Subj	Crs No	Course Title	Date Sub	Change Type	Companion Course
IS	586	Network Security		Pre Req	IS 486
IS	589	Security Principles and Practices		Pre Req	IS 489
IS	600	Foundations of Computer and Info Systems		Add Crs	
IS	615	Topics in Information Systems		Add Crs	
IS	641	Project Planning and Design		Prefix Ch	
IS	642	Project Implementation		Prefix Ch	
IS	650	Networks and Communications		Add Crs	
BA	601	Organizational Leadership		Prefix Ch	
BA	606	Individual Studies		Add Crs	
BA	645	Operations Management		Add Crs	
BA	650	Accounting/Finance and Information Systems		Add Crs	
BA	675	Topics in Business		Add Crs	
Program Changes / New Programs					
		MIS Program Changes			

ROUTE SHEET
NEW MAJOR/MINOR/PROGRAM or PROGRAM CHANGE
(Attach program log form)

Nature of program request (Mark all that apply)

☐ Undergraduate program change   ☑ Graduate program change
☐ New non-degree program   ☐ Honors Program change
☐ New major   ☐ Program Title change
☐ New minor   ☐ New Applied Baccalaureate program
☐ New certificate program   ☐ Other (specify) _____

1) Faculty Sponsor Signature _____ Date _5/8/14_

2) Dept./Program Coordinator _____ Date _5/8/14_

3) Division Chair _____ Date _5/8/14_

   Curriculum Chair _____ Date _5/8/14_

4) Faculty Senate Committees: The Curriculum Committee reviews all course proposals except for honors and graduate courses, which are reviewed by the Honors Committee or Graduate Committee instead. All 400/500 "split" courses must be approved by <u>both</u> the Curriculum and Graduate Committees. All committee decisions are forwarded to the Senate Executive Committee.

   a) Curriculum Committee Chair _____ Date _____
     ___ N/A ___ Approved ___ NOT Approved

   b) Graduate Committee Chair _____ Date _____
     ___ N/A ___ Approved ___ NOT Approved

   c) Honors Committee Chair _____ Date _____
     ___ N/A ___ Approved ___ NOT Approved

5) Faculty Senate President _____ Date _____
   ___ Approved by the Senate Executive Committee
   ___ Approved by the Senate   ___ NOT Approved (*Return to sponsor*)

6) Appropriate Dean _____ Date _____
   ___ Approved   ___ NOT Approved (*Return to Senate President*)

7) Provost/VPAA _____ Date _____
   ___ Approved   ___ NOT Approved (*Return to Senate President*)

8) President _____ Date _____
   ___ Approved   ___ NOT Approved (*Return to Provost/VPAA*)

MEMORANDUM

TO: Kim Jenson, Chair, Graduate Studies Committee
Tad Shannon, President, Faculty Senate

FROM: Scot Morse, Coordinator, Management & Information Systems Program
Kristina Frankenberger, Business

DATE: May 9, 2014

SUBJECT: Program and course changes in the Management & Information Systems Program

The Divisions of Business and Computer Science have recently initiated a major revision to the interdisciplinary Master of Science in Management and Information Systems program. This memorandum offers a summary of the proposed revisions to both coursework and the degree plan.

The present revisions stem from a number of challenges that the program has faced over the past few years. Program faculty have discussed these issues and during a Winter term 2014 meeting College of Liberal Arts and Sciences Dean Sue Monahan and Vice President for Academic Affairs Stephen Scheck both recommended suspending admissions until revisions could be made.

The following curriculum changes are being made alongside programmatic changes, including:
- new program specific admission requirements
- an application to the program
- new acceptance procedures

With these changes now complete, admissions have been reopened and we are receiving applications.

The proposed changes to the degree plan do not change the total number of credits or the form of the exit requirement. The former remain at 48 credit hours and the latter a professional project. Students previously selected between 16 and 20 credit hours of Computer Science and then between 16 and 20 credits of Business, with no required courses. We propose to change this to a set of Core courses plus Electives. Students will be required to take 28 credit hours of Core courses that have been selected by the program faculty to be representative of the minimum core material that this degree targets and that graduates must demonstrate a level of mastery over. This leaves room for 12 credit hours of electives. We are trying to integrate the program more and avoid thinking of the program as being composed of two disparate subjects; however, we will retain the requirement that students complete a minimum number of credits in

each Division: minimum of 16 credits of IS or CS prefix courses and a minimum of 16 credits of BA prefix courses.

The coursework changes include "new" courses with an IS prefix (both 500 and 600 level) as well as those renumbered and/or re-titled. The goal for the Computer Science Division is to have all courses within the M & IS program be labeled as IS courses and not as CS. Therefore, what was previously CS 600 will become IS 600, and so on. In all cases except for CS/IS 641 and 642 we will keep the CS course for use in traditional Computer Science oriented graduate courses for a different program, or for M & IS students with the necessary background to succeed in those courses. CS 641 and CS 642 will be deleted.

The exit requirement remains a professional project. It will however only be run as IS 641 and IS 642. Computer Science and Business faculty will coordinate in the execution of student projects and may alternate or team-teach these courses.

One last change to the program is worth noting. We will offer IS 675 Topics in Information Systems (1 credit) or BA 675 Topics in Business (1 credit) once per term. These courses serve the dual purpose of giving students a way to have full time status, at 9 credits/term, when all other courses are 4 credits, and to study a variety and breadth of topics. Students will be able to count up to 4 of these courses as one elective, but not as a Core course. Students are allowed to take up to 4 more, which should carry them through to the end of their work at WOU. These additional 4 may not be used to meet any other program requirements.

Note regarding 500 level courses. There are several IS 5xx courses — two in the Core and several expected to be available as electives — students may include in their program. With the currently designed program, students will have no trouble keeping the number of these courses below 50% of their program as is required by the Graduate School. Another issue is that some students may have already taken the IS 4xx counterpart course and so are not eligible to take the graduate offering. We see this as a good thing as it will force those students to take other classes, to their benefit. We will, however, need to write course substitutions for those cases where a Core course is replaced and will furthermore need to make sure there are enough course offerings so these students will be able to fill out their program.

Thank you for considering our proposal. We hope the changes will strengthen the Management and Information Systems program. We welcome any suggestions.

Summary of Changes

Existing Program (48 hours)

Select 16-20 credits of Computer Science:
  CS 600 Fundamentals of Computer and Information Systems
  CS 610 Programming Languages
  CS 620 Database and Information Systems
  CS 630 Software Engineering
  CS 650 Networks and Communications
  CS 660 Algorithms and Computational Theory
  CS 670 Computer Architecture and Operating Systems
  CS 680 Knowledge Based Systems and Decision Support Systems
  CS 690 Computer Security Administration

Select 16-20 credits of Business
  BA 601 Organizational Leadership
  BA 610 Marketing Analysis and Strategy
  BA 615 General Linear Models
  BA 620 Budgetary Process
  BA 630 Report Writing and Economic Analysis

Select 8 credits for Exit Requirement
  BA 635 Professional Project
  CS 609 Practicum

Proposed Program (48 hours)

Required Core (28 credits)
  BA 610 Marketing Strategy
  BA 640 Organizational Leadership
  BA 650 Accounting/Finance and Information Systems
  IS 600 Fundamentals of Computer and Information Systems
  IS 520 Introduction to Database Systems
  IS 525 IT Project Management
  IS 650 Networks and Communications

Select electives (12 credits), with a minimum of 16 credits overall of both BA and IS/CS
  BA 615 General Linear Models
  BA 620 Budgetary Process
  BA 625 New Product Development
  BA 630 Report Writing and Economic Analysis
  BA 645 Operations Management
  BA 676 Topics in Management and Information Systems
  BA 675 Topics in Business (1)
  IS 675 Topics in Information Systems (1)
  BA 606 Individual Studies (special arrangement only; 1-8)
  IS 585 Introduction to Computer Security
  IS 586 Network Security
  IS 589 Security Principles and Practices
  + Any other approved BA, IS or CS 500 or 600 level course

Professional Project (8 credits) required
  IS 641 Project Planning and Design
  IS 642 Project Implementation

Existing Course	Proposed Course	Type of Change
CS 600 Fundamentals of Computer and Information Systems	IS 600 Foundations of Computer and Information Systems	New course
CS 650 Networks and Communications	IS 650 Networks and Communications	New course
CS 615 Colloquium *	IS 675 Topics in Information Systems	New course
CS 641 Project Planning and Design**	IS 641 Project Planning and Design	Course prefix
CS 642 Project Implementation**	IS 642 Project Implementation	Course prefix
IS 586 Network Security *		Prerequisite
IS 589 Security Principles and Practices*		Prerequisite
BA 601 Organizational Leadership	BA 640 Organizational Leadership	Course number
	BA 645 Operations Management	New course
	BA 650 Accounting/Finance & Information Systems	New course
	BA 675 Topics in Business	New course
	BA 606 Special Individual Studies	New course

* New course is an item under Old Business at Faculty Senate at the time of writing
** Approved but not yet in catalog

Catalog Copy (proposed language)

Coordinator: Scot Morse

Mission
The M.S. in Management & Information Systems program is an interdisciplinary collaboration between the Divisions of Business & Economics and Computer Science. It is designed to provide students with a mature foundation in business concepts and practices together with an understanding of the foundational disciplines, practices and technologies that enable modern information systems.

Learning Outcomes
Students will
1. develop a thorough understanding of the core foundational computing principles that underlie modern information systems
2. demonstrate the technical communication skills needed to interact with IT industry professionals.
3. learn fundamental business practices (e.g., accounting, finance, data analysis, management and marketing) which will enhance their ability to understand a business's information needs and to develop better systems to address those needs.

The program consists of 48 credit hours of approved graduate courses in Business, Information Systems and Computer Science. This includes a required core component, electives and a professional project exit requirement. Within the core and electives, students must complete a minimum of 16 credit hours

of BA courses, with another 16 credits minimum from IS or CS listed courses not including the exit requirement. Electives should be selected with the help of an advisor.

M.S. in Management and Information Systems (48 credits)

Required core (28 credits)
BA 610 Marketing Strategy (4)
BA 640 Organizational Leadership (4)
BA 650 Accounting/Finance and Information Systems (4)
IS 600 Foundations of Computer and Information Systems (4)
IS 520 Introduction to Database Systems (4)
IS 525 IT Project Management (4)
IS 650 Networks and Communications (4)

Electives (12 credits)
Select 12 credits of the following or other approved BA, IS or CS graduate level courses
BA 615 General Linear Models (4)
BA 620 Budgetary Process (4)
BA 625 New Product Development (4)
BA 630 Report Writing and Economic Analysis (4)
BA 645 Operations Management (4)
BA 676 Topics in Management and Information Systems (4)
BA 675 Topics in Business (1)*
BA 606 Individual Studies (special arrangement only; 1-8)
IS 675 Topics in Information Systems (1)*
IS 585 Introduction to Computer Security (4)
IS 586 Network Security (4)
IS 589 Security Principles and Practices (4)

Required Professional Project (8 credits)
IS 641 Project Planning and Design (4)
IS 642 Project Implementation (4)

* BA 675 or IS 675 may each be taken up to 4 times for credit but may count at most as 4 credits of elective

Admission requirements *(if it is desired to have this in the catalog)*
The Master of Science in Management & Information Systems graduate program invites applications for admission from students meeting the following requirements:
- Meet all requirements for admission to the Graduate School of Western Oregon University
- Have completed the following undergraduate coursework with a grade of C or better (see the application for more information)
    o Financial Accounting (BA 211 or equivalent)
    o Introduction to Microeconomics (EC 201 or equivalent)
    o Introduction to Programming using a modern language such as Java, C++, C#, or Python (CS 161, CS 133 or equivalent)
    o Introduction to Probability and Statistics (MTH 243 or equivalent)
    o Calculus or Discrete Mathematics (MTH 251 or BA 240 or MTH 241 or MTH 231 or equivalent)

- <u>Submit a Management & Information Systems Program Application</u>, which includes:
  - A current resume
  - Answers to questions about your background and career goals
  - A writing sample
  - Unofficial transcripts showing evidence of the completed coursework listed above
  - Three sealed letters of recommendation

For more information go to wou.edu/grad or email mmis-grad@wou.edu

Western Oregon University

MASTER OF SCIENCE IN MANAGEMENT & INFORMATION SYSTEMS

Name: _____   Address: _____

V-number _____   _____

Email address: _____   _____

Phone: _____ □ Cell □ Home □ Work   Advisor: _____

COURSES		Term	Grade	Credits
I. Required Core Courses (28 credits)				
BA 610	Marketing Strategy			4
BA 640	Organizational Leadership			4
BA 650	Accounting/Finance and Information Systems			4
IS 600	Fundamentals of Computer and Information Systems			4
IS 520	Introduction to Database Systems			4
IS 525	IT Project Management			4
IS 650	Networks and Communications			4
II. Electives (12 credits):				

Select 3 or more BA or IS/CS graduate courses with the help of an advisor. Students must have a minimum of 16 credits of BA courses in their overall program. IS 615 (1) or BA 675 (1) may be taken up to four times for credit in any combination to count as one elective.

BA 615	General Linear Models			4
BA 620	Budgetary Process			4
BA 625	New Product Development			4
BA 630	Report Writing and Economic Analysis			4
BA 645	Operations Management			4
BA 676	Topics in Management and Information Systems			4
BA 675	Topics in Business			1
BA 606	Individual Studies (special arrangement only)			1-8
IS 675	Topics in Information Systems			1
IS 585	Introduction to Computer Security			4
IS 586	Network Security			4
IS 589	Security Principles and Practices			4
+ Any other approved BA, IS, or CS 500 or 600 level course				
III. Exit Requirement: Professional Project (8 credits)				
IS 641	Project Planning and Design			4
IS 642	Project Implementation			4
		TOTAL QUARTER HOURS:		**48**

Note: Requirements of the program total 48-credits of graduate courses made up of a combination of hours from both the Business and Computer Science divisions. Other courses not listed here may be offered and included in the program as electives with advisor approval. The project courses IS 641 and IS 642 may not be counted as part of the required Core or Electives. Graduate coursework must be done at the 500 or 600 level with no more than 50% done at the 500 level. Students who take the 400 level counterpart of a 400/500 course may not retake the 500 level course for credit in this program.

Student Signature: _____ Date: _____

Advisor Signature: _____ Date: _____

Program Coordinator Signature: _____ Date: _____

APPROVED: Director of Graduate Studies _____ Date: _____

MASTER'S DEGREE COMPLETION DATE: _____

Exit Requirement: _____

Existing Plan

Western Oregon
UNIVERSITY

MASTER OF SCIENCE IN MANAGEMENT AND INFORMATION SYSTEMS

Name: _____   Address: _____

V-number _____   _____

Email address: _____   _____

Phone: _____ □ Cell □ Home □ Work   Advisor: _____

COURSES		Term	Grade	Credits
I. **Computer Science Courses** (Select 16-20 credits from courses below)				
CS 600	Fundamentals of Computer and Information Systems			4
CS 610	Programming Languages			4
CS 620	Database and Information Systems			4
CS 630	Software Engineering			4
CS 650	Networks and Communications			4
CS 660	Algorithms and Computational Theory			4
CS 670	Computer Architecture and Operating Systems			4
CS 680	Knowledge Based Systems and Decision Support Systems			4
CS 690	Computer Security Administration			4
II. **Business Courses** (Select 16-20 credits from courses below)				
BA 601	Organizational Leadership			4
BA 610	Marketing Analysis and Strategy			4
BA 615	General Linear Models			4
BA 620	Budgetary Process			4
BA 630	Report Writing and Economic Analysis			4
III. **Exit Requirements** (*select 8 credits from the following courses*)				
BA 635	Professional Project ** (1-8)			
CS 609	Practicum ** (1-9)			

TOTAL QUARTER HOURS: **48**

Note: Requirements of the program total to 48-credits of graduate courses made up of a combination of hours from both the business and computer science division. Depending on a student's baccalaureate background and professional work environment proficiency, some variation in ratio of CS vs. BA credits may be permitted with advisor approval. Included in the 48 total credit hours are 8 hours of Practicum and/or Professional Project to be approved by the student's advisor and which serve as the program's exit requirement.

Note: Graduate coursework must be done at the 500 or 600 level with no more than 50% done at the 500 level.

BA Advisor's Signature: _____   Date: _____

CS Advisor's Signature: _____   Date: _____

Student's Signature: _____   Date: _____

APPROVED: Director of Graduate Studies _____   Date: _____

MASTER'S DEGREE COMPLETION DATE: _____

Exit Requirement: _____