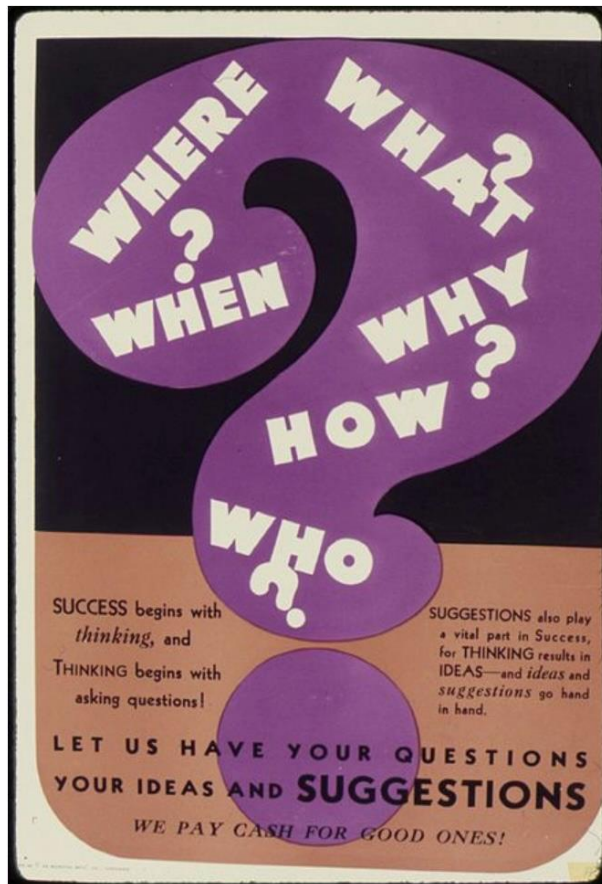




DALHOUSIE
UNIVERSITY



Academic Advisor
Yuan Ma, PhD, PEng

Electrical & Computer Engineering

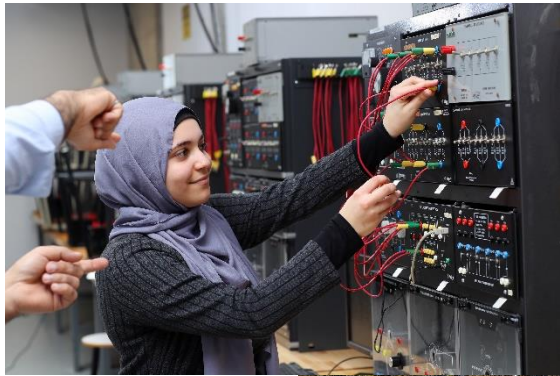
Electrical & Computer Engineering

...is the study of **physical** phenomena to convert environmental signals into electricity

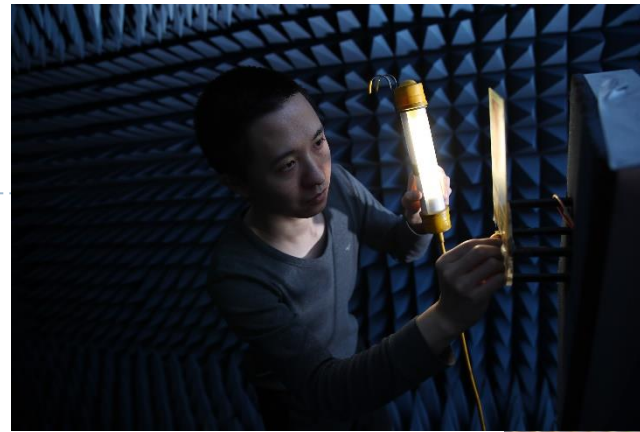
...is the **design** of electrical devices, systems and processes.

...is a multi-branch discipline which that allows to solve current problems for our society.





Power Systems

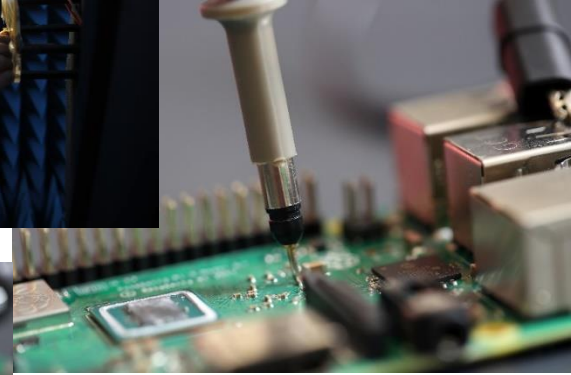
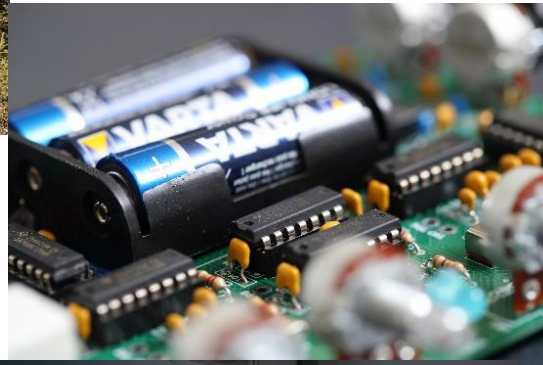


Communications
Cybersecurity

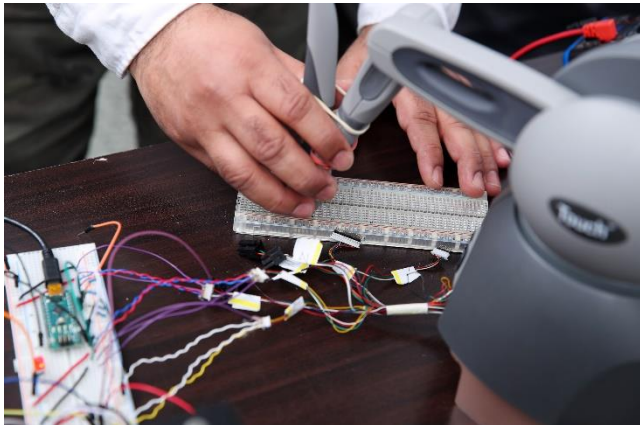
Renewable Energy



Electronics



Controls and Automation



Instrumentation

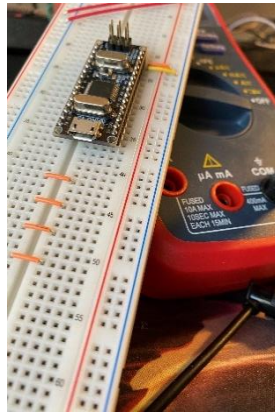


Computer Engineering

Software Design



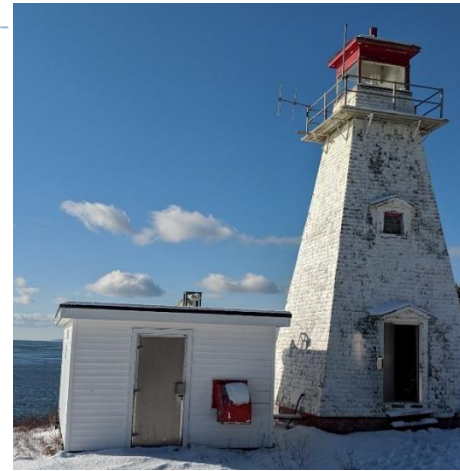
Computer Architecture



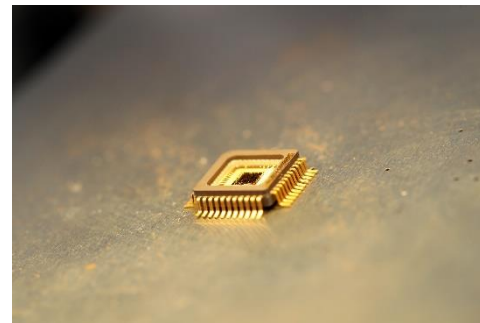
Embedded Systems



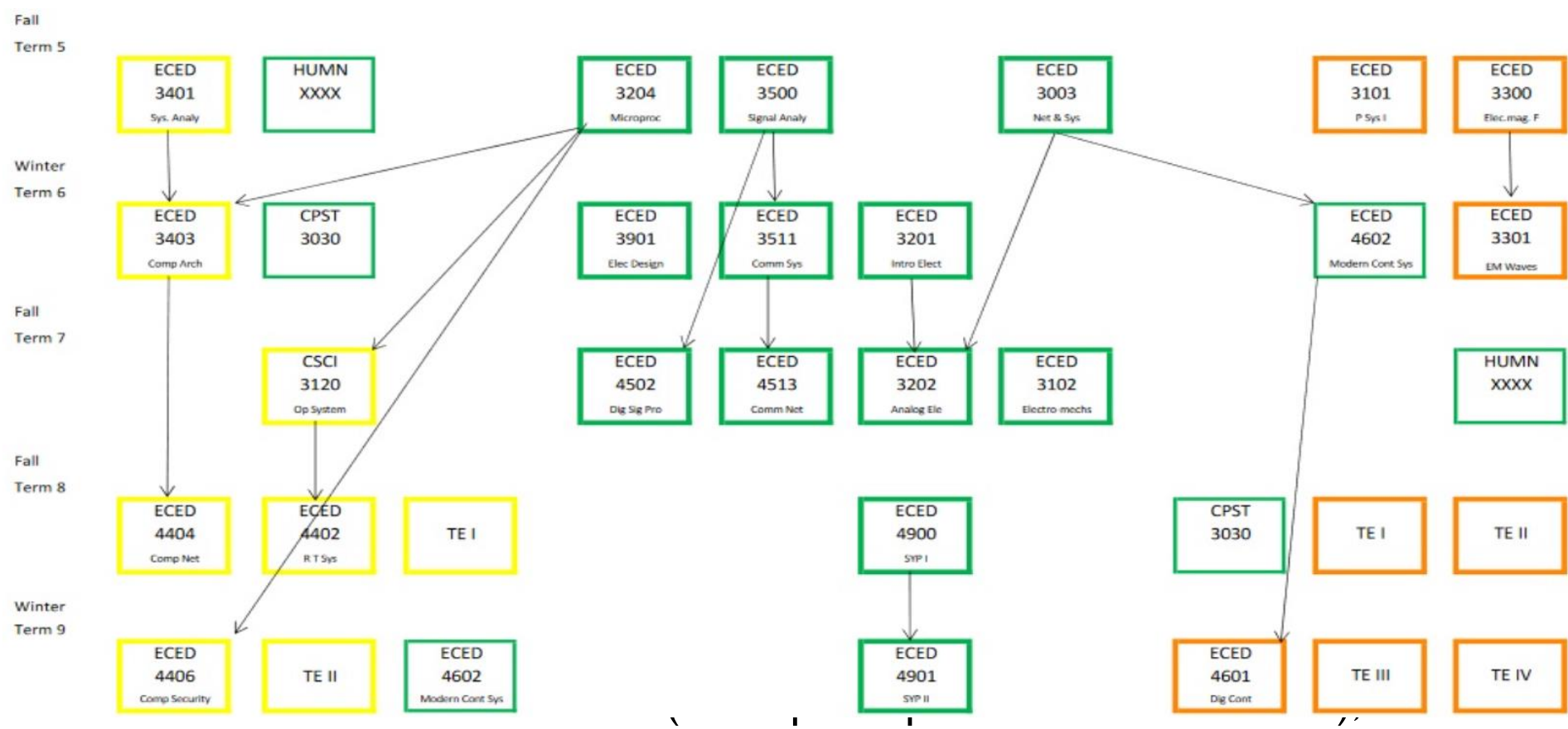
Network Systems



Real Time Systems



Electrical & Computer Engineering



- 17 /19 (CE) core courses in upper division; 4/2 (CE) technical elective courses; 1 humanities elective and 1 complementary study course.

Co-op Option

Three 4-month work terms in industry

Fall	Winter	Summer
AT5	AT6	WT1
AT7	WT2	WT3
AT8	AT9	

AT = Academic Term

WT = Work Term

Engineers Nova Scotia EIT/Mentorship Program

In submission of Pre-Grad Experience toward the APENS work experience requirement. Up to 12 months credit may be granted.



Student Supports

Assistance for Students

Academic Advising/ Questions:

engineering@dal.ca (lower division); eceugrad.advising@dal.ca (upper division)

Student Support:

eceugrad@dal.ca; Karyn.hemsworth@dal.ca; ece.admin@dal.ca;

Social Work (Student Health & Wellness):

hazel.ling@dal.ca

Student Voice: DEES (Reps/SAC)

Dalhousie Undergraduate Engineering Society (DUES) – Peer mentorship & tutor
www.daleng.ca (vpacademics@dal.ca)

Accessibility assessment: [Accessibility - Academic Support - Dalhousie University](https://www.dal.ca/academic-support/accessibility)
access@dal.ca; Tel: 902 494 2836

Dal Security: 902 494 4109

Mental Health Mobile Crisis Team: 902 429 8167

Off Campus Emergency Service: 911



Academic Advising Appointments

- ▶ **Drop in Hours**

- ▶ Thursday afternoon 1:00- 3:00pm at C314

- ▶ **By Appointment**

- ▶ Students email eceugrad.advising@dal.ca





Regulations



Academic probation and Dismissal

- ▶ For Upper Division (Years 3, 4, & 5) assessment occurs after 24 credit hours in the Upper Division. Students are assessed for academic standing at the end of every term thereafter
- ▶ Academic Probation
 - ▶ Occurs if $1.7 \leq \text{CGPA} < 2.0$
 - ▶ Continue on probation while term GPA ≥ 2.0 and CGPA < 2
- ▶ Academic Dismissal
 - ▶ Occurs if:
 - ▶ CGPA is below 1.7
 - ▶ On AP and term GPA is below 2.0
 - ▶ Dismissal is for 12 months in Lower Division, 8 months in Upper Division
 - ▶ Re-admission is not automatic and is based on providing proof of remediation and successful activity during the time away from school
 - ▶ Students may do the “Refining Your Learning Skills for Engineers” class as proof of commitment to change
- ▶ A second Academic Dismissal is permanent

Readmission after Academic Dismissal

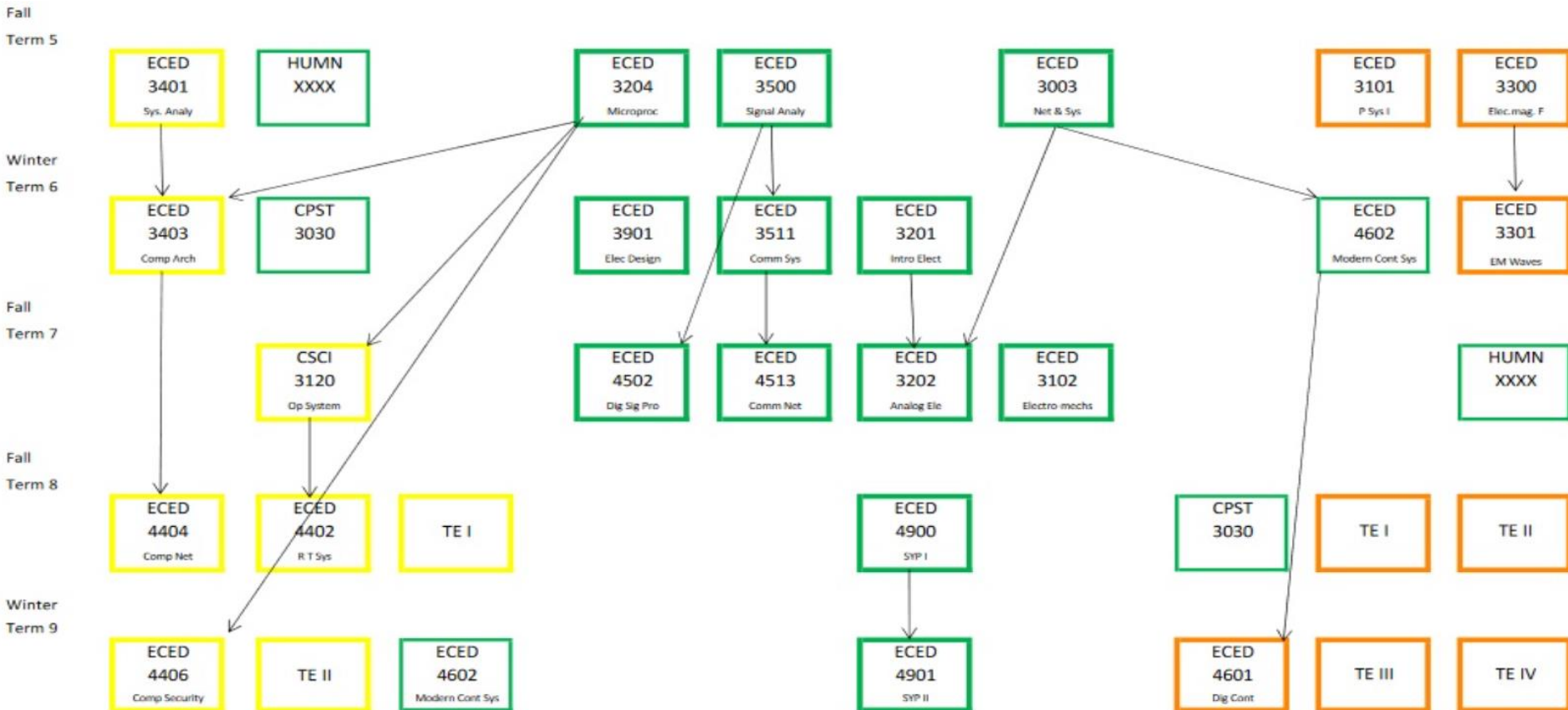
- ▶ Student may apply for re-admission after a dismissal of 12 months (8 months in upper division)
- ▶ Requires:
 - ▶ Department recommendation
 - ▶ Associate Dean's approval
- ▶ Recommendation is based on the principle:
 - ▶ The student will perform better now than in the past
 - ▶ The student has used the time away from school for remedial and successful activity
 - ▶ E.g. upgrading study skills
- ▶ Good reasons must be provided
- ▶ Documentation is required

Policies

[Frequently Asked Questions](#)

Study Plans (unofficial)

- ▶ Prepared by the student in consultation with an Advisor
- ▶ Study Plans must meet all pre-requisites
 - ▶ Time limit for the program is strictly observed (5 yr for upper division).



Examinations

- ▶ **Accommodations**
 - ▶ Must be applied for through the Office of Student Accessibility and Accommodations
 - ▶ A psycho-educational assessment is required for claims of learning disabilities
 - ▶ Medical documentation is required for other claims
 - ▶ Accommodations are pre-approved by the Associate Dean
 - ▶ Final exams are written at the OSAA Exam Centre, but students may request to sit on Sexton campus (reasons must be given)
 - ▶ Transportation support is available for mid-term exams if necessary (check with the Dean's office)
- ▶ **Supplementary Exams (Supps)**
 - ▶ Fixed exam dates every term, normally at the start of, or immediately before, their next study term
 - ▶ Only one supplementary exam allowed per term. An FM is required to do a supplemental exam
 - ▶ A student with no FMs may write a supplemental exam in a course with a grade below C to get off of academic probation
 - ▶ Students on academic dismissal cannot write supplemental examinations
 - ▶ In special cases, this rule could be waived on a “Waiver of Academic Regulation” form if it is the only failure
 - ▶ Students must apply (form from Undergraduate Office) and pay a fee (to the Registrar)
 - ▶ Supplemental grade becomes the new grade, **even if lower**

Appeals and Waivers

▶ Waivers:

- ▶ Approved by the Associate Dean, may be recommended by the Department
- ▶ Required to over-ride regulations, e.g.:
 - ▶ Deadlines passed
 - ▶ Supplementary exams (more than one, more than once, ...)
 - ▶ Allow supplementary while on dismissal
 - ▶ Waive academic dismissal
 - ▶ Waive graduation on academic probation
- ▶ Generally considered if the rule seems to be trapping the student unfairly. There must be other extenuating circumstances, and they must be supported by documentation.
- ▶ Normally used only to waive Faculty-level rules; e.g. the “CGPA \geq 2.0 on graduation” rule is university-level and is usually waived only after consultation with the Registrar.

▶ Appeals:

- ▶ Considered by the Academic Appeals committee.
- ▶ If waivers or other requests are denied by Dean, Associate Dean, Department, Program, or any other authority in the Faculty of Engineering.
- ▶ Errors in applying regulations.
- ▶ Special circumstances not covered above.
- ▶ A decision, failure to make a decision, or failure to implement a decision can be appealed. The student must therefore seek a decision before appealing.



Academic Integrity

At Dalhousie University, we are guided in all of our work by the values of academic integrity:

honesty, trust, fairness, responsibility and respect
(The Center for Academic Integrity, Duke University, 1999).

As a student, you are required to demonstrate these values in all of the work you do.

The University provides policies and procedures that every member of the university community is required to follow to ensure academic integrity.

http://www.dal.ca/dept/university_secretariat/academic-integrity.html

Student Code of Conduct

Everyone at Dalhousie is expected to treat others with dignity and respect. The Code of Student Conduct allows Dalhousie to take disciplinary action if students don't follow this community expectation.

When appropriate, violations of the code can be resolved in a reasonable and informal manner.

If an informal resolution can't be reached, or would be inappropriate, procedures exist for formal dispute resolution.

https://www.dal.ca/campus_life/safety-respect/student-rights-and-responsibilities/student-life-policies/code-of-student-conduct.html



Future Career



Job Perspective for Future Graduates

- ▶ Design
- ▶ Consulting
- ▶ Manufacturing
- ▶ Sales
- ▶ Marketing
- ▶ Research
- ▶ Customer Service
- ▶ Commissioning
- ▶ Management
- ▶ Project Management

Electrical Engineering is applied to different fields, and ECE engineers **work closely with other disciplines**, including mechanical engineers, process engineers, industrial engineers, and computer scientists.

Senior Year Capstone Project

▶ Student teams are partnered with a local “Client”

- Data acquisition
- Control application
- Power systems
- Underwater communications
- Health equipment
- Speech enhancement
- Hard rock toys
-



DALHOUSIE UNIVERSITY

Engineering

Capstone Conference

Presented by:



Thank you to our **Industry** Project Sponsors 2021

     <p>Blackwell</p>  	     	        	<p>Canadian Water Solutions Carolyn Wren Dalhousie - Dr. Hughes Dalhousie - Biomedical Dalhousie - Bousquet Lab Dalhousie Centre for Collaborative Clinical Learning & Research Dalhousie - Department of Surgery Dalhousie - Division of Physical Medicine and Rehabilitation Dalhousie - Faculty of Agriculture Dalhousie - Frampton Lab Dalhousie - Hughes Lab Dalhousie - Office of Sustainability Focal Technologies Corp. George and Meridith Tasiopoulos and Family Nova Scotia Chief Medical Examiner NSERC SBME</p>	       	         
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The Biomedical Engineering Certificate

Biomedical Engineering is the application of engineering techniques to problems in medicine and human health.

Program requirements:

- Take a biomedical-related technical elective(s)
- Take one course outside of ECE Dept that broadens their understanding of biomedical topics
- Taking core courses of relevance to Biomedical Engineering
- Doing a senior year project on a biomedical topic

