UNIVERSITY OF KENTUCKY
APPLICATION FOR CHANGE IN EXISTING COURSE: MAJOR & MINOR

1. Submitted by College of Communications and Information Studies Date March 25, 2005
Department/Division offering course School of Library and Information Science

2. Changes proposed:
   (a) Present prefix & number LIS636 Proposed prefix & number LIS636
   (b) Present Title Micro computers in libraries and information centers
       New Title Foundations of Information Technology
   (c) If course title is changed and exceeds 24 characters (including spaces), include a sensible title (not to exceed 24 characters) for use on transcripts:
       Foundations of Info Tech
   (d) Present credits: 3 Proposed credits: 3
   (e) Current lecture: laboratory ratio
   Proposed:
   (f) Effective Date of Change: (Semester & Year) Fall 2005

3. To be Cross-listed as: XX
   Prefix and Number
   Signature: Department Chair

4. Proposed change in Bulletin description:
   (a) Present description (including prerequisite(s)):
       Examines microcomputer software applications commonly used in libraries and information centers. Consideration given to the structure of microcomputer operating systems, and the elements of software evaluation.
   (b) New description:
       see attached
   (c) Prerequisite(s) for course as changed:

5. What has prompted this proposal?
   Updates title and description to more accurately reflect the course content and emphasis.

6. If there are to be significant changes in the content or teaching objectives of this course, indicate changes:
   none

7. What other departments could be affected by the proposed change?

8. Is this course applicable to the requirements for at least one degree or certificate at the University of Kentucky? □ Yes □ No

9. Will changing this course change the degree requirements in one or more programs?*
    If yes, please attach an explanation of the change.* □ Yes □ No

10. Is this course currently included in the University Studies Program?
    If yes, please attach correspondence indicating concurrence of the University Studies Committee. □ Yes □ No

11. If the course is a 100-200 level course, please submit evidence (e.g., correspondence) that the Community College System has been consulted.

*NOTE: Approval of this change will constitute approval of the program change unless other program modifications are proposed.
LIS 636, Foundations of Information Technology
A study of the computing fundamentals necessary for the understanding and use of information technology. Focus is on examining computer systems in concept and practice, which is essential to information professionals. Topics include how computers represent, process, store and retrieve information; how operating systems control these processes, interpret commands, present the user interface, and run applications; how databases are designed and created; how general understanding of programming processes and productivity software skills is important in a variety of professional contexts. Productivity applications include the Office suite, Internet applications and web publishing, and database management systems.
UNIVERSITY OF KENTUCKY
APPLICATION FOR CHANGE IN EXISTING COURSE: MAJOR & MINOR

12. If the course is 400G or 500 level, include syllabi or course statement showing differentiation for undergraduate and graduate students in assignments, grading criteria, and grading scales. □ Check here if 400G-500.

12. Is this a minor change? □ Yes □ No
(NOTE: See the description on this form of what constitutes a minor change. Minor changes are sent directly from the Dean of the College to the Chair of the Senate Council. If the latter deems the change not to be minor, it will be sent to the appropriate Council for normal processing.)

13. Within the Department, who should be consulted for further information on the proposed course change?

Name: MILLER
Phone Extension: 7-8854

Signatures of Approval:

[Signatures]
Department Chair
Date: 3-25-05

Dean of the College
Date: 4-27-05

Date of Notice to the Faculty

Date

Date

Date

Date

Date

Date of Notice to University Senate

**If applicable, as provided by the Rules of the University Senate.

ACTION OTHER THAN APPROVAL

**********

The Minor Change route for courses is provided as a mechanism to make changes in existing courses and is limited to one or more of the following:

a. change in number within the same hundred series;
b. editorial change in description which does not imply change in content or emphasis;
c. editorial change in title which does not imply change in content or emphasis;
d. change in prerequisite which does not imply change in content or emphasis;
e. cross-listing of courses under conditions set forth in item 3.0;
f. correction of typographical errors. [University Senate Rules, Section III - 3.1]

Rev 3/04
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. Interfaces examined will be both graphical and command based. Discussion will include computer file and directory structures, how computers physically store and retrieve files, and the configuration and security issues related to WINTEL systems.
- To develop a knowledge base regarding computer hardware and software sufficient to make informed selection decisions and perform basic troubleshooting.
- To develop an understanding of general programming processes and develop some basic script programming skills.
- To introduce database systems, their design issues, modeling techniques (ERD and DFD), and database 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 simple HTML web pages and successfully upload them to a Unix based web server.
- To develop higher order competencies in some widely used productivity applications: Microsoft Word, Excel, PowerPoint, and Access.

Course Readings:
The text is Peter Norton’s Introduction to Computers Sixth Edition. However, there are a number of used copies of the previous 5th edition that could be substituted this semester. I will have reading lists that map to both texts. In either case, note that the text is used primarily for foundation material and does always not reflect the depth in which we will explore some of these topics. Students will be assigned readings from this as well as other recommended sources; all these other materials are on the web. Readings marked with an asterisk * are assigned: others are optional supporting readings that you should make use of if you feel you need additional information on a topic. We will assign readings and exercises on the University of Kentucky’s web based training ExecuTrain system at http://www.uky.edu/IS/Training/EVC . The publisher of our text also has a great web site with many links, study guides, and self-directed quizzes; the URL for this information is at http://www.glencoe.com/norton/online/. Readings should be done prior to the class meeting. Students are held responsible for material in the course readings. Readings should be done prior to the class meeting. Students are held responsible for material in the course readings.
Blackboard
While this is not an online class, we will use the Blackboard course management system to facilitate supplemental materials. Please visit 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.

Class Listserv
We have a listserv for this class that you will be automatically added to. You need to be sure that your email address in the UK directory is current as that is the source of the addresses used for these lists. See http://www.uky.edu/Directory/ to learn about managing your directory entry.

Grading
Your grade for this course will be based on the following:
2 exams, 100 pts each = 200 pts
5 projects worth a total of 140 pts
Total: 340 pts.

Grading Scale:
100-90% (306-340 pts) = A
89 -80% (272-305 pts) = B
79 -70% (238-271 pts) = C

PLEASE NOTE:
Assignments are due at the beginning of the class period; late assignments will have 10% deducted for every class period they are late. The instructor reserves the right to modify (i.e. reduce) the number of projects assigned during the course based on schedule issues. Two floppy disks (3.5") should be purchased for use in this class. Since you may be asked to periodically turn in a disk to the instructor, you should not put other course work or email on them and it is your responsibility to have backups of any work turned in on disk.

Exam Policy
It is the responsibility of every student to be present for exams. If a student misses an exam as a result of a documented illness or unforeseen emergency, the student will be given an opportunity to make up the test by appointment. If a student misses an exam for a non-medical or other non-excused reason, a make up exam may not be allowed. Students wishing to schedule an alternate exam date for a non-medical reason must seek advance approval from the instructor at least two weeks prior to the scheduled exam to be considered.

Attendance Policy
Students are expected to attend class. While there is no formal participation component in the grading scale, note that unexcused absences that total up to one fifth of the
contact hours for the course will result in a letter grade reduction. If the total of unexcused absences exceeds one third of the contact hours, an automatic grade of E will be assigned. Even if the absences are excused, if they total one fifth or more of the contact hours, the student may be required to petition for a late withdrawal. All absences, whether excused or unexcused, can not be made up. Students are responsible for all material covered during any absence.

Plagiarism and Cheating
Plagiarism and cheating will not be tolerated. The University of Kentucky has established rules concerning these issues. You should have received a copy of this policy in your student handbook. Please note the penalties described for these violations.

Projects:
The projects are intended to be somewhat independent learning experiences and I encourage you to try to work ahead on these as you have time. However, we will discuss each project in class sometime before the due date.

Project #1: An introduction to the functions and use of operating systems. We will examine command line operating systems, Windows 9x, Windows 2000/XP, and Unix. Tasks include navigating directory structures and basic file management activities. Use of the UAMS system will also be covered to create needed computing accounts (u-connect and SWEB).
20 pts

Project #2: Create your class web page in HTML
Your class web page will be created and uploaded to the sweb server. This basic page will be updated periodically by adding links to completed future projects. 25 pts.

Project #3: Office applications: (45 points)
  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 text based command scripts using batch files with replaceable parameters and a basic PHP script. Examples with JavaScript and Visual Basic will also be examined. 25 pts

Schedule for LIS 636
Week 1: 1/17 Martin Luther King holiday

Week 2 Module 1 Course introduction
1/24 Introduction to the microcomputer: The "Black Box"
   Computing history and trends
   Binary machines: binary numbers and Boolean logic
   Data representation and data hierarchies (ASCII, etc.)
   Overview of hardware

   Readings -
   Norton: Section 1A
   Appendix A on history of computing.

Week 3 - Module 2 Introduction to operating systems
1/31 Command line and GUI
   Functions of operating systems
   The kernel and the shell
   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 9x 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

   Readings -
   Norton: 6A and 6B, p 464
   Online:
   http://www.easydos.com/dosindex.html commands
   Unix: http://www engr uky edu/unixhelp/index.html

Week 4: Module 3 Internet and the web
2/7 Project 1 due
Markup languages and HTML
Unix and uploading files
Readings:
Norton: 1B, 8A, and 11A
   *http://www.users.csbsju.edu/~jgramke/Help/unix/unix/data/chmod.html
   http://www.users.csbsju.edu/~jgramke/Help/Web/permissions.html

HTML Readings:
HTML Reference Sites: http://www.susx.ac.uk/USIS/www/htmlguides.shtml
   *http://www.w3.org/TR/REC-html40-971218/intro/intro.html
   *http://www.mcl.dist.maricopa.edu/tut/

Week 5 Module 4 Computer hardware systems
2/14   CPU cycles, RAM addressing, ROM, data bus.
       Input/output devices
       Graphics and displays
       Secondary storage concepts

Readings -
Norton: Sections 2A, 2B, 3A, 3B, 4A, 5A

Week 6: Module 5 Productivity software
2/21   Project 2 due
       Word 2000/XP
       Excel
Readings:
Norton: 9A, 9B, 10A

Week 7
2/28   Midterm review

Week 8
3/7    Midterm
       PowerPoint

Week 9
3/14   Spring Break

Week 10 Module 6 Programming and scripting
3/21   Exam discussion
       Introduction to text based script command files.
       Programming processes, Software types and trends: compiled, interpreted, object oriented.
Readings:
Norton 13A and 13B
Week 11
3/28 Project 3 due
   Batch files, replaceable parameters, flow of control; bat files on PCs, Visual Basic and macros, PHP and JavaScript examples

Readings-
Norton 13A and 13B
Online readings:
*http://www.computerhope.com/batch.htm (section on batch files)
*http://www.rohvanderwoude.com/ (section on batch files)
*http://www.w3schools.com/js/js_intro.asp (introduction to JavaScript)

Week 12 Module 7 Database systems
4/4 Database Management Systems, Relational databases
   Entity Relationship Modeling
   Access
   Query languages (SQL)
   Normalization

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
*http://www.devshed.com/Server_Side/MySQL/Normal/Normal1/page4.html
Extra and supplemental:
http://www.oreilly.com/catalog/accessdata2/chapter/ch04.html
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
http://www.gslis.utexas.edu/~i384k11w/normover.html
   Readings -
Norton Chapter 10B, 12A, and 12B

Week 13: Databases continued
4/11 Project 4 due

Week 14
4/19 Module 8 File systems
   Secondary storage details: How files are physically stored; Physical formatting; allocation units, sectors and tracks; logical formatting; FAT, root directory and file retrieval
   
   Readings –
Norton 5A and 5B
Supplemental Readings -
http://www.computerhope.com/jargon/n/ntfs.htm
http://www.computerhope.com/jargon/f/fat.htm

Week 15 Module 9 PC security
4/26 Project 5 due
PC security, viruses, and networks
Review
Readings:
Norton 14B
Norton 7A, 7B
Supplemental:
http://www.cert.org/
http://www.symantec.com/index.htm
http://service1.symantec.com/SUPPORT/nav.nsf/docid/1999041209131106
http://www.sophos.com/
http://www.purportal.com/
http://www.sans.org/top20/

Week 16
5/2/2005 6:00 PM Final exam