

# Environmental Engineering

*Made in Windsor.*



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Environmental Engineering  
Experience Map



University  
of Windsor

## Highlights and Skills

### PROGRAM HIGHLIGHTS


#### Environmental Engineering

Ours was the first environmental engineering degree program in Canada and we've been leading the way ever since. In this comprehensive program, you'll get exposure to all aspects of the field — air, water, solid waste, sustainability, and more. UWindsor is home to the Great Lakes Institute for Environmental Research, giving students the opportunity for collaboration between science and engineering. We have a low faculty-to-student ratio and the resources to set you up for success.

**MIN. AVG.\* 74% ONTARIO COURSE REQUIREMENTS** ENG4U, MHF4U, SCH4U and SPH4U required. MCV4U is strongly recommended. A minimum average of 74% in all math and science courses except biology is also required.

### FUNCTIONAL KNOWLEDGE

- Designing processes and systems to remove contaminants before they are released into the environment
- Understanding contemporary best practices and long-term industry goals for sustainable, environmentally conscious technologies and processes
- Planning effective, large-scale projects that manage resources and balance considerations including cost, quality, and speed
- Analyzing complex problems and breaking them down into steps/ component parts
- Developing skills necessary to recognize the need for precision and detail in engineering design tasks
- Designing professional-quality products and processes, considering technical, environmental, ethical, and commercial considerations

 Co-op available \* Minimum grade point average for admission to program. A higher average may be required.

## Build your Skills and Experience

Your UWindsor experience is more than attending classes. It is a combination of academics, co-curricular activities, and extracurricular involvement. By making the most of all three elements of your university experience, you will maximize your opportunities to build your skills, broaden your personal network, and clarify your long term academic and career goals.



#### CURRICULUM

Courses of study specific to each program



#### CO-CURRICULAR

Activities and experiences that complement coursework (Outstanding Scholars, peer mentoring, VIP)



#### EXTRACURRICULAR

Activities falling outside the scope of set curriculum (Part-time job, clubs, volunteering, athletics)

## Career Planning Cycle

Intentional career planning will help you prepare for your next step after graduation and beyond. It is a fluid, dynamic, and lifelong process. You can move on or return to an earlier stage in the cycle at any time.



## Explore Opportunities Using This Chart

Explore a selection of opportunities recommended for students in your program. This chart shows some of your many options – you don't have to do everything on it or limit yourself to it. Engage in opportunities from each of the three categories to set yourself up for success.

### High-Impact Practice (HIP)

A HIP is an enriching educational experience that can be life-changing and often includes learning outside of the classroom while encouraging meaningful interaction and collaboration, such as:

- Co-op, internship or field experiences
- Research with faculty
- Culminating senior experience
- Capstone courses
- Service-learning
- Learning communities
- Study abroad

## Academics


Your Coursework





### First Year

- Take required courses that are common for all first-year engineering students to provide flexibility in program choice
- Review degree course requirements
- Meet with an academic advisor such as the undergraduate coordinator or department head
- Receive academic support, mentoring and advising from the **WINONE** office in the **Centre for Engineering Innovation**
- Attend **WINONE Tutorials** for first-year students for academic support and advice from peer mentors.

### Middle Years

- Take required courses and check in with academic advisor to make sure you are on the right path
- Look into completing a research project with a faculty member in final year 
- Begin taking courses in accordance with Environmental Engineering major requirements
- Learn about topics such as air pollution, water pollution control, chemical reaction engineering, environmental microbiology, waste management or sustainability
- Start taking courses required as pre-requisites for graduate/professional school
- Consider declaring a minor and/or specialization
- Select non-technical electives of interest




### Final Year





- Meet with an academic advisor to go over degree requirements
- Complete all courses required for degree
- Apply to graduate through **UWinside Student Portal**
- Work with a faculty member on a research project or publication 
- Consider completing required courses for **Honours Certificate in Civil Engineering** to pair with degree
- Choose a capstone project to optimize your senior experience 
- Complete all required technical and approved non-technical electives
- Explore professional development opportunities offered by **Continuing Education**
- Join a professional association in your field such as the **Water**

## Experience




Ways To Get Involved



- Explore co-op options and consider applying in fall of second year 
- Investigate research opportunities as part of the **Outstanding Scholars** program 
- Gain experience by taking on a summer job
- Research student exchange opportunities for middle years 
- Join a club like the **Engineering Student Society**, **UWindsor Green** or **Engineers Without Borders**
- Participate in the **Bystander Initiative** workshop to gain skills that will help you be an effective and supportive ally to prevent sexual assault on campus

- Apply to co-op in fall of second year 
- Participate in the **UWill Discover** undergraduate research conference 
- Complete co-op work term I in the summer of second year and work term II in the summer of third year 
- Apply for student exchange 
- Expand your skills by working full time in your off semesters or taking on a part-time or volunteer position during your academic terms
- Run for class representative on **Department Council**
- Look for a leadership role in a club or society
- Consider for applying to be a **WINONE Tutorial Scholar** or volunteer to assist with outreach activities with the **WINONE Office**

#### Environment Association of Ontario

- Complete co-op work term III in the fall semester 
- Conduct field research with faculty member 
- Become a tutor for **Students Offering Support (SOS)** 
- Run for class representative on **Department Council** or a peer mentor for the **WINONE Tutorials**

## Career

Plan Ahead For What's Next



- Create a list of things that you enjoy, areas in which you excel, and your skills
- Meet with a career advisor in **Career Development and Experiential Learning (CDEL)** for help developing a plan for your future years
- Consider a career assessment appointment to help you identify possible career paths
- Get involved with a part-time job, volunteer opportunity, campus group, or research assistantship
- Attend **CDEL** workshops to learn how to find a summer or part-time job and write a university-level resumé
- Chat with an advisor during **CDEL's Drop-In hours** to get answers to your career and job search questions

- Research career fields and occupations with the help of a **CDEL** career advisor
- Explore opportunities and meet potential employers by participating in **Job Shadow Experience**, job fairs, and industry networking events
- Explore further educational opportunities by attending the **Graduate and Professional Schools Fair** and researching admission requirements for programs that interest you
- Create a **LinkedIn** profile and have it critiqued by **CDEL**
- Take part in informational interviews and join online communities like **LinkedIn** and **Ten Thousand Coffees** to connect with people in your targeted profession or industry
- Search job postings to learn what skills, knowledge, and credentials you will need for potential careers

- If you are considering applying to graduate or professional school, be aware of early application deadlines
- Meet with **CDEL** to prepare application documents like a resumé, cover letter, CV, or personal statement for jobs and education programs you are applying to
- Attend **CDEL's workshops** on interview skills and job search strategies
- Set up a mock interview with a career advisor for professional school or job applications
- Compose a portfolio of relevant academic and work experience
- Consider registering as an EIT with **Professional Engineers Ontario**
- Take part in recruitment events and job fairs hosted by **CDEL** and other organizations

# Life After Graduation



I chose engineering because I wanted to make a change in the world. The foundation of knowledge and engineering mindset I gained during my time at the University of Windsor has definitely done that for me. Be it my bioremediation research work in Northern Delhi, opportunities within the campus entrepreneurial community to develop my own business or simply participating in intramural sports leagues, there has been no shortage of opportunities for development and professional growth in the University of Windsor campus.”

*Dylan Verburg – BAsC (Honours) in Environmental Engineering [2016]*

**5** Number of  
Graduates  
(2020)

**92%** Employment  
Rate of Graduates  
(OUGS Engineering, 2019)

## Career Tracks\*

Biological engineer  
Consultant  
Design engineer  
EHS manager  
Energy resources manager

Environmental engineer  
Environmental hydrogeologist  
Facility manager  
GIS modeler  
Industry trainer

Infrastructure engineer  
Operations director  
Policy analyst  
Professor  
Project manager

Quality assurance supervisor  
Research coordinator  
Teacher  
Water plant manager  
Water resources engineer



## Common Sectors For Graduates

- Academia and research
- Agriculture
- Education
- Engineering
- Energy/utilities sector
- Environmental advocacy, conservation, consulting
- Government
- Industry and manufacturing
- Patent/intellectual property law
- Technical consulting, sales, training

## Career-Readiness Competencies



Critical Thinking &  
Problem Solving



Professionalism &  
Work Ethic



Teamwork &  
Collaboration



Communication





# Campus Resources

- Research undergraduate scholarships and bursaries through the **Student Awards and Financial Aid Office**
- Visit **Leddy Library** and the **Writing Support Desk** for help with academic assignments
- Check out the **Bounce Back** program designed to improve academic performance as well as decrease feelings of stress and anxiety through both effective learning strategies and life skills acquisition
- Build leadership skills and find leadership opportunities at the **Leadership Hub**
- Get advice and support about your academic status by making an appointment with **Central Academic Advising**
- Seek out assistance with academic accommodation from **Student Accessibility Services**
- Discover ways to get involved on campus through the **Student Success and Leadership Centre**
- Broaden your cultural awareness through the **International Student Centre** and **Student Exchange Office**
- Look into the **Ignite: Work Study** program for on-campus employment
- Get assistance developing your career plan and job search skills from **Career Development and Experiential Learning**
- Develop your entrepreneurial skills and learn how to start your own business at **EPICentre**
- Find support for Indigenous learners and broaden your understanding of Indigenous culture by visiting the **Aboriginal Education Centre - Turtle Island**
- Tend to your health and wellness with support from **Student Health Services**, the **Wellness Outreach Office** and **Lancer Recreation**
- Receive confidential mental health counselling delivered by trained professionals at the **Student Counselling Centre**
- **Prevent.Resist.Support.** Seek personal support or learn more about sexual violence prevention and resistance education through the **Office of Sexual Violence Prevention, Resistance & Support**
- Explore professional development opportunities through **Continuing Education**



[experience.uwindsor.ca](https://experience.uwindsor.ca)

## Student Recruitment

Phone: 519-973-7014

Toll-Free: 1-800-864-2860

Email: [info@uwindsor.ca](mailto:info@uwindsor.ca)

## WINONE Office

Phone: 519-253-3000, Ext. 2560

Email: [winone@uwindsor.ca](mailto:winone@uwindsor.ca)

## Career Development and Experiential Learning

Web: [uwindsor.ca/cdel](https://uwindsor.ca/cdel)

Email: [careerservices@uwindsor.ca](mailto:careerservices@uwindsor.ca)