



Syllabus

IOM431 (Business Information Systems)

Business Information Systems – Monday and Wednesday 12:00-1:50 p.m.

Contact Information

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Course Goal

Enable you to effectively manage critical information technology resources by providing you with an experiential understanding of the fundamental infrastructure components of Information Technology that include; computing hardware, networking, operating systems, application software, applications development.

Course Description

Over the past 5 years we have seen the impact of the network era through the proliferation of web-based applications transforming organizational processes and in some cases entire industries. These new web-based applications have complex and dynamic components that require technical knowledge to develop and manage. This course will combine the study of theory, best practices and hands-on laboratory exercises to improve your understanding of how to understand, select and develop these technologies. This course is designed as a survey course that discusses networks, protocols, hardware, operating system software, software applications development and software selection. The course uses a hands-on approach with over 40% of the class sessions conducted in an interactive environment (classroom / lab). Students will be required to develop business applications, conduct individual research, present and work on a real-world consulting project.

Learning Outcomes

Upon successful completion of this course, you will be able to:

- Describe the fundamental principles of computing hardware, application software, networking and applications development.
- Research individual computing, networking or storage technologies and explain how they work and their application to the business environment.
- Develop a proto-type network based web application that uses a three tier architecture model. This includes a (Database application) using Structured Query Language (SQL) and a (Server-side application) using ASP (Active Server Pages) and IDC (Internet Database Connector) / HTX (extensible HTML) technologies
- Identify an Information technology related operational improvement and determine an optimal software / hardware solution

Prerequisites

- None

Technical Requirements

The following identifies the standard office automation software (Microsoft Office, PC version) used at the Marshall School of Business and the associated basic usage skills students should have prior to taking IOM431. Students should be able to:

Windows Operating System (2000 or XP)

- Properly operate the mouse to navigate and manipulate files and menu items.
- Open, move, resize, and work in multiple application windows at one time.
- Search, open, rename and save existing files.
- Cut, copy, and paste from one application to another.
- Use Internet Explorer
- Access specific Web pages by entering the appropriate URL information
- Save and copy from Web pages into other applications.

Microsoft Word

- Create, save and open documents.
- Use the find and replace function.
- Check spelling and grammar.
- Change fonts and their characteristics.
- Use predefined templates.

Microsoft PowerPoint

- Create, save and open a presentation.
 - Use presentation templates.
 - Use clipart (add, resize, move, crop, etc.)
 - Use special effects such as auto advance, slide transitions, etc.
 - Adjust font properties such as size, color, etc.
- Cut, paste, move and delete objects

Textbook

Principles of Information Systems - Seventh Edition

Ralph M. Stair, George W. Reynolds Thomson Publishing - Course Technology

ISBN # 0-619-21561-5

Assessment

Presentation Layer	100pts	This assignment is worth a maximum of 100 points toward your final course grade. The minimum requirements to earn 90 points on this assignment are:
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		those students who add in 5 additional Unix commands related to file management. (2 pts each)
Individual Research Project	125pts	<p>This project is less structured than the lecture / labs and allows student to explore existing IT business applications and technologies. Each student will research and present a specific technology and it's application to business (select one application and discuss it in depth).</p> <p>The research will explore:</p> <ul style="list-style-type: none"> • What does the technology do? • How does the technology work? • What are the applications for business • What is your specific application • Your insights? • (More information will be given in class.) <p>The student will turn in the electronic copy of the presentation and write a one page executive summary.</p>
Group Software Evaluation Project	150pts	The objective of this assignment is to analyze a company in need of adding or upgrading software. Student groups will apply their knowledge in evaluating and selecting an optimal IT product or service as applied to a business situation. Each presentation will contain approximately 15 - 20 (Max) slides. Groups will be asked to provide a live presentation, submit an electronic copy of the presentation and write an executive summary (maximum 6 pages). Each student in the group will do peer evaluation.
Midterm	150pts	The midterm will contain a mix of fill in the blank, multiple choice and short answer questions. All material covered up until the time of the midterm including (lecture, assignments and readings) may be used.
Final	200 pts	The final is not cumulative and will contain a mix of fill in the blank, multiple choice and short answer questions. All material covered up until the time of the final including (lecture, assignments and readings) may be used. It will have a financial evaluation question.
In-class quiz	25 pts	Few in-class quizzes will be given. No makeup quizzes. You can drop one of the in-class quizzes.

Note: The individual points for each class work will be on different scale and the final grade will be adjusted based on the above criteria.

Schedule

Date / Time / Location	Readings	Due	Modules
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12:00 - 1:50pm HOH 406	Information Systems Pages 57 - 64 Seventh Edition Pages: 63-70		contains an overview of lectures contained within the course and represents an overview of the technical components used in today's Business Information Systems.
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1/30 12:00 - 1:50pm HOH 406	Principles of Information Systems Pages 84 - 96 Seventh Edition Pages: 88-101 Optional Reading How Cache Works linked with permission from the publisher " Brian Marshall	None	Computing Hardware (Part 1) This lecture is designed to take the student beyond the basic terminology and help understand how computing hardware works and the current trends in the market. Topics covered are processors, cache and memory.
2/1 12:00 - 1:50pm HOH 406	Principles of Information Systems Pages 97 - 103 Seventh Edition Pages: 101-109 Optional Reading How Hard Disks Work linked with permission from the publisher " Brian Marshall	None	Computing Hardware (Part 2) This lecture will continue with an explanation of how and secondary storage work. Based on information obtained in class lecture and from the assignment reading, students team will create a high-level diagram of an optimal Client PC for a particular business function.
2/6 12:00 - 1:50pm Computer lab HOH401	Principles of Information Systems Pages 132 - 145 Seventh Edition Pages: 143-156	None	Operating Systems This lecture / lab is designed to provide the student with an overview of operating systems. With Some exposure to the UNIX operating system. A brief discussion of terms and an in class exercise will help introduce the student to the basics of operating systems.
2/8 12:00 - 1:50pm COMPUTER LAB BRI202A	Principles of Information Systems Pages 159 - 16 Seventh Edition Pages: 171-175	None	Languages This lecture / lab will introduce the student to the fundamentals of the following programming languages ('C' and Java). Two in class exercises (programming in 'C' and creating a Java Applet) will help the student to understand how programs are created in both procedural and object oriented environments.
2/13 12:00 - 1:50pm COMPUTER LAB BRI202A		Unix Lab	Extra time to complete Operating Systems and Languages lab.

2/15 12:00 - 1:50pm COMPUTER LAB HOH401	None	None	Presentation Layer (Part 1) This lecture / lab will provide the student with understanding of how the presentation layer is a web-based computing environment is developed and the fundamental structure of HTML as the dominate formatting language.
2/20	None	None	Presidents' day - Holiday
2/22 12:00 - 1:50am COMPUTER LAB HOH401	Tutorials from the presentation layer lab 2		Presentation Layer (Part 2) This lab is designed to extend the student's knowledge of the presentation layer by developing a client controls using JavaScript. Student will learn the fundamental structure of Scripting Languages will gaining an understanding of how two technologies may be integrated together to develop a seamless application for the end-user.
2/27 12:00 - 1:50pm COMPUTER LAB HOH401	Principles of Information Systems Pages 180 - 182 & 192 - 199 Seventh Edition Pages: 196-198 & 206-214	Presentation Layer	Data Layer (Part 1) This lecture / lab is designed to provide you with a historical perspective on how and why of database evolution. You will also obtain a basic understanding of how relational databases work and key components (Data Entities, Attributes, Data types, Keys Relationships)
3/1 12:00 - 1:50pm COMPUTER LAB HOH401	Introduction to Relational Databases By Ian Gilfillan	None	Data Layer (Part 2) This lab assignment is designed to provide you with an introduction to the physical design of a proto-type relational database system using Oracle 9i and Structured Query Language (SQL). The objective of the assignment is to create three tables that comprise a proto-type contact management system. Populate the table with data and then develop a set of queries to retrieve information. Access to the database server is provided in the HOH-401 or BRI 202 computer labs.

3/6 12:00 - 1:50pm COMPUTER LAB BRI202A	"What Are the Basic Concepts of Client/server Architecture?" Marion K. Jenkins (2003) CIO / Darwin	Data Layer	Application Layer (Part 1) This lecture / lab is designed to build from the Presentation Layer (HTML, JavaScript) and Database Layer (SQL). The goal of this assignment is to teach the student how to connect the Presentations layer and the data layer using an application layer using either (idc / htx). IDC / HTX or Active Server Pages. The student will need the fundamental knowledge of SQL gained from the database layer, no programming experience, however, will be required to complete this assignment.
3/8 12:00 - 1:50pm COMPUTER LAB HOH401	None	None	Application Layer (Part 2) We will complete the Application Layer assignment.
3/13-3/18	None		Spring Break - holiday
3/20 HOH 406		Application Layer	Overview of Group Software Evaluation Project This lecture will provide students with an in depth explanation of the group software evaluation project that will include suggested strategies for researching and presentation of the project.
3/22 12:00 - 1:50pm HOH 406	Principles of Information Systems Pages 364 - 374 & Pages 395 - 402 Seventh Edition Pages: 401-411 & 436-441	None	Transaction Processing and ERP Systems or Guest Lecture or Another lecture depending on Guest Lecture availability.
3/27 12:00 - 1:50pm HOH 406	None	None	Midterm Review This segment of the lecture will provide students with a macro view of the examination material, suggest strategies for exam preparation and review key areas related the exam.

3/29 12:00 - 1:50pm HOH 406	None	Midterm	Midterm
4/3 12:00 - 1:50pm HOH 406	Principles of Information Systems Pages 460 - 481 Seventh Edition Pages: 507-529	None	Artificial Intelligence and Expert Systems This lecture is a journey into AI that discusses the meaning, the latest development, the business applications and implications, the challenges and problems, and the controversies about A.I. Here you will meet some of the state-of-the-art A.I. artifacts of the world including the most powerful, the most portable, and the most versatile intelligent devices that scientists have developed. We will also discuss their applications in the business world as well as their impacts to people's business relationships and engagements.
4/5 12:00 - 1:50pm HOH 406	Principles of Information Systems Pages 557 - 591 Seventh Edition Pages: 611-645	Individual Student Research Presentations	Systems Implementation Individual Student Presentations The six students that signed up for this day will have 10min to present their research.
4/10 12:00 - 1:50pm HOH 406	Principles of Information Systems Page 593 - 597 & Case #1 starting on page 605 Seventh Edition Pages: 646-652 Case will be given in class	Individual Student Research Presentations	Systems Maintenance and Review Individual Student Presentations The six students that signed up for this day will have 10min to present their research.
4/12 12:00 - 1:50pm HOH 406	Principles of Information Systems Page 616 - 631 Seventh Edition Pages: 673-690	Individual Student Research Presentations	Information Security (Part 1) In this lecture you exposed to the security treats, risks and liabilities associated with networked computer systems. You will also be provided with a framework for analyzing three distinct environment (clients machines, the network and servers) Individual Student Presentations The six students that signed up for this day will have 10min to present their research.

4/17 12:00 - 1:50pm HOH 406	How Viruses Work linked with permission from the publisher " Brian Marshall How Firewalls work linked with permission from the publisher Brian Marshall Principles of Information Systems Page 637 - 644 Seventh Edition Pages: 698-706		Information Security (Part 2) In this lecture you will gain an understanding of the fundamental technologies used to protect against security threats such as: anti-virus software, Encryption (Private / public) , Authentication and Digital Signatures, firewalls, watermarking and social engineering and policy. Information Privacy and Ethics:
4/19 12:00 - 1:50pm HOH 406	None	None	Review of group software evaluations: This class session will provide student groups an opportunity to discuss consulting project questions review the framework for analysis and prepare for presentations in the following week.
4/24 12:00 - 1:50pm HOH 406	Prof. Notes Introduction to Business Intelligence and Data Warehouse	Group Presentation	This class will introduce you to BI methods and tools in the market and the importance of Data Warehouse for big companies. Or Group Software Evaluation Presentations
4/26 12:00 - 1:50pm HOH 406	None	Group Presentation	Group Software Evaluation Presentations Or This class will introduce you to BI methods and tools in the market and the importance of Data Warehouse for big companies.
5/5 Friday 11:00 – 1:00 pm HOH 406	None	Final	Final Exam (Location may change, check with Professor).

General Notes

Note on Attendance

Attendance at all class meetings is mandatory. While attendance will not factor directly into your grade, you will be judged by the instructor on how well you attend and contribute to class. Excused absences are permitted in accordance with University policy - please notify the professor before the absence. Unexcused absences that are anticipated in advance should be cleared with the instructor, and may be excused on a case by case basis.

Academic Integrity

The use of unauthorized material, communication with fellow students during an examination, attempting to benefit from the work of another student, and similar behavior that defeats the intent of an examination or other class work is unacceptable to the University. It is often difficult to distinguish between a culpable act and inadvertent behavior resulting from the nervous tensions accompanying examinations. Where a clear violation has occurred, however, the instructor may disqualify the student's work as unacceptable and assign a failing mark on the paper.

Note on Unclaimed Graded Paperwork

Returned paperwork, unclaimed by a student, will be discarded 4 weeks after the end of term, and hence will not be available should a grade appeal be pursued by a student following receipt of his/her course grade.

Academic Accommodation for Students with Disabilities

Any student requesting academic accommodation based on a disability is required to register with Disability Services and Programs (DSP) each semester. A letter of verification for approved accommodations can be obtained from DSP. Please be sure the letter is delivered to me as early in the semester as possible. DSP is located in STU 301 and is open 8:30am-5:00pm Monday through Friday. The telephone number for DSP is (213) 740-0776.