ECE225 Circuit Analysis

(Department of Electrical and Computer Engineering; Spring, 2017)

Course Schedule: 12:00~12:50pm Monday, Wednesday, and Friday (CRN: 18111)

Classroom: Science & Engineering South 230 (SES 230)

Lab Schedules:
- 11:00am-1:50pm Tuesday (CRN: 18107) (with Marco)
- 2:00-4:50pm Tuesday (CRN: 18108) (with Marco)
- 8:00am-10:50pm Thursday (CRN: 18109) (with Tejumade)

Lab Location: Science & Engineering Laboratory East 3250 (SEL 3250)

Course website: http://www.ece.uic.edu/~zyang/Teaching/20162017SpringECE225/index.html

Instructor: Zheng Yang (yangzhen@uic.edu)

Office Hours: 8:30am~10:00am Monday and Wednesday at ERF 3017

Teaching Assistants:
- Marco Poort (mpoort2@uic.edu)
- Tejumade Durowade (tdurow3@uic.edu)

TA Office Hours:
- 10am-11am Tuesday & 2:30pm-3:30pm Wednesday at SEO 1331 (Marco)
- 12pm-2pm Thursday at SES 2342 (Tejumade)

Textbook (Required for class)

Course Topics
Basic electric circuit variables and elements; Ohm’s Law; Kirchhoff’s Laws and circuit topology (nodes, loops); Equivalent transformations of circuits (series, parallel), input impedance, voltage and current division rules, superposition principle; Thévenin and Norton equivalent circuits and source transformations; transient and steady-state analysis of circuits, impulse response; Linear amplifiers and circuits with dependent sources; AC steady state, phasors, impedances, frequency characteristics of circuits; and laboratory.

Prerequisites
MATH 220; and Grade of C or better in PHYS 142; and Grade of C or better in ECE 115.

Homework
Totally fifteen homework is assigned. Homework solutions are posted after the due date. Homework assignments are collected at before the class on the due date. Five lowest scores of the fifteen homework are dropped. The remaining ten homework scores are employed. NO LATE HOMEWORK is accepted!

Quiz
Totally fourteen quizzes (excluding Quiz #00) are given at end of one of the classes during each week. Quiz topics are based on the contents discussed on the classes during the previous three classes. The solutions of the quizzes are discussed right after the quiz on the same class. Four lowest scores of the fourteen quizzes are dropped. The remaining ten quiz scores are employed. NO LATE Quiz is scheduled!

Exams
Three exams (50 minutes) are given on class. Exam contents are based on materials covered in lectures, homework and quizzes. The lowest score of the three exams is dropped. The other two exam scores are employed. NO MAKEUP EXAMS are given!
Final Exam: The final exam is scheduled during the final exam week and it is mandatory. It contributes to 25% of the overall score of the course.

Laboratory: Lab section is led by teaching assistant. Totally twelve labs are given. The two lowest scores of the twelve labs are dropped. The remaining ten labs scores are employed.

- All required components for lab section can be found in SEL 3250. (No additional lab kits.)
- Attendance of lab section is mandatory and is monitored by the teaching assistant.
- The experiment procedures of each lab can be found at the course website.
- Lab reports are collected at the end of each lab section. NO LATE LAB REPORTS are accepted!
- One lab report is required per student.
- Lab reports submitted without attending lab are not accepted.

Grading: The overall grade of the course is determined based on homework, laboratory, quizzes and exams as below.

<table>
<thead>
<tr>
<th>Component</th>
<th>Weight</th>
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<tbody>
<tr>
<td>Fifteen Homework (with five lowest ones dropped)</td>
<td>10% (=1%×10)</td>
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<tr>
<td>Fourteen Quizzes (with four lowest ones dropped)</td>
<td>5% (=0.5%×10)</td>
</tr>
<tr>
<td>Twelve Laboratory Reports (with two lowest ones dropped)</td>
<td>20% (=2%×10)</td>
</tr>
<tr>
<td>Three Exams (with lowest one dropped)</td>
<td>40% (=20%×2)</td>
</tr>
<tr>
<td>Final Exam</td>
<td>25% (=25%×1)</td>
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A straight scale is used to determine the grades with A = 90–100%, B = 80–89%, C = 70–79%, D = 60–69%, F = 0–59%.

Regulations for Religious Holidays:
Students who wish to observe their religious holidays shall notify the instructor by the tenth day of the semester of the date(s) when they will be absent unless the religious holiday is observed on or before the tenth day of the semester. In such cases, the students shall notify the instructor at least five days in advance of the date when he/she will be absent.

Policy on Incomplete (IN) Grades:
The UIC policy is that Incomplete (IN) grades should be given ONLY when the student is making satisfactory progress. Please see the current Undergraduate Catalog for a precise statement. In this course, any student looking for an IN grade needs to have a C average at the time he/she requests for an IN. If the student is earning a D or below, then an IN grade will not be given, regardless of other circumstances. Note that satisfactory progress is a necessary but not sufficient condition for an IN. There must also be an extraordinary reason why instructor should consider giving an IN.

Professional and Ethical Responsibility:
- Attend all lectures. Take exams on scheduled dates. No make-up exams or alternate arrangements will be allowed unless for reasons beyond a student’s control (supporting documents required).
- Read announcements on course website, Blackboard, and emails from the instructor and TAs regularly.
- Review lecture slides and notes posted and complete reading assignments in a timely manner.
- Policy on cheating and plagiarism: Dishonest actions by students will result in appropriate disciplinary action. Intentional use or attempt to use unauthorized assistance, materials, or information, in any quiz, examination, or assignment and plagiarism in literature review report may lead to penalties such as a failing grade. College of Engineering and University guidelines will be followed. Generally, the minimum penalty for cheating is an E in the course; the maximum penalty is expulsion from the university. Giving aid on exams to others is also considered as a form of cheating.