

ELE861 – Microwave Engineering

- **Course Outline**

<http://www.ee.ryerson.ca/undergraduate/dcd/ele861.html>

- **Key Knowledge to Be Acquired**

Detailed understanding of wave propagation in boundless and bounded regions including the effects of electric and magnetic polarization damping forces on wave attenuation, radiating systems together with antenna arrays and radiation patterns, and awareness of advanced microwave engineering experiments..

- **Key Skills to Be Mastered**

General understanding of electromagnetic field generation, reception and propagation, familiarity with waveguide components and circuits, acquiring the needed basic expertise to design electric and magnetic field sensors.

- **Potential Careers**

Engineers, researcher and instructors: Antenna design, microwave components and systems, electromagnetic interference and compatibility, lightning protection of power lines and sensitive electronic and communication systems, etc.

- **Potential Employers**

Because of the in-depth understanding of the generation, reception and propagation of electromagnetic waves, wide range of applications require such expertise, including antenna design, microwave components and systems, electromagnetic compatibility at the component and system levels, etc.

- **Graduate Studies**

Most universities, including Ryerson University and the University of Toronto, have graduate programs in the general area of applied electromagnetics, such as electromagnetic compatibility, electromagnetic transients, microwave devices and antennas.