Youngstown State University
Electrical and Computer Engineering (ECEN)

Syllabus for Basic Circuit Theory 2, Spring 2012

Course: 2633
CRN: 22195
Room: 3150 Moser Hall
Time: M W F 10:00 - 10:50 AM

Instructor: Mr. Jason Zapka
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Office Hours: Room ESB 2042 - By appointment

Required Text: *Engineering Circuits, 9th ed.*, Nilsson & Riedel, Pearson, 2011

Course Website: Class information which may include the syllabus, unit outlines and homework assignments will posted at http://people.ysu.edu/~jazapka/ECEN2633.html. Please check often for updated information.

Course Description: Continuation of ECEN 2632. Transients in RLC circuits. Mutual inductance and transformers. Three-phase circuits. Transform methods in circuit analysis, transfer functions, resonance. Prereq. Or concurrent: MATH 2673. Prereq. ECEN2632.

Tentative Outline:

Weeks	Chapters	Topics	Test Dates
1-4	6.4&5, 9.10&11, 11	Mutual Inductance & Transformers; Three Phase Systems	Friday, Feb 10
5-9	12, 13, 8	Laplace Transform: Theory & Application	Friday, Mar 23
10-13	14, 15	Frequency Selective Circuits; Active Filters	Friday, Apr 20
14-15	18	Two-port Circuits	
Finals		**Final Exam**	Friday, May 11 8:00 a.m.

Note: The test dates will not change but the material covered may be adjusted as necessary.

Course Goals: At the completion of the course, a student will be able to

1) analyze circuits with linear or ideal transformers
2) analyze balanced three-phase power systems to determine apparent, real and reactive power
3) apply the Laplace transform to the analysis and design of linear engineering circuits
4) analyze the frequency response of resonant circuits and design simple filters

5) develop and analyze models for two-port circuits
6) develop and present systematic, clear and concise solutions to engineering circuit problems

Academic Honesty: Academic honesty is essential to the educational process and serves to protect the integrity of the University community. All work that is turned in must be your own, except if specified otherwise. Refer to the YSU undergraduate bulletin for additional information on consequences of academic misconduct and university policies on academic honesty.

Grading: This course is designed to develop and improve your thinking abilities with respect to electrical circuit theory and design. Therefore your work will be graded based on how you think and the solutions you obtain. You should always show your thinking and your approach to every problem and design you do. The standard grading policy will be used for determining the letter grade:

$$A \geq 90\% \quad 90 > B \geq 80\% \quad 80 > C \geq 70\% \quad 70 > D \geq 60\% \quad F < 60\%$$

Grade Weighting:

Homework	100 pts
Test 1	100 pts
Test 2	100 pts
Test 3	100 pts
Final Exam	100 pts

Attendance: Although not required, class attendance is essential for good performance and the student is responsible for all material covered in the class. Attendance is required on all tests. No make-ups will be given and no late assignments accepted unless prior arrangements are made with the instructor. There will be no make-ups for quizzes and in-class work.

Homework: To succeed in this course, timely completion of all homework assignments will be critical. Homework assignments will be collected periodically and graded. By completing the assignments one will gain the knowledge essential for mastering the course.

Tests: Three 50 minute tests will be given throughout the semester. The tests will be closed book and notes.

Final Exam: A 2-hour comprehensive final exam will be given during finals week. The final will be closed book and notes.

Cell Phones: Although cell phones may be an important part of our lives, they can be a serious distraction those around you. Please turn cell phones OFF or to a quiet vibrate and refrain from using them during class time.