# MATERIALS AND METALLURGICAL Engineering Is it for you?



Does turning metals into useful objects sound interesting to you?



Would you like to know the secrets of metals and their properties?

# **DID YOU KNOW THAT..**

The main metals processed in Quebec are aluminum, steel, cast iron, copper, zinc and ferroalloys.

One of the rarest metals on Earth is iridium, a metal that is thought to have been brought here from outer space, because it is abundant on meteorites and very rare in the Earth's crust.



### WHERE DO THESE ENGINEERS WORK?

- Consulting engineering firms
- Steel companies
- Academic institutions
- Federal and provincial government
- Testing and analytical laboratory services
- Rolling stock equipment manufacturing plants
- Aluminum and metal industry
- Aerospace industry

# WHAT DO THESE ENGINEERS DO?

- Conduct research on the behaviour and crystalline structure of materials at certain temperatures and in conditions involving friction and extreme corrosion.
- Conduct studies on metals and alloys: their crystalline structure, dispersion of alloy elements in the basic metal, the presence of impurities, cracks and other flaws.
  - Estimate the fatigue lives of materials and structures according to different manufacturing processes.
  - Study the effect of radiation on materials in space and in nuclear reactors.

Conduct research on metal and ceramic combinations to form complex structures and composite materials.

#### QUEBEC MATERIALS AND METALLURGY ENGINEERING AT THE HEART OF INNOVATION

**Detection of legionella in the water cooling systems of industrial processes** A more advanced detection system for these bacteria.

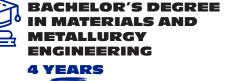


(IN FRENCH)

AVERAGE SALARY \$132,626

Genium360, Compensation Survey of Engineering Employees and Graduates in Québec, 2023







## ENDLESS OPPORTUNITIES IN ENGINEERING!

Learn more about materials and metallurgy and other kinds of engineering