



CAREERS IN ENVIRONMENT

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Student Centre

Sponsored by

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Career Centre at the University of Toronto at Mississauga
<http://www.utm.utoronto.ca/careers/>

OCCUPATIONAL POSSIBILITIES

A major or specialization in an environment program provides a basis for many types of careers in the environmental field, business, government, education, etc. For some careers, advanced study (graduate degree) or field/laboratory experience may be required. Those careers found in Career Cruising (a Canadian electronic career search tool, available in the UTM Career Centre) are preceded by an *.

Environmental

- *Environmental Technician
- *Environmental Health Officer
- Environmental Regulator
- Water Quality Inspector
- Environmental Resource Management
- Park Naturalist
- Environmental Activist
- Ecopreneurs
- Corporate Environment Planning
- *Hazardous Materials Manager
- Environmental Reporter
- Botanical Gardens Curator
- Environmental Risk Assessor
- *Park Warden/Ranger
- *Agronomist (soil scientist)
- *Ecologist
- *Forester
- *Conservation Officer
- *Cartographer
- *Geologist
- *GIS Specialist
- *Meteorologist
- *Aquaculturist
- Landscape Architect Assistant
- *Environmental Engineer

Government/Politics

- *Immigration Officer
- *Political Aide
- *Lobbyist
- *Foreign Service Officer
- *Politician
- *Environmental Health Officer
- Economic Development Officer
- *Activist
- Land Surveyor
- *Public Policy Analyst
- Government Audience Advocate

Business

- Market Research Analyst
- Associate Management Consultant
- *Researcher
- Project Manager
- Market Researcher
- Interviewer
- Eco Tourism Guide
- Newsmagazine/Journal
- Project Co-ordinator
- *Fundraiser

SKILLS AND ABILITIES

Students with environment majors develop the ability to formulate concepts, allowing them to solve practical problems and to find better ways of meeting world needs. Such skills are applicable to job responsibilities in a variety of fields in the sciences, business, government and education. The following list presents some examples of the skills developed and used by students in environment majors.

Analytical skills

- Summarizing research findings
- Attending to details
- Analyzing data
- Applying logic to problems
- Evaluating data and results
- Perceiving patterns/structures

Investigative skills

- Reviewing relevant data
- Asking questions
- Applying concepts
- Applying knowledge creatively
- Defining problems

Technical skills

- Processing data
- Mapping/GIS
- Solving quantitative problems
- Laboratory skills
- Field work
- Sampling
- Plant identification

Communication skills

- Organizing and reporting data
- Informing/explaining
- Reporting results and conclusions orally and in writing
- Designing charts/graphs
- Using Powerpoint

EXPLORING CAREER POSSIBILITIES IN ENVIRONMENT

In addition to finding information online or in print, it's important to explore career options by talking with people in the field. The UTM Career Centre offers two programs to help you do this, and provides a networking binder to help you find professionals to speak with:

Extern Program

You are matched with a staff member in your preferred career area and you go to the host's work place to job shadow them for 1-5 days in February and/or May. More information is available at www.utm.utoronto.ca/careers/extern.html

UTM Alumni Mentoring Program

Coordinated by the UTM Alumni Office and the Career Centre, third and fourth year students are matched with a UTM alumnus in your career field. Gain information about your prospective career and how to get started in the field. More information is available at www.utm.utoronto.ca/careers/mentor.html

Networking Binder

Contains contact information for professionals in the field willing to answer your career questions. Included are environment professionals from Atmospheric Environment Services, GC-Environment Canada, and the Ontario Ministry of the Environment.

MAKING YOURSELF MORE MARKETABLE

- Seek part-time, summer and volunteer work either in the environmental sector or in positions that allow you to develop and demonstrate marketable skills. These would include both technical skills and “soft” skills like teamwork, project management, leadership, report writing, and presentation skills. Don't forget government summer jobs; they may pay less, but the skills and contacts can pay off later. Those seeking careers in the NGO sector like international development typically need some previous international experience even for entry-level jobs. This experience can be gained through a variety of internships during or following university.
- Get involved in on-campus extra-curricular activities that allow you to develop and demonstrate relevant skills. Use these opportunities to network with people in your career field. For example, as a club executive, you might organize a career event and take on the responsibility of contacting alumni and employers. As a writer for The Medium, you might interview grads or experts in your field.
- Attend relevant conferences that are being held in southern Ontario. The Enviroanalysis Conference and Geomatics conferences are examples. Use these opportunities to increase your knowledge of the field, network with people working in the field and with potential employers. Maintain these contacts with occasional emails. Volunteer to work at these conferences—it's a great (and cheap) way to meet a lot of people. Remember too that IES holds an annual Environment event

each year at St. George. It includes panels and employer exhibits and is only available to UT students.

- Take practicum courses like Environment 400. This will get you out into the environment work world, give you experience with technical skills and help you begin to develop a reputation. An excellent reference from your supervisor can be a great introduction to a potential employer.
- Combine technical skills (e.g., scientific procedures, statistical and analytic skills, computer database management skills, GIS), understanding of policy/legislation and theoretical frameworks in the knowledge base you develop from your courses. Pick project and paper topics that allow you to deepen your knowledge in those areas that particularly interest you. But go for breadth too so you can adapt to a number of different settings. Sometimes you can include interviews with people in the field as part of your research for the paper/project.

SELECTED WEBSITES

See UTM Environmental Programs website for more links

<http://www.utm.utoronto.ca/~w3env100y/env/jobs.htm>

or the University of Toronto Environmental Resource Network

<http://utern.sa.utoronto.ca/>

Job Postings

EnviroJob Board – <http://www.cchrei.ca/envirojob/>

Canadian Environmental - <http://www.canadianenvironmental.com/envirojobs/>

Government of Ontario Job Opportunities – <http://www.gojobs.gov.on.ca/>

UTM Career Centre – <http://www.utm.utoronto.ca/careers/>

Workopolis Campus – <http://campus.workopolis.com/>

Career Edge (internship programs) – <http://www.careeredge.ca>

Career Information

Canadian Council for HR in the Environment Industry – <http://www.cchrei.ca/>

Environmental Jobs and Careers – <http://www.ecoemploy.com/>

Canadian Environmental – <http://www.canadianenvironmental.com/>

Industry Canada Environmental Affairs – <http://strategis.ic.gc.ca/environment>

Potential Employers

Ontario Environment Business Directory - <http://www.envirodirectory.on.ca/>

Ontario Ministry of the Environment - <http://www.ene.gov.on.ca/>

Environment Canada - <http://www.ec.gc.ca/>

United Nations Environment Programme - <http://www.unep.org/>

Public Service Commission of Canada - <http://jobs.gc.ca/>

ejobs.com - Environmental Jobs in Ontario - <http://www.ejobs.org/states/ont.html>

Professional Organizations

National Certification for Environmental Practitioners - <http://www.cecab.org/>

Ontario Environment Industry Association - <http://www.oneia.ca/>

Ontario Society for Environmental Management - <http://osem.on.ca/>

PAST ENVIRONMENTALLY-RELATED GRADUATE, PART-TIME, SUMMER, VOLUNTEER POSTINGS FROM THE UTM CAREER CENTRE

Recent Graduate Employment Service (RGES)

Position Title: Watershed Monitoring Technical Assistant

Description: To assist with the planning, development and implementation of the Regional Watershed Monitoring Program. Provide technical support on monitoring issues to internal staff and external clients. Assist with the compilation, analysis and reporting of monitoring data and information.

Requirements: Post secondary education in biology, environmental science or related field; 1-2 years of experience related to major tasks; Demonstrated knowledge of limnology, aquatic ecology, fish and wildlife management and stream based environmental monitoring techniques; Demonstrated ability to plan, organize and implement projects and programs; Good working knowledge of computer applications and statistics; Excellent analytical and communication skills; Excellent interpersonal skills; Valid Ontario Drivers License.

Position Title: Radiation Technician

Description: Analyses of environmental samples in the Radiation Protection Laboratory such as water, vegetation, milk, sediment for analytes such as tritium by liquid scintillation counting, gross alpha/beta using gas-flow proportional counters. Gamma spectrometry of various sample types. Assisting with field sampling and with SOP's.

Requirements: BSc in chemistry, physics or biology or equivalent combination of experience and education, knowledge of chemical analytical techniques, good communication and writing skills, experience with databases and spreadsheets, basic chemical laboratory experience, experience with instrumentation including calibrations, drivers license would be an asset. We would provide training in radioanalytical techniques and instrumentation.

Position Title: Plans Analyst, Municipal Plan Review

Description: Determine, coordinate and report appropriate corporate interests related to planning and development applications; provide effective project management, staff supervision and service delivery. Provide and maintain excellent customer and client service.

Requirements: Post secondary education in land use or environmental planning or a related field; Eligibility for membership in CIP preferred; Working knowledge of the Planning Act, Conservation Authorities Act and regulations, and the Environmental Assessment Act; 3 years municipal and/or environmental planning experience and applied computer knowledge; Demonstrated excellence in oral and written communication skills and customer service.

Summer Employment Service

Position Title: Environmental Services Intern

Description: The residents of the Town of Richmond Hill place a strong value on the Town's natural environment. In support of our "Environment First" policy for the protection and enhancement of the natural environment, our efforts include programs that cover lakes and rivers, open space systems, groundwater, forested lands and wildlife, as well as the unique features of the Oak Ridges Moraine. These positions will be involved in the implementation of both office and field programs to monitor, manage, protect and enhance the natural environment throughout the Town. In this role, you will be involved with Town initiatives focused on Lake Wilcox and the

Rouge, Humber and Don watersheds. You will actively participate in the coordination of these initiatives as well as related community environmental education initiatives.

Requirements: Ideally you are currently enrolled in a Masters Program, or are a senior level student working towards a four year University Degree in a physical science such as Biology, Chemistry, or a related discipline. Experience with implementing field programs, monitoring and report writing are assets. Effective verbal and written communication skills with a strong knowledge of spreadsheet, database, word processing and G.I.S. computer programs/applications are essential. A valid Class 'G' driver's license and a reliable vehicle to conduct field monitoring activities are required (mileage compensated).

Position Title: Environmental Field Labourer

Description: To assist with the development and implementation of Ecological Services' habitat creation and restoration projects and wildlife management programs. Perform the following tasks under supervision: 1) Assist with the implementation of habitat rehabilitation projects including aquatic plant establishment, construction and deployment of specific habitat features, and monitoring. 2) Wildlife inventories including colonial waterbird nest counts. 3) Assist with Canada goose, ring-billed gull and double-crested cormorant management programs. 4) Assist with weekend interpretive programs and conservation seminars. 5) Assist with the collection of environmental data including, water and sediment sampling. 6) Operate and maintain biological sampling equipment, including work boats. 7) Other duties as assigned.

Requirements: Post secondary education biology, environmental science, resource management or a related field. The ability to identify common flora and fauna found in the GTA. Familiar with biological sampling equipment, including work boats. Experience/aptitude for outdoor activities. Valid Ontario driver's license. Pursuing a career in environmental or related field. Due to funding requirements (for two of these positions) by the HRDC, eligible employees must be registered full-time students in the previous academic year who intend to return to school on a full-time basis in fall 2004. Applicants must also be between the ages of 15 and 30.

Volunteer Listings:

Position Title: Public Relations and Community Outreach

Description: As a Public Relations and Community Outreach Assistant, you will work with Citizen's Environment Watch staff to expand the reach of CEW's water and air monitoring programs. Your enthusiasm will help us to establish strong and sustainable relationships with new target communities. Your commitment will ensure that CEW's programs meet the needs of communities that may not normally have access to such support and might even be particularly at risk from environmental pollution. You will help us to raise CEW's profile, meet grant obligations, and ensure an even stronger air and water quality monitoring program in the future - which directly benefits our environment!

Requirements: Communication, Creative, Interpersonal, Organizational, enthusiasm, writing skills, presentation skills, familiarity with environmental issues.

Part-Time Temporary Employment Service

N.B. OSAP Work-Study Program offers career-related part-time positions on campus at UTM and at St. George. Work 10-12 hours per week to a maximum of 200 hours. Check the postings the day after Labour Day on the UTM Career Centre website.

Other part-time job sample

Position Title: Science Educator, Bilingual

Description: Bring your knowledge of informal science and technology education, communication skills, creativity and enthusiasm to the Ontario Science Centre. You will: present innovative, engaging curriculum-related science, technology programs/workshops for school groups; provide presentations/workshops to various audiences.

Requirements: Proficiency in English and French; excellent communication, presentation skills; demonstrated knowledge of the Ontario Curriculum, science/technology, physics, space science and/or chemistry; experience in learning simulations, information technology, early childhood or adult education; creativity; initiative; planning, organization skills; flexibility; adaptability; ability to work on teams.

To access full-time, part-time, summer and volunteer opportunities, register online with the Career Centre at www.utm.utoronto.ca/careers

Full-time job listings are available via the Recent Graduates Employment Service for two years after graduation. Ask for details at the Career Centre!

PRINT AND ELECTRONIC RESOURCES AT THE UTM CAREER CENTRE

Employer Directories

Canadian Environmental Directory 1998-1999 (HIS/Micromedia, 1998)

Canadian GIS Source Book (Geomatics Industry Association of Canada, 1996)

The 2003-2004 Canadian Graduate Programs in Environmental Studies Directory (Queen's University, 2003)

Who's Hiring 2003 (Mediacorp Canada Inc., 2003)

Canadian Directory of Search Firms 2003 (Mediacorp Canada Inc., 2003)

The Career Directory (Mediacorp Canada Inc., 2003)

The Canada Student Employment Guide 2004 (Sentor Media Inc., 2004)

Careers in Environment Books

EnviroCareers 2001 (Canadian Council for Human Resources in the Environment Industry, 2000)

EnviroEmployment Guidebook (Canadian Council for Human Resources in the Environment Industry, 2003)

Careers For Nature Lovers (VGM Career Horizons, 1993).

Great Jobs for Environmental Studies Majors (VGM Career Books, 2002)

Other Print Resources

Red Occupational Binders (212): Information on many careers in Environment such as Environmentalist, Ecologist, and Conservation Officer.

Green Market Survey Binder (212): Information on jobs in both the public and private environmental sectors.

Sample Jobs in Environment Binder: Compilation of previous job postings from the Recent Graduate Employment Service database.

Networking Binder: Contact information of professionals in the field willing to answer your career questions. Included are environment professionals from Atmospheric Environment Services, GC-Environment Canada, and the Ontario Ministry of the Environment.

Alumni Binder: UofT grads tell how they transferred their degree to the world of work

Electronic Resources

Career Cruising: A Canadian career planning tool. *Career Explorer* has up to date information on over 400 careers, including information interviews with real people doing the job. You can identify occupations alphabetically, by school subject or by industry. It also contains a *Career Matchmaker*, an occupational selection process based on information you provide about yourself (personality, work preferences). Environment careers included are Park Warden, Lobbyist and Activist.

SEEING OPPORTUNITY: NEWSPAPER ANALYSIS

From *Career Circuit*:

http://www.thecircuit.org/coach/english/ccoachbt/b3a_newspaper.htm

One way to start noticing trends and their potential impact on your future is to read the newspaper (or watch the news or listen to the news) a different way. Whenever you read a newspaper article, ask yourself the following questions:

- Is it possible that this article is even remotely related to career development or the world of work? (If "No" stop here; otherwise, continue.)
- What connection does this article have to the work world?
- What are the global implications on the work world of this article's topic?
- What are the national implications on the work world of this article's topic?
- What are the local implications on the work world of this article's topic?
- How do any of these implications connect with the kinds of work I might like to do?

EXAMPLE A

Newspaper article: "Red Deer man gives birth to his own alien grandson with six heads"

Question #1

Is it possible that this article is even remotely related to career development or the work world? (If "No" stop here; otherwise, continue.)

Answer #1

No (although it's always arguable). Skip to the next article.

EXAMPLE B

Newspaper article: "Wood boycott heads to Japan"

"A B.C. environmentalist says she is going to Japan to save trees in British Columbia... She says she is going to ask Japanese companies not to buy paper from the giant forest products company..."

(Assume a reader in Whitecourt, Alberta)

Question #1

Is it possible that this article is even remotely related to career development or the work world? (If "No, stop here; otherwise, continue.)

Answer #1

It seems reasonable that if this environmentalist is successful and Japan boycotts British Columbia forest products, it will have a significant impact on work.

Question #2

What connection does this article have to the work world?

Answer #2

First, the environmentalist's success may affect the flow of foreign money into Canada, having an overall adverse effect. Second, the woman's success may result in a direct loss of jobs in B.C.'s forestry sector, thereby hurting the B.C. economy. Third, there are bigger implications on the work world generally in terms of the environmentalist versus natural resource worker.

Question #3

What are the global implications on the work world of this article's topic?

Answer #3

Globally, this article reflects a trend that everyone already knows about - the environmental movement. The article highlights that this movement is a trend rather than a fad and that natural resource industries will need to find new ways of doing things and representing themselves. It also indicates a global trend away from the use of natural resources and towards entirely different means of operating (e.g., less packaging, less paper, more items that are reusable).

Question #4

What are the national implications on the work world of this article's topic?

Answer #4

From Canada's perspective, the environmental movement will mean massive restructuring of the economy because traditionally we have been natural-resource based. What if the movement gains

even more strength and environmentalists lobby to have the original plains of Manitoba, Saskatchewan and Alberta restored to their natural state? Forestry is just a start for the movement.

Question #5

What are the local implications on the work world of this article's topic?

Answer #5

Locally, this woman's work will actually be beneficial to Whitecourt, at least in the short-term. As the giant forest companies face boycotts, Whitecourt's own Millar-Western Industries may actually boom for a few years. As one of the most environmentally progressive forestry product companies in Canada, they will be supported or at least ignored by environmentalists - they do not use bleach, re-plant what they cut and no longer engage in clear-cutting. If Japan boycotts the others and buys from Millar-Western, Whitecourt may thrive for quite some time.

In the long-term, even more interesting prospects may be on the horizon for Whitecourt. If Millar-Western is truly an environmentally state-of-the-art forestry company, Whitecourt's economy could prosper as much by technology transfer as by forest product sales. Imagine selling Millar-Western's expertise to other forestry companies in B.C., the rest of Canada, South America, and Eastern Europe! Whitecourt could see an international "Environmental Forestry Training Centre" that would bring people in from all over the world. Then, tourism dollars would pour in as visitors spend extra time for leisure purposes. Hotels, restaurants, tour and travel companies, craft shops and recreational organizations would develop and grow.

Question #6

How do any of these implications connect with the kind of work I might like to do?

Answer #6

Youth workers might want to ponder a number of opportunities from the environmental trend in general. However, to keep the analysis more immediate, look at the near-future impact on Whitecourt directly. A youth worker in Whitecourt may want to consider the following needs after reading this article:

Whitecourt employers may need more people. Who is helping them recruit, select and train youth who they hire?

Whitecourt employers may end up employing a higher percentage of youth than usual. Who is training/coaching the supervisors of these youth on how to communicate with youth, motivate youth, etc.?

Whitecourt may end up importing workers from Edmonton. How will this affect the community, particularly in terms of youth? What if these "imports" are youth - what social/recreational needs will this create?

If Whitecourt is to benefit from the problem in B.C., it will need to market its environmentally-friendly practices. Is there a need to train youth in "environmental marketing"?

This may have taken you a while to read, but it actually takes very little time to ask and answer these questions every time you talk with someone, listen to someone, watch something or read something. The key is remembering to ask yourself the questions, and this requires constant vigilance.