Department of Electrical and Computer Engineering

COURSE OUTLINE

CENG 255 – Introduction to Computer Architecture

Term - FALL 2014 (201409)

Instructor

Dr. Kin Fun Li
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Office Hours

Days: Mondays & Thursdays
Time: 11:30-12:00
Location: EOW-409

Lectures

A-Section(s):
A01 / CRN 10384
A02 / CRN 10385
Days: Mondays & Thursdays
Time: 10:00-11:20
Location: DSB C103

Labs **Location: ELW A359**

B-Section(s):	Days:	Time(s):
B01	M	11:30-14:20
B02	M	16:00-18:50
B03	R	11:30-14:20
B04	R	15:30-18:20
B05	F	14:30-17:20
B06	T	14:30-17:20
B07	T	17:30-20:20

Required Text

Title: Computer Organization & Embedded Systems (6)
Author: Hamacher, Vranesic, Zaky, & Manjikian
Publisher: McGraw Hill
Year: 2012

Lab Manual:

Title: CENG 250 Laboratory Manual
Author: KFL et al.
Publisher: Available on Course Web
Web: www.ece.uvic.ca/~kinli/ceng255/

References: Lecture notes and article reprints available on Course Web (IBM/architect)

Assessment:

Assignments:	0%	Due dates to be announced
Labs	25%	
Mid-term	15% (X2)	Date: Oct 9 and Nov 6, 2014
Final	45%	Date and Time to be announced

Note: Failure to complete all laboratory requirements will result in a grade of N being awarded for the course.

The final grade obtained from the above marking scheme will be based on the following percentage-to-grade point conversion:

Passing Grades	Grade Point Value	Percentage for Instructor Use Only	
A+ A A-	9 8 7	90 – 100 85 – 89 80 – 84	
B+ B B-	6 5 4	77 – 79 73 – 76 70 – 72	
C+ C	3 2	65 – 69 60 – 64	
D	1	50 – 59	
Failing Grades	**Grade Point Value**	**Percentage for Instructor Use Only**	**Description**
E	0	0 - 49	Fail, *Conditional supplemental exam. (For undergraduate courses only)
F	0	0 – 49	Fail, no supplemental.
N	0	0 – 49	Did not write examination, Lab or otherwise complete course requirements by the end of term or session; no supplemental exam.

**Assignment of E grade will be at the discretion of the Course Instructor.*

The rules for supplemental examinations are found on page 80 of the current 2014/15 Undergraduate Calendar.

Term in which E Grade Was Obtained	Application Deadline for Supplemental Exam	Supplemental Exam Date
First term of Winter Session (Sept – Dec)	February 28 in the following term	First week of following May
Second term of Winter Session (Jan – Apr)	June 30 in the following term	First week of following September
Summer Session (May – Aug)	October 31 in the following term	First week of following January

Deferred exams will normally be written at the start of the student's next academic term; i.e., approximately 4 months following the deferral of the exam.

Course Description

1. Course Objectives
   - To gain an understanding of how a computer system works and its subsystems interact
   - To familiarize the control of low-level computer operations using assembly language programming
2. Learning Outcomes
   - Able to select suitable computer hardware and system software for specific engineering applications
   - Able to synergize computer system hardware and software
   - Able to relate high-level algorithmic concepts and programming languages to machine-level system hardware and software
3. Syllabus

The architecture of computer systems including concepts such as processor, memory, buses, input/output, instruction sets, interrupt processing, pipelining, performance. Families of processors, CISC, RISC. Memory organization and management including cache, virtual memory, protection. Computer arithmetic. Assembly language programming, assemblers, linkers and loaders. Hardware/Software interaction.

Note to Students:

Students who have issues with the conduct of the course should discuss them with the instructor first. If these discussions do not resolve the issue, then students should feel free to contact the ECE Chair by email or the ECE Chair's Secretary eceasst@uvic.ca to set up an appointment.

Accommodation of Religious Observance
See http://web.uvic.ca/calendar2014/GI/GUPo.html

Policy on Inclusivity and Diversity
See http://web.uvic.ca/calendar2014/GI/GUPo.html

Standards of Professional Behaviour

You are advised to read the Faculty of Engineering document Standards for Professional Behaviour at http://www.uvic.ca/engineering/current/undergrad/index.php#section0-25 which contains important information regarding conduct in courses, labs, and in the general use of facilities.

Cheating, plagiarism and other forms of academic fraud are taken very seriously by both the University and the Department. You should consult

http://web.uvic.ca/calendar2014/FACS/UnIn/UARe/PoAcI.html for the UVic policy on academic integrity.