

Operations & Supply Management 2012 Program Review 8/15/12

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Section 1: Overview

The Operations and Supply Management (OSM) major has been in existence since the late 1980's. Since its inception, the program has undergone numerous changes both in name and content. The program underwent its most recent changes with the addition of a Lean Systems Certificate and Leadership & Project Management Minor that includes numerous new and modified courses during the 2011/2012 academic year. Prior to this time period, the OSM program focus was to integrate courses from the College of Engineering Technology (CET) to add a technical dimension and promote collaboration between colleges. Subsequently new course offerings have been directed at other programs within College of Health Professions as well as CET. This can be seen in the changes made to the Leadership & Supervision and Manufacturing Operations Management Certificates, as well as the OSM major and minor. These additional changes in program content correspond to the rapid changes that have been observed within the industry and student employment options over the course of the past several years. Specifically a focus on service based industry, like healthcare, retail, and sport-resort. In addition, content changes have also reflected the increased expectation by employers to hire students that can compete in a global workforce. Employers are demanding and actively seeking out students who possess the attributes and characteristics indicative of a highly skilled and knowledgeable workforce. For example, recommendations of the recent and past Advisory Board meetings suggested the need for more integrated program with other disciplines. Program changes have reflected this through both courses and program additions.

The mission of the Operations and Supply Management (OSM) Program is to prepare students for careers in the highly skilled, technically oriented, continually evolving discipline of supply chain management. This mission is accomplished by offering students a variety of courses within the COB and CET with the breadth and depth of knowledge and information expected of students who must compete in an ever expanding global economy. Required major, minor, and certificate courses and course descriptions are contained in Appendix A. In addition to these courses, students have the opportunity to gain firsthand knowledge and experience in supply chain management by working on projects that have been sponsored by businesses and organizations located throughout the Western Michigan region. These include professional organizations like the Association of Operations Management (APICS) and Institute of Supply Management (ISM). Through these first hand experiences, students can apply the knowledge and skills learned in the classroom to critically analyze and problem solve, real life, employer based supply chain management problems.

A. Program Goals

It should be noted that program goals contained in the 2012 OSM Administrative Program Review are slightly different than the goals observed in the previous academic program reviews and are in line with the TracDat outcomes. The new goals and the use of TracDat establish a mechanism for evaluating and improving the OSM program through objective measurements. In addition, the APR process requires a survey instrument that will allow program reviewers an opportunity to more objectively determine whether program goal attainment has been achieved. The goals are both specific to student skills as well as to program capabilities.

The following list contains the 2012 Operations and Supply Management (OSM) Administrative Program Review exit competencies (APR):

1. *Expected Outcome:* Apply business concepts and practices in creating and maintaining lean supply chains that support strategic goals.

External Validation: Survey OSM graduates as part of the APR process and monitor results from TracDat through compiled course reviews done after course completion and annual program assessment.

2. *Expected Outcome:* Communicate effectively: including both oral and written assignments incorporated throughout the program. Graduates must be able to demonstrate the ability to present ideas and information in a clear, concise and effective manner.
External Validation: Survey OSM graduates as part of the APR process and monitor results from TracDat through compiled course reviews done after course completion and annual program assessment.
3. *Expected Outcome:* Function as a member of a team: both, in the classroom and within a company setting, and demonstrate the ability to work with others and to accomplish tasks.
External Validation: Survey OSM graduates as part of the APR process and monitor results from TracDat through compiled course reviews done after course completion and annual program assessment.
4. *Expected Outcome:* Use and apply tools learned in the classroom and in the field, to solve problems and make business decisions. Tools such as Lean, Six Sigma, and other continuous improvement methods will vary by industry and these tools are expected to change over time.
External Validation: Survey employers and organizations as part of the APR process. Monitor internship opportunities and monitor results from TracDat through compiled course reviews done after course completion and annual program assessment.
5. *Expected Outcome:* Analyze an environment, draw logical conclusions, and demonstrate the ability to make effective decisions: both independently and as part of a cooperative team.
External Validation: Survey employers and organizations as part of the APR process and monitor the number of special projects and field trips offered plus monitor results from TracDat through compiled course reviews done after course completion and annual program assessment.

The Operations and Supply Management program goals support the mission and vision of Ferris State University and College of Business. These goals have been updated to reflect changes that have been occurring within the industry and are based on recommendations suggested at the last two OSM Advisory Board meetings. Changes in program goals reflect advice, feedback, and recommendations received from companies providing internships, and related field experiences. As previously indicated, OSM program goals now include a measurement section that should aid in the long term program evaluation and improvement process.

B. Program Visibility and Distinctiveness

Historically, the OSM program has had limited visibility and success in recruiting potential students. Within the last several years new faculty have been added to the Management department that possess capabilities in the operations management. This includes experience both with manufacturing and service sector. This has provided additional exposure to the program combined with a great awareness by most COB faculty of the OSM program offerings. This exposure has been felt beyond the COB with increased awareness with both the Colleges of Engineering Technology and Health Professions. This is evident in the operation management courses offered. More specifically, the OSM program minor has provided an extra option which did not exist prior to 2004. Given the growth of the minor, the same results are expected for the

additional certificate and minor. It is believed that the new Lean Certificate will expand this awareness and assist in promoting the program.

Major progress has recently been made in increasing the visibility of the OSM program to companies. The results of these efforts include four projects involving students and various companies. These student projects include:

- 2004: Hayworth Corp., Big Rapids. Lean manufacturing project conducted to evaluate floor layout for Kanban parts. This project required that students establish inventory levels and evaluate process flow.
- 2004: Wolverine World Wide, Rockford. Evaluate international logistics of in-bound materials from East Coast suppliers through the Dominican Republic to the US (Rockford, MI). Assessment of current practices was conducted to determine effectiveness.
- 2005: Wolverine World Wide, Rockford. Two student teams evaluated Wolverine's Central store operations. Team 1 examined the flow of incoming, inventory placement/storage, and outgoing movement of raw materials. Team 2 examined the process of how sales samples are received and then redistributed to salesman and shows.
- 2006: Bohning Archery Co., Lake City. Two teams apply value stream mapping to improve operational efficiency.

Without repeated exposure of students and faculty to businesses at professional organization's monthly meetings, none of these opportunities would exist. A goal of the OSM program is to continue to develop, expand upon, and promote outside field experiences, business networking opportunities, and relationships for students and local employers that will eventually distinguish the OSM program from other COB programs.

In addition to the aforementioned projects, active networking and close contact with companies has contributed to developing an active OSM Advisory Board and cultivation of student internship opportunities. The following listing of internships/coops can be directly attributed to the increased visibility and development of collaborative business relationships between FSU's OSM student organization, OSM faculty, and local community business leaders.

- Steelcase: summer intern: 2005-2006.
- National Nail: intern from 2005, internship offered but no student applied.
- Irwin Seating: internship since 2005.
- Grand Haven Stamping: two interns summer 2006.
- Mark Four Automotive: internship from 2005.
- Ferris State University Purchasing Department from 2009.

It has become increasingly difficult to fill the internship opportunities presented by companies due in part to the fact that specific skills have not been developed in students until late in their academic careers. With so few students in the OSM program, several internship opportunities for FSU students have gone unfilled and often get filled by students from other similar programs at other universities. It is important for students to gain these internships and coop experiences in order to better prepare them for future employment opportunities. Continued work with the COB's internship coordinator will aide in finding and placing students that fit position requirements.

Institutions that are the main competitors for prospective students in the Operations and Supply Management program are the same as competitors identified by other COB programs. These program competitors include: Michigan State University, Grand Valley State University, Central Michigan University, Eastern Michigan University, Western Michigan University, Baker College, etc.

Most of these competitor programs have curriculum requirements similar to the requirements identified in FSU's Operations and Supply Management program curriculum. One distinctive difference that FSU has is the number of engineering courses required from the CET when compared to other programs. Only Western Michigan University's OSM program offers students a more integrated program with an engineering curriculum. Program improvements and the addition of four full time doctoral qualified faculty (see Appendix C for vita) has provided the necessary stimulus to broaden the offers and prospective to all COB students and those taking classes from other programs. This has eliminated all the previous shortcoming of the program. Changes within the program are reflected by the increased diversity of the faculty and their experiences which provides a more unique educational offering.

C. Program Relevance

Overall, demand in supply chain management (buyer, logistical, and materials management) and operations (material analysts, master schedulers, and inventory managers) has been steadily growing due to the effects on organizations of increased globalization. This can be seen though the courses in International Business (INTB 310 & INTB 320) which are required plus extensive coverage in MGMT 370 and MKTG 466 (15 to 20 percent). Recent trends in the automotive industry, as portrayed by the media, report declining employment in manufacturing and has cast a negative shadow over the OSM program. However, this decline in manufacturing has been offset with the growth and interest of operations and supply management in the service sector. For example, service organizations such as Hotels, Health Care, and Retail are expanding their efforts to improve supply chain management. Currently, two companies (National Nail and Irwin Seating) who offer the OSM students internships are looking to hire OSM students who can speak Chinese. This also points out a deficiency of the current program that will be discussed in section 5.

According to the web site <http://www.collegegrad.com/careers/manag25.shtml> and <http://www.collegegrad.com/careers/manag19.shtml>, future employment opportunities for graduating seniors from this program are likely to include the following: (note: just 2 job titles were used in this search)

“Overall employment of purchasing managers, buyers, and purchasing agents is expected to grow slower than the average for all occupations through the year 2020. Offsetting some declines for purchasing workers in the manufacturing sector will be increases in the services sector. Companies in the services sector, which have typically made purchases on an ad hoc basis, are beginning to realize that centralized purchasing offices may be more efficient. Also, many purchasing agents are now charged with procuring services that were traditionally done in-house in the past, such as computer and IT (information technology) support in addition to traditionally contracted services such as advertising. Demand for purchasing workers will be limited by improving software, which has eliminated much of the paperwork involved in ordering and procuring supplies, and also by the growing number of purchases being made electronically through the internet and electronic data interchange (EDI). Despite slower-than-average growth, some job openings will result from the need to replace workers who transfer to other occupations or leave the labor force.”

“Employment of industrial production managers is expected to grow more slowly than average for all occupations through 2014, but better than previous years as employment in manufacturing shows some improvements. As fewer manufacturing plants move abroad more opportunities will result but moderated by improved productivity. Also, new computerized machines are better able to control quality. However, because production managers are so essential to the efficient operation of a plant, they have not been as affected by efforts to flatten management structures. Nevertheless, this trend has led production managers to assume more responsibilities and has limited the creation of more employment opportunities.”

"Employment growth will be driven by the important role of logistics in an increasingly global economy. Job prospects should be best for those with a college degree and work experience related to logistics."

Data from the Bureau of Labor Statistics Employment Projections from 2010 to 2020 show a changing prospective. Under Management classification (11-0000) there are listed Purchasing Managers, Buyers, and Industrial Production Managers which shows a below average growth rate at 7, 7, and 9 percent respectively. On the other hand, employment in the area of Logistics (Transportation and Distribution) indicates that there will be an above average growth rate of 26 percent. This point has been raised directly in the Advisory Board's 2004 meeting where several members recommended that a strong International perspective be part of the OSM program.

Given these forecasts, OSM seniors must be flexible in where and what they may do upon graduating. This trend has already been observed by the OSM faculty given where students have obtained positions. This last year, most premium positions were out of state reflecting better economic conditions outside of Michigan.

The program responds to emerging issues in the discipline, development of new technologies and tools, changes in employer needs, and changes in student needs. Program faculty keep current in the field, maintain contacts with practitioners, and are active in professional organizations. When curricular changes are needed, program faculty initiate the curriculum revision process.

With the exception of a few freshmen enrolled in the program, students are more likely to transfer into the program (major or minor) after they find they are interested in the material or become aware of employment opportunities. This is likely because many students don't have a good understanding of what operations management involves until they have some exposure in the operations management class.

The program does a good job of meeting student expectations based on the standard university Student Assessment of Instruction (SAI), and the input provided by graduating students and alumni conducted for this program review. The results of the surveys of students and alumni conducted for this program review will be covered in Sections 2(D) and (A) respectively.

D. Program Value

The OSM program is part of the business program offerings thus providing student with choices and benefiting the college and the university. This view is supported by a majority of the COB faculty and will be further discussed in Section 2(E) along with other faculty perceptions. The developing relationship with area businesses to provide assistance and aide in student learning provides values for both parties and to the community. Students get the chance to apply the concepts and theory while the businesses get assistance and access to research/consulting services.

Select courses within the program also provide students with hands on experiences that give them an added edge when they are searching for a job. This is just starting to be seen by the last year's graduates of the program.

The program faculty are active participants in the work of the department, college, and university serving on numerous committees. The faculty is also active in trying to bring about the integration of courses and programs between the COB and COT.

Our four faculty members are active in several professional associations. The faculty participate in a variety of conferences, lead in the implementation of Blackboard as a faculty trainer, and serve on the boards of

professional organizations. For a complete list of faculty activities please refer to the vita in Appendix C. This is beneficial to students in that faculty are current in the field and have contacts that are beneficial to students involved in a job search.

Based on input from employers involved in the advisory board and the responses to the employer survey the program personnel conclude that the program is valuable to employers. Growth in the minor and anticipated benefits of the certificates should further support the continuation of this program. That said, there are opportunities for improvement that include integration of COT minors/concentrations, internships, and modifications to required course mix. The minutes of the advisory board meeting are included in Appendix B and will be discussed in more detail in Section 2(F). The employer survey will be covered in detail in Section 2(B) of this report.

Section 2: Collection of Perceptions

As a part of the Program review process alumni, employers, students, and COB faculty were surveyed. The surveys were developed in conjunction with, and approved and administered by Institutional Research and Testing. It should be noted that this is the first time we have used online surveys sent to the respondents' email address instead of traditional paper surveys. A comparison of response rates is shown in the table below. In general the response rates were comparable with the exception of the employer survey where the 2012 response rate was approximately half of the response rate in 2006. More current testing will be required to update any direction the OSM program is directed towards as survey responses have become more difficult in the recent years. This is addressed in more detail in the discussion of the employer survey results in Section 2 B.

Comparison of survey response rates: 2012 and 2006

	2012 Completed/Sent	2012 Response Rate	2006 Completed/Sent	2005 Response Rate
Alumni	9/54	16.7%	17/240	7.1%
Employer	9/197	4.6%	20/30	66.7%
Student	4/11	36.4%	0/9	0.0%
Faculty	15/74	20.1%	26/74	35.1%

A. Graduate Follow-Up Survey

As noted earlier, the COB administers the EBI proprietary survey to all COB majors when they clear for graduation. This survey collects data on student satisfaction with the program but not data on job placement since at this point students are typically not actively engaged in the job search process. Similarly the Student Survey conducted for this program review did not ask questions about job placement. Data on job placement is obtained from the Graduate Follow-Up Survey Summary provided by Institutional Research and Testing. The Ferris' 2008/09 Graduate Follow-Up Survey Summary provided by Institutional Research and Testing received one response from the four graduates who attained an OSM degree. A variety of reasons could cause this as email addresses change and individuals relocate, or just plain overlook the questionnaire. Looking at the report, this issue is not uncommon to any program.

It should be noted that program faculty maintain contact with graduates on an informal basis. Each of the program faculty meet with outside personnel employed in similar fields specific to the degree to gain current and future knowledge applicable to the program. Also, it is not uncommon for graduates to contact faculty after they graduate with requests for advice on specific OSM matters and other career-related issues, however this is not a substitute for the University's Alumni Relations activities.

B. Employer Survey

Input was collected from a very wide variety of employers throughout Michigan, as well as the Midwest. Two hundred and eighty seven surveys were sent out electronically; One hundred made it to valid email addresses; and nine surveys were completed and returned. Our Statistics Department was asked if this represented statistically valid and they said it is. The representative sample covered a broad range of organizations from large too small. Respondents also covered a wide range of positions from managers to owners. Low responses to different topics can be attributed to newer technologies. For example, a student learning the basics of statistics will use a sophisticated program where it only requires data entry and prints out the results. Responses validated some of our current course offerings. The comments were particularly enlightening. Employers too are very busy these days and retrieving survey results can prove daunting. While the number of respondents is somewhat low, the results are telling in that we must add the

finer points to the curriculum that address the very important /critical aspects. Plans are in the works to include more of these functions such as Microsoft business applications during class.

Subject	% Reporting Very Important/Critical
Microsoft Word	77.8%
PowerPoint	55.6%
Photoshop	11.1%
Desktop Publishing	22.2%
Excel	77.8%
Databases	33.3%
Public Speaking	55.6%
English	44.4%
Math	33.3%
Principles of Economics	11.1%
Principles of Accounting	55.6%
Business Law	22.2%
Applied Management	44.4%
Principles of Marketing	11.1%
Introduction to Statistics	11.1%
Others Suggested	% Reporting Very Important/Critical
E-filling	11.1%
Engineering Classes	11.1%
Michigan Quality	11.1%
Microsoft Project	11.1%

Each of the topics identified above is covered in the OSM Program. Microsoft Word and Excel were identified as critical skills required of our graduates. The Department is already discussing the need to bolster the coverage of each of the indicated topics. The inclusion of Photoshop and Desktop Publishing will garner a minimum focus.

Suggested Important Subjects to be added	% Reporting Very Important/Critical
Critical Thinking, logic, and problem solving	11.1%
Writing and Speaking	11.1%
Suggested Unimportant Subjects	% Reporting Very Important/Critical
Marketing and Statistics	11.1%

A couple of employers made helpful comments that will impact our decisions going forward. Several other recommendations concerning the General Education were made as shown below with telling results. As an interesting side note, respondents are somewhat misleading in their answers as to what is important between the given rankings of topics. This will lead to further research as to the specifics implied within those answers.

Suggested Important Subjects	% Reporting Very Important/Critical
Oral Presentation	66.7%
Verbal communication Skills	77.8%
Writing Skills	66.7%
Interpersonal Skills	77.8%
Decision Making Skills	66.7%
Analyzing Skills	66.7%
Leadership Skills	77.8%
Scientific Understanding	55.6%
Cultural Awareness	44.4%
Social Awareness	44.4%

Quantitative Skills	55.6%
Financial Analysis/Budgeting	22.2%
Teamwork Skills	55.6%
Foreign Language	55.6%

OSM APR...Employer

Frequencies

Prepared by: Institutional Research & Testing, 05/12

Statistics

	N		Mean	Median	Std. Deviation
	Valid	Missing			
q1 Total number of employees in your org	4	0			
q2 Number of employees with a Bachelor's in Qual & Supply Mgmt	4	0			
q3 Expect to hire new employees with Bachelor's in Qual & Supply Mgmt	4	0	1.75	2.00	.500
q4 How many	4	0			
q5 Expected position titles/compensation	4	0			
q6 Expect to decrease the number of positions for Bachelor's in Qual & Supp Mgmt	4	0	2.00	2.00	.000
q7 How many	4	0			
q8.a Microsoft Word	3	1	1.00	1.00	.000
q8.b PowerPoint	3	1	1.67	2.00	.577
q8.c Photoshop	3	1	2.00	2.00	.000
q8.d Desktop Publishing	3	1	2.33	2.00	.577
q8.e Excel	3	1	1.00	1.00	.000
q8.f Databases (such as Access)	2	2	1.50	1.50	.707
q8.g Other	0	4			
q8.h Other specified	4	0			
q9 Other important programs	4	0			
q10.a Public Speaking	3	1	1.33	1.00	.577
q10.b English	3	1	1.67	2.00	.577
q10.c Math	2	2	1.50	1.50	.707
q10.d Principles of Economics	2	2	2.00	2.00	1.414
q10.e Principles of Accounting	2	2	2.00	2.00	.000
q10.f Business Law	3	1	1.67	1.00	1.155
q10.g Applied Management	3	1	1.33	1.00	.577
q10.h Principles of Marketing	3	1	2.33	2.00	1.528
q10.i Introduction to Statistics	3	1	2.00	2.00	.000

q11 Subjects most important to a Quality and Supply grad	4	0			
q12 Subjects least important to a Quality and Supply grad	4	0			
q13.a Oral Presentation	3	1	1.00	1.00	.000
q13.b Verbal Communication Skills	3	1	1.00	1.00	.000
q13.c Writing Skills	3	1	1.33	1.00	.577
q13.d Interpersonal Skills	3	1	1.00	1.00	.000
q13.e Decision-Making Skills	3	1	1.33	1.00	.577
q13.f Analyzing Skills	3	1	1.33	1.00	.577
q13.g Leadership Skills	3	1	1.00	1.00	.000
q13.h Scientific Understanding	3	1	1.67	1.00	1.155
q13.i Cultural Awareness/Global Awareness	3	1	1.33	1.00	.577
q13.j Social Awareness	3	1	1.33	1.00	.577
q13.k Quantitative Skills	3	1	1.33	1.00	.577
q13.l Financial Analysis/Budgeting	3	1	1.67	2.00	.577
q13.m Teamwork Skills	3	1	1.00	1.00	.000
q13.n Foreign Language	3	1	2.00	2.00	.000
q13.o Other	0	4			
q13.p Other specified	4	0			
q14 Comments about answer in q13	4	0			
q15 Subjects or skills are most important and why	4	0			
q16 Subjects or skills are least important and why	4	0			
q17 Suggestions to improve	4	0			
q18 Interested in serving on advisory board	3	1	2.00	2.00	.000
q19 Contact info	4	0			
q20 Additional comments	4	0			

C. Alumni Survey

An email survey of the OSM Program alumni was conducted in April 2012. The survey instrument is included in Appendix E. Names and email address for 107 alumni were obtained from University Advancement and Marketing. Of the 107 surveys sent, 53 were returned as undeliverable. Of the 53 surveys sent to valid addresses, 9 surveys were completed for a response rate of 16.7%. Majors comprise 9 (100%) of the respondents. It should be noted that the Operations Management Degree is relatively new compared to most majors. There were no more than three respondents from any given year as they ranged from 1981 to 1992. The complete survey results are included in Appendix E.

Overall it appears most alumni are satisfied with the education they received at Ferris. Of the respondents who answered the questions, 5 (55.6%) stated that they were very satisfied with their degree, while 4 (44.4%) respondents stated they were somewhat satisfied with their degree. All respondents have been employed since their graduation. Looking at the responses, 3 (33.3%) graduates felt experience is extremely important, while 4 (44.4%) felt it would be somewhat important, leading to internships helping the student. This should lead one to believe that not only is the program still viable from a graduate's perspective, but

that reading between the lines indicates there needs to be improvements in the responsiveness to student's needs in this field.

The following table shows the frequencies for Alumni survey questions 20a-25f. "Please rate the importance of each of the following OSM selections for someone in your position?"

Ranking of Classes by Alumni

q20.a Applied Management	9	0	2.56	2.00	1.130
q20.b Business Ethics & Social Responsibility	8	1	2.63	2.50	1.188
q20.c Business Law	9	0	3.22	3.00	1.394
q20.d Business Strategy/Policy	9	0	2.11	2.00	.782
q20.e Business Writing	9	0	1.78	2.00	.667
q20.f Contracts and Sales (BLAW)	9	0	2.44	3.00	1.236
q20.g Financial Management	9	0	1.67	1.00	.866
q20.h Human Resource Management	9	0	2.11	2.00	1.054
q20.i Information Systems	8	1	1.88	2.00	.641
q20.j International Business	9	0	2.78	3.00	1.202
q20.k Team Dynamics/Organizational Behavior	9	0	2.33	2.00	1.581
q20.l Principles of Accounting (ACCT)	8	1	1.88	1.50	.991
q20.m Principles of Economics (ECON)	9	0	2.67	2.00	1.581
q20.n Principles of Marketing (MKTG)	9	0	2.44	3.00	1.236
q20.o Production/Operation Management	9	0	1.33	1.00	.500
q20.p Statistics (STQM)	9	0	2.33	2.00	.707
q21 Subjects most useful	9	0			
q22 Subjects should be added/improved	9	0			
q23 Subjects should be eliminated	9	0			
q24.a Analyzing skills	9	0	1.78	2.00	.833
q24.b Computer skills	9	0	2.44	2.00	1.014
q24.c Decision Making skills	9	0	1.89	2.00	.782
q24.d Interpersonal skills	9	0	2.00	2.00	.866
q24.e Leadership skills	9	0	2.11	2.00	.928
q24.f Oral Presentation skills	9	0	2.67	3.00	.707
q24.g Scientific Understanding	9	0	2.22	2.00	.667
q24.h Verbal Communication skills	9	0	2.33	2.00	.707
q24.i Writing skills	9	0	2.22	2.00	.667
q25.a Cultural Awareness/Global Awareness	9	0	2.89	2.00	1.167
q25.b Financial Analysis/Budgeting	9	0	2.44	2.00	.726
q25.c Management skills	9	0	1.89	2.00	.601
q25.d Quantitative skills	9	0	2.11	2.00	.601
q25.e Social Awareness	9	0	2.33	2.00	1.225
q25.f Teamwork skills	9	0	2.00	2.00	.866

The frequencies show that alumni feel the all subject areas are pertinent to an Operations Management Degree. This is consistent with the feedback received from the OSM Advisory Board and the results of the Employer survey as discussed elsewhere in this report.

The following table shows the frequencies for Alumni survey questions 26-1 to 26a. This area is concerned with what the respondent thought required improvement.

Suggested improvements by Alumni

q26_1 Strengthen area(s): Accounting skills	8	1	.00	.00	.000
q26_2 Strengthen area(s): Computer skills	8	1	.38	.00	.518
q26_3 Strengthen area(s): Finance skills	8	1	.13	.00	.354
q26_4 Strengthen area(s): Foreign Language skills	8	1	.63	1.00	.518
q26_5 Strengthen area(s): Interpersonal skills	8	1	.13	.00	.354
q26_6 Strengthen area(s): Management skills	8	1	.13	.00	.354
q26_7 Strengthen area(s): Problem-solving skills	8	1	.13	.00	.354
q26_8 Strengthen area(s): Statistical skills	8	1	.13	.00	.354
q26_9 Strengthen area(s): Verbal communication skills	8	1	.25	.00	.463
q26_10 Strengthen area(s): Other	8	1	.13	.00	.354
q26.a Other specified	9	0			

The results show that alumni feel they received the best preparation from our university for their stated careers. It indicates that all topic areas are relevant yet with changes in technology, several other areas display a need for improvement. Prior to this data, two new courses and a certificate have been created to expand upon new knowledge. Again, further research into the interpretations of the answers is required to be more specific prior to making adjustments.

OSM APR...Alumni

Frequencies

Prepared by: Institutional Research & Testing, 05/12

	Statistics		Mean	Median	Std. Deviation
	Valid	Missing			
q1 Year graduated	9	0			
q2 Presently employed full time	9	0	1.00	1.00	.000
q3 Present job title	9	0			

q4 Other job titles	9	0			
q5 Employed since graduation	0	9			
q6 Last job title	9	0			
q7 Reason for unemployment or part-time status	9	0			
q8 Last salary range	7	2	8.14	7.00	1.773
q9 How obtain first position	9	0			
q10 Belong to professional organization	9	0	1.78	2.00	.441
q11 Which one(s)	9	0			
q12 Career wise, doing next 5 yrs	9	0			
q13 Satisfied w/ OPSM degree prep for career	9	0	1.44	1.00	.527
q14 Reason(s) for your response	9	0			
q15 Degree include technical training	9	0	1.11	1.00	.333
q16 What kind	9	0			
q17 Career enhanced by technical training	0	9			
q18 In what way	9	0			
q19.a Word processing	9	0	1.44	1.00	.726
q19.b PowerPoint	9	0	2.22	2.00	1.093
q19.c Spreadsheet	9	0	1.11	1.00	.333
q19.d Databases	9	0	1.11	1.00	.333
q19.e Other	2	7	1.00	1.00	.000
q19.f Other specified	9	0			

D. Student Survey

An online survey of current students in the OSM Program was conducted in April 2012. The survey instrument is included in Appendix I. Four surveys were completed, representing a response rate of 36.4%. Complete survey results are included in Appendix J.

Of the surveys received, 4 (100%) were from program majors. Overall the students seem very satisfied with the program. Three (75%) of the respondents had chosen the program from the beginning and one (25%) switched.

Student perceptions, for the most part, agree with that of employers on what is valid. In one way or another, all of the respondents felt there needed to be more of a focus on operations type classes. Supporting this statement is the students impression of their academic preparation; 2(50%) somewhat agree, 1(25%) neutral, and 1(25%) somewhat disagree. Countering this was their perception of the operations program; 1(25%) strongly agree, 1(25%) somewhat agree, and 2(50%) neutral. Faculty support through advising was positive; 2(50%) strongly agree, and 2(50%) somewhat agree. These results are somewhat dependent upon the occupation the student ends up with which may skew results.

OPSM APR...Current Students

Frequencies

Prepared by: Institutional Research & Testing, 05/12

Statistics

	N		Mean	Median	Std. Deviation
	Valid	Missing			
q1_1 Choose QSM: I wanted a four year degree in business	4	0	.50	.50	.577
q1_2 Choose QSM: I did not know what major in business to select	4	0	.00	.00	.000
q1_3 Choose QSM: Other	4	0	.50	.50	.577
q1.a Other specified	4	0			
q2 Transfer from another university	4	0	2.00	2.00	.000
q3 Which university	4	0			
q4 Transfer from another FSU program	4	0	1.75	2.00	.500
q5 Which program	4	0			
q6 During 12Sp sem, enrolled in credit hours	4	0			
q7 Currently	4	0	1.00	1.00	.000
q8 Expect to do after completing degree	4	0	1.00	1.00	.000
q8.a Other specified	4	0			
q9 Institution specified	4	0			
q10 Major specified	4	0			
q11.a Degree will help me achieve career goals	4	0	2.25	2.00	.500
q11.b Satisfied w/ acad prep	4	0	2.75	2.50	.957
q11.c Satisfied w/ advising	4	0	1.75	2.00	.500
q11.d Recommend to prospective students	4	0	1.50	1.50	.577
q11.e QSM is quality program	4	0	2.25	2.50	.957
q12 Explain answers	4	0			
q13.a Public Speaking (Comm)	4	0	3.50	3.00	1.915
q13.b English (Engl)	4	0	1.50	1.50	.577
q13.c Math (Math)	4	0	2.00	2.00	.816
q13.d Macro Economics (Econ 221)	4	0	3.25	3.00	.500
q13.e Micro Economics (Econ 222)	4	0	3.25	3.00	.500
q13.f Principles of Accounting (Acct)	4	0	2.00	2.00	.816
q13.g Business Law (Blaw)	4	0	2.75	2.50	1.708
q13.h Microcomputer Applications (Isys)	4	0	3.75	3.50	1.708
q13.i Applied Management (Mgmt)	4	0	2.50	2.50	1.291
q13.j Principles of Marketing (Mktg)	4	0	2.25	2.50	.957

q13.k Introduction to Statistics (Stqm)	4	0	2.75	2.50	.957
q14 Subjects should be added/improved & why/how	4	0			
q15 Subjects should be eliminated & why	4	0			
q16 Involved in extracurricular activities	4	0	1.25	1.00	.500
q17 Which one(s)	4	0			
q18 Additional comments	4	0			

E. Faculty Perceptions

An online faculty survey was developed and sent out by the Institutional Research and Testing Department to the 62 full-time, tenured and tenure-track faculty employed by the College of Business (COB) during the 2011-2012 academic year. The online faculty survey was developed to obtain faculty feedback pertaining to five (5) key program questions. Two (2) additional questions were also included for demographic purposes (Refer to the Appendix for a copy of the online survey instrument). The faculty survey was conducted from March 23, 2012 through April 6, 2012. A total of 15 COB faculty completed the online survey with an overall response rate of 24%. Survey Result Frequencies can be found in the Table below followed by a brief discussion of the survey results.

OPSM APR...Faculty Frequencies

Prepared by: Institutional Research & Testing, 05/12

Statistics

	N		Mean	Median	Std. Deviation
	Valid	Missing			
q1.a OSM degree of benefit to students in COB	15	0	1.40	1.00	.632
q1.b Curriculum includes courses relevant to current business practices	14	1	1.57	1.00	.756
q1.c Quality comparable to similar progs across country	14	1	1.79	2.00	.802
q1.d Adequate facilities/equipment to meet instructional needs	14	1	2.50	2.00	1.019
q1.e Students receive appropriate course advising	14	1	1.64	1.00	.842
q1.f Students should be required to do internship	15	0	1.80	2.00	.862
q1.g Sufficient number of tenured track faculty	13	2	2.08	2.00	1.038
q1.h Grads prepared to enter workforce	14	1	2.00	2.00	.877
q2 Length of employment at FSU	14	1	3.79	4.00	2.259
q3 Strengths of program	15	0			
q4 Suggestion(s) to improve program	15	0			
q5 Types of equipment or facility needs enhance student prog learning	15	0			
q6 Department	15	0			
q7 Additional comments	15	0			

The first key question, (Question 1a-1h) sought to measure faculty perception about the various strengths and weakness of FSU's Bachelor's Degree in Operations and Supply Management (OSM). The paragraphs

below describe the aggregate feedback obtained from faculty related to the strengths and weaknesses of FSU's OSM program. Overall, ninety-three percent (93%) of the respondents indicated the Bachelor's Degree in Operations and Supply Management benefit students (14/15).

Question 1b: The program curriculum includes courses relevant to current business practices. The majority of faculty (85.7%) also indicated the Operations and Supply Management curriculum included courses relevant to current business practices (12/15).

Question 1c: The quality of the Bachelors in Operations and Supply Management Degree at FSU is comparable to the quality found in similar bachelor programs across the country. Over seventy-eight percent (78.6%) of the faculty indicated the quality of the program was comparable to similar OSM programs (11/14); while an additional 21.4% (3/14) of the faculty were either neutral which indicates they had insufficient information about FSU's or OSM programs at other universities to draw a definitive conclusion.

Question 1d: There is adequate facilities and equipment to meet the current instructional needs of the program. Over fifty seven percent (27.1, 8/14) of the faculty indicated facilities and equipment are adequate to meet the instructional needs of OSM students; while 21.4% (3/14) of faculty responding neutral, indicates they were not sure as to what is available. And 21.4% (3/14) stated they somewhat disagree indicating that current equipment is not quite sufficient. Through outside research, it has been discovered that other universities with proper backing have actual labs available for this course.

Question 1e: The students in the Bachelors in Operations and Supply Management Degree receive appropriate course advising. Over Seventy-eight percent (78.6%) of the faculty indicated students receive appropriate course advising (11/14).

Question 1f: Students enrolled in in the Bachelors in Operations and Supply Management Degree should be required to complete an internship. In regards to internships, over seventy-three percent (73.3%) percent of faculty (11/15) felt students should be required to complete an internship; over twenty-six percent (26.7%) were neutral on this issue (4/15). This indicates the majority are supporting an internship while a smaller fraction is not sure. The uncertainty could stem from the lack of local internships fitting to this degree.

Question 1g: Over sixty one percent (61.5%, 8/13) of the respondents indicated there was a sufficient number of tenured track faculty teaching in the program, while an additional 30.5% (4/13) of faculty responded neutral, and 7.7% (1/13) disagreed that there were sufficient number of tenured tracked faculty teaching within the OSM program. This disagreement could be due to a lack of knowledge of the degrees possessed by the program faculty. There is currently, a sufficient number of tenured track faculty teaching within the program to meet student program needs.

Question 1h: Students graduating with a Bachelor's in Operations and Supply Management Degree are prepared to enter the workforce. In reference to whether students are prepared to enter the workforce after completing FSU's OSM program, over sixty-four percent (64.3%, 9/14) of faculty agreed; 35.7% (5/15) were neutral; The neutral responses could be due to a lack of knowledge as to the positions available to students or the lack of positions available due to the economy.

Faculty were asked to provide qualitative comments about the "strengths of the current Bachelors in Operations and Supply Management Degree program. Five (5) qualitative comments were received. Qualitative comments ranged from constructive feedback, such as "The application based curriculum. Students learn about the principles, but also have several opportunities to apply those concepts to practice

through assignments and projects. This technique assists in preparing the students for the workplace.” Another respondent commented, “Use of guest speakers and plant visits, these help stay away from death-by-PowerPoint” to “Great faculty, the program is very current, active advisory board, All of this leads to a high value education with good job prospects.” The remainder of comments consisted of “Do not know” to “I have absolutely no knowledge of this program- not even who teaches the courses.”

The third key survey question was also an open-ended qualitative question which sought “suggestions to improve the current OSM program”. Below is a listing of suggestions:

- “An internship”
- “I do not know”
- “I have absolutely no knowledge of this program—not even who teaches the courses.”
- “Just continuous improvement initiatives”
- “Make incoming freshmen more aware of the program and its possibilities”

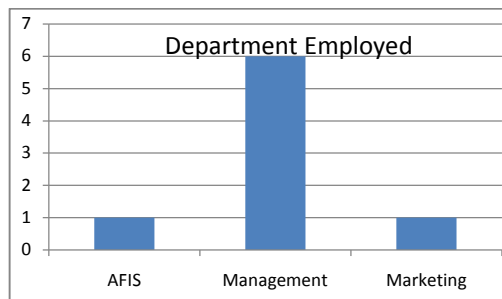
The fourth key question was also an open-ended qualitative question which sought suggestions from faculty on the “type(s) of equipment or facility needs that may be required or anticipated” to improve student program learning. Below is a listing of suggestions:

- “Update the rooms on third floor with computers and speakers that work consistently. The audio for the equipment is not reliable. This prevents instructors from sharing video clips that enhance the classroom instruction.”
- “Update the computers and projectors in classrooms”

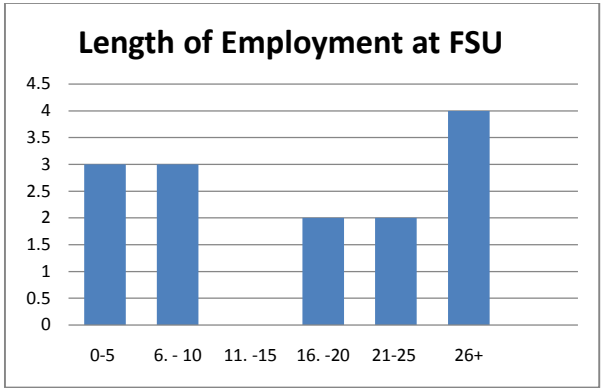
Three respondents they don’t have knowledge about the program or program needs.

The fifth and sixth questions were demographic in nature. The first demographic question asked faculty to specify the department in which they were currently employed.

The chart below shows the departmental distribution. In the chart below, only eight of the respondents indicated a department as another seven did not.



The final demographic question sought to determine faculty length of employment at FSU. The chart below shows faculty length of employment.



The final survey question provided faculty an opportunity to include any additional comments. Below is a listing of the responses:

“Keep the program. It is a good program and provides a choice for students who enter Ferris and would like to specialize. It does not require a lot of additional resources.”

“We keep doing these surveys as though they had some meaning. I do not know anything about supply chain management other than it seems to be a pretty good degree. I do not know about the curriculum. I do not know about the books they use. I could not pick a member of the supply chain faculty out of a line up and hope that I never have to. Are you getting my drift yet? I am not saying these things to make bad comments about these good people. We keep sending out these surveys about all of the majors as though just because I happen to be in the College of Business I should know about the operation of a particular program. I do not. I have been doing excessive new preps in my own department because we have been short of people in XXXX, on what basis would you expect me to be an expert in these diverse areas? These surveys are not worth much.”

F. Advisory Committee Input

An OSM Program Advisory Board meeting was held on April 13, 2012. The Advisory Board consisted of three individuals representing manufacturing, career services concerning operations and a manager of a business who actively practices operations management. Several topics were covered as some of them are highlighted in the following table. A complete overview of the minutes can be found in Appendix B.

Suggestion	Observation
Teach more on industrial drawing	This led to a discussion on the specifics of a mechanical drawing where geometric tolerances became a focus and something that should be added. Engineering classes will be consulted.
New product launches	This topic was addressed from the viewpoint of having a student understand

	the basic process involved when a new product comes to market and the elements involved up to the initial product launch.
A better focus on CRM and SRM	Both Customer Relationship Management and Supplier Relationship Management are crucial to an operations management position. It was felt a greater focus is needed in this area. New classes being developed and just developed will address this.
Students with training in ERP	Most organizations pay a higher starting wage for individuals trained in ERP programs such as SAP for example. This is something that was suggested the program look into, although the cost may be a barrier.
Internships	This has been a repeated message across the board for the last few years, The program representatives have been active in looking into as many as possible through meetings and employers they connect with.
International Business Classes	While some praise was noted for our current offering, many other suggestions came up like currency rates and cultures. This is something the program must move towards in the future.
Certificates	One certificate was discussed that was just launched and the advisory committee approved of its focus. Another covering some of the other previously mentioned topics was also discussed for the near future that existing employees weak in those areas could take from Ferris.

Section 3: Program Profile

A. Profile of Students

The Operations and Supply Management (OSM) program culminates with a Bachelor of Science degree. The OSM applicants must present evidence of graduation from high school or the GED as one of the admission criteria. Additional admission criteria includes meeting two of the following: a minimum high school grade point average of 2.50 (on a 4.00 scale); ACT math score of 19 or higher; an ACT reading score of 19 or higher.

The transfer student applicants must have a minimum GPA of 2.35 (on a 4.00 scale) from their previous college and have completed the equivalent of Ferris' MATH 115 or English 150 with a grade of C or better. Additional requirements include meeting three of the four of the following: a minimum high school grade point average of 2.50 (on a 4.00 scale); ACT math score of 19 or higher; an ACT reading score of 19 or higher and English ACT of 16 or higher. Graduation for each student requires a minimum 2.0 GPA in core classes, in the major, and overall.

Current Students

The quality of students is shown in Table 3A-1. The increasing quality of the students in the program is likely due in part to the increased admission standards in the College of Business (COB). The GPA and ACT scores of OSM majors and graduates have fluctuated during the last five years, but are on an upward trend. The deviation to the prior statement is the 2010 data. These figures can be explained by the role that the economy played with unemployed individuals returning to college as non-traditional students. These students were most likely adjusting to balancing studying, family obligations, and looking for employment opportunities.

Table 3A-1: Operations & Supply Management Students FSU GPA and ACT (Majors)

Term	Enrollment	Average Student Age	Avg. GPA	Min. GPA	Max. GPA	Avg. ACT	Min. ACT	Max. ACT
2007f	8	20	3.24	3.24	3.24	22	22	22
2008f	14	21	3.32	3.17	3.48	22	19	25
2009f	8	21	3.19	3.03	3.36	20	17	22
2010f	11	26	2.96	2.06	3.83	17.5	14	20
2011f	11	22	3.51	2.94	3.86	18.83	14	22

SOURCE: FSU Website, Institutional Research and Testing, Administrative Program Review Reports 2011

Table 3A-2 illustrates the OSM student composition. Of the 11 students enrolled in the program in the fall of 2011, ten are full time and one is part time. Currently seven are males and four are female students. The ethnic breakdown was as follows: eight white, one black and two foreign students. The increase in females and ethnicity is encouraging and reflective of the current occupation and workplace trends. The majority of students are residents of Michigan with two international students in the OSM program. In addition, all students are enrolled in classes on-campus. Some of the program's classes are available online however; all the students possessed an "on-campus" status.

Table 3A-2: Operations & Supply Management Gender and Ethnicity of Students

Term	Enrollment	Males	Females	Ethnicity					
				White	Black	Foreign	Hispanic	Native	Asian
2007f	8	8	0	6			1	1	
2008f	11	10	1	11					
2009f	8	8	0	6	1				1
2010f	11	9	2	8	1	1			1
2011f	11	7	4	8	1	2			

SOURCE: FSU Website, Institutional Research and Testing, Administrative Program Review Reports 2011

Program Graduates

Table 3A-3 represents the FSU GPA and ACT scores of students who graduated from the OSM program. The GPA and ACT figures fluctuated somewhat as was the case with the current students. The FSU GPA reports indicate that the underperforming students were dismissed or changed majors. The ACT scores indicate that some underprepared (lower scoring on ACT) students took advantage of the opportunity afforded by FSU and have obtained a B.S. Operations and Management degree.

Table 3A-3: Operations & Supply Management Graduates FSU GPA and ACT (Majors)

Term	Avg. GPA	Min. GPA	Max. GPA	Avg. ACT	Min. ACT	Max. ACT
2007-2008	2.86	2.64	3.08	21.50	20.00	23.00
2008-2009	2.90	2.54	3.40	21.50	18.00	25.00
2009-2010	3.17	3.00	3.28	20.75	19.00	22.00
2010-2011	2.54	2.54	2.54	N/A	N/A	N/A

SOURCE: FSU Website, Institutional Research and Testing, Administrative Program Review Reports 2011

N/A: Information was not available for this time period.

The Graduate Follow-Up Survey Summary that was sent to recent graduates resulted in a zero response rate. As such, we were unable to report placement rates and average salaries of recent graduates. However, we were able to obtain salary information from our alumni. Our alumni were successful finding employment – See alumni survey in Appendix D. The average salary of OSM graduates, who reported the information, was \$81,400. The minimum salary was \$60,000 and maximum was \$100,000 plus. While these salary levels were from alumni who graduated during the 1981-1992 period, these figures are in alignment with the Bureau of Labor Statistics Occupational Outlook salary figures. The information contained in the graduate/alumni survey reflected that 100% of graduates were currently employed. This fact, along with the Bureau of Labor statistics outlook for growth rates, illustrates the reality that the degree is relevant and in demand.

B. Enrollment

Enrollment in the OSM major is provided in Table 3B-1. The program has shown some growth but is below the program's goal of 15-20. The majority of students become interested in the OSM major after they have been exposed to the OSM topics in the MGMT 370 class. Additional interest has evolved through student advising sessions with faculty and classroom discussions.

Table 3B-1: Operations & Supply Management Student Enrollment (Majors)

Term	Enrollment	Freshman	Sophomore	Junior	Senior
2009f	8	1	2	1	4
2010f	11	1	3	1	6
2011f	11	2	3	3	3

SOURCE: FSU Website, Institutional Research and Testing, Administrative Program Review Reports 2011

The program obtains 2-3 additional students each year using the current "recruitment" methods. The program is under-advertised. Strategies to increase enrollment include revisiting how the program is advertised on the COB's website.

The faculty plan to first address how the program is presented on the COB website to create a more appealing program to the students. According to the 2011, E-Expectations Report, 40% of prospective students state the first link they look for on a school's website is academic programs and majors. So, linking the academic programs and highlighting them on the homepage is essential. Additionally, accenting the unique program elements (specialized courses, online courses, internships, and faculty support) can further assist in differentiating the program from others. Featuring the Career and Salary Information as part of the program information is also important. Students need to see a direct link between their education and prospective careers and salaries. Including information about how degrees line up with specific careers and the potential salaries of those careers will engage prospective students and keep them moving to and through the OSM program.

The faculty also plan on participating in the COB Dawg Days. Taking the time to meet prospective students will have a larger impact on increasing enrollment than waiting for students to visit your campus. Discussing a list of quick facts with prospective students such as the credits needed to graduate, specific course requirements, estimated costs, internship opportunities, and other pertinent information (career roles, responsibilities and salary) will be key information to share with them. It is hoped that this will lead students to make contact with the university and begin the enrollment process.

Continuing to discuss the major in OSM related courses is another method to pique student interest in the program. A visit to local high schools to market the degree is another viable option to pursue when time permits. Communicating with the COB, Allied Health, and CET faculty at various functions is another method to promote the OSM major, minor and certificate.

C. Program Capacity

There has not been a cap placed on enrollment in the OSM program. There are no accreditation requirements or state and federal regulations concerning program capacity. Historically, enrollment has ranged from 8 to 14 with four program faculty members – three of whom were added in the last five years. Three of the four faculty teach one to two classes of MGMT 370, which is directly related to the major, minor and certificate,

each semester. The remaining two to three classes, that the faculty teach, are for the general business administration program. In short, the faculty are fully utilized.

The average section sizes for OSM classes are comparable to those offered in the typical business administration classes. On average, 30-40 and 20 students per class are enrolled in the face-to-face and online sections respectively. The online sections have been very helpful for students in off-campus programs, non-traditional students and those away on internship. There are approximately six face-to-face sections and two online sections offered per semester.

D. Retention and Graduation

The OSM faculty seek to retain students in the program by building strong relationships with them. Faculty are available to students outside of office hours and throughout the year. They normally assist students with mentoring, scheduling, critiquing resumes and cover letters, and writing letters of recommendation for internships/jobs. It is through this type of support that students remain in the program and tell others about it.

According to the Institutional Research and Testing data, there has been -100% retention for the last one of three years as indicated in table 3D-1. The discrepancy of six seniors enrolled in the program in fall 2010 and the graduation rate of one can be explained by the fact that the students changed their major to OSM later. As a result, they needed additional classes to complete the degree. This is a common trend. A large percentage of students who change their major, at least once if not multiple times, before coming to the program may take five years to graduate.

As the program grows, it is expected that retention rates will change as market demand for students change. All data provided by Institutional Research and Testing pertain to the various names of the OSM program and relate to the major. No data is available regarding the minor at this point in time.

Table 3D-1: Operation and Supply Management Graduation Numbers

Graduation Rates by Academic Year	
2008-2009	4
2009-2010	4
2010-2011	1
2011-2012	2

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The OSM graduation rates are presented in Table 3D-1. The graduation decreased substantially in 2010-2011, but rebounded somewhat in 2011-12. While the graduation rate did not return to its previous 2009-2010 peak level, it increased by one in 2011-2012. Plans to increase graduation rates are directly linked to increased program exposure as indicated in the Enrollment section. Timely and valuable faculty/student contact can also assist in sustaining and/or increasing this figure.

There were two students who obtained an OSM minor and certificate between the 2007-2011 time period.

The reports, provided by Institutional Research and Testing, reflect a very small number of students pursuing a certificate. This is misleading because students often decide to add a certificate after they have already taken one or more of the four classes required for a certificate. They may, in fact, not submit the paperwork for a certificate until they have completed all of the courses or, in some cases, after graduation. The faculty will need to start tracking the students pursuing a certificate manually in the future to address this discrepancy.

The faculty are committed to increasing the enrollment and graduation rates for the program, minor and certificate. In addition to fulfilling the activities discussed in section 3B, the faculty plan to launch a peer feedback approach. This approach assists in making the personal connection with prospective students by offering them the chance to speak with current students who share their interests. These peer connections can make a prospective student feel like the institution is invested in them as an individual. Plus, a current student is more approachable and is perceived to have less bias than a professor or department head, whose job it is to sell the school. Current students are there to learn, not sell. We believe this could be helpful with advocating and promoting our program.

E. Access

All students meeting the minimum criteria for admission to the College of Business may be admitted directly into the OSM program. The OSM program strives to be accessible to the greatest number of students possible. Classes are offered on the rotation schedule every semester, including the summer, on-campus, and at several off-site locations, including Traverse City, Grand Rapids, and Flint. The MGMT 370 along with the specialized courses such as MGMT402 (Six Sigma Process Management), MGMT 412 (Lean Culture and Skills Development), and MGMT 492 (Lean Service Enterprise Leadership) are scheduled as needed to fulfill the degree requirements for the student. All these classes are offered face-to-face, mixed delivery and fully online. These course formats aide both the working traditional student, non-traditional students and those on internships with completing their required courses.

In addition to the major, the OSM Program also offers an OSM minor and OSM certificate as mentioned in the Retention and Graduation section. The Leadership and Project Management minor and Lean Systems certificate are the most recent curriculum options that have been added for students who want to supplement the OSM degree and or another major. They both support the OSM areas of study/concentration. Classes, in the minor and certificate, are offered in the summer face-to-face, mixed-delivery, and online format both on- and off-campus. The minors and certificates seem to be well-received. While the tracking of the number of students pursuing minors or certificates is problematic, program faculty are seeing an increase in students in their classes from a variety of other programs at the University, both on and off-campus.

F. Curriculum

Requirements for the major and minor with course descriptions are included in Appendix A. Sample syllabi for OSM courses can be found in Appendix L. The OSM program requirements can be summarized into three areas, general education (48 credits required to meet ACBSP guidelines), Business core (30 credits + economics and business writing), and the OSM major courses. The OSM major includes six required courses, two elective courses, and an 18 credit concentration. The students have the option to select from a suggested list of courses or obtain a minor with their advisor's permission for fulfillment of the 18 credit requirement. An internship is on the suggested list of the 18 credit concentration. Advisors highly support the internship option. In fact, they recommend at complete two as this is what employers are expecting new graduates to possess.

Input from the Advisory Committee, alumni survey and employer survey discussed in Section 2 will be reviewed and will likely result in changes to individual courses and the program. The faculty consistently evaluates course assignments, course design and delivery with respect to enhancing the learning experience for the students in the program. The program's goal is to offer the highest quality educational experience possible in each class. Guest speakers and application exercises are regularly used in the OSM classes. This assists in maintaining connections with industry and consistently applying theory to practice.

Program Revisions since last APR

There have been some revisions to the program since the last program review. Three new classes have been introduced and approved within the last year and a half.

The MGMT 492 course was approved in Spring 2011 and was incorporated as part of the OSM program at the same time. The addition of the MGMT 492 course along with the newly approved Lean Systems Certificate curriculum assists in carving out a niche for the OSM program. According to CIA World Factbook (2010), service industries represent 76 percent of the national GDP whereas, only 24 percent is represented by manufacturing. The MGMT 492 focuses on how to implement the lean principles in a service organization. The majority of other universities concentrate on implementing the lean principles in a manufacturing setting. Additionally, the employment figures for Lean professionals, in and outside of Michigan, are stable and expected to increase according to the Indeed.com website and Bureau of Labor Statistics respectively. Many organizations are looking for graduates to possess lean and leadership knowledge upon graduation. It is more economical for them to hire a graduate with the knowledge than to train them in the Lean Systems process. This opinion was voiced and unanimously supported by the advisory board member discussions in our most recent committee meeting.

The MGMT402 and MGMT 412 courses were approved during Spring 2012. The MGMT 492 course is already part of the OSM program. Plans to weave the MGMT 402 and MGMT 412 courses into the OSM program are also underway. The new courses were initially developed to support the Leadership and Project Management minor and the Lean Systems certificate, but they both compliment the OSM curriculum nicely.

The OSM faculty regularly reviews the program for relevancy with respect to workplace trends. Plans to implement several of the recent advisory committee's suggestions into the program are in progress. Partnerships and collaboration with other colleges is another way to enhance our program's effectiveness. The most recent partnership is with the College of Allied Health – Health Care Systems Administration. Discussions to offer a Lean Healthcare certificate and possibly a minor are seriously being considered. A Logistics and Distribution minor and/or certificate is also being considered to support the Bureau of Labor Statistics trend mentioned in Section 1.

G. Quality of Instruction

The results of the student survey can be found in Appendix I. The results indicate the students are satisfied with the program. Students feel the academic advising is effective. This supports the information stated in Retention and Graduation section. The faculty are knowledgeable in the subject matter they teach and are available to help students answer their questions. The students believe the OSM program is preparing them to work in the field and would recommend it to others. A summary of the SAI results for selected classes are included in Appendix M.

The majority of the alumni survey responses (Appendix E) were positive. The graduates seemed very satisfied with the program and class offerings that prepared them for their respective careers. It is interesting to note that a MGMT 350 course (Management Metrics & Decision Making) has been added to the

curriculum since this set of respondents graduated. This addresses the comment of “offering a financial drivers” type of course in the OSM program. The comments regarding a foreign language were valid. These comments were in alignment with our advisory committee members’ comments. It is important as the OSM occupations become more global. The faculty recommend a foreign language as a way to support a student’s electives during advising sessions. However, formalizing the requirement has not been integrated into the program yet. This is something that should be further explored.

The results from the Employer survey can be found in Appendix G. The employers anticipated a continued demand for the OSM major. The majority of the courses and skills highlighted as somewhat important/extremely helpful or very important/very helpful are already included in the OSM curriculum. Specifically, the statistics, business law, quantitative skills, leadership skills, analytical/decision making skills, presentation skills, MS office and software applications (Excel, Word, etc.), and cultural awareness. The one course that is believed to be important through the employer’s perspective, but is not a program requirement, is a foreign language. This is something that should be further explored as noted in the previous section.

The OSM program faculty participate in a large number of professional development activities. They participate and present at international, national and regional conferences, and publish papers in both research journal and business magazines. In addition, the faculty participate in numerous developmental activities offered through the Faculty Center for Teaching and Learning to increase their teaching effectiveness. For a complete list of faculty activities please refer to the faculty vita in Appendix C.

OSM Students have had a number of opportunities to interact with faculty, peers, and business professionals. Some examples include participation in the student chapter of the American Society of Operations Management (APICS) and National Association of Purchasing Managers (NAPM). The student groups participated in a number of activities, which ranged from attending monthly professional meetings with APICS and NAPM in Grand Rapids to participating in plant tours at such as: Ice Mountain, Mark Four, Hayworth, Yoplait, Steelcase, and Wolverine World Wide. Additionally, the student chapter participated in an annual case competition held in Chicago each winter where they competed against 18 to 22 other universities. Feedback from participating students indicated it was a great networking opportunity and a valuable learning experience.

Interaction of the students with faculty, peers, and OSM professionals increases the quality of teaching and learning in the program. It provides opportunities for students to gain experience that goes beyond the classroom. Students are also in a position to network with professionals in the field, which can be invaluable in obtaining employment or internships. Faculty development activities increase the quality of teaching and learning in the program. The faculty are current and active in the field, which helps ensure students are obtaining an education that is relevant for the current workplace.

H. Composition and Quality of Faculty

The OSM program currently has two tenured faculty and two non-tenured faculty. All of the OSM faculty have terminal degrees. The OSM program tenured faculty have received 2 promotions and/or merit awards since the 2006 academic program review. The tenure track faculty have received one promotion. The four faculty members are listed below with their rank and qualifications.

Tenured Program Faculty

Steve Lyman, Ph.D. (Professor, Operations Management) –Michigan State University, Ph.D. Production & Operations Management. Courses taught at Ferris include: Operations and Supply Management, Purchasing, and Advanced Management Cases and Problems.

David Marion, Ph.D. (Associate Professor, Operations Management) – Ph.D., University of Toledo. Manufacturing Management & Engineering. Courses taught at Ferris include: OSM and Business Ethics & Social Responsibility. Masters of Business Administration: Project Management and Operations Systems.

Non-Tenured Faculty

Carol Rewers, Ph.D. (Associate Professor, Operations Management). Ph.D., Capella University College of Business. Organization and Management. Courses taught at Ferris include: Operations and Supply Management, Human Resource Management, and Team Dynamics & Organizational Behavior and Applied Management

Lisa Eshbach, Ph.D. (Assistant Professor, Management). Ph.D., Wayne State University. Industrial Engineering and Business Administration. Courses taught at Ferris include: Lean Service Enterprise Leadership, Leadership and Supervision, Advanced Management Cases and Problems, Business Ethics & Social Responsibility, International Business, Tools for Decision Making, Team Dynamics & Organizational Behavior, and Applied Management.

The OSM faculty are characteristic of many COB faculty. They all have an extensive amount of work related and teaching experience. The applicants are expected to meet the minimum entrance requirements for a Bachelor of Science degree (B.S.) Program in Business. They have a combined 55 years of work experience and 67 years of teaching experience. In addition to teaching a normal workload of 12 credits (four three-credit classes) per semester, the faculty actively conduct research, publish papers in both research journal and business magazines, maintain certifications and memberships, with multiple regional, national and international organizations, write grants, deliver presentations, and engage in consulting. The professional activities of the program faculty can be found in Appendix C.

A Digital Measures report (COB repository of faculty vita data) for the period 2006 to present indicated the following notable reported professional activities for the four program dedicated tenure and tenure-track OSM program faculty:

- Four papers published
- Seven awards and honors (e.g. Outstanding RSO Advisor, Best Papers, etc.)
- Eight Grants received
- 23 presentations (conference proceedings and university)
- 57 memberships on university, college, or department committees
- 65 professional development activities attended
- Serve as active reviewers for regional and national case journals.
- Actively consult with community and public organizations.
- Maintain certifications and memberships with multiple regional, national and international organizations.

Non-TenureTrack and Adjunct Faculty

The OSM program employed two adjunct faculty in the past year – Donald Brecken and Frank Armstrong. Of the 25 sections of OSM program classes offered during the Fall 2011 and Spring 2012 semesters, five sections were taught by the adjunct faculty (21%).

Recruitment

Three new faculty have been added to the Management department since the last APR. The OSM program followed the approved university process for faculty recruitment. All of the positions were advertised through the Ferris Website as well as in multiple locations including the *Chronicle of Higher Education* and *Higher Ed Jobs* to attract a qualified diverse pool of candidates.

The posted OSM faculty qualifications included a terminal degree in Operations Management, Management (or closely related field) from an accredited university along with the appropriate industry experience. The program faculty made every attempt to hire the best candidate regardless of gender or race/ethnicity. A search committee was formed. The applicant pool was narrowed down through a review of the application materials. A phone interview was conducted before bringing the top finalists to campus for interviews. Candidates met with faculty, staff, administrators and students. The faculty, staff, administrators and students were asked to provide input to the search committee based on their interaction with the candidate. The search committee then voted on the candidates and made a recommendation to the administration. The department head extended the offer to the selected candidate.

Orientation

The new OSM faculty were required to participate and complete the Ferris faculty orientation week in the summer and continued with the year-long orientation program sponsored by the Faculty Center Training and Learning. Each new faculty member was also provided a tenured faculty member as a mentor. New faculty were trained as advisors and assigned advisees during their second year of employment.

Reward Structure

Recent OSM faculty position postings have included salary ranges based on national survey salary data compiled by the Knowledge Services Department of AACSB. The particular range selected varies based on program area (e.g. management), rank (e.g. assistant professor), and quartiles (e.g. 25th to 50th percentiles). Recent experience suggests that posted salary ranges have been adequate in attracting qualified diverse applicants.

The current reward structure has generally supported faculty participation in proposed professional development activities that were aligned to program and department goals. Future faculty interest in professional development activities is anticipated. Support from administration in this area is expected to continue.

I. Assessment and Evaluation

The SAI results, Advisory Board input, and alumni, employer, student, and faculty surveys also provide useful information in assessing the program's effectiveness. A summary of SAI results for selected classes are included in Appendix M. The input from the Advisory Board is detailed in the advisory board meeting minutes found in Appendix B and is discussed elsewhere in this report. The same is true for the alumni, employer, student, and faculty surveys, which are found in the Appendix E, G, I, & K respectively.

Learning outcomes at the course and program level are detailed in the TracDat Reports: Program and Course Outcomes provided in Appendix N, O, & P. The Program provides students with a strong foundation in all aspects of OSM and helps them develop marketable skills for a career in Operations Management or other Management positions. Individual courses focus on helping students

develop knowledge, skills, and abilities in various aspects of Operations Management (e.g., lean, logistics & distribution, scheduling, project management, etc.). The measurement of the learning outcomes by course is detailed in Appendix N, O, & P. Learning outcomes and assessment criteria should be entered into TracDat as soon as possible. The results need to be entered for all courses to allow for proper assessment of student learning. The courses where results data have been entered show the vast majority of students are successful in meeting all learning outcomes.

J. Service to Non-Majors

The OSM program serves every COB BS degree program that requires the BUS Core (nearly every COB program) through the MGMT 370 course. The recent BUS Core APR concluded that MGMT 370 provides a quality foundation in the operations management principles to the BUS BS programs requiring the business core.

Additionally, the MGMT 370 and MGMT 305 are taken by College of Engineering Technology, Allied Health, and Criminal Justice students to fulfill their program, minor and/or certificate requirements. The number of students involved does not have a significant impact on the program. It is expected that this level of service at a minimum will continue and could increase as the classes or activities become more well-known on campus.

K. Degree Program Cost and Productivity Data

According to the Ferris Productivity Report Fall 2006– Spring 2011 SCH/FTEF is a measure of productivity that gives the average number of student credit hours generated per fulltime equated faculty member. The report provides data at the university, college, department, and course prefix levels. Since courses in the OSM program shares the MGMT prefix, along with several other management classes, the data reported are for all courses that use the MGMT prefix. Table 3J-1 shows a comparison of the SCH/FTEF for the MGMT prefix courses, the Management department, the COB, and the university.

The table clearly exhibits that the MGMT prefix courses, of which the OSM courses are a part of, have consistently led the department, college, and university in terms of productivity since the 2006-07 academic year. The high productivity of the faculty, combined with the lack of need for special facilities/resources, indicates OSM is a very low investment program for Ferris.

Table 3J-1

SCH/FTEF Comparison from 2006-2007 through 2010-2011*					
	2006-07	2007-08	2008-09	2009-10	2010-11
Management Prefix **	749.19	764.15	682.53	627.84	665.98
Management Department**	644.6	662.8	620.4	630.8	628.4
College of Business**	576.4	591.1	580.8	581.9	569.69
University **	443.06	450.88	448.62	453.69	466.28

** : SOURCE: FSU Website, Institutional Research and Testing, Administrative Program Review Reports 2010 and FSU Productivity Report Fall 2006 – Spring 2011

L. Administration Effectiveness

The administration has been very supportive of the OSM program. They provide the necessary assistance to all faculty as individual needs arise. The program is run in an efficient manner. The OSM faculty shares the Department Secretary and Department Head with 16 other faculty who teach in three other programs (Business Administration, Human Resources Management, and Legal Studies).

All OSM faculty teach full course loads. Class and teaching schedules are prepared by putting the needs and preferences of the students first. The department head along with the secretary develop a master scheduling plan so students are able to take the courses needed to complete their degrees in a timely manner. The faculty preferences are then considered when building schedules to address the program requirements. The process works well. It is a proactive method to reduce scheduling conflicts across the curriculum.

Section 4 Evaluation of Facilities and Equipment

Review of the facilities and equipment included: Faculty Offices, COB Lab/Classroom Computers, and Flite Library.

Faculty Offices:

Each faculty member has adequate office space. In addition, a review of office computer equipment shows that all equipment has been purchased within the last four or five years and has sufficient operating capabilities for their needs (Refer to attached: *COB/IRC Faculty & Staff Computer Assignment*). All computers are connected to the University's network and have Internet access. Any software upgrade is handled through the Network Administrator. Laptops are available upon request for faculty teaching at satellite locations and/or for university related activities.

COB Labs/Classrooms and Computers:

The classrooms utilized by the department are sufficient to accommodate student class sizes. The classrooms utilized by the department are equipped with a desktop computer(s), overhead projector, DVD/VCR, and LCD projector. All hallways are equipped with video cameras to deter theft of the equipment.

All classroom computers have university network and Internet access, Microsoft Office 2007 or 2010, FrontPage, and other standard COB software. All faculty have the option/ability to request that course specific software be added to any classroom computer(s) where they will be teaching. The approval of such software additions is subject to review for compliance with College of Business software requirements, as well as, any budgetary constraints. Any problems related to either faculty or classroom computer's is reported to the Technology Assistance Center (TAC) for resolution. In some situations, (i.e., BUS 312) classrooms requiring computer or projector upgrades are being replaced at the time of classroom renovations.

In order to keep the technology current, the College of Business, in collaboration with the President's office, Academic Affairs, and Technology Services, has made a commitment to upgrade a certain number of computers and associated equipment each year. Additionally, the Management Department is pursuing the use of iPads for faculty use in the classroom. As this new equipment is purchased, the equipment being replaced is passed onto other COB faculty and/or placed in classrooms for upgrade purposes. However, in light of the recent economy and potential University wide budget cuts, computer equipment upgrades and/or implementation of new technology may temporarily be delayed within the College of Business.

Overall, there are approximately 345 computers located in various classrooms and computer labs within the College of Business (Refer to *COB Lab/Classroom Computers* attachment). The average processor speed is 11.73 GHZ. Based on this review, one recommend would be to add additional docking stations in those classrooms that lack this technology; otherwise, the facilities and equipment available to the Operations and Supply Chain Management program appear to be quite adequate for their present needs.

FLITE Library:

Students enrolled in the Operations and Supply Chain Management program have access to approximately 164 Dell and Macintosh computers within the main areas of the FLITE Library and an additional 95 within their computer lab area(s). Standard software loads include the following:

Program Name:	Version
Adobe Acrobat Reader	10
Java	1.6 Update 5
Lockdown Browser	X 1.0.3
Microsoft Access	2010
Microsoft Excel	2010
Microsoft FrontPage	2003 X
Microsoft Internet Explorer	8
Microsoft Photostory	3
Microsoft PowerPoint	2011
Microsoft Project	2010
Microsoft Publisher	2010
Microsoft Visio	2010
Microsoft Visual Studio	2010
Microsoft Word	2010
Mozilla Firefox	3.X
QuickTime	7.7
Sonic Record Now	7.3
SQL 2008 Client Tools	2008
TAP	4.5
Windows XP	SP3

Students also have access to over 100 library databases. Specific to the Operations and Supply Chain Management program would be: 1) ABI/Inform, 2) Business and Company Resource Center, 3) Lexis/Nexis Academic Universe, 4) Mergent Online, 5) RIA Checkpoint, and 6) Standard and Poor's Netadvantage.

Section 5: Conclusions

A. Relationship to FSU Mission

Ferris State University mission is to “prepare(s) students for successful careers, responsible citizenship, and lifelong learning”. The College of Business is “committed to academic excellence, ethical conduct, and a learner-centered environment characterized by quality teaching, outcomes assessment, and continuous improvement...” One of the primary goals within FSU’s COB is for students to develop business related competencies that are highly sought after by employers for the ultimate purpose of helping students to secure fulltime employment in their chosen business career. The COB assist students in developing their business related competencies by developing distinctive programs based on current business needs. As the COB mission indicates, “We will be noted for being responsive to changes in workforce needs; building/maintaining good relationships with employers; preparing our students to excel in a global environment; and providing high-quality interns and graduates who meet and exceed employer expectations...”

FSU’s College of Business - Operation and Supply Chain Management (OSM) program is an excellent fit that encompasses both the mission of Ferris State University and the College of Business by giving students an education based not only on business theories, but current skills, practices, and trends industry employers are utilizing and seeking in the workplace. The skills OSM students develop will help them to obtain an entry-level management position in Operations and/or Supply Chain Management in either the manufacturing or service industry; depending upon the student’s particular interest.

B. Program Visibility and Distinctiveness

The Operations and Supply Chain Management program offer students’ opportunities to observe, analyze, and recommend business solutions using the tools (such as project management, value stream mapping, lean principles, etc.) that have been incorporated in the OSM program. Such course offerings, combined with internships, provide students unique educational and career experiences. The goal of the OSM program is to continue to develop, expand upon, and promote outside field experiences, business networking opportunities, and employer relationships. Program faculty need to continue to build the reputation of the program, publicize the successes of former students, and market the program to interested undergraduate students.

C. Program Value

According to FSU’s COB website, FSU’s “...College of Business will be distinctive for its provision of highly regarded career-oriented business education, adding value to our students through innovative teaching and learning processes, ensuring that they are well-prepared to make immediate contributions to their employers and society upon graduation. Our graduates will be sought because their competencies are of high quality and are consistent with current and future workplace needs.” As discussed in Section 1(D) the OSM program is valuable to the University, COB, and students and is part of a well-rounded offering of business related programs that contributes, overall, to the financial health of the university. Students benefit from course projects, internships, and ultimately the opportunity to secure future employment in Operations and/or Supply Chain Management.

Reference:

FSU COB Mission and Vision Statement. Accessed via <http://www.ferris.edu/business/mission-vision-values>.

Ferris State University Mission and Vision Statement. Accessed via:
http://myfsu.ferris.edu/cp/render.UserLayoutRootNode.uP?uP_tparam=utf&utf=http%3A%2F%2Fwww.ferris.edu%2Fhtmls%2Fferrisfaq%2Fmission.htm

D. Enrollment

The enrollment in the major appears to have flattened since 2009. The program in 2011 had 11 students. This is below the program's goal of 15-20. The OSM faculty seek to retain students in the program by building strong relationships with them. They are very responsive to students' requests for assistance with mentoring, advising, scheduling, etc. It is through these relationships that the students who transfer into the program stay and tell others about it. Faculty are available to students outside of office hours and throughout the year.

The program is under-advertised. Strategies to increase enrollment include revisiting how the program is advertised on the COB's website, participating in the COB Dawg Days, discussing the major in OSM related courses to pique student interest and visiting local high schools to market and promote the major. Communicating with the COB, Allied Health, and CET faculty at various functions is another method to promote the OSM major, minor and certificate.

E. Characteristics, Quality and Employability of Students

The quality of students discussed in section 3A reflects an overall gradual improvement trend. The increasing quality of the students in the program is likely due in part to the increased admission standards in the College of Business (COB). The GPA and ACT scores of OSM majors and graduates have fluctuated, but are progressing in a positive direction. Additional time will be needed to see if a consistent improvement trend continues.

There was no data that provided placement rates as we did not receive responses from our Graduate Follow up Survey. However, our alumni are 100% employed. [We should be collecting our own data. In as much as we are the beneficiary, we should take the initiative and secure input from our alumni, since we have indicated that we are in contact with them.] This is an indicator that the degree is very desired and relevant in today's workplace. [How about having our alumni recruit in the local high schools?] [or better, community colleges] There were some alumni that possessed jobs within Michigan. However, it should also be noted that most of the alumni from the program have obtained positions out-of- state with a higher rate of compensation. The faculty need share this information with the students to prepare them accordingly. They also need- to encourage all students to pursue multiple internships ensuring that our graduates are more appealing to employers.

F. Quality of Curriculum and Instruction

The OSM curriculum is similar to competitors' program as discussed in Section 3(F). However, the recently added three Lean related courses will assist in making the program unique with respect to other universities. The following is a list of recommended OSM program changes and additions based on input obtained from the advisory board, alumni survey, employer survey, and the Bureau of Labor Statistics. The current OSM program is relatively flexible. It could accommodate the following potential changes resulting in a more focused, relevant and marketable degree:

- Addition of one to two Foreign Language courses (3-6 credits)
- Addition of a Logistics and Distribution course (3 credits)

- Addition of a Customer Relationship Management and Supplier Relationship Management course (3 credits)
- Mandating the Internship as a required course – currently it is an option of several that students can choose.

The following list includes some reductions that ensure the program does not exceed 121 credits:

- Data Base Development (3 credits)
- Electives (6 credits)

Recent discussions of developing and offering the certificate/minor are being seriously considered with the College of Health Profession's Health Care Systems Administration program. The faculty believes that creating partnerships and collaborating with other colleges is an effective method to enhance our program's visibility and enrollment.

G. Composition and Quality of the Faculty

The OSM program currently has two tenured faculty and two non-tenured faculty. Three of the four have been hired since the last APR to support the OSM and Business Administration program. All of the OSM faculty have received terminal degrees. The OSM faculty are unique in that they all have an extensive amount of work related and teaching experience. The faculty have a combined 55 years of work experience and 67 years of teaching experience. In addition to teaching a normal workload of 12 credits (four three-credit classes) per semester, the faculty actively engage in research, publish papers in both research journal and Business magazines, maintain certifications and memberships, with multiple regional, national and international organizations, conduct research, write grants, deliver presentations, and engage in consulting. See Appendix C for more information.

H. Input from the Department Chair, David Steenstra

The Operations and Supply Management program is a viable program within the management discipline. The program has not grown in recent years. It is likely, students are not aware of the significance of this area of management, nor do they truly understand what operations really means. There are only 11 students enrolled in the major. Yet, this program responds to some of the most contemporary and emerging issues in business. Students are immersed in principles and procedures within the wide scope of supply chain management. A major goal of this program is to advance a broad understanding of lean management principles. Demand for graduates with these skills is growing. This should have an impact on the popularity of this program with students.

An additional consideration for this program is the service option to non-majors. Supply and Operations Management is an excellent minor or certificate and compliments any number of other degree programs within the college, as well as other colleges within the university.

One of the most significant strengths of this program is the quality of instruction. In recent years, two additional faculty with outstanding experience and respected credentials have joined the operations team. These two, coupled with two other senior faculty, create an incredible, dynamic team. The MGMT 370 Operations course is a major component of the business core. All college of business students take this class, and are served extremely well by this highly competent team.

With effective marketing, networking, and student awareness, the future for this discipline is very bright.

I. Input from the Dean, David Nicol

The Operations and Supply Chain Management program offers knowledge and skill development highly consistent with the expressed needs of industry. To do so, we are fortunate to have well qualified faculty associated with the program who bring both relevant academic training and industry experience. That said, we are confronted with two substantial challenges if we are to continue to offer the degree: (1) convincing prospective students of the desirability of such a degree; and, (2) conveying the distinctiveness and value of our offering (versus similar programs). The panel has suggested some activities toward this end. The additional challenge is identifying and substantiating programmatic distinctiveness and value, for, if we are unable to do so, our enrollment will continue to be limited and sporadic. In this instance, it might better exist as a Business Administration concentration.

As noted, in addition to supporting the program, the faculty are responsible for providing an Operations course as part of the business core curriculum that all business students must complete. They also offer courses that many, both inside and outside of the college, take as electives. Hence, though the program itself has had limited enrollment, the faculty are fully utilized, and then some.

It appears to me that we must redouble our efforts to link with the workplace and our alumni. The survey participation would suggest we are lacking in this regard, in part, due to dependence on others. I agree with the panel's assessment that faculty need to establish their own ongoing linkages, which can provide meaningful insight for program improvement, additional resources for curricular activities, and assistance in student recruiting.

I agree with the suggestion that internships be required (not simply 'recommended'). Not only is it consistent with our claim of offering a practical, career-oriented education, but, increasingly, we place our students at a competitive disadvantage by not doing so (since a minority act on our 'recommendation'). Internships are now a standard component of a business education – Business Week's annual ranking of undergraduate business schools includes internship participation as one of its nine rating criteria; for their Top 25, the reported internship participation rate ranges from 85-97%.

Appendices

Appendix A – Checksheets & Course Descriptions: Major, Minor, and Certificate

Ferris State University-College of Business Bachelor of Science Degree in Business

Operations & Supply Management – 121/122 Credits

Name: _____

ID #: _____

Required		Course Title – Prerequisites Shown in Brackets ()	S.H.	Grade	Gr. Pts.
Communication Competence – 12 Credits Required					
Choose One:		COMM 105 Interpersonal Communication (None) OR COMM 121 Fundamentals of Public Speaking (None)	3		
ENGL	150	English I (ENGL 074 w/ grade of C- or better ,or a minimum score of 14 on ACT or a minimum score of 370 on SAT)	3		
ENGL	250	English 2 (ENGL 150 with a grade of C- or better)	3		
Choose One:		ENGL 311 Advanced Technical Writing OR ENGL 325 Advanced Writing for Business (ENGL211/250 w/ C or better for both)	3		
Scientific Understanding – 7- 8 Credits Required					
Consult the Ferris website: www.ferris.edu/htmls/academics/gened/scicourses.html Select two courses from the scientific understanding subject area (one must be a lab course).					
		Scientific Understanding with Lab	4		
		Scientific Understanding	3-4		
Quantitative Skills – 3 Credits Required					
Choose One:		MATH 115 Intermediate Algebra OR MATH 116 Intermediate Algebra & Num Trig (MATH 110 with a grade of C- or better, or 19 on ACT or 460 on SAT for both) If MATH ACT score is 24 or higher, substitute a general education elective.	3-4		
Cultural Enrichment – 9 Credits Required *					
Cultural Enrichment electives, consult the General Education category of the Ferris website: www.ferris.edu/htmls/academics/gened/gened.html					
		Cultural Enrichment	3		
		Cultural Enrichment	3		
		Cultural Enrichment (200 Level or above)	3		
Social Awareness – 9 Credits Required *					
Social Awareness elective, consult the General Education category of the Ferris website: www.ferris.edu/htmls/academics/gened/soccourses.html					
ECON	221	Principles of Macroeconomics (MATH 110 with a grade of C- or better or ACT of 19 or SAT of 460)	3		
ECON	222	Principles of Microeconomics (ECON 221)	3		
		Social Awareness Elective	3		
College of Business Additional General Education Electives – 9 Credits Required *					
General Education electives, consult the Ferris website: www.ferris.edu/htmls/academics/gened/gened.html					
			3		
			3		
			3		
Students who return to the university after an interrupted enrollment (not including summer semester) must normally meet the requirements of the curriculum which are in effect at the time of their return, not the requirements which were in effect when they were originally admitted.					

* Global Consciousness and Race/Ethnicity or Gender requirements may be accomplished from any category in one or more courses.

Ferris State University – College of Business
Operations & Supply Management Major

Required		Course Title-Prerequisites Shown in Brackets ()	SH	Grade	Gr. Pts.
Operations & Supply Management Major – 36 Credits Required					
INTB	320	International Logistics (None)	3		
MFGE	354	Lean Manufacturing: Concepts and Practices (Junior status) OR	3		
MGMT	492	Lean Service Enterprise Leadership (MGMT 305 or instructor permission)			
MGMT	350	Mgmt Metrics & Decision Making (None)	3		
MGMT	430	Inventory and Supply Management (MGMT 370)	3		
MGMT	491	Management Internship (Completion of 60 semester hours and department approval)	3		
MKTG	466	Purchasing (MKTG 321 or instructor approval)	3		
Select 6 Classes - 18 Credits					
From the List Below or a Minor From Another Program					
ISYS	200	Database Design & Implementation (ISYS 105 or Demonstrated Competency in ISYS 105)	3		
MFGE	322	Production Processes (None)	3		
MFGE	351	Introduction to Industrial Engineering (None)	3		
MGMT	302	Team Dynamics & Organizational Behavior (Sophomore status)	3		
MGMT	305	Supervision & Leadership (Sophomore status)			
MGMT	373	Human Resource Management (Sophomore status)	3		
MGMT	375	Negotiations (Junior status)			
MGMT	491	Management Internship (Completion of 60 semester hours and department approval)	3		
MKTG	472	Supply Chain Management (MKTG 321 & MGMT 370)	3		
STQM	311	Continuous Improvement Tools and Techniques (Sophomore status or instructor approval)	3		
STQM	351	Quality Control for Management (STQM 260)	3		
Business Core – 30 Credits Required					
ACCT	201	Principles of Accounting 1 (MATH 110 with a grade of C- or better, or 19 on ACT or 460 on SAT)	3		
ACCT	202	Principles of Accounting 2 (ACCT 201 with a grade of C- or better)	3		
BLAW	321	Contracts and Sales (None)	3		
BUSN	499	Interdisciplinary Integrating Experience (FINC 322, MGMT370, MKTG 321 and senior status)	3		
FINC	322	Financial Management 1 (ACCT 202, Math 115 or MATH 116 or MATH117 or MATH ACT 24)	3		
ISYS	321	Business Information Systems (ACCT 202 & MKTG 321 & MGMT 301)	3		
MGMT	301	Applied Management (None)	3		
MGMT	370	Quality/Operations Management (Sophomore Standing)	3		
MKTG	321	Principles of Marketing (Sophomore status or higher)	3		
STQM	260	Introduction to Statistics (MATH 115 or MATH 116 w/ C- or better or 24 on ACT or 560 on SAT)	3		
Additional – 6 Credits Required					
		Free Elective	3		
		Free Elective	3		

NOTE: A 2.00 cumulative GPA is required for the major, business core and a 2.00 cumulative GPA is required for the completion of the Operations & Supply Management degree.

**Ferris State University – College of Business
MANAGEMENT DEPARTMENT**

OPERATIONS and SUPPLY MANAGEMENT MINOR – 18 Credits

REQUIRED	COURSE TITLE – PREREQUISITES SHOWN IN BRACKETS ()		S.H.	GRADE
18 Credits Required				
MFGE	351	Introduction to Industrial Engineering (None)	3	
MFGE MGMT	354 492	Lean Manufacturing: Concepts and Practices (Jr. status) OR Lean Service Enterprise Leadership (MGMT 305 or instructor permission)		
MGMT	370	Quality/Operations Management (Sophomore standing or instructor permit)	3	
MKTG	466	Purchasing (MKTG 321 or instructor approval)	3	
MKTG	472	Supply Chain Management (MKTG 321)	3	
STQM	351	Quality Control for Management (STQM 260)	3	
PROCEDURES				

- In consultation with Professor Lyman, Bus 351, Professor Marion, IRC 212R or Professor Rewers, Bus 341, the student will complete an Operations & Supply Management Minor checksheet, indicating the courses he/she plans to complete. Signatures of the student and Operations advisor are required.
- The completed Operations & Supply Management Minor checksheet will be forwarded to the Management Department Head for approval. The approved checksheet will then be forwarded to Student Records in the College of Business.
- Grades of the completed courses for the Operations & Supply Management Minor will be posted on the student's checksheet.
- A term prior to completion of the Operations & Supply Minor program, the student will make an appointment with the Graduation Secretary in the College of Business, BUS 200. Upon verification that the student has completed the bachelor's degree requirements, the Dean's Office will then notify the Registrar who will note the completion of the Operations & Supply Management Minor on the student's official transcript.

NOTE: No more than 50% of the credits in this minor may be transferred from another institution, nor, will this minor be granted if more than 6 of the certificate credits are specifically required in the students' major.

NOTICE REGARDING WITHDRAWAL, RE-ADMISSION AND INTERRUPTION OF STUDIES

Students who return to the university after an interrupted enrollment(not including summer semester) Must normally meet the requirements of the curriculum which are in effect at the time of their Return, not the requirements which were in effect when they were originally admitted.

NOTE: A 2.00 GPA is required for completion of the Operations & Supply Management Minor.

Declaration Form on Reverse Side

Effective: 2012 Spring

**FERRIS STATE UNIVERSITY
ACADEMIC MINOR DECLARATION FORM**

Name: _____ Student Number: _____

College: _____ Major: _____

Requirements for minor in: **Operations & Supply** Effective Semester: _____

A minimum of 18 semester hours of credit in the minor are required, with an overall 2.0 grade point average for the courses in the minor. The following courses are required for certification of the minor.

Required Courses	Date Completed	Required Courses	Date Completed
MFGE 351		MKTG 466	
MFGE 354 or MGMT 492		MKTG 472	
MGMT 370		STQM 351	

Scheduling for the major takes the precedent over scheduling for courses in the minor. The University 'does' not guarantee that courses required for the minor will be offered each semester. Certification that the student has met the requirements of the academic minor will not be entered in the academic record until the student has been certified for a bachelor's degree.

PROCEDURE

1. A declaration by a student to pursue an academic minor requires the student, in consultation with the minor advisor in the department offering the minor, to complete the top portion and declaration signature section of this form.
2. This completed form will be submitted by the student to the department head for approval. Upon approval, the form will be forwarded to the dean's office of the college offering the minor. One copy of the form will be sent to the student's dean's office, another to the Registrar's Office, and a final copy provided to the student.

Declaration Of Minor	Student	Date
	Minor Advisor	Date
	Department Head	Date

Clearance Of Minor	Minor Advisor	Date
	Department Head	Date
	Dean (College Offering Minor)	Date

**Ferris State University – College of Business
MANAGEMENT DEPARTMENT**

LEADERSHIP AND PROJECT MANAGEMENT MINOR – 18 Credits

REQUIRED	COURSE TITLE – PREREQUISITES SHOWN IN BRACKETS ()	S.H.	GRADE
MGMT	305	Supervision & Leadership (Second semester sophomore)	3
MGMT	350	Mgmt Metrics & Decision Making (None)	3
MGMT	492	Lean Service Enterprise Leadership (MGMT 305 or instructor permission)	3
PROJ	320	Project Management Fundamentals (Sophomore standing)	3
PROJ	350	Project Schedule, Cost and Risk Management (PROJ 320)	3
PROJ	420	Managing the Procurement Process and Preparing for Certification (PROJ 320, PROJ 350)	3

1. In consultation with Professor Eshbach, IRC212M, the student will complete a Leadership and Project Management Minor checksheet, indicating the courses he/she plans to complete. Signatures of the student and advisor are required.
2. The completed Leadership and Project Management Minor checksheet will be forwarded to the Management Department Head for approval. The approved checksheet will then be forwarded to Student Records in the College of Business.
3. Grades of the completed courses for the Leadership and Project Management Minor will be posted on the student's checksheet.
4. A term prior to completion of the Leadership and Project Management Minor program, the student will make an appointment with the Graduation Secretary in the College of Business, BUS 200. Upon verification that the student has completed the bachelor's degree requirements, the Dean's Office will then notify the Registrar who will note the completion of the Leadership and Project Management Minor on the student's official transcript.

NOTE: No more than 50% of the credits in this minor may be transferred from another institution, nor, will this minor be granted if more than 6 of the certificate credits are specifically required in the students' major.

NOTICE REGARDING WITHDRAWAL, RE-ADMISSION AND INTERRUPTION OF STUDIES

Students who return to the university after an interrupted enrollment (not including summer semester), must normally meet the requirements of the curriculum which are in effect at the time of their return, not the requirements which were in effect when they were originally admitted.

NOTE: A 2.00 GPA is required for completion of the Project Leadership Minor.

Declaration Form on Reverse Side

Effective: 201108

**FERRIS STATE UNIVERSITY
ACADEMIC MINOR DECLARATION FORM**

Name: _____ Student Number: _____
 College: _____ Major: _____
 Requirements for: **Leadership & Project Mgmt** Effective Semester: _____

A minimum of 18 semester hours of credit in the minor are required, with an overall 2.0 grade point average for the courses in the minor. The following courses are required for certification of the minor.

Required Courses	Date Completed	Required Courses	Date Completed
MGMT 305		PROJ 350	
MGMT 350		PROJ 420	
MGMT 492			
PROJ 320			

Scheduling for the major takes the precedent over scheduling for courses in the minor. The University 'does' not guarantee that courses required for the minor will be offered each semester. Certification that the student has met the requirements of the academic minor will not be entered in the academic record until the student has been certified for a bachelor's degree.

PROCEDURE

- A declaration by a student to pursue an academic minor requires the student, in consultation with the minor advisor in the department offering the minor, to complete the top portion and declaration signature section of this form
- This completed form will be submitted by the student to the department head for approval. Upon approval, the form will be forwarded to the dean's office of the college offering the minor. One copy of the form will be sent to the student's dean's office, another to the Registrar's Office, and a final copy provided to the student

Declaration Of Minor	Student	Date
	Minor Advisor	Date
	Department Head	Date

Clearance Of Minor	Minor Advisor	Date
	Department Head	Date
	Dean (College Offering Minor)	Date

**Ferris State University – College of Business
MANAGEMENT DEPARTMENT
LEAN SYSTEMS CERTIFICATE – 12 Credits**

Name: _____ ID#: _____

REQUIRED	COURSE TITLE – PREREQUISITES SHOWN IN BRACKETS ()	S.H.	GRADE
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Required Classes - 9 Credits			
MGMT	402	Six Sigma Process Management (MGMT 492 or MFGE 354)	3
MGMT	412	Lean Culture and Skills Development (MGMT 492 or MFGE 354 or instructor approval)	3
MGMT MFGE	492 354	Lean Service Enterprise Leadership (MGMT 305 or instructor permission) <u>OR</u> Lean Manufacturing (Junior status)	3
Select One Class From the List Below - 3 Credits Required			
MGMT	305	Supervision and Leadership (None)	3
MGMT	370	Quality-Operations Management (Sophomore standing or instructor permit)	3
MGMT	491	Management Internship (Completion of 60 semester hours and department approval)	3
MKTG	472	Supply Chain Management (MGMT 370 & MKTG 321)	3
STQM	351	Quality Control for Management (STQM 260 w/ a C- or better)	3
Total Credits			12

1. In consultation with Professor Eshbach, IRC212M, or Professor Marion, IRC 212R, the student will complete a Lean Systems Certificate checksheet, indicating the courses he/she plans to complete. Signatures of the student and advisor are required.
2. The completed Lean Systems Certificate checksheet will be forwarded to the Management Department Head for approval. The approved checksheet will then be forwarded to Student Records in the College of Business.
3. Grades of the completed courses for the Lean Systems Certificate Minor will be posted on the student's checksheet.
4. A term prior to completion of the Lean Systems Certificate program, the student will make an appointment with the Graduation Secretary in the College of Business, BUS 200. Upon verification that the student has completed the bachelor's degree requirements, the Dean's Office will then notify the Registrar who will note the completion of the Lean Systems Certificate on the student's official transcript.

NOTE: No more than 50% of the credits in this minor may be transferred from another institution, nor, will this minor be granted if more than 6 of the certificate credits are specifically required in the students' major.

For more information, please contact the Management Department (231) 591-2427.

[Notice Regarding Withdrawal, Re-admission and Interruption of Studies](#)

Students who return to the university after an interrupted enrollment (not including summer semester) must normally meet the requirements of the certificate which are in effect at the time of their return, not the requirements which were in effect when they were originally admitted.

NOTE: a 2.00 cumulative GPA is required for completion of the Lean Systems Certificate.

Student: _____ Date: _____

Supervision Advisor: _____ Date: _____

Management Dept. Head: _____ Date: _____
(To receive this certificate, you must complete a certificate clearance in the College of Business-Room 200)

Effective 201208

**Ferris State University
College of Business
Management Department**

MANUFACTURING OPERATIONS MANAGEMENT CERTIFICATE 12 Credits

Name: _____ ID#: _____

Required	Course Title Prerequisites Shown in Brackets ()	S.H.	Grade	Gr. Pts.
MFGE 354	Lean Manufacturing (Junior status)	3		
MGMT 370	Quality/Operations Management (Sophomore standing or instructor permit)	3		
MKTG 466	Purchasing (MKTG 321 or permission of professor)	3		
Select One From the Following:				
MFGE 322	Production Processes (None)	3		
MFGE 351	Introduction to Industrial Engineering (None)	3		
MGMT 305	Supervision and Leadership (Second semester sophomore)	3		
Total Credits – 12 Credits				

- Note: 1. This Certificate may be completed at the main campus or at our off-campus sites.
2. No more than 50% of the credits in this certificate may be transferred from another institution, nor, will this certificate be granted if more than 50% of the certificate credits are required in the program.

For more information, please contact the Management Department (231) 591-2427.

Notice Regarding Withdrawal, Re-admission and Interruption of Studies
Students who return to the university after an interrupted enrollment (not including summer semester) must normally meet the requirements of the certificate which are in effect at the time of their return, not the requirements which were in effect when they were originally admitted.

NOTE: a 2.00 cumulative GPA is required for completion of the Manufacturing Operations Management Certificate.

Student: _____ *Date:* _____

Supervision Advisor: _____ *Date:* _____

Management Dept. Head: _____ *Date:* _____

(To receive this certificate, you must complete a certificate clearance in the College of Business-Room 200)

Effective: 201001

**Ferris State University – College of Business
MANAGEMENT DEPARTMENT
LEADERSHIP & SUPERVISION CERTIFICATE – 12 Credits**

Name: _____ ID#: _____ Major: _____

REQUIRED	COURSE TITLE – PREREQUISITES SHOWN IN BRACKETS ()	S.H.	GRADE
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Required Courses - 6 Credits			
MGMT	305	Supervision & Leadership (Second semester sophomore)	3
MGMT	492	Lean Service Enterprise Leadership (MGMT 305 or instructor permission)	3
Select Two Classes From the List Below - 6 Credits			
MGMT	301	Applied Management (None)	3
MGMT	302	Team Dynamics & Organizational Behavior (Sophomore standing)	3
MGMT	370	Quality-Operations Management (Sophomore standing or instructor permit)	3
MGMT	373	Human Resource Management (Sophomore standing)	3
MGMT	375	Negotiations (Junior status)	3
MGMT	474	Cases Strategy – Workforce Trend (MGMT 373)	3
MGMT	491	Management Internship (Completion of 60 semester hours and department approval)	3
Total Credits			12

- Note: 1. This Certificate may be completed at the main campus or at our off-campus sites.
2. No more than 50% of the credits in this certificate may be transferred from another institution, nor, will this certificate be granted if more than 50% of the certificate credits are required in the program.

For more information, please contact Dr. Lisa Eshbach at (231) 591-3197.

[Notice Regarding Withdrawal, Re-admission and Interruption of Studies](#)

Students who return to the university after an interrupted enrollment (not including summer semester) must normally meet the requirements of the certificate which are in effect at the time of their return, not the requirements which were in effect when they were originally admitted.

NOTE: A 2.00 cumulative GPA is required for completion of the Leadership & Supervision Certificate.

Student: _____ **Date:** _____

Supervision Advisor: _____ **Date:** _____

Management Dept. Head _____ **Date:** _____

To receive this certificate, you must complete a certificate clearance in the College of Business-Room 200 Effective Spring 2012

Operations/Supply Mgmt Course Descriptions

INTB-320 International Logistics

Covers the basic subjects needed by a manager to understand methods and entry into foreign markets, international contracts, terms of trade, terms of payments, managing transaction risk, international commercial documents, international insurance, international ocean freight, international air freight, international land and multi-modal transportation, packaging for export, custom clearance, and international logistic infrastructure. Prerequisites: Junior Standing

MFGE-354 Lean Manufacturing

This course is designed to familiarize the manufacturing student with the concepts and practices of lean manufacturing as currently applied in industry, and develop in them rudimentary skill in applying those principles, with the overall goal of enabling them to reduce waste in the workplace. Topics include push vs. pull systems, kanban, continuous flow production, takt time, SMED, TPM, TQM, TOC, 5S, poka yoke, and kaizen. Plant tours (if available) will help illustrate applications of concepts. Pre-Requisites: Junior Status.

MGMT-492

This course concentrates on how to design, continuously improve, and lead a lean service business process initiative. Specific areas of concentration include Systems Planning and Thinking (seeing the whole business as a value stream), Human relations skills (leadership, strategy development and deployment, change management, and team problem solving) and Lean Principles (kaizen, PDCA, 5S, pull, leveling process stability, standardized work, root-caused problem resolution and A3 Reporting). Prerequisites: [MGMT 305](#) or instructor permission.

MGMT-350 Mgmt Metrics & Decision Making

Covers the basic subjects needed by a manager to understand financial statements, the budgeting process, cash flow management, working capital, forecasting, monitoring and controlling capital and expense budgets, pricing strategy, cost analysis, pro forma development, avenues of corporate finance, risk analysis/management, project and corporate level valuations and international finance.

MGMT-430 Inventory – Supply Management

The theories and strategies associated with Inventory Management as it relates to the supply chain will be analyzed. Initiatives, like Lean Operations(Just-In-Time) and Quick Response, will be studied to examine their impact on inventory. Students will evaluate the inventory management practices and trade-offs associated with the strategic and tactical issues associated with capacity, labor, shelf life, quality, lead times, forecasting accuracy, and supply chain members as it relates to internal and external environmental conditions. Prerequisites: [MGMT 370](#) with a grade of D- or better or Instructor approval.

MGMT-491 Internship

Work experience with cooperating employer organizations in business, industry, government, and education. The work experience is designed to be relevant to the students' academic pursuits, personal development, and professional Pre-Requisites: Completion of 60 semester hours and department approval.

MKTG-466 Purchasing

Purchasing functions and procedures; organization and operation of the purchasing department, selecting and managing sources of supply, control of quality, inventory, delivery, legal aspects of purchasing, contracts, international procurement, understanding the role of the buyer within the firm. Pre-Requisites: [MKTG 321](#) or Instructor approval.

ISYS-200 Database Design-Implementation

Introduces database concepts, design methodologies, and implementation procedures. Stresses the importance of sound database design to insure data integrity and flexibility. Common data structures, normalization techniques, integrity constraints, security features, query and report facilities are discussed. One or more popular commercial database

management systems will be used to implement the designs. Pre-Requisites: [ISYS 105](#) or Demonstrated Competency in [ISYS 105](#).

MFGE-322 Production Processes

A survey course covering production machining, metal casting, powder metallurgy, bulk deformation, pressworking, and non-traditional machining.

MFGE-351 Introduction to Industrial Engineering

Basic principles and techniques for work design and evaluation, and the fundamentals of developing manufacturing cost in industry. A brief history of motion and time study, work methods design, work measurement techniques, and basic cost estimating techniques used to arrive at manufacturing cost for piece parts and assemblies.

MGMT-302 Team Dynamics – Organizational Behavior

Explores the fundamental processes and skills essential for the success of individual and group/team behavior in contemporary organizational settings. [MGMT 302](#) emphasizes the importance of team formation and decision making, effective conflict management, and the impact of diverse individual personality and cultural backgrounds on team and organizational success. Pre-Requisites: Sophomore Standing.

MGMT-305 Supervision & Leadership

Provides an opportunity to review and understand the characteristics and qualities required for effective leadership in contemporary organizations; complements traditional teaching methods with role playing, case studies, and exercises. Pre-Requisites: Second Semester Sophomore Status.

MGMT-373 Human Resource Management

Covers the objectives, functions, and organization of personnel programs; discusses such topics as selection training and development, job analysis, wage and salary administration, performance appraisal, disciplinary systems, employee safety and health, and the collective bargaining process. Pre-Requisites: Sophomore Standing.

MGMT-375 Negotiations

This course focuses on the behavioral aspect of human resources, specifically negotiations. The course covers the broad spectrum of negotiations from common negotiations that occur in everyday life (e.g. buying/selling a car, negotiation a job offer, etc.) to specific labor-management negotiations. In addition to studying the subject from a theoretical and empirical standpoint, students will participate in a variety of in-class role-plays and simulations, and complete a personal negotiation project outside of class. Pre-Requisites: Junior standing.

MGMT-491 Internship

Work experience with cooperating employer organizations in business, industry, government, and education. The work experience is designed to be relevant to the students' academic pursuits, personal development, and professional Pre-Requisites: Completion of 60 semester hours and department approval.

MKTG-472 Supply Chain Management

Introduction to logistics management as a process of value added activities that synchronize supply and demand. Extensive review and analysis of transportation and physical distribution issues including channel management. Additional topics include warehousing operations, packaging and regulatory laws. Pre-Requisites: [MKTG 321](#) and [MGMT 370](#).

STQM-311 Continuous Improvement Tools-Techniques

Basic statistical tools necessary for successful implementation of a Total Quality Management (TQM) system. Topics include: continuous improvement; process improvement tools; group and team tools; and other topics distinctive to TQM, including: organizational mission and vision statements, HOSHIN planning, quality function deployment, P-D-C-A cycle, and benchmarking. Also, practical applications in team settings on real problems in manufacturing, health engineering, and education. Pre-Requisites: Sophomore status or Instructor approval.

STQM-351 Quality Control for Management

An introduction to modern quality control techniques, with emphasis on Juran, Deming, and Japanese enhancements. In-depth coverage of quality costs, basic statistical tools, control charts and process capability, with use of quality control software. Pre-Requisites: [STQM 260](#) with a C- or better.

Business Core Course Descriptions

ACCT-201 Principles of Accounting 1

Introduction to accounting principles with an external reporting emphasis on the preparation and use of financial statements. Includes recording and adjusting accounts, the accounting cycle, accounting for merchandising operations, internal control and cash, receivables, inventories, assets, liabilities, corporate organization, stock transactions, dividends, and retained earnings and investments. Prerequisites: MATH 110 with a grade of C- or better.

ACCT-202 Principles of Accounting 2

Continuation of ACCT 201. Introduction to management decisions in reliance on systems that provide historical and projected data to guide present and future operations. Includes managerial accounting, job-order costing, process costing, cost behavior, cost-volume-profit relationship, variable costing, activity based costing, profit planning, standard costing, flexible budgets, segment reporting, profitability analysis and decentralization, capital budgeting, service department costing, statements of cash flows and financial statement analysis. Prerequisites: ACCT 201 with a grade of C- or better.

BLAW-321 Contracts & Sales

Provides an introduction to the law and the legal system in the U.S. as well as a thorough examination of the law of contracts and sales. (Includes a review of articles 2 and 6 of the Uniform Commercial Codes.)

BUSN-499 Integrating Experience

Introduces the basics of business strategy and policy and moves to use of a computer simulation with students functioning in multidisciplinary teams. The teams have the challenge of developing and executing a strategy that involves production operations, procurement, distribution and marketing, pricing, research and development, employment levels and compensation, financing the operations, and other aspects of a business competing in a global environment. Pre-Requisites: [FINC 322](#) or [MGMT 350](#) and [MGMT 370](#) and [MKTG 321](#), and senior status.

FINC-322 Financial Management 1

The environment, goals, and techniques of financial management; emphasizes both investment and financing decisions; incorporates control techniques including ratio analysis, budgeting, and forecasting; includes time value of money, bond and stock values, the use of operating and financial leverage, capital budgeting techniques, cost of capital, and basic information concerning international financial management. Prerequisites: ACCT 202 and MATH 115 or MATH 116 or MATH 117 or MATH ACT of 24.

ISYS-321 Business Information System

Introduction to strategic information systems functions. Provides an integrating experience that enables a student to demonstrate the capacity to synthesize and apply knowledge from an organizational perspective. Included are the uses of information technology to grow, expand, and efficiently and profitably manage an organization. Of particular focus are the interrelationships between information systems. An interdisciplinary team project(s) is required. Pre-Requisites: [ACCT 202](#) & [MKTG 321](#) & [MGMT 301](#).

MGMT-301 Applied Management

A description and analysis of business activities designed to manage an organization to efficiently serve employees, customers, and the community. Topics studied include planning, organizing, leading, and controlling; the business environment, business institutions, government regulations, organizational structure, human resources, human behavior, and current practices. Designed to meet the needs of graduates and employers in the global economy. Prerequisites: Sophomore Standing

MGMT-370 Quality-Operations Management

The philosophy of continuous quality improvement, basic process improvement tools, basic management and planning tools, teaming, and models for improvement. Maximizing customer service and satisfaction, optimizing inventory investment, and maximizing operations efficiency. Principles of operations management; dependent and independent demand, forecasting; work measurement; work standards. Practical application of these techniques (in team settings) on a variety of business-related problems will enhance the ability to carry out the operations aspect of a business. Pre-Requisites: Sophomore Standing or Instructor Permit.

MKTG-321 Principles of Marketing

Introduction to the basic functions of marketing. Included as topics of study are: consumer behavior, marketing research, marketing planning, physical distribution, selling, promotion, retailing, pricing, wholesaling, purchasing, international marketing, and e-commerce. Prerequisite: Sophomore status or higher.

STQM-260 Introduction to Statistics

Practical aspects of sampling, data presentation, measures of central tendency and dispersion, basic probability theory, the normal probability distribution, the sampling distribution of sample means and sample proportions, confidence intervals and hypothesis tests for one-sample designs, simple linear regression and correlation. Pre-Requisites: MATH 115, 116, 120, 126, 130, 132, or 135 with a grade of C- or better or 24 on ACT or 560 on SAT.

Appendix B – Advisory Board Meeting Minutes

Operations & Supply Management Advisory Committee Meeting

April 13, 2012

Members Present: Michelle Herron, Lisa Eshbach, Bart Hogarth, Ron Kopp, Steve Lyman, David Marion, Carol Rewers, David Steenstra & Greg Zimmerman.

Members were informed that the survey results were not available for them to review yet for this program. Members were mailed course descriptions and checksheets for the major, minor and certificate prior to the meeting.

Ron started with suggesting to add something that teaches reading industrial engineering drawings. He feels many people need to learn this area. Steve added that some students don't think it is necessary. He would like a greater variety of blueprints to teach with. Ron also believes there needs to be etiquette on blue print drawings, no sloppy stuff which leads to products not meeting specifications.

Bart asked about reading and interpreting OGET?

Steve thinks it is a shortcoming with students; blueprint review isn't well received in the purchasing class he teaches. The marketing students haven't been taught blue print reading. Steve introduces them to housing blueprints and metal forming, not electrical; he wondered how far he should go since the specifics vary greatly.

Faculty wondered about adding it to the new MGMT 402 class David just developed, Six Sigma Process Management. Greg thought it would be good to add it to the class.

Ron thinks blueprints are very important because when you send one to a company they send it back to you and you have a contract.

David Marion will talk to Jim Rumpf to see what is covered in the manufacturing classes our students take from the College of Engineering Technology.

Ron thinks that new product launches are the hardest things for people to learn. He thinks a course in this could be great. It should be all the way from what the company wants to the end product. How to do them successfully is something everyone struggles with – the details, the whole thing. He thinks an undergrad class in project management could do this.

Bart feels that there are four important pieces in product launches. If two of them change there is a problem.

Bart and Ron both told David if he lays out something, how a class might flow they would look at it for him and give input.

CRM – Customer Relationship Management what does it do? It was felt that as the economy gets better this will help. Students will also need data mining. We do have a class in place that teaches this.

David asked Ron in the relationship with CRM how much do the students need to know. He felt we need to tie in SRM – Supplier Relationship Management. David asked if they just need to know it is correct by looking at it. Ron sees CRM growing in the future years. Lisa let them know that some of this is covered in the lean class she teaches and parts are in MGMT 370.

Lisa asked Ron what subjects in CRM do we need that will benefit the students. Why you do it is important. If it is done right you can get forecasting from your customers.

Steve feels that the students don't get the MRE stuff; they have a short coming when it comes to understanding numbers. He wants to get them into the long term concept.

David got SAP to come free but the cost came up for the students. A student that knew ERP is worth more money right off the bat.

Steve thinks every area is different in an MRP system.

Steve proposed a MGMT 371 which would have been operations for the service area, it was shot down but maybe he should try again.

Ron feels they need to be good on lean – down to the scheduling; students will use it in ERP and or lean, sometimes both. They need to understand how ERT works and the different areas that are incorporated in it. Materials management would also be good for them to learn. At his last company they didn't even know this stuff. Steve would like a tool that they will understand to give them hands on. Something that looks like an SRP, track an order through the process, let students see this.

It was wondered if some of the classes teach launching plants and products. Do students understand the upfront planning, do we understand design motives, how do you predict what could happen, what could cause this product to fail and how will it affect the customer. Lisa will research this; she thinks that manufacturing covers it so why create another course.

Steve explained that our students don't have the math skills or requirements that the COET students do. They need STQM 260 prior to taking the manufacturing classes or they struggle. MFGE 351 is very hard for our students.

Bart asked if promotion cards are available for the students. The only problem is this program doesn't look at waste. It is value added and how do student eliminate and combine? Are these parts of the engineering class?

Lisa will also check to see if we have a course that will cover these items. It could tie in with David's new MGMT 402 class.

Ron thinks we have a solid program; he pretended he was a student asking if it was a good fit. Getting a job and an interview isn't easy, there are ways to answer questions – research the companies. Carol mentioned that she has someone from Career Services come into her class and they do interviewing and emphasize the items students need to know. Be proactive, add value to their resume. Carol also makes the students do on-line interviewing and resume writing. There could be a seminar to do this for our students

Michelle feels that she could work with Career Services and help out our students. Interviewing is a make or break thing. Carol tried everything she can to teach them. Michelle even has parents call when their kids don't get a job. She believes students need to focus on employers.

Bart mentioned that his daughter had problems until she got experience.

Internships are tough, parents pay to get their students one but students have to prepare themselves. But, internships land jobs. Bart also asked how we do internships and it was explained to him.

Steve told them about trying to get students to look for internships. It is a struggle but it is more valuable than any other course.

Greg asked about our internships – they identify learning outcomes, the boss and department heads approve them and the employer buys in. Internships are strongly encouraged. Students just don't understand the jobs; there are 180 unfilled jobs in plastics.

Michelle wants to get students out to manufacturing places.

Students have a problem with team problem solving in the MGMT 492 class, it hits hard.

Ron is really pleased with international purchasing. He looked at harmonizing the tariff codes to clear customs so they can declare duty on it. Landed costs should also be included if it isn't now. It is believed that the above topics should be covered in the INTB 320. If they aren't covered by this course they should teach them landed cost.

Bart worked in Japan and he knew places selling parts to us. If they can get registered, they can produce items locally cheaper. Sometimes you deal with one company to design a project and deal with another model with the same design but they end up with different product designs.

Also, do we cover exchange rates in INTB 320? Exchange rates are huge, multinational opportunities, material cost, raw material and flex rate should all be covered.

Steve has to teach purchasing from a sales perspective. Previous instructors taught it this way. Why do we need to know commodity prices, how it relates to the product? Every time he teaches something he modifies it to the class make up. He does lean or other things – adjusts to the students.

Greg mentioned that there are blurred lines in business, not straight ones everyone would identify.

CEO's need to be involved with lean, health care is right for lean so is education.

Bart believes some of the hot buttons are waste analysis and to understand pockets of lean or inventory. What real metrics are, he came from Ford, and in Japan they didn't do this. They need to know transformation and also overtime. What was his whip – five things, teaching of lean and value stream mapping, is this inventory stable for three months, if not make changes. This is hard in service and hospitals. Students need to understand this. Look at the visualization of production flow - does it flow at the right place. Both ends should be very interactive. Don't put it in the computer, they need to know now. It is difficult to teach.

Carol added that this is why they all push internships.

Bart added that he went to Florida to college and the dean at the time asked him what he did for summer and he suggested he work in a factory to get a feel for the job. GM University also makes students take a semester of course and work for a term, back and forth that way. Bart figured out some examples students can understand. He uses the same movie Steve shows, but overseas people didn't understand it.

Bart asked about just in time – he doesn't use it because it never came down to the end of the line. Michelle thinks we need to teach them just in time to get the lean so they change their mind set. MGMT 492 & 412 talks about leadership and 412 covers people systems.

Lisa tried to go from mass to lean. We need to ask employees to put in and change to lean initiative.

Bart added that with lean you get what you measure. While launching a plant he broke it down so people on the floor can understand and that way there were no more than five screw ups a day. Sort things out, what do you want this person to do. There are a lot of parallel things you do whether a system or service. How do you measure deliverables?

David Steenstra thanked the members for attending the meeting and that their input was wonderful.

Steve asked about the minors and certificates. We're always looking to make things better. They are looking to change the minor again, other changes are coming down.

Members were asked how we should teach product development and project management.

Lisa asked about doing a lean service minor – she wonders if the certificate is enough or if they need a minor. She thinks it is beneficial.

Greg would like to see a minor, but it would only be attractive to people here, maybe he would have both available.

Michelle thinks the certificate is better for her people. Ron agreed with her.

Steve thought maybe two certificates, one with a service related concentration.

Lisa and Steve both encourage students to do two certificates instead of a minor. Gives them more options.

Meeting adjourned at 2:45 pm.

Appendix C – Faculty Vita: Digital Measure Format

Dr. Lisa Eshbach

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Education

- Ph D, Wayne State University, 2004.
Major: Industrial Engineering and Business Administration
Supporting Areas of Emphasis: Lean Manufacturing
Dissertation Title: APPLICATION OF LEAN MANUFACTURING IN A PROJECT MANAGEMENT ENVIRONMENT
- MS, Wayne State University, 2002.
Major: Industrial Engineering
- MS, Central Michigan University, 1997.
Major: International Administration
Supporting Areas of Emphasis: International Business
Dissertation Title: Application of Business Process Reengineering
- Associates of Applied Sciences, Michigan Technological University, 1993.
Major: Electrical Engineering
- BS, Michigan Technological University, 1992.
Major: Business Administration
Supporting Areas of Emphasis: Industrial Engineering

Professional Positions

Academic - Post-Secondary

- Assistant Professor, Ferris State University. (August 15, 2009 - Present).
- Adjunct Faculty, Baker College. (May 1, 1998 - May 1, 2010).
- Adjunct Faculty, Lawrence Technological University. (September 1, 2004 - April 30, 2010).
- Senior Lecturer, Wayne State University. (August 26, 2005 - May 5, 2009).

Professional

- Senior Manufacturing Engineer, Visteon Corporation. (September 1, 2001 - July 15, 2006).
- Senior Manufacturing Engineer, Visteon Corporation. (September 1, 1998 - September 1, 2001).
- Project Manager, Ford Motor Company. (August 1, 1996 - September 1, 1998).
- Materials Planning and Logistics Analyst, Ford Motor Company. (June 1, 1993 - August 1, 1996).

Licensures and Certifications

- Quality Matters Certificate, Faculty Center Training and Learning. (March 2012 - Present).

Professional Memberships

- North America Case Research Association. (May 2009 - Present).
- Lean Enterprise Institute. (August 2001 - Present).
- Academy of Management. (August 2007 - August 2009).
- Production Operations Management Society. (August 2007 - August 2008).
- Society of Manufacturing Engineers. (May 2003 - May 2005).

Development Activities Attended

- Workshop, "Quality Matters," Faculty Center for Training and Learning. (July 2011 - September 2011).
- Workshop, "Blackboard Learn 9.1," Faculty Center for Training and Learning. (July 25, 2011 - July 27, 2011).
- Workshop, "3R's Rubrics + Readability = Retention," Faculty Center for Training and Learning. (February 2011 - May 2011).
- Workshop, "Copyright, Fair Use and the Creative Commons," Faculty Center for Training and Learning. (May 11, 2010).
- Workshop, "Level 1 -4 Online Certification Training: Let's Get It Together," Faculty Center for Training and Learning. (October 2009 - April 2010).
- Faculty Orientation, "Faculty Orientation," Faculty Center of Training and Learning. (August 17, 2009 - April 21, 2010).
- Workshop, "Rubrics Rock! Training," Faculty Center for Training and Learning. (October 6, 2009 - November 24, 2009).
- Workshop, "Grant and Research Education Series," Faculty Center for Training and Learning. (October 6, 2009 - November 10, 2009).

RESEARCH

Presentations Given

- Eshbach, L. (Presenter & Author), Grand Valley State University, L. N. (Presenter & Author), North America Case Research Association (NACRA), "Project Management at Tiger Metalbenders Inc.," North America Case Research Association (NACRA), Boston, MA. (October 25, 2012).
- Eshbach, L., N. L., North America Case Research Association (NACRA), "Ferris Valley Foods: Corporate Governance and Responsibility," NACRA, San Antonio, TX. (October 13, 2011).
- Eshbach, L., North America Case Research Association (NACRA), "City of Grand Rapids: Lean Times Require Lean Measures," NACRA, Gatlinburg, TN. (October 29, 2010).
- Eshbach, L., North America Case Research Association (NACRA), "Application of Lean Principles at the Grand Rapids Public Library," NACRA, Santa Cruz, CA. (October 29, 2009).

Contracts, Grants and Sponsored Research

Grant

Eshbach, Lisa, "Applying Municipal Lean in the City of Grand Rapids," Sponsored by International Business Machines (IBM), Private, \$20,000.00.

Eshbach, Lisa (Principal), "TIMME Grant," Sponsored by TIMME- Academic Affairs, Ferris State University, \$750.00. (April 2010 - December 2010).

Eshbach, Lisa, "NSF CCLI Phase 2 grant (award number 0618669) – June 2008," Sponsored by National Science Foundation, Federal, \$5,000.00. (April 2009 - July 2009).

Awards and Honors

Outstanding Case in Corporate Governance - Honorable Mention, North American Case Research Association. (October 22, 2011).

Best Case Award in Production/Operations/Supply Chain Management Track, North America Case Research Association. (October 29, 2009).

Research in Progress

"City of Grand Rapids: Lean Times Require Lean Measures" (Writing Results)

The longitudinal case study evaluates the Grand Rapids city government's implementation of municipal lean. The case also outlines the quantitative benefits (resource and time savings) realized by the execution of this lean project. The setting of priority goals and the performance measurement in achieving those goals are analyzed. The performance improvement tools used in evaluating the program's impact are fully defined and examined

"Implementing Lean Administration in the Grand Rapids Public Library System" (Writing Results)

The case examines the application of lean principles used by a large municipal public library system to achieve process and cost efficiencies. These tools (i.e. value stream mapping, kanban, standardized work processes, visual factory, poke yoke and 5-Why problem solving tools) were successfully used to achieve cost and process based improvements within the organization.

SERVICE

Department Service

Co-Editor, Management Newsletter. (March 2010 - Present).

Committee Member, Operations and Supply Management (OSM) Program Review. (December 1, 2011 - August 13, 2012).

College Service

Presenter, DECA. (January 2011).

Presenter, DECA. (January 2010).

University Service

Committee Member, Annual Program Review Committee. (August 2010 - Present).

Faculty Mentor, Blackboard Learn 9.1 Implementation Team. (September 1, 2011 - August 20, 2012).

Committee Member, HealthCare Systems Administration Faculty Search Committee. (March 2012 - June 2012).

Guest Speaker, Laboratory Management Course. (December 7, 2011).

Guest Speaker, HCSA 474 - Health Care Strategic Applications. (March 2011).

Judge for Student Posters, Michigan Energy Conference. (April 2010).

Professional Service

Session Chair, Midwest Decision Science Institute, Grand Rapids, MI. (April 12, 2012 - April 14, 2012).

Reviewer, Conference Paper, North American Case Research Association (NACRA). (July 2011 - August 2011).

Reviewer, Conference Paper, North America Case Research Association (NACRA). (June 2010 - July 2010).

Public Service

Guest Speaker, Grand Valley State University - MGT 661. (June 2011).

Steve B. Lyman
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Education

Ph D, Michigan State University, 1993.
Major: Production & Operations Management

MS, Michigan State University, 1985.
Major: Packaging

BS, Michigan State University, 1979.
Major: Engineering

Professional Positions

Academic - Post-Secondary

Full Professor, Ferris State University, Management Department. (May 2002 - Present).

Assistant Professor, Eastern Michigan University, Interdisciplinary Technology Department: Industrial Distribution Program. (August 2000 - April 2002).

Assistant Professor, Middle Tennessee State University, Marketing Department, MBA program.. (January 1993 - August 1994).

Graduate Assistant & Instructor, Michigan State University. (May 1988 - December 1992).

Professional

Purchasing & Materials Manager, TRW Commercial Steering Division. (January 1998 - August 2000).

Buyer and Supplier Development Engineer, TRW Commercial Steering Division. (August 1994 - January 1998).

Material Handling Engineer, General Motors Corporation. (March 1982 - July 1988).

Assistant Plant Manager & Materials Controller, Chivas Products Limited. (March 1979 - March 1982).

Licensures and Certifications

Certified Purchasing Manager, NAPM/ISM. (1999 - Present).

Certified Production and Inventory Manager, APICS. (1998 - Present).

Certified Quality Auditor, ASQ. (1996 - Present).

Lead Auditor, ISO 9000. (1996 - Present).

Professional Memberships

American Production and Inventory Control Society.

American Society of Quality.

Decision Sciences Institute.

National Association of Purchasing Management.

Society for Case Research.

Michigan Ski Industry Association. (June 2009 - Present).

Midwest Ski Area Association. (May 2009 - Present).

Development Activities Attended

Workshop, "Ferrisconnect Learn 9.1," FSU FCLT. (October 21, 2011).

Workshop, "Presentation Zen," FSU FCLT. (September 15, 2011 - October 13, 2011).

Conference Attendance, "Lilly North," FSU & CMU. (September 22, 2011 - September 25, 2011).

Conference Attendance, "MSAA (Midwest Ski Area Association)," Devils Head Resort. (August 7, 2011 - August 10, 2011).

Conference Attendance, "Lilly North," FSU & CMU. (September 17, 2010 - September 19, 2010).

Workshop, "MSIA (Michigan Ski Industry Association)," Shanty Creek Resort. (August 10, 2010).

Conference Attendance, "MSAA (Midwest Ski Area Association)," Shanty Creek Resort. (August 8, 2010 - August 10, 2010).

Conference Attendance, "MSAA (Midwest Ski Area Association)," Devils Head Resort. (August 2, 2009 - August 5, 2009).

Workshop, "MSIA (Michigan Ski Industry Association)," Apple Mountain Resort. (June 16, 2009).

Seminar, "Six Sigma," Steelcase. (September 2008 - November 2008).

Conference Attendance, "Lilly North," FSU & CMU. (September 17, 2008 - September 20, 2008).

Conference Attendance, "4th Annual Midwest Supply Chain Management Conference," Steelcase University. (March 26, 2008).

Workshop, "Ferrisconnect block 10," FSU FCLT. (November 26, 2007 - December 16, 2007).

Workshop, "Innovative used of Technology in the Classroom," FSU FCTL. (September 19, 2007 - November 20, 2007).

Seminar, "Bargaining with Vendors and Suppliers." (November 13, 2007).

Workshop, "Ferrisconnect Training (Bus 499)," FSU FCTL. (October 16, 2007 - November 12, 2007).

Conference Attendance, "Lilly North," CMU & FSU. (October 1, 2007 - October 4, 2007).

Conference Attendance, "4th Annual Midwest Supply Chain Management Conference," Steelcase University. (March 21, 2007).

Seminar, "WebCT Vista," FSU. (2006).

Workshop, "Faculty Self-Serve Banner In-Service Training," College of Business, FSU. (2006).

Seminar, "The Key to Successful Online Instruction Universal Design," FSU FCTL. (December 6, 2006).

Workshop, "Delivering Video and Audio with Flash," FSU FCTL. (December 6, 2006).

Workshop, "Podcasting with Windows Movie maker," FSU FCTL. (November 11, 2006).

Workshop, "Self Serve Banner Training," FSU COB. (November 1, 2006).

Workshop, "Respondus 3.5," FSU FLCT. (September 27, 2006).

Conference Attendance, "2006 National WebCT Conference." (July 15, 2006 - July 18, 2006).

Seminar, "WebCT Vista Migration Training," FSU. (June 21, 2006 - June 26, 2006).

Conference Attendance, "3rd Annual Midwest Supply Chain Management Conference," Steelcase University. (March 22, 2006).

Seminar, "Academic Advising Training," FSU. (2005).

Seminar, "Governmental and Educational Institution Application of Reverse Auctions," FSU Purchasing Group - Online Webcast. (2005).

Seminar, "Inventory Methods and Cycle Counting." (September 13, 2005).

Workshop, "WebctDesigning Courses for Mixed Delivery," FSU. (August 2, 2005).

Seminar, "WebCT Design & Development for Online Teaching," FSU. (June 19, 2005 - June 23, 2005).

Conference Attendance, "2nd Annual Midwest Supply Chain Management Conference," Steelcase. (March 23, 2005).

Seminar, "Six Sigma," Ice Mountain Plant. (December 2004).

Conference Attendance, "APICS Chapter - Professional Development Meetings," APICS. (2003 - 2004).

Workshop, "Value Stream Mapping Training." (September 28, 2004 - September 29, 2004).

Conference Attendance, "Lilly North." (September 22, 2004 - September 24, 2004).

Conference Attendance, "1st Annual Midwest Supply Chain Management Conference," Steelcase. (April 28, 2004).

Workshop, "Student Advising-Tools and Approaches," Ferris State University. (March 20, 2003).

Workshop, "New Faculty Training seminars," CTLFD. (2002).

Seminar, "WebCT Training," FSU. (July 2002 - August 2002).

Awards and Honors

Outstanding RSO Campus Advisor, American Production and Inventory Control Society (APICS). (2007).

Outstanding RSO Campus Advisor, American Production and Inventory Control Society (APICS). (2003).

RESEARCH

Published Intellectual Contributions

Refereed Journal Articles

Lyman, S. B. (2002). How the Distributor Fits into Lean. *Performance Improvement Quarterly*, 12(8), 20.

Lyman, S. B., Dajalos, R. (2001). Slaying the Stockout Monster. *Performance Improvement Quarterly*, 11(7), 12.

Journal Articles

Lyman, S. B. (2003). Supplier Classification Systems. *Inside Supply Management*, 14(7), 10-11.

Jackson, D. R., Lyman, S. B., Taylor, D. K. (2002). Making SMI a Cost-Effective Initiative. *Inside Supply Management*.

Jackson, D. R., Lyman, S. B., Taylor, D. K. (2002). SMI for the Little Guy. *Inside Supply Management*.

Lyman, S. B., Dajalos, R. (2001). The Stockout Monster. *Performance Improvement Quarterly*, 11(6), 25.

Other

Lyman, S. B., Rewers, C. L. (2006). *ISO 9000 and Supplier Ethics*. MBAA Conference.

Presentations Given

Lyman, S. B. (Presenter & Author), BHAA, Business and Health Administration Association, "Restoring Consumer Confidence in the Global Supply Chain," MBAA, Chicago, IL. (March 2008).

Lyman, S. B. (Presenter & Author), Rewers, C. L. (Presenter & Author), BHAA, Business and Health Administration Association, "Moral and Ethical Considerations Associated with Safeguarding the Public's Interest in Medical error Cases," MBAA, Chicago, IL. (March 2006).

Rewers, C. L. (Presenter & Author), Lyman, S. B. (Presenter & Author), MBAA 2006 Conference, "ISO 9000 and Supplier Ethics," MBAA, Chicago, IL. (March 2006).

Tymes, Jr., N., Hettiarachchy, J., Bolling, C. J., Cooper, M. C., Lyman, S. B., Lilly Conference North, "Capstone Model: Learning Community for Continuous Improvement," Traverse City, MI. (September 2004).

Lyman, S. B., Taylor, D. (Author Only), Jackson, D. (Author Only), Society of Case Research Annual Workshop, "VMI at Airmaster," SCR, Rockhurst University, Kansas, MO. (July 2004).

Lyman, S. B. (Presenter & Author), Hatch, M. (Presenter & Author), 32th Annual Decision Sciences Institute Meeting, "Moving Beyond Flow Charting to Value Stream Mapping," Decision Sciences Institute, San Francisco, CA. (November 2002).

Lyman, S. B., NAPM/APICS Saginaw Chapters meeting, "The Theory and Reality of Supplier Development," NAPM/APICS, Saginaw, MI. (November 2002).

Lyman, S. B. (Presenter & Author), Hatch, M. (Presenter & Author), 31th Annual Western Decision Sciences Institute Meeting, "Learning to Use Simulation in a Manufacturing Plant: A Case Study," Western Decision Sciences Institute, Las Vegas, NV. (April 2002).

- Lyman, S. B. (Presenter & Author), Hatch, M. (Presenter & Author), 31th Western Annual Decision Sciences Institute Meeting, "Value Stream Mapping: A Technique for Process Mapping," Western Decision Sciences Institute, Las Vegas, NV. (April 2002).
- Lyman, S. B. (Presenter & Author), Hatch, M. (Presenter & Author), Yee, S., 26th Annual Midwest Decision Sciences Institute Meeting, "Using Simulation to Model Library Operations: A Case Study," Midwest Decision Sciences Institute, Dearborn, MI. (April 2001).
- Lyman, S. B. (Presenter & Author), Hatch, M. (Presenter & Author), 25th Annual Midwest Decision Sciences Institute Meeting, "Changing a Company's Environmental Conditions to Support Lean Manufacturing: A Case Study," Midwest Decision Sciences Institute, Chicago, IL. (April 2000).
- Lyman, S. B. (Presenter & Author), Council of Logistics Management, "Plastic Returnable/Reusable Containers in the Automotive Industry: A Case Study," Big Rapids, MI. (October 1998).
- Lyman, S. B. (Presenter & Author), Tan, K. (Presenter & Author), 39th Mountain Plains Management Conference, "The Analysis of Stochastic Tool Life Distributions on Dispatching Procedures," Grand Junction, CO. (1997).
- Lyman, S. B. (Presenter & Author), Kannan, V. (Presenter & Author), Decision Sciences Institute, "A Comparison of Scheduling Heuristics in a Dual Resource Constraint Job Shop with Stochastic Tool Life," Wilmington, North Carolina. (February 1995).
- Lyman, S. B. (Presenter & Author), Decision Sciences Institute, "An Analysis of a Dual Resource Constraint Job Shop with a Stochastic Tool Life Constraint," Honolulu, Hawaii. (November 1994).
- Lyman, S. B. (Presenter & Author), Melnyk, S. (Presenter & Author), American Production and Inventory Control Society, "Tool Management and Control: Developing an Integrated Top Down Control Process," American Production and Inventory Control Society, San Antonio, TX. (October 1993).
- Lyman, S. B. (Presenter & Author), Melnyk, S. (Presenter & Author), Decision Sciences Institute, "An Analysis of Finite Tool Life and Scheduling Heuristics in a Dual Resource Constraint Job Shop," Decision Sciences Institute, Lansing, MI. (April 1993).
- Lyman, S. B. (Presenter & Author), Decision Sciences Institute, "A Comparison of Family and Job Based Priority Schemes in Group Scheduling," Decision Sciences Institute, San Francisco, CA. (November 1992).
- Lyman, S. B. (Presenter & Author), Kannan, V. (Presenter & Author), Decision Sciences Institute, "An Analysis of the Effects of Lot Splitting in Group Scheduling," Decision Sciences Institute, Kansas City, MO. (November 1992).
- Lyman, S. B. (Presenter & Author), Melnyk, S., Decision Sciences Institute, "Analysis of Varying Labor Efficiency and Capability in a Dual-Constrained Job Shop: A Simulation Experiment," Decision Sciences Institute, Indianapolis, IN. (May 1991).
- Lyman, S. B., Council of Logistic Management Conference, "Plastic Returnable/Reuseable Containers in the Automotive Industry: A Case Study," Council of Logistic Management, Boston, MA. (October 1988).

Awards and Honors

- Best Conference paper, MBAA (Midwest Business Association). (March 24, 2008).
- Nominated BY BHAA as best overall theme paper, MBAA (Midwest Business Association). (March 2006).

SERVICE

Department Service

- Committee Member, Management Department Tenure Review Sub-Committee. (2010 - 2013).
- Committee Member, Academic Program Review - Operations and Supply Management Program. (2011 - 2012).
- Committee Member, CPC Comment Professional Component. (September 2009 - May 2012).
- Committee Chair, Management Department Tenure Review Sub-Committee. (2007 - 2010).
- Committee Member, Management Department Tenure Review Sub-Committee. (2007 - 2009).
- Faculty Advisor, Operations and Supply Management Program. (2002 - 2009).
- Faculty Search Committee. (January 2009 - April 2009).
- Committee Member, Management Department Tenure Review Sub-Committee. (2007 - 2008).
- Committee Chair, Academic Program Review - Operations and Supply Management Program. (2006 - 2007).
- Committee Member, MBA Search Committee. (2006 - 2007).
- Committee Member, Operations Management Search Committee. (2006 - 2007).
- Committee Member, Strategic Management Search Committee. (2006 - 2007).
- Organizer/Chair, Operations Management Advisory Board Meeting. (2005 - 2006).
- Organizer/Chair, Operations Management Advisory Board Meeting. (2004 - 2005).
- Co-chair, Faculty Search Committee. (December 2004 - April 2005).
- Team leader, Capstone Simulation. (2004).

College Service

- Committee Member, College of Business College Curriculum Committee. (2007 - 2008).
- Faculty Advisor, FSU APICS - Registered Student Organization. (2007 - 2008).
- Faculty Advisor, FSU APICS - Registered Student Organization. (2006 - 2007).
- Attendee, Meeting, APICS Professional Development Meetings. (2005 - 2006).
- Attendee, Meeting, NAPM. (2005 - 2006).
- Attendee, Meeting, NAPM. (2005 - 2006).
- OSM Internships. (2005 - 2006).
- Attendee, Meeting, Region 14 Meetings in Chicago. (2005 - 2006).
- APICS Tours. (2003 - 2006).

Faculty Mentor, College of Business PBO (Prof. Business Organizations). (2005).

Attendee, Meeting, APICS Professional Development Meetings. (2004 - 2005).

Attendee, Meeting, NAPM. (2004 - 2005).

Attendee, Meeting, NAPM. (2004 - 2005).

Attendee, Meeting, Region 14 Meetings in Chicago. (2004 - 2005).

Committee Member, College of Business Recruiting and Retention Team. (2003 - 2005).

Attendee, Meeting, College of Business Dawg Days. (February 2005).

Faculty Mentor, College of Business PBO (Prof. Business Organizations). (2004).

Attendee, Meeting, APICS Professional Development Meetings. (2003 - 2004).

Faculty Advisor, FSU APICS - Registered Student Organization. (2002 - 2003).

Faculty Mentor, College of Business PBO (Prof. Business Organizations). (September 10, 2003).

Attendee, Meeting, College of Business Dawg Days. (April 19, 2003).

University Service

Committee Member, WebCT Committee. (2006 - 2007).

Committee Member, Judicial Services. (2003 - 2007).

Chairperson, Search Committee - Off Campus Faculty. (2005 - 2006).

Chairperson, Judicial Services Review Board. (January 2005).

Professional Service

Member, Midwest Ski Area Association, MI. (August 2009 - Present).

Member, Institute of Supply Management (ISM), Grand Rapids, MI. (September 2004 - Present).

Member, Society for Case Research. (September 2003 - Present).

Director, American Production and Inventory Control Society, Grand Rapids, MI. (September 2003 - 2010).

Reviewer, Conference Paper, Decision Sciences Institute. (2007).

Reviewer, Ad Hoc Reviewer, Society for Case Research. (2007).

Director, American Production and Inventory Control Society, Grand Rapids, MI. (September 2006 - May 2007).

Public Service

Training, Bohning Archery. (2007).

Auditing of quality systems, Wolverine World Wide, Big Rapids and Rockford, MI. (2007).

Training, Tubelinte, Inc.. (2003).

Consulting

For Profit Organization, Caberfae Peaks Ski & Golf Resort. (August 2011 - December 2011).

For Profit Organization, Bohning Archery. (2007).

For Profit Organization, Tubelite, Inc., Reed City, MI, US. (2003).

Awards and Honors

Service, Professional

Ten year Service Award, American Association of Operations Management (APICS). (December 2007).

Dr. David Marion Ph.D.

Ferris State University
MGMT
(231) 591-3164
Email: mariond@ferris.edu

Education

- Ph D, University of Toledo, 2006.
Major: Manufacturing Management with Engineering
Dissertation Title: The Antecedents and Consequences of a Strategic Orientation Leading to Innovation, Organizational Structure and Competitive Advantage
- MMM, University of Toledo, 2004.
Major: Manufacturing Management with Engineering
- BME, University of Toledo, 2001.
Major: Mechanical Engineering

Professional Positions

Professional

- Maintenance Supervisor, General Motors Corporation. (May 2000 - August 2001).
- Accessories Engineer (contract), Mazda Corporation. (March 1999 - January 2001).
- Design Engineer (contract), Plastics Technologies. (March 1996 - January 1999).
- Project Manager, Modern Tools, Inc.. (August 1993 - February 1996).

Licensures and Certifications

- Project Management Professional, PMI. (December 2007 - December 2012).

Professional Memberships

- Academy of Management.
- APICS.
- Decision Sciences.
- WMPMI. (December 2007 - Present).
- Member, Southern Management Association. (June 2009 - June 2010).

Development Activities Attended

- Conference Attendance, "Meetings," Project Management Institute. (January 2010 - December 2010).
- Conference Attendance, "ACBSP Conference for accreditation," ACBSP. (June 24, 2010 - June 29, 2010).
- Continuing Education Program, "Leadership Class," Michigan State University. (May 6, 2010 - May 7, 2010).

Conference Attendance, "Midwest Decision Sciences," Decision Sciences, University of Toledo. (April 22, 2010 - April 24, 2010).

Conference Attendance, "Meetings," Project Management Institute. (January 2009 - December 2009).

Regular Meetings, "APICS," APICS. (January 2009 - December 2009).

Workshop, "Michigan Quality Council," Baldrige. (September 23, 2009).

Conference Attendance, "ACBSP Conference for accreditation," ACBSP. (June 25, 2009 - June 29, 2009).

Continuing Education Program, "Innovation," Orion Group/Michigan State University. (May 27, 2009 - May 28, 2009).

Continuing Education Program, "Process Mapping," Orion Group/Michigan State University. (April 28, 2009 - April 29, 2009).

Conference Attendance, "NC State Undergraduate Assessment Symposium," NC State. (April 23, 2009 - April 26, 2009).

Conference Attendance, "Midwest Decision Sciences," Decision Sciences, Miami University. (April 15, 2009 - April 18, 2009).

Workshop, "Michigan Quality Council," Baldrige. (March 11, 2009 - March 12, 2009).

Conference Attendance, "Meetings," Project Management Institute. (January 2008 - December 2008).

Ongoing Meetings, "APICS," APICS. (January 2008 - December 2008).

Seminar, "Green Belt Training," SteelCase University. (September 29, 2008 - November 17, 2008).

Conference Attendance, "Lilly Conference," International Teaching and Learning Institute. (September 19, 2008 - September 21, 2008).

Conference Attendance, "NC State Undergraduate Assessment Symposium," NC State. (April 25, 2008 - April 28, 2008).

Conference Attendance, "Midwest Decision Sciences," Decision Sciences, Penn State Eire. (April 16, 2008 - April 19, 2008).

Workshop, "Class Trip to Burke Porter Machinery," Burke Porter Machinery/Skytron. (April 11, 2008).

Workshop, "Class Trip to Skytron," Ferris/Skytron. (March 28, 2008).

Conference Attendance, "Supply Chain Management," APICS/SteelCase University. (March 19, 2008).

Continuing Education Program, "Michigan Quality Council," Baldrige. (March 10, 2008 - March 12, 2008).

Workshop, "Class Trip to Johnson Controls," Ferris/Johnson Controls. (March 6, 2008).

Workshop, "Class Trip to Inwin Seating," Ferris/Inwin Seating. (February 28, 2008).

Conference Attendance, "APICS Student Case Competition," APICS. (February 15, 2008 - February 16, 2008).

Workshop, "Class Trip to Gentex," Ferris/Gentex. (February 8, 2008).

Conference Attendance, "Meetings," APICS. (2007).

Conference Attendance, "Meetings," Project Management Institute. (2007).

Seminar, "Professional Development Day for Project Management Institute." (2007).

Conference Attendance, "Decision Sciences," Decision Sciences. (November 16, 2007 - November 20, 2007).

Workshop, "Project Management Day," PMI Institute local chapter. (October 8, 2007).

Workshop, "MQC Site Visit," Baldrige/MQC. (June 17, 2007 - June 22, 2007).

Workshop, "Class Trip to Johnson Controls," Ferris/Johnson Controls. (June 14, 2007).

Workshop, "Michigan Quality Council," Baldrige. (May 4, 2007).

Conference Attendance, "Midwest Decision Sciences," Decision Sciences, Northern Illinois University. (April 12, 2007 - April 14, 2007).

Workshop, "Michigan Quality Council," Baldrige. (March 21, 2007 - March 22, 2007).

Continuing Education Program, "PMP Training Camp," Project Management Training Institute. (December 17, 2006 - December 21, 2006).

TEACHING

Non-Credit Instruction

Guest Lecture, COB Management Department, 25 participants. (August 2010).

RESEARCH

Presentations Given

Marion, D. (Presenter & Author), ACBSP conference, "What is Assessment Doing for Us?," ACBSP, Los Angeles, CA. (June 26, 2010).

Marion, D. (Presenter & Author), Midwest Decision Sciences, "Factors Influencing the Adoption of Lean Techniques," Midwest Decision Sciences, Toledo, OH. (April 23, 2010).

Marion, D. (Author Only), Academy of Management, "Evidence of Managerial Malpractice: An empirical Study," Academy of Management, Chicago, IL. (August 2009).

Marion, D. (Presenter & Author), APICS Grand Rapids, "Innovation Management," APICS Grand Rapids, Grand Rapids, MI. (April 2009).

Marion, D. (Author Only), Midwest Decision Sciences, "how Negotiation Strategies Effect Supplier Relations," Erie, PA. (April 16, 2008).

Marion, D. (Presenter Only), Statistics Club, "Presentation for Statistics Club." (2007).

Marion, D. (Presenter & Author), Midwest Decision Sciences, "Strategic Organization in Small Business that Leads to a Competitive Advantage.," Chicago, IL. (June 2007).

Marion, D. (Presenter & Author), Lim, J. (Presenter & Author), Jeong, J. S. (Presenter & Author), DSI National Conference, "An Integrated Conceptual Model of B2B E-Commerce Adoption Intention," DSI, San Fransisco, CA, US. (November 2005).

Marion, D. (Presenter & Author), DSI National Conference, "Manufacturing verseus Design Dominance in the New Product Development Process," DSI, San Fransisco, CA. (November 2005).

Marion, D. (Presenter Only), Lim, J., Hawaii International Conference on Business, "A Study of the Relationship Between Market Orientation and Strategic Orientation," Wakiki, Hawaii. (April 2005).

Marion, D. (Presenter & Author), Midwest Decision Sciences, "Computer Integrated Systems and Inter-Organizational Systems Effect on New Product Development," Toledo, OH. (April 2005).

Marion, D. (Presenter & Author), Liao, K. (Presenter & Author), Lim, J. (Presenter & Author), Midwest Decision Sciences, "Degree of Outsourcing in Prototyping Function in Global Supply Chain Management," Toledo, OH. (April 2005).

Marion, D. (Presenter & Author), DSI National Conference, "A Strategic Profile for Service Firms," DSI, Boston, MA, US. (November 2004).

Marion, D. (Presenter & Author), DSI National Conference, "Virtual Teams: Allocentrism or Idiocentrism? Which Will Perform Better in a Computer-Mediated Environment?," DSI, Boston, MA, US. (November 2004).

Marion, D. (Presenter & Author), Midwest Decision Sciences, "Will Vendor Selection Go the Way of E-Procurement?," Cleveland, OH. (April 2004).

Media Contributions

TV

FSU TV. (April 2010).

Contracts, Grants and Sponsored Research

Contract

Marion, David, "Human Resource Survey," Sponsored by Whirlpool Corporation, Private. (April 2009 - Present).

Grant

Marion, David, "What Can LEAN Do For Us?," Ferris State University, \$2,500.00. (2007).

Research in Progress

"Lean Adoption" (On-Going)

This is ongoing from previous work as each year I survey the same group to build longitudinal data.

"Managerial Malpractice" (On-Going)

Continued from previous paper completed with the Gilleys. Paper was submitted and rejected with conditions, looking to rewrite.

"The Focus of Lean Adoption" (On-Going)

Research is developing from the work with Whirlpool Corporation into what promotes the adoption of Lean practices.

SERVICE

College Service

Aid faculty with assessment, COB Assessment Mentor. (September 2010 - Present).

Committee Chair, COB Assessment Committee. (November 2008 - Present).

Accreditation movement. (2007 - 2008).

Committee Member, College of Business Core Committee. (2006 - 2007).

Attendee, Meeting, Honors Dinner. (2006 - 2007).

University Service

Committee Member, University Senate. (August 2010 - Present).

Committee Member, AAAC Committee. (September 2007 - Present).

Committee Member, Senate Executive Committee. (April 2011 - April 2012).

Chairperson, Athletic Advisory Committee. (September 2007 - September 2010).

Committee Member, Energy Conference Steering Committee. (September 2009 - August 2010).

Professional Service

Chairperson, Midwest DSI Conference. (April 2009).

Reviewer, Conference Paper, National DSI Conference. (2007).

Reviewer, Book, Project management text. (2007).

Public Service

Board Member, Rockford Community Swim Team, Rockford, Michigan. (March 2010 - Present).

Chairperson, Rockford Parent Booster Organization, Rockford, Michigan. (August 2009 - August 2010).

Treasurer, Rockford Parents Swim Association, Rockford, Michigan. (March 2008 - March 2010).

Reader/Discussant, 4th Grade Classes. (2007).

Reader/Discussant, 4th Grade Classes. (2007).

Judge, Stanwood School Innovation Day, Stanwood, MI. (2007).

Consulting

For Profit Organization, Whirlpool Corporation, All Physical Plants. (June 2010 - November 2010).

For Profit Organization, Whirlpool Corporation, Benton Harbor. (May 2009 - October 2009).

For Profit Organization, Dana Corporation. (2003).

Dr. Carol L. Rewers

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Education

Ph D, Capella University - College of Business, 2007.

Major: Organization and Management

MS, Michigan State University, 1992.

Major: Labor and Industrial Relations

MS, Western Michigan University, 1989.

Major: Public Health Administration

BS, Ferris State University, 1986.

Major: Nursing

AAS, Ferris State University, 1985.

Major: Nursing

Professional Positions

Academic - Post-Secondary

Assistant Professor, Ferris State University. (August 25, 2008 - Present).

Assistant Professor, Davenport University. (August 2007 - August 2008).

Adjunct faculty and full-time temporary positions in the School of Allied Health and College of Business., Ferris State University. (August 2002 - May 2005).

Adjunct Faculty, Lansing Community College, Health Careers Department. (April 1989 - January 1991).

Professional

Assistant Vice President & Interim V.P., Patient Care Services Operations, Sparrow Health System. (March 1998 - August 2002).

Department Manager, Women's Pavilion, Sparrow Health System. (March 1995 - August 2002).

Clinical Director of Medical and Oncology Services/Patient Care Director, Middle Tennessee Medical Center. (March 1994 - March 1995).

Assistant Department Manager - Women's Pavilion, Sparrow Hospital. (September 1992 - February 1994).

Data Manager - Department of Medicine, Michigan State University. (September 1989 - June 1992).

Director of Professional Services, Upjohn Healthcare Services. (May 1988 - May 1989).

Staff Nurse - Medical Unit and Intensive Care Units, Ingham Medical Center. (June 1986 - 1988).

Professional Memberships

Society for Human Resource Management.

Society of Case Research.

Academy of Management. (September 2008 - Present).

Institute for Supply Management. (September 2008 - Present).

American College of Healthcare Executives. (2004 - 2010).

American Society of Public Administrators. (2002 - 2004).

American Organization of Nurse Executives. (2001 - 2002).

Michigan Organization of Nurse Executives. (1999 - 2002).

Development Activities Attended

"American Red Cross CPR & AED Re-Certification." (November 2011).

"Blackboard- Learn Training -6 Hr. Training." (November 2011).

"McGraw Hill Connect Training." (September 2011).

"Spring Learning Institute." (April 2011).

"Society of Case Research - Summer Case Writing Workshop." (July 2010).

"Scholarship of Teaching and Learning Academy & SOTL Initiative.," FCTL. (May 2010).

"Dr. Rochona Majumdar, India as an Emerging World Power.," FSU - Globalization Committee. (April 15, 2010).

"Kun Shik Cho – Former President & CEO – Hyundai Globalization Presentation.," FSU - Globalization Committee. (April 14, 2010).

"Globalization & Manufacturing Presentation," FSU - Globalization Committee. (January 14, 2010).

"Participated in Jossey-Bass OTL Conference," FSU- FCTL. (October 7, 2009).

"Digital Measures Workshop." (September 29, 2009).

"Course-Mapping Workshop, COB." (August 2009).

"New Faculty Advising Workshop," FSU. (July 22, 2009).

New Faculty Transition Programs, "Multiple Programs 2008-2009," FSU. (August 2008 - April 2009).

"New Advisor Training," FSU. (April 28, 2009).

"Spring Learning Institute." (March 2009).

Grant and Research Education Series, 2008-2009, "Multiple Sessions -Grant and Research Education Series, 2008-2009," FSU. (September 2008 - March 2009).

"FerrisConnect Online Training," FSU. (2008).

"Six Sigma Training," Ice Mountain. (2005).

Conference Attendance, "Legal Mandates - HIPPA." (2003).

"Grant Writing Seminar." (2003).

Awards and Honors

Sparrow Nurse Manager of the Year, Sparrow Hospital. (2002).

Leadership Recognition, Gallup Survey. (2001).

Associate of the Month. (June 1997).

Nurse of the Year Nomination, Ingham Medical Center. (1988).

Vice President of Ferris State University Nursing Class. (1984).

RESEARCH

Published Intellectual Contributions

Refereed Journal Articles

Brotherton, T., Rewers, C. L. PlanetHospital.com - Medical Tourism Website at a Crossroad. *Annual Advances in Business Cases*.

Brotherton, T., Rewers, C. L. (2011). Strike or No Strike? Negotiating a Faculty Labor Contract - From Management's Perspective During Tough Economic Times. *SCR Winter Conference proceedings*.

Brotherton, T., Rewers, C. L. (2009). PlanetHospital.com - Medical Tourism Website at a Crossroad.

Conference Proceedings

Rewers, C. L., Brotherton, T. *Strike or No Strike? Negotiating a Faculty Labor Contract - From Management's Perspective During Tough Economic Times - a Management's perspective*. SCR Winter Conference proceedings.

Other

Lyman, S. B., Rewers, C. L. (2006). *ISO 9000 and Supplier Ethics*. MBAA Conference.

Presentations Given

Rewers, C. L., MBAA, "Presentation - Reviewer," SCR, Chicago, IL. (March 24, 2011).

Rewers, C. L., Case Discussant- SCR, "Reviewer and Case Discussant," SCR, Hanover Indiana. (July 17, 2010).

Rewers, C. L., Society of Case Research - Summer Workshop, "PlanetHospital.com," SCR, Hanover Indiana. (July 16, 2010).

Rewers, C. L., MBAA - Presenter, "Using Cases as Online Teaching Tools: Do's and Don'ts from the Trenches," SCR, Chicago, Ill. (March 26, 2010).

Rewers, C. L., MBAA, "Society of Case Research Board Mtg. Developed and co-presented a 2012 Conference Proposal," SCR, Chicago, Ill. (March 24, 2010).

Rewers, C. L., COB Colloquium, "Promoting the Integration of Theory and Practice: Classroom Exercises that Cultivate Student Learning.," COB, COB. (November 5, 2009).

Rewers, C. L., Lilly North Conference, "Promoting creativity in the classroom - What does "Hot Wheels" have to do with business layout design strategies?," FCTL, Traverse City. (September 25, 2009).

Rewers, C. L., Lilly North Conference, "Utilizing government resources to enhance the learning outcomes for Human Resource students that support effective business practices," FCTL, Traverse City. (September 25, 2009).

Lyman, S. B. (Presenter & Author), Rewers, C. L. (Presenter & Author), BHAA, Business and Health Administration Association, "Moral and Ethical Considerations Associated with Safeguarding the Public's Interest in Medical error Cases," MBAA, Chicago, IL. (March 2006).

Rewers, C. L. (Presenter & Author), Lyman, S. B. (Presenter & Author), MBAA 2006 Conference, "ISO 9000 and Supplier Ethics," MBAA, Chicago, IL. (March 2006).

Rewers, C. L., Backpack to Briefcase Conference, "Motivational Speaker," FSU. (2002).

Contracts, Grants and Sponsored Research

Grant

Rewers, Carol L., Sponsored by Diversity mini grant.

Rewers, Carol L., "Timme Grant MBAA International Conference," Sponsored by Faculty Center for Teaching and Learning.

Other

Rewers, Carol L., "Society of Case Research Summer Workshop," Sponsored by Timme Travel. (July 15, 2010).

Rewers, Carol L., "Scholarship of Teaching and Learning Academy & SOTL Initiative," Sponsored by FCTL. (May 17, 2010).

Rewers, Carol L., "9th Annual Lilly Conference," Sponsored by FCTL. (September 24, 2009).

Awards and Honors

Best Case Study for 2010-2011, Journal of Annual Advances in Business Cases. (June 2011).

Best Paper Award- 2008, Business and Health Administration Association (BHAA). (April 2008).

Research in Progress

"GEO Group, Inc. North Lake Correctional Facility's"

"Strike or No Strike: Negotiating a Faculty Labor Contract from a Management Perspective During Tough Economic Times"
Management perspective case study research

"Strike or No Strike: Negotiating a Faculty Labor Contract from a Unions Perspective During Tough Economic Times"
A Unions perspective case study research

SERVICE

Department Service

- Committee Member, Management Department Newsletter. (2010 - Present).
- Committee Member, Management Department Scholarship Committee Member. (2010 - Present).
- Adjunct Faculty Reviewer. (2009 - Present).
- Advisor/Co-Advisor, SHRM Student RSO. (2009 - Present).
- Student Academic Advising. (2009 - Present).
- Committee Member, Academic Program Review - Business Administration. (2011 - 2012).
- Committee Member, Academic Program Review - Operations Management. (2011 - 2012).
- Academic Program Review – Human Resource Management. (2010 - 2011).
- Committee Member, General Business Advisory Board Member. (2010 - 2011).
- Committee Member, HR Advisory Board Member. (May 2011).
- Academic Program Review – General Business Associate Degree. (2010).
- Committee Member, Academic Program Review - Finance. (2009 - 2010).

College Service

- Faculty Advisor, TORCH Committee. (2011 - 2012).
- COB Graduation Commencement Ceremonies. (December 2011).
- Committee Member, John P. Nelson Memorial Scholarship Committee. (2010 - 2011).
- COB Celebration Festival Volunteer. (2009 - 2011).
- First Impressions Volunteer. (August 2011).
- HR Advisory Board Member. (May 2011).
- Committee Member, Innovative Breakthroughs Entrepreneurial Annual Scholarship Committee. (2010).
- Committee Member, Academic Program Review – Finance. (2009 - 2010).
- Committee Member, Douglas O. Froelich Memorial Endowment Fund Scholarship Committee. (2009 - 2010).
- Committee Member, General Business Advisory Board Member. (2009 - 2010).
- COB Graduation Commencement Ceremonies. (May 2010).
- First Impressions Volunteer. (2009).

University Service

- Attendee, Meeting, University Curriculum Committee. (2011 - 2012).
- Attendee, Meeting, Taskforce -GE Wellness Rubrics. (2011).
- Committee Member, Senate Health and Promotions/Substance Abuse Prevention Committee. (2010 - 2011).
- Committee Member, Academic Senate, FSU. (August 2009 - August 2011).
- Chairperson, Academic Senate Bylaw and Charter Review Committee. (2009 - 2010).
- Committee Member, Faculty Research Committee. (2009 - 2010).
- Committee Member, FSU's Tot's Place Development Center. (2009 - 2010).
- Attendee, Meeting, Ms. Nontombi Naomi Tutu, breakfast reception and "South Africa: Healing the Wounds of Racism" lecture. (March 2, 2010).
- District II DECA Conference Judge. (2009).
- Attendee, Meeting, MISHRM. 21st Annual State Conference. (October 2009).
- Committee Member, Alumni Relations Board of Directors, FSU. (2001 - 2005).

Professional Service

- Committee Member, Current and Future Concepts in Women's Health Planning Committee.
- Society of Case Research Summer Workshop Reviewer/Case Discussant. (July 17, 2010 - Present).
- Critical Incident Review -SCR. (March 25, 2010 - Present).
- Timme/Faculty Center for Teaching and Learning Grant for 9th Annual Lilly Conference on College and University Teaching, Traverse City, Michigan. (September 24, 2009 - Present).
- Academy of Management - Reviewer and Emergency Reviewer. (2009 - 2010).
- Academy of Management - Reviewer and Emergency Reviewer. (2008 - 2009).
- Guest Speaker, Labor Relations/Negotiations for College of Allied Health, Big Rapids, Mi. (April 2004).
- Committee Member, Centerpoint Conference Planning Committee. (1997 - 2001).
- Committee Member, Oncology Conference Planning Committee. (1994).

Public Service

- Committee Member, Children's Miracle Network Planning Committee. (1999 - 2000).
- Committee Member, United Way, Planning Committee. (1998 - 2000).
- Co-Chair, United Way, Planning Committee. (1998 - 2000).

Consulting

- Academic, Ferris Community Business Alliance, Big Rapids, MI. (October 2011 - Present).

Academic, MOHRA, Big Rapids, MI. (September 2010 - Present).

Appendix D – Alumni Survey Instrument



Operations and Supply Management APR - Alumni Survey

As a part of the continuing effort to improve the Quality and Supply Management bachelor degree program, the College of Business at Ferris State University conducts a program evaluation once every six years. This evaluation includes surveys of present students, graduates, potential employers, and the university community.

As an alumnus of this program your opinion will provide important information in this process. Please take a few minutes to complete the following survey. You would be contributing to the improvement of education at Ferris State University. Please be assured that the confidential information you provide will be anonymous.

1. Year you graduated from Ferris State? (YYYY format)
2. Are you presently employed full time?
 - Yes
 - No
3. What is your present job title?
4. What other job titles have you had?
5. Have you ever been employed since graduation?
 - Yes
 - No
6. What was your last job title?
7. What is the reason for your unemployment or part-time status? (Optional)
8. If you are now (or have ever been) employed, what is (or was) your last salary range? (Optional)
 - \$20,000 or less
 - \$20,001 - \$30,000
 - \$30,001 - \$40,000
 - \$40,001 - \$50,000

- \$50,001 - \$60,000
- \$60,001 - \$70,000
- \$70,001 - \$80,000
- \$80,001 - \$90,000
- \$90,001 - \$100,000
- \$100,001 or more

9. How did you obtain your first position?

10. Do you belong to any professional organizations?

- Yes
- No

11. Which ones?

12. Career wise, what do you think you will be doing in the next five years?

Evaluation of Your Degree

13. How satisfied are you with your Quality and Supply Management degree in terms of preparation for a career?

- Very Dissatisfied
- Somewhat Dissatisfied
- Somewhat Satisfied
- Very Satisfied

14. Reason(s) for your response to question number 13

15. Did your Quality and Supply Management degree include technical training?

- Yes
- No

16. What kind of technical training was included?

17. Has your career been enhanced by this technical training?

- Yes
- No

18. In what way?

19. Please indicate the extent to which you use each of the following computer programs.

	Daily	Weekly	Very Little	Not at All
Word processing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
PowerPoint	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Spreadsheet	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Databases	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other Please Specify: _____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

20. Please indicate the extent to which each of the following courses has been helpful in your career.

Business Law	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Business Strategy/Policy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Business Writing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Contracts and Sales (BLAW)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Financial Management	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Human Resource Management	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Information Systems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
International Business	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>
Principles of Accounting (ACCT)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Principles of Economics (ECON)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Principles of Marketing (MKTG)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Production/Operation Management	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Statistics (STQM)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>

21. What subjects have been most useful to you? Why?

22. What subject areas do you think should be added or improved? Why?

23. What subject areas do you think should be eliminated? Why?

24. Among the objectives of the Quality and Supply Management Program is to assist students in developing an awareness of business-related areas and skills. How well do you feel you were prepared for your career in the following skills?

	Excellent	Good	Average	Below Average	Poor
Analyzing skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Computer skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Decision Making skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Interpersonal skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Leadership skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Oral Presentation skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Scientific Understanding	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Verbal Communication skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Writing skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

25. Among the objectives of the University is to assist students in the development of certain skills. How well do you feel you were prepared for your career in the following skills?

	Excellent	Good	Average	Average	Poor
Cultural Awareness/Global Awareness	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Financial Analysis/Budgeting	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Management skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Quantitative skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Social Awareness	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Teamwork skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

26. What areas of your Quality and Supply Management degree do you feel needed strengthening? (Please check all that apply)

- Accounting skills
- Computer skills
- Finance skills
- Foreign Language skills
- Interpersonal skills
- Management skills
- Problem-solving skills
- Statistical skills
- Verbal communication skills
- Other

Please Specify:

27. Where you have indicated skills that needed strengthening, could you please provide the specifics of the skills training which would have been beneficial to your career? Also, why do you think these skills need strengthening?

28. Based on your experience, do you feel that a year of a foreign language (as French, German, Spanish) should be a requirement or an elective?

- Requirement
- Elective

29. Why do you think so?

Graduate Study

30. Have you attended graduate school since your graduation?

- Yes
- No

31. Did you complete your degree?

- Yes
- No

32. What is that degree?

33. Do you have future plans for graduate study?

- Yes
- No

Extracurricular Activities

34. Were you involved in a student professional business organization while you were at Ferris?

- Yes
- No

35. Which ones?

36. To what extent did your participation enhance your business preparation?

- It contributed very little
- It was somewhat important
- It was extremely important

37. Did your participation assist you in your career?

- Yes
- No

38. In what way?

Cooperative Education or Internship Experience

39. Did you have a cooperative education or internship experience while at Ferris?

- Yes
- No

40. What experience did you have?

41. Please indicate the extent to which the experience enhanced your business career preparation.

- It contributed very little
- It was somewhat important
- It was extremely important

42. If you did not have a cooperative education or internship experience, please indicate whether or not such an experience would have enhanced your career.

- It would have contributed very little
- It would have been somewhat important
- It would have been extremely important

43. Please provide any comments you would like to make about the quality of, or deficiencies in, your Quality and Supply Management undergraduate degree at Ferris State University.

Thank you for your time and input.

Appendix E – Alumni Survey Results

OPSM APR...Alumni

Frequencies

Prepared by: Institutional Research & Testing, 05/12

	Statistics		Mean	Median	Std. Deviation
	Valid	Missing			
q1 Year graduated	9	0			
q2 Presently employed full time	9	0	1.00	1.00	.000
q3 Present job title	9	0			
q4 Other job titles	9	0			
q5 Employed since graduation	0	9			
q6 Last job title	9	0			
q7 Reason for unemployment or part-time status	9	0			
q8 Last salary range	7	2	8.14	7.00	1.773
q9 How obtain first position	9	0			
q10 Belong to professional organization	9	0	1.78	2.00	.441
q11 Which one(s)	9	0			
q12 Career wise, doing next 5 yrs	9	0			
q13 Satisfied w/ OPSM degree prep for career	9	0	1.44	1.00	.527
q14 Reason(s) for your response	9	0			
q15 Degree include technical training	9	0	1.11	1.00	.333
q16 What kind	9	0			
q17 Career enhanced by technical training	0	9			
q18 In what way	9	0			
q19.a Word processing	9	0	1.44	1.00	.726
q19.b PowerPoint	9	0	2.22	2.00	1.093
q19.c Spreadsheet	9	0	1.11	1.00	.333
q19.d Databases	9	0	1.11	1.00	.333
q19.e Other	2	7	1.00	1.00	.000
q19.f Other specified	9	0			
q20.a Applied Management	9	0	2.56	2.00	1.130
q20.b Business Ethics & Social Responsibility	8	1	2.63	2.50	1.188
q20.c Business Law	9	0	3.22	3.00	1.394
q20.d Business Strategy/Policy	9	0	2.11	2.00	.782
q20.e Business Writing	9	0	1.78	2.00	.667

q20.f Contracts and Sales (BLAW)	9	0	2.44	3.00	1.236
q20.g Financial Management	9	0	1.67	1.00	.866
q20.h Human Resource Management	9	0	2.11	2.00	1.054
q20.i Information Systems	8	1	1.88	2.00	.641
q20.j International Business	9	0	2.78	3.00	1.202
q20.k Team Dynamics/Organizational Behavior	9	0	2.33	2.00	1.581
q20.l Principles of Accounting (ACCT)	8	1	1.88	1.50	.991
q20.m Principles of Economics (ECON)	9	0	2.67	2.00	1.581
q20.n Principles of Marketing (MKTG)	9	0	2.44	3.00	1.236
q20.o Production/Operation Management	9	0	1.33	1.00	.500
q20.p Statistics (STQM)	9	0	2.33	2.00	.707
q21 Subjects most useful	9	0			
q22 Subjects should be added/improved	9	0			
q23 Subjects should be eliminated	9	0			
q24.a Analyzing skills	9	0	1.78	2.00	.833
q24.b Computer skills	9	0	2.44	2.00	1.014
q24.c Decision Making skills	9	0	1.89	2.00	.782
q24.d Interpersonal skills	9	0	2.00	2.00	.866
q24.e Leadership skills	9	0	2.11	2.00	.928
q24.f Oral Presentation skills	9	0	2.67	3.00	.707
q24.g Scientific Understanding	9	0	2.22	2.00	.667
q24.h Verbal Communication skills	9	0	2.33	2.00	.707
q24.i Writing skills	9	0	2.22	2.00	.667
q25.a Cultural Awareness/Global Awareness	9	0	2.89	2.00	1.167
q25.b Financial Analysis/Budgeting	9	0	2.44	2.00	.726
q25.c Management skills	9	0	1.89	2.00	.601
q25.d Quantitative skills	9	0	2.11	2.00	.601
q25.e Social Awareness	9	0	2.33	2.00	1.225
q25.f Teamwork skills	9	0	2.00	2.00	.866
q26_1 Strengthen area(s): Accounting skills	8	1	.00	.00	.000
q26_2 Strengthen area(s): Computer skills	8	1	.38	.00	.518
q26_3 Strengthen area(s): Finance skills	8	1	.13	.00	.354
q26_4 Strengthen area(s): Foreign Language skills	8	1	.63	1.00	.518
q26_5 Strengthen area(s): Interpersonal skills	8	1	.13	.00	.354
q26_6 Strengthen area(s): Management skills	8	1	.13	.00	.354
q26_7 Strengthen area(s): Problem-solving skills	8	1	.13	.00	.354
q26_8 Strengthen area(s): Statistical skills	8	1	.13	.00	.354

q26_9 Strengthen area(s): Verbal communication skills	8	1	.25	.00	.463
q26_10 Strengthen area(s): Other	8	1	.13	.00	.354
q26.a Other specified	9	0			
q27 Specifics of training would have been beneficial	9	0			
q28 Year of foreign language should be requirement or elective	9	0	1.56	2.00	.527
q29 Why	9	0			
q30 Attended grad school since graduation	9	0	1.78	2.00	.441
q31 Complete degree	2	7	1.50	1.50	.707
q32 What is degree	9	0			
q33 Future plans for grad study	7	2	1.57	2.00	.535
q34 In student professional business org	9	0	1.56	2.00	.527
q35 Which ones	9	0			
q36 Extent participation enhanced business prep	4	5	2.50	2.50	.577
q37 Participation assist in your career	4	5	1.25	1.00	.500
q38 In what way	9	0			
q39 Have cooperative education/internship	9	0	1.89	2.00	.333
q40 What experience did you have	9	0			
q41 Extent the experience enhanced your business career prep	1	8	3.00	3.00	
q42 Would experience have enhanced your career	8	1	2.25	2.00	.707
q43 Additional comments	9	0			

Frequency Table

		q1 Year graduated			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1981	1	11.1	11.1	11.1
	1984	1	11.1	11.1	22.2
	1988	1	11.1	11.1	33.3
	1989	1	11.1	11.1	44.4
	1991	3	33.3	33.3	77.8
	1992	2	22.2	22.2	100.0
	Total	9	100.0	100.0	

q2 Presently employed full time

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	9	100.0	100.0	100.0

q3 Present job title

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Group Quality Manager	1	11.1	11.1	11.1
	Installation Manager for Technology Contracting - Central Region	1	11.1	11.1	22.2
	President	1	11.1	11.1	33.3
	Scheduler	1	11.1	11.1	44.4
	Senior Technician	1	11.1	11.1	55.6
	Sr. Project Engineer	1	11.1	11.1	66.7
	Supply Chain Director, China	1	11.1	11.1	77.8
	VP	1	11.1	11.1	88.9
	Warehouse Manager	1	11.1	11.1	100.0
	Total	9	100.0	100.0	

q4 Other job titles

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Chief Operating Officer	1	11.1	11.1	11.1
	Distribution Center Manager	1	11.1	11.1	22.2
	HVAC Branch Manager - Michigan	1	11.1	11.1	33.3
	Manufacturing Manager, Logistics Manager, Inventory Planning Manager, SAP Project Manager, Customs and Compliance Manager	1	11.1	11.1	44.4
	master scheduler. materials supervisor, production scheduler	1	11.1	11.1	55.6
	None - First job out of college.	1	11.1	11.1	66.7
	Production planner, Operations manager	1	11.1	11.1	77.8
	Production Superintendent	1	11.1	11.1	88.9
	Technician I, II, and III	1	11.1	11.1	100.0
	Total	9	100.0	100.0	

q5 Employed since graduation

		Frequency	Percent
Missing	System	9	100.0

q6 Last job title

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		9	100.0	100.0	100.0

q7 Reason for unemployment or part-time status

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		9	100.0	100.0	100.0

q8 Last salary range

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	\$60,001 - \$70,000	1	11.1	14.3	14.3
	\$70,001 - \$80,000	3	33.3	42.9	57.1
	\$100,001 or more	3	33.3	42.9	100.0
	Total	7	77.8	100.0	
Missing	System	2	22.2		
Total		9	100.0		

q9 How obtain first position

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		9	100.0	100.0	100.0

q10 Belong to professional organization

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	2	22.2	22.2	22.2
	No	7	77.8	77.8	100.0
	Total	9	100.0	100.0	

q11 Which one(s)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		8	88.9	88.9	88.9
	CSCMP, ASUG, Operations Leadership Exchange	1	11.1	11.1	100.0
	Total	9	100.0	100.0	

q12 Career wise, doing next 5 yrs

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		1	11.1	11.1	11.1
	could be in supervision/management	1	11.1	11.1	22.2
	Hopefully same as the last 20 years.	1	11.1	11.1	33.3
	Same	2	22.2	22.2	55.6
	same job I have now.	1	11.1	11.1	66.7
	Senior manager	1	11.1	11.1	77.8
	working oversees in an emerging market	1	11.1	11.1	88.9
	your #9 is crap, everything is text out of range bullshit/ Test your survey same stuff planning for retirement	1	11.1	11.1	100.0
	Total	9	100.0	100.0	

q13 Satisfied w/ OPSM degree prep for career

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Satisfied	5	55.6	55.6	55.6
	Somewhat Satisfied	4	44.4	44.4	100.0
	Total	9	100.0	100.0	

q14 Reason(s) for your response

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		5	55.6	55.6	55.6
	Good background for what i'm doing now.	1	11.1	11.1	66.7
	Learned all the necessary skill sets to manage production and inventory and to interface with IT and engineering	1	11.1	11.1	77.8

provided a good overview/foundation to allow me to evolve through OJT in my current company	1	11.1	11.1	88.9
wasn't prepared to fully understand concepts of MRP. professional tasks and overall understanding. I was taught from a book. Not relevant, give me real world stuff that's going to happen., guess what., in the 1990's most everyone was going into some tier of automotive, your instructors should have planned for that. What the next great michigan employment area will be....? I don't know, that's your job to figure it out and taylor it on a bias for your students/ Making me do homework on a mouse trap factory was in hindsight was embarassing for me and the professor who just assigned the crap from a book. I didn't pay to have a jockey buy a book and read it to me	1	11.1	11.1	100.0
Total	9	100.0	100.0	

q15 Degree include technical training

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	8	88.9	88.9	88.9
	No	1	11.1	11.1	100.0
	Total	9	100.0	100.0	

q16 What kind

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		2	22.2	22.2	22.2
	a few engineering courses were required	1	11.1	11.1	33.3
	apics. Most valuable guidance I got and it was from prof ray balcerzak. He knew his shit	1	11.1	11.1	44.4
	HVAC Engineering Technology	1	11.1	11.1	55.6
	MET - Mechanical Engineering Technology	1	11.1	11.1	66.7
	Plastics Manufacturing	1	11.1	11.1	77.8
	Time and Motion Study	1	11.1	11.1	88.9

	Welding Engineering	1	11.1	11.1	100.0
	Total	9	100.0	100.0	

q17 Career enhanced by technical training

		Frequency	Percent
Missing	System	9	100.0

q18 In what way

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		9	100.0	100.0	100.0

q19.a Word processing

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Daily	6	66.7	66.7	66.7
	Weekly	2	22.2	22.2	88.9
	Very Little	1	11.1	11.1	100.0
	Total	9	100.0	100.0	

q19.b PowerPoint

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Daily	3	33.3	33.3	33.3
	Weekly	2	22.2	22.2	55.6
	Very Little	3	33.3	33.3	88.9
	Not at All	1	11.1	11.1	100.0
	Total	9	100.0	100.0	

q19.c Spreadsheet

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Daily	8	88.9	88.9	88.9
	Weekly	1	11.1	11.1	100.0
	Total	9	100.0	100.0	

q19.d Databases

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Daily	8	88.9	88.9	88.9
	Weekly	1	11.1	11.1	100.0
	Total	9	100.0	100.0	

q19.e Other

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Daily	2	22.2	100.0	100.0
Missing	System	7	77.8		
Total		9	100.0		

q19.f Other specified

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		6	66.7	66.7	66.7
	canned purchased erp programs	1	11.1	11.1	77.8
	Company based legacy systems	1	11.1	11.1	88.9
	WMS	1	11.1	11.1	100.0
	Total	9	100.0	100.0	

q20.a Applied Management

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Extremely Helpful	1	11.1	11.1	11.1
	Very Helpful	4	44.4	44.4	55.6
	Somewhat Helpful	3	33.3	33.3	88.9
	Should Be Eliminated	1	11.1	11.1	100.0
	Total	9	100.0	100.0	

q20.b Business Ethics & Social Responsibility

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Extremely Helpful	1	11.1	12.5	12.5

	Very Helpful	3	33.3	37.5	50.0
	Somewhat Helpful	3	33.3	37.5	87.5
	Should Be Eliminated	1	11.1	12.5	100.0
	Total	8	88.9	100.0	
Missing	System	1	11.1		
Total		9	100.0		

q20.c Business Law

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Extremely Helpful	1	11.1	11.1	11.1
	Very Helpful	1	11.1	11.1	22.2
	Somewhat Helpful	4	44.4	44.4	66.7
	Not Helpful	2	22.2	22.2	88.9
	Did Not Take	1	11.1	11.1	100.0
	Total	9	100.0	100.0	

q20.d Business Strategy/Policy

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Extremely Helpful	2	22.2	22.2	22.2
	Very Helpful	4	44.4	44.4	66.7
	Somewhat Helpful	3	33.3	33.3	100.0
	Total	9	100.0	100.0	

q20.e Business Writing

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Extremely Helpful	3	33.3	33.3	33.3
	Very Helpful	5	55.6	55.6	88.9
	Somewhat Helpful	1	11.1	11.1	100.0
	Total	9	100.0	100.0	

q20.f Contracts and Sales (BLAW)

		Frequency	Percent	Valid Percent	Cumulative Percent

Valid	Extremely Helpful	3	33.3	33.3	33.3
	Very Helpful	1	11.1	11.1	44.4
	Somewhat Helpful	3	33.3	33.3	77.8
	Not Helpful	2	22.2	22.2	100.0
	Total	9	100.0	100.0	

q20.g Financial Management

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Extremely Helpful	5	55.6	55.6	55.6
	Very Helpful	2	22.2	22.2	77.8
	Somewhat Helpful	2	22.2	22.2	100.0
	Total	9	100.0	100.0	

q20.h Human Resource Management

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Extremely Helpful	3	33.3	33.3	33.3
	Very Helpful	3	33.3	33.3	66.7
	Somewhat Helpful	2	22.2	22.2	88.9
	Not Helpful	1	11.1	11.1	100.0
	Total	9	100.0	100.0	

q20.i Information Systems

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Extremely Helpful	2	22.2	25.0	25.0
	Very Helpful	5	55.6	62.5	87.5
	Somewhat Helpful	1	11.1	12.5	100.0
	Total	8	88.9	100.0	
Missing	System	1	11.1		
Total		9	100.0		

q20.j International Business

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Extremely Helpful	2	22.2	22.2	22.2
	Very Helpful	1	11.1	11.1	33.3

	Somewhat Helpful	3	33.3	33.3	66.7
	Not Helpful	3	33.3	33.3	100.0
	Total	9	100.0	100.0	

q20.k Team Dynamics/Organizational Behavior

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Extremely Helpful	4	44.4	44.4	44.4
	Very Helpful	2	22.2	22.2	66.7
	Not Helpful	2	22.2	22.2	88.9
	Should Be Eliminated	1	11.1	11.1	100.0
	Total	9	100.0	100.0	

q20.l Principles of Accounting (ACCT)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Extremely Helpful	4	44.4	50.0	50.0
	Very Helpful	1	11.1	12.5	62.5
	Somewhat Helpful	3	33.3	37.5	100.0
	Total	8	88.9	100.0	
Missing	System	1	11.1		
Total		9	100.0		

q20.m Principles of Economics (ECON)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Extremely Helpful	3	33.3	33.3	33.3
	Very Helpful	2	22.2	22.2	55.6
	Not Helpful	3	33.3	33.3	88.9
	Should Be Eliminated	1	11.1	11.1	100.0
	Total	9	100.0	100.0	

q20.n Principles of Marketing (MKTG)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Extremely Helpful	3	33.3	33.3	33.3
	Very Helpful	1	11.1	11.1	44.4
	Somewhat Helpful	3	33.3	33.3	77.8

	Not Helpful	2	22.2	22.2	100.0
	Total	9	100.0	100.0	

q20.o Production/Operation Management

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Extremely Helpful	6	66.7	66.7	66.7
	Very Helpful	3	33.3	33.3	100.0
	Total	9	100.0	100.0	

q20.p Statistics (STQM)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Extremely Helpful	1	11.1	11.1	11.1
	Very Helpful	4	44.4	44.4	55.6
	Somewhat Helpful	4	44.4	44.4	100.0
	Total	9	100.0	100.0	

q21 Subjects most useful

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		4	44.4	44.4	44.4
	Business Related Topics	1	11.1	11.1	55.6
	My career has taken a turn towards accounting.	1	11.1	11.1	66.7
	op mgt, mrp, mps, inventory mgt, it's what I do. overall, some are for good foundational information, a person needs to speak intelligently on other topics, ie-- time studies, accounting. law ect	1	11.1	11.1	77.8
	Principles of Accounting and Production and Operations Management because it all comes down to financial management of production and inventory or services and what you can do to delivery profit and efficiency to your bottom line.	1	11.1	11.1	88.9
	Production/Operation Management, I still perform this fuction every day. Also, International Business---No one is just a	1	11.1	11.1	100.0

	manufacture anymore. Everyone has to import if price is a issue.				
	Total	9	100.0	100.0	

q22 Subjects should be added/improved

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		4	44.4	44.4	44.4
	Business Writing	1	11.1	11.1	55.6
	International Business in China	1	11.1	11.1	66.7
	No answer	1	11.1	11.1	77.8
	Statistical forecasting could use a little more attention and you must add project management to the curriculum.	1	11.1	11.1	88.9
	taylor it to what a michigan resident can expect to be employed in. You have research, you know what a graduate will most likely be employed in. target that. round the edges to make it closely work in similar industries but most everyone is from michigan. will stay in michigan. wants to work for a michigan business.....get it straight. Some dude from Arizona going through this college should feel satisfied but a little lost. know your audience	1	11.1	11.1	100.0
	Total	9	100.0	100.0	

q23 Subjects should be eliminated

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		6	66.7	66.7	66.7
	I had 3 accountings. Screw 3. do 1-2 that was a waste of time. anymore than 1 english/creative writing is a waste of time. Make sure you don't come off like a dufuss, but If I have my shit straight and running the plant and a high efficiency, nobody cares If I know all my correct grammar. Money talks, correct english is only for a resume.	1	11.1	11.1	77.8
	No answer	1	11.1	11.1	88.9

	None	1	11.1	11.1	100.0
	Total	9	100.0	100.0	

q24.a Analyzing skills

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Excellent	4	44.4	44.4	44.4
	Good	3	33.3	33.3	77.8
	Average	2	22.2	22.2	100.0
	Total	9	100.0	100.0	

q24.b Computer skills

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Excellent	1	11.1	11.1	11.1
	Good	5	55.6	55.6	66.7
	Average	1	11.1	11.1	77.8
	Below Average	2	22.2	22.2	100.0
	Total	9	100.0	100.0	

q24.c Decision Making skills

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Excellent	3	33.3	33.3	33.3
	Good	4	44.4	44.4	77.8
	Average	2	22.2	22.2	100.0
	Total	9	100.0	100.0	

q24.d Interpersonal skills

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Excellent	3	33.3	33.3	33.3
	Good	3	33.3	33.3	66.7
	Average	3	33.3	33.3	100.0
	Total	9	100.0	100.0	

q24.e Leadership skills

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Excellent	2	22.2	22.2	22.2
	Good	5	55.6	55.6	77.8
	Average	1	11.1	11.1	88.9
	Below Average	1	11.1	11.1	100.0
	Total	9	100.0	100.0	

q24.f Oral Presentation skills

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Good	4	44.4	44.4	44.4
	Average	4	44.4	44.4	88.9
	Below Average	1	11.1	11.1	100.0
	Total	9	100.0	100.0	

q24.g Scientific Understanding

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Excellent	1	11.1	11.1	11.1
	Good	5	55.6	55.6	66.7
	Average	3	33.3	33.3	100.0
	Total	9	100.0	100.0	

q24.h Verbal Communication skills

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Excellent	1	11.1	11.1	11.1
	Good	4	44.4	44.4	55.6
	Average	4	44.4	44.4	100.0
	Total	9	100.0	100.0	

q24.i Writing skills

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Excellent	1	11.1	11.1	11.1
	Good	5	55.6	55.6	66.7

	Average	3	33.3	33.3	100.0
	Total	9	100.0	100.0	

q25.a Cultural Awareness/Global Awareness

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Good	6	66.7	66.7	66.7
	Average	2	22.2	22.2	88.9
	Below Average	1	11.1	11.1	100.0
	Total	9	100.0	100.0	

q25.b Financial Analysis/Budgeting

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Good	6	66.7	66.7	66.7
	Average	2	22.2	22.2	88.9
	Below Average	1	11.1	11.1	100.0
	Total	9	100.0	100.0	

q25.c Management skills

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Excellent	2	22.2	22.2	22.2
	Good	6	66.7	66.7	88.9
	Average	1	11.1	11.1	100.0
	Total	9	100.0	100.0	

q25.d Quantitative skills

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Excellent	1	11.1	11.1	11.1
	Good	6	66.7	66.7	77.8
	Average	2	22.2	22.2	100.0
	Total	9	100.0	100.0	

q25.e Social Awareness

		Frequency	Percent	Valid Percent	Cumulative Percent

Valid	Excellent	2	22.2	22.2	22.2
	Good	4	44.4	44.4	66.7
	Average	2	22.2	22.2	88.9
	Poor	1	11.1	11.1	100.0
	Total	9	100.0	100.0	

q25.f Teamwork skills

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Excellent	3	33.3	33.3	33.3
	Good	3	33.3	33.3	66.7
	Average	3	33.3	33.3	100.0
	Total	9	100.0	100.0	

q26_1 Strengthen area(s): Accounting skills

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not Selected	8	88.9	100.0	100.0
Missing	System	1	11.1		
Total		9	100.0		

q26_2 Strengthen area(s): Computer skills

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not Selected	5	55.6	62.5	62.5
	Selected	3	33.3	37.5	100.0
	Total	8	88.9	100.0	
Missing	System	1	11.1		
Total		9	100.0		

q26_3 Strengthen area(s): Finance skills

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not Selected	7	77.8	87.5	87.5
	Selected	1	11.1	12.5	100.0
	Total	8	88.9	100.0	
Missing	System	1	11.1		
Total		9	100.0		

q26_4 Strengthen area(s): Foreign Language skills

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not Selected	3	33.3	37.5	37.5
	Selected	5	55.6	62.5	100.0
	Total	8	88.9	100.0	
Missing	System	1	11.1		
Total		9	100.0		

q26_5 Strengthen area(s): Interpersonal skills

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not Selected	7	77.8	87.5	87.5
	Selected	1	11.1	12.5	100.0
	Total	8	88.9	100.0	
Missing	System	1	11.1		
Total		9	100.0		

q26_6 Strengthen area(s): Management skills

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not Selected	7	77.8	87.5	87.5
	Selected	1	11.1	12.5	100.0
	Total	8	88.9	100.0	
Missing	System	1	11.1		
Total		9	100.0		

q26_7 Strengthen area(s): Problem-solving skills

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not Selected	7	77.8	87.5	87.5
	Selected	1	11.1	12.5	100.0
	Total	8	88.9	100.0	
Missing	System	1	11.1		
Total		9	100.0		

q26_8 Strengthen area(s): Statistical skills

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not Selected	7	77.8	87.5	87.5
	Selected	1	11.1	12.5	100.0
	Total	8	88.9	100.0	
Missing	System	1	11.1		
Total		9	100.0		

q26_9 Strengthen area(s): Verbal communication skills

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not Selected	6	66.7	75.0	75.0
	Selected	2	22.2	25.0	100.0
	Total	8	88.9	100.0	
Missing	System	1	11.1		
Total		9	100.0		

q26_10 Strengthen area(s): Other

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not Selected	7	77.8	87.5	87.5
	Selected	1	11.1	12.5	100.0
	Total	8	88.9	100.0	
Missing	System	1	11.1		
Total		9	100.0		

q26.a Other specified

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		7	77.8	77.8	77.8
	difficult, 20yrs ago, too much has changed	1	11.1	11.1	88.9
	writing skills	1	11.1	11.1	100.0
	Total	9	100.0	100.0	

q27 Specifics of training would have been beneficial

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		5	55.6	55.6	55.6
	20yrs ago, too different of a world	1	11.1	11.1	66.7
	Better understanding of the balance sheet and financial drivers that executives look at to make decisions on spending. Problem solving skills could have been better right out to school so be sure in add a similar course that most companies use for their managers and supervisors.	1	11.1	11.1	77.8
	Listening and writing skills.	1	11.1	11.1	88.9
	Should require some foreign language. Most business are now global.	1	11.1	11.1	100.0
	Total	9	100.0	100.0	

q28 Year of foreign language should be requirement or elective

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Requirement	4	44.4	44.4	44.4
	Elective	5	55.6	55.6	100.0
	Total	9	100.0	100.0	

q29 Why

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		2	22.2	22.2	22.2
	Almost every business are global.	1	11.1	11.1	33.3
	If a business student has not taken a foreign language by the time they are in college that I see no need to force them to learn one at that time. On the other hand, those students who may have always been interested in working abroad should have an option to use a foreign language class to satisfy the curriculum. They will have a slight advantage in my opinion.	1	11.1	11.1	44.4
	If a foreign language is required, a European language wont be very helpful in today's	1	11.1	11.1	55.6

international business environment. Most production is now done in Asia and that is where production planning is most needed by US companies who partner Asia.				
in the US, English should be the language now if a company moves toward foreign markets then a foreign language could play an important roll	1	11.1	11.1	66.7
My company in particular is completley global. I speak with peers in Poland and Quatemala on a regular basis	1	11.1	11.1	77.8
too volative of job market, changes tooooooo much. don't make me take french when in 4 years their financial market may crash, ie=-greece/ ELECTIVE at best. You don't know the future job market so don't screw some ignorant kid into potentially wasting time	1	11.1	11.1	88.9
You dont know what you need till you get out	1	11.1	11.1	100.0
Total	9	100.0	100.0	

q30 Attended grad school since graduation

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	2	22.2	22.2	22.2
	No	7	77.8	77.8	100.0
	Total	9	100.0	100.0	

q31 Complete degree

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	1	11.1	50.0	50.0
	No	1	11.1	50.0	100.0
	Total	2	22.2	100.0	
Missing	System	7	77.8		
Total		9	100.0		

q32 What is degree

		Frequency	Percent	Valid Percent	Cumulative Percent

Valid		8	88.9	88.9	88.9
	MBA	1	11.1	11.1	100.0
	Total	9	100.0	100.0	

q33 Future plans for grad study

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	3	33.3	42.9	42.9
	No	4	44.4	57.1	100.0
	Total	7	77.8	100.0	
Missing	System	2	22.2		
Total		9	100.0		

q34 In student professional business org

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	4	44.4	44.4	44.4
	No	5	55.6	55.6	100.0
	Total	9	100.0	100.0	

q35 Which ones

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		6	66.7	66.7	66.7
	APICS, ASQC	1	11.1	11.1	77.8
	asqc apics	1	11.1	11.1	88.9
	National Weld Society	1	11.1	11.1	100.0
	Total	9	100.0	100.0	

q36 Extent participation enhanced business prep

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	It was somewhat important	2	22.2	50.0	50.0
	It was extremely important	2	22.2	50.0	100.0
	Total	4	44.4	100.0	
Missing	System	5	55.6		
Total		9	100.0		

q37 Participation assist in your career

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	3	33.3	75.0	75.0
	No	1	11.1	25.0	100.0
	Total	4	44.4	100.0	
Missing	System	5	55.6		
Total		9	100.0		

q38 In what way

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		6	66.7	66.7	66.7
	both. apics is almost as valuable as a degree,,,,,,,,,,,,,shhhhhh, I wont' tell anybody either	1	11.1	11.1	77.8
	contacts	1	11.1	11.1	88.9
	It allowed me to network in my field of study.	1	11.1	11.1	100.0
	Total	9	100.0	100.0	

q39 Have cooperative education/internship

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	1	11.1	11.1	11.1
	No	8	88.9	88.9	100.0
	Total	9	100.0	100.0	

q40 What experience did you have

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		9	100.0	100.0	100.0

q41 Extent the experience enhanced your business career prep

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	It was extremely important	1	11.1	100.0	100.0
Missing	System	8	88.9		
Total		9	100.0		

q42 Would experience have enhanced your career

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	It would have contributed very little	1	11.1	12.5	12.5
	It would have been somewhat important	4	44.4	50.0	62.5
	It would have been extremely important	3	33.3	37.5	100.0
	Total	8	88.9	100.0	
Missing	System	1	11.1		
Total		9	100.0		

q43 Additional comments

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		5	55.6	55.6	55.6
	I enjoyed it and think it has served me well	1	11.1	11.1	66.7
	None	1	11.1	11.1	77.8
	taylor your degrees to the michigan employment enviroment, get a good core, change the rest frequently. You are too static. get creative, take a chance, job markets change frequently. You should have real smart highly paid people who can see this coming and plan accordingly. If you don't then get going. The market and educational needs are changing faster than you are, and if you are satisfied then you're not worth what you are charging the students.	1	11.1	11.1	88.9
	The program was top notch in the 1980's and I hope that it is even better now.	1	11.1	11.1	100.0
	Total	9	100.0	100.0	

Appendix F – Employer Survey



Operations and Supply Management APR - Employer Survey

As a part of the continuing effort to improve the Quality and Supply Management - Bachelor's degree program, the College of Business at Ferris State University periodically conducts a program evaluation. This evaluation includes an advisory board meeting and surveys of present students, graduates, potential employers, and the university community.

As a potential employer of these graduates, your opinion will provide important information in this process. If you would take a few minutes to complete the survey, you would be contributing to the improvement of education at Ferris State University. Please be assured that the confidential information you provide will be anonymous.

1. What is the total number of employees in your organization?
2. What is the number of employees with a Bachelor's in Quality and Supply Management in your organization?
3. Does your organization expect to hire new employees with a Bachelor's in Quality and Supply Management?
 Yes
 No
4. How many?
5. Please list expected position titles and approximate competitive salary offers.

6. Does your organization expect to decrease the number of positions for Bachelor's in Quality and Supply Management?

- Yes
- No

7. How many?

8. How important is it for a Quality and Supply Management graduate to be able to use the following computer applications?

Very Important

- PowerPoint
- Photoshop
- Desktop Publishing
- Excel
- Databases (such as Access)
- Other
- Please Specify:

9. Please indicate other important programs.

10. Please indicate the extent to which each of the following subjects would be helpful to a Quality and Supply Management graduate in their employment with you.

	Extremely Helpful	Very Helpful	Somewhat Helpful	Not Helpful	Should be Eliminated
Public Speaking	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
English	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Math	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Principles of Economics	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Principles of Accounting	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Business Law	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Applied Management	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Principles of Marketing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Introduction to Statistics	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

11. Which subjects would be most important to a Quality and Supply Management graduate in your employment? Why?

12. Which subjects would be least important to a Quality and Supply Management graduate in your employment? Why?

13. Among the objectives of the University is to assist students in the development of certain skills. How

important do you feel these skills are to a Quality and Supply Management graduate in your employment?

Very Important Somewhat Important Not Important

Oral Presentation
Verbal Communication Skills
Writing Skills
Interpersonal Skills
Decision-Making Skills
Analyzing Skills
Leadership Skills
Scientific Understanding
Cultural Awareness/Global Awareness
Quantitative Skills

Financial Analysis/Budgeting
Teamwork Skills
Foreign Language
Other – Please Specify:

- 14.** Please use this space to make any comments about your answers to Question 13.

- 15.** What subjects or skills are most important? Why?

- 16.** What subjects or skills do you think are least important? Why?

- 17.** What suggestions would you have to improve?

- 18.** Would someone from your organization be interested in serving on our advisory board?
 - Yes
 - No

- 19.** Please provide their contact information.

- 20.** Please use this space for additional comments.

Thank you for your time and input.

Appendix G Employer Survey Results

OPSMAPR...Employer

Frequencies

Prepared by: Institutional Research & Testing, 06/12

Statistics

	N		Mean	Median	Std. Deviation
	Valid	Missing			
q1 Total number of employees in your org	9	0			
q2 Number of employees with a Bachelor's in Qual & Supply Mgmt	9	0			
q3 Expect to hire new employees with Bachelor's in Qual & Supply Mgmt	9	0	1.67	2.00	.500
q4 How many	9	0			
q5 Expected position titles/compensation	9	0			
q6 Expect to decrease the number of positions	9	0	2.00	2.00	.000
q7 How many	9	0			
q8.a Microsoft Word	7	2	1.00	1.00	.000
q8.b PowerPoint	7	2	1.29	1.00	.488
q8.c Photoshop	6	3	2.00	2.00	.632
q8.d Desktop Publishing	7	2	2.00	2.00	.816
q8.e Excel	7	2	1.00	1.00	.000
q8.f Databases (such as Access)	6	3	1.50	1.50	.548
q8.g Other	1	8	1.00	1.00	
q8.h Other specified	9	0			
q9 Other important programs	9	0			
q10.a Public Speaking	7	2	1.43	1.00	.787
q10.b English	7	2	1.43	1.00	.535
q10.c Math	6	3	1.50	1.50	.548
q10.d Principles of Economics	5	4	2.40	2.00	1.140
q10.e Principles of Accounting	6	3	2.33	2.00	.816
q10.f Business Law	7	2	2.29	2.00	1.113
q10.g Applied Management	7	2	1.43	1.00	.535
q10.h Principles of Marketing	7	2	2.71	2.00	1.254
q10.i Introduction to Statistics	7	2	2.00	2.00	.577
q11 Subjects most important to grad	9	0			
q12 Subjects least important to grad	9	0			
q13.a Oral Presentation	7	2	1.14	1.00	.378

q13.b Verbal Communication Skills	7	2	1.00	1.00	.000
q13.c Writing Skills	7	2	1.14	1.00	.378
q13.d Interpersonal Skills	7	2	1.00	1.00	.000
q13.e Decision-Making Skills	7	2	1.14	1.00	.378
q13.f Analyzing Skills	7	2	1.14	1.00	.378
q13.g Leadership Skills	7	2	1.00	1.00	.000
q13.h Scientific Understanding	7	2	1.43	1.00	.787
q13.i Cultural Awareness/Global Awareness	7	2	1.57	1.00	.787
q13.j Social Awareness	7	2	1.57	1.00	.787
q13.k Quantitative Skills	7	2	1.29	1.00	.488
q13.l Financial Analysis/Budgeting	7	2	1.71	2.00	.488
q13.m Teamwork Skills	7	2	1.29	1.00	.488
q13.n Foreign Language	7	2	2.29	2.00	.488
q13.o Other	0	9			
q13.p Other specified	9	0			
q14 Comments about answer in q13	9	0			
q15 Subjects or skills are most important and why	9	0			
q16 Subjects or skills are least important and why	9	0			
q17 Suggestions to improve	9	0			
q18 Interested in serving on advisory board	8	1	1.75	2.00	.463
q19 Contact info	9	0			
q20 Additional comments	9	0			

Frequency Table

q1 Total number of employees in your org

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	1	11.1	11.1	11.1
	10	1	11.1	11.1	22.2
	193	1	11.1	11.1	33.3
	20	1	11.1	11.1	44.4
	300	1	11.1	11.1	55.6
	37	1	11.1	11.1	66.7
	45	1	11.1	11.1	77.8
	70	1	11.1	11.1	88.9
	80	1	11.1	11.1	100.0
	Total	9	100.0	100.0	

q2 Number of employees with a Bachelor's in Qual & Supply Mgmt

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	?	1	11.1	11.1	11.1
	0	7	77.8	77.8	88.9
	1	1	11.1	11.1	100.0
	Total	9	100.0	100.0	

q3 Expect to hire new employees with Bachelor's in Qual & Supply Mgmt

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	3	33.3	33.3	33.3
	No	6	66.7	66.7	100.0
	Total	9	100.0	100.0	

q4 How many

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		6	66.7	66.7	66.7
	1	2	22.2	22.2	88.9
	2	1	11.1	11.1	100.0
	Total	9	100.0	100.0	

q5 Expected position titles/compensation

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		6	66.7	66.7	66.7
	Materials Planner 50k-65k Supplier Quality Manager 50k-65k	1	11.1	11.1	77.8
	Quality Assurance Engineer	1	11.1	11.1	88.9
	Quality Manager at \$70k within the next year	1	11.1	11.1	100.0
	Outcoming graduate would be Quality Eng or Tech at \$40k				
	Total	9	100.0	100.0	

q6 Expect to decrease the number of positions for Bachelor's in Qual &

Supp Mgmt

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	9	100.0	100.0	100.0

q7 How many

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		9	100.0	100.0	100.0

q8.a Microsoft Word

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Important	7	77.8	100.0	100.0
Missing	System	2	22.2		
Total		9	100.0		

q8.b PowerPoint

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Important	5	55.6	71.4	71.4
	Somewhat Important	2	22.2	28.6	100.0
	Total	7	77.8	100.0	
Missing	System	2	22.2		
Total		9	100.0		

q8.c Photoshop

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Important	1	11.1	16.7	16.7
	Somewhat Important	4	44.4	66.7	83.3
	Not Important	1	11.1	16.7	100.0
	Total	6	66.7	100.0	
Missing	System	3	33.3		
Total		9	100.0		

q8.d Desktop Publishing

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Important	2	22.2	28.6	28.6
	Somewhat Important	3	33.3	42.9	71.4
	Not Important	2	22.2	28.6	100.0
	Total	7	77.8	100.0	
Missing	System	2	22.2		
Total		9	100.0		

q8.e Excel

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Important	7	77.8	100.0	100.0
Missing	System	2	22.2		
Total		9	100.0		

q8.f Databases (such as Access)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Important	3	33.3	50.0	50.0
	Somewhat Important	3	33.3	50.0	100.0
	Total	6	66.7	100.0	
Missing	System	3	33.3		
Total		9	100.0		

q8.g Other

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Important	1	11.1	100.0	100.0
Missing	System	8	88.9		
Total		9	100.0		

q8.h Other specified

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		8	88.9	88.9	88.9

	E-Filing	1	11.1	11.1	100.0
	Total	9	100.0	100.0	

q9 Other important programs

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		6	66.7	66.7	66.7
	Engineering related programs	1	11.1	11.1	77.8
	MQ1	1	11.1	11.1	88.9
	MS Project to create and articulate timelines	1	11.1	11.1	100.0
	Total	9	100.0	100.0	

q10.a Public Speaking

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Extremely Helpful	5	55.6	71.4	71.4
	Very Helpful	1	11.1	14.3	85.7
	Somewhat Helpful	1	11.1	14.3	100.0
	Total	7	77.8	100.0	
Missing	System	2	22.2		
Total		9	100.0		

q10.b English

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Extremely Helpful	4	44.4	57.1	57.1
	Very Helpful	3	33.3	42.9	100.0
	Total	7	77.8	100.0	
Missing	System	2	22.2		
Total		9	100.0		

q10.c Math

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Extremely Helpful	3	33.3	50.0	50.0
	Very Helpful	3	33.3	50.0	100.0
	Total	6	66.7	100.0	
Missing	System	3	33.3		
Total		9	100.0		

q10.d Principles of Economics

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Extremely Helpful	1	11.1	20.0	20.0
	Very Helpful	2	22.2	40.0	60.0
	Somewhat Helpful	1	11.1	20.0	80.0
	Not Helpful	1	11.1	20.0	100.0
	Total	5	55.6	100.0	
Missing	System	4	44.4		
Total		9	100.0		

q10.e Principles of Accounting

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Helpful	5	55.6	83.3	83.3
	Not Helpful	1	11.1	16.7	100.0
	Total	6	66.7	100.0	
Missing	System	3	33.3		
Total		9	100.0		

q10.f Business Law

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Extremely Helpful	2	22.2	28.6	28.6
	Very Helpful	2	22.2	28.6	57.1
	Somewhat Helpful	2	22.2	28.6	85.7
	Not Helpful	1	11.1	14.3	100.0
	Total	7	77.8	100.0	
Missing	System	2	22.2		
Total		9	100.0		

q10.g Applied Management

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Extremely Helpful	4	44.4	57.1	57.1
	Very Helpful	3	33.3	42.9	100.0
	Total	7	77.8	100.0	
Missing	System	2	22.2		
Total		9	100.0		

q10.h Principles of Marketing

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Extremely Helpful	1	11.1	14.3	14.3
	Very Helpful	3	33.3	42.9	57.1
	Not Helpful	3	33.3	42.9	100.0
	Total	7	77.8	100.0	
Missing	System	2	22.2		
Total		9	100.0		

q10.i Introduction to Statistics

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Extremely Helpful	1	11.1	14.3	14.3
	Very Helpful	5	55.6	71.4	85.7
	Somewhat Helpful	1	11.1	14.3	100.0
	Total	7	77.8	100.0	
Missing	System	2	22.2		
Total		9	100.0		

q11 Subjects most important to a Quality and Supply grad

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		7	77.8	77.8	77.8
	Critical thinking, logic, problem solving	1	11.1	11.1	88.9
	Writing and speaking. I would expect the person to have interface with the customer and be the face of my company, so they would have to represent themselves and the company properly.	1	11.1	11.1	100.0
	Total	9	100.0	100.0	

q12 Subjects least important to a Quality and Supply grad

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		7	77.8	77.8	77.8

	Marketing and Statistics... I don't see them doing alot of those in day to day operations, but a basic understanding of their principles would be helpful.	1	11.1	11.1	88.9
	None	1	11.1	11.1	100.0
	Total	9	100.0	100.0	

q13.a Oral Presentation

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Important	6	66.7	85.7	85.7
	Somewhat Important	1	11.1	14.3	100.0
	Total	7	77.8	100.0	
Missing	System	2	22.2		
Total		9	100.0		

q13.b Verbal Communication Skills

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Important	7	77.8	100.0	100.0
Missing	System	2	22.2		
Total		9	100.0		

q13.c Writing Skills

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Important	6	66.7	85.7	85.7
	Somewhat Important	1	11.1	14.3	100.0
	Total	7	77.8	100.0	
Missing	System	2	22.2		
Total		9	100.0		

q13.d Interpersonal Skills

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Important	7	77.8	100.0	100.0
Missing	System	2	22.2		
Total		9	100.0		

q13.e Decision-Making Skills

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Important	6	66.7	85.7	85.7
	Somewhat Important	1	11.1	14.3	100.0
	Total	7	77.8	100.0	
Missing	System	2	22.2		
Total		9	100.0		

q13.f Analyzing Skills

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Important	6	66.7	85.7	85.7
	Somewhat Important	1	11.1	14.3	100.0
	Total	7	77.8	100.0	
Missing	System	2	22.2		
Total		9	100.0		

q13.g Leadership Skills

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Important	7	77.8	100.0	100.0
Missing	System	2	22.2		
Total		9	100.0		

q13.h Scientific Understanding

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Important	5	55.6	71.4	71.4
	Somewhat Important	1	11.1	14.3	85.7
	Not Important	1	11.1	14.3	100.0
	Total	7	77.8	100.0	
Missing	System	2	22.2		
Total		9	100.0		

q13.i Cultural Awareness/Global Awareness

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Important	4	44.4	57.1	57.1
	Somewhat Important	2	22.2	28.6	85.7
	Not Important	1	11.1	14.3	100.0
	Total	7	77.8	100.0	
Missing	System	2	22.2		
Total		9	100.0		

q13.j Social Awareness

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Important	4	44.4	57.1	57.1
	Somewhat Important	2	22.2	28.6	85.7
	Not Important	1	11.1	14.3	100.0
	Total	7	77.8	100.0	
Missing	System	2	22.2		
Total		9	100.0		

q13.k Quantitative Skills

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Important	5	55.6	71.4	71.4
	Somewhat Important	2	22.2	28.6	100.0
	Total	7	77.8	100.0	
Missing	System	2	22.2		
Total		9	100.0		

Budgeting

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Important	2	22.2	28.6	28.6
	Somewhat Important	5	55.6	71.4	100.0
	Total	7	77.8	100.0	
Missing	System	2	22.2		
Total		9	100.0		

q13.m Teamwork Skills

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Important	5	55.6	71.4	71.4
	Somewhat Important	2	22.2	28.6	100.0
	Total	7	77.8	100.0	
Missing	System	2	22.2		
Total		9	100.0		

q13.n Foreign Language

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Somewhat Important	5	55.6	71.4	71.4
	Not Important	2	22.2	28.6	100.0
	Total	7	77.8	100.0	
Missing	System	2	22.2		
Total		9	100.0		

		Frequency	Percent
Missing	System	9	100.0

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		9	100.0	100.0	100.0

q13

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		7	77.8	77.8	77.8
	Global representation is the best approach... basic professionalism and understanding what is needed or how to get information is the most important	1	11.1	11.1	88.9
	None	1	11.1	11.1	100.0
	Total	9	100.0	100.0	

q15 Subjects or skills are most important and why

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		7	77.8	77.8	77.8
	Communication and critical thinking	1	11.1	11.1	88.9
	See above	1	11.1	11.1	100.0
	Total	9	100.0	100.0	

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		7	77.8	77.8	77.8
	foreign language and scientific understanding... Foreign language can be taught by the company hiring the grad - unless the grad has a specific company and language in mind. We are so global today that if a student takes Spanish, they might end up working with India.	1	11.1	11.1	88.9
	None	1	11.1	11.1	100.0
	Total	9	100.0	100.0	

7 Suggestions to improve

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		7	77.8	77.8	77.8
	None	1	11.1	11.1	88.9
	Teach them to think...the rest comes more easily	1	11.1	11.1	100.0
	Total	9	100.0	100.0	

q18 Interested in serving on advisory board

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	2	22.2	25.0	25.0
	No	6	66.7	75.0	100.0

	Total	8	88.9	100.0	
Missing	System	1	11.1		
Total		9	100.0		

q19 Contact info

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		7	77.8	77.8	77.8
	Daniel Walker, 734-855-5837	1	11.1	11.1	88.9
	Steve Wright Tucker Communications, Inc. 603 N. State St. Big Rapids, MI 49307 231-796-2548	1	11.1	11.1	100.0
	Total	9	100.0	100.0	

q20 Additional comments

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		6	66.7	66.7	66.7
	Hi Dave :-)	1	11.1	11.1	77.8
	Just so you are aware, our department heads consist of the following: Administrator, Human Resources, Operations Manager, Network Administrator and Accounting Supervisor. Thank you.	1	11.1	11.1	88.9
	None	1	11.1	11.1	100.0
	Total	9	100.0	100.0	

Appendix H – Student Survey Instrument



Operations and Supply Management APR - Current Student Survey

As a part of the continuing effort to improve its programs, the College of Business at Ferris State University conducts an evaluation of each program once every six years. We are currently conducting this evaluation for the Quality and Supply Management program. This process includes soliciting input from employers, alumni, current students, and faculty via surveys.

As a current student your input will provide important information to guide us in improving the program. Please take a few minutes to complete the following questionnaire. Please be assured that the information you provide will be kept confidential.

1. Why did you choose to enter into the Quality and Supply Management Degree program? (Please indicate ALL that apply)

- I wanted a four year degree in business
 - I did not know what major in business to select
 - Other
- Please specify:

2. Did you transfer into this program from another university?

- Yes
- No

3. From which University?

4. Did you transfer into this program from another program at Ferris?

- Yes
- No

5. From which program?

6. During the spring semester of 2012, I am enrolled in _____ credit hours at Ferris State University. (Use numbers please.)

7. Are you currently:

- Full-time
- Part-time

8. What do you expect to do after completing your degree in Quality and Supply Management? Please select the option that BEST describes your plan.

- Get a job
- Continue my education at Ferris

Continue my education at another institution
 Other

Please specify:

9. Please specify the institution.

10. Please specify the major.

11. Please indicate your level of agreement with each of the following statements.

Strongly Agree Somewhat Agree Neutral Somewhat Disagree Strongly Disagree

My bachelor's degree
In Quality and Supply
Mgmt will help me
achieve my career goals.

I am satisfied with the
Academic preparation
received in this degree.

I am satisfied with the
The advising received
While in the program.

I would recommend this
program to prospective
students.

This program is a quality
program.

12. Referring to question number 11, please explain why you answered as you did.

13. Please indicate the extent to which you expect each of the following courses in your Quality and Supply Management program to be helpful in your career.

Extremely Helpful, Very Helpful, Somewhat Helpful, Not Helpful, Should be Eliminated, Haven't Taken Yet

Public Speaking (COMM)
English (ENGL)
Math (MATH)
Macro Economics (ECON 221)
Micro Economics (ECON 222)
Principles of Accounting (ACCT)
Business Law (BLAW)
Microcomputer Applications (ISYS)
Applied Management (MGMT)
Principles of Marketing (MKTG)
Introduction to Statistics (STQM)

14. What subjects do you think should be added or improved? Why and in what way?

15. What subject areas do think should be eliminated? Why?

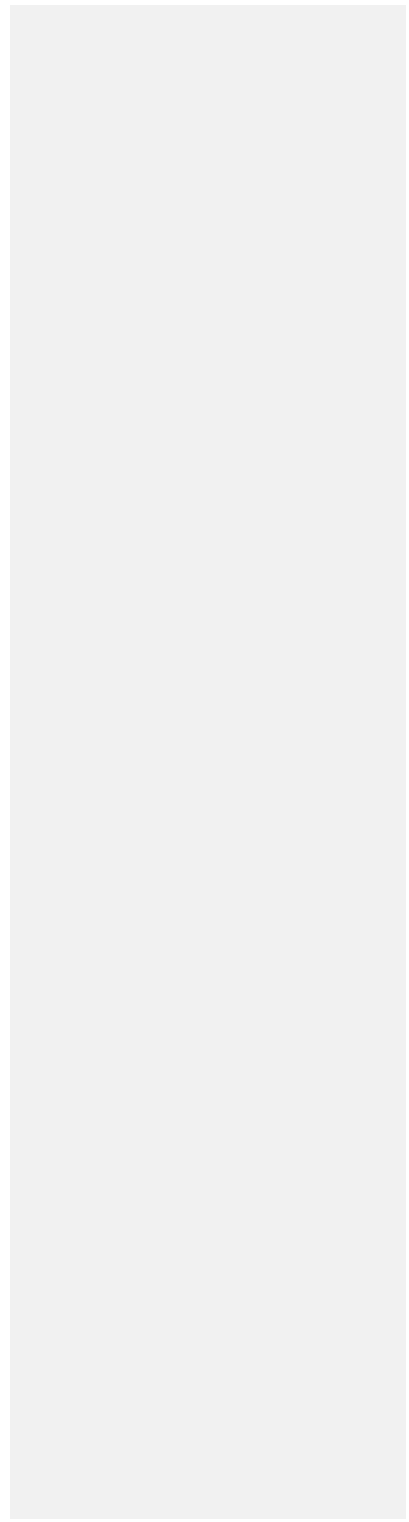
16. Are you involved in any extracurricular activities (such as clubs, fraternities/sororities, sports, RSOs, etc.) at Ferris?

Yes
 No

17. Which ones?

18. Please use this space for additional comments.

Thank you for your time and input.



Appendix I: Student Survey Results

OPSM APR...Current Students

Frequencies

Prepared by: Institutional Research & Testing, 05/12

	Statistics		Mean	Median	Std. Deviation
	Valid	Missing			
q1_1 Choose QSM: I wanted a four year degree in business	4	0	.50	.50	.577
q1_2 Choose QSM: I did not know what major in business to select	4	0	.00	.00	.000
q1_3 Choose QSM: Other	4	0	.50	.50	.577
q1.a Other specified	4	0			
q2 Transfer from another university	4	0	2.00	2.00	.000
q3 Which university	4	0			
q4 Transfer from another FSU program	4	0	1.75	2.00	.500
q5 Which program	4	0			
q6 During 12Sp sem, enrolled in credit hours	4	0			
q7 Currently	4	0	1.00	1.00	.000
q8 Expect to do after completing degree	4	0	1.00	1.00	.000
q8.a Other specified	4	0			
q9 Institution specified	4	0			
q10 Major specified	4	0			
q11.a Degree will help me achieve career goals	4	0	2.25	2.00	.500
q11.b Satisfied w/ acad prep	4	0	2.75	2.50	.957
q11.c Satisfied w/ advising	4	0	1.75	2.00	.500
q11.d Recommend to prospective students	4	0	1.50	1.50	.577
q11.e QSM is quality program	4	0	2.25	2.50	.957
q12 Explain answers	4	0			
q13.a Public Speaking (Comm)	4	0	3.50	3.00	1.915
q13.b English (Engl)	4	0	1.50	1.50	.577
q13.c Math (Math)	4	0	2.00	2.00	.816
q13.d Macro Economics (Econ 221)	4	0	3.25	3.00	.500
q13.e Micro Economics (Econ 222)	4	0	3.25	3.00	.500

q13.f Principles of Accounting (Acct)	4	0	2.00	2.00	.816
q13.g Business Law (Blaw)	4	0	2.75	2.50	1.708
q13.h Microcomputer Applications (Isys)	4	0	3.75	3.50	1.708
q13.i Applied Management (Mgmt)	4	0	2.50	2.50	1.291
q13.j Principles of Marketing (Mktg)	4	0	2.25	2.50	.957
q13.k Introduction to Statistics (Stqm)	4	0	2.75	2.50	.957
q14 Subjects should be added/improved & why/how	4	0			
q15 Subjects should be eliminated & why	4	0			
q16 Involved in extracurricular activities	4	0	1.25	1.00	.500
q17 Which one(s)	4	0			
q18 Additional comments	4	0			

Frequency Table

q1_1 Choose QSM: I wanted a four year degree in business

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not Selected	2	50.0	50.0	50.0
	Selected	2	50.0	50.0	100.0
	Total	4	100.0	100.0	

q1_2 Choose QSM: I did not know what major in business to select

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not Selected	4	100.0	100.0	100.0

q1_3 Choose QSM: Other

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not Selected	2	50.0	50.0	50.0
	Selected	2	50.0	50.0	100.0
	Total	4	100.0	100.0	

q1.a Other specified

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		2	50.0	50.0	50.0
	I wanted to be in this major	1	25.0	25.0	75.0

	I worked in purchasing for a number of years without a degree. I enjoyed working in the supply chain field, but was limited in earnings potential without the leverage of a four year degree.	1	25.0	25.0	100.0
Total		4	100.0	100.0	

q2 Transfer from another university

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	4	100.0	100.0	100.0

q3 Which university

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		4	100.0	100.0	100.0

q4 Transfer from another FSU program

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	1	25.0	25.0	25.0
	No	3	75.0	75.0	100.0
	Total	4	100.0	100.0	

q5 Which program

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		3	75.0	75.0	75.0
	Business Administration with Legal Studies Concentration	1	25.0	25.0	100.0
	Total	4	100.0	100.0	

q6 During 12Sp sem, enrolled in credit hours

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	12	2	50.0	50.0	50.0
	15	2	50.0	50.0	100.0
	Total	4	100.0	100.0	

q7 Currently

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Full-time	4	100.0	100.0	100.0

q8 Expect to do after completing degree

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Get a job	4	100.0	100.0	100.0

q8.a Other specified

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		4	100.0	100.0	100.0

q9 Institution specified

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		4	100.0	100.0	100.0

q10 Major specified

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		4	100.0	100.0	100.0

q11.a Degree will help me achieve career goals

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Somewhat Agree	3	75.0	75.0	75.0
	Neutral	1	25.0	25.0	100.0
	Total	4	100.0	100.0	

q11.b Satisfied w/ acad prep

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Somewhat Agree	2	50.0	50.0	50.0
	Neutral	1	25.0	25.0	75.0

	Somewhat Disagree	1	25.0	25.0	100.0
	Total	4	100.0	100.0	

q11.c Satisfied w/ advising

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	1	25.0	25.0	25.0
	Somewhat Agree	3	75.0	75.0	100.0
	Total	4	100.0	100.0	

q11.d Recommend to prospective students

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	2	50.0	50.0	50.0
	Somewhat Agree	2	50.0	50.0	100.0
	Total	4	100.0	100.0	

q11.e QSM is quality program

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	1	25.0	25.0	25.0
	Somewhat Agree	1	25.0	25.0	50.0
	Neutral	2	50.0	50.0	100.0
	Total	4	100.0	100.0	

q12 Explain answers

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		2	50.0	50.0	50.0
	Having some classes that need to take are un nessacery	1	25.0	25.0	75.0
	The classes in the program are slowly being taken off of the requirements making it difficult to determine what courses will be offered.	1	25.0	25.0	100.0
	Total	4	100.0	100.0	

q13.a Public Speaking (Comm)

		Frequency	Percent	Valid Percent	Cumulative Percent

Valid	Very Helpful	2	50.0	50.0	50.0
	Not Helpful	1	25.0	25.0	75.0
	Haven't Taken Yet	1	25.0	25.0	100.0
	Total	4	100.0	100.0	

q13.b English (Engl)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Extremely Helpful	2	50.0	50.0	50.0
	Very Helpful	2	50.0	50.0	100.0
	Total	4	100.0	100.0	

q13.c Math (Math)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Extremely Helpful	1	25.0	25.0	25.0
	Very Helpful	2	50.0	50.0	75.0
	Somewhat Helpful	1	25.0	25.0	100.0
	Total	4	100.0	100.0	

q13.d Macro Economics (Econ 221)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Somewhat Helpful	3	75.0	75.0	75.0
	Not Helpful	1	25.0	25.0	100.0
	Total	4	100.0	100.0	

q13.e Micro Economics (Econ 222)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Somewhat Helpful	3	75.0	75.0	75.0
	Not Helpful	1	25.0	25.0	100.0
	Total	4	100.0	100.0	

q13.f Principles of Accounting (Acct)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Extremely Helpful	1	25.0	25.0	25.0

	Very Helpful	2	50.0	50.0	75.0
	Somewhat Helpful	1	25.0	25.0	100.0
	Total	4	100.0	100.0	

q13.g Business Law (Blaw)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Extremely Helpful	1	25.0	25.0	25.0
	Very Helpful	1	25.0	25.0	50.0
	Somewhat Helpful	1	25.0	25.0	75.0
	Should be Eliminated	1	25.0	25.0	100.0
	Total	4	100.0	100.0	

q13.h Microcomputer Applications (Isys)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Helpful	1	25.0	25.0	25.0
	Somewhat Helpful	1	25.0	25.0	50.0
	Not Helpful	1	25.0	25.0	75.0
	Haven't Taken Yet	1	25.0	25.0	100.0
	Total	4	100.0	100.0	

q13.i Applied Management (Mgmt)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Extremely Helpful	1	25.0	25.0	25.0
	Very Helpful	1	25.0	25.0	50.0
	Somewhat Helpful	1	25.0	25.0	75.0
	Not Helpful	1	25.0	25.0	100.0
	Total	4	100.0	100.0	

q13.j Principles of Marketing (Mktg)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Extremely Helpful	1	25.0	25.0	25.0
	Very Helpful	1	25.0	25.0	50.0
	Somewhat Helpful	2	50.0	50.0	100.0

	Total	4	100.0	100.0
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q13.k Introduction to Statistics (Stqm)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Helpful	2	50.0	50.0	50.0
	Somewhat Helpful	1	25.0	25.0	75.0
	Not Helpful	1	25.0	25.0	100.0
	Total	4	100.0	100.0	

q14 Subjects should be added/improved & why/how

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		1	25.0	25.0	25.0
	I would like to see more classes were students act out business scenarios. Adding more classes that deal with contract creation and review would be helpful. BLAW 321 is a good start, but we need something that expands on the material learned in that class.	1	25.0	25.0	50.0
	Negotiation Will help as a purchaser manager	1	25.0	25.0	75.0
	The Isys classes need to be improved. Right now they are honestly, a waste of time. The management classes also need to be improved or taken out. We are required to take certain courses and that is fine but you could eliminate ones that are basically the same with very little new information.	1	25.0	25.0	100.0
	Total	4	100.0	100.0	

q15 Subjects should be eliminated & why

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		2	50.0	50.0	50.0
	BLAW bec as an international student that just waste of time And each state have their own law	1	25.0	25.0	75.0
	MGMT 301 seemed like it was all common sense information about management. Most info was covered in higher level management	1	25.0	25.0	100.0

	classes.				
	Total	4	100.0	100.0	

q16 Involved in extracurricular activities

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	3	75.0	75.0	75.0
	No	1	25.0	25.0	100.0
	Total	4	100.0	100.0	

q17 Which one(s)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		1	25.0	25.0	25.0
	Phi Alpha Delta, Pre-Law Fraternity International	1	25.0	25.0	50.0
	Pi Kappa Alpha	1	25.0	25.0	75.0
	Saudi student association	1	25.0	25.0	100.0
	Total	4	100.0	100.0	

q18 Additional comments

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		3	75.0	75.0	75.0
	I would like to see the programs offer more evening and online courses.	1	25.0	25.0	100.0
	Total	4	100.0	100.0	

Appendix J: Faculty Survey Instrument



Operations and Supply Management APR - Faculty Survey

Instructions:

1. Please indicate your level of agreement with each of the following statements. If you have no experience or knowledge of the statement, please leave the item blank.

Strongly Agree Somewhat Agree Neutral Somewhat Disagree Strongly Disagree

The Bachelors in Operations & Supply Management Degree is of benefit to students in the College of Business.

The program curriculum includes courses relevant to the current business practices.

The quality of the Bachelors in Operations & Supply Management Degree at FSU is comparable to the quality found in similar bachelor programs across the country.

There is adequate facilities and equipment to meet the current instructional needs of the program.

The students in the bachelors in Operations & Supply Management Degree receive appropriate course advising.

Students enrolled in the Bachelors in Operations & Supply Management Degree should be required to complete an internship.

There is currently, a sufficient number of tenured track faculty teaching within the program to meet student program needs.

Students graduating with a Bachelors in Operations & Supply Management Degree are prepared to enter the workforce.

2. How long have you been employed at Ferris State University?

- 5 years or less
- 6-10 years
- 11-15 years
- 16-20 years
- 21-25 years
- 26-30 years
- 31 years or more

3. What are the strengths of the current Bachelors in Operations & Supply Management Degree program?

4. What suggestion(s) would you recommend to improve the current Bachelors in Operations & Supply Management Degree?

5. What types of additional equipment or facility needs would enhance student program learning?

6. Please specify the department where you are currently employed.

7. Please use this space for additional comments.

Thank you for your time and input.

Appendix K: Faculty Survey Results

OPSM APR...Faculty

Frequencies

Prepared by: Institutional Research & Testing, 05/12

	N		Mean	Median	Std. Deviation
	Valid	Missing			
q1.a OSM degree of benefit to students in COB	15	0	1.40	1.00	.632
q1.b Curriculum includes courses relevant to current business practices	14	1	1.57	1.00	.756
q1.c Quality comparable to similar progs across country	14	1	1.79	2.00	.802
q1.d Adequate facilities/equipment to meet instructional needs	14	1	2.50	2.00	1.019
q1.e Students receive appropriate course advising	14	1	1.64	1.00	.842
q1.f Students should be required to do internship	15	0	1.80	2.00	.862
q1.g Sufficient number of tenured track faculty	13	2	2.08	2.00	1.038
q1.h Grads prepared to enter workforce	14	1	2.00	2.00	.877
q2 Length of employment at FSU	14	1	3.79	4.00	2.259
q3 Strengths of program	15	0			
q4 Suggestion(s) to improve program	15	0			
q5 Types of equipment or facility needs enhance student prog learning	15	0			
q6 Department	15	0			
q7 Additional comments	15	0			

Frequency Table

q1.a OSM degree of benefit to students in COB

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	10	66.7	66.7	66.7
	Somewhat Agree	4	26.7	26.7	93.3
	Neutral	1	6.7	6.7	100.0
	Total	15	100.0	100.0	

q1.b Curriculum includes courses relevant to current business practices

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	8	53.3	57.1	57.1
	Somewhat Agree	4	26.7	28.6	85.7
	Neutral	2	13.3	14.3	100.0
	Total	14	93.3	100.0	
Missing	System	1	6.7		
Total		15	100.0		

q1.c Quality comparable to similar progs across country

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	6	40.0	42.9	42.9
	Somewhat Agree	5	33.3	35.7	78.6
	Neutral	3	20.0	21.4	100.0
	Total	14	93.3	100.0	
Missing	System	1	6.7		
Total		15	100.0		

q1.d Adequate facilities/equipment to meet instructional needs

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	2	13.3	14.3	14.3
	Somewhat Agree	6	40.0	42.9	57.1
	Neutral	3	20.0	21.4	78.6
	Somewhat Disagree	3	20.0	21.4	100.0
	Total	14	93.3	100.0	
Missing	System	1	6.7		

Total	15	100.0		
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q1.e Students receive appropriate course advising

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	8	53.3	57.1	57.1
	Somewhat Agree	3	20.0	21.4	78.6
	Neutral	3	20.0	21.4	100.0
	Total	14	93.3	100.0	
Missing	System	1	6.7		
Total		15	100.0		

q1.f Students should be required to do internship

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	7	46.7	46.7	46.7
	Somewhat Agree	4	26.7	26.7	73.3
	Neutral	4	26.7	26.7	100.0
	Total	15	100.0	100.0	

q1.g Sufficient number of tenured track faculty

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	5	33.3	38.5	38.5
	Somewhat Agree	3	20.0	23.1	61.5
	Neutral	4	26.7	30.8	92.3
	Somewhat Disagree	1	6.7	7.7	100.0
	Total	13	86.7	100.0	
Missing	System	2	13.3		
Total		15	100.0		

q1.h Grads prepared to enter workforce

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	5	33.3	35.7	35.7
	Somewhat Agree	4	26.7	28.6	64.3
	Neutral	5	33.3	35.7	100.0
	Total	14	93.3	100.0	

Missing	System	1	6.7		
Total		15	100.0		

q2 Length of employment at FSU

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	5 years or less	3	20.0	21.4	21.4
	6-10 years	3	20.0	21.4	42.9
	16-20 years	2	13.3	14.3	57.1
	21-25 years	2	13.3	14.3	71.4
	26-30 years	2	13.3	14.3	85.7
	31 years or more	2	13.3	14.3	100.0
	Total	14	93.3	100.0	
Missing	System	1	6.7		
Total		15	100.0		

q3 Strengths of program

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		10	66.7	66.7	66.7
	do not know.	1	6.7	6.7	73.3
	Great faculty, the program is very current, active advisory board. All of this leads to a high value education with good job prospects.	1	6.7	6.7	80.0
	I have absolutely no knowledge of this program -- not even who teaches the courses.	1	6.7	6.7	86.7
	The application based curriculum. Students learn about the principles, but also have several opportunities to apply those concepts to practice through assignments and projects. This technique assists in preparing the students for the workplace.	1	6.7	6.7	93.3
	Use of guest speakers and plant visits, these help stay away from death-by-powerpoint.	1	6.7	6.7	100.0
	Total	15	100.0	100.0	

q4 Suggestion(s) to improve program

	Frequency	Percent	Valid	Cumulative

				Percent	Percent
Valid		10	66.7	66.7	66.7
	An internship	1	6.7	6.7	73.3
	I do not know.	1	6.7	6.7	80.0
	I have absolutely no knowledge of this program -- not even who teaches the courses.	1	6.7	6.7	86.7
	Just continuous improvement initiatives	1	6.7	6.7	93.3
	Make incoming freshmen more aware of the program and its possibilities.	1	6.7	6.7	100.0
	Total	15	100.0	100.0	

q5 Types of equipment or facility needs enhance student prog learning

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		10	66.7	66.7	66.7
	?	1	6.7	6.7	73.3
	I do not know.	1	6.7	6.7	80.0
	I have absolutely no knowledge of this program -- not even who teaches the courses.	1	6.7	6.7	86.7
	Update the computers and projectors in classrooms.	1	6.7	6.7	93.3
	Update the rooms on third floor with computers and speakers that work consistently. The audio for the equipment is not reliable. This prevents instructors from sharing video clips that enhance the classroom instruction.	1	6.7	6.7	100.0
	Total	15	100.0	100.0	

q6 Department

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		7	46.7	46.7	46.7
	Accounting.	1	6.7	6.7	53.3
	College of Management	1	6.7	6.7	60.0
	Management	5	33.3	33.3	93.3
	Marketing.	1	6.7	6.7	100.0
	Total	15	100.0	100.0	

q7 Additional comments

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		13	86.7	86.7	86.7
	Keep the program. It is a good program and provides a choice for students who enter Ferris and would like to specialize. It does not require a lot of additional resources.	1	6.7	6.7	93.3
	We keep doing these surveys as though they had some meaning. I do not know anything about supply chain management other than it seems to be a pretty good degree. I do not know about the curriculum. I do not know about the books they use. I could not pick a member of the supply chain faculty out of a line up and hope that I never have to. Are you getting my drift yet? I am not saying these things to make bad comments about these good people. We keep sending out these surveys about all of the majors as though just because I happen to be in the College of Business I should know about the operation of a particular program. I do not. I have been doing excessive new preps in my own department because we have been short of people. Even if we were not short of people in Accounting, on what basis would you expect me to be an expert in these diverse areas? These surveys are not worth much.	1	6.7	6.7	100.0
	Total	15	100.0	100.0	

Appendix L: Sample Syllabi

Ferris
State
University

MGMT 370
Spring 2012

Instructor: Dr. Steven B. Lyman

Office Hours: Tuesday/Thursday 8:00-9:30, rm 336. I am online usually every day and I usually respond within 24 to 48 hours with the exception of weekends and holidays.

Contact: 231-591-2469,

E-mail: lymans@ferris.edu or Within Ferrisconnect course (best method)

Course Description:

The course focuses on strategies, processes and techniques used from material acquisition to production and finally through delivery of a product or service. Students will learn about operational efficiency and effectiveness and how this relates to product/service costs. Operations focus on the supply side of the supply and demand relationship where marketing and consumer create demand. Extensive use of discussion related to current topics and publications (Business Week and Wall Street Journal) will be used so students can apply the concepts to real life industries. The student will also develop a working knowledge of what the various issues and concepts are in operations like: Lean Manufacturing, Supply Chain Management, Operation Strategies, Value Stream Mapping, Kaizen, and various elements of Quality from ISO 9000 to Six Sigma.

Learning Objectives and Outcome:

The objective of this course is to develop awareness of current methods used in operations, both in manufacturing and service industries. The general categories of outcome base learning are International, Social/Ethical Responsibility, Sustainable/Environmental, Processes management: Mfg/Service, HR/Organizational Issue, and Technology. Collectively, discussions, problems, and cases, required for this course are intended both to develop as well as to demonstrate student's key competencies as follows:

- Outcome #1: International awareness, understand global operations issues and strategies. This includes global sourcing, logistics, facility location, and environmental/sustainability. Students will be able to define the concerns and conflicts with sourcing from low cost countries. Articulate the reason why companies support international business such as new markets or outsourcing activities.
- Outcome #2: Process management and improvement. Demonstrate knowledge of and ability to apply the tools of process analysis and improvement. Scheduling and control of resources. Tools include project management (CPM), quality improvement (TQM, Six Sigma, ISO9000), process mapping, lean tools (value stream mapping, 5S, TPM). Understand the role of policies and procedures for operational control.
- Outcome #3: Operational strategies. Understand the roles and drivers of operational strategy and the interrelationship to other functional area. Specific strategies to be focused on include capacity, improvement tools, and international operations.
- Outcome #4: Customer service and the expanding role of service operations. Includes relating systems to support customer demands, scheduling, and resources. Understand the role customer contact has on revenue generation, impact quality has, and the role inventory control has.

Outcomes & Measurables	Class projects	Quizzes/Tests	Homework	Special Projects
1) International awareness, understand global operations issues and strategies.	X	X		X
2) Process management and	X	X	X	X

improvement.				
3) Operational strategies; capacity, location, layout/flow, quality and lean.	X	X	X	
4) Customer service and service operations.		X		X

Required Text & Readings:

1) Stevenson, W. J., Operations Management, 2012, 11th edition There are several versions (hardbound and soft cover). Hard Bound ISBN 978-0-07-352525, Soft cover **ISBN 978-0-07-758703 and Connect Software ISBN 978-0-07-758704**. If you buy new look for McGraw-Hill Operations Management Student Value Edition & Connect. You can buy the book on-line (ebook) and Connect for about \$50 each. I recommend buying the used soft cover and going to McGraw Hill Connect and buying Connect Direct. Note: I strongly recommend obtaining this book.

2) In addition, there will be assigned reading for most chapters. These articles will be found with Ferrisconnect, Articles icon on the home page which is a URL link to the Library. These articles will not cost anything and will be part of each chapter's discussions and will enhance understanding.

3) You will need to get access McGraw-Hill Connect with each class having a specific Link:
 Tue-Thur 9:30-10:45: http://connect.mcgraw-hill.com/class/s_lyman_spring_2012_tuethur_930-1045
 Tue_Thur 12-1:15: http://connect.mcgraw-hill.com/class/s_lyman_spring_2012_tuethur_12-115_4
 On-line: http://connect.mcgraw-hill.com/class/s_lyman_spring_2012_fully_on-line_v1_3

Materials for Grading (Please note: all attached documents (excel and word) are to be in Office 2003 version or higher.)

Quizzes: 10 points each, (14 quizzes)	280	(on McGraw-Hill Connect)
On-line Assignments/Homework (10 @ 10 pts)	100	(on McGraw-Hill Connect)
In-class Tests (3 total @ 125 each)	375	
Class Projects	100	
Total points	850	

Grading Scale (these are percentages)

A	94-100	B-	80-83	D+	67-69
A-	90-93	C+	77-79	D	64-66
B+	87-89	C	74-76	D-	60-63
B	84-86	C-	70-73	F	0-59

Note to all Student: Assignments, whether Ferrisconnect or McGraw Hill Connect have due dates, stay current, don't fall behind. If you miss an assignment or quiz, you have one week to notify me after its due date at which time I will reopen (extend) the activity. You will be given 3 day to complete the activity. No not wait until the semester end and expect any consideration.

Chapter Exams/quizzes

Quizzes will be utilized as a measure of your growing understanding. Quizzes are available on-line through McGraw-Hill, with one quiz per chapter. Students may do their quizzes "open book" but remember there is a time limitation. Once you start you must finish, you can't stop and come back later. Time is limited to 60 minutes. Each quiz may be attempted twice. No late or make-up quizzes will normally be accepted. If the computer system does not show your grade, either for quiz or homework, within a day or past the due date please contact me. DO NOT WAIT TILL THE END OF CLASS, I WILL NOT FIX IT AT THAT TIME. All

McGraw-Hill Connect assignment and quizzes will not be reopened past 1 weeks after they close. So notify me no later than one week if you have a problem.

Assignment-Homework

You are required to go into McGraw-Hill Connect and find my section and complete the problems. The due dates are to allow you a time frame to complete the problems so that you will be better prepared to take the quizzes. Most assignment will be 10 points and you can try more than once, so view these as learning points.

In-class Tests: Test will cover several chapters and will tend to be problem (show your work) and short essay regarding topics that interrelated and may also include articles. Testing format are to challenge you and promote and show higher learning (see learning objectives).

In-Class Projects

Throughout the semester I will be assigning questions, articles or problems that each group will be required to answer (10 pts each). Most activities will be conducted during class time. The group will hand in the answer to the instructor for grading with all participating (present) names on one sheet. Only the members who are present and participate will receive credit. I recommend you use examples to illustrate a point when possible.

Articles

Most chapters there are assigned articles. Some will be tested on. The purpose of the articles is to highlight current issues within industry that relates to the specific topic. The articles should also be used to support some of the discussion/responses.

Class Schedule and outcome assessment:

Dates	Topic	Assignment	Measurable Outcomes					
			Process Control	Process Improvement	Operation Strategy	International Operations	Sustainable Business	Customer Service
1/10 & 1/12	Chapter 1: Intro to Operations Management	On-line assignment chpt 1			X		X	X
1/17 & 1/19	Chapter 2: Operations Strategy in a Global Environment	Class project: Case Harley-Davidson (customization of bikes) On-line assignment chpt 2	X		X	X	X	X
1/24 & 1/26	Chapter 3: Forecasting	On-line assignment chpt 3	X		X			X
1/31 & 2/2	Chapter 4: Product & Service design	On-line assignment chpt 4 Class project: House of Quality		X	X		X	X
2/7 & 2/9	Chapter 5: Strategic Capacity Planning	In-class project: Yield Management	X	X	X			
2/14	Test #1	Chapters 1-5						
2/16 & 2/21	Chapter 6: Process Selection and Layout	On-line assignment chpt 6	X		X	X	X	
2/23 & 2/28	Chapter 18, Waiting Lines	On-line Assignment Chpt 18						
3/1 & 3/13	Chapter 8: Location		X			X		X

	Strategies							
3/15 & 3/20	Chapter 9&10: Management of Quality Ch 10 pg 443-449	On-line Assignment chpt 9 Class project: M&M inspection (see articles)	X	X	X	X		
3/20 & 3/22	Chapter 14: JIT and Lean	On-line Assignment chpt 14	X	X	X			
3/27	Test #2	Chapters 6, 8-11						
3/29 & 4/3	Chapter 11: Aggregate Planning 7 MPS	Inclass project,	X		X			
4/10 & 4/12	Chapter 12: MRP and ERP	On-line assignment chpt 12 Class project: MRP	X			X		X
4/17 & 4/19	Chapter 13: Inventory Control		X					X
4/24 & 4/26	Chapter 15: Supply Chain Management	On-line assignment chpt 15 Class Project: supplier selection	X			X	X	
Finals	Test #3	Chapters 11-15						

Links Related to Subject:

Operations and supply management topics and training: www.apics.org
Purchasing and supply management topics and training: www.ismgqr.org or www.napmgrp.org
Logistics and Distribution topics: www.mi-clm.org
Quality Management topics and training: www.asq.org
Quality and Six Sigma topics and training: www.isixsigma.com
Project Management topics and training: www.pmi.org

Final Note

I reserve the right to make needed and appropriate adjustments in this syllabus.

Bio

Dr. Lyman came to FSU's College of Business in May 2002, after teaching for 3 years at Eastern Michigan University and 5 years at Michigan State University. He has taught courses in Industrial Distribution, Quality Management, Purchasing, and Operations Management. Professor Lyman currently teaches courses in Operations Management and Logistics and serves as the faculty advisor the student chapter of American Production and Inventory Control Society (APICS) at FSU.

Prior to his academic endeavors, Steve served in numerous leadership roles in the automotive industry for over 13 years. During his years at General Motors Lansing Assembly, he was an industrial engineer working with suppliers in the Just-In-Time program. More recently, Steve served as Supplier Develop Engineer and later as Buyer and Materials Manager for TRW Commercial Steering Division. His duties included implementing various supply chain management initiatives along with assisting in the installation of SAP, ISO 9000 certification, and lean production.

Steve holds certifications with the American Production and Inventory Control Society (CPIM), Institute of Supply Management (formerly NAPM) (C.P.M.), and with American Society of Quality (CQA). He is also a certified lead auditor for ISO/QS 9000 and has conducted over 20 quality audits. Steve is also an active member of the Decision Sciences Institute and the Society for Case Research. Steve has recently published articles in both in *Inside Supply Management* and *APICS The Performance Advantage*. He has also published in *International Journal of Operations & Production Management* on issues of supply management and also in both the *International Journal of Production Research* and *Simulation* journals.

Appendix M: SAI Summaries

SAI Summary and Utilization: OSM Faculty

There are several questions in the SAI form used for in class instruction at Ferris State University. The objective of this summary and assessment is *not merely to highlight this instructor's performance, but to organize it and utilize the feedback to improve the instruction process where possible*. With that objective, some key questions were selected and collected from the SAI forms. They have been organized into the following categories:

- a. Course Content and Management*
- b. Instructor Effectiveness*
- c. Overall Class Assessment*

COURSE CONTENT AND MANAGEMENT

Q2. Course activities (lectures, projects, etc.) helped me learn the course material.								
Fall 2011					Spring 2012			
Instructor	Course	Section	Freq	Mean	Course	Section	Freq	Mean
Steve Lyman	MGMT 370	004	15	3.80	MGMT 370	004	22	4.45
	MGMT 370	006	25	4.32	MGMT 370	003	27	4.26
David Marion	MGMT 370	005	10	3.10	MGMT 370	005	14	4.43
Carol Rewers					MGMT 370	002	21	4.24
Aggregate Mean				3.74				4.35

Q4. The course was well organized								
Fall 2011					Spring 2012			
Instructor	Course	Section	Freq	Mean	Course	Section	Freq	Mean
Steve Lyman	MGMT 370	004	15	4.36	MGMT 370	004	22	4.36
	MGMT 370	006	25	4.20	MGMT 370	003	27	4.33
David Marion	MGMT 370	005	10	2.70	MGMT 370	005	14	4.57
Carol Rewers					MGMT 370	002	21	4.29
Aggregate Mean				3.75				4.39

Q5. The instructor helped me make connections between the content of this course and real life situations.								
Fall 2011					Spring 2012			
Instructor	Course	Section	Freq	Mean	Course	Section	Freq	Mean
Steve Lyman	MGMT 370	004	15	4.63	MGMT 370	004	22	4.57
	MGMT 370	006	25	4.53	MGMT 370	003	27	4.48
David Marion	MGMT 370	005	10	3.70	MGMT 370	005	14	4.50
Carol Rewers					MGMT 370	002	21	4.43
Aggregate Mean				4.29				4.50

Q9. The instructor gave helpful illustrations and examples in explaining application of the course materials.								
Fall 2011					Spring 2012			
Instructor	Course	Section	Freq	Mean	Course	Section	Freq	Mean
Steve Lyman	MGMT 370	004	15	4.42	MGMT 370	004	22	4.64
	MGMT 370	006	25	4.20	MGMT 370	003	27	4.48
David Marion	MGMT 370	005	10	3.20	MGMT 370	005	14	4.43
Carol Rewers					MGMT 370	002	21	4.48
Aggregate Mean				3.94				4.51

INSTRUCTOR EFFECTIVENESS

Q7. The instructor presented material in a clear and understandable manner.									
	Fall 2011				Spring 2012				
Instructor	Course	Section	Freq	Mean	Course	Section	Freq	Mean	
Steve Lyman	MGMT 370	004	15	4.38	MGMT 370	004	22	4.38	
	MGMT 370	006	25	4.13	MGMT 370	003	27	4.33	
David Marion	MGMT 370	005	10	3.10	MGMT 370	005	14	4.57	
Carol Rewers					MGMT 370	002	21	4.10	
Aggregate Mean				3.87				4.35	

Q10. The instructor seemed to be genuinely interested in what she/he was teaching.									
	Fall 2011				Spring 2012				
Instructor	Course	Section	Freq	Mean	Course	Section	Freq	Mean	
Steve Lyman	MGMT 370	004	15	4.75	MGMT 370	004	22	4.76	
	MGMT 370	006	25	4.53	MGMT 370	003	27	4.67	
David Marion	MGMT 370	005	10	3.90	MGMT 370	005	14	4.79	
Carol Rewers					MGMT 370	002	21	4.57	
Aggregate Mean				4.39				4.70	

Q11. The instructor was well prepared for classes.									
	Fall 2011				Spring 2012				
Instructor	Course	Section	Freq	Mean	Course	Section	Freq	Mean	
Steve Lyman	MGMT 370	004	15	4.40	MGMT 370	004	22	4.45	
	MGMT 370	006	25	4.27	MGMT 370	003	27	4.41	
David Marion	MGMT 370	005	10	3.50	MGMT 370	005	14	4.64	
Carol Rewers					MGMT 370	002	21	4.43	
Aggregate Mean				4.06				4.48	

Q12. I was able to get help in this course if I needed it.									
	Fall 2011				Spring 2012				
Instructor	Course	Section	Freq	Mean	Course	Section	Freq	Mean	
Steve Lyman	MGMT 370	004	15	4.40	MGMT 370	004	22	4.29	
	MGMT 370	006	25	3.87	MGMT 370	003	27	4.11	
David Marion	MGMT 370	005	10	2.70	MGMT 370	005	14	4.71	
Carol Rewers					MGMT 370	002	21	4.43	
Aggregate Mean				3.66				4.39	

Q13. I felt that the instructor put considerable effort into teaching this class.									
	Fall 2011				Spring 2012				
Instructor	Course	Section	Freq	Mean	Course	Section	Freq	Mean	
Steve Lyman	MGMT 370	004	15	4.52	MGMT 370	004	22	4.40	
	MGMT 370	006	25	4.20	MGMT 370	003	27	4.33	
David Marion	MGMT 370	005	10	3.50	MGMT 370	005	14	4.71	
Carol Rewers					MGMT 370	002	21	4.43	
Aggregate Mean				4.07				4.47	

Q15. The instructor displayed an interest in students and their learning.									
	Fall 2011				Spring 2012				
Instructor	Course	Section	Freq	Mean	Course	Section	Freq	Mean	
Steve Lyman	MGMT 370	004	15	4.40	MGMT 370	004	22	4.67	
	MGMT 370	006	25	4.07	MGMT 370	003	27	4.33	
David Marion	MGMT 370	005	10	3.00	MGMT 370	005	14	4.71	
Carol Rewers					MGMT 370	002	21	4.43	
Aggregate Mean				3.82				4.54	

Q17. The instructor was enthusiastic about the subject matter of this course									
	Fall 2011				Spring 2012				
Instructor	Course	Section	Freq	Mean	Course	Section	Freq	Mean	
Steve Lyman	MGMT 370	004	15	4.58	MGMT 370	004	22	4.68	
	MGMT 370	006	25	4.13	MGMT 370	003	27	4.48	
David Marion	MGMT 370	005	10	3.90	MGMT 370	005	14	4.71	
Carol Rewers					MGMT 370	002	21	4.62	
Aggregate Mean				4.20				4.62	

Q17. The instructor was enthusiastic about the subject matter of this course								
Fall 2011					Spring 2012			
Instructor	Course	Section	Freq	Mean	Course	Section	Freq	Mean
Steve Lyman	MGMT 370	004	15	4.58	MGMT 370	004	22	4.68
	MGMT 370	006	25	4.13	MGMT 370	003	27	4.48
David Marion	MGMT 370	005	10	3.90	MGMT 370	005	14	4.71
Carol Rewers					MGMT 370	002	21	4.62
Aggregate Mean				4.20				4.62

Q18. The instructor was receptive to the expression of student views								
Fall 2011					Spring 2012			
Instructor	Course	Section	Freq	Mean	Course	Section	Freq	Mean
Steve Lyman	MGMT 370	004	15	4.42	MGMT 370	004	22	4.52
	MGMT 370	006	25	4.13	MGMT 370	003	27	4.44
David Marion	MGMT 370	005	10	3.40	MGMT 370	005	14	4.71
Carol Rewers					MGMT 370	002	21	4.48
Aggregate Mean				3.98				4.54

OVERALL CLASS ASSESSMENT

Q22. Overall, I rate this an an excellent course.								
Fall 2011					Spring 2012			
Instructor	Course	Section	Freq	Mean	Course	Section	Freq	Mean
Steve Lyman	MGMT 370	004	15	4.08	MGMT 370	004	22	4.33
	MGMT 370	006	25	3.87	MGMT 370	003	27	4.07
David Marion	MGMT 370	005	10	2.56	MGMT 370	005	14	4.21
Carol Rewers					MGMT 370	002	21	3.76
Aggregate Mean				3.50				4.09

Q23. Overall, I rate this instructor as an excellent teacher.								
Fall 2011					Spring 2012			
Instructor	Course	Section	Freq	Mean	Course	Section	Freq	Mean
Steve Lyman	MGMT 370	004	15	4.29	MGMT 370	004	22	4.52
	MGMT 370	006	25	4.07	MGMT 370	003	27	4.19
David Marion	MGMT 370	005	10	3.20	MGMT 370	005	14	4.46
Carol Rewers					MGMT 370	002	21	3.84
Aggregate Mean				3.85				4.25

Commentary on SAI Assessment

A. Course Content and Management

i) Mean scores on linkage of course activities to course material ranged from *3.74 to 4.35 out of a possible maximum of 5*.

ii) Mean scores on linkage of course content to application in real life ranged from *4.29 to 4.50 out of a possible maximum of 5*.

iii) Mean scores on use of examples to explain application of course concepts ranged from *3.94 to 4.51 out of a possible maximum of 5.*

iv) Mean scores on the organization of the course ranged from *3.75 to 4.39 out of a possible maximum of 5.*

The scores indicate that the instructors' methods are providing relevant content covered in class. They are effective at presenting concepts and applying theory to practice.

B. Instructor Effectiveness

i) Mean scores on whether the instructor was clear and presented in an understandable way ranged from *3.87 to 4.35 out of a possible maximum of 5.*

ii) Mean scores on instructor interest in what they were teaching ranged from *4.39 to 4.70 out of a possible maximum of 5.*

iii) Mean scores instructor preparedness ranged from *4.06 to 4.48 out of a possible maximum of 5.*

iv) Mean scores on instructor availability help students outside of class ranged from *3.66 to 4.39 out of a possible maximum of 5.*

v) Mean scores on extent to which instructor put effort into class ranged from *4.07 to 4.47 out of a possible maximum of 5.*

vi) Mean scores on instructor enthusiasm in the subject they were teaching ranged from *4.20 to 4.62 out of a possible maximum of 5.*

vii) Mean scores on instructor receptiveness to the expression of student views ranged from *3.98 to 4.54 out of a possible maximum of 5.*

The scores suggest that the instructors work hard and are enthusiastic about what they teach. They encourage students to express themselves and stay engaged in the learning process.

C. Overall Class Performance

i) Mean scores on the excellence of the course ranged from *3.50 to 4.09 out of a possible maximum of 5.*

ii) Mean scores on the excellence of the instructor as a teacher ranged from *3.85 to 4.25 out of a possible maximum of 5.*

There is consistency in the overall assessment of the class experience and the instructor's performance as teachers. The instructors engage students and encourage continuous learning. They provide appropriate content and associated applications to ensure that the students fully understand how the material can be utilized in a work environment. This approach reinforces/supports the Ferris mission of excellence in teaching, real world application of learning and providing students with the skills for success and lifelong learning.

Analysis and Utilization of SAI Feedback

Changes in assignments, activities in class and examinations are regularly made based on student suggestions and faculty continuous improvement analysis.

Appendix N – TracDat Reports: Program and Course Outcomes

Appendix O – TracDat Reports: Outcome Assessment Results

Appendix P – TracDat Reports: Curriculum Map

**Unit Assessment Report - Four Column

Ferris State University Program - Operations and Supply Management (B.S.)

Mission Statement: The mission of the Operations Management Program is to prepare graduates for careers in the field of business operations. The program combines business and technological disciplines to provide graduates with the requisite skills in both theory and practice.

Purpose

1. To provide students with specific marketable skills in operations management.
2. To assist students in becoming and remaining competitive in an expanding, changing, and complex global economy.
3. To provide students with a background for career advancement and growth as well as personal growth and satisfaction.
4. To provide students with the basis for making decisions using the most appropriate information technology and current techniques while considering the societal and ethical impact of those decisions.
5. To provide students with a foundation of relevant theory, and exposure to contemporary and emerging management practices, and opportunities for application of the concepts.
6. To maintain a timely curriculum that reflects the needs of society, business and the students.
7. To provide students with opportunities for professional and personal growth and development.

Goals

1. To develop students' competency with respect to contemporary and future operations management practices by focusing on relevant theory and practice and providing opportunities for application of the concepts.
2. To develop knowledge and skills for adapting to a dynamic society by integrating a global perspective.
3. To integrate the application of appropriate information technology into the curriculum
4. To ensure faculty development in needed areas, especially in the area of appropriate information technology and alternative teaching methodologies.
5. To encourage students' participation in activities that contributes to their professional and personal growth and development.
6. To increase enrollment and retention in the program.
7. To improve the assessment of student academic outcomes.

Advisory Board/Committee Less than once every two years

Meetings:

Next FSU Academic 2012-2013

Program Review:

Accreditation Body: COB-Accreditation Council for Business Schools and Programs ACBSP

Academic Year of Next 2018-2019

Accreditation Review:

College: COB

Outcomes	Means of Assessment & Criteria for Success / Tasks	Results	Action & Follow-Up
<p>Program - Operations and Supply Management (B.S.) - Process Flow - Students will be able to recognize a process flow as demonstrated by a service or manufactured product</p> <p>Start Date: 09/03/2008</p> <p>End Date: 12/12/2008</p> <p>Outcome Status: Active</p>	<p>Assessment Method: during the class period students will be given the opportunity to demonstrate knowledge of a flow diagram</p> <p>Assessment Method Category: Case Studies/Problem-based Assignments</p>	<p>07/20/2009 - Students formed teams and solved case studies. This was a somewhat guided exercise and some students added really good insights. flow diagrams were understood by at least 65% of the classes.</p> <p>Classification: Criterion Met</p> <p>Action: 1 - No Action Required</p>	
<p>Program - Operations and Supply Management (B.S.) - OSCM 1 - Apply business concepts and practices in creating and maintaining lean supply chains that support strategic goals</p> <p>Outcome Status: Active</p>	<p>Assessment Method: Over one or two semester improvement cycles, program faculty (e.g. program capstone-course faculty) will: (1) target one or two program outcomes; (2) select (e.g. randomly) ten senior capstone course students; (3) select capstone course work demonstrating student competence levels for each targeted outcome; (4) evaluate selected student work as hi, med, low with respect to their performance on selected capstone work related to each targeted outcome; (5) formulate and implement an improvement action plan for each targeted outcome yielding more than four of ten students scoring low.</p> <p>Criterion for Success: At least 60% of students showing med or hi level performance</p>	<p>07/20/2009 - Students have the foundational skills and are moving towards the capstone course.</p> <p>Classification: Inconclusive</p> <p>Action: 2 - Pending Action</p>	
<p>Program - Operations and Supply Management (B.S.) - OSCM 2 - Communicate effectively; including, both oral and written assignments incorporated throughout the program. Graduates must be able demonstrate the ability to present ideas and information in a clear, concise, and effective manner.</p> <p>Outcome Status:</p>	<p>Assessment Method: Over one or two semester improvement cycles, program faculty (e.g. program capstone-course faculty) will: (1) target one or two program outcomes; (2) select (e.g. randomly) ten senior capstone course students; (3) select capstone course work demonstrating student competence levels for each targeted outcome; (4) evaluate</p>	<p>07/20/2009 - Students were further introduced to PowerPoint and Excel in the analysis of business situations in an operations environment. These skills will be assessed at a later date</p> <p>Classification: Inconclusive</p> <p>Action: 2 - Pending Action</p>	

Outcomes	Means of Assessment & Criteria for Success / Tasks	Results	Action & Follow-Up
Active	<p>selected student work as hi, med, low with respect to their performance on selected capstone work related to each targeted outcome; (5) formulate and implement an improvement action plan for each targeted outcome yielding more than four of ten students scoring low.</p> <p>Criterion for Success: At least 60% of students showing med or hi level performance</p>		
<p>Program - Operations and Supply Management (B.S.) - OSCM 3 - Function as a member of a team; both, in the classroom and within a company setting, and demonstrate the ability to work with others and to accomplish tasks.</p> <p>Outcome Status: Active</p>	<p>Assessment Method: Over one or two semester improvement cycles, program faculty (e.g. program capstone-course faculty) will: (1) target one or two program outcomes; (2) select (e.g. randomly) ten senior capstone course students; (3) select capstone course work demonstrating student competence levels for each targeted outcome; (4) evaluate selected student work as hi, med, low with respect to their performance on selected capstone work related to each targeted outcome; (5) formulate and implement an improvement action plan for each targeted outcome yielding more than four of ten students scoring low</p> <p>Criterion for Success: At least 60% of students showing med or hi level performance</p>	<p>07/20/2009 - Teams are formed on a regular basis to enhance communications and the learning experience. At least 60% of the classes are competent in teamwork.</p> <p>Classification: Inconclusive</p> <p>Action: 2 - Pending Action</p>	
<p>Program - Operations and Supply Management (B.S.) - OSCM 4 - Use and apply tools learned in the classroom and in the field, to solve problems and make business decisions. (Tools such as Lean, Six Sigma, and other continuous improvement methods will vary by industry and these tools are expected to change</p>	<p>Assessment Method: Over one or two semester improvement cycles, program faculty (e.g. program capstone-course faculty) will: (1) target one or two program outcomes; (2) select (e.g. randomly) ten senior capstone course students; (3) select capstone course work demonstrating student competence levels for each targeted outcome; (4) evaluate</p>	<p>07/20/2009 - Students get a feel for the overall use of the tools through teamwork, cases, and exercises. As this is the initial stage, no results are evident.</p> <p>Classification: Inconclusive</p> <p>Action: 2 - Pending Action</p>	

Outcomes	Means of Assessment & Criteria for Success / Tasks	Results	Action & Follow-Up
<p>Outcome Status: Active</p>	<p>selected student work as hi, med, low with respect to their performance on selected capstone work related to each targeted outcome; (5) formulate and implement an improvement action plan for each targeted outcome yielding more than four of ten students scoring low.</p> <p>Criterion for Success: At least 60% of students showing med or hi level performance</p>		
<p>Program - Operations and Supply Management (B.S.) - OSCM 5 - Analyze an environment, draw logical conclusions, and demonstrate the ability to make effective decisions; both independently and as part of a cooperative team.</p> <p>Outcome Status: Active</p>	<p>Assessment Method: Over one or two semester improvement cycles, program faculty (e.g. program capstone-course faculty) will: (1) target one or two program outcomes; (2) select (e.g. randomly) ten senior capstone course students; (3) select capstone course work demonstrating student competence levels for each targeted outcome; (4) evaluate selected student work as hi, med, low with respect to their performance on selected capstone work related to each targeted outcome; (5) formulate and implement an improvement action plan for each targeted outcome yielding more than four of ten students scoring low</p> <p>Criterion for Success: At least 60% of students showing med or hi level performance</p>	<p>07/20/2009 - As part of the class, at least 70% were able to accomplish this goal. Although, the real test is yet to be accomplished in the capstone course.</p> <p>Classification: Inconclusive</p> <p>Action: 2 - Pending Action</p>	

Assessment Impact by Unit Objectives

Ferris State University

Program - Operations and Supply Management (B.S.)

Program - Operations and Supply Management (B.S.)

Mission Statement: The mission of the Operations Management Program is to prepare graduates for careers in the field of business operations. The program combines business and technological disciplines to provide graduates with the requisite skills in both theory and practice.

Purpose

1. To provide students with specific marketable skills in operations management.
2. To assist students in becoming and remaining competitive in an expanding, changing, and complex global economy.
3. To provide students with a background for career advancement and growth as well as personal growth and satisfaction.
4. To provide students with the basis for making decisions using the most appropriate information technology and current techniques while considering the societal and ethical impact of those decisions.
5. To provide students with a foundation of relevant theory, and exposure to contemporary and emerging management practices, and opportunities for application of the concepts.
6. To maintain a timely curriculum that reflects the needs of society, business and the students.
7. To provide students with opportunities for professional and personal growth and development.

Goals

1. To develop students' competency with respect to contemporary and future operations management practices by focusing on relevant theory and practice and providing opportunities for application of the concepts.
2. To develop knowledge and skills for adapting to a dynamic society by integrating a global perspective.
3. To integrate the application of appropriate information technology into the curriculum
4. To ensure faculty development in needed areas, especially in the area of appropriate information technology and alternative teaching methodologies.
5. To encourage students' participation in activities that contributes to their professional and personal growth and development.
6. To increase enrollment and retention in the program.
7. To improve the assessment of student academic outcomes.

Advisory Board/Committee Less than once every two years

Meetings:

Next FSU Academic 2012-2013

Program Review:

Accreditation Body: COB-Accreditation Council for Business Schools and Programs ACBSP

Academic Year of Next 2018-2019

Accreditation Review:

College: COB

Outcome: Process Flow

Students will be able to recognize a process flow as demonstrated by a service or manufactured product

Start Date: 09/03/2008

End Date: 12/12/2008

Outcome Status: Active

Means of Assessment			
Assessment Method	Criterion for Success	Assessment Schedule	Active
during the class period students will be given the opportunity to demonstrate knowledge of a flow diagram			Yes
Assessment Method Category: Case Studies/Problem-based Assignments			

Related Courses

- INTB 320 - International Logistics
- MGMT 370 - Quality-Operations Mgmt

Results			
Result	Action	Follow-Up	Action
Case Studies/Problem-based Assignments - 07/20/2009 - Students formed teams and solved case studies. This was a somewhat guided exercise and some students added really good insights. flow diagrams were understood by at least 65% of the classes. Classification: Criterion Met			1 - No Action Required

Outcome: OSCM 1

Apply business concepts and practices in creating and maintaining lean supply chains that support strategic goals

Outcome Status: Active

Means of Assessment			
Assessment Method	Criterion for Success	Assessment Schedule	Active
Over one or two semester improvement cycles, program faculty (e.g. program capstone-course faculty) will: (1) target one or two program outcomes; (2) select (e.g. randomly) ten senior capstone course students; (3) select capstone course work demonstrating student competence levels for each targeted outcome; (4) evaluate selected student work as hi, med, low with respect to their performance on selected capstone work related to each targeted outcome; (5) formulate and implement an improvement action plan for each targeted outcome yielding more than four of ten students scoring low.	At least 60% of students showing med or hi level performance		Yes

Related Courses

- MGMT 370 - Quality-Operations Mgmt

Results			
Result	Action	Follow-Up	Action
07/20/2009 - Students have the foundational skills and are moving towards the capstone course. Classification: Inconclusive			2 - Pending Action

Outcome: OSCM 2

Communicate effectively; including, both oral and written assignments incorporated throughout the program. Graduates must be able demonstrate the ability to present ideas and information in a clear, concise, and effective manner.

Outcome Status: Active

Means of Assessment			
Assessment Method	Criterion for Success	Assessment Schedule	Active
Over one or two semester improvement cycles, program faculty (e.g. program capstone-course faculty) will: (1) target one or two program outcomes; (2) select (e.g. randomly) ten senior capstone course students; (3) select capstone course work	At least 60% of students showing med or hi level performance		Yes

Means of Assessment			
Assessment Method	Criterion for Success	Assessment Schedule	Active
demonstrating student competence levels for each targeted outcome; (4) evaluate selected student work as hi, med, low with respect to their performance on selected capstone work related to each targeted outcome; (5) formulate and implement an improvement action plan for each targeted outcome yielding more than four of ten students scoring low.			

Related Courses

- INTB 320 - International Logistics
- MGMT 370 - Quality-Operations Mgmt

Results			
Result	Action	Follow-Up	Action
07/20/2009 - Students were further introduced to PowerPoint and Excel in the analysis of business situations in an operations environment. These skills will be assessed at a later date Classification: Inconclusive			2 - Pending Action

Outcome: OSCM 3

Function as a member of a team; both, in the classroom and within a company setting, and demonstrate the ability to work with others and to accomplish tasks.

Outcome Status: Active

Means of Assessment			
Assessment Method	Criterion for Success	Assessment Schedule	Active
Over one or two semester improvement cycles, program faculty (e.g. program capstone-course faculty) will: (1) target one or two program outcomes; (2) select (e.g. randomly) ten senior capstone course students; (3) select capstone course work demonstrating student competence levels for each targeted outcome; (4) evaluate selected student work as hi, med, low with respect to their performance on selected capstone work related to each targeted outcome; (5) formulate and implement an improvement action plan for each targeted outcome yielding more than four of ten students scoring low	At least 60% of students showing med or hi level performance		Yes

Related Courses

- INTB 320 - International Logistics
- MGMT 370 - Quality-Operations Mgmt

Results			
Result	Action	Follow-Up	Action
07/20/2009 - Teams are formed on a regular basis to enhance communications and the learning experience. At least 60% of the classes are competent in teamwork. Classification: Inconclusive			2 - Pending Action

Outcome: OSCM 4

Use and apply tools learned in the classroom and in the field, to solve problems and make business decisions. (Tools such as Lean, Six Sigma, and other continuous improvement methods will vary by industry and these tools are expected to change over time)

Outcome Status: Active

Means of Assessment			
Assessment Method	Criterion for Success	Assessment Schedule	Active
Over one or two semester improvement cycles, program faculty (e.g. program capstone-course faculty) will: (1) target one or two program outcomes; (2) select (e.g. randomly) ten senior capstone course students; (3) select capstone course work demonstrating student competence levels for each targeted outcome; (4) evaluate selected student work as hi, med, low with respect to their performance on selected capstone work related to each targeted outcome; (5) formulate and implement an improvement action plan for each targeted outcome yielding more than four of ten students scoring low.	At least 60% of students showing med or hi level performance		Yes

Related Courses

- MGMT 370 - Quality-Operations Mgmt

Results			
Result	Action	Follow-Up	Action
07/20/2009 - Students get a feel for the overall use of the tools through teamwork, cases, and exercises. As this is the initial stage, no results are evident. Classification: Inconclusive			2 - Pending Action

Outcome: OSCM 5

Analyze an environment, draw logical conclusions, and demonstrate the ability to make effective decisions; both independently and as part of a cooperative team.

Outcome Status: Active

Means of Assessment			
Assessment Method	Criterion for Success	Assessment Schedule	Active
Over one or two semester improvement cycles, program faculty (e.g. program capstone-course faculty) will: (1) target one or two program outcomes; (2) select (e.g. randomly) ten senior capstone course students; (3) select capstone course work demonstrating student competence levels for each targeted outcome; (4) evaluate selected student work as hi, med, low with respect to their performance on selected capstone work related to each targeted outcome; (5) formulate and implement an improvement action plan for each targeted outcome yielding more than four of ten students scoring low	At least 60% of students showing med or hi level performance		Yes

Related Courses

- INTB 320 - International Logistics
- MGMT 370 - Quality-Operations Mgmt

Results			
Result	Action	Follow-Up	Action

Results			
Result	Action	Follow-Up	Action
07/20/2009 - As part of the class, at least 70% were able to accomplish this goal. Although, the real test is yet to be accomplished in the capstone course.			2 - Pending Action
Classification: Inconclusive			

Program - Operations and Supply Management (B.S.) - Curriculum Map

Legend: (A) - Program Assessment, (I) - Introduced, (M) - Mastery, (R) - Reinforced

Outcomes	AC CT 201	AC CT 202	AC CT 205	BL AW 321	BU SN 499	CO MM 105	CO MM 121	EC ON 221	EC ON 222	EN GL 150	EN GL 250	EN GL 311	EN GL 325	FIN C 322	INT B 320	ISY S 321	MA TH 115	MA TH 116	MF GE 354	MG MT 301	MG MT 370	MG MT 430	MG MT 490	MK TG 321	MK TG 466	STQM 260	
Process Flow															I, R						A, I, R						
OSCM 1																						A, I, R					
OSCM 2															R							A, R					
OSCM 3															R							A, R					
OSCM 4																						A, I, R					
OSCM 5															R							A, I, R					