CS 220: Linux Kernel Internals

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Instructor:

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Web page: www.cs.loyola.edu/~binkley/220Office Hours: 12:00 - 1:00 MWF or by appointment (use email)

Texts (all optional):

G. Glass and K. Ables, "UNIX for progammers and Users, " Prentice Hall 2^{ed}
M. Beck, et. al, "Linux Kernel Internals," Addison-Wesley.
S. Probst and R. Flaxa, "Power Linux," Springer Verlag.
W. R. Stevens "Unix Network Programming," Prentice Happ Software Series (ISBN 0-13-949876-1).
R. Bentson, "Inside Linux: A look at Operating Systems Development," Specialized System Consultants.
R. Stevens, "Advanced Programming in the UNIX Environment," Addison-Wesley.

Linux:

For the first half of the course we will be unix users; for the second half we will be "under the hood." During the second half of the course you will need to install a copy of linux on a PC (one source is http://www.cheapbytes.com). By the end of the course, you will have to modify and rebuild the linux kernel.

Grading:

Seven Assignments:	70%	(10% each!)
Class Attendance or Good Excuses:	30%	
Total:	100%	

Late work:

Assignments are due on their due date at (or before) the start of class; assignments handed in up to one week from their due date lose up to 10%, after that they loose 50%.

Cheating:

Don't. Individual work is expected on your programs (note that asking for help finding a "bug" is not considered cheating).

Tentative Schedule:

Week	Topic
1	introduction, files
2	file and terminal I/O
3	processes and IPC
4	IPC
5	signals
6	signals
7	review / questions / MIDTERM
8	go over exam / UNIX kernel
9	kernel introduction
10	file system
11	memory management
12	inter-process communication
13	device drivers modules
14	network implementation