

**CSC 3320**  
**System-Level Programming**  
**Fall 2016**  
Classroom: Aderhold 214  
12:00-1:15 p.m. MW

**Instructor:** John Smith  
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**Pre-requisites:** CSC 2310 with grade of C or higher. Note that this is required - **IF YOU DO NOT HAVE THE PREREQUISITES (OR ITS EQUIVALENT FROM ANOTHER INSTITUTION) ON YOUR TRANSCRIPT, WITHDRAW FROM THIS COURSE NOW.**

**Catalog Description:**

An introduction to programming at the level of the operating system. Topics include editors, system calls, programming tools, files, processes, interprocess communication, and shells.

**Course Objectives:**

This course is designed to give students experience in using a high-level language ( C ) to interface with an operating system (UNIX). Students will learn fundamental UNIX concepts, including files, processes, interprocess communication, and shells. They will also gain experience writing and testing C programs using UNIX editors and programming tools.

**Topics:**

- 1) UNIX commands: basic commands for non-programmers, advanced utilities like awk, grep.
- 2) UNIX shell programming: bash script.
- 3) C Programming: syntax and basic data structures.
- 4) Files - UNIX file system, file permissions, file system calls (fcntl, creat, open, read, write, close, lseek).
- 5) Processes - Basic concepts, daemon processes, process creation and termination, process diagnostics (ps, kill, top).

**Texts:**

Glass and Ables, *Unix for Programmers and Users*, Prentice Hall, Third Edition (2003), ISBN 0-13-046553-4.

**Midterm:**

The Midterm will be given on Wednesday, October 26, 2016.

**Final Exam:**

The Final Exam will be given on Monday, December 5, 2016.

**Grading Policy:**

- 1) Six homeworks: 30%
- 2) Two projects: 30%
- 3) Midterm exam: 20%
- 4) Final exam: 20%

**Class Policy:**

- *Attendance:* Daily attendance is strongly encouraged. Any student missing a lesson is responsible for any material assigned or covered in class during his or her absence.
- All assignment to be handed in must be done individually unless the instructor explicitly states otherwise. Any assignment or portion of an assignment that is duplicated or group result will receive a grade of zero for all parties concerned. The same policy applies to projects.
- *Late work:* 10% late penalty per 24-hour within 7 calendar days of the original due date. No submission accepted after that.
- Makeup exams will only be given in the case of serious illness or emergency. You must personally contact the instructor before the scheduled exam.
- Assignments and exams (except final exam) will be graded and returned in approximately one week after it was collected or given respectively. Should there be a delay, the students will be notified.
- *Absolutely no lame excuses please*, such as "I have to go home early, allow me to take the test on Apr 1", or "I had a fight with my girlfriend, which affects my performance". Even when they are true, they are still lame.
- Please advise the instructor if you have a documented disability that needs to be accommodated.
- No extra work in the next semester given to improve your grade. Any queries about the grades should be brought to the attention of the instructor within a week after the graded students' works have been returned to the class.
- Turn off cell phones and keep them off the desk during the lectures. Text messaging during class is strictly prohibited.

**Statement:** This course syllabus provides a general plan for the course; deviations may be necessary.