Bachelor of Science in Operations Management

Degree Proposal

Decision and Information Sciences Department
School of Business Administration

Revised

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Overview

The Bachelor of Science in Business Administration with a major in Operations Management (OM) program intends to provide a strong managerial and technical education to those interested in the field of Operations Management (e.g., manufacturing planning and control, supply-chain management, project management, and total quality management). The degree is intended to provide students with the fundamental knowledge they need to work effectively in operation functions as well as advanced knowledge about best practices, current technologies, tools and their applications, and leadership skills necessary to operate in a globally diverse and competitive marketplace. This program will fill a distinct void in the Michigan education system; it will provide Oakland University (OU) with an opportunity to become a leader in the state in OM education and will help promote the role and mission of the university

The Decision and Information Systems (DIS) Department of the School of Business Administration (SBA) will offer this degree program. The DIS Department represents three distinct disciplines: Operations Management (OM),[1] Management Information Systems (MIS), and Quantitative Methods (QMM). Presently, the department offers an undergraduate major only in MIS, although minors are presently offered in OM and QMM.

The OM faculty within the DIS Department includes four full-time members. The OM faculty within the DIS Department has teaching and research interests in the areas around which the proposed program is configured, such as manufacturing planning and control, supply-chain management, project management, total quality management, and the development of effective operations strategies. This will allow the faculty to teach and continue to do research in these areas, thus contributing to synergy between teaching and research and enabling the OM faculty to deliver a superior undergraduate program.

In addition to the four OM faculty, there are additional faculty members within the department, within in the SBA, and in other University units that will be contributing to the proposed degree offering. The proposed degree program will utilize course offerings outside the DIS department, in both of Oakland University's SBA and School of Engineering and Computer Science (SECS) as possible program electives. *No additional Full-Time Faculty Equivalents (FTE's) are required to provide this program at this time.*

I. Rationale

Nationwide, many business schools, including two in Michigan, offer undergraduate OM degrees to meet the continuing needs of business. Oakland University, because if its

[1] The terms Operations Management (OM) and Production Operations Management (POM) are used interchangeably throughout this proposal. The current trend is to refer to the area as Operations Management rather than Production Operations Management to reflect a broader area of study that includes service operations as well as manufacturing.

current course content, and it's location in the southeast Michigan manufacturing environment, has the unique opportunity to offer an excellent OM program to meet the operations management requirements of both regional and state economies. OU's OM major will be unique in that it will offer curriculum content that spans the life cycle from idea conception to recycling and reclamation while emphasizing important contemporary issues such as Lean Systems and Processes, Project Management, and Quality Management. Although the proposed program offers traditional Operations Management content, it is in these current initiatives that industry is investing its resources. It is these differences that will create a distinctive program for OU.

There are both a regional and a state need for this program. Critical aspects of the proposed OM program, including need, how the program will help promote the role and mission of the university, the goals of the program and its role within the DIS curriculum, a comparison to regionally similar programs, and the anticipated source of students, are each discussed below.

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a. Need for the program

Oakland University is positioned in close proximity to automotive firms such as Daimler-Chrysler, General Motors, Ford, Visteon, Delphi, Lear, Johnson Controls, Federal Mogul and the vast number of related parts producers that make up the automotive supply chain. Michigan's economic reliance on these firms suggests that meeting the needs for well trained and qualified professionals in Operations Management is a real opportunity for Oakland University. Furthermore, as the state of Michigan attempts to diversify its economy and lessen its reliance upon automotive firms, the need for trained and qualified professionals in Operations Management will only be intensified. Ongoing discussions at the highest levels of state government suggest a greater reliance upon industries such as bio-tech, health care, communications technology, and others, all of which indicate an expanding future for Operations Managers.

Regardless of the nature of the firm, manufacturing or service, Operations is one of the three primary business disciplines. These three primary business disciplines, Marketing, Finance and Operations, are needed in all businesses; large, small, private, public, manufacturing and service firms. In addition to Michigan's automotive presence, there is a vast health care and emerging technology presence in southeastern Michigan. As the state attempts to lessen its reliance on automotive firms, the diversity of businesses will only expand in coming years. The proposed major will serve the needs of all of these industries.

The extensive automotive supply chain, health care industry, and emerging technology emphasis as well as business initiatives such as Automation Alley, the Oakland Technology Park, create a compelling reason for Oakland University to create and maintain a contemporary OM educational program that will train future industry executives and managers in the use of the current practices and technologies. Given the

increasing competition within the global marketplace today, these future managers and executives will be called upon to initiate strategic and cost saving programs such as *lean* and *flexible* operating systems, managing and collaborating within an extended global supply chains, managing and coordinating rapid product/service design and development, and integrating enterprise resource planning technologies, all of which are considered state of the art OM initiatives. Global competition and the detrimental effect upon the US economy due to the loss of manufacturing jobs, clearly demonstrates the increasing importance and a compelling reason for trained and qualified professionals in Operations Management.

The OM program described in this proposal will help meet the current and future educational needs emphasizing initiatives which will continue to be a strategic focus of the operations function in the numerous manufacturing and service firms in close geographic proximity to Oakland University.

Oakland University's Strategic Plan 1995-2005 noted that undergraduate education is central to Oakland University's mission. Undergraduate education is a key area of commitment. This proposed program would provide for a major that offers a distinctive competence. The proposed program will offer coverage of contemporary content, as well as emerging initiatives ranging from rapid product design and development through the life cycle of a product to recycling and reclamation. Curriculum content such as *lean* initiatives, *n-tier* supply chain management, and project (program) management highlight the distinctive offering of the proposed program. The courses that will comprise the proposed program are depicted in Figure 1 and are described in Section III of this proposal.

In addition, this program supports a current, important strategic initiative of Oakland University in its 10-year plan. In a February 2001 presentation (*2010 Oakland University Profile*), President Russi indicated that a goal of the University is to promote initiatives with an "automotive focus." This proposed major supports that goal. The compelling and distinctive nature of this in-state program combined with Oakland University's location and support of important several strategic initiatives all make it appropriate to offer the proposed degree.

Further support for the proposed program comes from the lack of competing in-state OM degree programs. This lack affords Oakland University the opportunity to offer a program tailored to the growing and future needs of the surrounding economy. This program will also allow interested students an in-state opportunity. Further discussion of similar programs, particularly programs within the state, is found below in Appendix B..

b. How the program will help promote the role and mission of the university

Developing a program that teaches both aspiring and practicing business professionals the latest developments in Operations Management will help promote and advance the role and mission of Oakland University in its support of *"learners for 21st century."*

This major is consistent with Strategies 1, 5 and 6 of the Oakland University Strategic Plan:

> Strategy 1: *Oakland views undergraduate education as central to its mission and will ensure an environment of learning excellence in order to educate a diverse body of students to be productive, contributing members of society*.

Currently, the SBA offers degree programs with majors in functional business disciplines including accounting, economics, finance, human resources, management, management information systems, and marketing. One exception is operations management, a **core** functional discipline within all businesses. This major will expand the range of majors the SBA offers.

For many years, the SBA has been offering OM courses at both the undergraduate and graduate levels and in addition *requires* an introductory OM survey course in these programs. The SBA currently offers an Undergraduate minor and a concentration in OM at the MBA level. Our ability to offer this major at this time is due to the addition of a fourth OM faculty member faculty in the Fall of 2004. Initially, no additional FTE's are needed to support a major. And, at this time, all of the courses necessary for the major have been developed, and are presently being offered.

> Strategy 5: *Oakland views community outreach as an integral component of its activities, and will expand its efforts to serve the community consistent with the university's mission and vision.*

In an effort to promote a program with a distinctive competence, the DIS Department has created and worked with its Advisory Board to review the program proposal and curricular issues, and to assist efforts for creating a unique learning opportunity. Examples of the proposed program's outreach effort based upon this collaboration include: (1) curriculum content which addresses current strategic industry implementation imperatives, and (2) an initiative to encourage and help undergraduate students obtain spring/summer internship positions. The OM faculty is keenly aware that internships provide valuable experience. These internship positions will advance program objectives promoting effective management the operations function as well as advancing knowledge about world-class practices, current technologies, current tools and their applications and leadership skills necessary to operate in a globally diverse and competitive marketplace.

> Strategy 6: *Oakland will develop and support areas of institutional excellence and distinction that contribute to national eminence.*

As recognized above, support one argument in favor of the proposed program the lack of similar in-state OM degree programs. This lack offers Oakland University the opportunity to offer a program tailored to the growing needs of the regional and state economies. Working with its Advisory Board, the DIS Department has designed a program with a distinctive competence that will contribute to Oakland University's

national eminence. The proposed program goes beyond offering traditional OM curriculum content. It addresses state-of-the-art curriculum content including *lean* and *flexible* operating systems, managing and collaborating within an extended supply chain, managing and coordinating rapid product design and development, and integrating enterprise resource planning technologies (see Appendix D for example course descriptions).

It is also anticipated that two important University initiatives will further enhance the distinctive competence of this proposed program. One of these initiatives being developed by the University is the Pawley Institute and its focus on lean learning. The second of these initiatives is "Life Cycle Product Development Program" being developed by the SBA in conjunction with the Society of Automotive Engineers. OM faculty in the DIS Department participate in both of these initiatives. Among other things, these initiatives will enhance the participating OM faculty members' ability to introduce and to maintain leading edge curriculum content. Furthermore, those faculty members recognize the importance of practical work experience and will work with the Advisory Board, with participating business within these initiatives, and with businesses in the surrounding economy to promote spring/summer internship opportunities. The DIS Department and members of its Advisory Board believe this proposal offers a program that will contribute to Oakland University's continued success.

This major is also consistent with Oakland University's Creating the Future Final Report. A stated goal of this initiative is: "To help the university become a comprehensive learner-centered, *technology-enriched* institution in the years to come." This program will promote the advanced knowledge about the world-class practices. In doing so, current and state-of-the-art technologies, current and state-of-the-art tools and their applications, as well as the leadership skills necessary to operate in a globally diverse and competitive marketplace will be emphasized.

This major is also consistent with the Mission of the School of Business Administration:

> *The mission of the SBA is to advance knowledge and enhance students' abilities to manage in a global business environment. The mission is achieved through a synergistic combination of teaching, scholarship and professional service with emphasis on the linkage of theory and practice, and the application and management of technology. Toward the achievement of these ends, the SBA promotes collaborative relationships among students, faculty, staff, administrators, and employers.*

It is imperative that the SBA offer programs that assist and develop the growing needs of those that are working in business today. The local and regional economies and the automotive industry in particular will support the global best practices emphasis of this program.

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c. Goals of the program and its role within the DIS curriculum

The undergraduate Operations Management major proposed by the SBA will pursue four key goals. Each of these is discussed below. (Appendix A provides an additional statement of the objectives of the OM curriculum within the SBA.)

1. A management core that will promote a goal of an integrative, cross-disciplinary exposure to the foundations of a business. This includes the subjects of accounting, economics, finance, human resource management, general management, management information systems, marketing as well as operations management.

2. A variety of elective courses that will promote a goal to enable students to improve their ability to apply contemporary operations principles and practices in support of strategic, tactical and operational decision making in a wide variety of business settings.

3. A variety of elective courses that will promote a goal to enable students to expand upon their skill set through an examination of leading edge principles, practices, and technologies. Achievement of this goal will promote the distinctive competence of the program in the form of curriculum content that examines state-of-the-art business initiatives.

4. A capstone course, which will promote a goal of integrating student learning from the variety of elective courses chosen in support of the need to manage global firms for competitive advantage.

Although the DIS Department is composed of the three distinctive functional disciplines (OM, MIS, and QMM) as previously identified, it offers only one major course of studies. Offering a major in OM would expand the departmental offerings to two majors.

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d. Comparison to regionally similar programs

There is a highly variable range of programs that serve the OM-related needs of business and technical professionals. Only two four-year business schools in Michigan offer undergraduate OM degrees. The most comprehensive in-state program is offered by Central Michigan University in Mount Pleasant, MI. The nearest, most comprehensive out-of-state program is offered by Bowling Green State University in Bowling Green, OH. The comprehensive nature of these two programs is measured in terms of the breadth of their curriculum. (Appendix B) highlights the characteristics of Central Michigan University, Bowling Green State University, as well as several other in-state programs.) Neither of these programs offers curriculum content that spans the life cycle from idea conception to recycling and reclamation that the proposed program offers. Neither of these programs offers the range of curriculum content from Lean Systems and

Processes, to Project Management, to Quality Management, and other electives as this proposed program offers. Although the proposed program offers traditional Operations Management content, it is in these state-of-the-art initiatives that industry is investing current resources. It is these differences that will create a distinctive program.

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e. The source of students

There are several sources of students that may choose to major in Operations Management. First, there have historically been approximately 4-6 students annually that minor in Operations Management. School of Business graduation records indicate that four POM minors were earned in 2003/04, one POM minor was earned in 2004/05, and three POM minors were earned in fall 2005. Without question, several of these may have chosen the OM major had it been offered. Second, potential majors will undoubtedly be drawn from students that have an undecided major. Third, it is possible that students may enroll at Oakland University as a result of the proposed program who would have registered at one of the universities that currently offer an Operations Management degree as noted in Appendix B.

To gain a better understanding of the potential demand for the program, a brief survey was undertaken of 130 undergraduate students in the SBA. 41% of the respondents said they would have considered an OM major at the time of their decision if it had existed. 2% said they would have majored on OM. These figures suggest that an initial starting group of 10 – 15 students would not be an unreasonable goal given that the SBA has 2000 undergraduate students of which about 700 are undecided majors. Of those who said they would have considered the major, most chose MIS or Marketing as their major.

Over time, the acceptance of the major should increase *total* student enrollment and should make Oakland University more attractive to prospective students because it can better serve their complete educational needs. As shown in Section IV of this proposal, it is anticipated that approximately 30 students will be in the program after a 5-year start up period.

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f. Impact on other SBA Programs

It is difficult at best to speculate on how the proposed program will impact other SBA programs. On the positive side, it should complement all existing majors. Business must be conducted in a collaborative fashion. It takes the input from professionals in all disciplines given the globally competitive marketplace. Currently, the SBA is lacking a program in one of the primary functional areas of business: Operations Management. The addition of this program will fill this gap and provide prospective students more flexibility in their choice of majors.

On the negative side, the number of students majoring in any degree program tends to follow the job opportunities. These job opportunities cycle over the years. For example, the recent decline in students majoring in Management Information Systems may in part be explained by the dramatic decrease in job opportunities. Given the expected placement success of Operations Management students, it is conceivable that this success may draw a small number of students away from other prospective majors.

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II. Self-Study of the Academic Unit

a. How the goals of the unit are served

The addition of this program is consistent with the objectives of the department's undergraduate OM minor as well as the concentration in OM in the MBA program. These objectives are articulated in Appendix A. Furthermore, as previously stated, the addition of this program is consistent with the mission of the SBA.

The focus of the proposed program is intended to provide students with both state-of-the art as well as the fundamental knowledge they need to manage the operations function effectively. The degree is intended to provide students with advanced knowledge about the world-class practices, current technologies, current tools and their applications, and leadership skills necessary to operate in a globally diverse and competitive marketplace.

The mix of the course offerings will allow students the ability to pursue both strategic elements as well as highly technical aspects of the OM discipline. Our intention is to provide students with an appropriate blend of knowledge concerning world-class practices, current technologies, current tools and their applications, and leadership skills.

b. Staffing needs

Currently there are four full-time, tenure-track faculty members in the OM area of the DIS Department. They possess all necessary qualifications. All have doctoral degrees in OM. As a group they provide an appropriate mix of both managerial and technical skills related to OM. There are additional departmental as well as University faculty that will contribute to the proposed degree. A brief profile of the OM faculty is found below, and complete vitae for these faculty members are included in Appendix C.

Initially, the program can be implemented with the existing faculty. An analysis of full time faculty equivalents (FTEs) is included in Appendix E. As can be seen in this analysis there will be sufficient faculty to cover fall and winter semesters.

Reliance upon adjunct faculty, similar to levels used by the current departmental program offerings, may be required for Spring/Summer staffing requirements. This is especially true in the event faculty members pursue research opportunities. In the future, as

enrollment numbers increase, further faculty positions may be sought, but this is not anticipated prior to program implementation.

c. The faculty qualifications

The current OM faculty within the DIS Department has the necessary skill set to offer the proposed undergraduate program. The program is built around the strength of the faculty, both in terms of their teaching and research interests. As the program grows, the SBA will have to consider further faculty positions and will look for individuals that both complement and augment the current faculty. Brief profiles of the SBA faculty expected to contribute regularly to the new degree program are included below. Complete vitae for the OM faculty are included in Appendix C.

1. School of Business Administration OM Faculty Profiles

Henry Aigbedo is an Assistant Professor of Production and Operations Management in the School of Business Administration at Oakland University in Michigan. He received his Ph.D. in Management Science and Engineering from the University of Tsukuba, Japan. Prior to joining Oakland University, he was on the faculty at the University of Tsukuba and Iowa State University. Dr. Aigbedo has acquired valuable experience through work/research at companies in Nigeria, Japan, and the United States. His research interests include Just-In-Time and Lean systems, Supply Chain Management, and Quality Management. He has published in these areas and has also made presentations at national and international conferences. In addition to addressing issues in the production and operations management area, his work encompasses the interface with other areas of business such as management information systems, logistics, and marketing. Dr. Aigbedo has taught Operations Management, Supply Chain Management and Manufacturing Planning and Control at both the undergraduate and graduate level. He is an active member of several professional organizations including, Decision Sciences Institute, Institute of Industrial Engineers, Institute for Operations Research and Management Sciences, and Japan Industrial Management Association.

Gene Fliedner, CFPIM, is an Associate Professor of Operations Management. He received his D.B.A. degree in Operations Management from Indiana University. He is certified at the Fellows level by the American Production and Inventory Control Society (APICS). Dr. Fliedner's teaching interests focus on operations planning and control, lean systems and processes, supply chain management, and project management. He has taught three POM elective courses (POM 441: Operations Planning and Control; POM 448: Project Management; and POM 480: Supply Chain Management) as well as the introductory undergraduate Operations Management class (POM 343) and graduate Operations Management class (POM 521). Dr. Fliedner's research interests focus on family forecasting systems and supply chain collaboration. His research appears in journals such as *Decision Sciences*, the *Journal of Operations Management*, *Computers and Operations Research*, *International Journal of Production Research*, *European Journal of*

Operational Research, the *International Journal of Forecasting*, the *Production and Inventory Management Journal* and *Industrial Management and Data Systems*.

Joseph Schiele is an Assistant Professor of Operations Management. He received his Ph.D. from the Richard Ivey School of Business, University of Western Ontario, Canada. Dr. Schiele's teaching interests include Manufacturing Strategy and Supply Chain Management. He is the author of over 15 case studies in the Operations Management area. Dr. Schiele's current research focus is on public procurement. He has published numerous articles in the area of purchasing and procurement. Dr. Schiele has also consulted for several Fortune 500 companies including Siemens International, the Intel Corporation, and Navistar International in the areas of purchasing and supply management.

T.J. Wharton, CPIM, is an Associate Professor of Operations Management. He received his Ph.D. from the University of Minnesota in operations management. His current research includes work on problem structuring in decision-making and manufacturing practices that enhance process improvement. He has taught Operations Management, Manufacturing Planning and Control and Statistical Methods at both the undergraduate and graduate levels Dr. Wharton has published and presented numerous papers in the above areas as well as in areas of statistical process control, distribution inventory management and flexibility and automation in manufacturing. Dr. Wharton is a past chair of the Operations Management Division of the Academy of Management. He has also been active in the Decision Sciences Institute and the Educational Society for Resource Management (APICS).

2. Additional Contributing DIS Faculty

Mark Isken is an Associate Professor in the Decision and Information Sciences Department. He received his Ph.D. in Industrial and Operations Engineering from the University of Michigan. Dr. Isken's teaching interests focus on operations research/management science, computer simulation and stochastic modeling, and health care systems analysis. Dr. Isken specializes in applications of management science and information technology in health care delivery systems. He has taught Healthcare Operations Management in the EMBA-HCM program for the past three years and has taught graduate and undergraduate courses in spreadsheet modeling. Dr. Isken's current research interests include personnel scheduling models, stochastic modeling of health care related systems, and decision support systems. He was a practicing operations researcher for two large local health care systems for several years and has consulted with numerous healthcare organizations. He has published in a number of academic journals including *Annals of Operations Research, Health Care Management Science, IEEE Transaction on Systems, Man and Cybernetics,* and the *Journal for the Society of Health Systems.*

Karl Majeske is an Assistant Professor of Quantitative Methods. He received a B.S., M.S., and Ph.D. degree in Industrial and Operations Engineering from the University of Michigan in 1985, 1991 and 1995, respectively. Dr. Majeske's

research interests include automotive body manufacturing, warranty and reliability data analysis, and developing methodologies to evaluate measurement systems. Karl has published research articles in a variety of journals including: *International Journal of Production Economics, Reliability Engineering and System Safety, Journal of Manufacturing Processes, the International Journal of Flexible Manufacturing Systems, and Quality Engineering.* Dr. Majeske has presented technical papers at conferences including The Institute for Operations Research and Management Science (INFORMS), the Annual Reliability and Maintainability Symposium (RAMS), and the American Society for Quality Fall Technical Conference. Karl is a member of INFORMS and the Decision Sciences Institute (DSI). Dr. Majeske teaches courses in Business Statistics, Management Science, Statistical Quality Control and Six Sigma.

David Doane is Professor of Quantitative Methods. He earned his Ph.D. in economics at Purdue University's Krannert Graduate school of Industrial Management. He has been co-recipient of three National Science Foundation educational grants to develop software for teaching statistics and to create an experimental computer classroom. He has served as Department Chair and Area Head. He is an active member of the American Statistical Association and INFORMS, and is the 2002 President-elect of the Detroit ASA Chapter. His interests include applied statistics, forecasting, and statistical education. He has consulted with government, health care organizations, and local firms. He regularly reviews for professional journals. He is a software developer and author/co-author of two textbooks. His research has appeared in *College Mathematics Journal, The American Statistician, Journal of Information Technology, Valuation, Property Tax Journal, Journal of Comparative Economics, The Justice System Journal, Michigan Law Review, Explorations in Economic History, Journal of Education for Business,* and *Journal of Statistical Education*.

These faculty profiles show that faculty members are doing research in all the curricular areas described in this proposed Undergraduate program.

d. Library holdings

To enhance the library holdings in the area of Operations Management, $15,000 has been budgeted -- $5,000 per year for the first three years of the program. The OM faculty will work closely with their library liaison to determine the best way to allocate these funds.

e. Classroom, laboratory and/or studio space

We do not anticipate the need for any specialized classroom facilities beyond the classroom needs of the courses already being offered. There is no need for specialized classroom facilities beyond the existing Elliott Hall facilities. Access to a computer classroom will be important to the major and the current facilities are adequate to support the projected enrollments.

f. Equipment

No additional equipment will be requested beyond those purchased through the current maintenance and renewal policies of computer hardware for the SBA. There may be a need for some specialized software, as curriculum content is developed to further the educational experience. Examples of such development may include the use of industrial production scheduling, inventory control, or quality analysis software that may be used to simulate operational environments. A modest amount of money is included in the proposed budget (see Section IV) for this expense.

III. Program Plan

a. Degree requirements

The proposed degree program consists of 18-20 credit hours of advanced, elective Operations Management courses in addition to the prerequisite 4-credit Operations Management course, which is an integral component of the School of Business Administration's core program.

The specific degree requirements are outlined below. Students must be admitted to major standing in business administration to proceed with the OM major.

Operations Management as an Undergraduate Major

Writing and General Education:	32 Credits
Precore: (RHT 150, RHT 160, COM 201 or 202, ACC 200, ACC 210, MIS 200 or CSE 125, MTH 121, MTH 122, ECN 200, ECN 201 or ECN 210, QMM 250)	46-48 Credits
Core: (ENG 382, ECN 303, MKT 302, ORG 330, FIN 322, MIS 300, MGT 350, ORG 331, MGT 435)	31 Credits

Major Requirements for the B.S. in Operations Management

In addition to university general education requirements and the business pre-core and core programs, the requirements for a major in Operations Management are:

Operations Management Core

POM 343: Production/Operations Management

Major Required Courses

POM 443: Operations Planning and Control
POM 450: Operations Strategy (Major Capstone Course)

Electives Group A (choose at least three of these courses)

POM 440/540: Process Management[1]
POM 442/542: Supply Chain Management[1, 2]
POM 448/548: Project Management[1]
POM 480: Special Topics in Operations Management
POM 490: Independent Study

QMM 440/540: Management Science[1]
QMM 452/552: Forecasting[1]

Electives Group B (choose at most one of these electives)

MIS 420: E-Commerce
MIS 442: IS Issues in Supply Chain Management[2]
MIS 444: Simulation in Management

ACC 320: Managerial and Cost Accounting II

IES 477: Concurrent Engineering
IES 484: Flexible Manufacturing Systems
IES 485: Statistical Quality Control

A total of 4 electives are required from the above.

1 Initially cross-listed with Graduate course with capacity of up to 30 students.

2 Only one of these two may be taken.

As noted above, many of the elective courses for the major will initially be cross-listed with the comparable graduate course. This will be necessary to achieve minimum class size. These electives have a capacity of 30 students, thus providing enough capacity to cover the initial projected number of students in the major as well as the MBA concentration. We believe that cross-listing these courses elevates the educational experience gained by the undergraduate students since graduate level standards are maintained in the courses.

All of the electives listed above with the POM rubric are in the current catalog.

Sample course outlines can be found in Appendix D. It is important to note that global and lean concepts are integrated throughout the curriculum. For example, POM 440 - Process Management, has as its primary focus lean concepts for continuous improvement.

An assessment plan for the program has been filed and approved by the University Assessment Committee. This document is included with the supporting documentation for this proposal.

b. Admission criteria

Students must comply with the requirements for admission to major standing in business administration, as specified in the undergraduate catalog.

c. New internal procedures required to support the program

The SBA Office of Undergraduate Academic Advising will manage processes for admissions, advising services, and graduation auditing.

d. Sample curriculum

Appendix F provides an example of a sample curriculum.

e. New courses

Initially, no new courses will be added to the curriculum. Process Management (POM 440) has been taught only as an MBA elective (POM 680). It will be offered to undergraduate students in the Winter 2006. Operations Strategy (POM 445) is listed in the course catalog but has not been taught in a number of years. It will be offered as a capstone, intensive writing class in the Winter term as required to support this proposed degree program.

Although they represent a slight increase in current FTE requirements, these two courses, can be easily covered through the reallocation of resources within the DIS department without requiring additional faculty or part-time instructors over current levels. This is demonstrated in the FTE Analysis of Appendix E. All of the POM rubric courses listed in **Section a**. **Degree requirements**, will be taught on a regular basis.

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f. Support of other departments

Students may choose to select an elective from course offering outside the DIS department, in both of Oakland University's SBA and SECS. It is considered that there is sufficient capacity for support from these areas.

g. Recruiting plans

The undergraduate program will be advertised by the SBA through mailings to alumni, ATiB affiliates, local industry contacts, and through local professional associations. Recruiting efforts would also go in tandem with those for the MBA program, which has experienced increasing enrollments over the past several years. Efforts will be made to recruit minorities and international students for the program.

h. Planned enrollment levels

It is anticipated that the program will start with 8-12 students in year one, 12-20 total students in year two, 15-25 total students in year three, 20-30 total in year four, and 30 total in year five. We estimate, based on an assessment of similar programs and our survey of students, a steady state of 15 students per starting class within five years of starting the program.

As mentioned previously, initially some of the electives may be cross-listed with the graduate equivalents. This may be necessary to achieve the minimum level of students needed to hold a class during the startup phase of the program. As the number of students increases, we will be able separate the undergraduate and graduate classes.

i. The need for graduate assistants

Initially, no graduate assistants will be needed. In the budget we have planned for one graduate assistant starting in year 3 to help as the program grows.

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IV. Needs and Costs of the Program

a. Additional resources for the program

b. Anticipated revenues for the program

Anticipate revenues as well as expenses for anticipated resources are highlighted in the proposed budget below.

Proforma Income Statement
Program Title: Operations Management (OM)
Program Type: New Program
Year #: 1
Incremental Analysis
Fund Number: New

		Year I Budget Request	Year II Budget Request	Year III Budget Request
Revenue Variables:				
Headcount		8	12	15

Total Credit Hours		15	15	15
Undergraduate		120	180	225
Graduate		0	0	0
Tuition Rate Per Credit Hour		0	0	0
Undergraduate		$ 224.75	$ 224.75	$ 224.75
Graduate		$ -	$ -	$ -
General Service Fee				
Activity/Recreation Fee				
Course Fees				
Revenue				
Tuition		$ 26,970.00	$ 40,455.00	$ 50,568.75
General Service Fee		$ -	$ -	$ -
Activity/Recreation Fee		$ -	$ -	$ -
Course Fees		$ -	$ -	$ -
Total Revenue		**$ 26,970.00**	**$ 40,455.00**	**$ 50,568.75**
Expenses	**ACCT**			
Salaries/Wages				
Faculty Inload (Replacement Costs)	6301	$ 6,000.00	$ 9,000.00	$ 9,000.00
Faculty Salaries	6101	$ -	$ -	$ -
Faculty Overload	6301	$ -	$ -	$ -
Part-time Faculty	6301	$ 6,000.00	$ 9,000.00	$ 9,000.00
Visiting Faculty	6101	$ -	$ -	$ -
Administrative	6201	$ -	$ -	$ -
Administrative - IC	6221	$ -	$ -	$ -
Clerical	6211		$ -	$ -
Wages	6401	$ -	$ -	$ -
Student	6501	$ 1,000.00	$ 2,000.00	$ -
Graduate Assistant	6311	$ -	$ -	$ 4,500.00
Out of Classification	6401	$ -	$ -	$ -
Overtime	6401	$ -	$ -	$ -
Total Salary Expenses		*$ 13,000.00*	*$ 20,000.00*	*$ 22,500.00*
Fringe Benefits	6701	$ 993.00	$ 1,489.50	$ 1,489.50
Total Salary and Fringe Benefits		***$ 13,993.00***	***$ 21,489.50***	***$ 23,989.50***
Operating Expenses				
Supplies and Services	7101	$ 3,000.00	$ 5,000.00	$ 5,000.00
Graduate Assistant Tuition	7101	$ -	$ -	$ 6,900.00
Travel	7201	$ -	$ -	$ -
Telephone	7301	$ -	$ -	$ -
Equipment	7501	$ -	$ -	$ -
Library	7401	$ 3,000.00	$ 3,000.00	$ 3,000.00
Total Operating Expenses		***$ 6,000.00***	***$ 8,000.00***	***$ 14,900.00***
Total Expenses		$ 19,993.00	$ 29,489.50	$ 38,889.50
Net Income/Loss		$ 6,977.00	$ 10,965.50	$ 11,679.25

Less Fees		$ -	$ -	$ -
Total Available for Distribution		$ 6,977.00	$ 10,965.50	$ 11,679.25
Net Expense Percentage		0.741305154	0.728945742	0.769042146
FYES		**4**	**6**	**7.5**

This budget has been reviewed and approved by the Senate Budget Committee.

V. Implementation

The program can be in place as early as fall semester 2006, pending approval. The curriculum is already in place and the schedule can be changed to accommodate a fall start date. Appendix F shows a scheduling template that incorporates the new program into the schedule with our existing programs starting in the fall of 2006. Start time can be modified based upon timing of final approval of the program.

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Appendix A: Goals and Objectives of the OM Curriculum

The focus of the proposed program is intended to provide students with fundamental knowledge they need to effectively manage the operations function (manufacturing planning and control, supply-chain management, project management, and total quality management). The objectives of the proposed degree are intended to provide students with advanced, integrative knowledge about the world-class practices, current technologies, current tools and their applications, and leadership skills necessary to operate in a globally diverse and competitive marketplace.

The proposed OM degree program has four key goals:

- First, the business management core will provide students with an integrative, cross-disciplinary exposure to the foundations of a business. This includes the subjects of accounting, economics, financial, human resources, general management, management information systems, marketing as well as operations management.
- Second, a variety of elective courses will be offered that will allow students to improve their ability to apply operations principles and practices in support of strategic, tactical and operational decision making in a wide variety of business settings.
- Third, a variety of elective courses offered that would allow students to expand upon their skill set through an examination of leading edge principles, practices, and technologies.
- And fourth, a capstone course will serve to integrate student learning from the variety of elective courses chosen to support the need for operations knowledgeable student to meet the needs of global firms for competitive advantage

The mix of the course offerings will allow students the ability to pursue both strategic elements as well as highly technical aspects of the Operations Management discipline. The intention is to provide students with an appropriate blend of the two over the entire life cycle of both products and services.

A cooperative, integrative approach, involving faculty from all disciplines within the School and Business Administration as well as other campus units, most prominently being the School of Engineering and Computer Science, will be utilized. This approach will facilitate a cross-disciplinary exposure to the foundations of a business. It is hoped that this cooperative approach will stimulate additional, mutually beneficial opportunities.

Appendix B: Comparison to Similar Operations Management Programs

There is a highly variable range of programs that serve the Operations Management related needs of business and technical professionals. The most comprehensive in-state program is offered by Central Michigan University in Mount Pleasant, MI. Wayne State University also offers an OM major in their business school. The nearest, most comprehensive out-of-state program is offered by Bowling Green State University in Bowling Green, OH.

Noted below are highlights of the Central Michigan University, Bowling Green State University, as well as several of other in-state programs.

Central Michigan University Operations Management Major (30 Total Semester hours):

A. Additional Common Body of Knowledge in Business and Administration Courses (9 Hours):

BLR 202 (3) Legal Environment of Business
MGT 340 (3) Productions / Operations Management
MGT 495 (3) Global Management Strategy

B. Required Courses (12 hours):

MGT 333 (3) Purchasing Management
MGT 335 (3) Introduction to Management Science
MGT 543 (3) Management and Control of Quality
MGT 545 (3) Operations Strategy

C. Elective Courses (9 hours):

MGT 320 (3) Human Resource Management
MGT 442 (3) Computer Applications for Production/ Operations Management
MGT 446 (3) Industrial Relations
MGT 542 (3) Inventory and Materials Management
MKT 330 (3) Distribution of Channel Systems
MKT 431 (3) Logistics Operations
MKT 432 (3) Logistics Strategy
MKT 565 (3) Supply Chain Management
ACC 321 (3) Managerial Cost Accounting
IET 375 (3) Robotics
IET 524 (3) Technology and Environment
IET 527 (3) Industrial Safety Management

Bowling Green State University Operations Management Major: The specific requirements as of Fall 2002 for the Production and Operations Management specialization are 18 credit hours comprised of the following four required courses (12 hours):

MGMT 441 Quality Management and Process (3 credits)
MGMT 442 Supply Chain Management (3 credits)
MGMT 445 Production Planning and Control (3 credits)
MGMT 449 Problems in Production and Operations Management (3 credits)

Plus:

MGMT 330 Purchasing and Supplier Management (3 credits)
MGMT 430 Purchasing and Price/Cost Analysis (3 credits)

Or:

MGMT 361 Human Resource Management (3 credits)
MGMT 456 Managing Productivity, Employee Involvement and Reward Systems (3 credits)

Or: two courses (6 credit hours) approved in advance by advisor, in any **one** of the following areas: ACCT, CS, MFG, MIS, or STAT.

Eastern Michigan University: no program in operations management, College of Technology offers several Industrial Technology undergraduate programs

Michigan State: offers a major in Supply Chain Management only

Northern Michigan University: no program in operations management

University of Michigan (Ann Arbor): only offers two undergraduate operations management courses

University of Michigan at Dearborn: offers a concentration in Management in which operations management electives may be chosen

Walsh College: no POM major, offers only 1 operations management course

Wayne State University: offers a major in Operations Management, consisting of the following five required courses:

ISM 5680: Operations Strategy in a Global Environment
ISM 5996: Advanced Topics in Operations Management
MGT 5510: Advanced Organizational Theory
MGT 5530: Advanced Organizational Behavior
MGT: 6995: Seminar in Management

And one elective from the following:

MKT 5600: Transportation and Distribution Management
MKT 5620: Business Logistics Management
Acc 5160: Cost Accounting

Western Michigan: offers a major in Integrated Supply Management by its Industrial and Manufacturing Engineering School in conjunction with College of Business

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Appendix C: Faculty Vitae

Ctrl+Click to view Vitae:

Aigbedo Isken Wharton
Fliedner Schiele Return to Table of Contents

Name: Henry Aigbedo
Department: Decision and Information Sciences
Rank: Assistant Professor
Date: August 2005

EDUCATION

DEGREE	INSTITUTION	DATE
Ph.D. Management Science & Engineering	University of Tsukuba, Japan	1998
M.S. Management Science & Engineering	University of Tsukuba, Japan	1995
M.S. Mechanical Engineering	University of Lagos, Nigeria	1989
B.S. Mechanical Engineering	University of Ibadan, Nigeria	1983

PROFESSIONAL EMPLOYMENT RECORD

1. Teaching

INSTITUTION	RANK	DATES	STATUS
Oakland University	Assistant Professor	8/15/2001~Present	Full-time
Oakland University	Visiting Assistant Professor	8/15/2000~8/14/2001	Full-time
Iowa State University	Visiting Assistant Professor	8/15/1999~5/15/2000	Full-time
University of Tsukuba, Japan	Assistant Professor	4/1/1998~8/15/1999	Full-time
Federal Univ. Tech., Minna, Nigeria	Lecturer	8/2/1991~10/1/1997	Full-time/Leave
State Polytechnic, Birnin-Kebbi, Nigeria	Lecturer	11/15/1983~8/2/1991	Full-time/Leave

2. Other (Industry Training)

Bordpak Premier Packaging Company, Lagos, Nigeria 4/1/1982~9/31/1982

National Electric Power Authority (Power Station), Sapele, Nigeria 7/1/1981~9/31/1981

Nigeria Ports Authority, Maintenance Facility, Warri, Nigeria 7/1/1980~9/31/1980

PUBLICATIONS

Articles

Refereed (Peer-Reviewed) Journal Publications

- Aigbedo, H., 2004, Analysis of parts requirements variance for a JIT supply chain, *International Journal of Production Research,* 42 (2), 417-430.

- Aigbedo, H. and Tanniru, M., 2004, Electronic markets in support of procurement processes along the automotive supply chain, *Production Planning and Control*, 15 (7), 688-695.

- Aigbedo, H. and Parameswaran, R., 2004, Importance-performance analysis for improving quality of campus food service, *International Journal of Quality and Reliability Management,* 21 (8), 876-896.

- Zeramdini, W., Aigbedo, H., and Monden, Y., 2000, Bicriteria sequencing for JIT mixed-model assembly lines, *International Journal of Production Research,* Vol.38, pp. 3451-3470.

- Aigbedo, H., 2000, Some structural properties for the just-in-time level schedule problem, *Production Planning and Control*, Vol. 11, pp. 357~362.

- Zeramdini, W., Aigbedo, H., and Monden, Y., 2000, Sequencing cars in JIT mixed-model assembly lines: A two-phase method. *Journal of Japan Industrial Management Association*, Vol. 60, No. 6, pp. 456~463,

- Aigbedo, H. and Monden, Y., 1997, A parametric procedure for multicriterion sequence scheduling for just-in-time mixed-model assembly lines, *International Journal of Production Research*, Vol. 35, pp. 2543~2564.

- Aigbedo, H. and Monden, Y., 1996, A simulation analysis for two-level sequence scheduling for just-in-time mixed-model assembly lines, *International Journal of Production Research*, Vol. 34, pp. 3104~3124.

Book Chapters

Refereed (Peer-Reviewed) Book Chapter Publications

- Aigbedo, H., 2005, Enhancing competitiveness of B2B and B2C E-commerce, in Khosrow-Pour, Mehdi (Ed.) *Encyclopedia of Information Science and Technology*, (pp. 1063-1069), Idea Group Publishing.

- Aigbedo, H., 2004, Managing operations in the e-commerce era: requirements and challenges, in Gupta, J. and Sharma, S. (Ed.) *Intelligent Enterprises for the 21st Century*, (pp. 281-301). Idea Group Publishing.

- Monden, Y. and Aigbedo, H., 2001, Just-In-Time and kanban scheduling, in *Maynard Industrial Engineering Handbook*, pp. 9.63-9.86, Kjell Zandin (Ed.), McGraw Hill.

Editor-Reviewed Book Chapter Publications

- Aigbedo, H., 2000, Just-In-Time and its cost reduction framework, in *Japanese Cost Management*, pp. 205-228, Yasuhiro Monden (Ed.), Imperial College Press, London. (Series in Technology Management)

- Aigbedo, H. and Monden, Y., 1999, Contribution on: Beam Search, Cycle Time, Discrete Product Manufacturing, Evolutionary Computations, Kanban, Line-balancing, Production Smoothing, and Sequencing, *Encyclopedia of Industrial Engineering*, Anil Mital (Ed.), published by the Journal of Industrial Engineering, CD-ROM

PRESENTATIONS

Refereed Conference Proceedings

- Aigbedo, H. and Parameswaran, R., 2004, Using attributes importance and performance information to improve food service quality, *Proceedings of the 35th Decision Sciences Institute Conference*, (November), Boston, MA.

- Aigbedo, H., 2003, The effect of supply frequency on some parts requirements variance metrics for a JIT supply chain, *Proceedings of the 9th International Conference on Industry, Engineering, and Management Systems*, pp. 434-439, (March), Cocoa Beach, FL.

- Aigbedo, H., 2003, Mass customization and suppliers' inventory level in a supply chain, *Proceedings of the 34th Decision Sciences Institute Conference*, (November), Washington, DC.

- Aigbedo, H., 2001, Assessment of service quality and customer satisfaction, *Proceedings of the Midwest Decision Sciences Institute Conference*, pp. 11 ~ 13**,** (April), Dearborn, MI.

- Aigbedo, H., 2000, On customer-based aggregate evaluation measures for service operations, *Proceedings of the National Decision Sciences Institute Conference*, pp. 1251, November, Orlando, FL. [Abstract only]

- Aigbedo, H., 1999, On time span variance in parts supply in a JIT assembly system, *Proceedings of the National Decision Sciences Institute Conference,* pp. 1100, November, New Orleans, LA. [Abstract only]

- Zeramdini, W., Aigbedo, H., and Monden, Y, 1999, Using genetic algorithms for sequencing mixed-model assembly lines to level parts usage and workload, *Proceedings of the 2nd Asia Pacific Conference on Industrial Engineering and Management Systems*, pp. 589-592, October, Kanazawa, JAPAN.

- Aigbedo, H., 1999, A probabilistic search algorithm to simultaneously smooth parts usage and assembly workload, Proceedings *of the5th International Decision Sciences Institute Conference*, pp. 1683 ~ 1687, July, Athens, GREECE.

- Zeramdini, W., Aigbedo, H., and Monden, Y, 1997, A hybrid method for sequencing for JIT mixed-model assembly lines, *Proceedings of the Production Scheduling Symposium*, pp. 37 ~ 42, October, Tokyo, JAPAN.

- Aigbedo, H., 1996, On the multi-staging heuristic for determining product sequences for just-in-time final assembly lines, Proceedings *of the 6th International Federation of Information Processing (IFIP) Conference*, pp. 243 ~248, October, Kyoto, JAPAN.

- Aigbedo, H., 1996, A decision framework for bicriterion sequencing for just-in-time mixed-model assembly lines, Proceedings *of the1st Asia-Pacific Conference of the Decision Sciences Institute*, pp. 507 ~ 514, June, Kowloon, HONG KONG.

- Monden, Y. and Aigbedo, H., 1995, Coordination of multiple goals in sequence scheduling for mixed-model assembly lines. *Proceedings of the Production Scheduling Symposium*, pp. 199 ~ 204, October, Tohoku University, JAPAN.

- Monden, Y. and Aigbedo, H., 1994, Some experimental findings on the multi-goal sequencing problem for JIT mixed-model assembly lines, *Proceedings of the Production Scheduling Symposium*, pp. 209 ~ 214, October, Tokyo, JAPAN.

Non-Refereed Presentations

- Aigbedo, H. and Parameswaran, R., 2004, Importance-performance maps and service quality improvement. *Decision and Information Sciences Research Seminar Series*, (November), Rochester, MI.

- Aigbedo, H., 2003, Managing an automotive supply chain: Some models, methods, and research issues. *Colloquium series of OU Mathematics department*, (March), Rochester, MI.

- Aigbedo, H., 2003, Crafting a strategy for manufacturing success through mass customization. *Decision and Information Sciences Research Seminar Series*, (November), Rochester, MI.

- Aigbedo, H., 2002, Analysis of product-based and parts-based schedules in two-stage just-in-time supply chains, *Institute for Operations Research and Management Sciences (INFORMS) conference*, (November), San Jose, CA.

- Tanniru, M., Aigbedo, H., Setzekorn, K. 2002, Supply chain management research: A strategy and preliminary observations, *Fifth ATiB Fall Conference on Managing Information Technologies*, (October), Rochester, MI.

- Aigbedo, H., 2002, On benchmarking the quality of services, *Production and Operations Management (POMS) conference*, (March), San Francisco, CA.

- Aigbedo, H., 2001, Supply chain management: Issues and Challenges, *Fourth ATiB Fall conference on Managing Information Technologies*, (October), Rochester, MI.

- Monden, Y. and Aigbedo, H., 1999, Some mathematical programming models for the just-in-time assembly sequencing problem. *Research Forum*, Tsukuba, JAPAN.

RESEARCH IN PROGRESS

- Aigbedo, H. "An assessment of the effect of mass customization on suppliers' inventory levels in a JIT supply chain"

- Aigbedo, H. "On bills of materials structure and optimum product-level smoothing of parts usage in JIT assembly systems"

- Aigbedo, H. "A functional analysis for JIT assembly systems with zero-one bills of materials"

- Aigbedo, H. and Monden, Y. "Smoothing parts consumption on JIT assembly lines by incorporating the product-rate preservation objective"

- Aigbedo, H. "The impact of mass customization on supply chains"

- Aigbedo, H. "A note on part demand distributions and mass customization in just-in-time systems."

GRANTS

- Modeling the effects of mass customization on inventory-related costs in a multi-echelon supply chain, SBA, 2004, ($7,000)

- A framework on how internet exchanges can provide value to supply chain participants. SBA, 2002, ($7,000)

- A comparative analysis of assembly line scheduling procedures for minimizing inventory levels of parts outsourced to vendors, 2001, OU, ($7,500)

- Heuristic-based scheduling procedures for just-in-time mixed-model assembly University of Tsukuba, 1998, (about $5,000)

SERVICE

<u>Departmental</u>

- Chair, Department Research Seminar Committee (2004-2005)

- Member, POM/QMM curriculum committee

- Member, Recruitment Committee for Operations Management positions (2002, 2004)

- Contributed comments towards the operations management major proposal

- Contributions to discussions and deliberations of the department's advisory board (e.g., relating to factory visitation sites and guest speakers for classes)

- Participated in industry contacts with respect to the POM major (Alps Automotive Company and Borg Warner Company)

- Participated in syllabi development for the supply chain management course in the Master of Science in Information Technology program being offered by the department

School (SBA)

- Member, Recruitment Committee for Accounting position in the Department of Accounting and Finance (2002)

- Member, Recruitment Committee for International Management position in the Department of Management and Marketing (Current, 2005 ~)

- Played mentorship role for students in the local (SBA) chapter of the National Association of Black Accountants

- Participation in the programs of the Applied Technology in Business (ATiB) program, especially the student project presentations.

- Joint supervision with Dr. Mohan Tanniru of a Masters independent study project. (2001)

- Active support for the Students in Free Enterprise (SIFE) program of the SBA Participate in other miscellaneous activities for the SBA, including the multi-cultural open-house, Alumni breakfast meetings, and commencement programs

University

- Chair of the senate Academic Standing and Honors Committee (2005 ~)

- Miscellaneous services in the Pawley (Lean) Institute at OU; including curriculum development issues, students' factory projects, and networking with industry partners. (2004 ~)

- Member of the University Senate: As a representative of the SBA (2003~2005)

- Member of the senate Academic Conduct Committee (2002~2004)

- Member of the Bachelor of General Studies Committee: As a representative of the SBA (2004 ~)

- Faculty mentor for a student in the Oakland University Trustee Academic Success (OUTAS) program. (2001)

- I was an active participant in OU conversation on research program. (2001)

Extra-University

Service to Profession

- I have served as reviewer for the *International Journal of Production Research*, *European Journal of Operational Research*, *European Journal of Information Systems*, *Computers and Industrial Engineering*, and *Journal of E-commerce Research*.

- I have served as discussant and reviewer for several Decision Sciences Institute Conferences.

- I served as reviewer for the *9th International Workshop on Project Management and Scheduling*, 2004, Nancy, France

- I served as session chair for the "*6th International Federation of Information Processing (IFIP) Conference" in* Kyoto, Japan (1996) and also for the "5*th ATiB Fall conference on Managing Information Technologies" in* Rochester, Michigan (2002).

- I served as a member of the program committee for the Information Resources Management Association (IRMA) 2005 conference.

- I reviewed 4 chapters of the current (7th) edition of the textbook, "Operations Management: Processes and Value Chains (2005) by Lee Krajewski and Larry Ritzman. This is one of the most widely used texts in operations management.

Community Service

- I serve as an interpreter/translator for a local Japanese Church in Novi, Michigan (Mainly translating the sermon from Japanese to English for attendees who do not understand the Japanese language.)

MISCELLANEOUS

Honors and Awards

1999 Listed in Marquis Who is Who in the World for contributions to education and society.

1997 Cultural exchange award from Japan Educational Foundation. (For promoting cultural awareness and training through the teaching of Nigerian culture and customs to Japanese Elementary School, Junior and High School students.)

1991-1998 Competitive scholarship award from the Japanese Government for language and graduate study in Japan. (Only 2 such awards are provided annually to students from Nigeria)

Professional Memberships

- Decision Sciences Institute (DSI)
- Institute of Industrial Engineers (IIE)
- Institute for Operations Research and Management Sciences (INFORMS)
- Japan Industrial Management Association
- Production and Operations Management Society (POMS)

Doctoral Dissertation

Studies on Sequence Scheduling for Just-In-Time Mixed-model Assembly Lines

Professional Interests

Research Interests: Just-In-Time and Lean Systems, Supply Chain Management, Quality Management, Mass Customization, and Environmental Issues in Operations Management

Teaching Interests: Operations Management, Supply Chain Management, Competitive Manufacturing Management, Quality Management, Lean Systems, and Management Science

Working/Research Tours

- 1991-1999: I undertook working and research tours of over 20 manufacturing facilities in Japan in industries ranging from automotive, furniture making, food processing, and building materials production. Among these were Toyota Motor Corporation, Komatsu Tractors, Denso Corporation, Tostem, and Morinaga plants. Specifically, research tours of Toyota Motor Corporation plants in Toyota city and Kyushu prefecture were done as part of my Ph.D. dissertation research.
- 1999 to 2000: While on the faculty of Iowa State University in Ames, Iowa, I undertook factory tours of Pella Corporation and 3M Corporation.

- 2000 to present: I have undertaken research and plant tours of several automotive plants in Michigan; including General Motors Assembly plant, Lear Corporation, Alps Automotive, Fanuc Robotics, Foamade, and Takata Automotive, etc.

Citations of Published Articles

- Identified at least 16 articles in which my research publications have already been cited: 12 of these citations are by other authors. Citation sources include: *International Journal of Production Research*, *European Journal of Operational Research*, *Computers and Operations Research*, *Computers and Industrial Engineering*, and *Operations Research Spectrum*.

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Name: Eugene B. Fliedner, CFPIM
Department: Decision and Information Sciences
Rank: Associate Professor
Date: September 20, 2004

EDUCATION

Degree	Awarding Institution	Concentration	Date
D.B.A.	Indiana University	Operations Management	1989
M.B.A.	Indiana University	Operations Management	1985
B.B.A.	Texas Christian University	Marketing	1981

ACADEMIC AND ADMINISTRATIVE POSITIONS

Associate Professor of Operations Management, School of Business Administration, Oakland University, 1998 - present.
Asssistant Professor of Operations Management, School of Business Administration, Oakland University, 1995 - 1998.
Asssistant Professor of Operations Management, School of Business Administration, Texas A&M University, 1988 - 1995.

OAKLAND UNIVERSITY OM COURSES TAUGHT

POM 343: Operations Management
POM 521: Operations Management
POM 441/641: Manufacturing Planning and Control
POM 480/680: Supply Chain Management
POM 448/648: Project Management

PEER REVIWED JOURNAL PUBLICATIONS

"CPFR: An Emerging Supply Chain Tool" *Industrial Management and Data Systems*, 2003, Vol. 103, No. 1, pp. 14-21. (Refereed journal publication)

"Accounting Administrators' Perceptions of Student Evaluation of Teaching (SET) Information," (with Larry Crumbley), *Quality Assurance in Education*, 2002, Vol. 10, No. 4, pp. 213-222. (Refereed journal publication)

"Hierarchical Forecasting: Issues and Use Guidelines," *Industrial Management and Data Systems*, Vol. 101, No. 1, 2001, pp. 5-12. (Refereed journal publication)

"An Investigation of Aggregate Variable Time Series Forecast Strategies with Specific Subaggregate Time Series Statistical Correlation," *Computers and Operations Research*, Vol. 26, 1999, pp. 1133-1149. (Refereed journal publication)

"The Journey Toward Agility," *Industrial Management & Data Systems*, Vol. 98, No. 4, 1998, pp. 165-171. (Refereed journal publication)

"Agility: The Next Competitive Manufacturing Weapon?" *Business Smarts*, Fall, 1997, p. 2. (Editor reviewed publication)

"Agility: Competitive Weapon of the 1990's and Beyond?" (with Robert Vokurka), *Production and Inventory Management Journal***,** Third Quarter, 1997, pp. 19-24. (Refereed journal publication)

"Agility: The Next Competitive Weapon," *APICS - The Performance Advantage*, (with Robert Vokurka), Volume 7, No. 1, 1997, pp. 56-59. (Editor reviewed publication)

"Forecasting System Parent Group Formation: An Empirical Application of Cluster Analysis," (with Barry Lawrence), *Journal of Operations Management*, Vol. 12, 1995, pp. 119-130. (Refereed journal publication)

"Comparison of the REMBRANDT System with Analytic Hierarchy Process," (with David Olson and Karen Currie), *European Journal of Operational Research*, Vol. 82, 1995, pp. 522-539. (Refereed journal publication)

"Measuring Operating Performance: A Specific Case Study," (with Robert Vokurka), *Production and Inventory Management Journal*, First Quarter, 1995, pp. 38-43. (Refereed journal publication)

"Constrained Forecasting: Some Implementation Guidelines," (with Vincent A. Mabert), *Decision Sciences*, Volume 23, No. 5, Fall 1992, pp. 1143-1161. (Refereed journal publication)

"Evaluating Adaptive Smoothing Models: Some Guidelines for Implementation," (with Benito Flores and Vincent Mabert), *International Journal of Production Research*, Vol. 24, No. 4, July/August, 1986, pp. 955-970. (Refereed journal publication)

PRESENTATIONS APPEARING IN REFEREED PROCEEDINGS

Fliedner, Gene. "Pull Forecasting: A Multivariate Supply Chain Forecasting Examination," presented at the 2003 National Decision Sciences Institute Meeting, Washington, DC.

Fliedner, Gene. "Supply Chain Pull Forecasting, Proceedings of the 2002 *National Decision Sciences Institute Meeting*, San Diego.

Fliedner, Gene. "Supply Chain Pull Forecasting," Midwest Decision Sciences Institute 2002 Proceedings, pp. 78-80.

Fliedner, Gene. "Collaborative Planning, Forecasting, and Replenishment in the Retail Supply Chain," Proceedings of the 2001 National Decision Sciences Institute Conference, San Francisco, CA. (Refereed selection process)

"Collaborative Planning, Forecasting, and Replenishment," Proceedings of the 2001 Annual Midwest Decision Sciences Institute Conference, Dearborn, MI. (Refereed selection process)

"A Preliminary Analysis of the Financial Performance of Six Sigma Adopting Firms" (with R. Kleiman; and S. Sharma), Proceedings of the 2001 Annual Midwest Decision Sciences Institute Conference, Dearborn, MI. (Refereed selection process)

"The Journey Towards Agility" (with Robert Vokurka), Proceedings of the 1998 Production and Operations Management Society 9th Annual National Conference, Sante Fe, NM. (Refereed selection process)

"Accounting Administrators' Perceptions of Student Evaluation of Teaching Information," (with D. L. Crumbley), Proceedings of the 1998 Southwest American Accounting Association Regional Meeting, Dallas, Texas. (Refereed selection process)

"An Evaluation of Time Series Statistical Correlation for Aggregate Variable Time Series Forecast Strategies," Proceedings of the 1994 National Decision Sciences Institute Conference, Honolulu, Hawaii. (Refereed selection process)

"Hierarchical Forecasting System Parent Group Formation: An Application of Cluster Analysis," (with Barry Lawrence), Proceedings of the 1993 National Decision Sciences Institute Conference, Washington, D.C. (Refereed selection process)

"Use of Alternative Techniques to Aid A Group Text Selection," (with David Olson and Karen Currie), Proceedings of the 1993 National Decision Sciences Institute Conference, Washington, D.C. (Refereed selection process)

"A Switching Heuristic for the Adaptive Control of the Forecast Model Smoothing Parameter," (with Benito Flores) Proceedings of the 1992 National Decision Sciences Institute Conference, San Francisco, CA. (Refereed selection process)

"Fixed Parameter Smoothing Models: Some Management Guidelines - An Update," Proceedings of the 1991 National Decision Sciences Institute Conference, Miami, Florida. (Refereed selection process)

"Fixed Parameter Smoothing Models: Some Management Guidelines," (with Kevin Ellisor), Proceedings of the 1990 National Decision Sciences Institute Conference, San Diego, California. (Refereed selection process)

"A Comparative Investigation of Hierarchical Forecasting System Strategies with a Traditional Forecasting Methodology," (with Vincent A. Mabert), Proceedings of the 1989 National Decision Sciences Institute Conference, New Orleans, Louisiana. (Refereed selection process)

"Evaluating Adaptive Smoothing Models: Some Guidelines for Implementation," (with Benito Flores and Vincent A. Mabert), Proceedings of the 1986 National Decision Sciences Institute Conference, Honolulu, Hawaii. (Refereed selection process)

"A Comparative Evaluation of Wright's Dynamic Job Sequencing Rule in a Flow Shop," (with F. Robert Jacobs), Proceedings of the 1984 Midwest Decision Sciences Institute Conference, Indianapolis, Indiana. (Refereed selection process)

RESEARCH IN PROGRESS

Fliedner, Gene. "Pull Forecasting: A Supply Chain Forecasting Conceptual Framework," working paper.

"Factory Focus," (with Robert Vokurka), working paper.

"A Preliminary Analysis of Six Sigma Financial Performance,"(with Robert Kleiman), working paper.

"Detecting Shifts in a Time Series Mean: An Application of the Cox Stuart Test," (with Benito Flores), working paper.

"A Switching Heuristic for the Adaptive Control of the Forecast Model Smoothing Parameter," working paper.

AWARDS AND GRANTS

School of Business Administration Service Award, Honorable Mention, 2004-05.

School of Business Administration Service Award, Honorable Mention, 2002-03.

School of Business Administration Service Award, Honorable Mention, 2000-01.

Competitive Research Grant, School of Business Administration, Oakland University, Spring/Summer, 1997, $6,500.

K-Mart Corporation Economic Development Grant offered through the Oakland University Office of Continuing Education and Professional Development: Project Management course, 1997 - 1998.

Competitive Research Grant, Institute for Research on the Management of Information Systems (IRMIS), faculty sponsor Vincent Mabert, Indiana University, 1987, $6,000.

Competitive Research Grant, Graduate School of Business, Indiana University, faculty sponsor, F. Robert Jacobs, 1986, $1,500.

Competitive Research Grant, Graduate School of Business, Indiana University, faculty sponsor Vincent Mabert, 1984, $1,500.

OAKLAND UNIVERSITY SERVICE

1. Decision and Information Sciences Department

- Operations Management Curriculum Committee, Fall 1997 – present
- Operations Management Faculty Search Committee, 2001-2003

2. School of Business Administration

- Research Advisory Committee, Chair 2002-2005, Member 2001-2002
- Continuous Quality Improvement Committee, 2002-2003
- Dean's Secretary Search Committee, Fall 2002
- Product Life Cycle Development Program Leadership Team, 2001-2003
- Undergraduate Curriculum Committee (UCC), 1997-2001
- Committee on Appointment and Promotion (CAP), Winter 1997
- Committee on Grading and Petitions (UCC Subcommittee), 1997-2001
- Business Logistics Management, POM 480/680 (new course proposed and developed, Winter, 1997)

3. Oakland University

- General Education Committee, 2001-2005
- General Education Western Civilization Subcommittee, Chair, 2004-05
- University Committee on Undergraduate Instruction (UCUI), Chair, 1998-2001.
- University Committee on Undergraduate Instruction (UCUI), 1997-1998.
- University Senator, School of Business Administration, Oakland University, 1995-1997

4. Extra-University

- 2004-05, President, Midwest Decision Sciences Institute
- 2004-05, Chair, Midwest Decision Sciences Institute Fellows Committee
- 2002-04, Secretary, Midwest Decision Sciences Institute
- 2001 Midwest Decision Sciences Institute Conference Director, Dearborn, MI.

- Reviewer, Stan Hardy Best Paper Award, Midwest Decision Sciences Institute, Winter, 2000.
- Referee, *Decision Sciences* (since 1994)
- Referee, *Journal of Operations Management* (since 1991)

MISCELLANEOUS

- Member, American Production and Inventory Control Society, Certified Practitioner, Fellows Level (CFPIM)
- Member, Decision Sciences Institute

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Mark W. Isken, Ph.D.
Assistant Professor of Management Information Systems
School of Business Administration
Oakland University
Office: (248) 370-3296
E-mail: isken@oakland.edu

EDUCATION

Ph.D. in Industrial and Operations Engineering	University of Michigan, Ann Arbor, 1995
M.S.E. in Industrial and Operations Engineering	University of Michigan, Ann Arbor, 1988
B.S.E. in Industrial and Operations Engineering	University of Michigan, Ann Arbor, 1987

Dissertation: Personnel Scheduling Models for Hospital Ancillary Units

RESEARCH INTERESTS

- Personnel scheduling models
- Stochastic models for health care systems
- Data warehousing and decision support systems

REFEREED PUBLICATIONS

Isken, M.W. An Implicit Tour Scheduling Model with Applications in Healthcare, *Annals of Operations Research*, 128, (April 2004) 91-110.

Isken, M.W. Data Cleansing and OLAP as a Prelude to Model Based Decision Support, *INFORMS Transactions on Education,* 3, 3 (May 2003).

Isken, M.W. Modeling and Analysis of Occupancy Data: A Healthcare Capacity Planning Application, *International Journal of Information Technology and Decision Making,* 1, 4 (December 2002) 707-729.

Isken, M.W. and Rajagopalan, B., Data Mining to Support Simulation Modeling of Patient Flow in Hospitals, *Journal of Medical Systems*, 26, 2 (April 2002) 179-197.

Isken, M.W. and Littig, S.J.. Simulation Analysis of Pneumatic Tube Systems, *Journal of Medical Systems*, 26, 1 (February 2002) 9-19.

Rajagopalan, B. and Isken, M.W., Exploiting Data Preparation to Enhance Data Mining and Knowledge Discovery, *IEEE Transactions on Systems, Man, and Cybernetics*, 31, 4 (November 2001) 460-467

Isken, M.W., Littig, S.J., and West, M., An Operations Analysis Data Mart, *Journal of Healthcare Information Management*, 15, 2, (Summer 2001), 143-154.

Isken, M.W. (2001). Computer simulation in Management Engineering. In J.A. Larson, *Management Engineering*, (pp. 179-196) Chicago: Healthcare Information and Management Systems Society.

Isken, M.W. and Hancock, W.M., Tactical Scheduling Analysis for Hospital Ancillary Units, *Journal of the Society for Health Systems*, 5, 4, (1998) 11-23.

Hancock, W.M. and Isken, M.W., Patient Scheduling Methodologies, *Journal of the Society for Health Systems*, 3, 4, (1992) 83-94.

Isken, M.W. and Hancock, W.M., A Heuristic Approach to Nurse Scheduling in Hospital Units with Non-Stationary Urgent Demand and a Fixed Staff Size, *Journal of the Society for Health Systems*, 2, 2, (1990) 24-41.

ACCEPTED AND IN PRESS

Isken, M.W., Sugumaran, V., Ward, T., Minds, D., and Ferris, W., Data collection using sensor networks to support modeling and analysis of outpatient clinics, accepted for publication in *Health Care Management Science* (tentatively to appear in May 2005).

WORKING PAPERS

Isken, M.W, A stochastic tour scheduling model, planned submission to Manufacturing, Service and Operations Management in August, 2004.

Isken, M.W. and Ward, T., Simulation modeling of inpatient obstetrical facilities, planned submission to Socio-Economic Planning Sciences in August, 2004.

RESEARCH FUNDING

Jan 2003 – Health Services Engineering, Inc. "Computer Simulation Modeling for Outpatient Clinic Capacity Planning - II" ($12500)

June 2002 – Health Services Engineering, Inc. "Computer Simulation Modeling for Outpatient Clinic Capacity Planning" ($3000)

October 2001 – National Science Foundation, Washington D.C., Small Business Innovation and Research, Phase I Grant, "Decision Support Software for Short-Term Hospital Occupancy Forecasts", ($100,000) Co-investigator with PI from Improvement Path Systems, Inc.

February 2001 – Awarded SBA Summer Research Grant for proposal entitled "Data mining approaches to patient classification problems." ($7500)

September 2000 - Agency for Healthcare Research and Quality, Washington D.C., Small Business Innovation and Research, Phase I Grant, "Decision Tool to Manage Cost/Quality in Neonatal ICUs", ($100,000) Co-investigator on project involving principals from Health Services Engineering, Inc. and physicians/researchers from Beth Israel Deaconess Medical Center, Harvard School of Public Health, Brigham and Women's Hospital, MassGeneral Hospital and University of British Columbia.

December 1999 – Awarded Oakland University Summer Research Fellowship for proposal entitled "Inpatient Bed Allocation Models." ($7500)

October 1999 –Health Services Engineering, Inc. ($1000).

PROCEEDINGS PUBLICATIONS AND POSTER SESSIONS

Doane, D. and Isken, M.W. (2004) Demonstrating multicollinearity: a spreadsheet simulation. *Proceedings of the 2004 Joint Statistical Meeting*, Toronto, Canada.

Isken, M.W. (2002) Teaching DSS: Trudging through dirty data on the path to model based decision support. *Proceedings of the 2002 Americas Conference on Information Systems*, Dallas, TX.

Isken, M.W. (2001). Simulation analysis of pneumatic tube systems. *Midwest DSI 2001 Proceedings* (pp. 41-43), Dearborn, MI.

Ogino, M.T., Richardson, D.K., Zupancic, J.A., Eichenwald, E.C., Isken, M.W., Pursley, D.M., Ward, T.J. & McKee, T.C. (2001) Simulating NICU census and patient flows. Poster session at 2001 Pediatric Academic Societies Meeting, Baltimore, MD.

Isken, M.W. (2000) An optimization model based decision support system for staff scheduling analysis in healthcare facilities. *Proceedings of the 2000 Americas Conference on Information Systems* (pp. 356-361), Long Beach, CA.

Isken, M.W., Ward, T.J., and McKee, T.C. (1999), Simulating outpatient obstetrical clinics. *Proceedings of the 1999 Winter Simulation Conference*, pp. 1557-1563, Phoenix, AZ.

McKee, T.C., Ward T.J., and Isken, M.W. (1999), "From Theory to Practice – Developing Decision Support Tools to Manage Cost and Quality of Obstetrical Care," *Proceedings of the 11th Annual Quest for Quality and Productivity in Health Services Conference*, August, 1999, pp. 1-6, Washington, DC.

OTHER CONFERENCE PRESENTATIONS

"Pre and Post Simulation Modeling of Outpatient Clinics", 2004, INFORMS, Denver, CO.

"Automated Data Collection in a Primary Care Clinic", 2003, INFORMS, Atlanta, GA.

"Short Term Hospital Census Prediction", 2002, INFORMS, San Jose, CA.

"A Stochastic Staff Scheduling Model with Applications in Healthcare", 2002, Annual Conference of the Canadian Operational Research Society, Toronto, ON, Canada.

"Data Analysis Issues in Healthcare", 1999, Second Fall Conference on Managing Information Technologies, Troy, MI.

"Totally Tubular: Design and Analysis of Pneumatic Tube Systems Using Computer Simulation," 1996, invited presentation ProModel Users Conference, Park City, UT.

"Before You Operate, Simulate," 1994, invited presentation ProModel Users Conference, Park City, UT.

"Modeling Patient Flow in Critical Care Units," 1993, invited presentation ProModel Users Conference, Park City, UT.

"An Implicit Tour Scheduling Model," Spring 1992, TIMS/ORSA Joint National Meeting, Orlando, FL.

"Staff Scheduling as a Management Tool," 1992 Michigan Healthcare Management Systems Society, Winner of Annual Technical Paper Contest.

"Personnel Scheduling in Service Industries," 1991, International IIE Conference, Detroit MI.

"Computer Aided Staffing Systems for Hospital Ancillary Units with Non-Stationary Demand," Fall 1990, ORSA/TIMS Joint National Meeting, Philadelphia, PA.

TEACHING

Assistant Professor - Oakland University (Management Information Systems)

Personal Productivity with Information Technology (MIS 200) Fall 2002, Fall 2003. Responsible for course design, delivery, and student assessment.

Management Information Systems (MIS 300) Fall 1999-Winter 2001. Responsible for course re-design, delivery, and student assessment. Developed process focused introductory MIS course.

Business Analysis and Modeling (MIS 446/646) Winter 2001-present. Created a spreadsheet based modeling course, taught in a computer teaching lab, which includes management science models as well as Excel VBA to create decision support systems.

Applied Technology in Business (ATiB 307, 406) – Coordinated several industry projects and developed/taught modules on Programming with Visual Basic, Access Database Development, Data warehousing/OLAP, Spreadsheet Modeling, and Dealing with Muddy Data.

Healthcare Operations Management in Executive MBA in Healthcare Management program. Designed and delivered course covering the fundamentals of healthcare operations management.

Lecturer - Oakland University (Management Information Systems)

Decision Support Systems (MIS 436/636), Winter 1999 – Responsible for course design, delivery, and student assessment.

Teaching Assistant - University of Michigan (Industrial and Operations Engineering)

Hospital Systems Engineering, Fall 1987, 1988, 1990
Computer Simulation, Fall 1988

II. SERVICE

Professional Society Leadership – Council member for INFORMS Health Applications Section
Applied Technology in Business Program – Interim Director (Winter 2003), faculty coordinator, teaching and technical consulting, session chair at Fall ATiB Conference
Committees – University Library Committee, numerous hiring committees, MIS Student Assessment, curriculum development for new Masters program in Information Technology Management, MIS undergraduate curriculum review
Donated Consulting – Children's Leukemia Foundation (database development), William Beaumont Hospital, Henry Ford Health System, Detroit Medical Center (software based analysis tools)

Ad-hoc reviewer – Interfaces, European Journal of Operations Research, Annals of OR, Journal of Scheduling, AMCIS Conferences, ICIS Conferences, SHS Conference

PROFESSIONAL EXPERIENCE

Health Services Engineering, (Bethesda, MD)
Consultant, 1998-1999

Obstetrical services planning Created computer simulation models and optimization models to support obstetrical planning projects in healthcare facilities throughout the country and abroad.

Henry Ford Health System, (Detroit, MI), ***Management Services Department***
Principal Operations Analyst, 1997-1998

Decision support tools for inpatient bed allocation Created databases, patient classification schemes, forecasting models, analytic and simulation models of patient flow, staffing models, statistical reports, and associated software to support administrative leaders in making complex decisions related to inpatient bed allocation and staffing.

William Beaumont Hospital, (Royal Oak, MI), ***Management Engineering Dept.***
Research Engineer 1996-1997, Coordinator 1994, Senior Management Engineer 1992-1993

Decision support Participated in a wide variety of operations analysis projects as well as developing a number of analytical decision support tools and databases.

III. PROFESSIONAL DEVELOPMENT

- Teaching Management Science with Spreadsheets (Indiana University, June 2000)
- Fall Research Workshop (Oakland University, October 1999)
- Ivey Case Teaching Workshop (Oakland University, August 1999)

IV. PROFESSIONAL ASSOCIATIONS

Member of INFORMS, Institute of Industrial Engineers, Society for Health Systems, Healthcare Information and Management Systems Society, Association for Computing Machinery, and the Michigan Simulation Users Group.

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Name: T. J. Wharton, CPIM
Department: Decision and Information Sciences
Rank: Associate Professor
Date: August 1, 2004

EDUCATION

Ph.D. in Operations Management, University of Minnesota, April 1985

M.B.A., University of Minnesota, June 1982

B.S. in Business Administration, University of Minnesota, June 1978

ACADEMIC AND ADMINISTRATIVE POSITIONS

Associate Professor of Operations Management, School of Business Administration, Oakland University, 1990 - present.

Chair, Department of Decision Information Sciences, School of Business Administration, Oakland University, 1999 – 2003.

Assistant Professor of Operations Management, The Whittemore School of Business and Economics, University of New Hampshire, 1985 - 1990.

Instructor of Operations Management, The Whittemore School of Business and Economics, University of New Hampshire, 1983 - 1985.

OAKLAND UNIVERSITY OM COURSES TAUGHT

POM 343: Operations Management
POM 521: Operations Management
POM 441/641: Manufacturing Planning and Control

REFEREED JOURNAL ARTICLES

Wharton, T.J., Reid, D. and Edna White, "An Empirical Study of Manufacturing Practices Over Time," *Production and Inventory Management Journal*,. Volume 38, Number 4, 1997, pp.7 - 12.

White, E., Kaighobadi, M. and T.J. Wharton, "Process Goal Charts for Quality Improvement Programs," *International Journal of Quality and Reliability Management*, Volume 11, Number 4, 1994, pp. 26 – 40..

Mathieson, K. and T.J. Wharton, "Are Information Systems a Barrier to Total Quality Management?" *Journal of Systems Management*, Volume 44, Number 9, 1993, pp. 34 - 38.

Wharton, T.J. and A Hormozi, "Beyond Europe 1992: Implications for U.S. Manufacturers," *Industrial Management*, Spring 1993.

Hormozi A., Jacobs, S. and T.J. Wharton, "Manufacturing Process Improvement: The Role of Vision Systems," *Production and Inventory Management Journal*, Volume 38, Number 4, 1992.

Wharton, T.J. and E. White, "Current Manufacturing Approaches: Opinion and Practice," *Production and Inventory Management Journal*, Volume 30, Number 4, 1990, pp. 38-41.

Wharton, T.J. and R. Dan Reid, "Manufacturing Planning and Control: How Well Are We Doing?" *Production and Inventory Management Journal*, Volume 30, Number 3, 1990, pp. 52-55.

White, E. and T.J. Wharton, "Flexibility and Automation: Patterns of Evolution," *Operations Management Review*, Volume 6, Numbers 3 & 4, 1988, pp. 1-8.

Shore, B., and T.J. Wharton, "Analysis of Microcomputer DSS Projects," *Journal of Systems Management*," Volume 37, Number 8, June 1986, pp. 25-31.

Melone, N. Paule and T.J. Wharton, "Strategies for MIS Project Selection," *Journal of Systems Management*, Volume 35, Number 2, February 1984, pp. 26-33.

REFEREED PROCEEDINGS

"Developing a Course Related Intranet,"(with Ken York), Proceedings of the Organizational Behavior Teaching Conference, May, 1997, Saginaw Valley State University, Michigan, pp. 10 –12.

"The Timing and Stock Selection Abilities of Bank Funds: Evidence Based on Meta Analysis, (with Anandi Sahu, Robert T. Klieman), Proceedings of the 1996 National Decision Sciences Institute Conference, November, 1996, pp. 231-235.

"Enhancing Problem Formulation Through Creativity: A Workshop," Proceedings of the Organizational Behavior Teaching Conference, May, 1996 , Eastern Michigan University, Michigan, pp. 113-120.

"An Empirical Study of Manufacturing Approaches over Time," (with Dan Reid and Edna White) Proceedings of the 1996 Northeast Decision Sciences Institute Conference, St. Croix, Virgin Islands, April, 1996, pp. 456-458.

"TQM in the Classroom," Proceedings of the Organizational Behavior Teaching Conference (with Ken York), June, 1995, Eastern Michigan University, Michigan.

"Where is Total Quality Management Taught Within the Business Curriculum?" Proceedings of the Organizational Behavior Teaching Conference, (with Liz Barclay), May 13, 1994, Oakland, Michigan, pp. 22 – 28.

"Performance and Environment: A Survey of Opinion and Practice in Cellular Manufacturing," (with Edna White and Jerry C. Wei), Proceedings of the International Conference of Pacific Region Management, Washington D.C.,1992.

"Inventory Planning System Effectiveness: A Comparison of Distribution Requirements Planning and Reorder Point," (with Dan Reid and Lee Krajewski), Proceedings of the 22th Annual Conference of the Decision Sciences Institute, San Diego, 1990.

"A Survey of Manufacturing Practice," (with Edna White), Proceedings of the 22th Annual Conference of the Decision Sciences Institute, San Diego, 1990.

"Manufacturing Planning and Control Performance: How Well Are We Doing?" (with Dan Reid), Proceedings of the Northeast Regional Meeting of the Decision Sciences Institute, Baltimore, 1989.

"Setting Process Control Limits: Resistant Versus Non-Resistant Measures," (with Edna White), *P*roceedings of the 20th Annual Conference of the Decision Sciences Institute, Las Vegas, 1988.

"An Analysis of Inventory Planning System Effectiveness in a Multiechelon Distribution System," (with Dan Reid). Proceedings of the Best Papers of the National Academy of Management Meeting, Anaheim, 1988.

"Flexibility and Automation: Patterns of Evolution," (with Edna White), Proceedings of the Northeast Regional Meeting of the Decision Sciences Institute, Rhode Island, 1988.

"An Empirical Investigation of the Hayes and Wheelwright Product-Process Matrix," Proceedings of the 19th Annual Conference of the Decision Sciences Institute, Boston, 1987.

"Manufacturing Planning and Control Linkages: How Important Are They*?"* Proceedings of the Northeast Regional Meeting of the Decision Sciences Institute, Atlantic City, 1987.

"Problem Formulation: A Neglected Aspect of Decision Making," Proceedings of the 14th Annual Conference of the American Institute of Decision Sciences, San Francisco, 1982.

"Computer Project Selection: Process, Techniques and Constraints," (with N. Paule Melone), Proceedings of the 12th Annual Conference of the American Institute of Decision Sciences, Las Vegas, 1980.

"Considerations in Planning and Controlling Inventory in a Multiechelon System," 1979 Manuscript Competition, Twin Cities Chapter of the American Production and Inventory Control Society, Minneapolis, Minnesota, 1980.

PRESENTATIONS

"Project Management: Research Issues and Studies, (with M. Tanniru, and D. Braunstein), ATiB Executive Forum, August 2001.

"IS Problem Structuring: Overcoming the Influence of Information Processing Heuristics and Biases," T.J. Wharton, Dan Braunstein, and Mohan Tanniru presented at the 30th Annual Meeting of the Decision Sciences Institute. 1999.

"Operations Management: Reflections on the Last 25 Years," A Panel Discussion at the National Academy of Management Meeting, August, 1999.

"Positive Steps Toward Tenure – the Do's and Don'ts of Achieving a Successful Tenure Decision," presentation at the Operations Management Doctoral Consortium, National Academy of Management Meeting, August, 1996.

"Using Control Charts to Manage Planned Change in Quality Improvement Programs," (with E. White and M. Kaighobadi), presented at the 24th Annual Conference of the American Institute of Decision Sciences, Las Vegas, 1992.

"Recruiters and Recruiting: Roles and Responsibilities," presented at the P/OM Doctoral Consortium at the National Academy of Management Meeting, San Francisco, August 1990.

"Flexibility and Automation: Patterns of Evolution," (with Edna White), presented at the Euro-Tims International Conference, Paris, July 1988.

"When Do Microcomputer Information Systems Lead to Better Decisions?" (with Barry Shore), presented at the 17th Annual Conference of the American Institute of Decision Sciences, Las Vegas, 1985

"Considerations in Planning and Controlling Inventory in a Multiechelon System," presented at the 11th Annual Conference of the American Institute of Decision Sciences, New Orleans, 1979.

HONORS, GRANTS, AND FELLOWSHIPS

Oakland University, School of Business Administration, Lorenz Teaching Award, 1998.

Oakland University, School of Business Administration, Research Grant, 1996.

Oakland University, School of Business Administration, Summer Research Fellowship, 1991.

Paper written with Dan Reid, "An Analysis of Inventory Planning System Effectiveness in a Multiechelon Distribution System," was selected as the best paper submitted to the P/OM Division of the National Academy of Management Meeting in 1988.

Whittemore School of Business and Economics Associates' Fellowship, summer 1988.

University of New Hampshire Faculty Fellowship, 1987.

Beta Gamma Sigma, 1985.

Whittemore School of Business and Economics Summer Research Fellowship, 1984.

Placed second in the 1979 Manuscript Competition held by the Twin Cities Chapter of APICS with the paper, "Considerations in Planning and Controlling Inventory in a Multiechelon System."

PROFESSIONAL ASSOCIATIONS AND SERVICE

1. Decision Sciences Institute (DSI)

Information Systems Coordinator for the DSI national conference in Boston, 1987.
Served as paper reviewer and discussant for the 1986 – 1992, 1998 National DSI conferences.
Served as paper reviewer and discussant for the 1987 - 1989 Northeast Regional DSI conferences.

2. Academy of Management

Division Chair 1995-96 Operations Management Division.
Program Chair 1994, P/OM Division.
Program Co-Chair, 1993 P/OM Doctoral Consortium.
Editor of Perspectives, the newsletter for the P/OM Division, 1989 – 1992.
Secretary of the P/OM Division, 1989 – 1992.
Associate Editor of Perspectives, the newsletter for the P/OM Division, 1987-1989.
Served as paper reviewer and discussant for the 1988- 1990 National Academy Meetings.

3. American Production and Inventory Control Society (APICS)

Certified Practitioner in Inventory Management (CPIM).
Served on the Board of Directors of the Detroit Chapter of APICS, 1990 - 1992.
Served as Faculty Advisor for the Oakland Student Chapter, 1990 - 1993.

UNIVERSITY SERVICE

Chair Faculty Search Committees, 1998, 1999, 2002, 2004
Chair Department of Decision Sciences, 1999 – 2003.
CAC committee 1998 – 2001, 2004 - present.
Scholarship Committee, 1998.
Continuous Quality Improvement Committee 1996 – 1999.
Committee on Appointments and Promotion, 1995 – 1998.
Faculty Senate Member 1995 – 1997.
TQM Steering Committee - Facilitator, 1993 – 1996.
P/OM Recruiting Committee, Chair 1993 - 1994.
SBA Planning Committee 1993 - 1996.
Lorenz Writing Award Committee 1993.
University Representative for the President's Council's Meetings on TQM, 1992.
Distinguished Service Award Committee. 1992 -1996.
Authored an article for the Fall, 1991 and Winter 1992 *Business Smarts*.
Faculty Advisor for the Student Chapter of APICS, 1990 - 1992.
Co-Coordinator of the SBA TQM Effort, 1992.
Library Committee, 1990 - present.
Committee on Appointments and Promotion, 1991 - 1992.
POM Minor Coordinator, 1991 - present.

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CURRICULUM VITAE - Joseph J. Schiele

Email: schiele@oakland.edu or Telephone: 248 370 2821

EDUCATION

The Art and Craft of Discussion Leadership, Harvard Business School, Boston, MA. (2005)

Doctoral of Philosophy, Richard Ivey School of Business, University of Western Ontario, Canada
Thesis: "Meaningful Involvement of Municipal Purchasing Departments". (2002)
Thesis Supervisor: Dr. Michiel Leenders, Professor Operations Management

Case Writing and Case Teaching Workshops, Richard Ivey School of Business (1997)

Professional Level Student, Certified Management Accountants Association (2002)

Master of Business Administration (with Distinction), Wilfred Laurier University (1995)

Bachelor of Arts, Political Studies, Lakehead University (1994)

Diploma of Accounting and Commercial Studies (with Honors), Sheridan College (1992)

HONORS AND AWARDS

- Deans Letters for Teaching Excellence, University of Ottawa School of Management (2001-2003)
- Dean Letter for Teaching Excellence, School of Business, Wilfred Laurier University (1999)
- Graduated with Distinction, MBA, School of Management, Wilfred Laurier University (1995)
- Academic Excellence Award, School of Management, Wilfred Laurier University, (1994 and 1995)
- Graduated with Honors, Diploma of Accounting and Commercial Studies, Sheridan College (1992)
- Student Representative, Academic Review Committee, Sheridan College (1992)

SCHOLARSHIPS AND GRANTS

- Center for Advanced Purchasing Studies Research Grant, Tempe, Arizona (1999)
- Ph.D. Plan for Excellence Scholarship, Richard Ivey School of Business (1996/97/98)
- Center for Advanced Purchasing Studies Research Grant, Tempe, Arizona (1998)
- NAPM Research Scholarship, Tempe, Arizona (1998)
- Academic Excellence Scholarship, Wilfred Laurier University, (1994/95)

ACADEMIC WORK EXPERIENCE

Assistant Professor, Operations Management, Decision and Information Sciences Department School of Business Administration, Oakland University, Rochester, Michigan, USA. (2004-present)

- POM 521, Operations Management, 14 week core MBA course, four sections per year.

Assistant Professor, MBA Program - Operations Management Course Coordinator
University of Ottawa School of Management, Ontario, Canada (2000-2004).

- ADM, 5380, Operations Management, 12 week core MBA course, three sections per year.
- ADM 6282, Introduction to Quality Management, 6 week elective MBA course, one section per year.
- ADM, 6294, Management of Services, 6 week elective MBA course, one section per year.

Part-time Instructor, Certified General Accountants Association, Vancouver, BC. (2005)

- COMM 5605, Operations Management, 12 week online MBA course, two sections.

Part-time Instructor, Romanian-Canadian MBA Program, Bucharest, Romania. (2004-2005)

- Operations Management, 2 week intensive MBA course, one section per year.

Part-time Instructor, Wilfred Laurier University, Waterloo, Ontario (1999-2000)

- Business 385, Operations Management, 12 week core course, two sections.
- Business 405, Purchasing and Supply Management, 12 week course, one section.

Teaching and Research Assistant, School of Computer Studies, University of Western Ontario. (1998)

Teaching and Research Assistant, Ivey Business School, University of Western Ontario. (1999)

Teaching and Research Assistant, Wilfrid Laurier University, Waterloo, Ontario. (1994)

INDUSTRY WORK EXPERIENCE

President & CEO, Schiele & Associates, Ottawa, Ontario (1996-present)

- Professional services firm that helps organizations address challenges associated with managing both service and manufacturing operations.

Senior Project Officer, Canadian National, Montreal, Quebec (1995-1996)

- Project-orientated work directed to the CEO and senior executives of the company.

Mexico Market Consultant, Laurier Trade Development Center, Waterloo, Ontario (1995)

- Distribution and market strategies for Canadian companies wishing to enter Mexico.

Director of Operations, JP Dive, Oakville, Ontario (1990-1994)

- Franchise development in Canada and the U.S. - training, business planning, and management.

Operations, Ford Motor Company, Oakville, Ontario (1985-1989)

- Various positions held including assembly, engineering, and quality management.

PROFESSIONAL ACTIVITIES AND SERVICE

- **Ad-hoc Reviewer**, Academy of Management, 2000 Toronto Conference, OM Division (2000).
- **Student Academic Curriculum Reviewer**, Sheridan College, Oakville, Ontario (1992).

RESEARCH, PUBLICATIONS, AND PRESENTATIONS

Journal Articles

Schiele, Joseph, J., 2005, "Improving organizational effectiveness through meaningful involvement of municipal purchasing departments." Journal of Public Procurement. (Winter 2005)

Schiele, Joseph, J. 2004, "A tool for assessing the value contributed by public purchasing departments throughout acquisition processes for consulting services." Journal of Public Procurement. (Spring 2005)

Schiele, Joseph J., and McCue, Cliff, 2005, "A theoretical model explaining meaningful involvement of municipal purchasing departments in acquisition processes for consulting services." International Journal of Production and Operations Management. (accepted)

Schiele, Joseph, J., 2005, "Meaningful involvement by municipal purchasing departments in acquisition processes for consulting services." Journal of Purchasing and Supply Management. (Fall 2005)

Schiele, Joseph, J., 2004, "The value associated with meaningful involvement of municipal purchasing departments in consulting services acquisition processes." Journal of Purchasing and Supply Management. (under review)

Schiele, Joseph J., 2000, "Meaningful Involvement of the Purchasing Function: The Case of Management Consulting Services." PRACTIX: Best Practices in Purchasing and Supply Chain Management, Vol. 3, No. 4, 2000**.**

Textbooks, Textbook Chapters and Sections Thereof

Schiele, Joseph J., 2000, "Nature Plus Limited - U.S. Expansion?" in Mackenzie, H F (Herb) (ed.), Contemporary Canadian Marketing Cases, Toronto Ontario: Prentice Hall.

Published Conference Proceedings

Schiele, Joseph J., and McCue, Cliff, 2004, "A theoretical model explaining meaningful involvement of municipal purchasing departments in acquisition processes for consulting services." Proceedings: International Public Procurement Conference, October 21-23, Ft. Lauderdale, Florida, USA.

Schiele, Joseph J. and Leenders, M., 2000, "Meaningful Involvement of a Public Sector Purchasing Department: The Case of Consulting Services", Proceedings: The 9th International Annual IPSERA Conference and The Third Annual North American Research Symposium on Purchasing and Supply Chain Management, London, Ontario, pg.672-683.

Schiele, Joseph J., 1998, "Global Supply Chain Management, Benefits, Risks, and Resolutions", Proceedings: NAPM First North American Research Symposium on Purchasing and Supply Management, Poster Board Research Summaries, Atlanta, Georgia, pg. 390.

Case Writing

Schiele, Joseph J., 2001
Business Case, "Strategies Towards Standardization", Intel College of Manufacturing, March.

Schiele, Joseph J., 2001
Teaching Note, "Strategies Towards Standardization", Intel College of Manufacturing, March.

Schiele, Joseph J., 2000
Business Case, "Amway Launches Quixtar.com", Direct Selling Education Foundation of Canada, May.

Schiele, Joseph J., 2000
Teaching Note, "Amway Launches Quixtar.com", Direct Selling Education Foundation of Canada, May.

Schiele, Joseph J., 2000
Business Case, "Shortening Design Lead Times at MTI", Intel College of Manufacturing, January.

Schiele, Joseph J., 2000
Teaching Note, "Shortening Design Lead Times at MTI", Intel College of Manufacturing", January.

Schiele, Joseph J., 2000
Business Case, "Shortening Production Lead Times at TSI", Intel College of Manufacturing, January.

Schiele, Joseph J., 2000
Teaching Note, "Shortening Production Lead Times at TSI", Intel College of Manufacturing, January.

Schiele, Joseph J., 2000
Business Case, "Cortech Provides Access to the Internet", Direct Selling Education Foundation of Canada, November.

Schiele, Joseph J., 2000
Teaching Note, "Cortech Provides Access to the Internet", Direct Selling Education Foundation of Canada, November.

Schiele, Joseph J., 1999
Business Case, "The Product Handler Strategy Decision", Intel College of Manufacturing, February.

Schiele, Joseph J., 1999
Teaching Note, "The Product Handler Strategy Decision@, Intel College of Manufacturing, February.

Schiele, Joseph J., 1999
Business Case, "Termination of Intel Business at Test-Co", Intel College of Manufacturing, February.

Schiele, Joseph J., 1999
Teaching Note, "Termination of Intel business at Test-Co", Intel College of Manufacturing, February.

Schiele, Joseph J., 1999
Business Case, "Lifestyle International", Direct Selling Education Foundation of Canada, December.

Schiele, Joseph J., 1999
Teaching Note, "Lifestyle International", Direct Selling Education Foundation of Canada, December.

Schiele, Joseph J., 1999
Business Case, "Increased Order Volumes at Cap-Co", Intel College of Manufacturing, February.

Schiele, Joseph J., 1999
Teaching Note, "Increased Order Volumes at Cap-Co.", Intel College of Manufacturing, February.

Schiele, Joseph J., 1999
Learning Note, "Managing the International Supply Source", Schiele & Associates, London, Ontario.

Schiele, Joseph J., 1999
Business Case, "Canadian Novelty Printing", Direct Selling Education Foundation of Canada, September.

Schiele, Joseph J., 1999
Teaching Note, "Canadian Novelty Printing", Direct Selling Education Foundation of Canada, September.

Schiele, Joseph J., 1998
Learning Note, "Network Marketing: Past, Present and Future", Direct Selling Education Foundation of Canada, November.

Schiele, Joseph J., 1998
Business Case, "Amway of Canada, Ltd.", Direct Selling Education Foundation of Canada, November.

Schiele, Joseph J., 1998
Teaching Note, "Amway of Canada, Ltd.", Direct Selling Education Foundation of Canada, November.

Schiele, Joseph J. and Lyn Purdy, 1998
Business Case, "Navistar: Supply Management", Ivey Management Services, November.

Schiele, Joseph J. and Lyn Purdy, 1998
Teaching Note, "Navistar: Supply Management", Ivey Management Services, November.

Schiele, Joseph J., 1998
Business Case, "Nature-Plus Limited - U.S. Expansion", Direct Selling Education Foundation of Canada, November.

Schiele, Joseph J., 1998
Teaching Note, "Nature-Plus Limited - U.S. Expansion", Direct Selling Education Foundation of Canada, November.

Conference Presentations

Schiele, Joseph J., and McCue, Cliff, 2004, "A theoretical model explaining meaningful involvement of municipal purchasing departments in acquisition processes for consulting services." Proceedings: International Public Procurement Conference, October 21-23, Ft. Lauderdale, Florida, USA.

Schiele, Joseph J., 2003, Invited Speaker, "Meaningful involvement of municipal purchasing departments." PMAC 78th Annual Conference and General Meeting, Victoria British Columbia, June 4-6.

Schiele, Joseph J. and Leenders, M., 2000, "Meaningful Involvement of a Public Sector Purchasing Department: The Case of Consulting Services", Presentation: The 9th International Annual IPSERA Conference and The Third Annual North American Research Symposium on Purchasing and Supply Chain Management, London, Ontario, May 24-27.

Schiele, Joseph J., 1998, "Global Supply Chain Management, Benefits, Risks, and Resolutions", Poster Board Research Presentations, NAPM First North American Research Symposium on Purchasing and Supply Management, Atlanta, Georgia, March 19-21.

DOCTORAL COURSE WORK, TRAINING, AND DEVELOPMENT

Course	Title & Subject Matter	Professor / Supervisor
	Operations Management	
Business 805	Fields Seminar I – System Design	All Faculty* (see below)
Business 815	Fields Seminar II – Strategic Considerations	All Faculty* (see below)
Business 820	Comprehensive Examinations	All Faculty* (see below)
Business 720	Summer Research Practicum	All Faculty* (see below)
Business 721	Research Apprenticeship I	All Faculty* (see below)
Business 722	Research Apprenticeship II	All Faculty* (see below)
	Research Methods & Analytic Techniques	
Business 702a	Univariate Analysis & Related Methods	Chris Higgins
Business 712	Multivariate Analysis & Causal Models	Chris Higgins
Business 704a	Research Methods and Design I	John Hulland
Business 704b	Research Methods and Design II	John Hulland
	Strategy & General Management	
Business 700	Foundations of Management Theory & Thought	Rod White
Business 701	Graduate Economic Theory & Models	John Palmer
Business 703	International Management Theory & Practice	Paul Beamish
	Case Method Training & Teaching Preparation	
Business 740	Case Writing Workshop	Jim Erskine & Mike Leenders
Business 741	Case Teaching Workshop	Jim Erskine & Mike Leenders
Business 800	Teaching Materials & Case Development	All Faculty* (see below)
Business 810	Teacher Training Development & Mentorship	All Faculty* (see below)

PLEASE NOTE: All Operations Management Faculty at Ivey are actively involved in Ph.D. seminars and training. For each topic, one or more members of the Operations Management Area Group with strength or experience in the area to be covered are charged with organizing and administering the relevant Ph.D. session(s). Below is an overview of the Operations Management Faculty who was involved in my doctoral training at Ivey:

Operations Faculty Member	Doctoral Alma Mater
Jim Erskine	Indiana University
John Haywood-Farmer	University of British Columbia
Neil Jones	Harvard University
Robert Klassen	University of North Carolina at Chapel Hill
Mike Leenders	Harvard University
Chris Piper	Carnegie-Mellon
Robert Wood	Harvard University

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Appendix D: Sample DIS Departmental Course Outlines

POM 343: Production & Operations Management (4 credits)

CATALOG DESCRIPTION: Study of operations of manufacturing and service organizations. Introduction to operational design and control issues such as forecasting, capacity planning, facility location and layout, production control, material requirements planning, scheduling and quality assurance.

COURSE PREREQUISITES: QMM 240 and QMM 241 or QMM 250 or STA 226 and major standing.

COURSE OBJECTIVES:

1. Further develop your understanding of the operations management function in both manufacturing and service organizations.
2. Investigate the relationship of the operations management function with the other functional areas including marketing, accounting, finance, engineering, personnel management, logistics, etc.
3. Increase your awareness of the strategic and operational problems encountered by operations managers.
4. To develop students' abilities to recognize, formulate, and analyze decisions of operations managers.
5. Enhance your understanding of important contemporary topics relevant to business managers of all functional disciplines.

POSSIBLE TEXT: Production and Operations Management, William J. Stevenson, Irwin/McGraw-Hill, 8th edition, 2004.

COURSE TOPICS:

Operations Function & Operations Strategy
Forecasting: The Basis of all Business Planning
Process Choice, Capacity & Layout Planning
Total Quality Management
Aggregate Production Planning
Master Production Scheduling
Independent Demand Inventory Planning and Control
Dependent Demand Inventory and Material Requirements Planning
Operations Scheduling
Continuous Improvement: Just-In-Time Production
Project Management

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POM 440: Process Management (3 credits)

CATALOG DESCRIPTION: This course will examine organizational and supply chain efforts to continuously improve processes and enhance customer satisfaction. Topics discussed will include: leadership styles; change management; costs of quality; employee empowerment, participation, and teamwork; statistical process control tools; process improvement techniques; supply chain product design, development, and collaboration; variance reduction across a supply chain; value and non value adding activities; waste elimination; value stream mapping; and numerous lean practices and tools.

COURSE PREREQUISITES: Major standing.

COURSE OBJECTIVES:

1. Define all terminology associated with lean, quality, and lean manufacturing.
2. Discuss the theoretical and historical framework that lead up to lean concepts and principles and total quality management.
3. View and analyze work as activities, connections and flow.
4. Identify the symptoms of waste in any work environment and a simulated activity.
5. Differentiate value and non-value added activities and processes.
6. Participate in team continual improvement efforts.
7. Understand appropriate tools to eliminate the root causes of waste.
8. Apply the appropriate rules/principles, concepts, tools and supporting systems of lean and total quality management in simulated activities.
9. Understand the necessary interrelationships by which people, processes, tools and systems operate at peak effectiveness within a lean, quality environment.

POSSIBLE TEXTS:

Collins, J. (2001). Good To Great. Harper Collins Publisher.
Dennis, P. (2002). Lean Production Simplified. Productivity Press.
Balle, F. and M. Balle (2005). The Gold Mine. Lean Enterprise Institute.

COURSE TOPICS:

Lean Operations Overview
Effective Leadership for Implementing Lean Systems and Quality Processes
Change Management for Lean Systems and Quality Processes
Lean Systems and Quality Processes within Manufacturing and Service Firms
Lean System and Statistical Process Control Tools
Transitioning From Lean Production to the Lean Enterprise

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POM 442: Supply Chain Management (3 credits)

CATALOG DESCRIPTION: This course seeks to study the essential function of business logistics. The management, planning, and analysis of both inbound and outbound material and information flows along with associated services will be examined. Specifically, this course will examine purchasing, materials management, and distribution functions used to support the physical flow and the offering of goods and services both domestically and internationally.

COURSE PREREQUISITES: Major standing.

COURSE OBJECTIVES:

1. Build an understanding of basic supply-chain management concepts and the physical flow of materials from vendors to customers.
2. Provide a knowledge base for conversing with those familiar with supply-chain concepts.
3. Build both quantitative and qualitative analysis skills, especially those needed for designing supply-chain systems.
4. Develop your ability to gain insights from popular press articles, which describe company experiences with supply-chain management.

TEXT: None. Instructor prepared notes along with published articles, published notes and cases

COURSE TOPICS:

The Domestic Transportation System
Logistics Strategy
Forecasting Logistics System Demand
Supply Chain Management
Supply Chain Management: Sourcing
Supply Chain Management: Product Design and Development
Supply Chain Management: Location Planning
Supply Chain Management: Warehouse Design and Operations
Supply Chain Management: Multiechelon Inventory Systems and DRP
Supply Chain Management: Distribution and Vehicle Scheduling

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POM 443: Operations Planning and Control (3 credits)

COURSE DESCRIPTION: This course studies the economic conversion of inputs (such as labor, capital and information) into goods and services for both manufacturing and service organizations in order to meet specified goals and objectives. Technical as well as managerial aspects of planning and controlling resources used within a production system are examined.

COURSE PREREQUISITES: POM 343 and major standing.

COURSE OBJECTIVES: The primary objective of this course is to better prepare you for a middle-level management position performing the specialized tasks of planning production and inventory control within a manufacturing firm. Secondary course objectives include:

1. Increase your awareness of both strategic and operational problems encountered by operations managers.
2. Further develop your understanding of the operations management function in both manufacturing and service organizations through an in depth examination of production planning, capacity planning, and execution systems.
3. Familiarize you with typical tasks conducted within manufacturing planning and control (MPC) systems and key MPC system components.
4. Assist your preparation for certification exams (CPIM) of the American Production and Inventory Control Society (APICS).

POSSIBLE TEXT: Manufacturing Planning and Control Systems. Thomas Vollman, William Berry, and D. Clay Whybark. Irwin/McGraw-Hill. 4th edition, 1997.

COURSE TOPICS:

Manufacturing Planning and Control (MPC) System Overview
Material Requirements Planning (MRP): Record Processing Logic
Advanced Concepts in Inventory Control and MRP
Capacity Planning
Production Activity Control: Priority Sequencing Rules, Shop Loading and Advanced Concepts
Master Production Scheduling (MPS) and Final Assembly Schedule (FAS)
Demand Management (Forecasting)
Just-In-Time (JIT) Production Planning and Scheduling
Enterprise Resource Planning (ERP)

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POM 445: Operations Strategy (3 Credits)

COURSE DESCRIPTION: This course addresses formulation and implementation of operations strategy as part of overall business strategy. It will examine managing operations for competitive advantage in various contexts and the integration of operations strategy with other functional areas of business. The course will examine operations strategy for service and manufacturing firms for process focus, speed, flexibility and environmental challenges. Cases are used to illustrate various concepts.

COURSE PREREQUISITES: POM 343, POM 441 or instructor's permission

COURSE OUTLINE:

Sessions 1,2	Background and Development of an Operation Strategy
Sessions 3,4	Designing Processes for Competitive Advantage
Sessions 5,6	Focused Operations
Sessions 7,8	Designing Operations for Speed and Flexibility
Sessions 9,10	Operations Solutions to Environmental Challenges
Sessions 11,12	Vertical Integration and Strategy
Session 13	Operations Strategies– Past and Future
Session 14	Student Project Presentations

POSSIBLE TEXT: Hill, Terry, *Operations Strategy: Text and Cases*, 3rd Edition, Irwin McGraw-Hill, 1999.

SUGGESTED READINGS:

Manufacturing Renaissance, edited by Gary P. Pisano and Robert H. Hayes
The Goal, by Eliyahu M. Goldratt
The Machine that Changed the World, by James P. Womack, Daniel T. Jones, and Daniel Roos
Lean Thinking, by James P. Womack and Daniel T. Jones
Mass Customization, by B. Joseph Pine II
Future Perfect, by Stan Davis
World Class Manufacturing: The lessons of Simplicity Applied, by Richard Schonberger
World Class Manufacturing: The Next Decade, by Richard Schonberger
Management Challenges for the 21st Century, by Peter F. Drucker
The Innovator's Dilemma, by Clayton M. Christensen

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POM 448: Project Management (3 credits)

COURSE DESCRIPTION: This course will examine the skills and techniques necessary to bring projects in on schedule and under budget while considering all facets of the project. Topics discussed in the course will include: role of the project manager, leadership styles, teamwork approach and alternative project organizational structures, statement of work contracts, work breakdown structures, organizational barriers to successful project completion, project plans, PERT/CPM networks, Gantt charts, critical path analysis, float times, resource allocation, least-cost scheduling, and time-cost tradeoff analysis.

COURSE PREREQUISITES: Major standing.

COURSE OBJECTIVES:

1. Further develop your understanding of project management and its applications in all functional disciplines within organizations, public, private, government, profit, and non-profit.

2. Examine all aspects of projects from conception to termination.

3. Examine useful planning tools for scheduling and monitoring projects of all sizes.

4. Use a variety of teaching tools, ranging from traditional text to computer exercises, cases, notes, and video.

POSSIBLE TEXT: Project Management, Jack R. Meredith and Samuel J. Mantel, Jr., John Wiley and Sons, Inc., New York, fourth edition, 2000.

COURSE TOPICS:

Projects Defined and Project Initiation
The Role of the Project Manager
Alternative Project Organization Structures
Project Planning and Work Breakdown Structure
Negotiation and Conflict Resolution
Budgeting and Cost Estimation
Scheduling: PERT/CPM
Constrained Resource Allocation
Monitoring Projects
Project Control, Project Auditing and Project Termination

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QMM 440: Management Science (3 credits)

COURSE DESCRIPTION: This course provides an introduction to the use of quantitative modeling and analysis tools for complex business problems. Techniques from the field of management science are combined with state of the art software including spreadsheet based optimization, decision analysis and simulation packages to give the student a practical, usable toolkit for business problem solving.

COURSE PREREQUISITES: Major standing.

COURSE OBJECTIVES:

1. Introduce students to the principles of mathematical and computer modeling of complex business problems
2. Allow students to become familiar with the basics of simulation, optimization, and decision making under uncertainty.
3. Help students become proficient with state of the art software tools for applying management science to real problems.
4. Increase students' ability to add value to the enormous quantity of data residing in information systems through the application of management science.
5. Raise students' awareness of the potential for management science to provide real corporate value by helping to solve difficult problems in many business disciplines.

POSSIBLE TEXT: Management Science and Decision Technology, Jeffrey D. Camm and James R.Evans., South-Western College Publishing., Cincinnati, 1st edition, 2000.

COURSE TOPICS:

1. Modeling for decision making
2. Data management and analysis
3. Optimization modeling of business problems
4. Decision making under risk and uncertainty
5. Monte-Carlo simulation
6. Dynamic process and system simulation

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QMM 452: Forecasting (3 credits)

COURSE DESCRIPTION: This class builds upon introductory statistics. The goal is to extend your statistical knowledge, increase your repertoire of computer tools and skills, and offer practical experience in making and presenting forecasts using real data. This will be done through readings, computer projects, report-writing, and oral presentations in a seminar atmosphere. In this class we will: review important concepts of statistical inference, examine the current economic situation and the future outlook, explore managers' perceptions of forecasting in organizations, study key topics in quantitative time series analysis and forecasting, use computer packages (Excel, Minitab, SAS) to analyze data, analyze case studies of forecasting in specific industries and, examine behavioral factors that affect implementation of forecasting systems.

COURSE PREREQUISITES: Major standing.

POSSIBLE TEXT: None. Readings are on reserve in the library. You will be assigned to give a short oral summary of certain readings, but you should try to read as many of them as you can, even if you are not assigned to present a summary.

COURSE TOPICS:

Time series components, trend, and fit statistics such as R2, MSE, MAPE, MAD (VS, Excel, Minitab)
Preparing and interpreting short-term trend forecasts (Excel, Minitab)
Single exponential smoothing: Holt's method (Minitab and Excel)
Double exponential smoothing: Holt's method (Minitab)
Construct simple seasonal indexes and determining their significance (Excel)
Time series decomposition and forecasting using Census II methods (Minitab)
Seasonal exponential smoothing using Winters' method (Minitab). Review of regression: t-tests, VIFs.
Multiple regression using trend and seasonal binaries. (Excel, Minitab)
Multiple regression: tests for influential observations (Minitab, SAS)
ARIMA: differencing, stationarity, identification by ACF and PACF plots
ARIMA: differencing, stationarity, identification by ACF and PACF plots
ARIMA: seasonal models, B-P statistic, residual plots), confidence intervals
Managing the forecasting function, planning and implementation

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Appendix E: Full Time OM Faculty Equivalents Analysis for Fall/Winter OM Course Offerings*

	Year 1				Year 2			
Semester:	Fall	Winter	Spring	Summer	Fall	Winter	Spring	Summer
OM Major Courses:								
POM 343: Operations Management	Day (3); Evening (2)	Day (3); Evening (2)	Evening (1)	Evening (2)	Day (3); Evening (2)	Day (3); Evening (2)	Evening (1)	Evening (2)
POM 443: Operations Planning & Control	Evening (1)				Evening (1)			
POM 445: Operations Strategy		Evening (1)				Evening (1)		
POM 521: Operations Management (MBA)	Day (1); Evening (1)	Day (1); Evening (1)	Evening (1)	Evening (1)	Day (1); Evening (1)	Day (1); Evening (1)	Evening (1)	Evening (1)
OM Directed Elective Courses:								
POM 448: Project Management	Evening (1)				Evening (1)			
POM 442: Supply Chain Management		Evening (1)				Evening (1)		
POM 480: Special topics								
POM 440: Process Management		Evening (1)				Evening (1)		
Average Required FTE's:	3.60	4.00			3.60	4.00		

* This analysis is recognizes the current SBA 3-2 teaching load practice and is therefore based upon an average of 2 1/2 course capacity of instruction per FTE per semester. There are currently 4 full-time faculty. Approximately 3.8 FTE's are required yearly based on this analysis. The remaining FTE's are currently being directed toward coverage of the required statistics courses (QMM).

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Appendix F: Sample Curriculum

First semester (16 credits)
RHT 150 Composition 1 (4)
MTH 121 Linear Programming (4)
MIS 200 Information Technology (4)
General Education Course (4)

Second semester (16 credits)
RHT 160 Composition II (4)
MTH 122 Calculus for Social Sciences (4)
COM 201 Public Speaking (4)
General Education Course (4)

Third semester (16 credits)
ACC 200 Financial Accounting (4)
ECN 200 Macroeconomics (4)
General Education Course (4)
General Education Course (4)

Fourth semester (18 credits)
ACC 210 Managerial & Cost Accounting (4)
ECN 201 Microeconomics (4)
QMM 250 Statistical Methods (6)
General Education Course (4)

Fifth semester (18 credits)
MKT 302 Marketing (4)
ORG 330 Organizational Behavior (3)
MIS 300 Mgt. Information Systems (3)
General Education Course (4)
POM 343 Operations Management (4)

Sixth semester (17-18 credits)
ORG 331 Mgt. of Human Resources (3)
FIN 322 Managerial Finance I (4)
General Education Course (4)
POM Elective* (3-4)
POM Elective* (3)

Seventh semester (16-17 credits)
ECN 303 Managerial Economics (3)
ENG 382 Business Writing (4)
MGT 350 Legal Environment of Business (3)
POM 441 Ops. Planning & Control (3)
POM Elective* (3-4)

Eighth semester (14-15 credits)
MGT 435 Mgt. Strategy & Policies (4)
General Education Course (4)
POM Elective* (3-4)
POM 445 Operations Strategy (3)

131-132 credits

*Students may elect to take spring and summer elective course options

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