



## GE401 Project Management (Required Course)

**Code and Name:** GE401 Project Management

**Credit Hours:** 3 (Lecture: 3, Tutorial: 0)

**Textbook:**

- A Guide to the Project Management Body of Knowledge PMBOK Guide, Project Management Institute, 6<sup>th</sup> Edition, PMI, 2013.

**Other References:**

- Project Management (Process, Methodologies, and Economics), Avraham Shtub, Jonathan F. Bard, and Shlomo Globerson, 3<sup>rd</sup> Edition, Pearson, 2017.

**Course Description:**

This course concentrates on the general methodology of managing a technical project from concept to operational use, with emphasis on the functions, roles, and responsibilities of the project manager. Topics include career aspects of project management, business factors affecting the project / the manager and the manager / project organization. The course emphasizes on planning, scheduling, using arrow networks, execution and communications, project lifecycle, risk analysis, interface management, design review, design control assessment, reporting and reaction to critical problems. Characteristics of project construction, design and process, labor, material and equipment utilization. Cost estimation, pricing and contracting, planning and cost control, monitoring and management systems are discussed.

**Pre-requisites:** MATH106 Calculus-II.

**Co-requisites:** None

**Course Learning Outcomes:**

With relation to ABET Student Outcomes (SOs: 1-7)

1. Describe basic specific terminology of project management, scope, and schedule management. (1)
2. Understand cost, quality, resource, communication, risk, and procurement management. (1)
3. Gain knowledge of contemporary issues related to standards for project management including initiating process, planning process, executing process, monitoring and controlling process, and closing process.
4. Identify Work Breakdown Structure (WBS), and create and update schedule. (4)

**Topics to be covered:**

- Introduction, The environment in which projects operate
- Role of the Project Manager, Nature of Project Management, Relationship Between Projects and Other Production Systems, Characteristics of Projects, Function of Project Manager, Life Cycle of a Project, Factors that Affect Success of a Project, Difference between Engineering and Management
- Process Approach to Project Management– Project Management Processes as defined by PMBOK, Integration, Scope, Time, Cost, Quality, Human Resource, Communication, Risk and Procurement Management, Project screening and selection (Quiz 1)
- Scope and Organizational Structure of a Project- Types of Organizational Structures, Organizational Breakdown Structures of a Project, Combining the OBS and WBS
- Project Time Management/Scheduling, Defining Activities, Managing Relationships, Gantt Chart, Activity on Arrow and Node Network Approach, Lead and Lag Relationships, Critical Path Method, Project Time Management- Aggregating Activities in a Network, Dealing with Uncertainty, PERT (First Major Exam)

**Grading Policy:**

The grading for the course are 60% coursework and 40% Final Exam. The course work consists of two Midterm Exams, where each midterm exam is worth 20%. It also includes quizzes, homework, and projects for the remaining 20% that is modified by the course instructor.

