LIS636-210 Syllabus
LIS636-210 Foundations of Information Technology
Summer 2010 Online section
Instructor: Joseph Miller, Associate Professor (257-8854) jbmiller@uky.edu
Office: 343 LCLI (hours by appointment only)

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 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 is known to be unreliable, you should rectify that situation. You must have audio capability to listen to the audio lectures; a headset/microphone and/or a webcam is recommended for possible video conferencing, but not required. Note that all examples and a few project questions are Windows-based. You do not have to have a Windows PC but if you use another platform it is up to you to identify appropriate software replacements for the programs demonstrated (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 has fewer issues than Internet Explorer but most of the time either browser should work. However, if something is not working in one browser, you should be prepared to use an alternate one to see if that fixes 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 immediate question response. Course support is by several means:

- **Your peers:** Discussion forums will be 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.
- **Face-to-face help:** I can always schedule OPTIONAL sessions where I can be available to meet with you or small groups if requested.
- **Adobe Connect:** this video conferencing system allows for us to talk and share desktops. It requires you have a headset microphone; a webcam is optional. As with face-to-face options, this must be arranged in advance.
- **Online sources:** many tutorials have been pointed to and the UK EVC training site is also a useful resource.

**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 BB course issue forum).

**Adobe Connect**

I will be 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 do not plan to require Adobe Connect participation but I will use it to create help sessions as needed on request.
Expectations

What I expect from you:

• You have thoroughly read this syllabus and understand the accelerated pacing of a summer session class – things will come at you very quickly!
• You have a reliable computer and Internet connection.
• You keep track of all 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 hopefully accommodate multiple learning styles.
• I will respond to all direct queries within 24 hours.
• 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.

Course Readings

The text is *Computer Concepts 2011: Comprehensive* by Julia Parsons and Dan Oja (ISBN 13: 978-0-538-74481-2). Note that this is a new text this year. Students will also utilize various other materials are on the web. We will also encourage readings and exercises on the University of Kentucky’s web based training page at [http://www.uky.edu/HR/etruaining/](http://www.uky.edu/HR/etruaining/). The publisher of our text also has a great web site you can register for at [http://oc.course.com/np/concepts2011](http://oc.course.com/np/concepts2011). Readings should be done prior to the class meeting. 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/](http://www.uky.edu/Blackboard/) to learn about this system and the login requirements. I will have registered students automatically added to the Blackboard roll; if this goes as expected, you will not have to sign up manually for the course. We will also use the SWEB system for many project activities; you should go to sweb.uky.edu to make sure your access is working correctly. Issues about sweb should be directed to help@sweb.uky.edu or by phone to 218-HELP.
LIS636-210 Syllabus

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

Module quizzes (7 @ 25 points each): 175 pts
Five projects worth a total of 140 pts
Class participation: 25 pts
Total: 340 pts.

Grading Scale:
100-90% (306-340 pts) = A
89 -80% (272-305 pts) = B
79 -70% (238-271 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 once on two different days each week (M-F). 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. The wiki can be worked on throughout the course as a way to build a class resource. To earn participation points, you must make at least ten substantive contributions to the wiki or the discussion board on a posted topic or in response to a peer question over the duration of the course (see rules below). Besides answering a peer question, discussion posts can also 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. Note that although posting questions is expected, simply asking a question in a forum is not considered a substantive post.

Rules for participation points
1. To be eligible for participation points, you must first meet the attendance login requirements.
2. The ten contributions cannot come all during a single module; the “cap” for any one module is three contributions. Therefore, you must make contributions in at least 4 modules to earn full participation points.
3. Contributions can be in the form of a message in a forum that addresses a discussion question posed by the instructor, completely answers/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.
LIS636-210 Syllabus

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 Friday (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 the dates and times specified in our calendar. Each project is due by midnight on the day designated; the exception is project 5, which is due by noon on the final day of the course. 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 (BlackBoard can detect some of these types of activities). Quizzes will be posted by noon of the day the module ends (Friday) and will be available until midnight of the following Sunday. Note that technical problems can occur with BlackBoard quizzes and will be addressed on a case-by-case basis.

More about quizzes
Note that quizzes will cover material from that module. You will not have a cumulative exam, but the course does build on previously completed work. Quizzes in BlackBoard will be timed and be presented as a single question at a time with no backtracking permitted. You will not be tested on that specific content again and you will not have access to the quiz after it is completed. However, anyone who wants more than a score only result can request detailed feedback on missed questions.

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.
LIS636-210 Syllabus

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 and I will defer specific “how to” questions about projects to the module with which they are associated. Further, while you can submit projects early if you wish, you should not make a submission until you are ready to have it graded. Further, note that “early” submissions should not be submitted earlier than the start of the module in which they are due. All projects are due when the quiz closes for the module with which they are associated. Projects will be graded ASAP but always no later than 48 hours after submission.

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 MIDNIGHT JUNE 6

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 MIDNIGHT JUNE 13

Project #3: Office applications: (45 points) DUE MIDNIGHT JUNE 27

  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 MIDNIGHT JULY 4


Course Modules on Blackboard
There are seven separate content modules on Blackboard. Since this is a seven-week long class, one module will be completed each week.

Module 1: Course Introduction
  History
  Binary numbers
  Boolean logic
Text Readings:
  Chapter 9, Section A, pages 486-96)
  Chapter 1, pages 2-47 (Emphasis on sections C and D)
Supplementary – http://whatis.com/ and Wikipedia on processors and machine cycles
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, Win2000/XP
-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

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

Text Readings:
Chapters 6 and 7
Other HTML Readings:
W3schools site: http://www.w3schools.com
*http://www.w3.org/TR/REC-html40-971218/intro/intro.html

Module 4: computer hardware
Computer hardware systems: CPU cycles, RAM addressing, ROM, data bus.
- Input/output devices
- Graphics and displays
- Secondary storage concepts and file systems - How files are physically stored;
Physical formatting; allocation units, sectors and tracks; logical formatting; FAT, root directory and file retrieval
LIS636-210 Syllabus

Text Readings –
Chapter 1, section D
Chapter 2
http://webopedia.internet.com/TERM/M/microprocessor.html
http://en.wikipedia.org/wiki/Amd_processors
http://en.wikipedia.org/wiki/Pentium_Dual-Core
http://en.wikipedia.org/wiki/AGP
http://en.wikipedia.org/wiki/PCI_Express
http://www.computerhope.com/jargon/n/ntfs.htm
http://www.computerhope.com/jargon/f/fat.htm

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
Online Readings:
LIS636-210 Syllabus

*http://www.smartdraw.com/resources/centers/software/erd.htm  ER models
http://www.umsl.edu/~sauter/analysis/er/er_intro.html
*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/sqletc/article.php/26861_1428511_4

Course Calendar Summary

May 24: Course begins; online orientation and Module 1 begins.
May 28: Module 1 Introduction ends – quiz 1 opens at noon.
May 30: Quiz 1 closes at midnight.
May 31: Module 2 Operating systems begins
June 4: Module 2 ends; quiz 2 opens at noon.
June 6: Quiz 2 closes at midnight and Project 1 due.
June 7: Module 3 Internet and HTML begins.
June 11: Module 3 ends; quiz 3 opens at noon.
June 13: Quiz 3 ends at midnight; project 2 due.
June 14: Module 4 Hardware begins.
June 18: Module 4 ends; quiz 4 opens at noon.
June 20: Quiz 4 closes at midnight.
June 21: Module 5 Productivity software begins.
June 25: Module 5 ends; quiz 5 opens at noon.
June 27: Quiz 5 closes at midnight. Project 3 due.
June 28: Module 6 Programming and scripting begins.
July 2: Module 6 ends; quiz 6 opens
July 4: Quiz 6 closes at midnight and Project 4 due.
July 5: Module 7 Database systems begins.
July 9: Module 7 ends; quiz 7 opens at noon.
July 12: Quiz closes at noon and Project 5 due.

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.”