



University  
of Windsor



**CIVIL ENGINEERING  
EXPERIENCE MAP**

# CIVIL ENGINEERING



## HIGHLIGHTS AND SKILLS

### PROGRAM HIGHLIGHTS


#### Civil Engineering

Build a bridge to success with our civil engineering program where you'll get a more comprehensive education than in the specialized programs offered at other schools. UWindsor's engineering programs have the highest level of accreditations, and our civil engineering program is no exception. Our civil degree is versatile and widely recognized in the industry.

**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, assessing, building, and overseeing the construction of efficient, fit-for-purpose civil projects
- Understanding foundational topics in construction, geotechnical, structural, municipal, transportation, hydraulic, and water resource engineering
- 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
- Paying keen attention to detail and producing error-free work to precise quality standards
- Writing, preparing, and presenting detailed technical reports, presentations, and resources to engage diverse audiences and communicate work

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

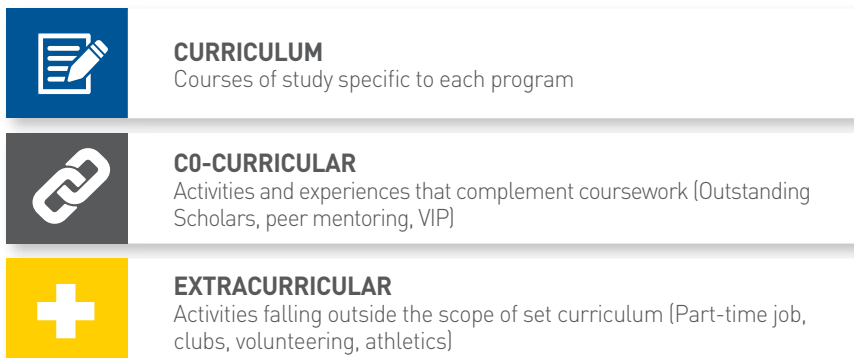
## BUILD YOUR SKILLS AND EXPERIENCE

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.

## 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

## FIRST YEAR

### ACADEMICS

*Your coursework*



- Take required courses that are common for all first-year engineering students to provide flexibility in program choice
- Review degree course requirements
- Begin thinking about specific aspects of Civil Engineering to focus on for later years
- 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**

## 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 **HIP**
- Begin taking courses in accordance with Civil Engineering major requirements
- 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 required courses for your degree
- Apply to graduate through **UWinsite Student Portal**
- Work with a faculty member on a research project or publication **HIP**
- Consider completing required courses for **Honours Certificate in Environmental Engineering** to pair with degree
- Choose a capstone project to optimize your senior experience **HIP**
- Complete all required technical and non-technical electives

### EXPERIENCE

*Ways to get involved*



- Explore co-op options and consider applying in fall of second year **HIP**
- Investigate research opportunities as part of the **Outstanding Scholars** program **HIP**
- Gain experience by taking on a summer job
- Research student exchange opportunities for middle years **HIP**
- Join a club like the **Engineering Student Society, Engineers Without Borders, or Concrete Canoe Team**
- 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

- Volunteer at a local civil engineering firm to network with industry professionals
- Participate in the **UWill Discover** undergraduate research conference **HIP**
- Apply to co-op in fall of second year **HIP**
- Complete co-op work term I in the summer of second year and work term II in winter of third year **HIP**
- Apply for student exchange **HIP**
- 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

- Join a professional association in your field such as the **Canadian Society for Civil Engineering**
- Complete co-op work term III in the fall semester **HIP**
- Conduct field research with faculty member **HIP**
- Become a tutor for **Students Offering Support (SOS)** **HIP**
- Utilize your knowledge and skills to complete a design experience project in the final year collaborative capstone course **HIP**
- Run for class representative on **Department Council**

### CAREER

*Plan ahead for what's next*

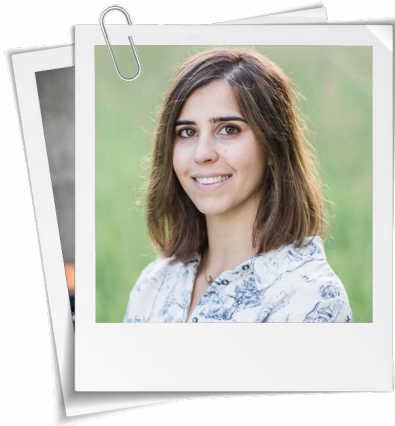


- Create a list of things that you enjoy, areas in which you excel, and your skills
- Meet with a career advisor in **Career Development and Experiential Learning (CDEL)** for help developing a plan for your future years
- Consider a career assessment appointment to help you identify possible career 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
- Drop in to meet with one of **CDEL's** peer advisors 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 industry networking events
- Attend the engineering job fair in June and the annual job fair in January
- Explore further educational opportunities by attending the **Graduate and Professional Schools Fair** and researching admission requirements for programs you are interested in
- Create a **LinkedIn** profile and have it critiqued
- 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
- Use **InterviewStream** to practice your interview skills online
- Set up an in-person 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**
- Attend the **engineering job fair** in June and the **annual job fair** in January

# LIFE AFTER GRADUATION



Participating as the student representative on the Civil and Environmental Engineering Faculty Committee helped me better my communication skills, taught me how to work with others toward a common goal, and improved my time management skills. I was given the opportunity to step out of the technical bubble and consider the bigger picture. Looking back, I feel grateful for working with professors that valued my input and implemented some of my ideas."

*Stephanie Dalo – BASc in Civil Engineering*

**51** NUMBER OF GRADUATES (2018)

**91.2%**

**EMPLOYMENT RATE OF GRADUATES**

*(OUGS Engineering, 2017)*

## CAREER TRACKS\*

Assembly maintenance  
Civil engineer  
Concrete engineer  
Consultant  
Design engineer  
Environmental specialist

Facility manager  
Financial director  
GIS modeler  
Industry trainer  
Logistician  
Marketing manager

Office manager  
Operations director  
Policy analyst  
Professor  
Project manager  
Quality assurance supervisor

Research co-ordinator  
Structural engineer  
Structural inspector  
Teacher  
Transportation engineer  
Water resources engineer

*\* Additional education and/or training required for some of the above careers.*



## COMMON SECTORS FOR GRADUATES

- Academia and research
- Construction, contracting, and development
- Education
- Engineering
- Energy/utilities sector

- Government
- Industry and manufacturing
- Logistics and operations
- Patent/intellectual property law
- Technical consulting, sales, training

## CAREER-READINESS COMPETENCIES



CRITICAL THINKING  
AND PROBLEM  
SOLVING



PROFESSIONALISM  
AND WORK ETHIC



TEAMWORK AND  
COLLABORATION



COMMUNICATION





# CAMPUS RESOURCES

- Research scholarships and bursaries through the **Student Awards and Financial Aid Office**
- Visit **Leddy Library** and the **Writing Support Desk** for help with academic assignments
- Learn about our **Bounce Back** program designed to support students struggling to find both personal and academic success in their post-secondary experience
- Build leadership skills and find leadership opportunities at the **Leadership Hub**
- Experience international service learning on an **Alternative Spring Break** team
- Get advice and support about your academic status by making an appointment with **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**
- Look into the **Ignite: Work Study** program for on-campus employment opportunities
- Get assistance developing your career plan and job search skills from **Career Development and Experiential Learning**
- Consult with the **EPICentre** if you are interested in starting your own business
- Broaden your cultural awareness through the **International Student Centre** and **Student Exchange Office**
- Find support for Indigenous learners and broaden your understanding of Indigenous culture by visiting **Turtle Island**
- Tend to your health and wellness with support from **Student Health Services** and **Lancer Recreation**
- Receive confidential mental health counselling delivered by trained professionals at the **Student Counselling Centre**
- Seek personal support or learn more about sexual violence education through the **Sexual Misconduct Response and Prevention Office**
- Explore professional development opportunities through **Continuing Education**

*We've got you covered!*

## GET IN TOUCH

### STUDENT RECRUITMENT

Phone: 519-973-7014  
Toll-Free: 1-800-864-2860  
[ask.uwindsor.ca](mailto:ask.uwindsor.ca)

### WINONE OFFICE

Phone: 519-253-3000, Ext. 2560  
Email: [winone@uwindsor.ca](mailto:winone@uwindsor.ca)

### CAREER DEVELOPMENT AND EXPERIENTIAL LEARNING

Phone: 519-253-3000, Ext. 3895  
Email: [careerservices@uwindsor.ca](mailto:careerservices@uwindsor.ca)