The University of Jordan
School of Engineering

Department	Course Name	Course Number	Semester
Mechanical Engineering	Project (1) for mechanical engineer	0974598	Any semester

2019 Course Catalog Description

The final year project extends over a two-regular-semesters period. In Project (1), student teams are assigned engineering problems involving a major engineering design component in which students apply the accumulated knowledge and skills gained throughout the mechanical engineering program. The assigned engineering problems may be theoretical, experimental or both. In the first semester, the students study the problem assigned and its theoretical background, set the approach, review the state of the art, make the problem analysis and preliminary design, and write a progress report including a cost estimate (if applicable) and timetable for achieving the whole project.

Instructors

All Final Year Projects' Supervisors

References

Books	
Journals	
Internet links	Final Year Project (I + II) Guide and Forms

Prerequisites

Prerequisites by topic	5th year level (Successfully completed 120 credit hours).
Prerequisites by course	Practical training 0904500 (or Co-requisite)
Co-requisites by course	0904500 - Practical training
Prerequisite for	0974599 - project (2) for mechanical engineer

Topics Covered

Week	Topics
1	Project Proposal Submission
2	Project Proposal Approval by The Department
3	Workshop I
4-14	• A review of the SYP theoretical background • Conceptual Design or research methodology • Analysis • Impact of Engineering Solutions

Mapping of Course Outcomes to ABET Student Outcomes

SOs	Course Outcomes
1	1. Write a proposal identifying the problem
5	2. The project team shall meet to work on the project's tasks. Besides The team shall meet with their supervisors to discuss the project, prepare forms, and submit logbooks

7	3. Attend Workshop (I) that delivers the following:
	   o Presenting Time and Task Management techniques
	   o Developing a working knowledge of basic project planning and scheduling skills
	   o Learning how to use several basic tools
	      ▪ Work Breakdown Structures (WBS)
	      ▪ Resource Allocation
	      ▪ Gantt Charts

4	4. Submit a progress report including the following:
	   o Executive Summary of the SYP project
	   o Project's Achievements
	   o Preliminary Results or Findings
	   o Remaining Project's Deliverables
	   o Impact of Engineering Solutions
	   o References

Evaluation

Assessment Tools	Expected Due Date	Weight
Workshop I	Week III of the semester	3 %
Progress Report	End of the first semester	7 %
Supervisor Evaluation Project I	End of the first semester	20 %

Note that the evaluation for Project II accounts for 70%

Contribution of Course to Meet Professional Components

Relationship to Student Outcomes

SOs	1	2	3	4	5	6	7
Availability	X			X	X		X

ABET Student Outcomes (SOs)

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

Updated by ABET Committee, 2021