

# Operating Systems

**Instructor:** Andrew Valencik, McNally North 118, [andrew@cs.smu.ca](mailto:andrew@cs.smu.ca)

**Office Hours:** 2:00-3:30PM MW, 1:00-2:00PM TR, and by appointment.

**Course Website:** [moodle.cs.smu.ca](http://moodle.cs.smu.ca)

**Textbook:** No textbook purchase will be required. Reading material and open source textbooks will be provided when necessary. With this in mind, the classic textbook and other useful resources are listed at the end.

**Calendar Description:** Please see 2014-2015 Academic Calendar

**Course Prerequisites:** Please see 2014-2015 Academic Calendar

**Academic Integrity:** See Academic Regulation 19 (also: [symlinks](#))

**Accessibility:** Please feel free to visit the Atlantic Center or meet with me in office hours to discuss any special concerns. <http://www.smu.ca/campus-life/services-for-students-with-disabilities.html>

## Grading Scheme:

| Component   | Grade | Notes                            |
|-------------|-------|----------------------------------|
| Assignments | 10    | In lab period                    |
| Midterm     | 30    | In class                         |
| Project     | 20    | Outside class schedule           |
| Exam        | 40    | Scheduled in regular exam period |

**Late Policy:** Late submissions will not be accepted.

**Extra Help:** Do not hesitate to come to my office during office hours or by appointment to discuss a homework problem or any aspect of the course.

**Attendance:** Students are expected to attend classes regularly. Additionally the labs will involve practical applications and work that cannot be replicated via notes.

**Methods of Course Delivery:** Class time will consist of traditional lectures supplemented with online videos, demonstrations, and possibly student interaction. The course moodle will server as the central and trusted repository for all course related materials.

**Learning Outcomes:** This course will examine the structure of modern operating systems and their associated components. There will be an emphasis on applying learned concepts to projects and assignments.

Upon completion of the course, students should understand how operating systems affect their applications and software projects. They should have an appreciation for the Unix Philosophy, operating system design, and systems programming. The following is an incomplete list of what students should be capable of after completing the course:

- Develop multiple process and multiple threaded applications
- Program effectively using system calls
- Program using inter-process communication
- Understand the OS interrupt mechanism
- Control concurrency and mutual exclusion using semaphores
- Be very comfortable working from a command line interface
- Build a virtual machine for a specific use

### Important Dates:

|                                 |                |
|---------------------------------|----------------|
| Add/Drop Deadline .....         | September 12th |
| Thanksgiving (no classes) ..... | October 13th   |
| Midterm .....                   | October 15th   |
| Withdrawal Deadline .....       | November 6th   |
| Project Presentations .....     | November 27th  |
| Project Deadline .....          | November 27th  |
| Last Day of Classes .....       | November 27th  |
| Final Exam .....                | T.B.A.         |

## List of Additional Resources

Remzi H. Arpaci-Dusseau and Andrea C. Arpaci-Dusseau. *Operating Systems: Three Easy Pieces*. Arpaci-Dusseau Books, 0.80 edition, May 2014.

Avi Silberschatz, Peter Baer Galvin, and Greg Gagne. *Operating System Concepts*. Wiley Publishing, 9th edition, 2012. ISBN 978-1-118-06333-0.