12	25	11

NOTE: Since Facilities Management is the second half of a 2 + 2 partnership with Architectural Technology, AT is a major source of students for continuance in the FM Program.

In 1996 recruiting efforts were expanded outside of the AT Program, and outside of FSU to increase enrollment.

Currently the FM Program is under-capacity and could have ten additional juniors enter the program.

* In the mid-1990's the Baccalaureate in Facilities Management, offered in the evenings at the Applied Technology Center was discontinued.

After discussions amongst the FM faculty, the FM Advisory Board, the popularity of the one-year FM Certificate Program at the ATC, and substantial interest in reestablishing the baccalaureate at the Grand Rapids Campus by current and former certificate students, the FM Program faculty have submitted a proposal to the Vice-President of Academic Affairs to offer the Baccalaureate in Facilities Management as a full-time program at the Grand Rapids Campus.

Productivity data for the BS Facilities Management course prefix is tabulated below. Data for Ferris State University, the College of Technology and the three departments within the college are included for comparison purposes.

PRODUCTIVITY REPORT
SCH/FTEF
1994-1999

Area	1994/1995	1995/1996	1996/1997	1997/1998	1998/1999
FSU	466	464	447	442	457
College of Technology	334	339	333	323	331
Transportation & Electronics Department	287	325	304	297	301
Design, Manufacturing & Graphic Arts Department	361	324	324	306	323
Construction & Facilities Department	352	380	384	384	378
FMAN Prefix Courses	230	253	233	305	255

Academic year 1997-1998 program teaching costs for the BS Facilities Managment are tabulated below. Data for Ferris State University, the College of Technology and the three departments within the college are included for comparison purposes.

Program Teaching Costs, Academic Year 1997-1998:

	Average Instructor Cost per SCH	Average Department Cost per SCH	Average Dean's Cost per SCH	Total Cost per SCH
FSU	$134.40	$44.28	$15.61	$194.29
College of Technology	$159.62	$57.78	$14.93	$232.33
Transportation and Electronics Department	$183.95	$66.52	$14.91	$265.38
Design, Manufacturing and Graphic Arts Department	$154.85	$61.75	$15.01	$231.61
Construction and Facilities Department	$131.64	$42.89	$14.90	$189.43
BS FMAN	$144.41	$41.67	$14.69	$200.77 68th out of 173 programs
10 FMAN courses	$135.86 51st out of 133 course prefixes			

Total program cost per SCH for the BS Facilities Management is below the College of Technology average, and slightly above the university average.

S&E funding for the BS, Facilities Management cannot be separated from the S&E funding for the AAS, Architectural Technology. Nevertheless, S&E funding is marginal. S&E data is tabulated in Appendix A. There are two major areas of concern. The program is highly dependent on year-end equipment funds, which are becoming scarcer, given the new budget procedures in the Office of the Vice President Academic Affairs. Second, faculty development and travel funds are limited.

- The FM program is central to the FSU mission.

  Ferris State University will be a national leader in providing opportunities for innovative teaching and learning in career-oriented, technological and professional education.

  The program concentrates on the career needs of the students, the needs of the profession, and maintains technological effectiveness.

- The FM program provides true 2 + 2 programming in conjunction with the AAS AT program.

- The FM program serves the State of Michigan and the nation with highly qualified graduates for the facilities management profession.

- The FM program enjoys a close, very supportive relationship with the major facilities management association, IFMA. Academic Recognition from IFMA and the involvement of the faculty are providing the program with national visibility.

- Enrollment growth is stagnant and needs improvement. The FM faculty believes that the re-establishment of the BS in Facilities Management at the Grand Rapids campus will lead to a growth in enrollment.

- Input from students, graduates, employers, the advisory committee and the academic recognition process all indicate a high quality of instruction.

- Input from graduates, employers, and the advisory committee all indicate a high demand for graduates. This demand is founded on the strength of all facets of the program and the preparation of the graduates to go to work as members of the FM team. The success of the internship program indicates that are students are well prepared to enter the work force.

- Placement rates are 100% and starting salaries are competitive.

- The program serves non-majors through FMAN courses that are required in other programs such as Recreation Leadership & Management and the newly established Resort Management Program and through Facility Management Minors in Facility Planning Management and Facility Operations Management.

- Classroom and computer laboratory facilities and equipment are adequate, and the sharing of facilities with the Architectural Technology Program makes this possible. A dedicated FM computer facility would be an asset. A funded plan for equipment, computer replacement/acquisition, and maintenance is a needed priority.

- Library resources are adequate.

- The program is of mid-range cost of baccalaureate programs in the College of Technology. Eight programs rank higher in cost and eight rank lower. (See Degree Program Costing Table in Appendix J.

- The faculty are highly qualified and competent. They are deeply involved in non-teaching activities and even with high teaching loads find the time for professional pursuits.

- Administrative effectiveness is very high (4.75 on Faculty Survey).

- The student, graduate, employer and advisory committee surveys all reinforce the need for continuous curriculum review and revision. This is a continuous process undertaken by the FM faculty.

- The average starting salary for graduates is $32,000 per year.

- To enhance enrollment a proposal has been submitted to the Vice-president for Academic Affairs to reestablish the Baccalaureate in Facilities Management at the Grand Rapids Campus and possibly only offer support courses on the main campus. (A copy of the proposal may be found in Appendix J)

- Pending the outcome of a market study conducted by FSU Grand Rapids, and a decision on the FM Proposal submitted to the Vice-President for Academic Affairs, that the Facilities Management Program be enhanced by reestablishing the Baccalaureate in FM at the Grand Rapids campus in addition to the currently offered Certificate in FM.

- That the Facilities Management Program enrollment be enhanced by developing, funding and conducting a targeted marketing and recruiting effort on a Midwest regional basis.

- Funding be provided to investigate and develop alternate methods of instructional delivery for the Certificate Program.

- That an equipment/acquisition and maintenance plan be developed by the faculty and appropriate funding be supported.

- That all program needs including a dedicated FM computer/research lab be included in the proposed College of Technology capital outlay project.

- That the faculty continue to review and revise the curriculum as appropriate to address issues raised in the student, graduate, employer and advisory committee surveys and to meet the continual changes in the profession. This effort is a current and continuing process.

PROGRAM REVIEW PANEL EVALUATION

Program: __FACILITIES MANAGEMENT__

Instructions: Circle the number which most closely describes the program you are evaluating.

1.   Student Perception of Instruction   Average Score __4.33__

5 (2)	4 (4)	3	2	1

Currently enrolled students rate instructional effectiveness as extremely high.

Currently enrolled students rate the instructional effectiveness as below average.

2.   Student Satisfaction with Program   Average Score __4.16__

5 (2)	4 (3)	3 (1)	2	1

Currently enrolled students are very satisfied with the program faculty, equipment, facilities, and curriculum.

Currently enrolled students are not satisfied with program faculty, equipment, facilities, or curriculum.

3.   Advisory Committee Perceptions of Program   Average Score __4.58__

5 (4)	4.5 (1)	4	3	2 (1)	1

Advisory committee members perceive the program curriculum, facilities, and equipment to be of the highest quality.

Advisory committee members perceive the program curriculum, facilities, and equipment needs improvement.

4.   Demand for Graduates   Average Score __4.75__

5 (4)	4.5 (1)	4 (1)	3	2	1

Graduates easily find employment in field.

Graduates are sometimes forced to find positions out of their field.

5.   Use of Information on Labor Market   Average Score __4.67__

5 (4)	4 (2)	3	2	1

The faculty and administrators use current data on labor market needs and emerging trends in job openings to systematically develop and evaluate the program.

The faculty and administrators do not use labor market data in planning or evaluating the program.

6.   Use of Profession/Industry Standards   Average Score __4.75__

5 (4)	4.5 (1)	4 (1)		3	2	1

Profession/industry standards
(such as licensing, certification,
accreditation) are consistently
used in planning and evaluating
this program and content of its
courses.

Little or no recognition is given to
specific profession/industry
standards in planning and
evaluating this program.

7.   Use of Student Follow-up Information   Average Score __3.67__

5 (1)	4 (2)	3 (3)	2	1

Current follow-up data on
completers and leavers are
consistently and systematically
used in evaluating this program.

Student follow-up information
has not been collected for use in
evaluating this program.

8.   Relevance of Supportive Courses   Average Score __3.83__

5 (1)	4 (3)	3 (2)	2	1

Applicable supportive courses
are closely coordinated with this
program and are kept relevant to
program goals and current to the
needs of students.

Supportive course content reflects
no planned approach to meeting
needs of students in this program.

9.   Qualifications of Administrators and Supervisors   Average Score __4.58__

5 (3)	4.5 (1)	4 (2)	3	2	1

All persons responsible for
directing and coordinating this
program demonstrate a high level
of administrative ability.

Persons responsible for directing
and coordinating this program
have little administrative training
and experience.

10.   Instructional Staffing   Average Score __3.92__

5 (2)	4.1 (1)	4 (2)	3	2	1 (1)

Instructional staffing for this
program is sufficient to permit
optimum program effectiveness.

Staffing is inadequate to meet the
needs of this program effectively.

11.   Facilities   Average Score __3.58__

5	4 (3)	3.5 (1)	3 (2)	2	1

Present facilities are sufficient
to support a high quality program.

Present facilities are a major
problem for program quality.

12.   Scheduling of Instructional Facilities   Average Score __4.33__

5 (3)	4 (2)	3 (1)	2	1

Scheduling of facilities and
equipment for this program is
planned to maximize use and be
consistent with quality instruction.

Facilities and equipment for this
are significantly under-or-over
scheduled.

13.   Equipment   Average Score __3.5__

5	4 (3)	3 (3)	2	1

Present equipment is sufficient
to support a high quality program.

Present equipment is not
adequate and represents a threat
to program quality.

14.   Adaption of Instruction   Average Score __3.92__

5 (1) 4.5 (1)	4 (2)	3 (2)	2	1

Instruction in all courses required
for this program recognizes and
responds to individual student
interests, learning styles, skills, and
abilities through a variety of instructional
methods (such as, small group or individualized
instruction, laboratory or "hands on" experiences,
credit by examination).

Instructional approaches in this
program do no consider individual
student differences.

15.   Adequate and Availability of Instructional Materials
       and Supplies   Average Score __4.08__

5 (1) 4.5 (1)	4 (3)	3 (1)	2	1

Faculty rate that the instructional
materials and supplies as being
readily available and in sufficient
quantity to support quality
instruction.

Faculty rate that the instructional
materials are limited in amount,
generally outdated, and lack
relevance to program and student
needs.

ADMINISTRATIVE PROGRAM REVIEW

Program/Department: FACILITIES MANAGEMENT
CONSTRUCTION & FACILITIES DEPARTMENT

Date submitted: _____ **Dean** _____

ENROLLMENT/PERSONNEL	FALL 1995	FALL 1996	FALL 1997	FALL 1998	FALL 1999
Tenure Track FTE	**	**	**	**	**
Overload/Supplemental FTEF					
Adjunct/Clinical FTEF (unpaid)					
Enrollment on-campus total*	25	26	18	20	
Freshman					
Sophomore					
Junior	6	3	4	10	
Senior	17	8	13	10	
To Be Determined			1	2	
Doctoral					
Enrollment off-campus*	19	27	27	18	

*Use official count (7 day count for semesters, 5-day count for quarters) 1 Faculty member teaches FM courses only, 2 Faculty members teach a mix of AT and FM courses.
**See ATSchedule

Financial - See AT Schedule

Expenditures*	FY 95	FY 96	FY 97	FY 98	FY 99
Supply & Expense					
Equipment					
Gifts & Grants					
Cash Donations					

Use end of fiscal year expenditures

Other

		AY 94-95	AY 95-96	AY 96-97	AY 97-98	AY 98-99
Number of Graduates* -	Total	14	18	8	15	12
	On Campus	14	18	7	12	11
	Off Campus	0	0	1 B.S. 9 cert	3 B.S. 7 cert	1 B.S. 24 cert
Placement of Graduates						
Average Salary						
Productivity -	Academic Year Average	230	253	233	305	
	Summer				31	
Summer Enrollment		10		29		

* Use total for academic year (F, W, S)

Program/Department: ARCHITECTURAL TECHNOLOGY
CONSTRUCTION & FACILITIES DEPARTMENT

Date submitted: _____ Dean _____

ENROLLMENT/PERSONNEL	FALL 1995	FALL 1996	FALL 1997	FALL 1998	FALL 1999
Tenure Track FTE	7	7	7	7	7
Overload/Supplemental FTEF					0
Adjunct/Clinical FTEF (unpaid)					0
Enrollment on-campus total*	98	108	105	81	
Freshman	58	55	47/1	34	
Sophomore	28	25	24/1	37	
Junior	8	17	8	14	
Senior	4	3	4	2	
To Be Determined		8	12/1		
Doctoral					
Enrollment off-campus*	9	0	0		

*Use official count (7 day count for semesters, 5-day count for quarters)

Financial

Expenditures*	FY 95	FY 96	FY 97	FY 98	FY 99
Supply & Expense	**10,948**	40,347	23,808.76	38110	39509
Equipment	1930	0	3,264.00	3078	11312
Gifts & Grants	0	0	120,000	40	0
Cash Donations		1198.00	256.00	1720	475

Use end of fiscal year expenditures

Other

	AY 94-95	AY 95-96	AY 96-97	AY 97-98	AY 98-99
Number of Graduates* - Total	12	22	28	26	27*
On Campus	12	22	28	26	27*
Off Campus					
Placement of Graduates					
Average Salary					
Productivity - Academic Year Average	294	335	360	377	332
Summer	10	13	0	0	0
Summer Enrollment					

- Use total for academic year (F, W, S)
- *Does not include Summer 99 graduates

Please complete the following, fold in half, staple or tape closed, and drop in the mail by March 1, 1999. Enclose any *additional* comments that you may wish to express on a separate sheet. Thank you.

A.   Education:

Name: _____

Degree(s) and Year(s) Received from Ferris State University:

BS/FM_____   .   .   Advanced Technical Certificate_____

Other degrees, corresponding year received, and institutions since high school:

Degree   Year   College/University

_____   _____   _____

_____   _____   _____

B.   Current Location Information:

Home Address Correction (if necessary):

_____

Home Phone: _____   Work Phone: _____

Company Name: _____

Position Title: _____

Company Address: _____

_____

E-Mail Address: _____

C.   Initial Salary Range:

If you received a BS in FM from Ferris, and then got a job based on that degree, please circle the range of your initial salary. *(Skip this question if you did NOT obtain a job based on a Ferris BS in FM.)*

below $20k	$25k to $30k	$35k to $40k	$45k to $50k
$20k to $25k	$30k to $35k	$40k to $45k	above $50k

D.   Current Salary Range (circle one):

$25k to $30k	$35k to $40k	$45k to $50k	$60k to $70k
$30k to $35k	$40k to $45k	$50k to $60k	above $70k

E.   Career Avenue which most closely describes your daily activities (circle one):

Facility Manager	Facility Planner	Facility Supervisor
Facility Director	Project Manager	Interior Planner
Construction Manager	Company Owner	Facility Staff

Other_____

February 15, 1999

Dear Facilities Management Graduate,

The University is reviewing our Bachelor's Degree Program in Facilities Management for continued support. The result of this review can range from increasing our program's resources to placing the program in a probationary status. This process requires your input.

As you may or may not know, the Facilities Management Program was recognized in 1997 as one of only four programs in North America that meets the IFMA Standards for professional education. Nonetheless, the value of your diploma from FSU varies with time and is determined by the reputation of the Facility Management Program. Help us to enhance the value of your degree by completing the enclosed survey and returning it by March 1, 1999.

In advance, we thank you for your quick response.

Very truly yours,

Victoria Hardy, CFM
Assistant Professor

Please take a few minutes to respond to the enclosed survey.

SUMMARY RATINGS:

Column A rates the relevance of the topic to the graduates' career path.

5 = very impt 4 = impt 3 = relevant 2 = not very relevant 1=unimportant

Column B rates the preparation received from the FM Program.

5 = very well prepared 4 = well prepared 3 = fairly prepared 2 = barely prepared 1 = not prepared

N/A not applicable

A	B	
2.90	2.89	Accounting
4.25	2.84	Budgeting and Finance
2.71	3.16	Business Law
4.65	3.80	Communication, Oral / Public Speaking
4.60	4.05	Communication, Written
4.25	4.40	Computer Applications - CAD Software
4.20	3.30	Computer Applications - Office Software
4.30	3.15	Computer Applications - Technical Software
4.10	3.40	Construction Practices
4.00	3.05	Contracts / Specifications - Interpretation
3.30	2.85	Contracts / Specifications - Writing
3.95	3.70	Design Principles
3.25	2.94	Economics – Buildings
2.50	2.83	Economics – Macro
3.30	3.05	Environmental Issues
4.00	2.80	Estimating – Costing
3.30	3.27	Ethics in Facility Management
3.85	3.47	General Management
2.60	2.52	Human Resources
3.50	3.15	Maintenance Issues
3.10	2.10	Marketing / Selling
3.50	3.55	Materials
3.70	3.50	Mathematics
4.15	3.05	Mechanical / Electrical Systems
3.35	3.00	Operations Administration
3.85	3.05	Outsourcing
2.70	2.94	Physics
4.25	4.15	Plan Reading
3.65	3.10	Productivity Issues
4.45	3.75	Project Management
3.45	2.84	Quality Assurance / Quality Control
3.40	3.05	Real Estate Issues
3.65	3.21	Safety
4.05	3.20	Scheduling
3.75	2.89	Supervision
3.30	3.31	Total Quality Management
4.15	2.84	Vendor Relationships
3.40	3.20	Property Management

Question by Question Tabulation of Results of Employer Survey

The mean score for each item is shown in bold letters immediately after it. The number of responses in each category are listed below the various ratings.

	Competencies and Foundation Skills	excellent 5	good 4	average 3	below average 2	poor 1	don't know
1.	Uses written and oral communication skills effectively. **4.25**	4	7	1	0	0	0
2.	Possesses adequate technical skills. (Scheduling, budgeting, planning, etc.) **4.33**	5	6	1	0	0	0
3.	Possesses adequate mathematical skills. **4.09**	2	8	1	0	0	1
4.	Uses critical thinking, problem solving, and decision making skills. **3.92**	4	3	5	0	0	0
5.	Exhibits an appropriate level of responsibility and self management. **4.08**	2	9	1	0	0	0
6.	Chooses ethical courses of action. **4.42**	5	7	0	0	0	0
7.	Identifies, organizes, plans, and allocates resources effectively. **4.25**	4	7	1	0	0	0
8.	Participates as a team player. **4.58**	8	3	1	0	0	0
9.	Works well with individuals from diverse backgrounds. **4.50**	7	4	1	0	0	0
10.	Acquires, interprets, and uses information effectively. **4.25**	4	7	1	0	0	0
11.	Possesses the ability to gain rapport with "clients". **3.91**	2	6	3	0	0	1
12.	Uses technologies effectively. (e.g., computers, telecommunication, etc.) **4.75**	9	3	0	0	0	0
13.	Possesses leadership and negotiation skills. **3.75**	2	5	5	0	0	0

No comments were received from the respondents.

17 February 1999

«Title» «FirstName» «LastName» «Proftitle»
«JobTitle»
«Company»
«Address1»
«Address2»
«City», «State» «PostalCode»

Dear «FirstName»:

Ferris State University is currently conducting an academic review of our Facilities Management Program. The purpose of the academic review is to periodically assess the performance of graduates, monitor the quality of the program, and provide a framework for future changes and revisions within the curriculum.

Your firm has been identified as a first employer of one or more of our Bachelor of Science in Facilities Management graduates. We request your input concerning the performance of graduates of our program. Please complete the enclosed survey and return it in the enclosed envelope by 1 March 1999.

Sincerely,

Mel Kantor, AIA, CFM	Joe M. Samson, CFM	Victoria Hardy, CFM
Professor, Program	Associate Professor	Assistant Professor
Coordinator	616-592-2630	616-592-3584
616-592-2625		

fmprltrE

FERRIS STATE UNIVERSITY - COLLEGE OF TECHNOLOGY
CONSTRUCTION AND FACILITIES DEPARTMENT

Program Review
Baccalaureate Degree in Facilities Management

Please rate the overall performance of graduates of the Facilities Management program in the following technical/skill areas on the following scale.

	Competencies and Foundation Skills	excellent	good	average	below average	poor	don't know
1.	Uses written and oral communication skills effectively.	5	4	3	2	1	NA
2.	Possesses adequate technical skills. (Scheduling, budgeting, planning, etc.)	5	4	3	2	1	NA
3.	Possesses adequate mathematical skills.	5	4	3	2	1	NA
4.	Uses critical thinking, problem solving, and decision making skills.	5	4	3	2	1	NA
5.	Exhibits an appropriate level of responsibility and self management.	5	4	3	2	1	NA
6.	Chooses ethical courses of action.	5	4	3	2	1	NA
7.	Identifies, organizes, plans, and allocates resources effectively.	5	4	3	2	1	NA
8.	Participates as a team player.	5	4	3	2	1	NA
9.	Works well with individuals from diverse backgrounds.	5	4	3	2	1	NA
10.	Acquires, interprets, and uses information effectively.	5	4	3	2	1	NA
11.	Possesses the ability to gain rapport with "clients".	5	4	3	2	1	NA
12.	Uses technologies effectively. (e.g., computers, telecommunication, etc.)	5	4	3	2	1	NA
13.	Possesses leadership and negotiation skills.	5	4	3	2	1	NA

Question by Question Tabulation of Results of Student Survey

1. What is your current academic status within the FM program?(circle answer)

    junior 10   senior 11   TOTAL 21

2. Why did you choose to attend FSU?
    *   architectural technology program   junior 4   senior 4   TOTAL 8
    *   career opportunities/hands on   junior 0   senior 2   TOTAL 2
    *   reputation of FM program   junior 2   senior 0   TOTAL 2
    *   poor H.S. GPA/only school that accepted me junior 1   senior 1   TOTAL 2
    *   family recommended   junior 1   senior 1   TOTAL 2
    *   College of Technology   junior 1   senior 0   TOTAL 1
    *   location   junior 1   senior 0   TOTAL 1
    *   get away from home   junior 1   senior 0   TOTAL 1
    *   small classes   junior 0   senior 1   TOTAL 1
    *   price   junior 0   senior 1   TOTAL 1
    *   liked campus   junior 0   senior 1   TOTAL 1
    *   to play sports   junior 0   senior 1   TOTAL 1

3. Are you satisfied with your decision to attend FSU?
    YES   junior 8   senior 7   TOTAL 15
    NO   junior 1   senior 2   TOTAL 3
    YES AND NO   junior 1   senior 1   TOTAL 2

    Why yes?
    *   good education   junior 3   senior 5   TOTAL 8
    *   like professors   junior 2   senior 2   TOTAL 4
    *   like campus   junior 0   senior 2   TOTAL 2
    *   good job opportunities   junior 1   senior 0   TOTAL 1
    *   hands on education   junior 1   senior 0   TOTAL 1

    Why no?
    *   facilities and location poor junior 3   senior 1   TOTAL 4
    *   few activities   junior 0   senior 1   TOTAL 1
    *   poor student services   junior 0   senior 1   TOTAL 1
    *   didn't learn anything in FM   junior 0   senior 1   TOTAL 1
    *   poor parking   junior 1   senior 0   TOTAL 1

4. Why did you choose to study Facilities Management?
    *   good program/career options/salary potential junior 5   senior 10   TOTAL 15
    *   alternate to architectural degree   junior 3   senior 3   TOTAL 6
    *   recommended by advisor   junior 1   senior 0   TOTAL 1
    *   challenging   junior 1   senior 0   TOTAL 1
    *   enjoy management   junior 1   senior 0   TOTAL 1
    *   wanted 4 year degree   junior 1   senior 0   TOTAL 1

fmqrrptS

5. Are you satisfied with your decision to study Facilities Management? Why? Why not?

YES	junior 9	senior 8	TOTAL 17
NO	junior 0	senior 3	TOTAL 3
YES AND NO	junior 2	senior 0	TOTAL 2

Why yes?
- career options, interesting   junior 4   senior 6   TOTAL 10
- good education   junior 1   senior 1   TOTAL 2
- related to interior design   junior 1   senior 0   TOTAL 1

Why no?
- should look at other prog's junior 0   senior 1   TOTAL 4
- wish I took CM   junior 0   senior 1   TOTAL 1
- no "hands on"   junior 0   senior 1   TOTAL 1
- too much theory   junior 0   senior 1   TOTAL 1
- can't wait to leave Big Rapids
                                                junior 1   senior 0   TOTAL 1
- doubt curriculum relates to real world jobs
                                                junior 1   senior 0   TOTAL 1

The responses to the following questions 6 through 43 are shown with three different suffixes. A "J" suffix indicates the responses of junior level students. A "S" suffix indicates the responses of seniors. A "T" suffix indicates the responses of juniors and seniors combined.

	excellent "5"	good "4"	average "3"	below average "2"	poor "1"	don't know
COURSES IN YOUR PROGRAM AREA ARE:						
6. Available and conveniently located.	2j/7s	8j/4s	-/-	-/-	-/-	-/-
Means: 4.2j/4.6s/ 4.4t	9t	12t	-	-	-	-
7. Based on realistic prerequisites.	2j/4s	8j/7s	-/-	-/-	-/-	-/-
Means: 4.2j/4.4s/ 4.3t	6t	15t	-	-	-	-
WRITTEN OBJECTIVES FOR COURSES IN YOUR PROGRAM:						
8. Are available to students.	2j/4s	8j/7s	-/-	-/-	-/-	-/-
Means: 4.2j/4.4s/ 4.3t	6t	15t	-	-	-	-
9. Describe what you will learn in the course. Means: 4.2j/3.9s/ 4.0t	2j/1s 3t	8j/8s 16t	0j/2s 2t	-/- -	-/- -	-/- -
10. Are used by instructor to keep students aware of their progress. Means: 3.9j/3.7s/ 3.8t	1j/1s 2t	7j/6s 13t	2j/4s 6t	-/- -	-/- -	-/- -
TEACHING METHODS, PROCEDURES, AND COURSE CONTENT:						
11. Meet projected student career needs, interests, and objectives. Means: 4.2j/4.1s/ 4.1t	3j/2s 5t	6j/8s 14t	1j/1s 2t	-/- -	-/- -	-/- -
12. Provide supervised practice for developing skills. Means: 4.0j/3.9s/ 3.9t	1j/2s 3t	8j/5s 13t	1j/4s 5t	-/- -	-/- -	-/- -

	excellent "5"	good "4"	average "3"	below average "2"	poor "1"	don't know
PROGRAM FACULTY:						
13. Know the subject matter and occupational requirements. Means: 4.7j/4.5s/ 4.6t	7j/7s 14t	3j/3s 6t	0j/1s 1t	-/- -	-/- -	-/- -
14. Are available to provide help when needed. Means: 5.8j/3.8s/ 4.2t	6j/1s 7t	4j/7s 11t	0j/3s 3t	-/- -	-/- -	-/- -
15. Provide instruction so it is interesting and understandable. Means: 4.0j/3.5s/ 3.8t	3j/0s 3t	5j/7s 12t	1j/3s 4t	1j/1s 2t	-/- -	-/- -
RELATED COURSE FACULTY (such as English, math, science, etc.)						
16. Know the subject matter and occupational requirements. Means: 3.9j/3.7s/ 3.8t	1j/2s 3t	3j/5s 13t	0j/3s 3t	1j/1s 2t	-/- -	-/- -
17. Are available to provide help when needed. Means: 3.5j/3.4s/ 3.5t	0j/1s 1t	5j/5s 10t	5j/3s 8t	0j/2s 2t	-/- -	-/- -
18. Provide instruction so it is interesting and understandable. Means: 3.3j/3.0s/ 3.1t	1j/0s 1t	3j/3s 6t	4j/6s 10t	2j/1s 3t	-/1s 1t	-/- -
PROGRAM COMPUTER LABORATORIES:						
19. Provide adequate lighting, ventilation, etc. Means: 4.6j/3.2s/ 3.9t	7j/1s 8t	2j/1s 3t	1j/3s 9t	0j/1s 1t	-/- -	-/- -
20. Include enough work stations for students enrolled in courses. Means: 4.0j/3.1s/ 3.5t	2j/1s 3t	6j/2s 8t	2j/6s 8t	0j/1s 1t	-/1s 1t	-/- -
21. Are safe, functional, and well maintained. Means: 3.7j/2.7s/ 3.2t	0j/1s 1t	7j/1s 8t	3j/5s 8t	-/2s 2t	-/2s 2t	-/- --
22. Are open adequate hours. Means: 3.6j/2.4s/ 3.0t	0j/1s 1t	6j/0s 6t	4j/3s 7t	-/5s 5t	-/2s 2t	-/- -
23. Are open when students are most likely to use them. Means: 3.1j/2.6s/ 2.9t	-/- -	4j/3s 7t	5j/2s 7t	-/5s 5t	-/1s 1t	-/- -
OTHER PROGRAM LABORATORIES:						
24. Provide adequate lighting, ventilation, etc. Means: 3.8j/3.5s/ 3.7t	1j/1s 2t	6j/4s 10t	3j/6s 9t	-/- -	-/- -	-/- -
25. Include enough work stations for students enrolled. Means: 3.6j/3.4s/ 3.5t	0j/1s 1t	6j/3s 9t	4j/7s 11t	-/- -	-/- -	-/- -
26. Are safe functional, and well maintained. Means: 3.7j/3.4s/ 3.5t	-/- -	7j/4s 11t	3j/7s 10t	-/- -	-/- -	-/- -
27. Are open adequate hours. Means: 3.3j/3.5s/ 3.4t	0j/2s 2t	4j/3s 7t	5j/5s 10t	1j/1s 2t	-/- -	-/- -
28. Are open when students are most likely to use them. Means: 3.3j/3.5s/ 3.4t	0j/2s 2t	4j/3s 7t	5j/4s 9t	1j/2s 3t	-/- -	-/- -
RELATED COURSE CLASSROOMS:						
29. Provide adequate lighting, ventilation, etc. Means: 3.7j/3.5s/ 3.6t	-/- -	7j/7s 14t	3j/3s 6t	-/1s 1t	-/- -	-/- -
30. Include enough seats, desks, tables, etc. for students enrolled. Means: 3.9j/3.6s/ 3.8t	1j/0s 1t	7j/7s 14t	2j/4s 6t	-/- -	-/- -	-/- -
31. Are safe, functional, and well maintained. Means: 3.8j/3.4s/ 3.6t	-/- -	8j/6s 14t	2j/3s 5t	-/2s 2t	-/- -	-/- -

	excellent "5"	good "4"	average "3"	below average "2"	poor "1"	don't know
OTHER PROGRAM CLASSROOMS:						
32. Provide adequate lighting, ventilation, etc.	-/-	7j/10s	3j/1s	-/-	-/-	-/-
Means: 3.7j/3.9s/ 3.8t	-	17t	4t	-	-	-
33. Include enough seats, desks, tables, etc. for students enrolled.	1j/0s	7j/11s	2j/0s	-/-	-/-	-/-
Means: 3.9j/4.0s/ 4.0t	1t	18t	2t	-	-	-
34. Are safe, functional, and well maintained.	-/-	8j/11s	2j/0s	-/-	-/-	-/-
Means: 3.8j/4.0s/ 3.9	-	19t	2t	-	-	-
PROGRAM INSTRUCTIONAL EQUIPMENT IS:						
35. Current and representative of industry.	2j/2s	5j/3s	3j/5s	-/1s	-/-	-/-
Means: 3.9j/3.5s/ 3.7t	4t	8t	8t	1t	-	-
36. In sufficient quantity to avoid long delays in use. Means: 3.9j/3.2s/ 3.5t	2j/0s	5j/3s	3j/7s	-/1s	-/-	-/-
	2t	8t	10t	1t	-	-
37. Safe and in good condition.	3j/0s	5j/7s	2j/4s	-/-	-/-	-/-
Means: 4.1j/3.6s/ 3.9t	3t	12t	6t	-	-	-
INSTRUCTIONAL MATERIALS (i.e., textbooks, reference books, etc.) ARE:						
38. Current and meaningful to the subject.	2j/1s	7j/9s	1j/1s	-/-	-/-	-/-
Means: 4.1j/4.0s/ 4.0t	3t	16t	2t	-	-	-
39. Available and conveniently located for use. Means: 4.0j/3.8s/ 3.9t	2j/0s	6j/9s	2j/2s	-/-	-/-	-/-
	2t	15t	4t	-	-	-
INSTRUCTIONAL SUPPORT SERVICES (i.e., tutoring, lab assistance, etc.) ARE:						
40. Available to meet student needs and interests. Means: 3.7j/3.5s/ 3.6t	-/-	6j/6s	3j/5s	-/-	-/-	1j/-
	-	12t	8t	-	-	1t
41. Provided by knowledgeable and interested staff. Means: 3.6j/3.8s/ 3.7t	-/-	5j/9s	4j/2s	-/-	-/-	1j/-
	-	14t	6t	-	-	1t
PLACEMENT SERVICES ARE AVAILABLE TO:						
42. Help students identify employment opportunities. Means: 3.8j/4.0s/ 3.9t	1j/3s	6j/6s	3j/1s	-/1s	-/-	-/-
	4t	12t	4t	1t	-	-
43. Help students prepare to apply for job applications. Means: 3.9j/4.1s/ 4.0t	2j/3s	5j/6s	3j/2s	-/-	-/-	-/-
	5t	11t	5t	-	-	-

COMMENTS:

1. Parking is a problem, especially at the SRC. The IFMA chapter isn't helping me as a student, but it looks good on a resume. That is a problem. It should be more student oriented.

2. The classrooms (mostly in architectural technology) are pretty disorganized and not appealing. The set-up actually lacks things we discuss in class. I feel the program is in very good shape. It needs to be more visible to architectural technology students and other students.

fmprrptS

Dear FM Student:

Ferris State University is currently conducting an academic review of our facilities management program. The purpose of the academic review is to periodically assess the performance of graduates, monitor the quality of the program, and provide a framework for future changes and revisions within the curriculum.

As students currently enrolled in the program, your input is requested. Your responses will be used along with those of graduates, employers of graduates, and faculty to define a future vision for the program.

Answer the questions on this page by writing a brief answer in the space provided. Then, answer the questions on the following sheet by circling the number which best describes your perception of the question for the architectural technology program. You may circle ? if you do not believe that the question applies to you or that you do not have enough information to respond to the question.

To ensure that the survey is confidential, fold the surveys so that the blank side of the sheet is facing out before returning it to your faculty member.

Thank you for your help.

1.   What is your current academic status within the FM program?(circle answer)

        junior   senior

2.   Why did you choose to attend FSU?

3.   Are you satisfied with your decision to attend FSU? Why? Why not?

4.   Why did you choose to study Facilities Management?

5.   Are you satisfied with your decision to study Facilities Management? Why? Why not?

fmprsurS

FERRIS STATE UNIVERSITY - COLLEGE OF TECHNOLOGY
CONSTRUCTION AND FACILITIES DEPARTMENT

Program Review - Bachelor of Science Degree in Facilities Management

Please rate the overall performance of FSU and the Facilities Management program in the areas listed below. Use the scale located on the right for your response.

	excellent	good	average	below average	poor	don't know
COURSES IN YOUR PROGRAM AREA ARE:						
6. Available and conveniently located.	5	4	3	2	1	?
7. Based on realistic prerequisites.	5	4	3	2	1	?
WRITTEN OBJECTIVES FOR COURSES IN YOUR PROGRAM:						
8. Are available to students.	5	4	3	2	1	?
9. Describe what you will learn in the course.	5	4	3	2	1	?
10. Are used by instructor to keep students aware of their progress.	5	4	3	2	1	?
TEACHING METHODS, PROCEDURES, AND COURSE CONTENT:						
11. Meet projected student career needs, interests, and objectives.	5	4	3	2	1	?
12. Provide supervised practice for developing skills.	5	4	3	2	1	?
PROGRAM FACULTY:						
13. Know the subject matter and occupational requirements.	5	4	3	2	1	?
14. Available to provide help when needed.	5	4	3	2	1	?
15. Provide instruction so it is interesting and understandable.	5	4	3	2	1	?
RELATED COURSE FACULTY (such as English, math, science, etc.)						
16. Know the subject matter and occupational requirements.	5	4	3	2	1	?
17. Available to provide help when needed.	5	4	3	2	1	?
18. Provide instruction so it is interesting and understandable.	5	4	3	2	1	?
PROGRAM COMPUTER LABORATORIES:						
19. Provide adequate lighting, ventilation, etc.	5	4	3	2	1	?
20. Include enough work stations for students enrolled in courses.	5	4	3	2	1	?
21. Are safe, functional, and well maintained.	5	4	3	2	1	?
22. Are open adequate hours.	5	4	3	2	1	?
23. Are open when students are most likely to use them	5	4	3	2	1	?
OTHER PROGRAM LABORATORIES:						
24. Provide adequate lighting, ventilation, etc.	5	4	3	2	1	?
25. Include enough work stations for students enrolled.	5	4	3	2	1	?
26. Are safe functional, and well maintained.	5	4	3	2	1	?
27. Are open adequate hours.	5	4	3	2	1	?
28. Are open when students are most likely to use them.	5	4	3	2	1	?

fmprsurS

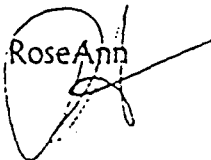|	excellent	good	average	below average	poor	don't know
RELATED COURSE CLASSROOMS:						
29. Provide adequate lighting, ventilation, etc.	5	4	3	2	1	?
30. Include enough seats, desks, tables, etc. for students enrolled.	5	4	3	2	1	?
31. Are safe, functional, and well maintained.	5	4	3	2	1	?
OTHER PROGRAM CLASSROOMS:						
32. Provide adequate lighting, ventilation, etc.	5	4	3	2	1	?
33. Include enough seats, desks, tables, etc. for students enrolled.	5	4	3	2	1	?
34. Are safe, functional, and well maintained.	5	4	3	2	1	?
PROGRAM INSTRUCTIONAL EQUIPMENT IS:						
35. Current and representative of industry.	5	4	3	2	1	?
36. In sufficient quantity to avoid long delays in use.	5	4	3	2	1	?
37. Safe and in good condition.	5	4	3	2	1	?
INSTRUCTIONAL MATERIALS (i.e., textbooks, reference books, etc.) ARE:						
38. Current and meaningful to the subject.	5	4	3	2	1	?
39. Available and conveniently located for use.	5	4	3	2	1	?
INSTRUCTIONAL SUPPORT SERVICES (i.e., tutoring, lab assistance, etc.) ARE:						
40. Available to meet student needs and interests.	5	4	3	2	1	?
41. Provided by knowledgeable and interested staff.	5	4	3	2	1	?
PLACEMENT SERVICES ARE AVAILABLE TO:						
42. Help students identify employment opportunities.	5	4	3	2	1	?
43. Help students prepare to apply for job applications.	5	4	3	2	1	?

COMMENTS:

fmprsurS

3/31/99

Mel

Here are the results from the FM faculty survey.

I checked with the department secretary, Donna, about the number of degrees offered (9) within the four programs in your department. That information was included in this report to emphasize the need for additional support staff.

If you would like anything changed or modified (except the data!!!!), please let me know.

Good luck!!!

RoseAnn

FACULTY PERCEPTIONS OF OCCUPATIONAL EDUCATION PROGRAMS

	Keypunch Instructions	Poor 1	Below Expectations 2	Acceptable 3	Good 4	Excellent 5	Don't Know	COMMENTS (Please note explana remarks or needs for provement)

GOALS AND OBJECTIVES

1. Participation in Development of College Occupational Education Program Plan — 1

Excellent—Administrators and/or other supervisory personnel involved in developing and revising the college plan for this occupational program seek and respond to faculty, student and community input.

Poor—Development of the plan for this program is basically the work of one or two persons in the college.

3.0

2. Program Goals — 2

Excellent—Written goals for this program state realistic outcomes (such as planned enrollments, completions, placements) and are used as one measure of program effectiveness.

Poor—No written goals exist for this program.

4.3

3. Course Objectives — 3

Excellent—Written measurable objectives have been developed for all occupational courses in this program and are used to plan and organize instruction.

Poor—No written objectives have been developed for courses in this program.

4.7

4. Competency Based Performance Objectives — 4

Excellent—Competency based performance objectives are on file in writing, consistent with employment standards, and tell students what to expect and help faculty pace instruction.

Poor—Competency based performance objectives have not been developed for courses in this program.

3.3

5. Use of Competency Based Performance Objectives — 5

Excellent—Competency based performance objectives are distributed to students and used to assess student progress.

Poor—Competency based performance objectives are not used with students for progress evaluation nor are students aware that they exist.

3.7

6. Use of Information on Labor Market Needs — 6

Excellent—Current data on labor market needs and emerging trends in job openings are systematically used in developing and evaluating this program.

Poor—Labor market data is not used in planning or evaluation.

5.0

7. Use of Information on Job Performance Requirements — 7

Excellent—Current data on job performance requirements and trends are systematically used in developing and evaluating this program and content of its courses.

Poor—Job performance requirements information has not been collected for use in planning and evaluating.

4.7

	Keypunch Instruction	Poor 1	Below Expectations 2	Acceptable 3	Good 4	Excellent 5	Don't Know	COMMENTS (Please note explanatory remarks or needs for improvement)

PROCESSES (Continued)

14. Program Availability and Accessibility — 14

Excellent—Students and potential students desiring enrollment in this program are identified through recruitment activities, treated equally in enrollment selection, and not discouraged by unrealistic prerequisites. The program is readily available and accessible at convenient times and locations.

Poor—This program is not available or accessible to most students seeking enrollment. Discriminatory selection procedures are practiced.

Comment: 4.7

15. Provision for the Disadvantaged — 15

Excellent—Support services are provided for disadvantaged (such as socioeconomic, cultural, linguistic, academic) students enrolled in this program. Services are coordinated with occupational instruction and results are assessed continuously.

Poor—No support services are provided for disadvantaged students enrolled in this program.

Comment: 4.5 (1 N/A)

16. Provision for the Handicapped. — 16

Excellent—Support services are provided for handicapped (physical, mental, emotional, and other health impairing handicaps) students enrolled in this program. Facilities and equipment adaptations are made as needed. Services and facilities modifications are coordinated with occupational instruction and results are assessed continuously.

Poor—No support services or facilities and equipment modifications are available for handicapped students enrolled in this program.

Comment: 4.3

17. Efforts to Achieve Sex Equity — 17

Excellent—Emphasis is given to eliminating sex bias and sex stereotyping in this program: staffing, student recruitment, program advisement, and career counseling; access to and acceptance in programs; selection of curricular materials; instruction; job development and placement.

Poor—Almost no attention is directed toward achieving sex equity in this program.

Comment: 4.7

18. Provision for Program Advisement — 18

Excellent—Instructors or other qualified personnel advise students (day, evening, weekend) on program and course selection. Registration procedures facilitate course selection and sequencing.

Poor—Instructors make no provision for advising students on course and program selection.

Comment: 5.0

19. Provision for Career Planning and Guidance — 19

Excellent—Day, evening, and weekend students in this program have ready access to career planning and guidance services.

Poor—Little or no provision is made for career planning and guidance services for students enrolled in this program.

Comment: 5.0

FACULTY PERCEPTIONS OF OCCUPATIONAL EDUCATION PROGRAMS

	Keypunch Instruction	Poor 1	Below Expectations 2	Acceptable 3	Good 4	Excellent 5	Don't Know	COMMENTS (Please note explanatory remarks or needs for improvement)

RESOURCES (Continued)

26. Qualifications of Administrators and/or Supervisors — 26

Excellent—All persons responsible for directing and coordinating this program demonstrate a high level of administrative ability. They are knowledgeable in and committed to occupational education.

Poor—Persons responsible for directing and coordinating this program have little administrative training, education, and experience.

Comment: 4.7

27. Instructional Staffing — 27

Excellent—Instructional staffing for this program is sufficient to permit optimum program effectiveness (such as through enabling instructors to meet individual student needs, providing liaison with advisory committees, and assisting with placement and follow-up activities).

Poor—Staffing is inadequate to meet the needs of this program effectively.

Comment: 5.0

28. Qualifications of Instructional Staff — 28

Excellent—Instructors in this program have two or more years in relevant employment experience, have kept current in their field, and have developed and maintained a high level of teaching competence.

Poor—Few instructors in this program have relevant employment experience or current competence in their field.

Comment: 5.0

29. Professional Development Opportunities — 29

Excellent—The college encourages and supports the continuing professional development of faculty through such opportunities as conference attendance, curriculum development, work experience.

Poor—The college does not encourage or support professional development of faculty.

Comment: 4.0

30. Use of Instructional Support Staff — 30

Excellent—Paraprofessionals (such as aides, laboratory assistants) are used when appropriate to provide classroom help to students and to ensure maximum effectiveness of instructors in the program.

Poor—Little use is made of instructional support staff in this program.

Comment: 1.3

31. Use of Clerical Support Staff — 31

Excellent—Office and clerical assistance is available to instructors in this program and used to ensure maximum effectiveness of instructors.

Poor—Little or no office and clerical assistance is available to instructors; ineffective use is made of clerical support staff.

Comment: 1.7

32. Adequacy and Availability of Instructional Equipment. — 32

Excellent—Equipment used on or off campus for this program is current, representative of that used on jobs for which students are being trained, and in sufficient supply to meet the needs of students.

Poor—Equipment for this program is outmoded and in insufficient quantity to support quality instruction.

Comment: 2.7

FACULTY PERCEPTIONS OF OCCUPATIONAL EDUCATION PROGRAMS

RESOURCES (Continued)

33. Maintenance and Safety of Instructional Equipment — 33

Excellent—Equipment used for this program is operational, safe, and well maintained.

Poor—Equipment used for this program is often not operable and is unsafe.

3.3

34. Adequacy of Instructional Facilities — 34

Excellent—Instructional facilities (excluding equipment) meet the program objectives and student needs, are functional and provide maximum flexibility and safe working conditions.

Poor—Facilities for this program generally are restrictive, disfunctional, or overcrowded.

4.3

35. Scheduling of Instructional Facilities — 35

Excellent—Scheduling of facilities and equipment for this program is planned to maximize use and be consistent with quality instruction.

Poor—Facilities and equipment for this program are significantly under- or over-scheduled.

4.3

36. Adequacy and Availability of Instructional Materials and Supplies — 36

Excellent—Instructional materials and supplies are readily available and in sufficient quantity to support quality instruction.

Poor—Materials and supplies in this program are limited in amount, generally outdated, and lack relevance to program and student needs.

4.0

37. Adequacy and Availability of Learning Resources — 37

Excellent—Learning resources for this program are available and accessible to students, current and relevant to the occupation, and selected to avoid sex bias and stereotyping.

Poor—Learning resources for this program are outdated, limited in quantity, and lack relevance to the occupation.

4.3

38. Use of Advisory Committees — 38

Excellent—The advisory committee for this program is active and representative of the occupation.

Poor—The advisory committee for this program is not representative of the occupation and rarely meets.

5.0

39. Provisions in Current Operating Budget — 39

Excellent—Adequate funds are allocated in the college operating budget to support achievement of approved program objectives. Allocations are planned to consider instructor budget input.

Poor—Funds provided are seriously inadequate in relation to approved objectives for this program.

3.3

40. Provisions in Capital Outlay Budget for Equipment — 40

Excellent—Funds are allocated in a planned effort to provide for needed new equipment and for equipment replacement and repair, consistent with the objectives for this program and based on instructor input.

Poor—Equipment needs in this program are almost totally unmet in the capital outlay budget.

2.7

FACILITIES MANAGEMENT PROGRAM (FM)

What are the strengths of your program?

- Trained and educated professional faculty who are all certified facilities managers
- Availability of computer technology - software & hardware (a positive and also a major concern)
- Faculty dedication to the program and students·
- Program content
- Official recognition by the International Facility Management Association (IFMA)
- FM internships--a key element in meeting employer needs
- Broad management base
- Strong architectural foundation
- Strong computer skills

What are the major needs for improvement in your program and what action is required to achieve these?

- Increased availability of computer technology
- Additional technical and staff (secretarial) support
- Upgraded facilities and furnishings
- Relocation of the FM - BS degree program to Grand Rapids where there is a larger base of potential students (traditional and non-traditional)
- Enhanced computer access for FM: need either centralized computer facility with Auto CAD and FM programs, more FM computers, or a requirement that students purchase their own computers and software
- Improved recruitment plan for more and better quality students, especially at community colleges. (Most students are not interested in FM, but in the money expected.)

To improve the FM program, more resources are needed for technical and secretarial support and to improve the availability of computer technology and industry-specific software for the FM students. In addition, resources are needed for the recruitment of students, particularly at off-campus locations.

Mel Kantor, AIA, CFM
Ferris State University
Construction and Facilities Department
College of Technology
915 Campus Dr.
Swan 312
Big Rapids, MI 49307-2291

Dear Mel,
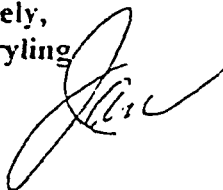
As promised, attached is the summary of the survey that was sent to the FM
Advisory Board Members. I have also included the original returned surveys as I
received them, for your future reference.

I trust that there was no set format for the summary and developed my own. If you
need additional input or information from me please advise.

I felt we had a very productive meeting last week and look forward to continued
improvement in the Ferris State FM program. As in the past, I am willing to assist
you and the other faculty members in any way I can in regard to the FM program.
Unfortunately, my role here at Amway Corporation has shifted to a more Facility
Administration Support function, but still I feel I will be able to provide quality
support for this advisory board.

I appreciate the opportunity to work with you as well as Vickie and Joe on this
project.

Sincerely,
Jan Fryling

Cc: Vickie Hardy

FERRIS STATE UNIVERSITY

FACILITIES MANAGEMENT (FM) PROGRAM

ADVISORY COMMITTEE SURVEY

Please circle the appropriate response, with a score of "5" being excellent, and "1" being poor. If a question is not applicable, or you don't know the answer, please respond N/A".

		EXCELLENT	GOOD	AVERAGE	BELOW AVERAGE	POOR	N/
1.	The FM program provides the skills and training needed by the profession.	5 (3)	4 (6)	3	2	1	N/
2.	There is a high demand for students from this program.	5 (4)	4 (3)	3	2	1 (1)	N/
3.	Your company would hire a student from this program.	5 (6)	4 (1)	3	2	1 (2)	N/
4.	The program provides an adequate number of graduates.	5 (1)	4 (2)	3 (1)	2 (2)	1 (2)	N/
5.	The program has adequate computer facilities.	5	4 (1)	3	2	1 (3)	N/
6.	The program has adequate laboratory facilities.	5	4 (2)	3 (1)	2	1 (3)	N/
7.	The program has an adequate number of faculty.	5	4 (2)	3 (2)	2	(1) 1 (3)	N/
8.	The program's curriculum meets the needs of the industry.	5 (3)	4 (4)	3	2	1	N/A
9.	The program's faculty have adequate academic credentials and experience.	5 (2)	4 (3)	3	2 (1)	1	(1) N/A
10.	The program's faculty have adequate institutional support for professional development and continuing education.	5 (1)	4 (3)	3 (2)	2	1	(2) N/A
11.	The graduates of the program are properly prepared to go to work.	5 (2)	4 (3)	3	2	1	N/A
12.	The graduates of the program are competitive with graduates of similar programs from other universities.	5 (2)	4 (2)	3 (1)	2	1	(1) N/A
13.	The program receives adequate financial support from the university	5	4 (1)	3 (2)	2	1	(2) N/A
14.	The International Facilities Management Association academic program recognition is vitally important to the success of this program.	5 (3)	4 (4)	3 (1)	2	1	N/A

COMMENTS:

11 SENT

9 RETURNED.

Thank you for participating in our survey.

FACILITIES MANAGEMENT (FM) PROGRAM

ADVISORY COMMITTEE SURVEY

Please circle the appropriate response, with a score of "5" being excellent, and "1" being poor. If a question is not applicable, or you don't know the answer, please respond N/A".

		EXCELLENT	GOOD	AVERAGE	BELOW AVERAGE	POOR	N/A
1.	The FM program provides the skills and training needed by the profession.	5	(4)	3	2	1	N/A
2.	There is a high demand for students from this program.	5	(4)	3	2	1	N/A
3.	Your company would hire a student from this program.	(5)	4	3	2	1	N/A
4.	The program provides an adequate number of graduates.	5	(4)	3	2	1	N/A
5.	The program has adequate computer facilities.	5	(4)	3	2	1	N/A
6.	The program has adequate laboratory facilities.	5	(4)	3	2	1	N/A
7.	The program has an adequate number of faculty.	5	4	(3)	2	1	N/A
8.	The program's curriculum meets the needs of the industry.	5	(4)	3	2	1	N/A
9.	The program's faculty have adequate academic credentials and experience.	(5)	4	3	2	1	N/A
10.	The program's faculty have adequate institutional support for professional development and continuing education.	5	(4)	3	2	1	N/A
11.	The graduates of the program are properly prepared to go to work.	5	(4)	3	2	1	N/A
12.	The graduates of the program are competitive with graduates of similar programs from other universities.	(5)	4	3	2	1	N/A
13.	The program receives adequate financial support from the university	5	4	3	2	1	(N/A)
14.	The International Facilities Management Association academic program recognition is vitally important to the success of this program.	(5)	4	3	2	1	N/A

COMMENTS:

WE HAVE HIRED 2 GRADUATES FULL TIME AND HAVE OFFERED SEVERAL INTERSHIPS OVER THE PAST TEN YEARS.

Thank you for participating in our survey.

		EXCELLENT	GOOD	AVERAGE	BELOW AVERAGE	POOR	N
		5	4	3	2	1	N
1.	The FM program provides the skills and training needed by the profession.	(5)	4	3	2	1	N
2.	There is a high demand for students from this program.	(5)	4	3	2	1	N
3.	Your company would hire a student from this program.	(5)	4	3	2	1	N(
4.	The program provides an adequate number of graduates.	5	4	(3)	2	1	N/
5.	The program has adequate computer facilities.	5	4	3	2	1	(N/
6.	The program has adequate laboratory facilities.	5	4	3	2	1	(N/
7.	The program has an adequate number of faculty.	5	4	3	2	1	(N/
8.	The program's curriculum meets the needs of the industry.	(5)	4	3	2	1	N/
9.	The program's faculty have adequate academic credentials and experience.	5	4	3	2	1	(N/
10.	The program's faculty have adequate institutional support for professional development and continuing education.	5	4	3	2	1	(N/
11.	The graduates of the program are properly prepared to go to work.	(5)	4	3	2	1	N/A
12.	The graduates of the program are competitive with graduates of similar programs from other universities.	(5)	4	3	2	1	N/A
13.	The program receives adequate financial support from the university	5	4	3	2	1	(N/A
14.	The International Facilities Management Association academic program recognition is vitally important to the success of this program.	(5)	4	3	2	1	N/A

COMMENTS:

_____

_____

_____

_____

_____

_____

_____

Thank you for participating in our survey.

FERRIS STATE UNIVERSITY

FACILITIES MANAGEMENT (FM) PROGRAM

ADVISORY COMMITTEE SURVEY

Please circle the appropriate response, with a score of "5" being excellent, and "1" being poor. If a question is not applicable, or you don't know the answer, please respond N/A".

		EXCELLENT	GOOD	AVERAGE	BELOW AVERAGE	POOR	
1.	The FM program provides the skills and training needed by the profession.	5	(4)	3	2	1	
2.	There is a high demand for students from this program.	5	(4)	3	2	1	
3.	Your company would hire a student from this program.	(5)	4	3	2	1	
4.	The program provides an adequate number of graduates.	5	(4)	3	2	1	
5.	The program has adequate computer facilities.	5	(4)	3	2	1	
6.	The program has adequate laboratory facilities.	5	(4)	3	2	1	
7.	The program has an adequate number of faculty.	5	4	3	2	1	N
8.	The program's curriculum meets the needs of the industry.	5	(4)	3	2	1	N
9.	The program's faculty have adequate academic credentials and experience.	5	(4)	3	2	1	N
10.	The program's faculty have adequate institutional support for professional development and continuing education.	5	(4)	3	2	1	N
11.	The graduates of the program are properly prepared to go to work.	5	(4)	3	2	1	N/
12.	The graduates of the program are competitive with graduates of similar programs from other universities.	5	4	(3)	2	1	N
13.	The program receives adequate financial support from the university	5	4	(3)	2	1	N/
14.	The International Facilities Management Association academic program recognition is vitally important to the success of this program.	(5)	4	3	2	1	N/

COMMENTS:

I don't feel comfortable with some of the above responses I have only worked /known one graduate - Matt Larson. (He works in our Facilities Group) That sample (1) was large enough to base this response on. Matt does a very good job for us. He has the desire and is willing to learn, so in my mind his education provided a good foundation.

I am looking forward to the 4-23-99 mtg to learn where the program has progressed to.

Thank you for participating in our survey.

FERRIS STATE UNIVERSITY

FACILITIES MANAGEMENT (FM) PROGRAM

ADVISORY COMMITTEE SURVEY

Please circle the appropriate response, with a score of "5" being excellent, and "1" being poor. If a question is not applicable, or you don't know the answer, please respond N/A".

		EXCELLENT	GOOD	AVERAGE	BELOW AVERAGE	POOR	N/A
1.	The FM program provides the skills and training needed by the profession.	5	(4)	3	2	1	N/A
2.	There is a high demand for students from this program.	5	(4)	3	2	1	N/A
3.	Your company would hire a student from this program.	5	(4)	3	2	1	N/A
4.	The program provides an adequate number of graduates.	5	4	3	2	1	(N/A)
5.	The program has adequate computer facilities.	5	(4)	3	2	1	N/A
6.	The program has adequate laboratory facilities.	5	(4)	3	2	1	N/A
7.	The program has an adequate number of faculty.	5	4	3	2	1	(N/A)
8.	The program's curriculum meets the needs of the industry.	5	(4)	3	2	1	N/A
9.	The program's faculty have adequate academic credentials and experience.	5	(4)	3	2	1	N/A
10.	The program's faculty have adequate institutional support for professional development and continuing education.	5	(4)	3	2	1	N/A
11.	The graduates of the program are properly prepared to go to work.	5	(4)	3	2	1	N/A
12.	The graduates of the program are competitive with graduates of similar programs from other universities.	5	(4)	3	2	1	N/A
13.	The program receives adequate financial support from the university	5	4	3	2	1	(N/A)
14.	The International Facilities Management Association academic program recognition is vitally important to the success of this program.	5	(4)	3	2	1	N/A

COMMENTS:

Thank you for participating in our survey.

FACILITIES MANAGEMENT (FM) PROGRAM

ADVISORY COMMITTEE SURVEY

Please circle the appropriate response, with a score of "5" being excellent, and "1" being poor. If a question is not applicable, or you don't know the answer, please respond N/A".

		EXCELLENT	GOOD	AVERAGE	BELOW AVERAGE	POOR	
1.	The FM program provides the skills and training needed by the profession.	5	(4)	3	2	1	
2.	There is a high demand for students from this program.	(5)	4	3	2	1	
3.	Your company would hire a student from this program.	5	(4)	3	2	1	
4.	The program provides an adequate number of graduates.	5	4	(3)	2	1	
5.	The program has adequate computer facilities.	5	(3)	3	2	1	
6.	The program has adequate laboratory facilities.	5	(4)	3	2	1	
7.	The program has an adequate number of faculty.	5	4	(3)	2	1	
8.	The program's curriculum meets the needs of the industry.	5	(4)	3	2	1	
9.	The program's faculty have adequate academic credentials and experience.	5	(3)	3	2	1	?
10.	The program's faculty have adequate institutional support for professional development and continuing education.	5	4	3	2	1	(N)
11.	The graduates of the program are properly prepared to go to work.	5	(3)	3	2	1	N
12.	The graduates of the program are competitive with graduates of similar programs from other universities.	(5)	4	3	2	1	N
13.	The program receives adequate financial support from the university	5	4	3	2	1	(N)
14.	The International Facilities Management Association academic program recognition is vitally important to the success of this program.	5	(4)	3	2	1	N

COMMENTS:
#10 and 13 I was not sure — we might be able to discuss at the meeting.
One additional major benefit is the mandatory Coop program — due to good industry — and business connection we are generating an advantage over programs where this opportunity is missing (Eastern!).
Looking forward to seeing you on the 23rd

Thank you for participating in our survey.

TOTAL P.02

FACILITIES MANAGEMENT (FM) PROGRAM

ADVISORY COMMITTEE SURVEY

Please circle the appropriate response, with a score of "5" being excellent, and "1" being poor. If a question is not applicable, or you don't know the answer, please respond N/A".

		EXCELLENT	GOOD	AVERAGE	BELOW AVERAGE	POOR	N/A
1.	The FM program provides the skills and training needed by the profession.	5	(4)	3	2	1	N/A
2.	There is a high demand for students from this program.	(5)	4	3	2	1	N/A
3.	Your company would hire a student from this program.	5	(4)	3	2	1	N/A
4.	The program provides an adequate number of graduates.	5	4	3	(2)	1	N/A
5.	The program has adequate computer facilities.	5	(4)	3	2	1	N/A
6.	The program has adequate laboratory facilities.	5	4	(3)	2	1	N/A
7.	The program has an adequate number of faculty.	5	(4)	3	2	1	N/A
8.	The program's curriculum meets the needs of the industry.	(5)	4	3	2	1	N/A
9.	The program's faculty have adequate academic credentials and experience.	5	(4)	3	2	1	N/A
10.	The program's faculty have adequate institutional support for professional development and continuing education.	(5)	4	3	2	1	N/A
11.	The graduates of the program are properly prepared to go to work.	5	(4)	3	2	1	N/A
12.	The graduates of the program are competitive with graduates of similar programs from other universities.	5	(4)	3	2	1	N/A
13.	The program receives adequate financial support from the university	5	4	3	2	1	(N/A)
14.	The International Facilities Management Association academic program recognition is vitally important to the success of this program.	5	4	(3)	2	1	N/A

COMMENTS:

_____

_____

_____

_____

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_____

Thank you for participating in our survey.

FACILITIES MANAGEMENT (FM) PROGRAM

ATTN: JAN FRYCING

ADVISORY COMMITTEE SURVEY

Please circle the appropriate response, with a score of "5" being excellent, and "1" being poor. If a question is not applicable, or you don't know the answer, please respond N/A".

		EXCELLENT	GOOD	AVERAGE	BELOW AVERAGE	POOR	N/A
1.	The FM program provides the skills and training needed by the profession.	(5)	4	3	2	1	N/A
2.	There is a high demand for students from this program.	5	4	3	2	1	(N/A)
3.	Your company would hire a student from this program.	5	(4)	3	2	1	N/A
4.	The program provides an adequate number of graduates.	5	4	3	2	1	(N/A)
5.	The program has adequate computer facilities.	5	4	3	2	1	(N/A)
6.	The program has adequate laboratory facilities.	5	4	3	2	1	(N/A)
7.	The program has an adequate number of faculty.	5	(4)	3	2	1	N/A
8.	The program's curriculum meets the needs of the industry.	(5)	4	3	2	1	N/A
9.	The program's faculty have adequate academic credentials and experience.	(5)	4	3	2	1	N/A
10.	The program's faculty have adequate institutional support for professional development and continuing education.	5	(4)	3	2	1	N/A
11.	The graduates of the program are properly prepared to go to work.	(5)	4	3	2	1	N/A
12.	The graduates of the program are competitive with graduates of similar programs from other universities.	(5)	4	3	2	1	N/A
13.	The program receives adequate financial support from the university	5	4	3	2	1	(N/A)
14.	The International Facilities Management Association academic program recognition is vitally important to the success of this program.	5	(4)	3	2	1	N/A

COMMENTS:

Thank you for participating in our survey.

FERRIS STATE UNIVERSITY

FACILITIES MANAGEMENT (FM) PROGRAM

ADVISORY COMMITTEE SURVEY

Please circle the appropriate response, with a score of "5" being excellent and "1" being poor. If a question is not applicable, or you don't know the answer, please respond N/A".

		EXCELLENT	GOOD	AVERAGE	BELOW AVERAGE	POOR	N
1.	The FM program provides the skills and training needed by the profession.	(5)	4	3	2	1	N
2.	There is a high demand for students from this program.	(5)	4	3	2	1	N
3.	Your company would hire a student from this program. ALREADY HAVE	(5)	4	3	2	1	N.
4.	The program provides an adequate number of graduates.	(5)	4	3	2	1	N.
5.	The program has adequate computer facilities.	5	(4)	3	2	1	N/
6.	The program has adequate laboratory facilities.	5	(4)	3	2	1	N/
7.	The program has an adequate number of faculty.	5	4	(3)	2	1	N/
8.	The program's curriculum meets the needs of the industry.	(5)	(4)	3	2	1	N/A
9.	The program's faculty have adequate academic credentials and experience.	5	(4)	3	2	1	N/A
10.	The program's faculty have adequate institutional support for professional development and continuing education.	5	4	(3)	2	1	N/A
11.	The graduates of the program are properly prepared to go to work.	(5)	4	3	2	1	N/A
12.	The graduates of the program are competitive with graduates of similar programs from other universities.	(5)	4	3	2	1	N/A
13.	The program receives adequate financial support from the university	5	(4)	3	2	1	N/A
14.	The International Facilities Management Association academic program recognition is vitally important to the success of this program.	5	(4)	3	2	1	N/A

COMMENTS:

I'D LIKE TO SEE MORE BUSINESS EMPHASIS. THE TECHNOLOGY IS FINE BUT WE NEED TO STRESS THE "MANAGER" IN FACILITY MANAGER. ELECTIVES ARE HELPFUL BUT FALL SHORT.

Thank you for participating in our survey.

FACILITIES MANAGEMENT (FM) PROGRAM

ADVISORY COMMITTEE SURVEY

Please circle the appropriate response, with a score of "5" being excellent, and "1" being poor. If a question is not applicable, or you don't know the answer, please respond N/A".

		EXCELLENT	GOOD	AVERAGE	BELOW AVERAGE	POOR	
1.	The FM program provides the skills and training needed by the profession.	5	(4)	3	2	1	
2.	There is a high demand for students from this program.	5	(4)	3	2	1	
3.	Your company would hire a student from this program.	5	4	3	2	1	(?)
4.	The program provides an adequate number of graduates.	5	4	3	(2)	1	?
5.	The program has adequate computer facilities.	5	4	3	2	1	(N)
6.	The program has adequate laboratory facilities.	5	4	3	2	1	(N)
7.	The program has an adequate number of faculty.	5	4	3	2	(1)	N
8.	The program's curriculum meets the needs of the industry.	5	(4)	3	2	1	N
9.	The program's faculty have adequate academic credentials and experience.	5	4	3	(2)	1	N
10.	The program's faculty have adequate institutional support for professional development and continuing education.	5	4	(3)	2	1	N
11.	The graduates of the program are properly prepared to go to work.	5	(4)	3	2	1	N.
12.	The graduates of the program are competitive with graduates of similar programs from other universities.	5	4	3	2	1	(N/)
13.	The program receives adequate financial support from the university	5	4	(3)	2	1	N/
14.	The International Facilities Management Association academic program recognition is vitally important to the success of this program.	(5)	4	3	2	1	N/

COMMENTS:

NEVER BEEN TO THE CAMPUS

THE ADVISORY GROUP NEEDS MORE INFORMATION

AND WE NEED TO MEET STUDENTS

Thank you for participating in our survey.

FACILITIES MANAGEMENT
BACHELOR OF SCIENCE DEGREE
FALL SEMESTER
Curriculum Guide Sheet

NAME OF STUDENT _____   STUDENT I.D. _____

Total semester hours required for graduation: 68

NOTE: Meeting the requirements for graduation indicated on this sheet is the reponsibility of the student. Compliance with this agreement will assure the student completion of the program in the time frame indicated. Your advisor is available to assist you.

			CREDIT	SEMESTER	GRADE
THIRD YEAR - FALL SEMESTER (15 Semester Hours)					
FMAN	321	Principles of FMAN (enrolled in FMAN or 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	_____	____
			(15)		
THIRD YEAR - WINTER SEMESTER (15 Semester Hours)					
FMAN	309	Comp Appl. for FMAN (ARCH 109/FMAN 321/or permission)	3	_____	____
FMAN	322	Project Management (FMAN 321 or 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	_____	____
			(15)		
THIRD YEAR - SUMMER SEMESTER (4 Semester Hours)					
FMAN	393	F-M Internship (Enrolled in FMAN Program or permission)	4	_____	____
			(4)		
FOURTH YEAR - FALL SEMESTER (18 Semester Hours)					
FMAN	431	Concepts of Space Planning (FMAN 309, 331)	3	_____	____
FMAN	441	Property Development & Planning (FMAN 321, BLAW 221)	3	_____	____
FMAN	451	Bldg. Diagnostic & Operations (FMAN 321 or permission)	3	_____	____
ACCT	201	Principles of Accounting 1 (MATH 110)	3	_____	____
ECON	222	Principles of Economics 2 (ECON 221)	3	_____	____
____	___	Cultural Enrichment Elective*	3	_____	____
			(18)		
FOURTH YEAR - WINTER SEMESTER (15 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	_____	____
____	___	Cultural Enrichment Elective*	3	_____	____
			(16)		

*One Cultural Enrichment Course must also meet the Global Consciousness Requirements
(See pg. 62-63 of college catalog).

CURRICULUM REQUIREMENTS
FACILITIES MANAGEMENT
BACHELOR OF SCIENCE DEGREE
FALL SEMESTER

ENTRY CRITERIA:
1. Application for admission should be submitted by February 15 prior to fall term 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	GENERAL EDUCATION	CREDIT HOURS
FMAN	309 Computer Application for FMAN	3	Communication Competence	
FMAN	321 Principles of Facility Management	3	ENGL 311 Advanced Technical Writing	3
FMAN	322 Project Management	3		
FMAN	331 Facility Programming & Design Mgt.	4	Scientific Understanding	
FMAN	393 Facilities Management Internship	4	BIOL 111 Environmental Biology	4
FMAN	431 Concepts of Space Planning	4		
FMAN	432 Interior Design for Facility Managers	3	Quantitative Skills	
FMAN	441 Property Develop. & Planning	2		
FMAN	451 Bldg. Diagnostic & Operations	3	Cultural Enrichment	
FMAN	499 Capstone Assessment Thesis	2	Electives	6
			Social Awareness	
			ECON 221 Principles of Economics 1	3
Technical Related			ECON 222 Principles of Economics 2	3
HVAC	4S3 HVACR Building Systems	3	PSYC 326 Industrial-Organizational Psychology	3
ACCT	201 Principles of Accounting I	3		
BLAW	221 Elementary Business Law	3		
MGMT	301 Applied Management	3		
STQM	260 Introductory Statistics	3		

B.S. Degree Minimum General Education Requirements in Semester Hours:

Cultural Enrichment Credits	9	Social Awareness Credits	9
Communications	12	Scientific Understanding Credits	7-8

Admission Requirements

To be admitted to the upper division sequence of students in facilities management, a student must have completed the associate degree program in architectural technology at Ferris, or a similar program at a recognized, regionally accredited institution.

Those students not meeting the above criteria may still be accepted into the facilities management program. Their academic background will be reviewed by a facilities management program faculty committee, and if deficiencies are noted, the student may be accepted into the program on a conditional basis. Upon completion of courses to remedy the deficiencies, the student will be granted general admission to the program.

Since programs will vary in objectives and content, students expecting to apply for admission to the bachelor of science program in facilities management at Ferris should contact the construction and facilities department as early as possible to ensure compatibility of lower division course work with facilities management program requirements.

Graduation Requirements

The facilities management program at Ferris leads to a bachelor of science degree. Graduation requires a minimum 2.0 grade point average in core classes, in the major and overall. Graduates must complete all general education requirements as outlined in the General Education section of the University Catalog.

General Information

Ferris State University is in its second century as one of the nation's premier technical and professional universities. It provides the education to make its graduates immediately employable in their chosen fields.

Approximately 120 educational programs — including doctorates, master's, bachelor's, associate degrees and certificates — are offered through the colleges of Allied Health Sciences, Arts and Sciences, Business, Education, Michigan College of Optometry, Pharmacy and Technology.

A wide variety of student organizations are active on campus, encompassing social, athletic, political, artistic and religious activities and interests.

Arts and cultural events, varsity athletics and an extensive intramural sports program further enrich student life.

The University has on-campus residential facilities for about 40 percent of its nearly 10,000 students.

Founded in 1884 by Michigan educator and statesman Woodbridge N. Ferris, the University has developed a modern, 600-acre campus in Big Rapids, in west central Michigan's vacation-recreation country.

FERRIS STATE UNIVERSITY

Give us a call toll-free at 1-800-4-FERRIS (from MI, IL, IN, OH, WI), or (616) 592-2100. After June 5, call (231) 591-2100.

it our homepage <www.ferris.edu>.

obtained by writing to:

Admissions Office
Ferris State University
420 Oak Street
Big Rapids, MI
49307-2020.

Applications can also be submitted on-line at the FSU web site or call the toll-free phone number, both listed below.

Applications are also available at the offices of Michigan high school and community college counselors.

The completed application must be returned to the Admissions Office well in advance of the semester in which the student expects to enroll.

Financial aid

At Ferris, more than 70 percent of the students receive financial aid, including scholarships, grants-in-aid, long-term loans or part-time employment.

The University annually awards more than $43 million in total student aid.

For more information, write to:

Financial Aid Office
420 Oak Street/PRK 102
Big Rapids, MI 49307-2020
or call 1-800-940-4243 (MI, IL, IN, OH, WI) or (616) 592-2110.
After June 5, call
(231) 591-2110.

More information

For more information about this program, write to:
Ferris State University
College of Technology
Program Coordinator
AT/FM Program
Swan 312
915 Campus Drive
Big Rapids, MI 49307
or call (616) 592-3773. After June 5, call (231) 591-3773.

CERTIFICATE PROGRAM IN FACILITIES MANAGEMENT

INFORMATION:

The Certificate Program in designed for individuals who work in the facilities management area of responsibility and desire to enhance specific skills. Individuals with job titles and responsibilities such as facility manager, building manager/supervisor, building owner, facilities planner and support staff, architect, architectural technician, designer, furniture industry designer, and facility management services consultant, will benefit from these courses. These courses are now qualified for the CFM maintenance points by IFMA.

CERTIFICATE PROGRAM ENROLLMENT CRITERIA:

1. Individuals intending to enroll in the program must have a background experience in a facilities management related area or are currently working towards a degree in a related area of study.

2. Minimum of two years of college course work, including courses in Communication and Basic Mathematics. College transcripts must be sent.

CERTIFICATE COURSE CONTENT:

FMAN 321 - Principles of Facilities Management	3 Credits
FMAN 322 - Project Management	3 Credits
FMAN 331 - Facility Programming and Design Management	3 Credits
FMAN 451 - Facilities Management Operations	3 Credits

To obtain the certificate, you must successfully complete all four courses. Individual courses are also available, however, enrollment priority will be given to those individuals who intend to complete all courses.

For additional information call 616-771-3770 or 1-800-998-3425, or write:

> Ferris State University - Grand Rapids
> 151 Fountain Street NE
> Grand Rapids MI 49503-3263

FACILITIES MANAGEMENT MINOR DEGREE
FACILITY PLANNING MANAGEMENT MINOR
FALL SEMESTER 96\97
Curriculum Guide Sheet

This minor degree is open to all students enrolled at Ferris State University pursuing Baccalaureate or higher degrees in majors other than Facilities Management.   Students with minimal technical and construction knowledge would be required to attend a workshop to develop necessary competencies in these areas. (See "Permission" below)

Required semester hours needed: 18; GPA of 2.0 or more in minor degree courses; 50% of credits must be 300+ level and 50% of credits must be taken at FSU.

ARCH	115	Interior and Exterior Finishes and Systems	3 _____
ARCH	250	Systems Cost Estimating (MATH 116, ARCH 102; or permission)	3 _____
FMAN	280	Introduction to Facilities Management	2 _____
FMAN	321	Principles of FMAN (enrolled in FMAN or permission)	3 _____
FMAN	322	Project Management (FMAN 321)	3 _____
FMAN	331	Facility Programming and Design Management (FMAN 321)	3 _____

PERMISSION:
Permission will be given to minor degree students to register for certain courses with technical pre-requisites if the student can demonstrate basic competency in the area. This may be done if the student has had previous practical experience, similar courses, or can demonstrate certain skills such as 1) print reading, 2) knowledge of terms, 3) knowledge of general architectural concepts, and 4) knowledge of general construction concepts.

Student competency will be determined by the Architectural Technology/Facilities Management faculty. The methodology used to determine competency will be to review course descriptions of relevant courses, review samples of student work, and "technical" interviews of students. This method is similar to how students transferring into Facilities Management from other institutions are currently evaluated. The difference will be that lower levels of competency will be required for minor degree students, and minor degree students will not be required to earn credit for all courses associated with the four year Architectural Technology/Facilities Management curriculum.

Students who cannot demonstrate basic competency will be required to attend a workshop concurrent with FMAN 280, which should be the first course taken in the Minor Degree Curriculum.

WORKSHOP DESCRIPTION:
The workshop will be scheduled on a weekly basis with individual students or groups of students. They will be led by faculty members from the ARCH and FMAN programs. A series of exercises will be developed for students attending the workshops. Attendance will be required until the competencies are developed.

FACILITIES MANAGEMENT MINOR DEGREE
FACILITY OPERATIONS MANAGEMENT MINOR
FALL SEMESTER 96\97
Curriculum Guide Sheet

This minor degree is open to all students enrolled at Ferris State University pursuing Baccalaureate or higher degrees in majors other than Facilities Management, and who expect to be involved in the planning of the physical aspects of the facilities in which they practice.   Students with minimal technical and construction knowledge would be required to attend a workshop to develop necessary competencies in these areas.

Required semester hours needed: 18; GPA of 2.0 or more in minor degree courses; 50% of credits must be 300+ level and 50% of credits must be taken at FSU.

Required Courses		Grades
ARCH 250	Systems Cost Estimating (MATH 116;ARCH 102; or permission)	3 _____
FMAN 280	Introduction to Facilities Management	2 _____
FMAN 321	Principles of Facilities Management (enrolled in an FMAN program or permission)	3 _____
FMAN 322	Project Management (FMAN 321)	3 _____
FMAN 441	Property Development and Planning (FMAN 321)	(2) _____
FMAN 451	Facility Management and Operations (FMAN 321)	3 _____
ELECTIVE	Two additional hours from courses listed below	2 _____

Elective Courses:		
ARCH 109	Computer Graphics in Architecture 1	2 _____
ARCH 115	Interior and Exterior Finishes and Systems	3 _____
ARCH 209	Computer Graphics in Architecture 2 (ARCH 109)	1 _____
HVAC 337	Mechanical and Electrical Systems for Buildings (PHYS 211, MATH 116)	3 _____
~~FMAN 431 Space Planning and Computer Applications (ARCH 109, FMAAN 331)~~		3
FMAN 331	Facility Programming and Design Management (FMAN 321)	3 (2) _____
HVAC 483	HVACR Building Systems	3 _____

Permission:
Permission will be given to minor degree students to register for certain courses with technical pre-requisites if the student can demonstrate basic competency in the area. This may be done if the student has had previous practical experience, similar courses, or can demonstrate certain skills such as 1) print reading, 2) knowledge of terms, 3) knowledge of general architectural concept, and 4) knowledge of general construction concepts.

Student competency will be determined by the Architectural Technology/Facilities Management faculty. The methodology used to determine competency will be to review course deriptions of relevant courses, review samples of student work, and "technical" interviews of students. This method is similar to how students transferring into Facilities Management from other institutions are currently evaluated. The difference will be that lower levels of competency will be required for minor degree students, and minor degree students will not be required to earn credit for all courses associated with the four year Architectural Technology/Facilities Management curriculum.

Students who cannot demonstrate basic competency will be required to attend a workshop concurrent with FMAN 280, which should be the first course taken in the Minor Degree Curriculum.

Workshop Description:
The workshop will be scheduled on a weekly basis with individual students or groups of students. They will be led by faculty members from the ARCH and FMAN programs. A series of exercises will be developed for students attending the workshops. Attendance will be required until the competencies are developed.

FMAN 280 - INTRODUCTION TO FACILITIES MANAGEMENT (ARCHITECTURAL ELECTIVE)

2 Credits
> 2 Lecture Hours

Prerequisites: None

Focuses on an awareness of the methods and concepts of the Facilities Management processes. Defines Facilities Management services, processes, reviews the history and future of Facilities Management, and how it fits into the organization. Examines career opportunities within Facilities Management.

FMAN 309 - COMPUTER APPLICATIONS FOR FACILITIES MANAGERS

3 Credits
> 2 Lecture Hours
> 2 Lab Hours

Prerequisites: FMAN 321

Introduction to and survey of the use of computers as tools for facilities management. Students will explore the use of computers in space planning, management, tracking assets, and facilitating the operational aspects of the facility.

FMAN 321 - PRINCIPLES OF FACILITIES MANAGEMENT

3 Credits
> 3 Lecture Hours

Prerequisites: Enrollment in the Facilities Management Program or permission of instructor

A foundation course with emphasis on the Facilities Management process, terminology, and organizational development. Includes an introduction to basic methods, concepts, and procedures of facilities planning, programming budgets, project management, office productivity measurements, and operations management.

FMAN 322 - PROJECT MANAGEMENT

3 Credits
> 3 Lecture Hours

Prerequisites: FMAN 321 or permission of instructor

Study of the methods, concepts, and procedures of project management. Considers term development, accountability, sequencing of events, scheduling, coordinating consultants, budgeting, contract administration, purchasing, and estimating. Relocations and move management will also be reviewed.

FMAN 331 - FACILITY PROGRAMMING AND THE DESIGN PROCESS

3 Credits
>3 Lecture Hours

Prerequisites: FMAN 321

Course will enable the students to see the relationships between the facility programming, which is problem identification, and architectural programming, which is identifying the architectural attributes of a facility. Students will also learn to evaluate the architectural attributes for consistency with the facility program.

FMAN 393 - FACILITIES MANAGEMENT INTERNSHIP

4 Credits
>Internship of 400 hours

Prerequisites: Completion of the junior year in Facilities Management and enrollment in FM program or permission

Ten to fifteen weeks of supervised industry training experience in the Facilities Management environment.

FMAN 431 – CONCEPTS OF SPACE PLANNING

3 Credits
>3 Lecture Hours

Prerequisites: FMAN 331

Introduction to space planning concepts. Blocking, Stacking, Universal Planning and Master Planning will be studied along with their relationship to the business goals of organizations.

FMAN 432 – INTERIOR DESIGN FOR FACILITY MANAGERS

3 Credits
>3 Lecture Hours

Prerequisites: FMAN 431

An overview of the elements of interior design and their application. The student applies the principles of interior design with regard to context, ergonomics, code and regulatory issues, and program requirements. The effect of physical attributes of various components of the interior space are studied.

FMAN 441 - PROPERTY DEVELOPMENT AND PLANNING

3 Credits
> 3 Lecture Hours

Prerequisites: FMAN 321

Methods of acquisition, ownership, and disposal of properties. Examination of leasing practices and lease management; real estate marketing and market analysis; feasibility analysis; financing; development trends; site evaluations and selection, occupancy, and use constraints; regulations and incentives; calculation and determining variations of rental space.

FMAN 451 – BUILDING DIAGNOSTICS AND OPERATIONS

3 Credits
> 3 Lecture Hours

Prerequisites: FMAN 321

A survey of the operating systems within facilities and the methodologies used to keep those systems operational. Introduction to concepts such as life cycle costs and building diagnostics will be introduced. Common Problems associated with selected systems will also be discussed.

FMAN 499 - CAPSTONE ASSESSMENT THESIS

3 Credits
> 1 Lecture Hour
> 3 Lab Hours

Prerequisites: Second semester senior status and FMAN 393

An application of Facilities Management methods, techniques, and principles used to solve simulated or actual problems. Emphasis will be placed on the Facilities Management process, project management, and planning/programming. Integrated problem solving, communications, team work, and change management will be required.

PROGRAM REVIEW PANEL EVALUATION

Program: _____

Instructions: Circle the number which most closely describes the program you are evaluating.

1. Student Perception of Instruction   Average Score _____

5	4	3	2	1

Currently enrolled
students rate instructional
effectiveness as extremely high.

Currently enrolled students
rate the instructional
effectiveness as below average.

2. Student Satisfaction with Program   Average Score _____

5	4	3	2	1

Currently enrolled students are
very satisfied with the program
faculty, equipment, facilities, and
curriculum.

Currently enrolled students are
not satisfied with program faculty,
equipment, facilities, or curriculum.

3. Advisory Committee Perceptions of Program   Average Score _____

5	4	3	2	1

Advisory committee members
perceive the program curriculum,
facilities, and equipment to be of
the highest quality.

Advisory committee members
perceive the program curriculum,
facilities, and equipment needs
improvement.

4. Demand for Graduates   Average Score _____

5	4	3	2	1

Graduates easily find
employment in field.

Graduates are sometimes forced
to find positions out of their field.

5. Use of Information on Labor Market   Average Score _____

5	4	3	2	1

The faculty and administrators
use current data on labor market
needs and emerging trends in job
openings to systematically develop
and evaluate the program.

The faculty and administrators
do not use labor market data in
planning or evaluating the
program.

6.   Use of Profession/Industry Standards   Average Score _____

5	4	3	2	1

Profession/industry standards   Little or no recognition is given to
(such as licensing, certification,   specific profession/industry
accreditation) are consistently   standards in planning and
used in planning and evaluating   evaluating this program.
this program and content of its
courses.

7.   Use of Student Follow-up Information   Average Score _____

5	4	3	2	1

Current follow-up data on   Student follow-up information
completers and leavers are   has not been collected for use in
consistently and systematically   evaluating this program.
used in evaluating this program.

8.   Relevance of Supportive Courses   Average Score _____

5	4	3	2	1

Applicable supportive courses   Supportive course content reflects
are closely coordinated with this   no planned approach to meeting
program and are kept relevant to   needs of students in this program.
program goals and current to the
needs of students.

9.   Qualifications of Administrators and Supervisors   Average Score _____

5	4	3	2	1

All persons responsible for   Persons responsible for directing
directing and coordinating this   and coordinating this program
program demonstrate a high level   have little administrative training
of administrative ability.   and experience.

10. Instructional Staffing   Average Score _____

5	4	3	2	1

Instructional staffing for this   Staffing is inadequate to meet the
program is sufficient to permit   needs of this program effectively.
optimum program effectiveness.

11. Facilities   Average Score _____

5	4	3	2	1

Present facilities are sufficient   Present facilities are a major
to support a high quality program.   problem for program quality.

12. Scheduling of Instructional Facilities   Average Score _____

5	4	3	2	1

Scheduling of facilities and   Facilities and equipment for this
equipment for this program is   are significantly under-or-over
planned to maximize use and be   scheduled.
consistent with quality instruction.

13. Equipment   Average Score _____

5	4	3	2	1

Present equipment is sufficient   Present equipment is not
to support a high quality program.   adequate and represents a threat
                                                  to program quality.

14. Adaption of Instruction   Average Score _____

5	4	3	2	1

Instruction in all courses required   Instructional approaches in this
for this program recognizes and   program do no consider individual
responds to individual student   student differences.
interests, learning styles, skills, and
abilities through a variety of instructional
methods (such as, small group or individualized
instruction, laboratory or "hands on" experiences,
credit by examination).

15. Adequate and Availability of Instructional Materials
    and Supplies   Average Score _____

5	4	3	2	1

Faculty rate that the instructional   Faculty rate that the instructional
materials and supplies as being   materials are limited in amount,
readily available and in sufficient   generally outdated, and lack
quantity to support quality   relevance to program and student
instruction.   needs.

MEL KANTOR, AIA, CFM

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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)

- **Program Coordinator,** Architectural Technology and Facilities Management Programs, Ferris State University (1996 - Present)

- **Architectural/Facilities Management Consultant,** Mel Kantor, AIA Architect (Private consulting practice, 1984 - Present)

PAST POSITIONS:

- **Program Coordinator,** Architectural Technology and Facilities Management Programs, Ferris State University (1984 - 1987 & 1992 - 1995)

- **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 (approx. 20 credit hours) - Central Michigan University

CONTINUING EDUCATION:

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

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

ARCHITECTURAL REGISTRATIONS:

- National Council of Architectural Registration Boards Certification

- State of Illinois

- State of Michigan

FACILITIES MANAGEMENT CERTIFICATION:

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

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)

- Facility Management Educators' Council

- West Michigan Chapter – IFMA

RECENT PROFESSIONAL ACTIVITIES (Non-Academic):

- Member and Chairperson   City of Big Rapids Plan Board (1981 -1989)

- Director   Grand Valley Chapter - American Institute of Architects
(1985 - 1987) (1993 - 1996) (1998 - Present)

- Member   Program Committee , GVAIA (1990 - 1992)

- Chairperson   GVAIA Education Committee (1993 - 1996) (1997 – Present)

- Member   International Facilities Management Educators' Council

- Secretary   International Facilities Management Association -
West Michigan Chapter (1997 - 1999)

- President   International Facilities Management Association -
West Michigan Chapter (1999 - Present)

- President   International Facilities Management Educators' Council
(1995 - 1999)

- Member   Grand Rapids Downtown Development Board Affordable
Housing Task Force (1993 - 1995)

- Member   Urban Institute of Contemporary Art Design Committee
(1996 - Present)

- Architectural Consulting   Residential and commercial architectural, interior design
consulting, Michigan and Illinois

- Facilities Management Consulting   Institutional and Corporate Facilities Management Consulting

RECENT ACADEMIC ACTIVITIES:

- Sabbatical Research   Low-cost Cadd Systems and Review of Autocad Manuals

- Basic Autocad Seminar   presented to high school educators (1995)

Council of America ....te and proctored the architectural portion of the State of Michigan exam for approximately the last twelve years (resigned in 1996)

- Involved with other AT/FM faculty in the development of a Baccalaureate in Architectural Technology (currently on indefinite hold)

- 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 the last eight years.

- Judge of several VICA Architectural Competitions

- Judge of two Rockford High School Design Competitions

- Judge – Grand Rapids Home Builders Association, Awards of Excellence 1996 - 1998

- Developed course in Advanced Architectural Presentation

- NEOCON Presentations on Facilities Management Education – 1997 – 1998

- In a joint effort with two facilities management colleagues, the Facilities Management program received International Facilities Management recognition for meeting IFMA'S academic standards. The program was one of the initial five internationally to receive this honor.

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

- Received 1999 AIA Grand Valley Chapter's Presidents' Award

Registered Architect: Ohio and Michigan
Certified Facility Manager-1997(by International Facilities Management Association)
(Note: Achievements since last promotion application shown in italics.)

PROFESSIONAL EXPERIENCE:

FERRIS STATE UNIVERSITY
College of Technology; Construction and Facilities Department
Architectural Technology and Facilities Management Programs
Big Rapids, Michigan 49307

ASSOCIATE PROFESSOR-(September '94-Present)
Continue to teach within program area. The following are key activities:
- *Developed Minor Degree option for Facilities Management Program. Approved 1996.*
- *Organized FM curriculum revision process with Vicky Hardy and Mel Kantor. Approved 1998.*
- *Adapted FMAN 331 and FMAN 451 to distance learning methods and taught both courses via distance learning.*
- *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)*

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.

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.

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.

PROFESSIONAL ACTIVITIES AND AFFILIATIONS:
- *Member, Facilities Management Educators' Council.* ('91-Present)
- *Member, International Facilities Management Association.* ('89-Present)
- *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)

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:
Handling Asbestos: Your Rights and Responsibilities Workshop. Sponsored by the Michigan Department of Environmental Quality. Grand Rapids, MI (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". (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". (April '97)

"Environmentally Conscious Interior Design", Presented by Denise Guerin, PhD of the University of Minnesota at Eastern Michigan University, Ypsilanti, MI. (March '97)

"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. (June '96)*

"Focus on Facilities", *Seminar sponsored by Northern Illinois IFMA Chapter, Chicago, IL. (October '94)*

"AutoCAD Advanced Drafting", *Grand Rapids Community College Autodesk Training Center. (March '94)*

"A Better Environment-By Design", *A seminar on environmentally sensitive design and construction. Sponsored by Michigan Construction Users Council. Lansing, MI. (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. Chicago, IL (October '98)*
A/E/C Systems '98; *Seminar of computer and software systems for architects, engineers, and contractors. Chicago, IL (June '98)*
Facilities Management Educators' Council. Conferences. Lansing, MI (September '91), Grand Rapids, MI (September '92), *Buffalo, NY (September '93), Lansing, MI (May '94)*
IFMA Student Conference; Lansing, MI (September '91), Grand Rapids, MI (September '92), *Lansing, MI ('94)*
NEOCON; Chicago, IL. (June '90, '91, '92)

COURSES TAUGHT:
ARCH 101 - Architectural Graphics (4 ch). Taught every Fall Semester.
> *Utilized the concepts of team projects and cooperative learning to master the basics of architectural drafting.*

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.*

ARCH 109 - Computer Graphics in Architecture 1 (2 ch): Taught most fall Semesters and some Winter semesters.
> *Developed HVAC related projects for HVAC sections of course.*

ARCH 285 - House: An American Evolution (2 ch): Taught most fall Semesters.
> Continue to teach this course which I developed.

Selected and integrated new text into course. Revised course to conform with curriculum revisions for Facilities Management program.

FMAN 451 - Building Diagnostics and Operations (3 ch): Taught Fall Semester at FSU and Summer Semester at the ATC.

Revised course to conform with curriculum revisions for Facilities Management program. Integrated cost and time estimating system into course.

TEACHING METHODOLOGY AND RELATED:

FM Minor Degree Option: Developed Minor Degree option for Facilities Management Program. Approved 1996.

FM Curriculum Revisions: Organized FM curriculum revision process with Vicky Hardy and Mel Kantor. Approved 1998.

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)

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)

PUBLICATIONS AND PRESENTATIONS:

"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)

"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 and Socially Responsible Built Environment"; Presented with Diane Nagelkirk at ATEA Workshop sponsored by FSU, Big Rapids, MI. (November '90)

"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)

CONSULTING:

MICHIGAN OCCUPATIONAL COMPETENCY ASSESSMENT CENTER; Big Rapids, MI (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.

SERVICE AND COMMITTEE MEMBERSHIPS:
Program:
- *Develop exit interview for graduating AT and FM students. Compile results and prepare annual reports. (Spring '92-Present)*
- *Developed standards for Facilities Management transfer students with input of AT/FM faculty. ('94-Present)*
- *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)*
- *Member lab maintenance committee. (Fall '92-Present)*
- *Faculty Co-advisor International Facilities Management Association, FSU Student Chapter. ('90-Present)*
- *Architectural Technology and Facilities Management Library Liaison. ('89-Present)*
- *Organized first and second "Architectural Graphics and Design Seminar" for high school drafting*

Developed proposal for Minor Degrees in Facilities Planning Management and Facilities Operations Management with Vicky Hardy. (Approved Spring '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)*
- *Participated in "Autumn Adventure".* (October '93, '94, '95, '98)
- 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:
- *Mentor and Chair of Tenure Committee for Victoria Hardy. ('94-Present)*
- 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 College of Technology Promotion Committee (Fall '97-Spring '00)*
- *Chair of College of Technology Promotion Committee ('98-'99 Academic Year)*
- *Cooked at COT Student Picnic ('96, '97)*
- *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 of Student Fees Committee. ('97-'99)*
- *Member of University Recreation Advisory Committee.* (March '93-March '94)
- Member Campus Facilities Master Planning Committee. ('90-'93)
- Member International Education Committee. ('90-'91)
- Member FSU Academic and Administrative Computer Activities Steering Committee. ('89-'90)

Community:
- *Volunteer 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)

- 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)

References Available on Request.

VICTORIA HARDY, CFM
6065 Pickerel Dr. NE
Rockford, Michigan 49341
616-874-5703
FAX: 616-874-5723
email-hardyv@ferris.edu

PRESENT POSITION   **Assistant Professor** - Facility Management
College of Technology
Ferris State University, Michigan 1994-present

Full-time tenured position teaching foundation courses in facilities management in the Construction and Facilities Department. Also responsible for placement of interns throughout industry; service on the University Planning Committee, including co-chairing the committee; and advising students in both the bachelor and certificate programs. In the first five years of appointment has guided the program through a national review culminating in the awarding of formal Recognition for achievement of industry standards in facility management education. Continues to serve as speaker, consultant, and workshop leader, including service on the Board of Directors of the International Facility Management Association (1994-1997), a multi-industry service organization with 15,000 members. Currently serves on the IFMA Foundation Board of Trustees.

PAST POSITIONS   **Principal**
AMS Planning and Research
Fairfield, CT 1990-1994

Managed the Michigan office for AMS while serving as the Principal on more than 45 arts and entertainment industry facility projects totaling more than $500 million in construction. These projects included strategic planning; management audits; program planning and analysis; market analysis; facility planning and feasibility studies; and program planning for such major clients as the Wharton Center (Michigan State University); Van Wezel Hall (Sarasota, FL); Metro-Dade County (Miami, FL); City of Tallahassee, FL; the Kennedy Center; Butler University (Clowes Hall); and the Gilmore Foundation (Kalamazoo, MI).

President
Music Hall Center
Detroit, Michigan   1987-1989

Led the historic Music Hall through a major transition period including the development of a workout plan to reduce debt and the implementation of a long-range plan for the renovation and preservation of the hall, a plan that was completed in 1996. Also served on the boards of the Arts Foundation of Michigan, and Concerned Citizens for the Arts in Michigan, the two major arts service organizations in the state.

Executive Director
Meadowlands Center for the Arts
Rutherford, NJ 1983-1987

Provided leadership for the Center through a successful transition from its early traumatic opening to resolution of $4.3 million in debt utilizing both public and private sources of funding. Established a long-range strategic plan for the continued health of the center. Organized a six-person task force in New Jersey to spearhead the formulation and passage of a statewide $100,000,000 bond issue to support the construction and renovation of arts and historic facilities across the state.

Director, University Events and Services
Stanford University
Stanford, CA   1977-1983

Produced and managed a major cultural series for the University (40 plus events in the season); managed all non-academic events for the campus (more than 1100 a year); served as the university officer for management of 16 theatres and performances spaces; managed all technical support services for the University for events; supervised and organized major special events for the campus, including commencements, visits by international dignitaries, and related activities including concerts by the Grateful Dead and Super Bowl events. Reported to the Vice-President for Public Affairs as one of five senior staff. Outreach activities on behalf of the program/office won the CASE Gold Medal Award in 1985 for Community Related Programs.

General Manager
Mississippi River Festival
Southern Illinois University
Edwardsville, IL   1975-77

Served first as the concert manager and then as general manager for this major summer festival held in the St. Louis suburbs. The St. Louis Symphony was in residence; in addition, another 50 plus concerts were presented in a three-month period, including rock and roll, folk, and chamber music. Responsible for booking decisions, production of events and education/residency programs.

Prior experience: Taught English and theater for five years in public schools in Missouri and Nebraska

CURRENT PROFESSIONAL ACTIVITIES

International Facility Management Association
Board of Directors: Director of Academic Affairs 1994-1997
  Standing Committee on Recognition of Programs – 1998-2000
  Standing Committee on Professional Education – 1998-2000
Vice-President – Programs: West Michigan Chapter 1998-2000

International Facility Management Association Foundation
Board of Directors

University Strategic Planning Committee
Ferris State University - 1995-present
Co-chair: 1998-2000

Board of Directors
ArtServe Michigan

SELECTED PAST PROFESSIONAL ACTIVITIES

Board of Directors
League of Historic American Theaters
1984-91. President, 1987-89.

Board of Directors
Arts Foundation of Michigan - 1990-1996
Concerned Citizens for the Arts in Michigan - 1988-1997
(N.B. These two organizations merged in 1997.)

Association of Performing Arts Presenters 1975-1989
Board of Directors; Executive Committee;
Chair, National Conference, 1982

**SPECIAL PROJECTS/
RECOGNITION**

Profiled:
Creativity in Business: 1986, Doubleday
Michael Ray and Rochelle Myers, authors

Recipient:
Council for Advancement and Support of Education
Gold Medal Award for Community Related Programs
Stanford University, 1985

Member:
USICA Administrators Study Team;
People's Republic of China; 1981

Citizen Ambassador Program
Facility Management Delegation
Australia and New Zealand; 1996

Named:
Who's Who in Entertainment, First Edition
Who's Who in American Women
Who's Who in Finance and Industry

Published:
League of Historic American Theaters Classic
CRM: Magazine of the National Park Service
PRINCIPAL Magazine: NAESP
Dance USA
NEOCON Proceedings 1997
NEOCON Proceedings 1998
Chicago Buildings and Real Estate Show
        Conference Proceedings - 1997

**PROFESSIONAL
AFFILIATIONS**

IFMA - International Facility Management Association
League of Historic American Theatres

**PROFESSIONAL
CERTIFICATION AND
EDUCATION**

Certified Facility Manager: National Exams-1997

Master's in Management – Aquinas College – Michigan

Stanford University - Selected Participant
Management Development Program (1980-81)

B.S. University of Missouri/Columbia

5.18.99

PROPOSAL

Planning Considerations
for the
Facilities Management Degree
and Certificate Programs
to be offered at
Ferris State University's
Grand Rapids Campus
and
Facilities Management
Support/Minor Courses
at
Ferris State University's
Big Rapids Campus

December 16, 1998

Prepared by:
Mel Kantor, AIA, CFM – Program Coordinator/Professor
Joe Samson, CFM, Associate Professor
Victoria Hardy, CFM, Assistant Professor
Charles Matrosic, PE, Department Head/Assistant Dean

FM MOVE PROPOSAL 1
12/16/98

1. **PROJECTED ENROLLMENT BASED ON FEASIBILITY DATA GATHERED BY FSU-GR STAFF:**

   - This proposal is predicated on the outcome of a feasibility study to be performed by the FSU – Grand Rapids staff with involvement of the Facilities Management faculty.

   - The study should investigate the potential enrollment from community colleges and universities offering architecture, architectural technology, architectural drafting, pre-architecture, and interior design programs. All of these have the potential of direct articulation into to Facilities Management.

   - The potential of enrollment through the Great Lakes Consortium should be investigated.

2. **PROPOSED TIMETABLE FOR PLANNING, NECESSARY APPROVALS, MARKETING AND IMPLEMENTATION:**

   - FM at FSU – GR Feasibility Study & Planning   December '99 – May '99
   - FM at FSU – GR Approvals   June '99 – July '99
   - FM at FSU – GR Marketing   August '99 – August '2000
   - FM at FSU – GR Facility Development   January '2000 – August '2000
   - FM at FSU – GR Starts GR   August '2000

3. **COURSES TO BE TAUGHT AT FSU – GR:**

   - See Faculty Load Model (Baccalaureate – Grand Rapids Campus, Certificate Courses – Grand Rapids, Support/Minor Courses including College of Business – Big Rapids) at the end of this proposal for a detailed list of courses and sections required.

   - See Facilities Management Check Sheets, Baccalaureate and Minors, for overview of course offerings by semesters.

   - This proposal is based on the assumption that all required support courses (HVAC, ENGL, MGMT, PSYC, STQM, BLAW, ECON, ACCT, BIOL and General Education) will be available at FSU – GR or can be taken at other nearby institutions.

4. **ARTICULATION OPPORTUNITIES WITH OTHER COLLEGES AND UNIVERSITIES:**

   - Articulation discussions are on going with the Architectural Drafting Program at Grand Rapids Community College, and the Architectural Program and Interiors Design Program at Lansing Community College. All three programs are very interested in articulation and preliminary examination of the programs indicates

very close conformity to the prerequisites of the Facilities Management Program.

- Preliminary discussions have also taken place with *Harrisburg, PA Community College and College of Dupage, IL*

- Contact has also been established with the *Waukesha County Technical College*, Pewaukee, WI and the FM Program Coordinator will be visiting the College in early February.

- Articulation opportunities also exist with all Michigan Community Colleges offering Architectural Technology Programs.

- Currently, any graduate from an accredited associate degree Architectural Technology Program is eligible for admission to the FM Program. Graduates from other technical programs may be eligible for admission upon review and approval of credentials by the program faculty.

- In all cases, graduates of the FM Program must meet all of Ferris' general education requirements.

5. **PROPOSED SCHEDULE FOR COURSE OFFERINGS BY SEMESTER AS WELL AS PREFERRED DAYS AND TIMES:**

- Development of a specific schedule for course offerings is premature at this time. It is the intention of the Facilities Management Program to offer the Grand Rapids Baccalaureate in Facilities Management as a daytime program, the Grand Rapids Certificate Program as an evening program, and support courses on the FSU – Big Rapids campus at times appropriate to meet the demands of the programs our courses support, including the Recreation & Leisure Management Program and the proposed Resort Management Program.

6. **STAFFING NEEDS FOR DELIVERING THE PROGRAM**

   a. **Grand Rapids:**

   - Initially will be staffed by existing FM faculty with selected courses taught by qualified adjunct faculty. See the Faculty Load Model, which is part of this proposal.

   b. **Big Rapids:**

   - Based upon current demands, courses will be taught by existing FM faculty.

   - At this time, due to the difficulty in obtaining adjuncts for the Big Rapids campus, adjuncts will not be used.

- Due to the impact on the current AAS – Architectural Technology, an additional FTEF position will be required on the Big Rapids campus. See the Faculty Load Model, which is part of this proposal.

c. **Current or projected UCEL sites:**

- The Facilities Management Program has recently completed the offering of the Certificate Program at Dow Chemical in Midland, Michigan. The program was offered with a combination of long-distance learning via simultaneous video delivery between Grand Rapids and Midland, alternating between sites.

  The program has no current or projected sites, but as another project is initiated it will be incorporated into the schedule (assuming available faculty and technical resources).

d. **Potential for linking sites for simultaneous delivery:**

- The FM Program has already effectively offered several courses, to the ATC and Dow Chemical – Midland, via long-distance simultaneous delivery.

- Providing course work by this method has great potential but is dependent on the availability of resources and appropriate technologies at both sites.

e. **Potential for Internet delivery of courses:**

- Long-distance learning via the Internet has great potential for the FM Program, but at this time, initiatives in this direction are premature. In the future, after current program initiatives have been completed, coursework via the Internet may be developed.

  FM faculty are actively involved in the International Facility Management Association (IFMA) and its continuing education initiatives. IFMA members have shown a noticeable interest in long-distance learning and the FM Program is investigating providing this resource to the profession.

- FM faculty interest and research into Internet and other long-distance teaching models is currently in progress. Faculty have taken long-distance education seminars at Ferris and Northwestern Michigan University and as time permits will continue this endeavor.

- The above is dependent upon the availability of technology resources to accommodate this initiative.

All of the above is predicated on the provision of faculty resources appropriate to meet current and future course demands.

7. LABORATORY, ACADEMIC EQUIPMENT, AND COMPUTER REQUIREMENTS:

- No laboratory facilities are required.

- Academic equipment in standard classroom facilities:

  - overhead projector
  - white board and markers
  - availability of LCD projector and computer on a limited basis
  - TV monitor and VCR on a limited basis

- Computer requirements:

  - Computer classroom, for a minimum of 3 courses per year, with 16 to 20 networked Pentium computers with Windows 95, CD-ROM, sound, Microsoft Office, Microsoft Project, Autocad 14, and FM software installed as needed.

- FM Resource Room – a small dedicated room with shelving to hold catalogs, professional publications, and miscellaneous documents, three networked computers, and a conference table with seating for six.

- Faculty offices for three faculty and one adjunct faculty.

8. LIBRARY RESOURCE REQUIREMENTS:

- Available library resources should be sufficient.

- The FSU – BR "FLITE" facility, the Kendall library, the Grand Rapids Community College library, and the Grand Rapids main library should provide adequate resources.

- The FM Resource Room mentioned in 7. above will provide certain specialized resources.

9. ADDITIONAL INFORMATION:

- FSU – BR on campus students desire for the FM Baccalaureate will be accommodated by a combination of support/minor courses offered on campus, and taking courses only available at the FSU – GR campus. It is possible that students desiring a BS in Facilities Management may attend FSU – GR for the entire junior and senior years.

- Potential competition for the FM program in West Michigan is virtually non-existent. Grand Valley State University no longer has an FM program. Michigan State's program is at the master's level. The only other FM program in the state is at Eastern Michigan University on the East Side of the state and has a narrow focus on energy system management.

- Discussion of the potential move of the FM Baccalaureate program to Grand Rapids has taken place with the FM Advisory Board and with other facilities professionals locally and nationally, and there has been enthusiastic support of locating the program in Grand Rapids.

10. IMPACT OF THIS PROPOSAL ON THE ARCHITECTURAL TECHNOLOGY AND FACILITIES MANAGEMENT PROGRAMS:

- Moving the Facilities Management Program to the FSU – Grand Rapids Campus will necessitate additional coordination activities between the Big Rapids and Grand Rapids campuses. This and the nurturing of the program in Grand Rapids will require additional student recruiting, recruiting of adjunct faculty, student advising, travel time between campuses, time on both campuses, marketing, etc. This necessitates a fifty- percent teaching and fifty-percent release time for coordination load for the Facilities Management Program Coordinator. This position will no longer serve both the AT and Fm programs, but will only coordinate the activities of the FM program. An AT coordinator will be required as discussed below.
- The providing of several facilities management support courses to the proposed College of Business' Resort Management Program will result in more of a teaching load for the Facilities Management faculty, thereby reducing faculty availability in teaching of some Architectural Technology courses. Examination of the AT & FM Course Model and the Faculty Load Model indicate the need for an additional faculty position (67 percent teaching and 33 percent release time for program coordination).
- Revision to seniority groupings is not being dealt with at this point, but must be addressed at some future time.

FACULTY LOAD MODEL ... TOTALS PER FACULTY MEMBER – AT & FM

FACULTY	FALL		WINTER		TOTAL		SUMMER	
	CREDIT HOURS	CONTACT HOURS	CREDIT HOURS	CONTACT HOURS	CREDIT HOURS	CONTACT HOURS	CREDIT HOURS	CONTACT HOURS
BOCKSTAHL-ER	2/4/4	4/6/9	3/4/2	3/9/4				
	10	19	9	16	17	35		
DILG	4/4/1	6/9/2	3/4/2/1/1/	3/9/2/1/2				
	9	17	11	17	20	34		
GERBER	4/2/4	8/4/6	4/3/2/2	8/4/2/4				
	10	18	9	18	19	36		
HARDY	3/3/3/3/3	3/3/3/3/3	3/3/2/3	3/4/2/3				
	15	15	11	12	26	27		
KANTOR FMAN PROG. COORD. 50%	3/3	3/3	3/3	4/3				
	6	6	6	7	12	13		
NAGELKIRK	4/2/3	8/4/3	4/3/3/1	8/3/3/2				
	9	15	11	16	20	31		
SAMSON	2/2/3/3/2	4/2/3/3/2	2/3/3/1/2	4/3/3/1/4				
	12	14	11	15	23	29		
NEW AT FAC. – 33% PROG. COORD.	4/4C	8/6C	4/1/4C	8/2/6C				
	8	14	9	16	17	30		
FMAN ADJUNCT			3	3				
			3	3	3	3		

AT & FM COURSE MODEL (BACCALAUREATE- GRAND RAPIDS CAMPUS, CERTIFICATE - GRAND RAPIDS CAMPUS, SUPPORT/MINOR COURSES – BIG RAPIDS CAMPUS)

FALL SEMESTER

COURSE NO.	COURSE TITLE	SECT. NO.	CREDIT HOURS	CONT. HOURS	FACULTY MEMBER	CAMPUS BR / GR	COMMENTS
ARCHITECTURAL TECHNOLOGY COURSES							
ARCH 101	ARCH'L GRAPHICS 1	1	4	8	*NEW AT FAC.*	BR	
ARCH 101		2	4	8	NAGELKIRK	BR	
ARCH 101		3	4	8	GERBER	BR	
ARCH 109	COMP'T'R GRAPHICS 1	1	2	4	SAMSON	BR	
ARCH 109		2	2	4	BOCKSTAHLER	BR	
ARCH 109		3	2	4	NAGELKIRK	BR	
ARCH 109		4	2	4	GERBER	BR	
ARCH 112	STRUCT. MAT'LS & SYS.	1	4	6	BOCKSTAHLER	BR	
ARCH 112	STRUCT. MAT'LS & SYS.	2	4	6	DILG	BR	
ARCH 112	STRUCT. MAT'LS & SYS.	3	4	6	GERBER	BR	
ARCH 203	ARCH'L CONSTR. DET.	1	4	9	DILG	BR	
ARCH 203		2	4	9	BOCKSTAHLER	BR	
ARCH 209	COMP'T'R GRAPHICS 2	1	1	2	DILG	BR	
ARCH 223	STATICS & STRUCT.	1	4	4	EASTLEY	BR	C. M. FACULTY
ARCH 244	HIST. DEV. WEST. ARCH	1	3	3	NAGELKIRK	BR	
ARCH 285	HOUSE-AMER. EVOL.	1	2	2	SAMSON	BR	
HVAC 337	MECH. & ELEC. SYS.	1	3	3	KORCAL	BR	HVAC FACULTY
HVAC 337		1	3	3	LAFFERTY	BR	HVAC FACULTY
BACCALAUREATE – GRAND RAPIDS							
FMAN 321	PRINCIPLES OF FMAN	1	3	3	HARDY	GR	
FMAN 431	SPACE PLANNING	1	3	3	KANTOR	GR	
FMAN 441	PROP. DEV. & PLNG.	1	3	3	HARDY	GR	
FMAN 451	BLDG DIAG. & OPER.	1	3	3	KANTOR	GR	
CERTIFICATE COURSES – GRAND RAPIDS							
FMAN 321	PRINCIPLES OF FMAN	2	3	3	SAMSON	GR	
FMAN 322	PROJECT MGMT.	1	3	3	HARDY	GR	

SUPPORT COURSES – BIG RAPIDS							
FMAN 280	INTRO. TO FMAN	1	2	2	SAMSON	BR	ARCH. ELECTIVE
FMAN 321	PRINCIPLES OF FMAN	2	3	3	HARDY	BR	
FMAN 441	PROP. DEV. & PLNG.	2	3	3	HARDY	BR	
FMAN 451	BLDG DIAG. & OPER.	2	3	3	SAMSON	BR	

FACULTY MEMBER INDICATED AS TEACHING A PARTICULAR COURSE OR SECTION IS SUBJECT TO CHANGE AS NEEDS DEMAND.

SEE FACULTY LOAD MODEL FOR TEACHING LOADS.

AT & FM COURSE MODEL (BACCALAUREATE – GRAND RAPIDS CAMPUS, CERTIFICATE – GRAND RAPIDS CAMPUS, SUPPORT/MINOR COURSES – BIG RAPIDS CAMPUS)

COURSE NO.	COURSE TITLE	SECT. NO.	CREDIT HOURS	CONT. HOURS	FACULTY MEMBER	CAMPUS BR / GR	COMMENTS
WINTER SEMESTER							
ARCHITECTURAL TECHNOLOGY COURSES							
ARCH 102	ARCH'L CONSTR.	1	4	8	*NEW AT FAC.*	BR	
ARCH 102	GRAPHICS	2	4	8	NAGELKIRK	BR	
ARCH 102		3	4	8	GERBER	BR	
ARCH 109	COMP'T'R GRAPHICS 1	1	2	4	GERBER	BR	HVAC STUDENTS
ARCH 109		2	2	4	SAMSON	BR	HVAC STUDENTS
ARCH 115	INT. & EXT. FINISHES &	1	3	3	BOCKSTAHLER	BR	
ARCH 115	SYSTEMS	2	3	3	DILG	BR	
ARCH 204	ARCH'L CONST. DOC.	1	4	9	DILG	BR	
ARCH 204		2	4	9	BOCKSTAHLER	BR	
ARCH 209	COMPUTER GRAPHICS	1	1	2	*NEW AT FAC.*	BR	
ARCH 209	IN ARCHITECTURE	2	1	2	DILG	BR	
ARCH 209		3	1	2	NAGELKIRK	BR	
ARCH 216	PROF. PRACTICE	1	2	2	DILG	BR	
ARCH 241	DESIGN FUNDAMENT.	1	2	4	BOCKSTAHLER	BR	
ARCH 241		2	2	4	SAMSON		
ARCH 244	HISTORICAL DEVEL. OF	1	3	3	NAGELKIRK	BR	
ARCH 244	WESTERN ARCH.	2	3	3	NAGELKIRK	BR	
ARCH 250	SYSTEMS COST. EST.	1	3	4	GERBER	BR	1 LECTURE/2 LABS
ARCH 250		2	3	2			
ARCH 270	ADVANCED AUTOCAD	1	1	1	DILG	BR	8 WEEKS – 2 HRS/WEEK
ARCH 280/281	ADVANCED PRESENT.	1	1	1		BR	8 WEEKS – 2 HRS/WEEK
BACCALAUREATE – GRAND RAPIDS							
FMAN 309	COMPUTER APPLIC.	1	3	4	KANTOR	GR	
FMAN 322	PROJECT MGMT.	1	3	3	HARDY	GR	
FMAN 331	FACILITY PROGRAM'G	1	3	3	KANTOR	GR	
FMAN 432	INTERIOR DESIGN	1	3	3	FM ADJUNCT	GR	
FMAN 499	CAPSTONE ASSESS.	1	3	4	HARDY	GR	
HVAC 483	HVACR BLDG. SYSTEMS	1	3	3	KORCAL	GR	HVACR FACULTY

LOAD MODEL 5W.DOC

CERTIFICATE COURSES – GRAND RAPIDS							
FMAN 331	FACILITY PROGRAM'G	1	3	3	SAMSON	GR	
SUPPORT COURSES – BIG RAPIDS							
FMAN 280	INTRO. TO FMAN	1	2	2	HARDY	BR	ARCH ELECTIVE
FMAN 322	PROJECT MGMT.	2	3	3	HARDY	BR	
FMAN 331	FACILITY PROGRAM'G	2	3	3	SAMSON	BR	

FACULTY MEMBER INDICATED AS TEACHING A PARTICULAR COURSE OR SECTION IS SUBJECT TO CHANGE AS NEEDS DEMAND.

SEE FACULTY LOAD MODEL FOR TEACHING LOADS.

AT & FM COURSE MODEL (BACCALAUREATE – GRAND RAPIDS CAMPUS, CERTIFICATE – GRAND RAPIDS CAMPUS, SUPPORT/MINOR COURSES – BIG RAPIDS CAMPUS)

COURSE NO.	COURSE TITLE	SECT. NO.	CREDIT HOURS	CONT. HOURS	FACULTY MEMBER	CAMPUS BR / GR	COMMENTS
SUMMER SEMESTER							
ARCHITECTURAL TECHNOLOGY COURSES							
NO COURSES TAUGHT DURING SUMMER SEMESTER							
BACCALAUREATE – GRAND RAPIDS							
FMAN 393	FAC. MGT. INTERNSHIP	1	4		HARDY	GR	
CERTIFICATE COURSES – GRAND RAPIDS							
FMAN 451	BLDG DIAG & OPER	1	3	3	SAMSON	GR	
SUPPORT COURSES – BIG RAPIDS							
NO COURSES TAUGHT DURING SUMMER SEMESTER							

FACULTY MEMBER INDICATED AS TEACHING A PARTICULAR COURSE OR SECTION IS SUBJECT TO CHANGE AS NEEDS DEMAND.

SEE FACULTY LOAD MODEL FOR TEACHING LOADS.

FACILITIES MANAGEMENT
BACHELOR OF SCIENCE DEGREE
FALL SEMESTER
Curriculum Guide Sheet

NAME OF STUDENT _____ STUDENT I.D._____

Total semester hours required for graduation: 68

NOTE: Meeting the requirements for graduation indicated on this sheet is the reponsibility of the student. Compliance with this agreement will assure the student completion of the program in the time frame indicated. Your advisor is available to assist you.

THIRD YEAR - FALL SEMESTER (15 Semester Hours) CREDIT SEMESTER GRADE

			CREDIT	SEMESTER	GRADE
FMAN	321	Principles of FMAN (enrolled in FMAN or 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		
			(15)		

THIRD YEAR - WINTER SEMESTER (15 Semester Hours)

FMAN	309	Comp Appl. for FMAN (ARCH 109/FMAN 321/or permission)	3		
FMAN	322	Project Management (FMAN 321 or 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		
			(15)		

THIRD YEAR - SUMMER SEMESTER (4 Semester Hours)

FMAN	393	F-M Internship (Enrolled in FMAN Program or permission)	4		
			(4)		

FOURTH YEAR - FALL SEMESTER (18 Semester Hours)

FMAN	431	Concepts of Space Planning (FMAN 309, 331)	3		
FMAN	441	Property Development & Planning (FMAN 321, BLAW 221)	3		
FMAN	451	Bldg. Diagnostic & Operations (FMAN 321 or permission)	3		
ACCT	201	Principles of Accounting 1 (MATH 110)	3		
ECON	222	Principles of Economics 2 (ECON 221)	3		
____	____	Cultural Enrichment Elective*	3		
			(18)		

FOURTH YEAR - WINTER SEMESTER (15 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		
____	____	Cultural Enrichment Elective*	3		
			(16)		

*One Cultural Enrichment Course must also meet the Global Consciousness Requirements
(See pg. 62-63 of college catalog).

ARCHITECTURAL TECHNOLOGY
ASSOCIATE IN APPLIED SCIENCE DEGREE
FALL SEMESTER
Curriculum Guide Sheet

NAME OF STUDENT _____   STUDENT I.D. _____

Total semester hours required for graduation: 66

NOTE: Meeting requirements for graduation indicated on this sheet is the responsibility of the student. Compliance with this agreement will assure the student completion of the program in the time frame indicated. Your advisor is available to assist you.

FIRST YEAR - FALL SEMESTER (17 semester hours)	CREDITS	COMMENTS	GRADE
ARCH 101 Architectural Graphics 1	4		
ARCH 112 Structural Materials and Systems	4		
ENGL 150 English 1	3		
MATH 116 Interm. Algebra/Num. Trigonometry	4		
ARCH 109 Computer Graphics in Architecture 1	2		

FIRST YEAR - WINTER SEMESTER (18 semester hours)

ARCH 102 Architectural Construction Documents 1(ARCH 101)	4		
ARCH 115 Interior & Exterior Finishes & Systems (ARCH 112)	3		
ARCH 209 Computer Graphics in Architecture 2 (ARCH 109)	1		
ARCH 244 Historical Development of Western Architecture	3		
ENGL 250 English 2	3		
PHYS 211 Introductory Physics 1	4		

SECOND YEAR - FALL SEMESTER (16 semester hours)

ARCH 203 Architectural Construction Detailing (ARCH 102, 112, 115)	4		
HVAC 337 Mech. & Electrical Systems for Bldgs. (PHYS 211,MATH 116)	3		
ARCH 223 Statics & Structures (ARCH 112, PHYS 211, MATH 116)	4		
COMM 105 Interpersonal Communication OR			
COMM 121 Fundamentals of Public Speaking	3		
_____ ___ Architectural Elective _____	2		

SECOND YEAR - WINTER SEMESTER (15 semester hours)

ARCH 204 Arch. Const. Documents 2(ARCH 203,209,223, or instr. perm.)	4		
PSYC 150 Introduction to Psychology	3		
ARCH 216 Professional Practice	2		
ARCH 250 Systems Cost Estimating (ARCH 102, MATH 116, or permission)	3		
ARCH 241 Design Fundamentals (ARCH 244, or permission)	2		
_____ ___ Architectural Elective _____	1*		

*One Half Semester Course   ****Applicable for students laddering into Construction Management.**

ARCH 260	Energy Conscious Design	2	**CONM 111	Construction Practices	3
*ARCH 270	Advanced Usage of CAD in Arch.	1	**CONM 122	Construction Surveying	3
*ARCH 280	Advanced Presentation	1	**CONM 212	Soils and Foundations	3
*ARCH 281	Advanced Presentation 2	1	CONM 224	Codes, Permits, & Gov't. Regulations	3
ARCH 285	House - The American Evolution	2	FMAN 280	Introduction to Facilities Mgt.	2

ARCH'L Electives are offered based upon faculty availability & student demand.

FACILITIES MANAGEMENT MINOR DEGREE
FACILITY OPERATIONS MANAGEMENT MINOR
FALL SEMESTER 96/97
Curriculum Guide Sheet

This minor degree is open to all students enrolled at Ferris State University pursuing Baccalaureate or higher degrees in majors other than Facilities Management, and who expect to be involved in the planning of the physical aspects of the facilities in which they practice.   Students with minimal technical and construction knowledge would be required to attend a workshop to develop necessary competencies in these areas.

Required semester hours needed: 18; GPA of 2.0 or more in minor degree courses; 50% of credits must be 300+ level and 50% of credits must be taken at FSU.

Required Courses		Grades
ARCH 250	Systems Cost Estimating (MATH 116;ARCH 102; or permission)	3 ___
FMAN 280	Introduction to Facilities Management	2 ___
FMAN 321	Principles of Facilities Management (enrolled in an FMAN program or permission)	3 ___
FMAN 322	Project Management (FMAN 321)	3 ___
FMAN 441	Property Development and Planning (FMAN 321)	3 ___
FMAN 451	Facility Management and Operations (FMAN 321)	3 ___
ELECTIVE	Three additional hours from courses listed below	3 ___

Elective Courses:		
ARCH 109	Computer Graphics in Architecture 1	2 ___
ARCH 115	Interior and Exterior Finishes and Systems	3 ___
ARCH 209	Computer Graphics in Architecture 2 (ARCH 109)	1 ___
HVAC 337	Mechanical and Electrical Systems for Buildings (PHYS 211, MATH 116)	3 ___
FMAN 431	Space Planning and Computer Applications (ARCH 109, FMAN 331)	3 ___
FMAN 331	Facility Programming and Design Management (FMAN 321)	4 ___
HVAC 483	HVACR Building Systems	3 ___

Permission:
Permission will be given to minor degree students to register for certain courses with technical prerequisites if the student can demonstrate basic competency in the area. This may be done if the student has had previous practical experience, similar courses, or can demonstrate certain skills such as 1) print reading, 2) knowledge of terms, 3) knowledge of general architectural concepts, and 4) knowledge of general construction concepts.

Student competency will be determined by the Architectural Technology/Facilities Management faculty. The methodology used to determine competency will be to review course descriptions of relevant courses, review samples of student work, and "technical" interviews of students. This method is similar to how students transferring into Facilities Management from other institutions are currently evaluated. The difference will be that lower levels of competency will be required for minor degree students, and minor degree students will not be required to earn credit for all courses associated with the four year Architectural Technology/Facilities Management curriculum.

Students who cannot demonstrate basic competency will be required to attend a workshop concurrent with FMAN 280, which should be the first course taken in the Minor Degree Curriculum.

Workshop Description:
The workshop will be scheduled on a weekly basis with individual students or groups of students. They will be led by faculty members from the Architectural Technology andFacilities Management programs. A series of exercises will be . developed for students attending the workshops. Attendance will be required until the competencies are developed.

FACILITIES MANAGEMENT MINOR DEGREE
FACILITY PLANNING MANAGEMENT MINOR
FALL SEMESTER 96/97
Curriculum Guide Sheet

This minor degree is open to all students enrolled at Ferris State University pursuing Baccalaureate or higher degrees in majors other than Facilities Management. Students with minimal technical and construction knowledge would be required to attend a workshop to develop necessary competencies in these areas. (See "Permission" below)

Required semester hours needed: 18; GPA of 2.0 or more in minor degree courses; 50% of credits must be 300+ level and 50% of credits must be taken at FSU.

Required Courses:

ARCH	115	Interior and Exterior Finishes and Systems	3	_____
ARCH	250	Systems Cost Estimating (MATH 116, ARCH 102; or permission)	3	_____
FMAN	280	Introduction to Facilities Management	2	_____
FMAN	321	Principles of FMAN (enrolled in FMAN or permission)	3	_____
FMAN	322	Project Management (FMAN 321)	3	_____
FMAN	331	Facility Programming and Design Management (FMAN 321)	4	_____

Permission:

Permission will be given to minor degree students to register for certain courses with technical prerequisites if the student can demonstrate basic competency in the area. This may be done if the student has had previous practical experience, similar courses, or can demonstrate certain skills such as 1) print reading, 2) knowledge of terms, 3) knowledge of general architectural concepts, and 4) knowledge of general construction concepts.

Student competency will be determined by the Architectural Technology/Facilities Management faculty. The methodology used to determine competency will be to review course descriptions of relevant courses, review samples of student work, and "technical" interviews of students. This method is similar to how students transferring into Facilities Management from other institutions are currently evaluated. The difference will be that lower levels of competency will be required for minor degree students, and minor degree students will not be required to earn credit for all courses associated with the four year Architectural Technology/Facilities Management curriculum.

Students who cannot demonstrate basic competency will be required to attend a workshop concurrent with FMAN 280, which should be the first course taken in the Minor Degree Curriculum.

Workshop Description:

The workshop will be scheduled on a weekly basis with individual students or groups of students. They will be led by faculty members from the ARCH and FMAN programs. A series of exercises will be developed for students attending the workshops. Attendance will be required until the competencies are developed.

Table III
Degree Program Costing
Total Cost per SCH Ranked High to Low
1997-98

Program Name	Program Credits Required	Instructor Cost per SCH	Dept Cost per SCH	Dean's Cost per SCH	Total Cost per SCH
Optometry OD (Yrs 3,4,5 & 6)	163	$462.84	$48.14	$82.18	$593.16
Pharmacy/All Options Pharm.D (Yrs 6 & 7)	71	$395.63	$43.97	$49.42	$489.02
Public Relations Certificate	12	$303.87	$54.69	$14.22	$372.78
Computer Networks & Systems BS (Embedded Systems	136	$294.94	$61.79	$14.27	$370.99
Dental Technology AAS	61	$219.84	$111.42	$22.83	$354.08
Quality Technology Certificate	12	$245.92	$83.54	$18.10	$347.57
Criminal Justice Administration MS	30	$279.29	$43.54	$18.73	$341.57
Opticianry AAS	68	$250.18	$34.78	$56.55	$341.51
Insurance Certificate	12	$274.44	$36.05	$15.70	$326.19
Printing Technology AAS	65	$238.74	$67.80	$15.98	$322.53
Real Estate Certificate	9	$257.91	$31.34	$14.22	$303.46
Indust & Environ Hlth Mgt (Gen Env Hlth option) BS	134	$230.39	$52.21	$18.74	$301.35
Advanced Studies in Global Logistics Certificate	12	$234.98	$48.85	$14.22	$298.06
Advertising Certificate	14	$216.12	$54.69	$14.22	$285.03
Computer Networks & Systems BS (Indust Automation T	136	$208.40	$61.79	$14.27	$284.45
Computer Networks & Systems BS (Communications Tra	1.3	$206.01	$61.79	$14.27	$282.06
Automotive Service Technology AAS	68	$185.87	$78.64	$16.04	$280.55
Quality Improvement for Managers Certificate	9	$214.05	$49.13	$16.19	$279.37
Computer Networks & Systems BS (Information Systems	137	$202.51	$59.09	$14.30	$275.90
Automotive Body AAS	63	$181.50	$76.87	$15.88	$274.25
Marketing Research Certificate	12	$210.56	$48.25	$14.22	$273.03
Visual Communication BS (Yrs 3 & 4)	64	$208.58	$47.96	$13.13	$269.67
Mainframe Computer Certificate	12	$200.65	$48.60	$14.22	$263.47
International Business Certificate	12	$215.33	$31.34	$14.22	$260.89
Heavy Equipment Technology AAS	67	$167.66	$74.36	$15.56	$257.58
Biotechnology BS	130	$214.36	$30.85	$9.20	$254.41
Manufacturing Engineering Technology BS (Yrs 3 & 4)	79	$168.44	$69.36	$15.86	$253.67
Nursing AAS	72	$160.16	$72.70	$20.68	$253.54
Advanced Studies in Investment Analysis Certificate	12	$207.83	$31.34	$14.22	$253.38
Electrical/Electronics Engr Technology BS (Yrs 3 & 4)	69	$174.18	$62.53	$14.30	$251.01
Automotive Service Technology AAS (Ford ASSET opt)	68	$154.52	$78.64	$16.04	$249.20
Automotive Service Technology AAS (Chrysler Apprentic	68	$154.52	$78.64	$16.04	$249.20
Automotive Service Technology AAS (General Motors AS	68	$154.52	$78.64	$16.04	$249.20
Welding Technology AAS	68	$165.06	$66.72	$15.47	$247.25
Career and Tech Educ/Career & Tech Instr MS	32	$172.17	$54.20	$20.69	$247.07
Technical Drafting and Tool Design AAS	67	$167.90	$63.09	$15.07	$246.06
Industrial Electronics Technology AAS	67	$161.76	$68.19	$14.94	$244.88

* Instructor Cost - *Salary & Fringe*
** Department Cost - *Departmental Level Non Instructor Compensation, Supplies and Equipment*
*** Dean's Cost - *Dean's Level Non Instructor Compensation, Supplies and Equipment*

Table III

Degree Program Costing
Total Cost per SCH Ranked High to Low
1997-98

(handwritten: -14 ABOVE / 3 BELOW)

Program Name	Program Credits Required	Instructor Cost per SCH	Dept Cost per SCH	Dean's Cost per SCH	Total Cost per SCH
Career and Tech Educ/Human Resource Dev MS	31	$170.33	$52.50	$20.14	$242.97
Career and Tech Educ/Postsecondary Admin MS	32	$162.16	$54.27	$20.60	$237.03
Manufacturing Tooling Technology AAS	68	$152.33	$67.31	$15.64	$235.28
Quality Engineering Technology BS (Yrs 3 & 4)	68	$158.67	$58.09	$15.17	$231.93
Retailing Certificate	12	$161.70	$54.69	$14.22	$230.61
Info Systems Mgt/Quality Improvement Emphasis MS	31	$167.40	$47.02	$15.94	$230.36
Midrange Computer Certificate	12	$166.76	$48.60	$14.22	$229.58
Indust & Environ Hlth Mgt (Indust Safety option) BS	121	$158.53	$48.77	$17.44	$224.73
Marketing Sales Certificate	12	$163.18	$47.29	$12.94	$223.41
Dental Hygiene AAS	77	$103.18	$97.96	$20.45	$221.60
Indust & Environ Hlth Mgt (Haz Waste option) BS	130	$153.75	$49.65	$17.48	$220.89
Info Systems Mgt/Accounting Emphasis MS	31	$158.54	$46.12	$15.94	$220.59
Printing Management BS (Yrs 3 & 4)	64	$152.42	$53.29	$14.26	$219.97
Welding Engineering Technology BS (Yrs 3 & 4)	73	$142.42	$58.70	$14.34	$215.46
Marketing Certificate	12	$145.75	$54.69	$14.22	$214.66
Actuarial Science BS	120	$173.06	$29.24	$12.24	$214.54
Civil Engineering Technology AAS	63	$155.66	$42.18	$14.74	$212.58
Pharmacy BS (Yrs 3,4 & 5)	94	$124.51	$43.21	$44.09	$211.81
Television Production BS	128	$120.45	$75.28	$15.56	$211.29
Plastics Engineering Technology BS (Yrs 3 & 4)	64	$132.29	$62.98	$15.76	$211.03
Surveying Technology AAS	61	$157.64	$39.00	$14.17	$210.82
Construction Project Management Certificate	12	$137.57	$55.02	$18.10	$210.69
Surveying Engineering BS	138	$154.15	$41.66	$14.63	$210.45
Indust & Environ Hlth Mgt (Indust Hyg option) BS	127	$146.50	$46.28	$16.42	$209.20
Legal Assistant AAS	64	$160.05	$33.45	$12.81	$206.31
Construction Administration Certificate	12	$132.94	$55.02	$18.10	$206.07
Medical Laboratory Technology AAS	70	$127.09	$57.17	$20.43	$204.70
Plastics Technology AAS	69	$139.36	$51.81	$13.42	$204.60
Accountancy/Finance BS	137	$154.16	$36.06	$12.98	$203.20
Heavy Equipment Service Eng Tech/Maint Opt BS (Yrs 3	66	$130.72	$55.59	$14.82	$201.13
Facilities Management BS (Yrs 3 & 4)	68	$144.41	$41.67	$14.69	$200.77
Medical Technology (Integrated) BS	136	$128.50	$52.16	$18.43	$199.09
Hospitality Management Certificate	12	$130.05	$54.69	$14.22	$198.97
Architectural Technology AAS	66	$137.66	$45.64	$15.38	$198.68
Food Service Management Certificate	12	$126.98	$54.69	$14.22	$195.89
Info Systems Mgt/Information Systems Emphasis MS	31	$132.89	$47.00	$15.37	$195.26
Public Relations BS	124	$140.02	$40.66	$12.68	$193.36

Instructor Cost - **Salary & Fringe**
Department Cost - **Departmental Level Non Instructor Compensation, Supplies and Equipment**
*** Dean's Cost - **Dean's Level Non Instructor Compensation, Supplies and Equipment**

Table III
Degree Program Costing
Total Cost per SCH Ranked High to Low
1997-98

Program Name	Program Credits Required	Instructor Cost per SCH	Dept Cost per SCH	Dean's Cost per SCH	Total Cost per SCH
Nursing BSN (Yrs 3 & 4)	84	$116.78	$57.87	$16.21	$190.86
Medical Technology (Career Mobility) BS (Yrs 3 & 4)	72	$127.54	$46.36	$16.10	$190.00
Construction Management BS (Highway/Bridge Track)	130	$131.68	$41.73	$14.65	$188.06
Accountancy (Public Accounting Track) BS	124	$134.42	$38.64	$13.06	$186.12
Product Design Engineering Technology BS (Yrs 3 & 4)	68	$106.99	$63.78	$14.81	$185.58
Automotive and Heavy Equipment Mgt BS (Yrs 3 & 4)	67	$108.72	$61.75	$14.70	$185.17
Accountancy (Cost/Managerial Track) BS	124	$131.71	$39.83	$13.61	$185.14
Career and Tech Educ/Administrative Cert MS	32	$109.17	$54.86	$20.79	$184.82
Computer Literacy Certificate	12	$121.90	$48.60	$14.22	$184.72
Small Business Management Certificate	12	$128.77	$41.49	$14.22	$184.48
Professional Tennis Management BS	126	$129.31	$41.86	$12.99	$184.16
Mechanical Engineering Technology AAS	65	$117.24	$52.87	$13.73	$183.85
Construction Field Engineering Certificate	15	$110.69	$55.02	$18.10	$183.81
Retailing BS	127	$130.39	$40.67	$12.16	$183.22
Accountancy/Computer Information Systems BS	139	$128.03	$40.60	$13.00	$181.63
Ornamental Horticulture Technology AAS	60	$132.65	$38.52	$10.26	$181.43
Hospitality Management BS (Yrs 3 & 4)	63	$125.27	$43.28	$12.52	$181.07
HVACR Technology AAS	68	$119.43	$45.97	$14.94	$180.35
Advertising BS	125	$125.66	$41.69	$12.79	$180.15
CJ/Law Enforcement Option BS (Yrs 3 & 4)	67	$118.66	$42.69	$18.48	$179.82
Direct Marketing Certificate	12	$110.05	$53.57	$15.70	$179.32
Accountancy (Professionally Directed Track) BS	124	$126.81	$38.59	$12.92	$178.33
Social Work BSW	128	$130.57	$37.98	$9.70	$178.24
Computer Information Systems/Marketing BS	145	$122.24	$42.01	$13.44	$177.69
Music Industry Management BS	124	$122.23	$41.19	$12.59	$176.01
Finance BS	125	$130.39	$32.64	$12.84	$175.87
Insurance/Real Estate BS	124	$128.24	$34.40	$13.14	$175.78
Wage Earning Home Economics Education BS (Yrs 3 & 4)	98	$115.07	$44.44	$15.95	$175.45
HVACR Engineering Technology BS (Yrs 3 & 4)	65	$116.43	$43.31	$14.91	$174.65
Marketing/Sales BS	124	$120.46	$41.08	$13.00	$174.54
Health Information Management BS	123	$118.82	$34.92	$20.07	$173.81
Food Service Management AAS	63	$117.75	$42.52	$12.97	$173.24
Technical Education BS (Yrs 3 & 4)	98	$112.47	$44.35	$15.98	$172.80
Allied Health Education BS (Yrs 3 & 4)	99	$111.33	$44.69	$16.11	$172.14
Construction Management BS from Arch Tech (Yrs 3 & 4)	83	$113.91	$42.80	$15.14	$171.86
Insurance BS	124	$119.23	$36.14	$13.80	$169.17
Building Construction Technology AAS	63	$112.20	$42.18	$14.74	$169.11

* Instructor Cost - *Salary & Fringe*
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*** Dean's Cost - *Dean's Level Non Instructor Compensation, Supplies and Equipment*

Source: Office of Institutional Research, g:\...\progcost\9793\tcpschrank.rsl

Table III

Degree Program Costing
Total Cost per SCH Ranked High to Low
1997-98

Program Name	Program Credits Required	Instructor Cost per SCH	Dept Cost per SCH	Dean's Cost per SCH	Total Cost per SCH
Marketing BS	124	$115.57	$39.85	$12.57	$167.99
Business Education/Marketing/Distributive Edu BS	155	$107.27	$45.18	$15.31	$167.76
Nuclear Medicine Technology BS	128	$114.90	$35.13	$17.68	$167.71
Heavy Equipment Service Eng Tech/Mfg Opt BS (Yrs 3 &	66	$91.11	$61.75	$14.72	$167.58
Health Care Systems Administration BS	128	$113.07	$36.31	$17.84	$167.22
Business Education/General Business BS	155	$107.27	$44.20	$15.54	$167.01
Construction Management BS (Commercial/Industrial Tra	130	$110.62	$41.73	$14.65	$167.00
Applied Speech Communication BS	126	$115.22	$37.83	$13.58	$166.62
CJ/Corrections Option BS (Yrs 3 & 4)	65	$107.58	$42.15	$16.70	$166.43
Computer Information Systems/Management BS	153	$115.22	$37.35	$13.36	$165.94
Health Information Technology AAS	63	$108.64	$35.54	$21.57	$165.75
Multimedia Production Certificate	12	$96.31	$54.69	$14.22	$165.22
Real Estate AAS	63	$118.59	$33.28	$12.36	$164.23
International Business BS	127	$114.80	$35.69	$13.26	$163.75
Retailing AAS	67	$109.66	$41.37	$12.37	$163.40
Computer Information Systems BS	129	$110.74	$39.31	$12.91	$162.96
CJ/Generalist Option BS (Yrs 3 & 4)	64	$104.52	$42.01	$15.49	$162.01
Professional Golf Management BS	124	$105.92	$42.37	$13.05	$161.34
Recreation Leadership & Mgt/Outdoor-Adv Edu Track BS	128	$106.38	$38.34	$15.64	$160.35
Industrial Chemistry Technology AAS	63	$126.00	$24.35	$9.42	$159.77
Recreation Leadership & Mgt/Corp Fitness-Well Track BS	128	$104.10	$38.22	$15.59	$157.91
Recreation Leadership & Mgt/Leisure Service Track BS	128	$104.35	$38.13	$15.39	$157.87
Mathematics Education BS	144	$107.22	$36.45	$14.09	$157.76
Recreation Leadership & Mgt/Sports Management Track	128	$104.68	$37.69	$15.25	$157.61
Training in Business and Industry BS (Yrs 3 & 4)	99	$102.29	$40.54	$14.63	$157.46
Child Development AAS	63	$93.33	$47.61	$16.22	$157.16
Biology Education BS	122	$103.31	$40.42	$12.90	$156.62
Applied Mathematics BS	120	$121.39	$25.63	$9.57	$156.59
Human Resource Management BS	122	$106.80	$34.80	$12.80	$154.40
Operations Management BS	125	$108.15	$33.66	$12.55	$154.35
Public Administration BS	124	$101.80	$39.01	$13.36	$154.17
Small Business Management BS	123	$104.83	$35.70	$12.89	$153.42
Quality & Productivity Management BS	124	$102.85	$36.47	$13.81	$153.13
Nuclear Medicine Technology AAS	66	$90.04	$40.80	$22.02	$152.86
Management BS	123	$106.68	$33.28	$12.62	$152.58
Visual Communication AAS	66	$95.84	$43.44	$12.52	$151.81
Chemistry Education BS	152	$101.06	$36.57	$13.48	$151.11

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*** Dean's Cost - *Dean's Level Non Instructor Compensation, Supplies and Equipment*

Table III

Degree Program Costing
Total Cost per SCH Ranked High to Low
1997-98

Program Name	Program Credits Required	Instructor Cost per SCH	Dept Cost per SCH	Dean's Cost per SCH	Total Cost per SCH
Technical and Professional Communication BS	121	$102.88	$31.10	$10.72	$144.70
Business Administration BS	124	$98.01	$33.54	$12.48	$144.04
Pre-Teaching (Elementary or Secondary) AA	65	$94.68	$36.38	$12.42	$143.49
English Education BS	120	$87.76	$37.94	$13.60	$139.30
Pre-Criminal Justice AA	64	$88.77	$36.13	$12.85	$137.75
Directed Studies AA	60	$91.89	$33.73	$11.48	$137.09
Career Exploration AA	60	$89.84	$32.05	$14.63	$136.52
General Business AAS	63	$88.39	$35.46	$12.53	$136.37
Collegiate Skills Program AA	60	$88.21	$31.05	$16.52	$135.78
Applied Biology (Pre-Veterinary Medicine Track) BS	120	$88.92	$32.55	$10.12	$131.59
Applied Biology BS	120	$88.86	$32.73	$10.00	$131.59
Applied Biology (Pre-Medicine Track) BS	120	$88.86	$32.73	$10.00	$131.59
Applied Biology (Sports Medicine Track) BS	120	$88.86	$32.73	$10.00	$131.59
Applied Biology (Pre-Dentistry Track) BS	120	$88.86	$32.73	$10.00	$131.59
Applied Biology (Pre-Physical Therapy Track) BS	120	$87.95	$32.91	$9.93	$130.79
Radiography AAS	78	$62.92	$43.28	$24.24	$130.44
Applied Speech Communication AA	60	$87.09	$31.51	$10.28	$128.88
Respiratory Care AAS	69	$63.16	$41.11	$22.10	$126.38
Pre-Social Work AA	60	$84.62	$31.21	$10.21	$126.04
Pre-Law AA	60	$84.57	$31.20	$10.25	$126.02
Liberal Arts AA	60	$84.42	$31.20	$10.25	$125.87
Pre-Mortuary Science AS	60	$85.55	$29.11	$9.80	$124.46
Pre-Optometry AS	60	$85.55	$29.11	$9.80	$124.46
Pre-Engineering AS	60	$85.39	$29.11	$9.80	$124.31
Pre-Pharmacy AS	60	$85.39	$29.11	$9.80	$124.31

* Instructor Cost - *Salary & Fringe*
** Depatment Cost - *Departmental Level Non Instructor Compensation, Supplies and Equipment*
*** Dean's Cost --*Dean's Level Non Instructor Compensation, Supplies and Equipment*