CSC 660–Advanced Operating Systems

Spring 2007
R 6:15-9:00

Instructor Information

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Office Hours	
MW	1:00-2:00
MW	4:00-5:00
Fr	by appt

Summary

Description : An in-depth study of the design and implementation of modern operating systems, focusing on the Linux 2.6 kernel. The course will focus on studying the source code of the Linux operating system, with programming exercises to modify and examine the behavior of the Linux kernel. This course assumes an understanding of operating systems concepts at the level of the dinosaur book (Silbershatz.)

Prerequisites : CSC 560, CSC 601

Textbooks : Robert Love, *Linux Kernel Development, 2nd edition*, Novell Press, 2005.
Daniel P. Bovet and Marco Cesati, *Understanding the Linux Kernel, 3rd edition*, O'Reilly, 2005.

Student Learning Outcomes

A successful student should emerge from this course with the following skills:

1. Analyze a large base of legacy code.
2. Explain the algorithms and functionality of Linux components, including the filesystem, interrupts, task scheduler, and virtual memory system.
3. Describe how virtual machines work.
4. Implement a Linux kernel module.
5. Implement modifications to the Linux kernel.

Grading

Your grade in the course will be earned / calculated as follows:

		A	→	90	–	100
midterm	20%	B	→	80	–	89
final exam	20%	C	→	70	–	79
assignments	60%	D	→	60	–	69
		F	→	0	–	59

Students with Disabilities

Students with disabilities who require accomodations (Academic adjustments, auxiliary aids or services) for this course must register with the Disability Services Office. Please contact the Disability Service Office immediately in the University Center, Suite 320 or call 859-572-6373 for more information. Verification of your disability is required in the Disability Services Office for you to receive reasonable academic accomodations. Visit our website at `http://www.nku.edu/~disability/`.

Academic Dishonesty

The work that you submit in this course is subject to Northern Kentucky University's Student Honor Code (see `http://www.nku.edu/~technology/code_of_ethics.htm`.) Issues involving academic dishonesty are taken very seriously by this instructor and are dealt with according to College and Department policy. Academic dishonesty includes but is not limited to:

1. Improper access to evaluation material or records.
2. Submission of material which is not the student's own work.
3. Conduct which interferes with the work or evaluation of other students.

Some specific examples of dishonesty include:

1. Copying from another person, book, magazine, or other electronic or printed media.
2. Obtaining another person's exam answer or answers.
3. Assisting another student in submitting work that is not the student's own.

It is unacceptable to share program code. It is unacceptable to share homework solutions. It is acceptable and often a good idea to talk about program algorithms and homework solution strategies, but it is not acceptable to use the same code or code segments, or to share actual solutions to homework problems. Any act of academic dishonesty will result in a grade of zero (0) for that item for the first occurrence. An automatic F in the course will result for the second offense. This policy holds for homework assignments and programs, as well as for tests. In order to be fair, penalties will be applied to all parties involved regardless of culpability or fault.

Course Calendar and Class Structure

See the course web site, `http://www.nku.edu/~waldenj1/classes/2007/spring/csc660/` for a current course schedule.