ECE 299 – Introduction to Electrical and Computer Engineering Design
Term – Summer 2019 (201905)

Instructor
Dr. T. Ilamparithi
Phone: 250 721 8679
E-mail: ilampari@uvic.ca

Office Hours
Days: Fridays
Time: 02:00 PM to 04:00 PM
Location: EOW 407

Course Objectives
ECE 299, as the name suggests, is an introductory course that helps you familiarize with the steps involved in engineering design. With the help of a project rather than an exam, the course is intended to prepare you for the professional world by focusing on skills such as planning, prioritizing, testing, troubleshooting, and documentation. Further, the course provides an ideal opportunity to learn new software used in different industries. Finally, the course also inculcates basic skills such as soldering and reading a datasheet of a component.

Intended Learning Outcomes
By the end of the course, you should be able to
- Read the datasheet of an electronic component and identify pertinent information.
- Build a circuit using LM386 operational amplifier to amplify audio signal
- Program an STM407 microcontroller to drive LEDs and to receive inputs from push buttons.
- Design a layout for a printed circuit board (PCB) using KiCAD software.
- Using SolidWorks software package, design a 3-D model of an enclosure.
- Formulate test procedures to validate the functions of the designed prototype.
- Prepare professional reports detailing the design activity.

Syllabus
- Introduction to basic electronics, circuits and testing
- Embedded programming and debugging
- Technical drawings
- Basics of project planning

A-Section(s): A01 / CRN 30276
Days: Tuesdays (T), Wednesdays (W)
Time: (T) 1:30 to 3:20 PM; (W) 3:30 to 4:20 PM
Location: Engineering Computer Science (ECS) 116

B01 Mon 13:00-14:50 ELW A359
B02 Tue 16:30-18:20 ELW A359
B03 Wed 13:00-14:50 ELW A359
B04 Thu 13:00-14:50 ELW A359

Note: Labs start in the week of 27th May

Sec TA Name TA Email
B01 Sina Ghaffari sinagh92@gmail.com
B02 Narges Attarmoghaddam nattarmoghaddam@uvic.ca
B03 Alireza Rahimpour ali.r.rahimpour@gmail.com
B04 Parastoo Soleimani soleimani.parastoo@gmail.com
**Required Textbook**
N/A

**Assessment:**

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<thead>
<tr>
<th>Assessment</th>
<th>Weightage</th>
<th>Dates</th>
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<tbody>
<tr>
<td>In class Quizzes</td>
<td>4 x 2.5 = 10%</td>
<td>Dates: To be announced</td>
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<tr>
<td>Lab (report + performance)</td>
<td>4 x 10 = 40%</td>
<td>Dates: To be announced</td>
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<tr>
<td>Project Demonstration</td>
<td>1 x 10 = 10%</td>
<td>Date: Week of 29th July in lab/lecture duration</td>
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<tr>
<td>Project Report</td>
<td>1 x 40 = 40%</td>
<td>Due: 2nd August by 5 PM</td>
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**Note:**
Failure to complete all laboratory requirements will result in a grade of N being awarded for the course.

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.

https://web.uvic.ca/calendar2019-05/undergrad/info/regulations/grading.html

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 Assistant to set up an appointment.

**Accommodation of Religious Observance:**
https://web.uvic.ca/calendar2019-05/undergrad/info/regulations/religious-observanc.html

**Policy on Inclusivity and Diversity:**
https://web.uvic.ca/calendar2019-05/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.
https://web.uvic.ca/calendar2019-05/undergrad/info/regulations/academic-integrity.html

**Equality:** This course aims to provide equal opportunities and access for all students to enjoy the benefits and privileges of the class and its curriculum and to meet the syllabus requirements. Reasonable and appropriate accommodation will be made available to students with documented disabilities (physical, mental, learning) in order to give them the opportunity to successfully meet the essential requirements of the course. The accommodation will not alter academic standards or learning outcomes, although the student may be allowed to demonstrate knowledge and skills in a different way. It is not necessary for you to reveal your disability and/or confidential medical information to the course instructor. If you believe that you may require accommodation, the course instructor can provide you with information about confidential resources on campus that can assist you in arranging for appropriate accommodation.
Alternatively, you may want to contact the Centre for Accessible Learning located in the Campus Services Building.

The University of Victoria is committed to promoting, providing, and protecting a positive, and supportive and safe learning and working environment for all its members.

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.

Sexualized Violence Prevention and Response at UVic
UVic takes sexualized violence seriously, and has raised the bar for what is considered acceptable behaviour. We encourage students to learn more about how the university defines sexualized violence and its overall approach by visiting www.uvic.ca/svp. If you or someone you know has been impacted by sexualized violence and needs information, advice, and/or support please contact the sexualized violence resource office in Equity and Human Rights (EQHR). Whether or not you have been directly impacted, if you want to take part in the important prevention work taking place on campus, you can also reach out:

Where: Sexualized violence resource office in EQHR; Sedgewick C119
Phone: 250.721.8021
Email: svpcoordinator@uvic.ca
Web: www.uvic.ca/svp