



University  
of Windsor



**INDUSTRIAL  
ENGINEERING  
EXPERIENCE MAP**

# INDUSTRIAL ENGINEERING



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**INDUSTRIAL ENGINEERING (MINOR IN BUSINESS ADMINISTRATION)**

## HIGHLIGHTS AND SKILLS

### PROGRAM HIGHLIGHTS


#### Industrial Engineering

Hold the key to efficiency and cost effectiveness by learning to streamline production systems and design flexible manufacturing approaches. Through co-op, internships, and other industry partnerships, our curriculum emphasizes hands-on skills as well as theory. There's even an option to minor in Business. We teach transferable skills like leadership and we hire experts to teach communication skills.

**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

- Understanding and implementing efficient processes for corporate logistics, warehousing and inventory management, and manufacturing supply chains
- Understanding and adhering to specific health, safety, and quality control frameworks and regulations
- Integrating human factors in product design
- 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

 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.

	<b>CURRICULUM</b> Courses of study specific to each program
	<b>CO-CURRICULAR</b> Activities and experiences that complement coursework (Outstanding Scholars, peer mentoring, VIP)
	<b>EXTRACURRICULAR</b> Activities falling outside the scope of set curriculum (Part-time job, clubs, volunteering, athletics)



## 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*



- 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 advisors or associate chair/head
- Receive academic support, mentoring and advising from the **WINONE** office in the **Centre for Engineering Innovation**

## 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**
- Aid fourth-year students with their research for their final year capstone project **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**, **SAE Baja** or **Students Offering Support**
- 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

## 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

## MIDDLE YEARS

- Take required courses and check in with an 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 Industrial Engineering major requirements
- Consider completing Business Administration minor to pair with degree
- Seek out courses that offer field experience **HIP**
- Start taking courses required as pre-requisites for graduate/professional school
- Consider declaring a minor and/or specialization

- Join a professional association in your field such as the **Institute of Industrial and Systems Engineers**
- Participate in **UWill Discover** undergraduate research conference **HIP**
- Seek out opportunities to get experience at a local engineering firm and network with industry professionals
- Apply to co-op in fall of second year **HIP**
- Complete a 12 to 16 month co-op placement starting in the summer after second or 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
- Look for a leadership role in a club or society

- 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
- Explore further educational opportunities by attending the **Graduate and Professional Schools Fair** and researching admission requirements for programs you are interested in
- Attend the **engineering job fair** in June and the **annual job fair** in January
- 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

## 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 Civil, Environmental, Electrical or Mechanical Engineering** to pair with degree
- Choose a capstone project to optimize your senior experience **HIP**
- Explore professional development opportunities through **Continuing Education**

- Take part in **SAE Baja** competition against students from universities all over North America
- Become a tutor for **Students Offering Support (SOS)** **HIP**
- Utilize your knowledge and skills to complete a design experience project in your final-year collaborative capstone course **HIP**
- Complete all required technical and approved non-technical electives

- 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
- Meet employers at the **engineering job fair** in June and the **annual job fair** in January
- Compose a portfolio of relevant academic and work experience
- Explore professional development opportunities through **Continuing Education**

# LIFE AFTER GRADUATION

35 **NUMBER OF GRADUATES (2018)**

91.2%

**EMPLOYMENT RATE OF GRADUATES**

*Employment rate of graduates 2 years following degree completion (OUGS Engineering, 2017)*

## CAREER TRACKS\*

Assembly maintenance  
Consultant  
Design engineer  
Doctor  
Facility manager  
Financial director  
Industrial engineer

Industry trainer  
Lawyer  
Logistician  
Marketing manager  
Materials manager  
Office manager  
Operations director

Packaging specialist  
Performance specialist  
Policy analyst  
Process engineer  
Professor  
Project manager  
Public affairs officer

Quality assurance supervisor  
Quality engineer  
Research co-ordinator  
Simulation analyst  
Strategic logistics  
Teacher  
Technical specialist

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



## COMMON SECTORS FOR GRADUATES

- Academia and research
- 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)