What can you do with a degree in… Materials Engineering?

What is Materials Engineering?

What do super-strong titanium alloys for spacecraft and artificial bone implants for surgical patients have in common? They simply wouldn't exist without materials engineers. Materials engineers conduct studies of the properties and characteristics of metals, ceramics and polymers and plan, design and develop machinery and processes to concentrate, extract, refine and process these basic materials to create products as varied as non-stick surfaces to synthetic skin.

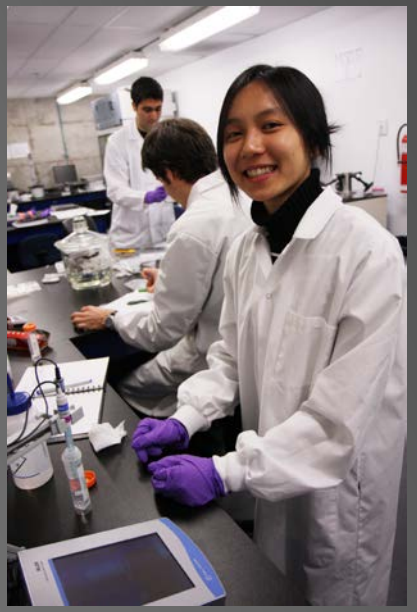
The field of materials science is multidisciplinary, and materials engineers possess an excellent balance of math, physics and chemistry. Creative problem solving is a must at every stage, whether while working in laboratories to discover new ways of fabricating materials or to improve the sustainability of various production plants. Materials engineers are responsible, independent, self-motivated, and adaptable to constraints

Where do graduates work?

Most graduates become engineers who help companies manufacture and develop materials, or select and use materials; for example: working with the aerospace industry to ensure that aircraft are constructed with the best possible materials. As materials engineering involves designing processes to develop new materials, engineers have the skills required to be good project managers, and often move into management and executive positions

Recent graduates in Materials Engineering have gone on to exciting careers in a wide variety of industries, here a just a few:

BBA, Jr. Engineer
Bell Helicopter, Metallurgical Engineer
Bombardier Aerospace, Materials and Processes Engineer
C & D Zodiac, Research & Development Engineer
Hatch, Process Engineer/Metallurgist
Rolls-Royce Canada, Material and Process Specialist



Industries

The work of materials engineers is necessary everywhere since everything is made out of materials. Materials engineers are involved in a variety of fields, including the resource and manufacturing sectors, designing and implementing processes in a factory or plant. They also work in materials research and development; creating new materials such as nanomaterials, and biomedical, automotive and aerospace materials; and improving the sustainability of traditional heavy industries such as steel, copper and nickel refining.

- Chemicals, Polymers and Materials
- Energy and Utilities: Hydro, Oil & Gas, Water, Sewage
- Engineering Consulting
- Finance & Insurance
- Biomedical Engineering
- Government
- Aerospace
- Mining
- Scientific & Technical Services
- Automotive

Useful Resources

Career Resources

McGill Engineering Career Centre
- Resources, information, job postings and links for engineering students

myFuture
- Job postings McGill students

Materials Engineering Co-op Program
- Materials Engineering features three co-op work terms. Each four-month work term is a 2-credit course.

The Engineering Institute of Canada
- Engineering Career Network

Professional Organizations

Engineers Canada
- The national organization of the 12 licensing bodies that regulate the practice of engineering in Canada

Ordre des ingénieurs du Québec
- The regulating body for Engineers in Quebec

ASM International
- The Materials Information Society

American Society for Testing and Materials (ASTM)

Canadian Biomaterials Society

Canadian Institute of Mining, Metallurgy and Petroleum (CIM)

Minerals, Metals, and Materials Society (TMS)

Student Life

You will have the opportunity to participate in a variety of clubs, activities and student government. Getting involved in a club or other group is a great way to meet people and build your résumé.

Materials Engineering Undergraduate Society

Engineering Undergraduate Society (EUS)

Promoting Opportunities for Women in Engineering (POWE)

Engineers Without Borders

Student Affairs Office
- Housed in the Engineering Student Centre; Academic Advisors provide assistance and information on program planning and academic success.

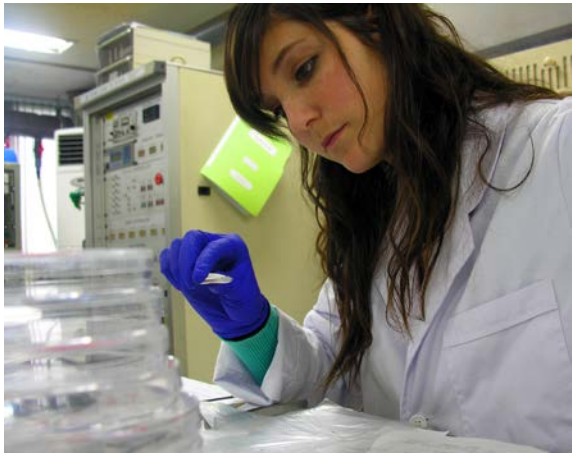
Salary Information*

Starting salaries will vary according to location, industry and employer.

Average annual salaries for new graduates
Canada: $55,000 – $62,000
United States: $58,581

Internship Salaries
$15 - $26 per hour

**Sources include: CACEE Campus Recruitment and Benchmark Survey (2011), NACE Salary Survey 2009, RIQ Enquete sur la rémunération directe des ingénieurs salariés du Québec (2012)*



Contact Us

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