

## ISE 455/555 Information Systems Engineering

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<b>Call Numbers:</b>	04064 (455) and 04079 (555)
<b>Faculty:</b>	David Koonce, 283 Stocker Center
<b>Formal Meetings:</b>	9:10 - 11:00 AM T and Th, 171 Stocker Center
<b>Office Hours:</b>	8-9 and 11-12, T and Th
<b>Contact:</b>	koonce@ohio.edu, 593-1550
<b>Web:</b>	Blackboard, Blog and Wiki (links in syllabus)
<b>Textbook:</b>	Information Technology for Management, 6th Edition, Turban, Leidner, McLean and Wetherbe; John Wiley & Sons, Inc., 2008.

## Course Description

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Information systems provide a primary source of information for industrial engineers. This course introduces to students to information systems. Students will also learn about the design and implementation of information systems.

## Course Objectives

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By the end of this course, you should be able to:

1. Model a system, incorporating feedback
2. Identify steps in the Systems Lifecycle Model
3. Explain the advantages and disadvantages of developing a system using a database management system
4. Describe common methods for data communications
5. Build a functional business information system.
6. Describe activities in common business information systems including
  - a. Accounting Information Systems
  - b. Management Information Systems
  - c. Decision Support Systems
  - d. Knowledge Based Systems
  - e. Executive Information Systems
  - f. Manufacturing Information Systems

## Grading

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Each week, students are expected to read all lecture material, read the blog, make a post relevant posting to the blog, comment on other student's blog postings and complete any other assigned homework.

Points will be assigned in the following categories, at the following weightings:

Blog posting and comments	30%
Homework, Access and other assignments	30%
Presentation and Wiki	10%
Midterm	15%
Final (Monday, March 16, at 8:00 a.m.)	15%

Missed homework submissions and exams may only be made up when a legitimate class absence occurs. **You must notify me before class starts. Communicating any extenuating situations to me beforehand is important.**

Final grades will be assigned using the following scale. If necessary, grades will be rounded up. (No student's grade will be rounded down.)

	A=93-100%	A-=90-92%
B+=87-89%	B=83-86%	B-=80-82%
C+=77-79%	C=73-76%	C-=70-72%
D+=67-69%	D=63-66%	D-=60-62%
Below60%=F		

## Readings and Blog

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Discussion will an emphasis for this class. You will be expected to participate in class discussion. You should complete each weeks reading prior to the start of class on Tuesday.

Beyond the textbook, which will have a weekly reading assignment, you will be expected to follow developments in Information Systems through independent reading and research. The class will utilize a Blog to disseminate our shared findings. You should either check the Blog frequently or use the RSS feed in your favorite reader to keep abreast of what your colleagues have found. Topics discussed on the Blog will become part of class discussion as well as exam material.

If you do not currently follow Technology or Information Systems, there are a host of good websites which cover these topics. In the past, students have favored:

- Slashdot
- Engadget
- Infoworld

But, there are 100's of web sources that present stories that are relevant to the week's topic as well as current events.

## Links to Know

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The web will be a crucial part of this class. Since there are many ways to communicate, we will use multiple methods for this class.

- 1) Blackboard - <https://blackboard.ohiou.edu/webapps/portal/frameset.jsp>
- 2) Blog - <http://cypress.ent.ohiou.edu/455/>
- 3) Wiki - [http://cypress.ent.ohiou.edu/wiki/index.php/Main\\_Page](http://cypress.ent.ohiou.edu/wiki/index.php/Main_Page)

## Homework

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On most weeks, there will be a homework submission, which may include a database assignment. On those weeks which require a submission, There will be an uploader for the

assignment on the course Blackboard site. The uploader will close at 12:00 Noon on Friday of the week the assignment is due. A separate uploader for any Access submission will also be available.

## Software Development

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Each week, we will either spend some time learning about Microsoft Access or developing an information system to meet the needs of a specific business process. On those weeks where we are studying Access, there will be no assignments. On the other weeks, there will a graded submission.

We will use Microsoft Access 2007. It is available in the Stocker Labs. If you would like to develop your application on your personal computer, you may purchase a version of Microsoft Office from the University. See the University IT website for details.

## Course Outline

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Below is an outline of the content and activities in each week of the course. The course schedule will also be available as an iCal file on Google. The url, listed below, will also be on the Blackboard site.

<http://www.google.com/calendar/ical/t6pfgav1k6stga4nfsmqpbukak%40group.calendar.google.com/public/basic.ics>

## Week 1 : How IT supports the Business Process

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IT and IS are, in most organizations, support functions for the revenue generating operations. This section will cover how organizations create revenue and how IT can help improve and streamline these processes

<b>Reading:</b>	Textbook - Chapter 1
<b>Class Discussion:</b>	Syllabus, Notes, Student Experiences with IT/IS, Access
<b>Homework:</b>	Work Minicase 1.2
<b>Access:</b>	Tables, Queries, Forms, Reports and Automation

## Week 2 : IT Concepts and its Roles in Organizations

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Organizations generate wealth in a number of ways. IT/IS support these variety of ways as well as structure the data and processing for different levels. Most organizations can be viewed as triangle ,with the top being the few high level leaders and managers. The size grows until the base of employees who typically generate the wealth are found.

<b>Reading:</b>	Textbook - Chapter 2
<b>Class Discussion:</b>	Notes, Building Tables in Access
<b>Homework:</b>	Develop an org chart for the college of engineering. Write a memo about the hierarchy and the information systems likely used at each level.
<b>Access:</b>	Building and linking tables

### Week 3 : Databases and Data Management

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Organizations run on an understanding of their system through accumulated data. From low level production systems to high level data mining, management through direct observation is a thing of the past. This section will cover databases, data warehouses, data marts, data mining among other topics.

<b>Reading:</b>	Textbook - Chapter 3
<b>Class Discussion:</b>	Notes, Each student presents a database they have used, Exploring default databases in Access.
<b>Homework:</b>	Find a discussion of a data mart in an external organization. Write a two page memo, including why the system qualifies as a data mart and not a data warehouse.
<b>Access:</b>	Queries in Access

### Week 4 : Networking and Communication

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The internet has revolutionized how business is done. This week we will cover communication from a detailed discussion of communication protocols to how these support communication, which supports the business process.

<b>Reading:</b>	Textbook - Chapter 4, Cisco Internetworking Technology Handbook - Chapter 1 (Google it).
<b>Class Discussion:</b>	Notes, Access Forms.
<b>Homework:</b>	Exercise 2 (page 156 of textbook).
<b>Access:</b>	Forms in Access

### Week 5 : Transaction Processing

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Information systems were initially best suited to automating the repetitive tasks that organizations perform. These tasks needed to be performed 100's, 1000's or more times a day. They also need to make sure that these tasks are done according to business rules, passed to the next needed business process, archived for records and summarized for management.

<b>Reading:</b>	Textbook - Chapter 7
<b>Class Discussion:</b>	Notes, Access Forms - Automation.
<b>Homework:</b>	Identify all of the transaction processing systems you interact with at Ohio University. Write me a memo with each system described in a paragraph.
<b>Access:</b>	Making Automated Forms in Access

## Week 6 : Enterprise Level Systems/ERP

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Building on the transaction systems, management systems were developed to aggregate data from the bottom up. Now, these systems support the supply chain.

<b>Reading:</b>	Textbook - Chapter 8
<b>Class Discussion:</b>	Notes, Access Reports.
<b>Homework:</b>	Research online how a grocery chain, like Kroger, builds and manages a supply chain. Write me a two page memo on how this is performed.
<b>Access:</b>	Reports in Access

## Week 7 : Interorganizational IS

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Organizations now share pieces of their enterprise views to supply chain members to support lean technologies like JIT. This week we cover how these large systems are interfaced and integrated.

<b>Reading:</b>	Textbook - Chapter 9
<b>Class Discussion:</b>	Notes, Access data integration.
<b>Homework:</b>	Import data supplied in a text file into Access and build a report to summarize data.
<b>Access:</b>	Report from imported data.

## Week 8 : Information Systems for Decision Support

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Information Systems provide the information needed for making decisions at all levels of organizations. From simple summary reports for monitoring processes, to exception reports, to forecasting models, to high level executive information systems that integrate external and internal information to support unstructured decisions.

<b>Reading:</b>	Textbook - Chapter 10, 11 and 12.
<b>Class Discussion:</b>	Notes, Access application settings.
<b>Homework:</b>	Build a wiki page to share your knowledge about OU to new students.
<b>Access:</b>	Creating a complete application in Access

## Week 9 : Strategic IT and System Acquisition

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IT and IS are crucial to organizations meeting their goals. Witness OU's desire to upgrade their SIS system. Given the justified need to acquire a system, how do you acquire and deploy said system?

<b>Reading:</b>	Textbook - Chapter 13, 15
<b>Class Discussion:</b>	Notes, Access application deployment.

<b>Homework:</b>	Research OU's process for selecting an SIS system and the deployment plan. Write a two page memo on the process.
<b>Access:</b>	Completing the application

## Week 10 : Presentations

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One of the key aspects of effectively utilizing technology and information systems is to be able to effectively present technology to an audience. Since the end of the dot com bubble, technology no longer justifies itself.

<b>Reading:</b>	None
<b>Class Discussion:</b>	Student Presentations.
<b>Homework:</b>	Wiki page or pages for your selected topic.
<b>Access:</b>	None

Students should choose a topic by week 5. One week before your presentation, you should schedule a review time with me to go over your presentation. I will make suggestions to help you cover the material at the right level of detail for the class.

### Proposed Topics:

1. WiFi, WiMax, Ultrawideband and other wireless communication technologies
2. VPN technologies and firewalls
3. Web Server technologies - httpd, IIS, caching
4. RFID, including applications
5. OODBMS
6. XML schema, with examples
7. Dynamic webpage creation - PHP, ASP, CFM
8. MOEMS/MEMS
9. Pervasive/Ubiquitous Computing
10. TDM/VOIP
11. AJAX
12. Digital Convergence
13. WAP
14. IETF/RFC

## General Information

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### Blog Grading

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Each week, I will review the blog posts and comments for each student. The total score each week will be 10 points, divided evenly between posts and comments. Blog posting and comments will be evaluated at some point on Friday afternoon. Please ensure that you have completed your work by Friday morning.

I will use the following Rubric for grading your posts and comments.

### Post Rubric

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Points	Description
5	1 or more posts. At least one post is relevant to a topic covered in the course. The post links to a reputable source and contains a discussion of the story and how it is relevant to the course.
4	1 or more posts which is relevant to the course but the relevance is poorly conveyed. Or, the source is not from a reputable source.
1	1 or more posts which are not relevant to the course.
0	No posts. Any post which is rude, defamatory or otherwise offensive.

### Comment Rubric

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Points	Description
5	2 or more comments. All comments show an understanding of the topic covered in the post. The comments contribute to the discussion of how the topic has relevance to the course, including speculation or prediction of how the topic may change our use of IT/IS in organizations.
4	2 or more comments which show an understanding of the topic. But, the comments do not add new material, understanding or relevance to the discussion.
3	1 comment which meets the criteria of the 5 point rubric
2	1 comment which meets the criteria of the 4 point rubric
1	Any number of comments which show no understanding of the post and preceding comments.
0	No comments. Any comment which is rude, defamatory or otherwise offensive.

### Course Email Policies

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To help me keep track of email requests, please create an email subject line which helps me address your needs quickly. Use the following conventions:

For homework issues: ISE455-Last Name-Homework-week#

For blog issues: ISE455-Last Name-Blog-week#

For grading issues: ISE455-Last Name-Grading

For presentation: ISE455-Last Name-Presentation

### Exams

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This course will have a midterm and a final exam. These will be given online using the class Blackboard website. The Final will be cumulative, with an emphasis on material presented since the midterm. It will also contain questions that test your understanding of the presentations of your peers in the blog and the final week.

## Office Hours

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Office hours immediately precede and follow this class meeting. During the office hours, I will be available to discuss any course topics, blog, wiki, presentation, homework or grading questions you have. I am also available at other times. Please email to set a time if you cannot make the scheduled office hours. **I will not discuss class content for classes missed due to an unexcused absence.**

## Memo Format

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I will provide a template for you to utilize in making your memo, for weeks which require a memo for homework. You may use this or a format of your choice. Your memo should be concise, informative and well written. Please proof read your memo before you submit it.

## Extra Credit

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There will be no extra credit opportunity in this class.

## Attendance

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Discussion will be an important part of this course. As such, you will not be allowed any unexcused absence. Excusable absences include all university allowable absences, as well as reasons of professional development. Regardless of the reason for absence, please email me prior to class. If your need for absence is sudden, please call me at my office phone 740-593-1550.

## Personal technology in the Classroom

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As this is a technology/information systems class, I encourage you to bring your laptop, PDA or other devices you use for learning into class. However, said devices should be put into a silent mode. Also, you should refrain from needlessly surfing the web, texting, IM or other activities which take your attention away from the class discussion. If you need to communicate with someone during class, please get up and leave the room to do so.

## Scholastic Dishonesty Policy

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Cheating on examinations, submitting work from other students as your own, or plagiarism will result in an automatic F on the assignment and possible further action from the university.