

ETec371 Course Specifications

Catalog Information

Course Number and Title: ETec371 – Circuit Analysis II

Credit Hours: 4

Course Description: A second course in DC and AC circuits with increased emphasis on mathematical techniques used in electrical circuit analysis and design. Use of network theorems, vector analysis techniques, polyphase circuits and additional topics. Structured laboratory with emphasis on measurement, theory and applications, test equipment, verification of circuit laws, data analysis and formal report preparation.

Prerequisites: ETEC 271, MATH 115 or 118, EET major or written permission.

Prerequisite Outcomes:

Schedule Information

Quarter: Winter 2007

Meeting Times and Rooms

Days	Times	Instructor	Room(s)
MF	3:00-3:50	F.D. Harris	ET333
W	3:00-4:50	F.D. Harris	ET333
T	2:00-3:50	F.D. Harris	ET331

Lab Fee: \$10.00

Enrollment Limit: 18

Student Resources

Student Syllabus: <http://eet.etec.wvu.edu/etec371/371w07syl.pdf>

Course Website: <http://eet.etec.wvu.edu/etec371/index.html>

Facilities and Materials

Required Text: "Introductory Circuit Analysis", 10th Edition, Robert Boylestad
"Experiments in Circuit Analysis", 10th Edition, Robert Boylestad

Lab Equipment: Prototype Board, DMM, VOM, DC Power Supply, Oscilloscope, Function Generator.

Software: pSpice

Course Outcomes

1. Be confident in the use of standard electronic test equipment (DMM, Function Generator, Oscilloscope, etc.)
2. Be competent in the analysis of low frequency, lumped parameter passive circuits.
3. Be able to use circuit analysis software to solve passive circuits.
4. Be familiar with the fundamental theorems of electric circuits.
5. Laboratory reports must be well written to meet the provided requirements.

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Courses Contribution to the Program Outcomes

P – Primary to the purpose of the course. Course contains significant instruction and opportunities for practice.

S – Secondary to the purpose of the course. Course contains limited instruction and opportunities for practice.

N – Not a significant part of this course.

Program Outcome		Course Contrib	Applicable Course Outcome(s)
a	An appropriate mastery of the knowledge, techniques, skills and modern tools of their disciplines.	P	1, 2, 3, 4
b	An ability to apply current knowledge and adapt to emerging applications of mathematics, science, engineering and technology	P	2, 3, 4
c	An ability to conduct, analyze and interpret experiments and apply experimental results to improve processes	P	1
d	An ability to apply creativity in the design of systems, components or processes appropriate to program objectives	N	
e	An ability to function effectively on teams,	N	
f	An ability to identify, analyze and solve technical problems	P	2, 3, 4
g	An ability to communicate effectively,	S	5
h	A recognition of the need for, and an ability to engage in lifelong learning	N	
i	An ability to understand professional, ethical and social responsibilities	N	
j	A respect for diversity and a knowledge of contemporary professional, societal and global issues,	N	
k	A commitment to quality, timeliness, and continuous improvement	N	
A	The application of circuit analysis and design, computer programming, associated software, analog and digital electronics, and microcomputers to the building, testing, operation, and maintenance of electrical/electronic(s) systems	P	2, 3, 4
B	The applications of physics or chemistry to electrical/electronic(s) circuits in a rigorous mathematical environment at or above the level of algebra and trigonometry	P	2, 3, 4
C	The ability to analyze, design, and implement control systems, instrumentation systems, communications systems, computer systems, or power systems	N	
D	The ability to apply project management techniques to electrical/electronic(s) systems	N	
E	The ability to utilize statistics/probability, transform methods, discrete mathematics, or applied differential equations in support of electrical/electronic(s) systems	N	

Outcome Assessment Tools

1. Circuits Module senior Survey