



ORIGINAL COURSE IMPLEMENTATION DATE:

September 2020

REVISED COURSE IMPLEMENTATION DATE:

COURSE TO BE REVIEWED (six years after UEC approval): January 2026

Course outline form version: 05/18/2018

OFFICIAL UNDERGRADUATE COURSE OUTLINE FORM

Note: The University reserves the right to amend course outlines as needed without notice.

Course Code and Number: ELTR 190		Number of Credits: 3 Course credit policy (105)															
Course Full Title: Electronics Capstone Project Course Short Title: Electronics Capstone Project <i>(Transcripts only display 30 characters. Departments may recommend a short title if one is needed. If left blank, one will be assigned.)</i>																	
Faculty: Faculty of Applied and Technical Studies		Department (or program if no department): Electronics															
Calendar Description: Apply knowledge gained in prior courses to specific project. Design, build, and assemble the prototype and generate manufacturing documents. Communicate the methods and processes of the project in a presentation.																	
Prerequisites (or NONE):		ELTR 100, ELTR 110, ELTR 130, and ELTR 140.															
Corequisites (if applicable, or NONE):		ELTR 150, ELTR 160, ELTR 170, and ELTR 180.															
Pre/corequisites (if applicable, or NONE):		None.															
Antirequisite Courses <i>(Cannot be taken for additional credit.)</i> Former course code/number: Cross-listed with: Dual-listed with: Equivalent course(s): <i>(If offered in the previous five years, antirequisite course(s) will be included in the calendar description as a note that students with credit for the antirequisite course(s) cannot take this course for further credit.)</i>		Special Topics <i>(Double-click on boxes to select.)</i> This course is offered with different topics: <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes <i>(If yes, topic will be recorded when offered.)</i>															
		Independent Study If offered as an Independent Study course, this course may be repeated for further credit: <i>(If yes, topic will be recorded.)</i> <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes, repeat(s) <input type="checkbox"/> Yes, no limit															
		Transfer Credit Transfer credit already exists: <i>(See bctransferguide.ca.)</i> <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes Submit outline for (re)articulation: <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes <i>(If yes, fill in transfer credit form.)</i>															
Typical Structure of Instructional Hours <table border="1"> <tr> <td>Lecture/seminar hours</td> <td>0</td> </tr> <tr> <td>Tutorials/workshops</td> <td></td> </tr> <tr> <td>Supervised laboratory hours</td> <td>45</td> </tr> <tr> <td>Experiential (field experience, practicum, internship, etc.)</td> <td></td> </tr> <tr> <td>Supervised online activities</td> <td></td> </tr> <tr> <td>Other contact hours:</td> <td></td> </tr> <tr> <td>Total hours</td> <td>45</td> </tr> </table>		Lecture/seminar hours	0	Tutorials/workshops		Supervised laboratory hours	45	Experiential (field experience, practicum, internship, etc.)		Supervised online activities		Other contact hours:		Total hours	45	Grading System <input checked="" type="checkbox"/> Letter Grades <input type="checkbox"/> Credit/No Credit	
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Labs to be scheduled independent of lecture hours: <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes		Maximum enrolment (for information only): 36 Expected Frequency of Course Offerings: Winter only <i>(Every semester, Fall only, annually, etc.)</i>															
Department / Program Head or Director:		Date approved: November 2019															
Faculty Council approval		Date approved: November 14, 2019															
Dean/Associate VP: John English		Date approved: November 14, 2019															
Campus-Wide Consultation (CWC)		Date of posting: January 17, 2020															
Undergraduate Education Committee (UEC) approval		Date of meeting: January 31, 2020															

Learning Outcomes

Upon successful completion of this course, students will be able to:

- Apply all acquired skills to design, assemble a PCB based electronics project.
- Design a circuit schematic for a specific function.
- Assemble a prototype circuit using a solderless breadboard.
- Design a PCB layout from a circuit schematic.
- Assemble a PCB circuit.
- Present and explain technical information to an audience.
- Employ iterative and modular design and development techniques.
- Work in team and apply project management tools effectively.
- Generate all the documentation required for manufacturing of the product.

Prior Learning Assessment and Recognition (PLAR)

☒ Yes ☐ No, PLAR cannot be awarded for this course because

Typical Instructional Methods (*Guest lecturers, presentations, online instruction, field trips, etc.; may vary at department's discretion.*)

Lab Work

NOTE: The following sections may vary by instructor. Please see course syllabus available from the instructor.

Typical Text(s) and Resource Materials (*If more space is required, download Supplemental Texts and Resource Materials form.*)

Author (surname, initials)	Title (article, book, journal, etc.)	Current ed.	Publisher	Year
1. No Textbook Required		<input type="checkbox"/>		
2.		<input type="checkbox"/>		
3.		<input type="checkbox"/>		
4.		<input type="checkbox"/>		
5.		<input type="checkbox"/>		

Required Additional Supplies and Materials (*Software, hardware, tools, specialized clothing, etc.*)**Typical Evaluation Methods and Weighting**

Final exam:	%	Assignments:	20%	Field experience:		Portfolio:	%
Midterm exam:	%	Project:		Practicum:	%	Other:	%
Quizzes/tests:	30%	Lab work:	50%	Shop work:	%	Total:	100%

Details (if necessary):**Typical Course Content and Topics**

- Project should have minimum DC power source component build and additional circuitry for display and control.