

**CS 430: Operating Systems**  
**Fall 2018**  
**TTH 10:30**

## Instructor Information

Name: S. Seth Long, Ph.D  
Office: MLH 216  
Email: [sslong@lcsc.edu](mailto:sslong@lcsc.edu)  
Office Hours: Monday 1:30-2:30, Thursday 9:30-10:30  
Course Website: <http://isoptera.lcsc.edu/~seth/cs430>

## Course Goals

At the end of the course, students should understand operating functions including:

- Filesystems
- Virtual memory and memory management
- Device drivers and the hardware/software interface
- Process scheduling
- Bootup process

Additionally, students should be capable of writing Linux kernel modules.

## Textbook

“Linux Kernel Development”, by Robert Love, Third Edition.

## Grading

Your grade will be calculated based on the following items:

Item	Percentage of grade
Midterm	15%
Final	15%
Lab assignments	10% total
5 Projects	60% total (one project is worth 20%, the other 4 are worth 10%)

Grades will be assigned according to a standard curve, that is:

- A: 90% +
- B: 80%- 90%
- C: 70%- 80%
- D: 60%- 70%
- F: less than 60%

Use of + or - grades (such as B+ or A-) and curves will be at the instructor’s discretion.

## Deadlines and late work

Late work will not be accepted, except by instructor discretion in unusual circumstances. However, partial credit will be given for partially-completed work. It is better to turn in an unfinished assignment for partial credit than to not turn in something on time and receive a 0.

## Attendance

Attendance will not be taken in this class except as required for financial aid purposes. However, all material presented during lecture is “fair game” for the midterm and final, and information which is useful to complete projects may be given at any time. Therefore I recommend that you always attend class.

## Academic Dishonesty

Cheating on any assignment will result in failing the class. Some things which constitute cheating in this class are:

- Copying another student's homework
- Turning in homework created by another student
- Reading another student's answers on a test
- Sharing all or part of your completed homework with another student before the assignment is due

In this class, collaboration is allowed on labs. Appropriate collaboration involves collaborative development of a solution, not copying of a friend's solution! This does not include projects, which are to be an individual effort. Sharing of ideas or discussing concepts is allowed for projects, but not sharing of source code. Other students should not see your source code for projects, and they should not see yours.

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Week Of	Course Content	Reading Chapters	Assignments
Aug 20	Introduction and Role of the OS, kernel C programming		
Aug 27	Pointers, function pointers, dynamic memory management, C conventions		
Sep 3	Labor Day Monday, module interfaces, sample module, debugging		
Sep 10	Process Management	3,4	Project 1 due
Sep 17	System Calls, Data Structures	5,6	
Sep 24	Interrupts, Device Driver demo	7	
Oct 1	Midterm on Tuesday, answers given on Thursday		Project 2 due
Oct 8	Deferring and Synchronization	8,9	
Oct 15	Synchronization, Timers	10, 11	
Oct 22	Memory Management	12	
Oct 29	Filesystems	13	
Nov 5	Block I/O	14	Project 3 due
Nov 12	Process address space, Page Cache	15,16	Project 4 due
Nov 19	Thanksgiving Break		
Nov 26	More on devices and modules, finishing up	17-20	Project 5 due
Dec 3	Topics of Interest		
Dec 10	Final Exam Tuesday, December 11, at 10:30 AM		