LIS636-201 Syllabus
LIS636-201 Foundations of Information Technology
Fall 2010 Online section
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Office hours: MW 10:00 -12, TR 1:00 – 3:00, & by appointment (appointments encouraged)

Objectives of the course:
• To develop a conceptual and practical understanding of the computing fundamentals essential to information technology systems. Topics include how computers represent, process, store and retrieve information, present the user interface, run useful applications, and interact with other computers in a networked world.
• To understand the function and role of operating systems in the management of computer processes and data and how to effectively utilize them. Human Computer Interaction (HCI) will be examined in the context of both graphical and command-based environments. Discussion will include computer file and directory structures, how computers physically store and retrieve files, and the configuration and security issues related to WINTEL and Unix systems.
• To develop a knowledge base regarding computer hardware and software sufficient to make informed selection decisions and perform routine troubleshooting.
• To develop an understanding of general programming processes and develop basic script programming skills that is the basis of modern Web development.
• To introduce database systems, their design, systems analysis and modeling techniques (ERD and DFD), and normalization. Focus will be on relational database structures and the creation and use of a relational database.
• To introduce markup language concepts and graphics techniques needed to create HTML web pages and successfully upload them to a Unix based web server.
• To develop competencies in some widely used productivity applications including Microsoft Word, Excel, PowerPoint, and Access.

Course Readings
The text is Computer Concepts 2011: Comprehensive by Julia Parsons and Dan Oja (ISBN 13: 978-0-538-74481-2). Students will utilize various other materials are on the web as directed in each module. We will also encourage readings and exercises on the University of Kentucky’s web based training page at http://www.uky.edu/HR/etraining/. The publisher of our text also has a great web site you can register for at http://oc.course.com/np/concepts2011 where you can take practice quizzes and access other resources. You are responsible for material in the course readings.

Blackboard
We will use the Blackboard course management system to facilitate the class. Please visit http://www.uky.edu/Blackboard/ to learn about this system and the login requirements. We will also use the SWEB system for many project activities; you should go to http://sweb.uky.edu to make sure your access is working correctly; you can test
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this by seeing if you can login using the web file manager tool on sweb. Issues about sweb should be directed to help@sweb.uky.edu or by phone to 218-HELP.

Online Course Requirements
You will need access to an appropriate computer with a broadband Internet connection. NOTE that it is YOUR responsibility to ensure you have a reliable computer for use during the course. Ongoing “computer problems” will not be considered a legitimate excuse for missing course activities. If you have a computer that unreliable, you should rectify that situation. You must have audio capability to listen to the audio lectures; a headset/microphone (minimum) or a webcam (desirable) is needed for video conferencing. Note that all examples and project questions are Windows-based. This means that while you do not have to have a Windows PC, it is up to you to identify appropriate software replacements for the programs demonstrated if you use another platform (these include an HTML and script editor, as well as FTP and telnet clients). Other required software includes a current copy of Office Professional that includes Word, Excel, PowerPoint, and Access. Note that all UK students are eligible for a one time free download of Office from the UK download site (https://download.uky.edu); you can get help with this process from the UK helpdesk. You should also have both the Firefox and IE browsers available to accommodate occasional BlackBoard issues. We make extensive use of Flash audio/visual materials, so you will also need the newest version of the Flash media player for both Flash presentations and for any use of the Adobe Connect web conferencing tool. NOTE: Occasionally BlackBoard has problems with Flash content. Generally, Firefox or Internet Explorer should work. However, if something is not working in one browser, you should be prepared to use an alternate one to see if that solves the problem.

Help
I will try to be available to assist as much as possible for this online experience. However, that does not mean 24/7 support with instant question response. Course support is by several means:

• Your peers: Discussion forums are used to facilitate group discussion by posting discussion questions or by responding to questions from the class. Note that ALL content questions about course topics and projects should go out to a discussion forum for that module first before emailing me directly (except for course structural issues such as any missing materials, etc.). If you have a question, it is likely that others might have a similar one as well and would benefit from the discussion of it. I will be participating to answer questions that cannot be resolved through peer discussion, but I expect you to try to help each other in this online format just as you might in a face-to-face class discussion.

• One-on-one help through email and telephone consultation: I check my mail frequently and respond as soon as possible. That will usually mean the same day, but my goal is always within 24 hours with the possible exception of longer reply time on some weekends where a response to a message may not come until Monday.
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- Face-to-face help: I can always schedule OPTIONAL sessions where I can be available to meet with you or small groups on request.
- Adobe Connect: this video conferencing system allows us to talk and share desktops. It requires you have at least a headset microphone; a webcam is optional but desirable. As with face-to-face options, video conference sessions outside the one initial meeting must be arranged if desired.
- Online sources: many tutorials have been pointed to and the UK EVC training site is also a useful resource.
- BlackBoard help is through the UK helpdesk system. There is also a wiki for BlackBoard at https://elearning.uky.edu/webapps/portal/frameset.jsp.

Email

It is essential that we can depend on effective email communication. Some personal email accounts can run into problems with the UK mail spam filtering system. Therefore, if you email me directly and do not receive a timely reply, you should consider an alternate strategy to do a follow up contact with me (e.g. phone call or a post to the BlackBoard course issues forum).

Adobe Connect

I have been experimenting with Adobe Connect, a web conferencing tool, this semester. You will access a virtual meeting room via an URL that I will provide. I will require one initial session with students as described in our orientation folder but other than that I do not require Adobe Connect use. However, we can use it to create help sessions on request.

Expectations

What I expect from you:
- You have thoroughly read this syllabus and understand the expectations for an Internet based class, including the need for a reliable computer and Internet connection.
- You will keep track of all posted deadline dates and times.
- You will be an active participant in the course and meet the minimum login requirements.
- You communicate any special needs or issues that might need accommodation.
- You will check your email and BB announcements regularly throughout the course.
- You will take advantage of alternate communication strategies as needed.
- You will engage the quizzes on your own without consulting other resources. While collaborative work on content questions and project work is fine, quizzes are an individual assessment tool.

What you can expect from me:
- I will present an online class that is comparable to the face-to-face version of 636 using tools that attempt to accommodate multiple learning styles.
- I will generally respond to all direct queries within 24 hours and often, less.
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- I will provide graded feedback on projects no later than 48 hours after submission.
- I will pose discussion questions for each module that will frame our use of the discussion boards and that I will monitor the discussion boards and add comments when appropriate.
- I will arrange face-to-face meetings or video conference sessions on request.

Grading

The grade for this course will be based on the following:

- Module quizzes (8 @ 20 points each): 160 pts
- Five projects worth a total of 140 pts
- Class participation: 25 pts
- Total: 325 pts.

Grading Scale:

- 100-92% (299-325 pts) = A
- 91-80% (260-298 pts) = B
- 79-70% (227-259 pts) = C

Attendance and Participation Policy

As a fully online course, there are no face-to-face attendance requirements. However, I define “attendance” for us in terms of how often you login and engage the BlackBoard course. You MUST login and engage the course at least twice each week on different days between Monday and Friday. Failure to do so for any given week will result in loss of ALL 25 participation points. Failure to meet the login requirements for more than one week during the course duration will result both the loss of participation points and a grade letter reduction for the course.

Participation Points

There are 25 points available for participating in the course wiki and/or discussion forums. To earn participation points, you must make at least two substantive contributions to the wiki or the discussion board each week over the duration of the course (see rules below). Discussion posts can be in the form of responding to one of my posts or initiating a discussion with a substantive post on a topic of interest that is related to the module. As noted above, all questions about course material and projects must be posted in one of these forums first to benefit the entire class and a post that answers a peer question also qualifies for participation credit. Note that although posting questions is expected, simply asking a question in a forum is not considered a substantive post. A “substantive” post is one that goes beyond stating agreement with another or just passing along a link; I think of this as a post that is generally at least 150 words (a short paragraph) of thoughtful commentary or related information.
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Rules for participation points
1. To be eligible for participation points, you must first meet the attendance login requirements. You must also have at least one virtual meeting with me during the semester via Adobe connect either during the orientation period, during posted “virtual office hours,” or by arrangement.
2. Contributions can be in the form of a message in a forum that addresses a discussion question posed by the instructor, completely answers or explains a peer question, or initiates a new thread related to the module. In addition, posts that introduce and explain a topic in the wiki can also count towards participation.

Review questions
Optional review questions are provided at the end of each module. If you want feedback on these, they must be submitted by noon on the Wednesday (the time the quiz launches for each module) in the form of an email message directly to me (jbmiller@uky.edu). Answers should be in the body of the message, not as an attached file to facilitate a quick response to you with comments if needed. Review questions are intended to reinforce module content and to help you prepare for quizzes. You do not have to submit these if you do not have questions about your responses.

Late assignments
Assignments are due at on the dates and times specified in our calendar. Each project is due on the day designated. Late assignments will have an automatic 10% deduction if turned in late up to 48 hours late. Assignments beyond 48 hours late will not be accepted unless there are documented extenuating circumstances such as an illness or family emergency. Note that an illness or family issue that interferes with completion of significant amounts of work might require a withdrawal from the course. Assignments will be turned in by one of three means as directed in each project; these include a BlackBoard assignment drop box, a direct email to the instructor, or links made from the student class web page. Each assignment will have directions about the appropriate way it is to be submitted; projects submitted in a method other than that specified will not be accepted.

Quiz Policy
Students are expected to do all quizzes without outside help and without consulting supporting materials; they are “closed book” quizzes. Any violation of this expectation will be deemed as a cheating violation and be subject to the appropriate academic response; specifically, any “copying and pasting” activities during a quiz will be treated as a violation (be aware that BlackBoard can detect some of these types of activities). Quizzes will be posted by noon of the day the module ends (always a Wednesday except for Module 8 which ends on the last day of class which is a Friday) and will be available until the end of the day on the following day, allowing a 36-hour window to take the quiz. Note that technical problems can occur with BlackBoard quizzes and will be addressed on a case-by-case basis.

More about quizzes
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Note that quizzes will cover material from that module, which includes both assigned readings and ANY relevant forum discussions. Quizzes in BlackBoard will be timed and be presented as a single question at a time with no backtracking permitted. You will not have a cumulative exam and you will not be tested on that specific content again; therefore will not need access the quiz after it is completed for further studying. Hence, you will be presented only with the quiz score when you complete the quiz. **However, anyone who wants more than a score-only result can request detailed feedback on missed questions by sending an email request.**

**Plagiarism and Cheating**
Plagiarism and cheating will not be tolerated. The University of Kentucky has established rules concerning these issues. Please note the penalties described for these violations documented on the UK website.

**Projects:**
All projects will be available for you to review at the start of the class and are in the projects folder on BlackBoard. You can certainly work ahead on projects as you have time if you are able to before they come up in class. However, while working ahead is fine, I will not “pre-grade” assignments; you can submit projects early if you wish (but not earlier than the start of the module in which they are due please) but you should not make a submission until you are ready to have it graded. Projects will be graded ASAP but always no later than 48 hours after submission. All projects are due the day the quiz starts for the module they are associated with and can be submitted up to the end of the day (11:59 PM).

Project #1: An introduction to the functions and use of operating systems. We will examine HCI using command line operating systems (DOS, Unix) and graphical systems (Windows). Tasks include navigating directory structures and file management. 20 pts. **DUE September 22**
Project #2: Create your web page using HTML and upload to the sweb server. This basic page will be updated periodically by adding links to completed future projects. 25 pts. **DUE October 6**
Project #3: Office applications: (45 points) **DUE November 5**
  - Part 1: Word processing - Create a multicolumn newsletter from a given text file.
  - Part 2: Excel - An Excel exercise in which a library budget will be prepared along with appropriate graphs and charts.
  - Part 3: PowerPoint – a short PowerPoint slide show will be created and made available on the web.
Project #4: An introduction to programming processes via text based command scripts. Batch files, simple JavaScript, and PHP scripts will be created. 25 pts **DUE November 17**
Project #5 (25 points): Database systems. Part 1: Normalization theory. Part 2: Relational databases in Microsoft Access. **DUE December 1**
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Course Modules on Blackboard
There are eight separate content modules on Blackboard. All start and end on Wednesdays except module 8, which ends on the last day of classes (a Friday).

Module 1: Course Introduction
  History
  Binary numbers
  Boolean logic
Text Readings:
  Chapter 9, Section A, pages 486-96)
  Chapter 1, pages 2-28 (Emphasis on section C)

Module 2: Operating Systems
  Functions of operating systems
  HCI via the command line and GUI
  PC Boot up cycle
  Command language syntax
  Disk organization and directories
  File and disk management commands
  Navigating directory and file structures in a command environment
  File names and extensions
  Windows desktop and file management in Windows Explorer
  Introduction to Unix and Windows
  Executable files, DLLs, and search paths
  Multitasking, multithreading, and OLE
  Device drivers and peripheral configuration, manual vs. plug and play
  Configuring WINTEL systems and role of important configuration files (config.sys, system.ini, windows registry, etc.)
  System interrupts and I/O addresses
  Secondary storage concepts and file systems - allocation units, sectors and tracks; logical formatting; FAT, root directory and file retrieval

  Text Readings –
  Chapter 4
  Online:
  http://www.easydos.com/dosindex.html commands
  Unix: http://www.engr.uky.edu/unixhelp/index.html

Module 3: Internet and the web
  A brief history of the Internet
  Internet protocols
  Markup languages and HTML
  Unix and uploading files
Module 4: computer hardware
Computer hardware systems: CPU cycles, RAM addressing, ROM, data bus.
  Input/output devices
  Graphics and displays

Text Readings –
Chapter 1, section D
Chapter 2

Module 5: Productivity software
  Word
  Excel
  Powerpoint

Text Readings:
Chapter 3

Module 6: Programming and scripting
  Programming processes, Software types and trends: compiled, interpreted, object oriented.
  Introduction to text based scripted command files.
  Batch files, replaceable parameters, flow of control; bat files as NT login scripts
  PHP and JavaScript examples

Text Readings-
Chapter 12 sections A, B, C (pages 672-712)
Online readings:
*http://www.computerhope.com/batch.htm (section on batch files)
*http://www.robvanderwoude.com/ (section on batch files)
*http://www.w3schools.com/js/js_intro.asp (introduction to JavaScript)

Module 7: Database Systems
  Introduction to Database Management Systems
  Entity Relationship Modeling
  Access
  Query languages (SQL)
  Normalization

Text Readings –
Chapter 11
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Online Readings:
* http://www.smartdraw.com/resources/centers/software/erd.htm ER models
http://www.umsl.edu/~sauter/analysis/er/er_intro.html Dataflow diagrams
* http://www.agilemodeling.com/artifacts/dataFlowDiagram.htm Dataflow diagrams
* http://www.oreilly.com/catalog/accessdata2/chapter/ch04.html Normalization

Extra and supplemental:
http://databases.about.com/library/weekly/aa080501a.htm
http://www.sqlmag.com/Articles/Index.cfm?ArticleID=4887&pg=1
http://www.databasejournal.com/sqltec/article.php/26861_1428511_4

Module 8: PC Security
Viruses and malware
Internet security
Readings
Chapter 1 section E (pages 34-42)
Chapter 3 section E (pages 162-169)
Chapter 7 section E (pages 400-408)

Course Calendar Summary
August 25: Course begins; online orientation and Module 1 begins.
September 8: Module 1 Introduction ends. Quiz 1 noon 9/8 – end of the day on 9/9.
October 6: Module 3 ends. Quiz 3 noon 10/6 – end of the day on 10/7. Project 2 due 10/6.
October 20: Module 4 ends. Quiz 4 noon 10/20 – end of the day on 10/21.
December 1: Module 7 ends. Quiz 7 noon 12/1 – end of the day on 12/2. Project 5 due 12/1.
December 10: Module 8 ends. Quiz 8 noon 12/10 – end of the day on 12/11.

NCATE Statement: Integration with UK Educator Preparation Unit Themes
“This course supports the four themes of the conceptual framework for the UK professional education unit: research, reflection, learning, and leading. The ultimate goal is to produce leaders who work together to improve service and learning among diverse populations in Kentucky and beyond.”