

**School of Computer Science
University of Guelph**

**CIS*3110
Operating Systems
Winter 2017**

- Instructor

Xining Li, MCLN 211, X56548, xli@cis.uoguelph.ca

- Lecture Hours and Room

Mon/Wed/Fri: 11:30 – 12:20 PM, ALEX Room 200

- Labs: Fri. 9:30-10:20 AM ROZH 105
Thur. 10:30-11:20 AM ROZH 105
Thur. 8:30-9:20 AM ROZH 105
Thur. 4:30-5:20 PM ROZH 105

- Office Hours

Tuesday: 9:00–11:20.

An appointment beyond office hours can be made through emails.

- Course Description

Operating Systems in theory and practice. Components in a system: scheduling and resource allocation; process management, multi-programming, multi-tasking; I/O control and file systems; mechanisms for client-server computing and Examples from typical operating systems.

- Course Topics

- Structure of a process: address space, registers, program counter and the stack.
- Asynchronous activity: hardware and software interrupts, service routines.
- Multiprogramming: programming for concurrency, process and thread, shared data, race conditions, critical sections and tools/techniques for multiprogramming such as mutual exclusion, semaphores and strict message passing.
- Memory management: memory allocation, stack, heap, virtual memory.
- File systems: file organization and interfacing with secondary storage.
- The operating system kernel: internals and interfacing via system calls.
- Distributed computing: communication, client/server model, remote procedure calls.

- Text Book: Operating System Concepts, 9th Ed. Silberschatz, Galvin, Gagne, John Wiley & Sons. INC

- Course Web:

<http://moodle.socs.uoguelph.ca>

- Evaluation

In determining the overall grade of the course, the following weights will be used:

☞ **Assignments:** 40%, where

- Assignment 1: 10%
- Assignment 2: 15%
- Assignment 3: 15%

☞ **Mid-term Exam:** 20%

☞ **Final Exam:** 40%

- Schedule of Dates:

- Jan. 30, 2017, A1 Due
- Feb. 27, 2017, A2 Due
- Mar. 1, 2017, Mid-term Exam
- Mar. 27, 2017, A3 Due
- Apr. 13, 2017, 7:00 PM – 9:00 PM, Final Exam, Room TBA

- Special Note

- All cases of academic misconduct are handled by the Dean, in conjunction with the School Director. Successive infractions of misconduct affirmed by this process could have consequences as serious as expulsion from the University. For details please see related pages in the University of Guelph Undergraduate Calendar 2016-2017.
- Requests for academic consideration because of illness or of a compassionate nature must be made in writing and accompanied by certification whenever possible.