

# What Can I Do with a Major in Environmental Engineering



## OVERVIEW OF MAJOR

Concordia University's Department of Building, Civil and Environmental Engineering offers a BEng in Civil Engineering with Option B offered to those planning careers in environmental engineering. A co-operative education program is also available. The Department offers programs leading to a Master of Applied Science program (MASc) in Civil Engineering which includes Environmental Engineering as one of its major research areas as well as a Graduate Certificate in Environmental Engineering and a PhD (Civil) with an Environmental Engineering specialization. For the latest information on programs, go to the Department's website at <http://www.bcee.concordia.ca>.

Working in Quebec normally requires registration with l'Ordre des ingénieurs du Québec (<http://www.oiq.qc.ca>), the professional corporation. Check with Engineers Canada at <http://www.engineerscanada.ca> for requirements in other provinces.

### CELEBRATED ENVIRONMENTAL ENGINEERS

Ellen Richards. Mother of Environmental Engineering.

Abel Wolman. Pioneer of Modern Sanitary Engineering.

Kevin Olmstead. Won 2.18 Million on *Who Wants to Be a Millionaire*.

Paul Roberts. Applied Principles of Mass Transport & Chemistry to Engineered Environmental Systems.

## EXAMPLES OF JOBS ACQUIRED BY RECENT CONCORDIA GRADUATES

The following job titles are representative of the types of entry-level positions for which Concordia University students are qualified for upon graduation. Note that the numbers following each job title refer to Canada's National Occupational Classification (NOC) code. For details on these titles go to <http://www5.hrsdc.gc.ca/NOC/>.

- Chemical Engineer (2134)
- Entry-Level Environmental Engineer (2131)
- Environment Coordinator
- Environmental Consultant (4161)
- Environmental Control Engineer
- Environmental Intern
- Environmental Manager (0212)
- Environmental Planner (2153)
- Environmental Professional
- Environmental Waste Technician (2231, 9424)
- Geotechnical Engineer (2144)
- Intermediate Environmental Consultant (4161)
- Junior Energy Consultant
- Landscape Architect (2152)
- Plant Engineer (2141)
- Site Manager (0711)
- Teacher (4131)
- Toxicologist (2121)

## **MORE JOB TITLES**

The titles below are not meant to be exhaustive but are representative of fields which environmental engineers pursue. Keep in mind that some occupations require further education (e.g., a higher degree, second degree, diploma). Note that the numbers following each job title refer to Canada's National Occupational Classification (NOC) code. For details on these titles go to <http://www5.hrsdc.gc.ca/NOC/>.

- Air Compliance Strategist
- Agricultural Engineer (2148)
- Biochemist (2112)
- Ecologist (2121)
- Energy Conservation Engineer (2132)
- Environmental Engineer (2131)
- Environmental Risk Manager/ Site Assessor (2263)
- Environmental Scientist
- Farmer (8251)
- Forester (2122)
- Hazardous Waste Manager (2263)
- Hydrologist (2113)
- Lobbyist (4161)
- Oceanographer (2113)
- Park Ranger (2224)
- Range Manager (2223)
- Researcher (4161)
- Safety Coordinator
- Sanitary Engineer (2131)
- Soil Conservationist (2123)
- Subsea Engineer
- University Professor (4121)
- Waste Treatment Engineer (2134)
- Water Resources Engineer (2131)
- Wildlife Biologist (2121)
- Zoologist (2121)

## POTENTIAL WORK SETTINGS

Environmental engineers commonly work in a variety of manufacturing industries and in government agencies at all levels (i.e., federal, provincial, municipal). They also often work for engineering and management consulting firms. To research specific employers who hire those in the field, there are many resources available in such locations as the Career Resource Centre, the Webster Library, Vanier Library and the Internet.

- Aerospace Industry
- Agricultural Production Companies
- Air Pollution Control
- Bioremediation Centers
- Biotechnology
- Budget Implementation Firms
- Construction Facilities
- Emissions Engineering Facilities
- Government (Local, State and Federal)
- Hazardous Waste Management Industry
- High Tech Industry
- Metals Industry
- Military
- Municipal Facilities
- Organic Chemicals Industry
- Parks
- Petroleum and Coal Industry
- Radiation Protection Industry
- Research Firms
- Scientific Research Labs
- Soil and Water Conservation Industry
- Testing Laboratories
- Universities and Colleges
- Wildlife Protection Bureau

## SKILLS and CHARACTERISTICS

Environmental engineers need mathematical, science and computer skills and should be good team players, problem solvers, communicators and negotiators. In addition, students will find the following skills, interests, values and other characteristics valuable for succeeding in the field.

- Ability to Grow Intellectually
- Ability to Work Independently
- Analytical Mind
- Coordination Skills
- Creativity
- Curiosity
- Decision Making
- Dedication
- Deductive Reasoning
- Eye for Detail
- Financial Resource Management
- Interpersonal Skills
- Keen Observation
- Negotiation
- Persuasion
- Public Safety & Security, Knowledge of
- Research Skills
- Supervisory Skills
- Time Management Ability
- Understanding of Different Environments
- Vision & Imagination

- Written Expression

## PROFESSIONAL ASSOCIATION AND OTHER LINKS

Making wise career decisions requires exploring your field. A multitude of Internet sites and other resources will help you do this to the best of your ability. Professional association sites, in particular, are very useful for their career descriptions and job hunting tips. Moreover, these authoritative sites frequently provide links to Internet sites which announce job openings and list potential employers. A few recommended sites are included below.

### Canadian

Engineering Institute of Canada

<http://www.eic-ici.ca/>

Provides information on continuing education and professional development opportunities. Also offers registration with a job board allowing you to search job openings across Canada.

Engineers Canada

<http://www.engineerscanada.ca>

The *International Engineering Graduates* section is aimed at international students and provides much of interest. *Women in Engineering* includes many links to sites of value to women. Click on *Site map* at the bottom of screen to get started.

ECO Canada -Environmental Careers Organization

<http://www.eco.ca>

Click on *Student Services* to research career and educational options. Explore offerings, such as internships under *HR Services*. Site also provides job postings.

Institution of Electrical and Electronics Engineers Canada (IEEE)

<http://www.ieee.ca>

Besides its technical journal, the Canadian division of this worldwide organization offers a general interest magazine, electronic newsletter, annual conference, financial aid and web services. Concordia University's branch of IEEE Canada offers a chance for students to develop leadership skills.

Ordre des ingénieurs du Québec

<http://www.oiq.qc.ca>

Click *Student* for information on the benefits of a student membership in Quebec's professional engineering corporation. Membership in such professional associations is great way to make contacts, uncover jobs and advance your career.

## International

American Academy of Environmental Engineers & Scientists

<http://www.aaees.org/>

Under *Contacts & Links* explore *Links and Resources* to locate organizations related to environmental engineering. Also of interest is the *AAEES Career Center*.

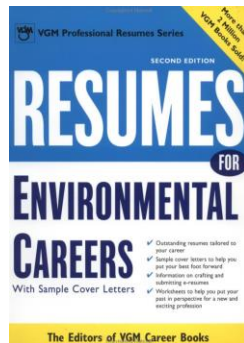
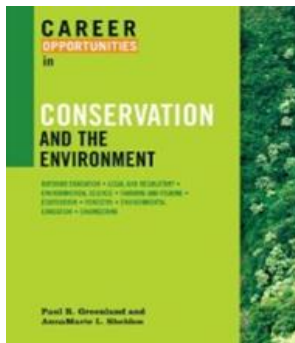
National Society of Professional Engineers

<http://www.nspe.org/>

Try *Career Center* for the following sections: *Job Board*, *Salary Information* and *Mentoring Programs*.

# Creating Your Amazing Career

## CAREER RESOURCE CENTRE TITLES



For those who need more help with their career and educational planning, the Career Resource Centre (CRC) offers books, pamphlets, DVDs and recommended Internet sites. It is located in the Hall Building, H-440, at 1455 de Maisonneuve Blvd. West. The following titles are just a few of the titles available in the CRC.\*

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- Ace the IT Interview
- Building a Winning Career in Engineering
- Canadian Environmental Directory
- Canadian Graduate Programs in Environmental Studies Directory
- Career Opportunities in Conservation and the Environment
- Careers in Wildlife Conservation
- Consulting Careers in Engineering and IT
- Environment Careers Panel Discussion (DVD format)
- Fast-Tracking Your Career: Soft Skills for Engineering and IT Professionals
- 50 Carrières de l'environnement
- Green Careers (DVD format)
- Le Guide de l'emploi en environnement: employeurs, formations, conseils
- Opportunities in Environmental Careers
- Real Resumes for Engineering Careers
- Resumes for Environmental Careers
- So You Want to Be an Engineer?
- 21 Things Every Future Engineer Should Know
- Working with the Environment