

Lecture 36 — Course Review

Jeff Zarnett

`jzarnett@uwaterloo.ca`

Department of Electrical and Computer Engineering
University of Waterloo

September 6, 2017

The exam is based on material we have covered in the lectures & labs.

The exam is cumulative: covers from the first lecture to the last.

Lab material you are expected to know covers Labs 1 through Lab 5.

Lecture 1: Introduction

Lecture 2: Review of Computer Architecture

Lecture 3: OS Structure and Traps

Lecture 4: Processes

Lecture 5: Process State

Lecture 6: Processes in UNIX

Lecture 7: Inter-Process Communication

Lecture 8: Threads

Lecture 9: POSIX Threads

Lecture 10: Symmetric Multiprocessing

Lecture 11: Concurrency & Atomicity

Lecture 12: Semaphores

Lecture 13: Classical Synchr. Problems

Lecture 15: Deadlock

Lecture 16: Deadlock Avoidance

Lecture 17: Deadlock Detection & Recovery

Lecture 18: Concurrency/Synchr. in POSIX

Lecture 19: Memory

Lecture 20: Dynamic Memory Allocation

Lecture 21: Segmentation & Paging

Lecture 22: Caching

Lecture 23: Virtual Memory

Lecture 24: Virtual Memory II

Lecture 25: Uniprocessor Scheduling

Lecture 26: Scheduling Algorithms

Lecture 27: Scheduling, Idling, Priorities

Lecture 28: Multiproc./Realtime Scheduling

Lecture 29: Scheduling UNIX/Linux/Windows

Lecture 30: I/O Devices, Drivers

Lecture 31: Disk Scheduling

Lecture 32: File System Interface

Lecture 33: File System Implementation

Lecture 34: File Allocation Methods

Lecture 35: Virtualization

Date of Exam:	Thursday, 13 August 2015
Time Period:	Start: 09:00. End: 11:30
Duration of Exam:	150 minutes
Exam Type:	Closed Book
Additional Materials:	Non-Programmable Calculators

We are writing in: PAC
Check Odyssey for your assigned seat.

- 1 No aids are permitted except for non-programmable calculators.
- 2 Turn off all communication devices.
- 3 There are four (4) questions, some with multiple parts. Not all are equally difficult.
- 4 The exam lasts 150 minutes and there are 100 marks.
- 5 If you feel like you need to ask a question, know that the most likely answer is “Read the Question”. No questions are permitted. If you find that a question requires clarification, proceed by clearly stating any reasonable assumptions necessary to complete the question. If your assumptions are reasonable, they will be taken into account during grading.

Preliminary statistics on the exam:

- About 70% of the exam is post-midterm material
- About 20% of the exam is C programming

How to prepare for the final exam:

- 1 Review lecture notes and slides.
- 2 Review the tutorial slides.
- 3 Understand your lab solutions.
- 4 Try old exams.
- 5 Ask for extra help if you need it (we have 3 TAs + 1 instructor).

Tips for the Exam:

- 1 Take the time to read the question carefully.
- 2 You can use point form instead of full sentences.
- 3 Don't leave questions blank - Nothing on the page = 0 marks.
- 4 Do the questions you know (or find easy) first, then move on to more challenging ones.
- 5 Keep an eye on the time.
- 6 Sleep the night before (all nighters are bad).

No grades can be released until after the end of exams.

You'll see them in Quest when grades for the term become available.