Society has become more aware of the seriousness of the environmental problems we face. Yet, at the same time, we have realized that the solutions are not simple. To work towards environmental sustainability, people need to understand the scientific basis of environmental problems. They also need to have expertise in planning, policy and other fields to deal with the social, economic and cultural complexities that surround them.

### TOP 5 REASONS to study ENVIRONMENTAL STUDIES/SCIENCE

1. Hands-on lab and field work. Get dirty, see results.
2. Gain transferable skills that employers want, while learning how to prepare arguments and solve problems.
3. Help create the future world in which you want to live.
4. The best way to find solutions: combining both the arts and the sciences.
5. Research-focused courses in upper years contribute to projects happening across Canada and around the world.

### ALUMNI JOBS

- 5% of alumni work in **UTILITIES**
- 13% of alumni work in **ENVIRONMENT SERVICES**
- 25% of alumni work in **GOVERNMENT & LAW**
- 33% of alumni work in **EDUCATION**

### ALUMNI STORY

“I think that it’s something that is really unique about our department. The fact that our program is so current with the issues our society is facing and that members of the department can unify over trying to find solutions to the problems.”

-Makenzie MacKay, BAH ‘17

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2018-19 thresholds

**NO AUTOMATIC ACCEPTANCE**

1.9 cGPA PENDING LIST

*Thresholds are made on a competitive basis and are updated annually. For the latest information please visit: QUartsci.com
# Environmental Toxicology

## Specialization

### 1st Year

**Get the Courses You Need**
- In first year you will have the chance to explore the foundations of Environmental Science in biology, chemistry, geography and geology along with some electives.
- See the back page for specific courses to consider.
- Attend Majors Night in the winter term to learn more about Plan options.

**Get Relevant Experience**
- Join teams or clubs on campus such as the Earth Centre or Queen’s Recycling Action on Climate Change. See Queen’s Sustainability webpage, the AMS Clubs Directory or the Queen’s Get Involved page for more ideas.
- Volunteer on or off-campus with different community organizations. See community organizations listed by the department, including SWITCH Ontario and the City of Kingston.
- Prepare for work or studies in a multi-cultural environment by taking QUIC’s Intercultural Competency Certificate, and research possible immigration regulations. Speak to a QUIC advisor to get involved in their programs, events, and training opportunities.
- Grappling with program decisions? Go to Majors Night or get some help wondering about career options from Career Services.

**Get Connected with the Community**
- Volunteer on or off-campus with different community organizations.
- Get involved with the Departmental Student Council (DSC).
- Watch for events in the School of Environmental Studies through the department website. Start or continue volunteering with organizations.
- Is an exchange in your future? Start thinking about where you would like to study abroad. Apply in January for a third year exchange through the International Programs Office.
- Consider studying abroad in the summer: look into taking BIOL 307, a China-Canada field course.

**Get Thinking Globally**
- Look into summer jobs by talking to the dept. or Career Services about work through SWEP or Work-Study.
- Take more responsibility within different clubs or extracurriculars.
- Do targeted networking with alumni working in careers of interest by joining the LinkedIn group Queen’s Connects. Check out Career Services networking workshops.
- Build your intercultural competence by getting involved with other cultures or by practicing or improving your language skills.
- Consider joining professional associations like the Ontario Environment Industry Association and the Canadian Institute for Environmental Law and Policy.
- Investigate full-time jobs or other opportunities related to careers of interest. If interested, look for environmental opportunities through Planet Friendly.
- Assess what experience you’re lacking and fill in gaps with volunteering, clubs, or internships — check out the Career Services skills workshop for help.

**Get Ready for Life After Graduation**
- Start going deeper into the discipline of Environmental Science, while considering a certificate such as Global Action and Engagement. Attend Degree + in the Fall term to learn more about Certificates and Internship options.
- Want to make sure your academics are where you want them to be? Visit SASS (Student Academic Support Services) and the Writing Centre for some help.
- If interested, apply for an Undergraduate Student Summer Research Fellowship (USSRF). Consider applying to do a 12-16 month QUIP internship between your third and fourth year. Consider entrepreneurial opportunities via programs like the Queen’s Innovation Connector Summer Initiative (QCSI).
- Consider joining professional associations like the Ontario Environment Industry Association and the Canadian Institute for Environmental Law and Policy.
- Join groups on LinkedIn reflecting specific careers or topics of interest in Environmental Studies.
- Is an exchange in your future? Start thinking about related to careers of interest. If interested, look for environmental opportunities through Planet Friendly.
- Assess what experience you’re lacking and fill in gaps with volunteering, clubs, or internships — check out the Career Services skills workshop for help.

### 2nd Year

**GET THE COURSES YOU NEED**
- Start focusing on areas of interest. Research education requirements for careers of interest. If needed, prepare to take any required tests like the LSAT or GMAT and get help thinking about Grad School from Career Services. Check out what some of our grads are doing at our website.

**GET RELEVANT EXPERIENCE**
- Look into summer jobs by talking to the dept. or Career Services about work through SWEP or Work-Study.
- Take more responsibility within different clubs or extracurriculars.

**GET CONNECTED WITH THE COMMUNITY**
- Get involved with the Departmental Student Council (DSC).
- Watch for events in the School of Environmental Studies through the department website. Start or continue volunteering with organizations.
- Build your intercultural competence by getting involved with other cultures or by practicing or improving your language skills.
- Consider joining professional associations like the Ontario Environment Industry Association and the Canadian Institute for Environmental Law and Policy.
- Join groups on LinkedIn reflecting specific careers or topics of interest in Environmental Studies.
- Investigate full-time jobs or other opportunities related to careers of interest. If interested, look for environmental opportunities through Planet Friendly.
- Assess what experience you’re lacking and fill in gaps with volunteering, clubs, or internships — check out the Career Services skills workshop for help.

**GET THINKING GLOBALLY**
- Is an exchange in your future? Start thinking about where you would like to study abroad. Apply in January for a third year exchange through the International Programs Office.
- Consider studying abroad in the summer: look into taking BIOL 307, a China-Canada field course.

**GET READY FOR LIFE AFTER GRADUATION**
- Start focusing on areas of interest. Research education requirements for careers of interest. If needed, prepare to take any required tests like the LSAT or GMAT and get help thinking about Grad School from Career Services. Check out what some of our grads are doing at our website.

### 3rd Year

**GET THE COURSES YOU NEED**
- A chance to start grouping courses in areas of interest, or to keep it more general and explore many areas of Environmental Science. Meet with an Academic Advisor to make sure you are on track and have planned out your courses for next year — for some ideas, see the back page.

**GET RELEVANT EXPERIENCE**
- If interested, apply for an Undergraduate Student Summer Research Fellowship (USSRF). Consider applying to do a 12-16 month QUIP internship between your third and fourth year. Consider entrepreneurial opportunities via programs like the Queen’s Innovation Connector Summer Initiative (QCSI).

**GET CONNECTED WITH THE COMMUNITY**
- Do targeted networking with alumni working in careers of interest by joining the LinkedIn group Queen’s Connects. Check out Career Services networking workshops.
- Connect with professors at events or workshops hosted by the DSC.
- Consider joining professional associations like the Ontario Environment Industry Association and the Canadian Institute for Environmental Law and Policy.
- Join groups on LinkedIn reflecting specific careers or topics of interest in Environmental Studies.
- Investigate full-time jobs or other opportunities related to careers of interest. If interested, look for environmental opportunities through Planet Friendly.
- Assess what experience you’re lacking and fill in gaps with volunteering, clubs, or internships — check out the Career Services skills workshop for help.

**GET THINKING GLOBALLY**
- Build your intercultural competence by getting involved with other cultures or by practicing or improving your language skills.
- Consider joining professional associations like the Ontario Environment Industry Association and the Canadian Institute for Environmental Law and Policy.
- Join groups on LinkedIn reflecting specific careers or topics of interest in Environmental Studies.
- Investigate full-time jobs or other opportunities related to careers of interest. If interested, look for environmental opportunities through Planet Friendly.
- Assess what experience you’re lacking and fill in gaps with volunteering, clubs, or internships — check out the Career Services skills workshop for help.

**GET READY FOR LIFE AFTER GRADUATION**
- Start focusing on areas of interest. Research education requirements for careers of interest. If needed, prepare to take any required tests like the LSAT or GMAT and get help thinking about Grad School from Career Services. Check out what some of our grads are doing at our website.

### 4th or Final Year

**GET THE COURSES YOU NEED**
- In fourth year you will have the chance to participate in research-based courses that can lead to Graduate School or to your future career path. Make sure to finish up all your courses for your degree and your optional certificate(s).

**GET RELEVANT EXPERIENCE**
- Investigate full-time jobs or other opportunities related to careers of interest. If interested, look for environmental opportunities through Planet Friendly.
- Assess what experience you’re lacking and fill in gaps with volunteering, clubs, or internships — check out the Career Services skills workshop for help.

**GET CONNECTED WITH THE COMMUNITY**
- Consider joining professional associations like the Ontario Environment Industry Association and the Canadian Institute for Environmental Law and Policy.
- Join groups on LinkedIn reflecting specific careers or topics of interest in Environmental Studies.
- Investigate full-time jobs or other opportunities related to careers of interest. If interested, look for environmental opportunities through Planet Friendly.
- Assess what experience you’re lacking and fill in gaps with volunteering, clubs, or internships — check out the Career Services skills workshop for help.

**GET THINKING GLOBALLY**
- Is an exchange in your future? Start thinking about related to careers of interest. If interested, look for environmental opportunities through Planet Friendly.
- Assess what experience you’re lacking and fill in gaps with volunteering, clubs, or internships — check out the Career Services skills workshop for help.

**GET READY FOR LIFE AFTER GRADUATION**
- Apply to jobs or future education, or make plans for other adventures. Get help from Career Services with job searching, resumes, interviews, Grad School applications, or other decisions.

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**What will I learn?**
- A degree in Environmental Science can equip you with valuable and versatile skills, such as:
  - Interdisciplinary perspective to understand environmental topics from a scientific, philosophical and ethical point of view.
  - Understand natural and human factors related to environmental problems.
  - Knowledge of local, national, and global environmental problems and issues.
  - Analytical skills to analyze data for trends and apply statistical tests.
  - Ability to interpret data from scientific experimentation and make conclusions based on research.
  - Experience with laboratory equipment.
  - Critical thinking to form, defend, and evaluate arguments and propose solutions.
  - Oral and written communication to create reports and give presentations.
  - Teamwork to work as a team on a long-term project.
  - Resource and time management.

**Where can I go?**
- A degree in Environmental Science can take your career in many directions. Many students choose to continue their academic inquiry with a Master’s. Our students are equipped with a strong foundation for careers in:
  - Energy
  - Environmental management
  - Government
  - Human and environmental health and safety
  - International development
  - Law
  - Parks and natural reserves
  - Public administration
  - Public health
  - Restoration and reclamation
  - Urban and regional planning.
Environmental Toxicology
Specialization, Bachelor of Science (Honours) degree PLAN

Sample Year by Year

1ST YEAR
- BIOL 102/3.0
- BIOL 103/3.0
- CHEM 112/6.0
- GPHY 101/3.0
- GPHY 102/3.0
- GEOL 104/3.0 or GEOL 107/3.0
- 6.0 units from MATH 120/6.0, MATH 121/6.0, or (MATH 123/3.0 and MATH 124/3.0), MATH 111/6.0
- ENSC 103/3.0

2ND YEAR
- BIOL 201/3.0
- BIOL 202/3.0
- BIOL 205/3.0
- BIOL 243/3.0
- 9.0 units from CHEM 213/3.0, CHEM 281/3.0 and (CHEM 282/3.0 or CHEM 285/3.0)
- ENSC 201/3.0
- 3.0 units from GEOL
- 3.0 units of electives

3RD YEAR
- CHEM 326/3.0
- ENSC 390/3.0
- 15.0 units from ETOX Options
- 9.0 units of electives

4TH YEAR
- ENSC 425/3.0
- PHAR 416/3.0
- ENSC 430/6.0 or ENSC 501/6.0
- 12.0 units from ETOX Options
- 6.0 units of electives

Note that degree requirements are revised regularly. The most current requirements, including course lists and options, are found in the Academic Calendar at: QUartsci.com/academic-calendar