

ECE 322 section T, Autumn 2018.

Book

"Advanced programming in the UNIX environment, 3rd Edition",
by W. R. Stevens. (the second edition is acceptable)

References:

1. Introduction to UNIX and Linux John Muster, McGraw Hill, ISBN 0-072-22796-6.
2. UNIX for Programmers and Users, Graham Glass and King Ables, Prentice Hall, ISBN 0-130-46553-4.
3. Mastering UNIX Shell Scripting Randal K. Michael, John Wiley, ISBN 0-471-21821-9.

Instructor

Dr. Stephen Murrell
Office: EB 516
email: stephen@rabbit.eng.miami.edu

Bulletin Description

Practical hands-on experience with UNIX systems programming and administration. Programming using shell scripting languages. File systems features, multiprocessing, inter-process communication, and systems programming fundamentals are discussed.

Specific outcomes of instruction:

1. Introduce the basic concepts of scripting languages and shell programming.
2. Establish the fundamental concepts of systems programming, file systems, and interprocess communication.
3. Provide practical hands-on experience with systems programming in UNIX environments.

Topics

1. Enterprise Operating Systems
2. UNIX Basics
3. System Architecture
4. Security/Permissions
5. Shell Scripting
6. File System Internals
7. Unix File System (UFS)
8. Files, Links, Directories
9. Network File System (NFS)
10. Systems Programming
11. File Management
12. Process Management
13. Inter-process Communications

Attendance

- You are adults and responsible for your own lives, I would like to be informed of any absences, and you must make up for anything you missed, and I'm not going to go over a whole class for someone who overslept or just didn't turn up. Missing a class is not an excuse for being late with an assignment.

Late Assignments

- Rare instances of lateness will be overlooked. Good excuses will always be considered. One of the hallmarks of a good excuse is that you didn't only think of it after the deadline passed. If you've got a reason for being late, tell me it before you actually are late.
- But some assignments are discussed and analysed in class. This may happen at any time after the due date, and after we have been over an assignment in class, it is possible that turning it in will not gain any credit.

Mid-Term Examinations

- There will be two mid-term examinations, one near the middle of the semester, and one nearing the end. Dates will be announced.

Final Examination

- Our final is on Thursday 6th December at 5:00 p.m.
- Don't accidentally book a flight home earlier. Final exam period is exceptionally busy, and it is not possible to offer pre-makeups.

Books

- You are not *required* to get the textbook, but one is strongly recommended.
- You certainly do not need the most up-to-date edition. Slightly older editions, used but in good condition, can be bought quite cheaply on line.

Collusion

- Studying in groups is very beneficial, and is strongly encouraged.
- All assignments and projects are strictly individual effort unless explicitly stated otherwise.
- Do not confuse those two points. With any programming assignments, once you get to making a detailed design, and well before you do any coding, it is time to stop working in a group. If a program starts off similar to someone else's, it is just about impossible to make it individual again, and that really shows up strongly in grading. No credit will be given for work you didn't do yourself.

Holidays

- In short, tell me by email during the first week of classes, of any religious holidays that would prevent you from participating in some class event (particularly a mid-term), and I will make every effort to accommodate you.

