Course Outline

Description: This course provides a quick introduction to various software tools and concepts associated with engineering project management. The aim of the course is to familiarize the student with some of the basic skills and knowledge that will help them to be productive participants in team-based engineering projects. In addition to lectures on fundamental concepts related to team-based projects, the course also introduces use of related software, such as PERT, CPM, Microsoft Project, etc., for estimating, scheduling, and resource allocation.

Prerequisites: ENGR 200 or ENGR 205; ENGR103 or CS 212. Students need to have at least a junior level standing in engineering so that they have some prior experience with team-based engineering laboratory projects. Since the course involves the use of project-related software, some basic knowledge of programming is necessary. Concurrent enrollment in ENGR 300 is highly recommended but is not necessary.

Professional Component:
Course Units: 1; Engineering Science: 50% ; Engineering Design: 50%

Textbook:

There is no single required textbook for this course but a number references are listed below.

References:

3) Adaptive Software Development: a collaborative approach to managing complex systems, James Highsmith
4) PM102 According to the Olde Curmudgeon, An Introduction to the Basic Concepts of Modern Project Management, Francis M. Webster Jr.

Objectives: Following are the specific objectives of this course.

1. To introduce students to some of the basic management concepts and methods of team-based engineering projects
2. To provide students with "hands-on" experience Defining, Designing and Presenting a Project Plan as a Team.
Format: 2 hours per week of lecture for seven weeks and a one-hour exam at the end of the course. Class time will be devoted to presentation and discussion of concepts, solution of illustrative examples, and "hands-on" practice with relevant software.

Evaluation: Evaluation will be based on an Exam, a Team Project and Classroom participation.

Course Content (for ENGR 290-05: Project Management Overview)

1. Project Management Introduction & Context……………2 Hours
2. Project Management Processes………………………………1 Hour
3. Project Scope Management…………………………….1 Hour
4. Project Time Management…………………………………1 Hour
5. Project Cost Management…………………………………1 Hour
6. Project Integration Management…………………………1 Hour
7. Project Quality Management………………………………1 Hour
8. Project Human Resource Management……………………1 Hour
9. Project Communication Management……………………1 Hour
10. Critical Path (CPM), Program Evaluation and Review Technique (PERT) and Microsoft Project, Discussion and Practice………………….3 Hours
11. Team Project Presentations…………………………….2 Hours