

UW-Milwaukee Sheldon B. Lubar School of Business

INTERNAL PROGRAM REVIEW

GRADUATE MS-MIS, MS-eBusiness, & MS.MBA PROGRAMS

July 2009

INTRODUCTION

In November, 2006, the Office of the Dean charged the MIS faculty area of Lubar School of Business to complete an internal program review of its graduate programs. The purpose was to review the curriculum, evaluate progress on recommendations from the most recent review, and provide any appropriate recommendations for continuous improvement.

The MIS area faculty who reviewed the graduate programs included Professors Jain (chair), Haseman, Nazareth, Ramamurthy, Sinha, Srite, Zahedi, and Zhao. The MIS faculty worked together to develop and compile all of the information, data and recommendations included in this report.

During the time leading up to this report, the MIS area spent substantial time reviewing the materials provided by the Office of the Dean (see below), gathering feedback from industry and alumni via focus groups and surveys and review of programs offered by some leading Information System Programs in the country. Substantial discussion and brainstorming took place between all MIS faculty and academic staff. This analysis, along with analysis of the current enrollment make-up of the graduate MIS enrollment, resulted in rethinking the target audience for the Lubar School graduate MIS programs. This resulted in a major restructuring of the program. The curricular additions/deletions/changes are the result of thoughtful discussion to develop state-of-the-art curriculum for our students within the limited available resource.

BACKGROUND

Substantial information was reviewed prior to the preparation of recommendations listed in this report, including:

- A copy of the Curriculum Review Process
- A copy of interpretative material related to AACSB Assurance of Learning Standards (in addition is a Program Assessment Plan from a local competitor) including an AACSB FAQ
- Lubar School mission statement, MS in Management Mission statement, and MS in Management-MIS program goals
- A recent Internal Program Review to serve as an example of a graduate review
- 2001 MS-MIS Graduate Curriculum Changes; 2003 MS-eBusiness Curriculum Changes; and the 2001 GFC document creating the MS.MBA program
- Benchmark Data (Comparison of similar programs offered in comparable universities and business schools including local competitors, Georgia State University, University of Illinois-Chicago, University of Pittsburgh, Temple University, Indiana University, University of Minnesota, Purdue University, Arizona State University, and the University of Arizona)
- Stakeholder assessments of the graduate MIS program
- Longitudinal Student Program Statistics
- Course Enrollments and Instructors
- Attrition and Grade Report information
- Teaching Evaluations for Courses
- Survey of MIS alumni
- Focus Group discussion with MIS executives in major companies in south eastern Wisconsin like Johnson Controls, Northwest Mutual Life, Rockwell Automation etc.

Internal Program Review

I. Statement of the academic major's focus and/or mission and how the academic major contributes to the fulfillment of the Lubar School mission statement and the MS in Management mission statement:

Lubar School of Business Mission Statement: *The Sheldon B. Lubar School of Business delivers high quality management education to a diverse group of graduate and undergraduate students and practicing professionals.*

- *We engage in conceptual and applied research to advance knowledge pertaining to management practice, further enriching our teaching effectiveness.*
- *We employ our skills in service to the school, university, scholarly and professional organizations, and the community-at-large.*
- *We capitalize on the diverse resources of metropolitan Milwaukee businesses, engaging them as partners in scholarly and instructional pursuits.*

MS in Management Mission Statement:

The Lubar School Master of Science programs prepare students to assume functional specialist positions in their areas of concentration.

We provide our students with a strong technical foundation in contemporary approaches to business application systems development, data & information management, privacy and security issues, and information technology project management– using state-of-the-art technologies, tools, and techniques. In addition, there is an emphasis on the communication skills and teamwork critical to client understanding and satisfaction. Our MS program will provide IS professionals advanced education in Information Technology Management (ITM). It will provide a strong foundation for advancement and success in IT career and ventures.

The above graduate MS mission statement is consistent with the Lubar School mission statement. By providing advanced level information technology knowledge and management skills, we develop future information technology leaders and entrepreneurs. We build on community partnerships and contribute to the ability of local organizations to effectively manage and use advanced information technology to achieve sustainable competitive advantage.

II. IDENTIFICATION OF PROGRAM'S STAKEHOLDERS

Our stakeholders include:

- **Students** – seeking to acquire advanced Information Technology Management skills.
- **Employers and their employees** – who need well-trained IT professionals that have the ability to play leadership role in development, implementation, and support of advanced information technology to achieve competitive advantage.
- **Our local and regional community** – who need organizations that employ effective and contemporary Information Technology practices.
- **The professional community** – who need professionals who will represent the IT profession in an ethical manner and contribute to the development of the profession through their involvement in professional organizations (e.g., Association of Information technology Professionals – AITP; Society of Information Management – SIM)

III. Learning outcomes of the major, objective(s) for the learning outcomes, how these outcomes meet stakeholders' needs, and how they contribute to fulfillment of the Lubar School mission and either the MS in Management program mission or MS.MBA program mission.

Upon graduation with a the MS in Management-ITM concentration (or the MS.MBA program), students will be able to:

1. Organize information and communicate effectively with others.
 - Students will synthesize a business case or project, produce a well-written paper summarizing it and detailing their own analysis.
 - Students will deliver an oral presentation to explain findings and justify conclusions covering a case or project.
2. Demonstrate analytical and problem-solving skills.
 - Students will demonstrate analytical skills through the use of appropriate techniques and evidence.
 - Students will apply analytical skills to solve complex business issues and problems.
3. Exhibit disciplinary competency with their functional areas of concentration.
 - Students will understand how to design an IT solution to business problems or opportunities.
 - Students will demonstrate an understanding of how to manage Information Technology in an organization.

By intensely exposing students to contemporary methodologies, tools and techniques, and management principles we are developing well-trained, well-rounded and academically sound IT professionals but at the same time establishing a foundation for life-long learning and career growth and advancement to senior Information Technology Management positions. The dissemination of knowledge and skills is reinforced with links to both applied and conceptual research undertaken by faculty teaching in the graduate ITM program ([link to LSB mission](#)). Finally, by providing these well-trained and academically well-rounded IT professionals who are capable of designing and developing and managing high quality, robust computer-based information systems, we build community partnerships and contribute to the ability of local businesses/organizations to compete in a global business environment ([link to LSB mission](#)).

IV. A mapping of at least 3 learning outcomes for the capstone course of both the revised MS-ITM and MS.MBA programs - Bus Adm 748, Managing Information Technology Projects:

The student will:

- 1) Examine nine key knowledge areas of project management - project integration, scope, time, cost, quality, risk, human resource, communication, and procurement management within the context of IT projects.
- 2) Apply various IT project management concepts, tools, and techniques.
- 3) Develop and implement a real world IT project in teams.

V. Review of the program by outside business representatives (such as area Advisory Councils or employers) which may include a written report by such representatives, or results from a focus group comprised of business representatives, or a survey of such representatives.

The design of the new MS-ITM and MS.MBA programs was presented by chair (Jain) to a focus group of about 25 senior Information System executives including many Chief Information Officers. Most of the MIS faculty attended this focus group meeting. The companies represented most major corporations in south east Wisconsin including manufacturing, insurance, banking and IT service sectors.

The group discussed the proposed program in detail for about 2 ½ hours. The group was extremely positive about the proposed program and indicated that the program will be very valuable to their respective companies and south east Wisconsin. The group also made many valuable suggestions. No major structural changes to the program were suggested.

Following the focus group meeting, MIS faculty discussed the suggestions made and incorporated suggestions in the content and description of proposed courses. No major structural changes were made to the program.

VI. An assessment action plan using direct measures for Bus Adm 748.

The student will:

1) Examine nine key knowledge areas of project management - project integration, scope, time, cost, quality, risk, human resource, communication, and procurement management within the context of IT projects.

OBJECTIVE RELATED TO THIS LEARNING OUTCOME: Utilizing case study analysis, classroom exercises, articles, etc. examining the various knowledge areas of project management.

ASSESSMENT MECHANISM: case study analysis, reports, etc.

2) Apply various IT project management concepts, tools, and techniques.

OBJECTIVE RELATED TO THIS LEARNING OUTCOME: Apply all IT project management concepts, tools, and techniques during the development and implementation of assigned IT team project.

ASSESSMENT MECHANISM: Final project report and presentation weighted by peer evaluations of each member's participation and contribution.

3) develop and implement a real world IT project in teams.

OBJECTIVE RELATED TO THIS LEARNING OUTCOME: In teams of 3-5 members, students will develop and implement an IT prototype application for individual work environments.

ASSESSMENT MECHANISM: Final project report and presentation weighted by peer evaluations of each member's participation and contribution.

VII. Review of previous reviews to identify whether recommendations were undertaken, goals met, and shortcomings eliminated.

In September 2000, the MIS faculty used a number of resources to redesign the MS-MIS concentration of the MS in Management program. The curriculum was modeled after the guidelines developed in the MSIS 2000 "Model Curriculum and Guidelines for Graduate Degree Programs in Information Systems." The state-of-the-art curriculum used the guidelines proposed by the ACM and AIS – national professional organizations representing MIS professionals – as the baseline for the changes.

At that time, a full internal program review was not conducted. As a result, there are no recommendations to review. During this current internal program review, we feel we have eliminated the following shortcomings which resulted in low enrollment:

1. We have changed the focus of the program to be an advanced program for practicing IS professionals.
2. We estimate there are 2 to 3 thousand such professionals in southeast Wisconsin who will be seeking to advance their career through the MS-ITM program.

The MIS faculty also recommend the following actions for the future to ensure continuous improvement in the MS.MBA and MS-ITM programs:

1. A continuous consultation with IS executives in the area to help keep course content current.
2. Major marketing campaign to get the word out to the potential candidate about the new program.

VIII. A timeline for regular review of assessment results (e.g., every 5 years) for the purpose of continuous improvement. Specify who will comprise the review team.

Every five years the program will be reviewed to assess progress toward the recommendations listed above. The review team will be constituted from the faculty teaching graduate ITM classes at that time and the representative of the school administration.

IX. Summary Themes Emerging from Review:

Several themes emerged from this internal program review:

- 1) Deletion of the MS-eBusiness concentration. Electronic business in the early 2000's was a major new trend. With the maturity of the field over all years eBusiness has now become an integral part of any business thus having a separate MS concentration in eBusiness is not required.
- 2) The desirability of a graduate certificate in Enterprise Resource Planning. UWM is one of five worldwide centers of excellence in Enterprise Resource Planning designated by SAP. There is significant demand for professionals with this skill. The graduate certificate program will allow students to acquire these skills without pursuing the full MS program. However, if they wish to continue and finish requirements for the MS program they will be able to do.
- 3) Changing the focus of the MS program to an advanced program. The targeted audience for the MS-ITM program will now be IS professionals who either have undergraduate degree in IS or related field or experience in this area.
- 4) Providing more flexibility to students. Flexibility has been enhanced by reducing the required courses from 7 to 5 and offering specialized advanced level courses.

APPENDIX

A. Course Additions/Deletions/Changes

B. LSB Doc 1515: MS-MIS Program Change

C. LSB Doc 1517: MS.MBA Program Change

D. LSB Doc 1518: Graduate Certificate in Enterprise Resource Planning

APPENDIX A

COURSE DELETIONS

Bus Adm 742 Simulation Theory and Practice
Bus Adm 745 Managing Information Technology for Performance
Bus Adm 890 Introduction to Electronic Business
Bus Adm 891 Development of Electronic Business Applications
Bus Adm 892 Analysis and Design of Electronic Business Systems
Bus Adm 893 Infrastructure for Electronic Business
Bus Adm 897 eBusiness Practicum

COURSE CHANGES

TITLE: Bus Adm 746:

FROM: Topics in Management Information Systems: (Subtitled)

TO: Topics in Information Technology Management: (Subtitled)

Bus Adm 819:

FROM: Management Information Systems Internship

TO: Information Technology Management Internship

TITLE AND DESCRIPTION:

Bus Adm 741:

FROM: Decision Support Systems and Groupware. 3 cr. G.

Individual and group decision making in business. Decision processes, modeling, and data warehousing for effective support and web-based use. Technology and processes for group and distributed decisions.

TO: Web Mining and Analytics. 3cr. G.

Measurement methods and analysis of web-based business data for strategic decisions; methods and technologies in web mining, visualization, and text mining for knowledge discovery and customer-relationship management.

Bus Adm 748:

FROM: Information Technology Project Management. 3 cr. G.

Develop understanding of key knowledge areas, process groupings, and constraints of project management, project life-cycle, tools/techniques including wbs, metrics, earned value analysis, network diagrams.

TO: Managing Information Technology Projects 3cr. G.

Understand project management tools/techniques, project planning, software effort/cost estimation models, quality tools/metrics, six-sigma, CMM and ISO-9000, and managing outsourced/off-shored projects. Involves team-based project implementation.

Bus Adm 814:

FROM: Intelligent Systems for Business. 3 cr. G.

Knowledge-based systems for business domains. Foundations and pragmatic acquisition of business knowledge. Use of intelligent systems in data mining, intelligent agents, and knowledge management.

TO: Enterprise Knowledge & Semantic Management. 3cr. G.

Managing knowledge in business enterprises, including acquisition, repository creation,

dissemination; organizational learning, developing enterprise ontology; collaboration management and e-collaboration; developing intelligent agents and recommendation systems.

TITLE, DESCRIPTION, AND PREREQUISITES:

Bus Adm 744:

FROM: Management of Information Systems. 3 cr. G.

Focus on the management, organizational, operations/ethical issues involved with information systems. Addresses possible approaches for effective enterprise-wide management of information system resources. Prereq: grad st; Bus Adm 747(P).

TO: Information Technology Strategy & Management. 3cr. G.

Focus on various frameworks to evaluate strategic value of IT, aligning IT and competitive business strategies, IT governance models, managing IT operations and outsourcing ethically. Prereq: grad st.

Bus Adm 747:

FROM: Systems Analysis and Design. 3 cr. G.

Requirements definition, modeling, and specification of information systems. Object-oriented conceptual and logical design data management and distribution, user interface design. Prereq: grad st.

TO: Service-Oriented Analysis and Design. 3cr. G.

Application development using service oriented architecture, methodologies for specification, selection, composition, and integration of services, software quality assurance and metrics. Prereq: grad st; Bus Adm 436(P).

Bus Adm 749:

FROM: Data Management Systems. 3 cr. G.

Database modeling and design. Object oriented data modeling using UML. Logical and physical design considerations. Creating and loading databases. Data manipulation using SQL. Manipulating databases from web. Prereq: grad st; Bus Adm 740(P); 747(P).

TO: Advanced Data and Information Management. 3cr. G.

Managing structured, semi structured and unstructured data, data integrity management, advanced data representation, data integration, governance and administration, data quality and reporting information. Prereq: grad st; Bus Adm 434(P).

Bus Adm 811:

FROM: Business Reengineering Through Information Technology. 3 cr. G.

Conceptual understanding of business reengineering emphasizing role of it. Develop skills in process assessment/redesign, it assessment/integration into business processes. Action planning of IT-enabled reengineering implementation. Prereq: grad st; BusMgmt 707(P) or Bus Adm 744(P); or cons instr.

TO: Process and Work-Flow Management. 3cr G.

Business process modeling and design, process optimization, inter/intra organization process integration, process re-engineering and continuous process improvement, process execution and process implementation using ERP. Prereq: grad st; BusMgmt 732(P).

Bus Adm 812:

FROM: Emerging Information Technologies. 3 cr. G.

Introduction to novel information technologies; assessing viability, impact and management of emerging technologies; integration with traditional information technology. Hands-on experience in laboratory setting. Prereq: grad st; Bus Adm 740(P) or cons instr.

TO: Emerging Information Technologies for Business. 3cr. G.

Course provides an introduction to novel information technologies; emphasis is on assessing viability, impact and management of emerging technologies and their integration with traditional information technology. Prereq: grad st.

NEW COURSES:

Bus Adm 743 Information Privacy, Security & Continuity. 3cr. G.

Privacy threats and safeguards; identifying information system vulnerabilities; planning and managing security measures. Ethical and legal perspectives concerning information and data
Prereq: grad st.

Bus Adm 810 Development of Web-Based Solutions. 3cr. G.

Web development for eBusiness, web development tools and methodologies, web services, content management, developing database-driven web applications, mobile applications, and Web 2.0 technologies. Prereq: grad st; Bus Adm 740(P).

Bus Adm 816 Business Intelligence Technologies & Solutions. 3cr. G.

Development of business intelligence (BI) solutions using data warehousing and data mining technologies. Use of SAP BW tool for implementing BI solutions. Prereq: grad st.

Bus Adm 817 Infrastructure for Information Systems. 3cr. G.

Overview of computing and network technologies. Design and development of technology infrastructure for supporting modern information systems. Infrastructure management strategies, security, reliability, and performance considerations. Prereq: grad st.

Bus Adm 818 Information Systems Practicum. 3cr. G.

Team project to build a working prototype system to address specific client need. This involves need assessment, market research, requirement specification, system design and building. Prereq: grad st; Bus Adm 747(P); cons of instr.

BusMgmt 732 Enterprise Resource Planning. 3cr. G.

Enterprise Resource Planning concepts, fundamental business processes, interaction of various functional areas, development tools for the implementation of web-based ERP applications.
Prereq: grad st.

BusMgmt 733 Enterprise Simulation Game. 3cr. G.

Use of ERP simulation game, development of understanding of ERP concepts, experience benefits of ERP, develop technical skills using ERP software. Prereq: grad st.

BusMgmt 734 Enterprise Resource Planning Certification. 3cr. G.

Understand interdependencies and integration of key business processes and power of technology-enabled ERP system to increase productivity and improve business performance. Includes TERP 10 certification exam preparation. Prereq: grad st; Bus Adm 811(P).

Appendix B

Lubar School of Business
MS in Management – MIS Program Change

LSB Doc. 1515

FROM:

Management Information Systems - 30 Credits

Core Courses - 21 credits

- Bus Adm 740 Management Information Systems Concepts and Languages
- Bus Adm 744 Management of Information Systems
- Bus Adm 747 Systems Analysis and Design
- Bus Adm 748 Information Technology Project Management*
- Bus Adm 749 Data Management Systems
- Bus Adm 812 Emerging Information Technologies
- Bus Adm 813 Object-Oriented and Visual Paradigms
- * Integrating course

Elective Courses - 9 credits from the following:

- Bus Adm 741 Decision Support Systems and Groupware
- Bus Adm 746 Topics in Management Information Systems
- Bus Adm 811 Business Reengineering Through Information Technology
- Bus Adm 814 Intelligent Systems for Business
- Bus Adm 819 Management Information Systems Internship
- Bus Adm 890 Introduction to Electronic Business
- Bus Adm 891 Development of Electronic Business Applications
- Bus Adm 893 Infrastructure for Electronic Business
- Bus Adm 899 Management Research Project/Thesis

TO:

MS-Information Technology Management

The information technology (IT) field continues to change at a rapid pace, with new technologies being introduced continually. While some technologies fail to achieve widespread use, a large number are adopted by corporate IT departments and consulting organizations to meet the needs of the organization and provide sustainable competitive advantage. Given the current trends in information technology, the IT practitioner of the future will be expected to use a variety of information technologies to deliver IT products in an environment that is increasingly driven by concerns of quality, cost, security, and shorter turnarounds. Corporate trends toward downsizing, globalization, outsourcing, and ubiquitous computing, coupled with an explosion of media friendly technologies, require that the IT practitioner of the future be more adaptable and possess a different set of skills than traditionally valued.

The revised Master of Science Information Technology Management program is an advanced masters program targeting practicing IT professionals and students with undergraduate degrees in information technology or related fields. It aims to prepare students to tackle pressing organizational problems using cutting edge technology and approaches, and to be successful IT practitioners in this ever-changing environment. It offers a common core of basic IT skills that is technology independent and will be valued over a career. It offers flexibility to tailor the program to individual needs, and is distinct from competing local programs through its innovativeness.

The program comprises 10 courses for a total of 30 credit hours and is offered in a convenient evening schedule.

Required Background:

Undergraduate degree in Information Technology or related field

or

Minimum of 3 years of information technology experience

or

Undergraduate coursework equivalent to UWM Bus Adm 335 (Visual System Development),
Bus Adm 434 (Data Base Management Systems), and Bus Adm 436 (Systems Analysis and Design).

Information Technology Management - 30 Credits

Required Courses (15 credits)

Bus Adm 744 Information Technology Strategy & Management
Bus Adm 747 Service-Oriented Analysis and Design
Bus Adm 748 Managing Information Technology Projects (*capstone course*)
Bus Adm 749 Advanced Data and Information Management
Bus Adm 810 Development of Web-Based Solutions

Elective Courses (15 credits)

Choose five courses from the following;

Bus Adm 741 Web Mining and Analytics
Bus Adm 743 Information Privacy, Security & Continuity
Bus Adm 746 Topics in Information Technology Management: (Subtitled)
Bus Adm 811 Process and Work-Flow Management
Bus Adm 812 Emerging Information Technologies for Business
Bus Adm 814 Enterprise Knowledge & Semantic Management
Bus Adm 816 Business Intelligence Technologies & Solutions
Bus Adm 817 Infrastructure for Information Systems
Bus Adm 818 Information Systems Practicum
Bus Adm 819 Information Technology Management Internship
Bus Mgmt 732 Enterprise Resource Planning
Bus Mgmt 733 Enterprise Simulation Game

Appendix C

Lubar School of Business
MS.MBA – Program Change

LSB Doc. 1517

FROM:

(material skipped)

MS.MBA Program

This coordinated degree program combines the degree requirements of the MBA and MS-MIS concentration. The combination of MBA core courses and MIS courses (including some eBusiness courses) prepares graduates for managerial positions in IT organizations or for IT-related functions within organizations. Prerequisite to the award of either degree in this program is the simultaneous award of its counterpart degree.

Credits and Courses

From the MBA program (24 credits):

- Bus Mgmt 704 Accounting Analysis and Control
- Bus Mgmt 705 Corporate Finance
- Bus Mgmt 706 Managing in a Dynamic Environment
- Bus Mgmt 708 Marketing Strategy: Concepts and Practice
- Bus Mgmt 709 Data Analysis for Management Applications
- Bus Mgmt 710 Economic Analysis for Managers
- Bus Mgmt 711 Competitive Operations Strategy
- Bus Mgmt 712 Strategic Management

From the MS-MIS area of concentration (21 credits):

- Bus Adm 740 MIS Concepts and Languages
- Bus Adm 744 Management of Information Systems
- Bus Adm 747 Systems Analysis and Design
- Bus Adm 748 Information Technology Project Management
- Bus Adm 749 Data Management Systems
- Bus Adm 812 Emerging Information Systems
- Bus Adm 813 Object-Oriented and Visual Paradigms

Elective Courses (9 credits):

Please refer to www.uwm.edu/Business/programs for a comprehensive listing of elective courses.

TO:

(material skipped)

MS • MBA Coordinated Degree Program

The Lubar School of Business offers a coordinated degree program - the MS • MBA - which combines the degree requirements of the MBA and MS-Information Technology Management concentration. The combination of MBA core courses and IT management courses prepares graduates for managerial positions in IT organizations or for IT-related functions within organizations. Prerequisite to the award of either degree in this program is the simultaneous award of its counterpart degree.

MS • MBA Foundation and Background Preparation. This coursework may be waived for individuals who have completed an AACSB-accredited undergraduate business degree program. Other individual course exemptions will be determined on a case-by-case basis. These courses are:

MBA Foundation courses:

- Bus Adm-700 Building Business Interfacing Skills (2 cr)
- Bus Adm-701 Business Mathematics (2 cr)

Bus Adm-702 Business Statistics(2 cr)
Bus Adm-703 Financial Accounting (3 cr)

ITM Foundation courses:

Undergraduate degree in Information Technology or related field

or

Minimum three years of information technology experience

or

Bus Adm 335 Visual System Development (3cr), Bus Adm 434 Data Base Management Systems (3cr),
And Bus Adm 436 Systems Analysis and Design (3cr)

Advanced Standing. Students with a BBA degree will be granted advanced standing for the core courses that were their major field of study as an undergraduate.

Credits and Courses - 54 degree credits

Required MBA program courses (24 credits):

Bus Mgmt 704 Accounting Analysis and Control
Bus Mgmt 705 Corporate Finance
Bus Mgmt 706 Managing in a Dynamic Environment
Bus Mgmt 708 Marketing Strategy: Concepts and Practice
Bus Mgmt 709 Data Analysis for Management Applications
Bus Mgmt 710 Economic Analysis for Managers
Bus Mgmt 711 Competitive Operations Strategy
Bus Mgmt 712 Strategic Management

Required MS-IT Management concentration courses (15 credits):

Bus Adm 744 Information Technology Strategy and Management
Bus Adm 747 Service-Oriented Analysis and Design
Bus Adm 748 Managing Information Technology Projects (*capstone course*)
Bus Adm 749 Advanced Data and Information Management
Bus Adm 810 Development of Web-Based Solutions

Electives (15 credits):

Group A (*Complete a minimum of 9 credits from the list below*):

Bus Adm 741 Web Mining and Analytics
Bus Adm 743 Information Privacy, Security and Continuity
Bus Adm 746 Topics in Information Technology Management
Bus Adm 811 Process and Work-Flow Management
Bus Adm 812 Emerging Technologies for Business
Bus Adm 814 Enterprise Knowledge and Semantic Management
Bus Adm 816 Business Intelligence Technologies & Solutions
Bus Adm 817 Infrastructure for Information Systems
Bus Adm 818 Information Systems Practicum
Bus Adm 819 Information Technology Management Internship
Bus Mgmt 732 Enterprise Resource Planning
Bus Mgmt 733 Enterprise Simulation Game

Group B (*Complete a minimum of 3 credits from the list below*):

Bus Adm 733 Organizational Development
Bus Adm 734 Managing Technological Innovation
Bus Adm 783 Supply Chain Management
Bus Adm 894 Internet Marketing
Bus Adm 895 Strategic Marketing Issues in eBusiness
Bus Mgmt 715 Leadership, Teambuilding and Effective Management

RECOMMENDATION OF THE FACULTY OF THE SHELDON B. LUBAR SCHOOL OF BUSINESS TO ESTABLISH A GRADUATE CERTIFICATE IN ENTERPRISE RESOURCE PLANNING

I. PROGRAM IDENTIFICATION

Title of Proposed Graduate Certificate

Graduate Certificate in Enterprise Resource Planning

1.2 Department(s) or Functional Equivalent(s) Sponsoring the Certificate

Management Information Systems

1.3 College(s), School(s) or Functional Equivalent(s)

Sheldon B. Lubar School of Business

1.4 Timetable for Initiation

Spring 2010

II. RATIONALE

The Lubar School of Business is a member of the SAP University Alliances (UA) program which provides access to the SAP software as well as training for faculty members. The Center for Technology Innovation, within the Lubar School of Business, serves as one of five SAP UA hosting centers worldwide. This Center is currently providing SAP hosting services to more than 80 other universities in the America's. SAP currently estimates that there is a worldwide shortage of around 40,000 professionals in the SAP field and our local corporate partners have indicated SAP professionals are in high demand. CTI has been working closely with these Milwaukee area companies by offering day-long workshops in SAP. Given the very strong demand for additional SAP professionals in the Milwaukee area, the MIS faculty met with industry representatives and received very positive feedback on this proposed graduate certificate program. The program would be geared toward existing working IT graduates who wish to return to school to gain this additional skill.

III. INSTITUTIONAL CONTEXT

Relationship to Mission of Institution

The mission statement of the Lubar School of Business, as well as UWM, indicates we are to deliver high-quality management education to our students and practicing professionals. Our educational philosophy is to "prepare students to meet the challenges of a dynamic, often unstructured, technological and globally interdependent business environment." To realize this vision, we systematically review our academic offerings to continuously improve our curriculum and offerings. This proposal is an outgrowth of the MIS area's five-year internal program review of its masters' programs.

The Graduate Certificate in Enterprise Resource Planning will provide a component that will complement students currently enrolled in the MBA or MS in Information Technology Management programs, in addition to qualified individuals who have completed (at a minimum) a bachelor's degree. The certificate is designed to provide students with a skill set that has been globally documented to be in high demand.

Relationship to/Impact on Other UWM Programs

The Graduate Certificate in Enterprise Resource Management will share most courses with the graduate MS in Information Technology Management program and may have the effect of students enrolling in this program upon completion of the certification.

IV. NEED

The focus of the Graduate Certificate in Enterprise Resource Planning will be the SAP ERP product. The certificate is a response to the significant shortage worldwide of professionals with SAP skills. SAP recently estimated this shortage to be about 40,000 individuals, with more than one half coming from North and South America. The shortage is reflected in the greater Milwaukee area by significant increase in the demand for the SAP skill set. This increase is due both to the adoption of SAP by new customers as well as increased utilization by existing SAP customers. The Lubar School of Business Career Services Center has noticed more companies requesting MIS graduates with SAP skills. As part of the development of this certificate and the revision of the MS curriculum in the MIS program, a group of over 20 Milwaukee area MIS executives met to provide feedback to the Lubar School of Business MIS faculty. More than half of those companies represented currently use SAP, and they expressed strong support for this certificate. These companies felt there would be great demand among their current employees. There is no comparable graduate certificate within the state of Wisconsin.

V. PROGRAM DESCRIPTION AND EVALUATION

5.1 Description:

5.1.1 The Graduate Certificate in Enterprise Resource Planning consists of 15 credits.

5.1.2 Define the nature of the program:

The goal of this certificate is to provide expertise in the Enterprise Resource Planning area.

5.1.3 Define the level of the program:

The Graduate Certificate in Enterprise Resource Planning is designed for college graduates who wish to acquire ERP skills but who may not wish to enter a complete MBA or MS in Management program.

5.1.4 Learning objectives and competencies that will be attained through this certificate:

The student will:

- a) describe ERP concepts;
- b) develop web-based ERP applications;
- c) conduct business cycles using the ERP simulation game;
- d) demonstrate the ability to configure ERP processes;
- e) conduct analysis using business intelligence tools; and
- f) prepare to take the SAP TERP10 certification exam.

5.1.5 Discuss any anticipated alternative instructional models.
N/A

5.2 Curriculum – Courses and Credits:

Required Courses (15 credits):

Bus Mgmt 732 (new)	Enterprise Resource Planning	3cr
Bus Adm 811	Process and Work-Flow Management	3cr
Bus Adm 816 (new)	Business Intelligence Technologies & Solutions	3cr
Bus Mgmt 733 (new)	Enterprise Simulation Game	3cr
Bus Mgmt 734 (new)	Enterprise Resource Planning Certification (<i>capstone</i>)	3cr

A maximum of 6 credits from the Certificate in Enterprise Resource Planning may also count toward other UWM graduate degrees.

5.3 Admission Requirements and Procedures:

Students applying for the certificate program must hold a bachelors degree and must have earned a 2.75 cumulative GPA or must furnish substantial evidence of ability to succeed in graduate-level coursework. The preferred background includes a bachelor or masters in MIS or Information Technology or a related area, or a bachelor’s degree with relevant work experience. Students may apply to the Graduate School as candidates for the certificate program in non-degree status, or they may pursue the certificate while enrolled in another graduate program, such as Lubar School’s MBA or Masters of Science in Management – Information Technology Management concentration.

5.4 Continuation and exit requirements:

Students must complete all coursework required for the certificate with at least a 3.0 GPA to have the certificate posted on the transcript at graduation.

5.5 Allowance for transfer credit (if any):

None.

5.6 Certificate conferral:

The certificate will be awarded upon successful completion of all certificate program requirements.

5.7 Program administration:

Lubar School’s Center of Technology Innovation (CTI) will oversee the administration of the program.

5.8 Participating faculty:

The following faculty/staff are potential participants in the program:

Bus Mgmt 732	Enterprise Resource Planning	Haseman
Bus Adm 811	Process and Work-Flow Management	Jain
Bus Adm 816	Business Intelligence Technologies & Solutions	Sinha
Bus Mgmt 733	Enterprise Simulation Game	Srite
Bus Mgmt 734	Enterprise Resource Planning Certification	Haseman

VI. RESOURCES

It is not anticipated additional resources will be required for the certificate.

VII. BULLETIN COPY

Certificate Program (Graduate) – Catalog Copy

Graduate Certificate in Enterprise Resource Planning

The Graduate Certificate in Enterprise Resource Planning is designed for students who desire a sequence of graduate level courses that focus specifically on the Enterprise Resource Planning (ERP) area. This five-course sequence prepares students for the SAP TERP10 certification exam. The market demand for professionals with skills in this area is quite high.

Eligibility

Students currently enrolled in a UWM graduate program are eligible to earn the Graduate Certificate in Enterprise Resource Planning. Persons not currently enrolled must apply for admission to the Certificate and must possess, at a minimum, a bachelor's degree with an overall GPA of 2.75 or better. For more information regarding the application process, please email ssandin@uwm.edu or call 414-229-5403.

Curriculum

To obtain the certificate, a student must complete 15 credits of required coursework.

Required Courses (15 credits):

Bus Mgmt 732	Enterprise Resource Planning	3cr
Bus Adm 811	Process and Work-Flow Management	3cr
Bus Adm 816	Business Intelligence Technologies & Solutions	3cr
Bus Mgmt 733	Enterprise Simulation Game	3cr
Bus Mgmt 734	Enterprise Resource Planning Certification (<i>capstone</i>)	3cr

A maximum of 6 credits from the Certificate in Enterprise Resource Planning may also count toward other UWM graduate degrees.

Graduation Requirements

Students must complete all coursework required for the certificate with at least a 3.0 GPA to have the certificate posted on the transcript at graduation. Students must complete all certificate courses within 3 years of initial enrollment in the certificate program.