



Course Code MENG-490	Course Title Capstone Design Project I	ECTS Credits 4
Department Engineering	Semester Fall, Spring	Prerequisites Senior Standing and Approval by the Department
Type of Course Required	Field engineering	Language of Instruction English
Level of Course 1 st Cycle	Year of Study 4 th	Lecturer(s) Dr George Gregoriou
Mode of Delivery Face-to-face	Work Placement N/A	Co-requisites None

Objectives of the Course:

The Capstone Design Project course is taken in the 4th year of studies in two semesters: during the first semester, the course MENG-490 Capstone Design Project I (4 ECTS) and during the second semester, the course MENG-492 Capstone Design Project II (6 ECTS)

The main objectives of this first course are to:

- Teach students important research techniques and practices
- Introduce students to practical engineering design
- Create the foundation where the students will have the opportunity to utilize theoretical knowledge and engineering tools/techniques acquired throughout the years in order to design, build, and test their idea in a laboratory environment
- Promote team work and practical experience in a multi-disciplinary environment
- Teach students how to write proper reports and how to present their work in front of their colleagues
- Ensure that students know how to properly set up appropriate measurement and troubleshooting procedures including proper use of laboratory equipment
- Promote engineering ethics and respect to the environment and society
- Teach students how to properly plan their activities in order to successfully achieve their design goals and, more importantly, how to meet their own deadlines

Learning Outcomes:

Upon completion of the course students are expected to:

- Use research skills on an engineering topic in order to reach a successful design for their project idea
- Operate specialized equipment and use computational/simulation tools
- Design and construct a working engineering application starting from a basic project idea and a set of constraints/specializations

- Write good technical reports and effective presentations
- Organize and schedule project activities in order to successfully complete an engineering project
- Test and troubleshoot their prototype
- Demonstrate team work and collaboration with others toward a successful completion of a project
- Identify important principles of ethics in engineering practices

Course Contents:

Independent-type of work involving research, design, implementation, testing, and troubleshooting

Learning Activities and Teaching Methods:

Lectures/seminars and project supervision

Assessment Methods:

Project design proposal, progress reports, presentation

Required Textbooks/Reading:

Authors	Title	Publisher	Year	ISBN
As needed				

Recommended Textbooks/Reading:

Authors	Title	Publisher	Year	ISBN
As needed				