

## **Department of Electronics, Contract Instructor Positions**

### **Summer 2024 (May-Aug 2024)**

The Department is seeking qualified contract instructors with strong communication and teaching skills established through successful teaching of engineering courses at the university level. Candidates should have current expertise in the subject area of the course, which might be attained through industrial experience or research in academia or government labs. Candidates must have a degree in a relevant field of engineering. **To satisfy program accreditation requirements instructors for all undergraduate courses (4000 level and below) must have current P.Eng. status in Canada.**

Applications will be accepted until March 15, 2024. Applications with a covering letter and curriculum vitae including educational background, employment history, and related work experience, should be sent via email to [chair@doe.carleton.ca](mailto:chair@doe.carleton.ca).

**These courses will be delivered in-person.**

Carleton University is committed to fostering diversity within its community as a source of excellence, cultural enrichment and social strength. We welcome those who would contribute to the further diversification of our University including but not limited to women, persons with disabilities, visible minorities, Aboriginal peoples, and persons of any sexual orientation or gender identity.

Contract instructor hiring is governed by the CUPE 4600 Unit 2 collective agreement (<https://carleton.ca/hr/labour-relations/academic-staff-agreements/>).

### **Full Summer (May-August)**

#### **EGEN 5303 [0.5 credit]**

##### **Sensor Systems**

Advanced topics dealing with technologies, transduction mechanisms, and fabricated sensors and actuators. Sensors for acceleration, rotation rate, pressure, and different micro actuators with application microfluidics, chemical, gas, and biosensors.

Prerequisite(s): enrolment in the M.Eng.- Engineering Practice program and an undergraduate degree in Electrical Engineering or permission of the Director.

### **Late Summer (July-August)**

#### **ELEC 2507 [0.5 credit]**

##### **Electronics I**

Qualitative semiconductor physics, leading to the diode equation. Diode applications. Operational amplifiers and their application in feedback configurations including active filters. Introduction to bipolar transistors and MOSFETs, analysis of biasing circuits. Transistor applications including small signal amplifiers.

Lectures three hours a week, laboratory and problem analysis three hours a week.