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 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 how computers physically store and retrieve files, file and directory structures, and configuration and security issues.

- 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 and demonstrate 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/](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](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/](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](http://sweb.uky.edu) to make sure your access is working correctly; you can test 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](mailto:help@sweb.uky.edu) or by phone to 218-HELP.
Online Course Requirements: READ CAREFULLY
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 before taking this course. You must have audio capability to listen to the audio lectures and 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 own a Windows PC, it is up to you to identify appropriate software replacements for the programs demonstrated if you use another platform (examples include an HTML editor and 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 2007 from the UK download site (https://download.uky.edu) or you can buy a discounted version of Office 2010. Either version is fine for the course and you can get help with this process from the UK helpdesk if needed. 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. Occasionally BlackBoard has problems with Flash content. Generally, Firefox or Internet Explorer should work, but if something is not working in one browser, you should be prepared to use an alternate one to see if that solves the problem.

NOTE to Apple users
This is a Windows based course, but you should be able to do most all activities with your Apple computer. However, there are elements of Projects 1 and 5 that will require the Windows operating system. Apple computers can be setup to run Windows sessions either with the “boot camp” utility or by using VMware; alternatively, you can simply elect to locate and use a Windows PC for those few parts of the course. We have such computers in room 303 LCLI here in the School and they can be made available on request. As noted above, there are many programs available for Apple that are comparable to ones I will demonstrate for activities such as HTML editing or FTP sessions, and for those parts of the course you can substitute any Apple program of your choice. The exception is Microsoft Access, our database program. The Office version for Apple does not include Access, so you need to either run the Windows version on your Apple or find a Windows system with Access for project 5.

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.
- 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. Video conference session meetings will be posted periodically or arranged on request.
- 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 follow up with me in some alternate way (e.g. phone call or a post to the BlackBoard course issues forum). Also, please include “636-201” as the first phrase in the subject line of ALL email correspondence related to the course.

Adobe Connect
Adobe Connect, a web conferencing tool, is available for use this semester. You will access a virtual meeting room via an URL that I will provide for such optional meetings. There is an introductory video on this tool in BlackBoard.

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 and required software.
- 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.
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- You communicate any special needs or issues that might need accommodation in a timely fashion.
- 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 or less.
- I will provide graded feedback on projects no later than 48 hours after the due date.
- 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 once each week; a “week” is defined as Sunday-Saturday. You must enter our course shell and open some course item for BlackBoard to track this as a login. Meeting the login requirements simply makes you eligible for that module’s participation points; failure to meet the minimum login requirements for any week during a module will result in zero participation points for that module irrespective of other activities. Failure to login for two consecutive or non-consecutive weeks during the semester will result in the loss of all participation points for the course. Failure to login for three or more consecutive or non-consecutive weeks will result in a grade of E. NOTE that the week of spring break (March 14 – 19),
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is an academic holiday and you do not have to login during that week. Other exceptions may be granted for a documented illness or family emergency.

Participation Points
There are 25 points available for participating in the course wiki and/or discussion forums. One participation point is associated with the completion of a self-assessment. The remaining 24 points are associated with each the eight modules (3 points per module, 1 point per qualifying post). To earn participation points, you must make at least three substantive contributions to the wiki or the discussion board for each module during the time the module is active; you cannot make advance posts before a module has started or post “make up” contributions after a module has ended. Wiki posts must be relevant to a current module and be made during the time frame the module is active. Further, all three posts cannot occur on the same day; that is, posts must occur on at least two different days during a module. This means you cannot make three posts on the last day of the module and expect to get full participation credit. Discussion posts can be in the form of responding to one of my framing questions or initiating a discussion with a substantive post on a topic of interest as long as it is related to the module content. As noted above, all questions about course material and projects must be posted in one of these forums first to benefit the entire class; however, although a post that answers a peer question can qualify for participation credit, simply posting a question does not. As a guide, a “substantive” post is one that goes beyond stating agreement with another or just passing along a link and generally must be at least 150 words (a short paragraph) of thoughtful commentary or related information.

Rules for participation points
1. To be eligible for participation points, you must meet the attendance login requirements. Failure to login to the course at least once a week for any week (except for spring break week) will result in the loss of all 25 participation points.
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 day the module ends (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 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
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. Because you will not have a cumulative exam and will not be tested on that specific content again you 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, you can request detailed feedback on all questions you missed for any quiz by sending an email request to me.

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 and you should not submit projects earlier than the start of the module in which they are due and only after you are ready to have it
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graded. Projects will be graded ASAP but always no later than 48 hours after the due date. 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 the module ends (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 February 7**

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 February 21**

Project #3: Office applications: (45 points) **DUE March 23**
- 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 April 6**


**Course Modules on Blackboard**
There are eight separate content modules on Blackboard.

**Module 1: Course Introduction** January 12 – 24
- History
- Binary numbers
- Boolean logic

Text Readings: Chapter 9, Section A, pages 486-96) and Chapter 1, pages 2-28 (Emphasis on section C)

**Module 2: Operating Systems** January 25 – February 7
- Functions of operating systems
- HCI via the command line and GUI
- PC Boot up cycle
- Command language syntax
- Disk organization and directories
- File names and extensions
- 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.)
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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 February 8 – February 21
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 February 22 – March 7
Computer hardware systems: CPU cycles, RAM addressing, ROM, data bus.
Input/output devices
Graphics and displays
Mass storage

Text Readings: Chapter 1, section D and Chapter 2

Module 5: Productivity software March 8 - March 23
Word
Excel
Powerpoint

Text Readings: Chapter 3

Module 6: Programming and scripting March 24 – April 6
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)
Module 7: Database Systems April 7 – April 20
Introduction to Database Management Systems
Entity Relationship Modeling
Access
Query languages (SQL)
Normalization
Text Readings: Chapter 11
Online Readings:
* 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

Module 8: PC Security April 21 – 29
Viruses and malware
Internet security
Textbook:
Chapter 1 section E (pages 34-42)
Chapter 3 section E (pages 162-169)
Chapter 6 section E (pages 340-349)
Chapter 7 section E (pages 400-408)
Chapter 12 section E (pages 723-729)

Course Calendar Summary
Module 2 – Operating systems: January 25 – February 7 Project 1 due
Module 3 – Internet: February 8 – February 21 Project 2 due
Module 4 – Hardware: February 22 – March 7
Module 5 – Productivity: March 8 - March 23 (includes spring break) Project 3 due
Module 6 – Programming and scripting: March 24 – April 6 Project 4 due
Module 7 – Databases: April 7 – April 20 Project 5 due
Module 8 – Security: April 21 – 29

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.”