CAREER PROFILES

Electrical and electronics engineers:

Electrical and electronics engineers design, plan, research, evaluate, and test electrical and electronic equipment and systems.

Wage/Salary Information:

$72,500 is the median annual salary found in local job-postings.

$40.17/hour is the median wage reported locally.

Commonly Listed Skills in Job Postings:

- Reading
- Document use
- Writing
- Numeracy
- Oral Communication
- Thinking
- Digital technology

Job Duties:

Electrical and electronics engineers conduct research into the feasibility, design, operation, and performance of electrical generation and distribution networks, electrical machinery and components and electronic communications, instrumentation and control systems, equipment, and components. Electrical and electronics engineers prepare material cost and timing estimates, reports, and design specifications for electrical and electronic systems and equipment and design electrical and electronic circuits, components, systems, and equipment. They conduct micro or nanodevices simulations, characterization, process modeling, and integration in the development of new electronic devices and products and supervise and inspect the installation, modification, testing, and operation of electrical and electronic systems and equipment. Electrical and electronics engineers also develop maintenance and

operating standards for electrical and electronic systems and equipment and investigate electrical or electronic failures.

Working Conditions:

Electrical and electronics engineers typically work a standard 40-hour week, however, project deadlines occasionally result in longer work hours.

Work is undertaken in a variety of environments. Many work in an office environment and improvements in technology (such as the use of the Internets, PDAs, emails, etc.) have resulted in increased opportunities for some people to work from home. Some electrical and electronics engineers inspect, oversee, and solve on-site problems in laboratories or industrial plants while others do outdoor field work associated with operational, maintenance, or construction activities.

Job hazards vary depending on the situation, particularly during field activities, such as electrical shock from field wiring if safety procedures are not followed.

Career Pathways:

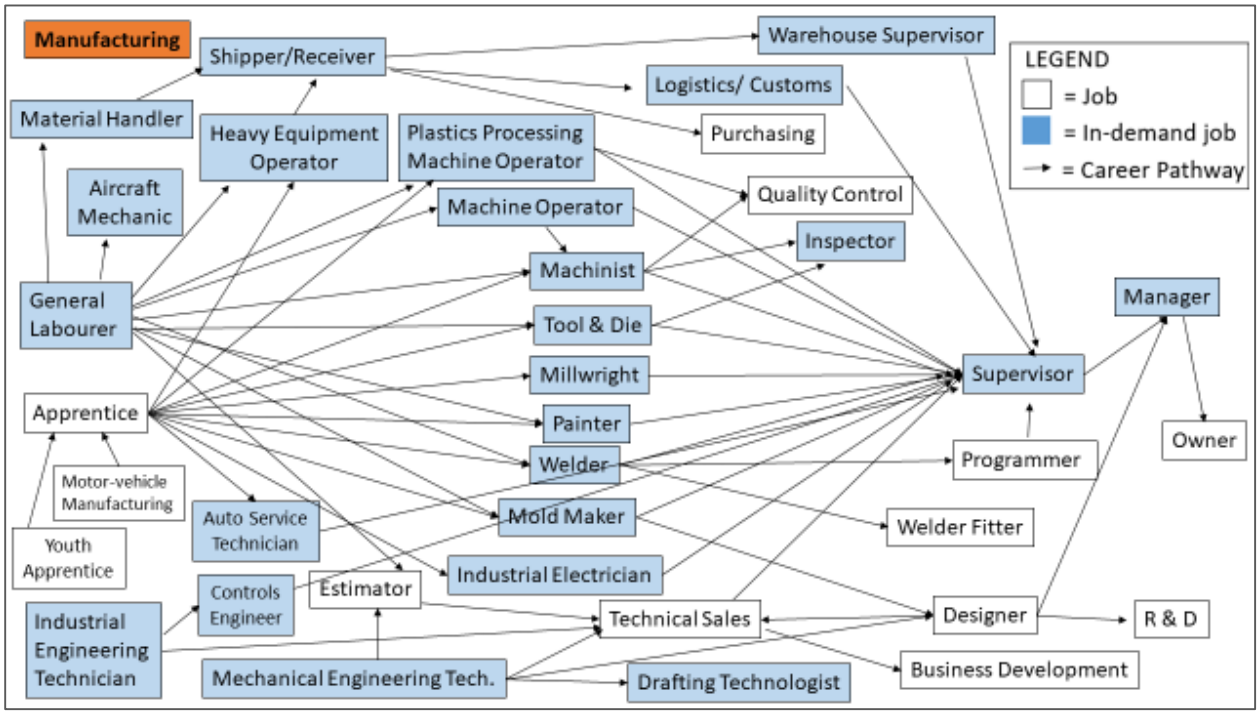
There are many different areas of specialization in this field. Some electrical and electronics engineers perform electrical design for residential, commercial, or industrial installations, electrical power and communications systems, and instrumentation and control systems. Some apply engineering science to make products for homes, such as consumer electronics. They may also focus on image processing or control systems for robots. Electrical and electronics engineers may also design and build a variety of other items (i.e. medical equipment, space technology, environmental monitoring systems, technology used in underwater research, etc.).

Recent graduates begin as a junior engineer or engineer in-training. With experience, individuals can progress to positions such as senior engineer, project manager, principal engineer, or partner. Many professionals pursue a master's degree to work in a more specialized field. Electrical and electronics engineers who pursue a doctoral degree can contribute to the field through research and teaching at the post-secondary level, and may find employment in a larger firm in their specialty.

Electrical and electronics engineers are employed by electrical utilities, communications companies, manufacturers of electrical and electronic equipment, consulting firms, and by a wide range of manufacturing, processing, and transportation industries and government. Below are potential career pathways for industrial electricians:

- Antenna Engineer
- Avionics Engineer
- Broadcasting Professional Engineer
- Circuit Designer Engineer
- Control Systems Engineer
- Meter Engineer
- Metrology Engineer
- Radar Engineer

- Radio and Television Broadcasting Design Engineer
- Satellite Antenna Engineer
- Spacecraft Electronics Engineer



Education and Training Pathways:

If you're interested in becoming an electrical and electronics engineer, you can acquire training/education locally at any of the following institutions.

University of Windsor:

Electrical Engineering (with optional Co-op)

Admission Requirements:

- Minimum admission average of 74%;
- Secondary average of 74%
- Mean admission average of 86%
- All programs take a common first year
- ENG4U, MHF4U, SCH4U, and SPH4U required. MCV4U is strongly recommended

Academic Credential: Degree – Bachelor of Applied Science in Electrical Engineering

Professional Certification: N/A

Attendance: In-person

Full-time or Part-time: Full-time

Program Length: 4 year

Program Cycle: Intake Summer, Fall, and Winter

Program Cost: *$5,976.69/term

OSAP Eligible: Yes

Location: 401 Sunset Avenue, Windsor, ON, N9B 3P4

For more information on this program, please visit:

http://www.uwindsor.ca/studentrecruitment/357/electrical-engineering-optional-co-op