

ETec471 Course Specifications

Catalog Information

Course Number and Title: ETec471 – Project Preparation

Credit Hours: 2

Course Description: Students define objectives and prepare project proposals for ETec474.

Prerequisites: ETec374, senior year. ETec474 must be taken during your last spring quarter before graduation. Therefore, this course should be taken in the autumn quarter preceding your last spring quarter.

Prerequisite Outcomes: Be able to design a stand-alone microcontroller-based system.

Schedule Information

Quarter: Fall 2006

Meeting Times and Rooms

Days	Times	Instructor	Room(s)
TR	12:00-12:50	Todd Morton	ET333

Lab Fee: none

Enrollment Limit: 18

Student Resources

Student Syllabus: <http://eet.etec.wvu.edu/etec474/471f06syl.pdf>

Course Website: <http://eet.etec.wvu.edu/etec474/index.html>

Facilities and Materials

Required Text(s): None

Lab Equipment: Misc. access to EET labs as required for project

Software: Misc. As required for project

Course Outcomes

1. Able to write a convincing technical proposal.
2. Can produce a well written technical document and understands the importance of multiple revisions and feedback.
3. Understands a typical product development cycle and apply project management skills to direct a project from conception to developing project requirements.
4. Understands the importance of and practices good teamwork skills including communication, leadership, and collaboration. Show respect for each team member's opinions, experience, heritage, education, position, and gender.
5. Able to plan and execute work that is accurate, complete, timely, and reliable.
6. Can develop a well written requirements document and development plan for an embedded system, which includes both hardware and software components.
7. Makes a commitment to the course project, project team, and project leader. Attends meetings and supports the needs and goals of the course.
8. Understand the importance of coding conventions, software ownership ethics, including plagiarism, licensing, and copyrights.
9. Understand the need for completing and delivering quality work in a timely manner.
10. Motivated and capable of expanding one's knowledge by researching and applying new electronics parts, software, and systems that have not been covered in previous coursework.

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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.	S	1, 3, 6, 10
b An ability to apply current knowledge and adapt to emerging applications of mathematics, science, engineering and technology	S	1, 6, 10
c An ability to conduct, analyze and interpret experiments and apply experimental results to improve processes	S	1, 6, 10
d An ability to apply creativity in the design of systems, components or processes appropriate to program objectives	P	1, 2, 6, 10
e An ability to function effectively on teams,	P	2, 3, 4, 7
f An ability to identify, analyze and solve technical problems	S	1, 6, 10
g An ability to communicate effectively,	P	1, 2, 3, 4, 6
h A recognition of the need for, and an ability to engage in lifelong learning	S	10
i An ability to understand professional, ethical and social responsibilities	S	4, 7, 8
j A respect for diversity and a knowledge of contemporary professional, societal and global issues,	S	4
k A commitment to quality, timeliness, and continuous improvement	S	1, 2, 5, 6, 9
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	S	1, 6, 10
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	N	
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	S	3, 4, 6, 7
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. Exams, Laboratories, Homework
2. Project and Career Module Senior Survey