



INTRODUCTION TO ENGINEERING PROJECT MANAGEMENT

ENCE 320 Course Syllabus – Summer 2017

CATALOGUE DESCRIPTION

ENCE 320 Introduction to Engineering Project Management (3) This course presents the principles and techniques of managing engineering projects from the initiation phase, through planning, execution, control and closeout. Students will develop the analytical skills and awareness necessary on the management side of engineering projects. Topics include project initiation, estimating, budgeting, developing work plans, scheduling, tracking work, resource allocation, project coordination, quality management, leadership, managing teams, conflict, negotiations, ethics, and professional responsibility and close out.

TEXTBOOK

Project Management, Harold Kerzner, Wiley Publishing, 2013, 11th Edition, ISBN 9781118022276

COURSE OBJECTIVE

The Project Management department is adopting outcome-based education protocols for all courses over the next few semesters. This is a complex process, and we will be looking for your input as we move forward. Outcome-based education shifts from single-course content objectives to having course objectives established to contribute to the overall capabilities expected of graduates of the program.

Outcomes for this course are based on the premise that students who successfully complete this course will have basic knowledge of the project management framework and knowledge areas as defined by the Project Management Institute (PMI) in the *Project Management Book of Knowledge (PMBOK)*, and the standards for management of a project. Students will develop and demonstrate the knowledge required for successful project evaluation and selection, initiation and planning, project execution, monitoring and controlling and project closeout. Graduates will develop a project plan, schedule, budget, and assess project risks. They will evaluate project performance using earned value management techniques. Graduates will become an effective member of a project team and to learn to manage projects by completing a group project. Graduates will demonstrate a thorough understanding of the basics of project management including the importance and interrelationship of all the components.

In order for you to succeed in the delivery of successful projects either as a project manager or an effective team member, as measured by the triple constraints, you need to be able to manage yourself and understand the project management life cycle and what contributes to a successful project. As a result this course begins with a class that is designed to introduce you to the field of project management through a series of self-assessments, exercises, projects, and class lectures.

The outcomes planned for this course the student will be able to take responsibility and demonstrate the abilities to complete the following tasks:

- Apply project selection methods to evaluate the feasibility of projects.
- Assess project contribution to business strategy, purpose and plans.
- Determine and document project goals and performance requirements by working closely with project stakeholders.
- Define and document product or service deliverables.
- Select appropriate project management practices, tools, and methodologies.
- Define, analyze, refine, and document project requirements, assumptions, and constraints.
- Define and document project schedule, budget, resources, and quality.
- Define performance criteria to support quality assurance.
- Assess and document project risks.
- Develop a Work Breakdown Structure (WBS).
- Analyze and refine project time and cost estimates to define project baseline, schedule and budget.
- Develop a project plan.
- Manage project progress by applying performance reporting, analysis and progress measurement techniques to ensure activities are executed as planned.
- Communicate project progress to stakeholders.
- Understand how to select, lead, and manage project teams.
- Identify needs for corrective action, obtain approvals, and evaluate effectiveness.
- Recognize and respond to risk events and issues.
- Obtain final acceptance of deliverables from appropriate stakeholders.
- Document lessons learned.
- Facilitate administrative and financial closure.
- Preserve essential project records to adhere to legal and other requirements.

LOGISTICS

<i>Time & Location</i>	Monday 8:00PM- 9:00PM EDT video conference
<i>Instructor</i>	Adjunct Professor Scott R. Macrae, PgMP, PMP, P.E.; macraes@umd.edu
<i>Office Hours</i>	Office hours by appointment and immediately after class
<i>Graduate Assistants</i>	
<i>Learning Management System (LMS)</i>	Canvas is the current system. All assignments for this course are posted on Canvas as well as lecture slides/notes and other materials. Answers to homework problems as well as practice tests are posted. We use Canvas for all examinations. Canvas can be used for team sites, wiki's, blogs, and emails to the class, groups, or individuals. http://umd.instructure.com/courses/

POLICIES

<i>Grading</i>	Grading is based on: class participation/attendance/instructor input; homework & Key Points Reviews (5%); quizzes (10%); pearl diving 1 – 3 (10%); pearl diving 4 (5%); group project (30%); exam 1 (20%); exam 2 (20%).
<i>On Time Delivery</i>	Reading assignment Key Points Reviews are posted online and due by 5:00 pm on the date that reading is assigned for. Key Points Reviews are open-book, open-notes and closed-classmates. Quizzes are posted online and must be completed before Monday at 5:00 pm. Quizzes are open-book, open-notes and closed-classmate. Other homework assignments are due at the start of class on the date they for which are assigned. I expect all deliverables to be on time or early. Late assignments will not be accepted unless arranged ahead of time with the instructor.
<i>Individual Extra Work</i>	The answer is no. I cannot permit extra work for additional credit in hopes of earning a higher grade because it simply is not fair to the other students. This is firm.
<i>Students w/ Disabilities</i>	The University has a legal obligation to provide appropriate accommodations for students with disabilities. Please inform the instructor of any accommodations needed relative to disabilities.

CODE OF ACADEMIC INTEGRITY

The course is subject to the Code of Academic Integrity and Honor Pledge available on the web at <http://www.studenthonorcouncil.umd.edu/index.html>. They prohibit students from cheating on exams, plagiarizing papers, submitting the same paper for credit in two courses without authorization, buying papers, submitting fraudulent documents, and forging signatures. The instructor is not reluctant to assign the grade “XF” for the course should any of the above apply.

CLASS SCHEDULE

Class	Date	Topic
1	6/5	Course Introduction; Project Management Life cycle and processes; Initiating the Project (Ch.1) Identifying and selecting projects (Decision Making) (Ch.2)
2	6/12	Developing Project Proposals (Ch.3) Proposed Solutions (Bid/No-Bid Decisions; Proposals) (Ch.3) Key Points Review 1, 2, & 3; Pearl Diving 1
3	6/19	Techniques for planning a project; Defining Scope, Quality, Responsibility, and Activity Sequence; Create a Work Breakdown Structure (Ch.4) Key Points Review 4; Quiz 1; Personality Test Homework Assign Group Projects
4	6/26	The Project Manager (MBTI, VIA Strengths) Business Case for a Positive Workplace; Engagement (Ch.10); Key Points Review 10; Pearl Diving 2
5	7/3	Techniques for scheduling a project; Developing the Schedule (Ch.5) Key Points Review 5; Quiz 2; Pearl Diving 3
6	7/10	Techniques for resource assignment to a project: Resource Utilization (Ch.6) Key Points Review 6
7	7/17	Techniques for budgeting a Project; Determining costs, budget, and Earned Value (Ch.7) Key Points Review 7; Quiz 3 Exam 1 — All material to this point (open book open notes, online)
8	7/24	Techniques for assessing and managing project risks; Developing a risk matrix (Ch. 8) Key Points Review 8
9	7/31	Techniques for Controlling a project; Project performance measurement; Cost Control; Closing the project (Ch.9) Key Points Review 9
10	8/7	The Project Manager (Ethics) (Ch.10) – Mandatory Attendance at weekly video conference Quiz 4; Pearl Diving 4
11	8/12	Group Projects Due;
11	8/14	The Project Team (Leading vs. Managing; Conflict) (Ch.11) Project Communication & Documentation (Ch.12) Types of Project Organizations (Ch.13) Key Points Review 11;
12	8/21	Key Points Review 12 & 13; Quiz 5
12	8/19	Exam 2 — Material from the entire semester (open book open notes, online)

Note: This syllabus is a plan and is subject to change!