University of Victoria Engineering

Faculty of Engineering

COURSE OUTLINE

ELEC/CENG399 – Design Project I

Term – Fall 2016 (201609)

Instructor

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Office Hours

Days: Monday
Time: 11AM-12PM
Location: EOW-419

Course Objectives

- The CENG/ELEC/SENG 399 Design Project I course is intended to provide an opportunity for students to study engineering design projects from a theoretical point of view as a team of 7 persons. Each team will select a suitable previously designed project and study and present them in the context of material discussed in class.
- The projects may have a diverse nature (theoretical investigations, practical designs, measurements, software developments, etc.)
- The students are expected to learn the project design process, including setting up milestones, background preparation, application of previously acquired knowledge to the project development, exploration of alternative approaches and evaluate them.

Learning Outcomes

- Be able to discuss and participate in engineering activities with awareness and consideration with respect to environment, ethics, safety, and health.
- Be able to define engineering requirements and specifications.
- Plan multi-disciplinary / team projects.
- Discuss analysis and design phases (planning, analysis, design, implementation, testing).

Syllabus

- Topic I: How to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
- Topic II: Discuss what it means to have professional and ethical responsibility
- Topic III: Discuss the impact of engineering solutions in a global, economic, environmental, and social context.

A-Section(s): A01 / CRN 10454/11285/12871
Days: Tuesday
Time: 16:30-15:20
Location: ECS125

Optional Text

Title: Design for Electrical and Computer Engineers
Author: J. Eric Salt and R. Rothery
Publisher: John Wiley & Sons, Inc.
Year: 2002

Assessment:

1. Learning presentation topics I, II, III 15%.
2. Assignments and learning notes, I, II, III (students must take notes on the other team learning presentations) 15%.
3. In-class attendance 10%.
4. Team design requirements document and progress report(Student comes up with a proposal for possible project or commercial product) 20%.
5. Project Proposal (Research study on students proposed project with approaches, work plan, etc...) 20%
6. Project oral presentation 20%.

Note:

The final grade obtained from the above marking scheme for the purpose of GPA calculation will be based on the percentage-to-grade point conversion table as listed in the current Undergraduate Calendar.

There will be no supplemental examination for this course.

Note to Students:

Students who have issues with the conduct of the course should discuss them with the instructor first. If these discussions do not resolve the issue, then students should feel free to contact the Chair of the Department by email or the Chair's Secretary to set up an appointment.

Accommodation of Religious Observance
http://web.uvic.ca/calendar2016-09/general/policies.html

Policy on Inclusivity and Diversity
http://web.uvic.ca/calendar2016-09/general/policies.html

Standards of Professional Behaviour
You are advised to read the Faculty of Engineering document Standards for Professional Behaviour, which contains important information regarding conduct in courses, labs, and in the general use of facilities.

https://www.uvic.ca/engineering/assets/docs/professional-behaviour.pdf

Cheating, plagiarism and other forms of academic fraud are taken very seriously by both the University and the Department. You should consult the entry in the current Undergraduate Calendar for the UVic policy on academic integrity.

http://web.uvic.ca/calendar2016-09/undergrad/info/regulations/academic-integrity.html

Course Lecture Notes

Unless otherwise noted, all course materials supplied to students in this course have been prepared by the instructor and are intended for use in this course only. These materials are NOT to be re-circulated digitally, whether by email or by uploading or copying to websites, or to others not enrolled in this course. Violation of this policy may in some cases constitute a breach of academic integrity as defined in the UVic Calendar.