



# Philadelphia University

Faculty of Engineering and Technology  
Mechatronics Engineering Department

## Course Details:

- Title:** Engineering project 1 (0640440)
- Prerequisite:** Passing 100 CHR + Mechatronics System Design(0640447) \*
- Credit Hours:** 1 credit hours (16 weeks per semester, approximately 16 contact hours)
- Description:** This class prepares the student to initiate and develop a senior mechatronics project

## Course Outlines:

Week	Topic
(1)	Introduction, Report Template Overview
(2)	Project Selection (group based)
(3)	Team work: members roles, timeline and time management,
(4)	Problem Definition; Aims and Objectives
(5)	Background and Literature Review
(6)	References, Citation and Appendices
(7)	Abstract, Figures and Tables
(8)	Presentation skills
(9)	Midterm Presentations
(10)	Engineering standards and designs constraints
(11)	Design of Model/Prototype
(12)	Implementation, results and analysis
(13)	Conclusions and future work
(14-15)	Project presentation+ discussion

## Course Learning Outcomes with reference to ABET Student Outcomes:

Upon successful completion of this course, student should:

1.	Design Mechatronic systems to solve an important engineering problem.	[1]
2	Design Mechatronic systems that meet specified needs and constraints.	[2]
3	Ability to effectively write the report of the graduating project.	[3]
4	Ability to effectively present a work in front of audience	[3]
5	Ability to recognized the impact of engineering solutions on environment , community, economy.	[4]
6	To work effectively within a team.	[5]
7	Ability to conduct literature review	[7]

## **Assessment Guidance:**

Evaluation of the student performance during the semester (total final mark) will be conducted according to the following activities:

<b>Midterm Exam:</b>	Due after 8 <sup>th</sup> week. Students will prepare and present: the project problem, objective and literature review.
<b>Final Report</b>	Due on 13 <sup>th</sup> week. Students submit final version of their report according to the department template.
<b>Final presentation:</b>	Due on the 14 <sup>th</sup> week. Students will present their final work.

## **Grading policy:**

Midterm Exam	Report+ presentation	20%	Instructor
Final Exam	Final Report	20%	Supervisor
	Final presentation & assessment	60%	Instructor+ Supervisor
Total:		100%	

## **Attendance Regulation:**

The semester has in total 45 credit hours. Total absence hours from classes and tutorials must not exceed 15% of the total credit hours. Exceeding this limit without a medical or emergency excuse approved by the deanship will prohibit the student from sitting the final exam and a zero mark will be recorded for the course. If the excuse is approved by the deanship the student will be considered withdrawn from the course.