# EASTERN MEDITERRANEAN UNIVERSITY

**FACULTY OF ENGINEERING**

## Department of Industrial Engineering

**IENG419 Project Management**

**Fall 2023-2024**

**Course Syllabus**

**Course Code :** IENG419 **Course Title :** Project Management **Course Type :** Area Elective

**Credit Value :** (3,0,1)3 **ECTS Value :** 6 **Pre-requisites :** Senior standing

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**Teaching Assistants:** Behzad Sanaei, Negar Akbarzadeh **Office Hours:** Wednesday 09:30

**URL:** *LMS of EMU*

**IMPORTANT NOTE:** This syllabus is a guide, not a contract, and therefore may be changed as necessary. If changes are to be made, it will be discussed and announced in the class.

**CATALOGUE DESCRIPTION**

 This course is designed to familiarize the student with the basic techniques used in the management of projects. It covers: project management: nature and organization; financial and commercial framework; definition, cost estimating, contracts and funding; planning and scheduling; network analysis including CPM & PERT, scheduling resources; computer applications: preparation, packages; purchasing and materials management: scheduling, ordering, materials control, purchasing procedures; managing work and costs: program implementation, managing progress, commissioning, permits, cost management; decommissioning; project closure.

**AIMS & OBJECTIVES**

The main aim of this course is to introduce students with the

1. Projects and skills needed to be a successful project manager
2. Project organizational stuctures
3. Time planning and project scheduling (AOA, AON) and analysis (CPM & PERT)
4. Basics of and techniques used in the management of projects (project costs, durations and activity crashing)
5. Project control (progress and performance mesaurement and evaluation, earned value)
6. Project management software MS Project
7. Preparing a term project (working effectively in multidisciplinary teams, making an independent research, applying related techniques in real life environment, and writing and presenting a technical report on the results)

**GENERAL LEARNING OUTCOMES (COMPETENCIES)**

On successful completion of this course, students are expected to develop **knowledge** and **understanding** of:

* The fundamentals of the project life cycle, project phases and project management
* Organize resources and establish work plans and cost budgets for a project
* Initiate a project, define goals and objectives, identify stakeholders and build a team
* Plan and breakdown the work into activities and tasks; schedule and assign resources
* Calculate and develop critical path, PERT, and Gantt charts and assess the time duration of a project
* Calculate slack time adjustments
* Estimate, budget, and control project costs
* Identify, assess, and manage project risks
* Basic Organizational Structures

On successful completion of this course, students are expected to develop **skills in**:

* Define, verify, and control the project scope
* Critical thinking and interpersonal skills
* Communicate effectively, orally and written.
* Organize, coordinate, and build the project team
* Control and monitor project progress, take corrective action and manage change
* Describe the various elements of a project, including the project environment, the project team, and the project manager and how they are integrated in a successful project
* Develop, implement, and control a project coordination plan
* Using project management software Microsoft Project effectively
* Using the most appropriate technique for a specific problem on hand
* Identifying relevant data to successfully solve project management problems
* Describe and apply effective project communications processes
* Evaluate and report performance against project plans and budgets
* Close down a project, report and present results and disband the team

On successful completion of this course, students are expected to develop their **appreciation** of, and respect for **values and attitudes** to:

* Group dynamics, and working in teams
* Project planning, constraints of and resistance to project management, project management skills
* Importance of management of human resources allocated to the project
* Undertake the roles of project managers and project team members
* Consider limitations of the analyses by taking into account the realistic practical constraints such as environmental, social, political and ethical
* Understand the impact of engineering solutions in global and societal context
* Professional and ethical responsibilities of engineers

**GRADING CRITERIA**

**Exams:** All examinations will be based on lectures, tutorials, labs, assigned readings, project study or other work. To pass these exams students will need to have studied the material well in advance in order to understand the concepts, procedures and techniques. Descriptions of these examinations are as follows:

*Class/Lab Quizzes:* It is planned to carry out 4 class quizzes and 2 Lab quizzes that will be announced in advance. All the quiz results will be counted towards your letter grade calculations. The quizzes will be closed-book/closed-notes type unless otherwise is mentioned.

*Midterm Exam:* There will be one midterm examination that covers all the material up to the date of the examination. The midterm exam may consist of three sections: a standardized question section (multiple-choice, true/false, matching, etc.), a section which includes questions from the project study, and a section which includes problem solving. The midterm exam will take place during the mid-term exams week which is organized centrally by the University.

*Final Exam:* The final examination will cover all the material studied throughout the semester and has the same structure as in the midterm examination with the exeption that there will be more weight to problem solving. The final exam will take place during the final exams period which is organized centrally by the University.

*Make-up Exam:* No make-up examination will be given to students missing more than one of the quizzes. Make-up examination will only be offered to those students who missed the midterm exam, a quiz and provided *valid documentation* for their absence within a week at the latest after the examination date. Any medical report should be approved by EMU Health Center, otherwise will not be accepted. University regulations apply for Graduation Make-up exams.

**Term Project:** Students should form groups of maximum 4 students. A penalty (at least 50% reduction in the grade) for late submissions will be applied if the project report is not submitted on the due date and time.

**LEARNING/TEACHING METHOD**

The function of teaching is to enable students to learn. To realize this the course will be organized into two modules: Lectures & Tutorials/Laboratory sessions. Sometimes four hours of class in a week will be used for lectures and/or tutorials/laboratories according to the perceived need. The students are expected to participate the discussions in the classes. The instructor will lecture in class by using the slides with the overhead projector. The instructor may invite experts on the field to the classes.

**GRADING POLICY**

Quizzes 10 %

Lab work 20 %

Term Project 20 %

Midterm Examination 20 %

Final Examination 30 %

**NG (Nil-grade):** Conditions that might lead to NG (Nil-grade):

1. Not attending the Final exam or its make-up.
2. Not attending the Midterm Exam without a valid excuse.
3. Not submitting the Term Project.
4. Not attending the project presentation.
5. Attendance to lectures/tutorials/labs less than 70%.

**RELATIONSHIP WITH OTHER COURSES**

This course is an area elective course for the senior standing students or consent of the instructor.

**TEXTBOOK/S & REFERENCES**

There won't be any specific textbook in this course. The students are referred to the collection of the books on Project Management and related fields in the EMU Library.

**COURSE CONTENT AND A TYPICAL SCHEDULE**

|  |  |
| --- | --- |
| WEEK | TOPICS COVERED |
| 1 | Introduction, importance of project management, definition of project, systems view of project management, basic project organizational structures |
| 2 | Resistance to project management, constraints of project management, project management skills |
| 3 | The project team, project stakeholders, project life cycle and project phases, PM knowledge areas |
| 4 - 5 | Work Breakdown Structure (WBS) development, activity definition and sequencing,Project Network Diagrams; Precedence Diagramming, (AoA) and (AoN) methods |
| 5 | Activity resource estimating, resource planning, activity duration estimating, Lab Applications |
| 6 - 7 | Schedule development: Gantt Charts, Critical Path Method (CPM), Lab Applications |
| 8 - 9 | Midterm exams period |
| 10 | Schedule development: Program Evaluation and Review Technique (PERT), Lab Applications |
| 11 - 12 | Types of project costs, activity crashing, Lab Applications |
| 13 - 14 | Project control, Earned Value analysis, Lab Applications |
| 15 | Project presentations and discussions |

# CONTRIBUTION OF COURSE TO MEETING THE REQUIREMENTS OF CRITERION 5

Mathematics and Basic Sciences: 0

Engineering Science : 3

General Education : 0

# RELATIONSHIP OF COURSE TO STUDENT OUTCOMES

|  |  |
| --- | --- |
| **Student Outcomes** | **Level of Contribution** |
| **No** | **Moderate** | **High** |
| (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 | 🞏 | 🗹 | 🞏 |

**ACADEMIC HONESTY - PLAGIARISM**

Cheating is copying from others or providing information, written or oral, to others. Plagiarism is copying without acknowledgement from other people’s work. According to university by laws cheating and plagiarism are serious offences punishable with disciplinary action ranging from simple failure from the exam or project, to more serious action (letter of official warning suspension from the university for up to one semester). During the penalty period the student is not allowed to enter the University campus which means the student will not be able to listen the lectures, joining any kind of exams/presentations, submitting homeworks/projects etc. Practically it will cost the student to receive an **NG grade**. Disciplinary action is written in student records and may appear in student transcripts.

**PLEASE KEEP THIS COURSE OUTLINE FOR FUTURE REFERENCE AS IT CONTAINS IMPORTANT INFORMATION**