

Overview

Welcome to CSC369H: Operating Systems. The course covers principles of operating systems with a focus on system programming in C. The course is structured around a series of programming assignments that parallel the concepts covered in lectures. By the end of the course, you will have experience working with a large, existing C codebase; will appreciate the importance and difficulty of parallel programming; and will have a working knowledge of system calls, processes, virtual memory, and the file system.

Contact Information

Instructor	Karen Reid
Lecture	Monday and Wednesday 12-1 pm (ES B142)
Tutorial	Thu 12-1 pm (TBA)
Website	http://www.cdf.toronto.edu/~csc369h/fall/
Office Hours	Mon, Wed, Thu 1-2pm (tentative)
Email	reid [at] cs.utoronto.ca

- **Website and Discussion Board:** The course website is required reading. It contains a calendar, assignment handouts, documentation, policies, and more. Most importantly, the page has a link to a discussion board. The board can get you fast, accurate response to your questions – but it only works if everyone participates! We will also use the boards to post announcements and updates, so **the discussion board is required daily reading.**
- **Email:** Please use email for personal issues and the discussion board to ask general course-related questions. Include “CSC369” in all email subject lines lest your message accidentally be filed as spam. An informative subject line like “CSC369: intending to break a leg before the midterm” really helps. I try to respond to email within 24 hours. However, due to volume, it may take longer, especially on weekends and near due dates. (I am often not able to answer email more than once on the weekend.)
- **Anonymous Feedback:** If you have feedback about the course, the web page includes a link to an anonymous email form. (You also have the -option- of including your name.) Since the sender cannot be determined, comments sent through the feedback system are considered public, and they may receive a response at the beginning of class or on the discussion board.

Syllabus and Term Due Dates

M-F Dates	Lecture	Work Due
12–16 Sep	Intro to Operating Systems, Single-Threaded Processes	
19–23 Sep	System Calls, Monitors	
26–30 Sep	Intro to Virtual Memory	Assignment 1: C Review and OS/161 (8%)
3–7 Oct	Virtual Memory	
10–14 Oct	Segmentation, Memory Optimizations	Assignment 2: Processes (8%)
17–21 Oct	Process Scheduling, Intro to Threads	Quiz 1: Processes and Virtual Memory (10%)
24–28 Oct	Threads and Synchronization	Assignment 3: Virtual Memory (8%)
31 Oct–4 Nov	Memory Sharing, Deadlock	
7–11 Nov	Intro to Filesystems	Quiz 2: Concurrency and Scheduling (10%)
14–18 Nov	Filesystems	Assignment 4: Shared Memory (8%)
21–25 Nov	Disk I/O	
28 Nov–2 Dec	Wrap-up and Review	Assignment 5: File Cache Performance (8%)
5–7 Dec	Wrap-up and Review	

1. Over the term, you will complete 5 assignments. The first assignment must be completed individually. Assignments 2-5 may be completed alone or in teams of two. Start looking for a partner now! You are **strongly** encouraged to work with a partner.
2. For most of the assignments, you will demonstrate your work to a TA in a 10 minute time slot that will be scheduled following the end of the grace day period for that assignment.
3. For the quizzes and final exam, you may bring a single sheet of 8.5 x 11 paper containing whatever notes or diagrams you wish. You may use both sides of the sheet. It is recommended but not required that your aid sheet be your own – not shared with another student and not a copy of another student's.
4. The final exam is comprehensive, 3 hours, and held during the exam period. You must obtain a 40% to pass the course; otherwise, your final mark will be set no higher than 48%.

Late Policy

All assignments are submitted electronically and are due at **10 p.m.** on the due date. Each student begins the semester with five grace day “tokens”. You may submit an assignment up to one day late using one token for each member of the team, up to a maximum of 3 days late for a single assignment or exercise. No other late work will be accepted.

Don't use all of your tokens at once. Use them wisely to manage your workload throughout the semester. Don't keep them until the end of the semester, either; we are unable to accept work past the last day of classes (Dec 7). Last year, many students used two of their tokens on Assignment 2, as the midterm period is especially busy.

In the event of an illness or catastrophe, get proper documentation (e.g., medical certificate) and contact me by email or phone if you do not have email access within 24 hours of the due date. It is always easier to make alternate arrangements before the due date or test day, so please let me know as soon as you know that you will need accommodation.

Re-marks

If a piece of work has been mis-marked or if you believe the rubric used to evaluate the work is not appropriate, you may request a re-mark. For a re-mark to succeed, you must clearly and concisely express what you believe was mis-marked or unfairly marked. To request a re-mark, use the remark form on the web site within two weeks of the work being returned. Be prepared for the entire work to be re-evaluated and for the mark to be adjusted up *or* down after the re-evaluation.

Textbooks

- Andrew Tannenbaum: *Modern Operating Systems*. Prentice Hall (2001 or 2007).
 - Weekly readings will be assigned from this text or from articles available from the library. The lectures and tutorials will assume that you have completed these readings.
- K.N. King: *C Programming: A Modern Approach*. Norton and Co (1996 or 2008).
 - This text is only recommended, not required. You will need a good C reference for this course, but you may already have a favorite reference text or online source.

Academic Offenses

All of the work you submit must be your own and your work must not be submitted by someone else. Plagiarism is academic fraud, and the department uses software that compares submissions for evidence of similarity. The “Code of Behaviour on Academic Matters” can be found at:

<http://www.governingcouncil.utoronto.ca/policies/behaveac.htm>

Here are a couple of guidelines to help you avoid plagiarism:

- Never look at another student's assignment solution, whether it is on paper or on the computer screen, and never show another student your assignment solution. This applies to all drafts of a solution and to incomplete solutions.
- Do not use code found on the web, from a “friend”, or obtained through any other means in your submission. It is plagiarism to include code that you did not write in your submission without attribution.
- We encourage you to discuss course concepts and to study for exams with other students, but the assignments should be your (and when allowed, your partner's) work. The easiest way to avoid plagiarism is to only discuss the assignment with your partner or the instructor. Similarly, google (and wikipedia) may help you with course material, but do not use the internet to look for solutions to the assignment problems.

Other

Students with diverse learning styles and needs are welcome in this course. In particular, if you have a disability/health consideration that may require accommodations, please feel free to approach me and/or Accessibility Services at (416) 978 8060; accessibility.utoronto.ca