

MARYVILLE
UNIVERSITY
SAINT LOUIS
13550 Conway Road
St. Louis, MO 63141

COURSE SYLLABUS INFORMATION

SEMESTER/YEAR: **Spring 2010**

INSTRUCTOR: **Scott Vicars**

COURSE INFORMATION:

CLASS: **ISYS 652-01**

ALPHA PREFIX NUMBER SECTION

TITLE: **Information Technology/Operations**

MEETINGS: **Thursdays, 6:00 – 9:50 p.m.**

DAYS / TIMES

1/14, 1/21, 1/28, 2/4, 2/11, 2/18, 2/25, 3/4

Graduate, 1st 1/2 Sem.

D/E / WEC / GRAD FULL / (1ST OR 2ND) 1/2 SEM

Reid 1334

LOCATION: SITE / BLDG / ROOM

CREDIT HOURS: **3** PREREQUISITE(S) (if any) **None**

Pre-assignment (for WEC/GRAD courses): Read **Chapter 1, Appendix A**, *Information Systems Essentials*, Haag & Cummings, 3rd Edition.

INSTRUCTOR INFORMATION:

INSTRUCTOR: **Scott Vicars**

MARYVILLE VOICE MAILBOX: **529-9201, ext.-3166** OFFICE LOCATION: **N/A**

WORK PHONE: **314-515-8311** MOBILE PHONE: **314-323-3445** E-MAIL: **svicars@maryville.edu**,
scott.vicars@edwardjones.com

NOTES REGARDING WHEN OR HOW TO REACH THE INSTRUCTOR:

Please use WORK number during weekday business hours (7 a.m. – 4:30 p.m.);
Use MOBILE number on evenings (4:30 p.m. – 10:00 p.m.) or weekends.

Academic Accommodations

Maryville University provides accommodations and supports for students with disabilities as defined by the Americans with Disabilities Act. If you have a documented disability and wish to discuss academic accommodations, please contact the course instructor and/or the Director of the Academic Success Center located in the University Library (314-529-6850).

Syllabus Continues on Attached Pages

VPASA:10/95

ISYS 652 – Information Technology / Operations

Purpose/Description: This course will address the issues of effectively managing Information Systems Technology (IT). It is **not** a technical course in Information Systems; it is a course in **managing IT**, covering computing, telecommunications and office systems. The technology is changing rapidly, and the people who plan to harness it effectively need to be aware of its impact, pitfalls and trends.

Overall Course Objectives:

- Understand basic concepts in Information Technology, including hardware, software, networks and the internet.
- Recognize and define key components of Management Information Systems. Explain the value of technology and information as a competitive advantage to the organization.
- Understand key concepts of Supply Chain Management, Customer Relationship Management, and Business Intelligence, and how these systems impact competitive advantage.
- Understand the key characteristics of a relational database. Compare and contrast the features of databases and data warehouses.
- Demonstrate how artificial intelligence and decision support systems can be used to solve business problems.
- Communicate the implications of electronic commerce in today's business environment.
- Understand the systems development life cycle, and trends in systems development, including outsourcing.
- Understand key concepts of IT Infrastructure.
- Communicate the mandates and strategies for protecting the organization's people and information.
- Recognize and describe the emerging trends and technologies that will impact the organization.

Methods: The course will be a mixture of lecture, case analysis and class discussion. The cases are individual assignments. Some cases may also be discussed in class as group exercises.

Reading: Students are expected to read assigned chapters before each class. Some supplemental reading, in the form of articles or websites may also be assigned in class.

Text: *Information Systems Essentials, Haag and Cummings, Third Edition; McGraw Hill 2009*

Class Participation: Class discussions and small group work are considered an integral part of this course.

Evaluation: There will be two exams worth 25% each. Case Study will be worth 25%, and quizzes on current topics will be worth 25%. We will discuss this on the first night of class.

Attendance: **Attendance for the first class session is mandatory.** Because of the concentrated nature of the MBA program, attendance in class is very important. Students who miss more than 6 hours (including arriving late or leaving early) will be required to withdraw from the course.

GRADING SCALE:

94-100 : A	76-79 : C+
90-93 : A-	73-75 : C
86-89 : B+	70-72 : C-
83-85 : B	60-69 : D
80-82 : B-	0-59 : F

This syllabus is subject to change at the discretion of the instructor to accommodate instructional and/or student needs.

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Schedule

<u>Week</u>	<u>Topic(s)</u>
1	Chapter 1 - The Information Age; Brief discussion of hardware and software (Appendix A);
2	Networks and the Internet (Appendix B); Chapter 2 – Business Initiatives; Competitive advantage with IT; Quiz
3	Chapter 3 - Databases; <i>Individual Case assigned</i> ; Quiz
4	Chapter 4 - Decision Support / AI; Chapter 5- E-Commerce; Quiz
5	Exam I, Chapters 1-5 ; Chapter 6 - System Development; Chapter 7 - Enterprise Infrastructure
6	Chapter 8 - Protecting People; Chapter 9 - Trends and technology, Impact of IT; Quiz
7	Individual Case due; Quiz ; Presentation of Cases; <i>Receive Take-home Exam</i>
8	In-class Exam II, Chapters 6-9; Take-home Exam due ; Presentation of additional Cases

Week 1

THE INFORMATION AGE IN WHICH YOU LIVE - Changing the Face of Business

1. Define management information systems (MIS) and information technology (IT) and describe their relationship.
2. Validate information as a key resource and describe both personal and organizational dimensions of information.
3. Explain why people are the most important organizational resource, define their information and technology literacy challenges, and discuss their ethical responsibilities.
4. Describe the important characteristics of information technology (IT) as a key organizational resource.
5. Define competitive advantage and illustrate the role of information technology in supporting competitive advantages and business vision.
6. Discuss the impacts information technology can and will have on your life.

COMPUTER HARDWARE AND SOFTWARE

1. Define information technology (IT) and its two basic categories: hardware and software.
2. Describe categories of computers based on size.
3. Compare the roles of personal productivity, vertical market, and horizontal market software.
4. Describe the roles of operating system and utility software as components of system software.
5. Define the purposes of each of the six major categories of hardware.

Reading: **Chapter 1, Appendix A** (all Chapter & Appendix readings are from *Information System Essentials*, some articles from the Web will also be assigned).

Week 2

**** Quiz on Week 2 Web Articles ****

NETWORK BASICS

1. Identify the four basic concepts on which networks are built and describe what is needed to set up a small peer-to-peer network at home.
2. Describe the components used to build large business networks and define and compare local area networks (LANs), wide area networks (WANs), and metropolitan area networks (MANs).
3. Compare and contrast the various Internet connection possibilities.
4. State the four principles of computer security and describe how different network security devices reflect those principles.
5. Describe client/server business networks from a business and physical point of view.

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MAJOR BUSINESS INITIATIVES - Gaining Competitive Advantage with IT

1. Describe how to use Porter's Five Forces Model to evaluate the relative attractiveness of an industry.
2. Describe the role of value chains in identifying value-added and value-reducing processes.
3. Define supply chain management (SCM) systems and describe their strategic and competitive opportunities and IT support.
4. Define customer relationship management (CRM) systems and describe their strategic and competitive opportunities and IT support.
5. Define business intelligence (BI) systems and describe their strategic and competitive opportunities and IT support.
6. Define e-collaboration and describe its strategic and competitive opportunities and IT support.

Reading: **Appendix B, Chapter 2, Web Articles (assigned week 1)**

Week 3

**** Quiz on Week 3 Web Articles, Individual Case Study topic selected and approved ****
Hands-on Workshop – Structured Query Language

DATABASES AND DATA WAREHOUSES - Building Business Intelligence

1. Describe business intelligence and its role in an organization.
2. Differentiate between databases and data warehouses with respect to their focus on online transaction processing and online analytical processing.
3. List and describe the key characteristics of a relational database.
4. Define the five software components of a database management system.
5. List and describe the key characteristics of a data warehouse.
6. Define the four major types of data-mining tools in a data warehouse environment.
7. List key considerations in information ownership.

Reading: **Chapter 3, Web Articles (assigned week 2)**

Week 4

**** Quiz on Week 4 Web Articles ****

DECISION SUPPORT AND ARTIFICIAL INTELLIGENCE - Brainpower for Your Business

1. Define decision support system, list its components, and identify the type of application it's suited to.
2. Define geographic information systems and state how they differ from other decision support systems
3. Define artificial intelligence and list the different types that are used in businesses.
4. Define expert systems and describe the types of problems to which they are applicable.
5. Define neural networks and fuzzy logic and the uses of these AI tools.
6. Define genetic algorithms and list the concepts on which they are based and the types of problems they solve.
7. Define intelligent agents, list the four types, and identify the types of problems they solve.
8. Define agent-based modeling and swarm intelligence.

Reading: **Chapter 4, Web Articles (assigned week 3)**

ELECTRONIC COMMERCE - Strategies for the New Economy

1. Define and describe the two major e-commerce business models (Business to Business and Business to Consumer).
2. Describe the emerging role of e-marketplaces in B2B e-commerce.
3. Identify the differences and similarities among customers and their perceived value of products and services in the B2B and B2C e-commerce business models.
4. Compare and contrast the development of a marketing mix for customers in the B2B and B2C e-commerce business models.

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5. Summarize the various ways of moving money in the world of e-commerce and related issues.
6. Define and describe the major e-commerce government models.

Reading: **Chapter 5**

Week 5

**** Exam I, Chapters 1 - 5 (in class) ****

Hands-on Workshop – HTML & Web Development

SYSTEMS DEVELOPMENT - Steps, Tools, and Techniques

1. List the seven steps in the systems development life cycle (SDLC) and associated activities for each step.
2. Describe the four systems development methodologies.
3. Define the role of outsourcing.
4. List and describe the three different forms of outsourcing.
5. Describe business process outsourcing (BPO).
6. Describe prototyping and profile an example of a prototype.
7. Describe the advantages of prototyping.

Reading: **Chapter 6**

ENTERPRISE INFRASTRUCTURE AND INTEGRATION

1. Explain the relationship between the organization's roles and goals and the IT infrastructure.
2. Describe the difference between a 2-tier and 3-tier infrastructure.
3. Describe system integration.
4. Describe Web services and Microsoft's .NET.
5. Explain the difference between network area storage (NAS) and storage area networks (SAN).
6. List and describe four of the seven "ilities."

Reading: **Chapter 7**

Week 6

**** Quiz on Week 6 Web Articles ****

PROTECTING PEOPLE AND INFORMATION - Threats and Safeguards

1. Define ethics and describe the two factors that affect how you make a decision concerning an ethical issue.
2. Define and describe intellectual property, copyright, Fair Use Doctrine, and pirated and counterfeit software.
3. Define privacy and describe ways in which it can be threatened.
4. Describe the ways in which information on your computer or network is vulnerable
5. Define risk management and risk assessment and describe the seven security measures that companies can take to protect their information.

Reading: **Chapter 8**

EMERGING TRENDS AND TECHNOLOGIES - Business, People, and Technology Tomorrow

1. Describe the emerging trends and technologies that will have an impact on the changing of the Internet.
2. Define the various types of technologies that are emerging as we move toward physiological interaction with technology.
3. Describe technological innovations and trends that will increase portability and mobility.
4. Describe the emerging trends of cell phones and RFID as they relate to the wireless environment.

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Reading: **Chapter 9, Web Articles (assigned week 5)**

Week 7

**** Quiz on Week 7 Web Articles, Individual Case Study due ****

1. Review in-class Exam II topics from Chapters 6-9 and receive take-home portion (due Week 8)
2. In-class Case Study (group project)
3. Presentation of Cases (if time permits)

Reading: **Web Articles (assigned week 6)**

Week 8

**** In-class Exam II, take-home portion of Exam II due, Presentation of Cases, Hands-on Workshop ****