

ECE 6070: Project Management in Electrical and Computer Engineering

Course Description

Students learn project management principles and apply them to Electrical and Computer Engineering real-world projects.

Transcript Abbreviation: Proj Manage ECE

Grading Plan: Letter Grade

Course Deliveries: Classroom

Course Levels: Graduate

Student Ranks: Masters, Doctoral

Course Offerings: Autumn, Spring

Flex Scheduled Course: Never

Course Frequency: Every Year

Course Length: 14 Week

Credits: 3.0

Repeatable: No

Time Distribution: 3.0 hr Lec

Expected out-of-class hours per week: 6.0

Graded Component: Lecture

Credit by Examination: No

Admission Condition: No

Off Campus: Never

Campus Locations: Columbus

Prerequisites and Co-requisites: Prereq: Grad standing in ECE.

Exclusions: Not open to students with credit for 6194.02.

Cross-Listings:

Course Rationale: Expose students to project management principles and their application to Electrical and Computer Engineering real-world projects.

The course is required for this unit's degrees, majors, and/or minors: No

The course is a GEC: No

The course is an elective (for this or other units) or is a service course for other units: Yes

Subject/CIP Code: 14.1001

Subsidy Level: Doctoral Course

Programs

Abbreviation	Description
CpE	Computer Engineering
EE	Electrical Engineering

Course Goals

Learn principles of project management
Apply project management tools and processes to solve Electrical and Computer Engineering problems.

Integrate technical aspects of Electrical and Computer Engineering with other practical aspects to successfully manage a project in the Industry framework.
Emphasize and practice teamwork.
Practice organizational, communication, technical writing and presentation skills.

Course Topics

Topic	Lec	Rec	Lab	Cli	IS	Sem	FE	Wor
General principles of Project Management	3.0							
Project Management process and tools	10.5							
Team Culture and project communications	3.0							
Strategic issues in Project Management, risk and crisis management	3.0							
Practical considerations in implementing Project Management in the Industry	4.5							
Case studies in Electrical and Computer Engineering	6.0							
Application of Project Management to Electrical and Computer Engineering Projects	9.0							
Project Documentation and reporting	3.0							

Representative Assignments

Homework Assignments
Final Project
Presentation on project progress

Grades

Aspect	Percent
Homework Assignments	60%
Midterm	5%
Presentation on project progress	10%
Final Project	15%
Final Exam	10%

Representative Textbooks and Other Course Materials

Title	Author
<i>An Introduction to Project Management, Revised (recommended)</i>	K. Schwalbe
<i>A Guide to the Project Management Body of Knowledge - PMBOK guide (recommended)</i>	The Project Management Institute

ABET-EAC Criterion 3 Outcomes

Course Contribution		College Outcome
**	a	An ability to apply knowledge of mathematics, science, and engineering.
**	b	An ability to design and conduct experiments, as well as to analyze and interpret data.
*	c	An ability to design a system, component, or process to meet desired needs.
***	d	An ability to function on multi-disciplinary teams.

Course Contribution		College Outcome
**	e	An ability to identify, formulate, and solve engineering problems.
**	f	An understanding of professional and ethical responsibility.
***	g	An ability to communicate effectively.
*	h	The broad education necessary to understand the impact of engineering solutions in a global and societal context.
*	i	A recognition of the need for, and an ability to engage in life-long learning.
	j	A knowledge of contemporary issues.
***	k	An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

CpE ABET-EAC Criterion 9 Program Criteria Outcomes

Course Contribution		Program Outcome
	1	an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
	2	an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
	3	an ability to communicate effectively with a range of audiences
	4	an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
	5	an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
	6	an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
	7	an ability to acquire and apply new knowledge as needed, using appropriate learning strategies

EE ABET-EAC Criterion 9 Program Criteria Outcomes

Course Contribution		Program Outcome
	1	an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
	2	an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
	3	an ability to communicate effectively with a range of audiences
	4	an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
	5	an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
	6	an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
	7	an ability to acquire and apply new knowledge as needed, using appropriate learning strategies

Additional Notes or Comments

One of the textbooks will be required, but it hasn't been decided which yet.

Updated textbook information, 3/6/20, CED.

Prepared by: Carol Duhigg