Essentials: Communication, Content, and Structure

Communications

Class Meetings:	Friday 14:00 - 16:00, Room 3305
Office:	to be decided
Office Hours:	By appointment
Email:	stewart.weiss@hunter.cuny.edu
Telephone:	(212) 772-5469

Resources

Required Textbook:	None
Suggested Textbooks	Bruce Molay. *Understanding Unix/Linux Programming*. Prentice Hall, 2003. ISBN 0-13-008396-8 (ISBN-13 978-0130083968). Only for those with no UNIX experience: Dave Taylor, *SAMS Teach Yourself Unix in 24 Hours*, Third Edition. Sams Publishing, 2001. ISBN 0-672-32127-0.
Online Resources	This page and all documents related to this course are available for download on my website and on the home page for the class at `http://www.compsci.hunter.cuny.edu/~sweiss/course_materials/cs82010/cs82010_spr13.php` home page for this class. In addition, students will be given accounts on a server (as yet to be determined) that will act as a repository for example programs and as a means by which to work on and submit projects for the class.

Learning Goals

A student who successfully completes this course will

- understand how to write programs that interact with UNIX and UNIX-like operating systems,
- be able to build applications that utilize all of the resources available on the given platform,
- be able to work efficiently within the UNIX programming environment,
- understand how the UNIX API is designed and structured, and
- understand the general structure common to most UNIX operating systems.

Content

Because the lynchpin of application development in UNIX is one's expertise in using the kernel API, this course focuses on that API. It will cover those parts of the kernel API related to general I/O, device and terminal control, the file system, process and thread management, signals and event driven programming, and inter-process communication and synchronization methods. It will also cover the curses library.

Assignments and Grading

Grades will be based upon four programming projects. The first three projects will be specified by the instructor. The final project will be a research project that will be chosen by the student with the approval of the instructor. The final project will require a brief oral presentation to the class. For the purpose of determining the final average, the first three assignments will be weighted 20% each and the final project will be weighted 40%. The due dates for the assignments, which may be subject to a bit of minor change, are

Assignment	Due Date
1	Feb. 19
2	Mar. 22
3	Apr. 19
4	May 10

Schedule

Please note that there is no class on March 29. The last day of class is May 17, which is during exam week and will be used for student presentations.