

ETec351 Course Specifications

Catalog Information

Course Number and Title: ETec351 – Electronics for Engineering Tech I

Credit Hours: 4

Course Description: Analysis of basic electric circuits, design of simple analog and digital circuits including power supplies, transistor amplifiers, operational amplifiers, timers and logic devices. Laboratory reinforces the circuit concepts presented in the classroom and promotes competent use of basic electronic instruments. Cannot be taken for credit by EET majors.

Prerequisites: MATH 115 or 118; PHYS 115 or co-req PHYS 123 and 133.

Prerequisite Outcomes:

Schedule Information

Quarter: Fall 2006

Meeting Times and Rooms

Days	Times	Instructor	Room(s)
MWF	1:00-1:50	F. D. Harris	AH18
M	3:00-4:50	F. D. Harris	ET331
W	3:00-4:50	F. D. Harris	ET331

Quarter: Winter 2007

Meeting Times and Rooms

Days	Times	Instructor	Room(s)
MWF	4:00-4:50	Tom Grady	ES123
W	2:00-3:50	Tom Grady	ET331
F	10:00-11:50	Tom Grady	ET331

Lab Fee: \$10.00

Enrollment Limit: 18 per lab section

Student Resources

Student Syllabus: <http://eet.etec.wvu.edu/etec351/351f06syl.pdf>

Course Website: <http://eet.etec.wvu.edu/etec351/index.html>

Facilities and Materials

Required Text: *Circuit Analysis with Devices* by Robbins & Miller

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

Software: None

Course Outcomes

1. Be competent in the use of electronic test equipment typically found in industry: Bench Power Supply, Hand Held DMM, Analog Oscilloscope, AC Clamp Meter, Function Generator.
2. Be able to analyze simple AC and DC electrical circuits.
3. Compute Apparent Power, Real Power, and Reactive Power as well as Power Factor for AC circuits.
4. Be able to analyze simple magnetic circuits.

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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.		
b	An ability to apply current knowledge and adapt to emerging applications of mathematics, science, engineering and technology		
c	An ability to conduct, analyze and interpret experiments and apply experimental results to improve processes		
d	An ability to apply creativity in the design of systems, components or processes appropriate to program objectives		
e	An ability to function effectively on teams,		
f	An ability to identify, analyze and solve technical problems		
g	An ability to communicate effectively,		
h	A recognition of the need for, and an ability to engage in lifelong learning		
i	An ability to understand professional, ethical and social responsibilities		
j	A respect for diversity and a knowledge of contemporary professional, societal and global issues,		
k	A commitment to quality, timeliness, and continuous improvement		
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		
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		
C	The ability to analyze, design, and implement control systems, instrumentation systems, communications systems, computer systems, or power systems		
D	The ability to apply project management techniques to electrical/electronic(s) systems		
E	The ability to utilize statistics/probability, transform methods, discrete mathematics, or applied differential equations in support of electrical/electronic(s) systems		

Outcome Assessment Tools