

CASPER COLLEGE COURSE SYLLABUS

ES2210-01 Engineering Circuit Theory

Semester/Year: Spring 2009

Lecture Hours: 3

Lab Hours: 2

Credit Hours: 4

Class Time: 9:00 - 9:50 am

Days: MWF

Room: PS 222

Lab time Friday, 1:00 - 2:50 pm, EI 114

Instructor's Name: Paul Marquard

Instructor's Contact

Office Phone: 268 - 2250 **Email:** marquard@caspercollege.edu

Information: Office - PS 210

Office Hours: MWF: 10:00 - 10:50 am; MTW: 11:00 - 11:50 am; others by appointment

Please read the entire syllabus carefully; you are responsible for all of the requirements and procedures described. You are also responsible for all announcements, assignments, changes to the syllabus, etc., whether or not you are in class.

Course Description: ES2210 is a basic course in electrical engineering circuit analysis for all engineering majors. Emphasis is placed on basic circuit theory, circuit modeling, analytical methods, network theorems, and first order circuits.

Statement of Prerequisites: ES 2120 Dynamics

Goal: To continue with the development of analytical thinking. Several techniques for circuit analysis and descriptions of power and energy in electrical circuits will be covered.

Outcomes:

Investigate basic electrical terms (voltage, current, and resistance).

Utilize Ohm's law to relate to basic electrical terms.

Utilize Kirchoff's current and voltage laws in circuits.

Determine electricity's actions in series and parallel circuits.

Solution of circuits using matrix techniques.

Define characteristics of operational amplifiers.

Define characteristics of inductors and capacitors.

Analyze time response of electrical circuits.

Transform between ideal sources.

Analyze frequency response of electrical circuits.

Define and investigate energy conversion and electrical power.

Methodology: A mixture of lectures, laboratories, examples, and problem solving sessions will be used

to meet the objectives. In addition, the student is expected to read the covered sections of the textbook. Hands-on laboratory investigations will supplement text information.

Evaluation Criteria: This grading scale may be lowered at any time. It will never be raised.

Homework	150
Quizzes	150
Laboratory Activities	200
Exams	300
Final Exam	200

Grades:

A	900 - 1000
B	800 - 899
C	700 - 799
D	600 - 699
F	0 - 599

Required Text, Readings, and Materials: *Electric Circuits*, by Nilsson & Riedel, 8th edition. ISBN: 0-13-198925-1

Class Policies:

You are encouraged to discuss course topics and assignments with one another. However, the homework turned in by each student must be that individual's own work. Assignments will be handed in on engineering computation paper with all parts labeled and complete work shown. Homework will be submitted on a daily basis, 3 – 5 problems per day. One problem will be randomly chosen for grading. Late homework will be docked 25% per day late. Assignments cannot be turned in after the corrected work has been returned or posted. No late materials will be accepted after the final exam.

Students are expected to read the chapter material listed on the schedule prior to coming to class. Quizzes may cover reading material before it is discussed in class. Most quizzes will cover material post lecture. The top 15 quizzes will be kept for grading purposes with a value of 10 points each. Missed quizzes will not be made up. They will be dropped.

Work not picked up by the end of the semester becomes the property of the instructor.

Exams will be taken as scheduled unless prior arrangements are made. Makeup exams must be prearranged. A makeup may be given at the discretion of the instructor depending on the reason, the status of the student's homework, and attendance. One 8.5" x 11" sheet of paper with notes is allowed on each exam. If there is a cancellation of classes on the day of an exam, the exam will be the next day classes meet.

The student is responsible for obtaining a scientific calculator approved by the instructor; and for

making time to access a computer outside of class time to complete assignments.

All graded material must be saved in case the instructor loses the grades on the computer. Jon Blesi will have more specific information about the laboratory portion of this class.

Last date to change to Audit status or to withdraw with a "W" grade: April 3, 2009 unless it is a full withdrawal from Casper College--which may be done at anytime.

Student Rights and Responsibilities: Please refer to the [Casper College Student Handbook](http://www.caspercollege.edu/students/whileyourhere/handbook/index.html) for information concerning your rights and responsibilities as a Casper College Student.
<http://www.caspercollege.edu/students/whileyourhere/handbook/index.html>

Chain of Command: If you have any problems with this class, you should first contact the instructor in order to solve the problem. If you are not satisfied with the solution offered by the instructor, you should then take your problem through the appropriate chain of command starting with the department head, then the division chair, and lastly the vice president for academic affairs.

Academic Dishonesty - Cheating & Plagiarism: As an educational institution, Casper College demands intellectual honesty and integrity from its students. Proven plagiarism or any other form of academic dishonesty can result in the failure of the class as well as a possible expulsion from Casper College. Students are expected to see the [Casper College Student Code of Conduct](http://www.caspercollege.edu/pdf/current_students/student_handbook_conduct_code.pdf) for more details.
http://www.caspercollege.edu/pdf/current_students/student_handbook_conduct_code.pdf

ADA Accommodations Policy: It is the policy of Casper College to provide appropriate accommodations to any student with a documented disability. If you have a need for accommodation in this course, please make an appointment with Brent Heuer, Accomodative Services Counselor, at 268-2557, or at <http://www.caspercollege.edu/adultstudents/helpservices/accomodative/index.html>.

Calendar or schedule indicating course content (all dates are tentative, the order may change slightly):

Date	Sections	Topics	Homework
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