UVic Department of Electrical and Computer Engineering

COURSE OUTLINE
ELEC 250 – Linear Circuits I (CRN30266)
Summer 2014

Instructor:

Dr. H.L. Kwok
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Office Hours:

Days: MW
Time: 16:00-16:50
Location: EOW425

Lectures:

A-Section(s):A01/A02
Days: MR
Time: 8:30-9:50am
Location: ECS123

Labs: **Location: ELW B324**

B-Section(s)	Days	Time
B01/B02	M	14:30-17:30
B03/B04	T	13:00-16:00
B05/B06	R	14:30-17:30
B07/B08	W	16:30-19:30
B09	F	14:30-17:30

Tutorial:

T-Section(s):T01/T02
Day: W
Time: 13:30-14:20
Location: CornA221/ECS125

Required Text:

Title: Fundamentals of Electric Circuits, Fifth Edition
Author: C.K. Alexander and M.N.O. Sadiku
Publisher: McGraw-Hill
Year: 2014

Assessment:

Assignments:	15%
Labs	15%
Quizzes (tutorial)	10%
Mid-term	20%
Final	40%

Date: July 3 (Thursday)

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

Assignments: Assignments are to be handed in biweekly (due dates to be posted on the course web).

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	35 - 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.

The rules for supplemental examinations are found on page 80 of the current 2013/14 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

This course deals with linear circuits. The design and implementation of circuits are of fundamental importance to electrical/computer/mechanical engineers interested in hardware. Even with the advancement in large-scale integrated circuits, the need to interface digital/analog circuits to the real world remains critical and essential at the systems level. This course teaches fundamental linear circuit blocks based on the design; analyses; transient and AC response; phasor representation; and 3-phase line circuits.

2. Learning Outcomes

At the end of the term students will be able to analyze/design linear circuits using resistors, capacitors, and inductors including analysis based on phasor representation.

3. Syllabus

a. Circuit components and theorems: Resistors; sources, Kirchhoff's current and voltage laws; linearity; superposition; Thevenin and Norton Theorems; node and loop analyses.

b. Energy storage components and time-dependent response: Capacitors and inductors; series and parallel connections; stored energies; analyses of first-order and second-order time-dependent circuits.

c. Frequency response and phasor representation: Phasors; impedances and admittances; network theorems using phasors; resonance circuit.

d. Power transfer and loads: RMS quantities; complex power; impedance matching; maximum power transfer; three-phase circuits and Y and delta loads.

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 to set up an appointment.

Accommodation of Religious Observance
See http://web.uvic.ca/calendar2013/GI/GUPo.html

Policy on Inclusivity and Diversity
See http://web.uvic.ca/calendar2013/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/assets/docs/professional-behaviour.pdf 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/calendar2013/FACS/UnIn/UARe/PoAcI.html for the UVic policy on academic integrity.

Plagiarism detection software may be used to aid the instructor and/or TA's in the review and grading of some or all of the work you submit.