

ISM4930 – Introduction to Computing and Information Systems

Motivation and Objectives

Almost all business schools offer a course teaching computing skills as well as basic principles of information system (IS) at the freshman or sophomore levels. Of those skills spreadsheet modeling and basic database design and implementation are the most demanded both in the business curriculum and in corporate life. In addition, IS concepts constitute an essential part of a modern business school education. Currently, our students do not have access to a course that teaches these skills and IS related concepts.

This 4 credit course will not only provide skills in spreadsheet modeling and database design and implementation but also cover basic IS fundamentals. Students completing the course successfully will receive Microsoft Certified Application Specialist (MCAS) certification in Excel and Access which we believe will make our students more competitive in the job market.

Description

An introduction to computing and information systems in organizations for undergraduate students. Topics include hands-on coverage of spreadsheet analysis, and database management; examples of information systems applications in organizations; management of information and computer technology; and current trends and future directions.

Prerequisites

MAC 1147 or equivalent.

Content

The course has about 2 credits worth of content on Excel and Access to prepare the students for the certification exam as well as provide computing skills that are needed in the business curriculum. The other 2 credits will be used to cover IS concepts. The details of topics are listed in Table 1.

Course Delivery

The course will be team taught. Two credits, mostly conceptual content, will be delivered using the electronic platform by ISOM faculty. The Excel and Access content will be delivered as a mixture of lectures and online tutorials by the staff of Dudziak-McClintock Business Technology Center (DMBTC) staff. They currently teach ISM3004 for the online BSBA program and have the expertise to teach this content.

Road Map

Several companies offer MCAS certification testing platforms. We have started evaluating these companies as well as content delivery platforms for online tutorials.

We will offer the course in Fall 2010 as one section for a maximum of 40 students, and evaluate the content and delivery methods. We hope to offer multiple sections in Spring 2011. If and when we have evidence that the course is well received, we will ask the Undergraduate Committee to consider this course as a replacement for CGS 2531.

After discussions with DMBTC staff we came to the conclusion that there is very little overlap between ISM3004 and ISM4930. If ISM4930 is eventually approved as a pre-professional core course we foresee both courses being offered.

Table 1 – Course Content

Week	Applications Track	IS Track
1	INTRODUCTION - Welcome to the course - Information Search - Netiquette - Copyright - Computer History DMBTC:	INTRODUCTION - Welcome to the course - IS in Organizations (Big Picture) ISOM: Gary Koehler
2	THE PERSONAL COMPUTER &THE INTERNET - PC Essentials - Virtual Personal Computers and the ISM4930 Lab - Networking - How The Internet Works DMBTC :	THE PERSONAL COMPUTER &THE INTERNET VIRTUAL ORGANIZATIONS - Groupware - Telework - Technology-based meetings DMBTC:
3	Spreadsheets using Excel - Introduction to spreadsheets - Creating and Manipulating Data	IS SYSTEMS - Systems - Business Information Systems - Examples ISOM: Haldun Aytug
4	Spreadsheets using Excel - Formatting data and content	BUSINESS PROCESSES AND SYSTEMS ANALYSIS - BPR - Requirements analysis ISOM: Selwyn Piramuthu
5	Spreadsheets using Excel - Creating and modifying formulas	INFORMATION SYSTEMS DEVELOPMENT - SDLC - JAD- Object-oriented design - Importance of maintenance, documentation ISOM: Shubho Bandyopadhyay
	Spreadsheets using Excel - Collaborating and securing data - Presenting data visually	DATABASE MANAGEMENT SYSTEMS - Administration - Data warehousing - OLAP/Data mining ISOM:

7	Spreadsheets using Excel - Working with add-ons	SYSTEMS PROCUREMENT - Make vs. Buy - Outsourcing - Risk assessment and control ISOM: Gary Koehler
8	Spreadsheets using Excel (EXCEL CERT EXAM)	REVIEW AND MIDTERM -- exam covers the IS track only
9	Databases using Access Database basics	STRATEGIC USE OF IS - Examples of strategic IS - Value chain model - Five forces model ISOM: Kenny Cheng
10	Databases using Access Creating and modifying tables Working with tables (primary keys, foreign keys, indexes, records, etc.) ...	INFORMATION SYSTEMS PLANNING AND GOVERNANCE ISOM: Praveen Pathak
11	Databases using Access Creating forms	THE WEB AND E-COMMERCE - E-commerce business models and concepts ISOM: Jane Feng
12	Databases using Access Creating reports Creating queries	ERP SYSTEMS - Overview of ERP modules - Examples (SAP, Peoplesoft, etc.) - Implementation Issues ISOM: Asoo Vakharia/Anand Paul/Janice Carrillo
13	Databases using Access Importing and exporting data	SCM SYSTEMS - Logistics - Purchasing ISOM: Asoo Vakharia/Anand Paul/Janice Carrillo
14	Databases using Access Tools for managing a database ...	CURRENT TRENDS (Maybe a speaker here would be best- someone from technology research companies such as Forrester) - Social networks - Cloud computing - ... ISOM:

15	Integrating Excel & Access for advanced projects * Mail merge from an address database -- printed and email * Hook an Access Database to a webpage * Email forms for data collection in Access * Sharing data between Office applications CERTIFICATION EXAMS BEGIN	CAREERS AND CERTIFICATIONS - Speaker (A CIO or COO or HR person knowledgeable in IS/OM carriers) (goal is to identify possible information systems career paths, motivate students to pursue a degree in ISOM)
16	CERTIFICATION EXAMS END	REVIEW AND FINAL EXAM -- exam covers the IS track only