

# ELECTRICAL (ELEC)

---

Registration in some course sections is restricted to students in particular programs. See Timetables - [kpu.ca/registration/timetables](http://www.kpu.ca/registration/timetables) (<http://www.kpu.ca/registration/timetables/>) - for current section information.

Visit the BC Transfer Guide - [bctransferguide.ca](https://www.bctransferguide.ca) (<https://www.bctransferguide.ca/>) - for information about course transfer in B.C.

## **ELEC 1100 2 credits**

### **Basic Skills**

Students will study effective learning, the shared responsibilities for workplace learning and job search techniques. They will problem-solve using mathematics and apply science concepts appropriate to the electrical trade.

Level: VO

Attribute: TRAD (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

## **ELEC 1110 1 credit**

### **Workplace Safety**

Students will be exposed to and learn the application of safe work practices, Worksafe BC standards and regulations, confined space requirements, and lock-out and tag-out procedures. They will perform practical components involving ropes, scaffolding, ladders and electrical lockout and verification. Students will also receive an orientation in Workplace Hazardous Materials Information System (WHMIS).

Level: VO

Attribute: TRAD (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

## **ELEC 1120 5 credits**

### **Basic Electrical Theory**

Students will be introduced to the nature and principles of electricity, the operation of electrical devices and the operation of testing / metering equipment. They will focus on the analysis and problem solving of Direct Current (DC) circuits. Students will learn the basic principles of magnetism and the principles of alternating current (AC).

Level: VO

Attribute: TRAD (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

## **ELEC 1130 1 credit**

### **Code and Blueprint Reading**

Students will be introduced to the history and importance of the Canadian Electrical Code (CEC). They will learn the CEC and other related regulatory standards. Students will be introduced to the use of construction drawings, manufacturer's specifications, and job and material planning.

Level: VO

Attribute: TRAD (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

## **ELEC 1140 1 credit**

### **Wiring Devices, Lighting and Controls**

Students will learn the safety procedures and operating principles of manual and magnetic motor starters and control circuits. In addition, students will learn the operation of LED and incandescent lighting and will connect and test three-way and four-way switches to control these types of lighting. The installation of lighting standards, and their various types, as well as the ratings of switches and receptacles will be examined. Students will also perform data cable terminations.

Level: VO

Attribute: TRAD (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

## **ELEC 1150 10 credits**

### **Installation of Low-Voltage Distribution Systems**

Students will use shop projects and hands-on activities to reinforce electrical theory and Electrical Code knowledge. They will receive practical training for the job site. Students will learn the importance of workplace safety.

Level: VO

Attribute: TRAD (<https://calendar.kpu.ca/courses-az/#courseattributestext>)

## **ELEC 1300 4 credits**

### **Elec Design & Renewable Energy**

Students will apply the principles of electricity to analyze the operation of electrical devices and verify the operating conditions of electrical systems using testing / metering equipment. They will compare different types of renewable energy sources and equipment and the cost-effectiveness of each type. Students will use grid-tie equipment to modify the energy collected from a renewable supply and test the output of the equipment to verify that it is compatible with the utility supply. They will design a stand-alone renewable power supply that will perform in a manufacturing environment.

Level: UG

Attributes: F2A5 (<https://calendar.kpu.ca/courses-az/#courseattributestext>), TRAD (<https://calendar.kpu.ca/courses-az/#courseattributestext>)