

John M. Thompson Centre for Engineering Leadership and Innovation

INTRODUCTION TO

INTEGRATED

ENGINEERING

AGENDA

- A Multidisciplinary Approach
- Recent Alumni
- Our Program
- Events
- Questions

A MULTI-DISCIPLINARY APPROACH

Depth & Expertise

- Integration of multiple systems of different kinds
- Technical integration of multiple engineering disciplines in single systems

Breadth & Adaptability

- Core courses from multiple disciplines
- Choice of technical electives

Connections

- Building strong relationships across disciplines

Diverse Expertise

- Faculty with research and industry experience in:
 - systems/civil/mechanical/materials engineering
 - technology commercialization
 - engineering management
 - sustainability



Sun Yi

BESc. 18'

Analyst, **Glenview
Capital**



Jake Carman

BESc. 18'

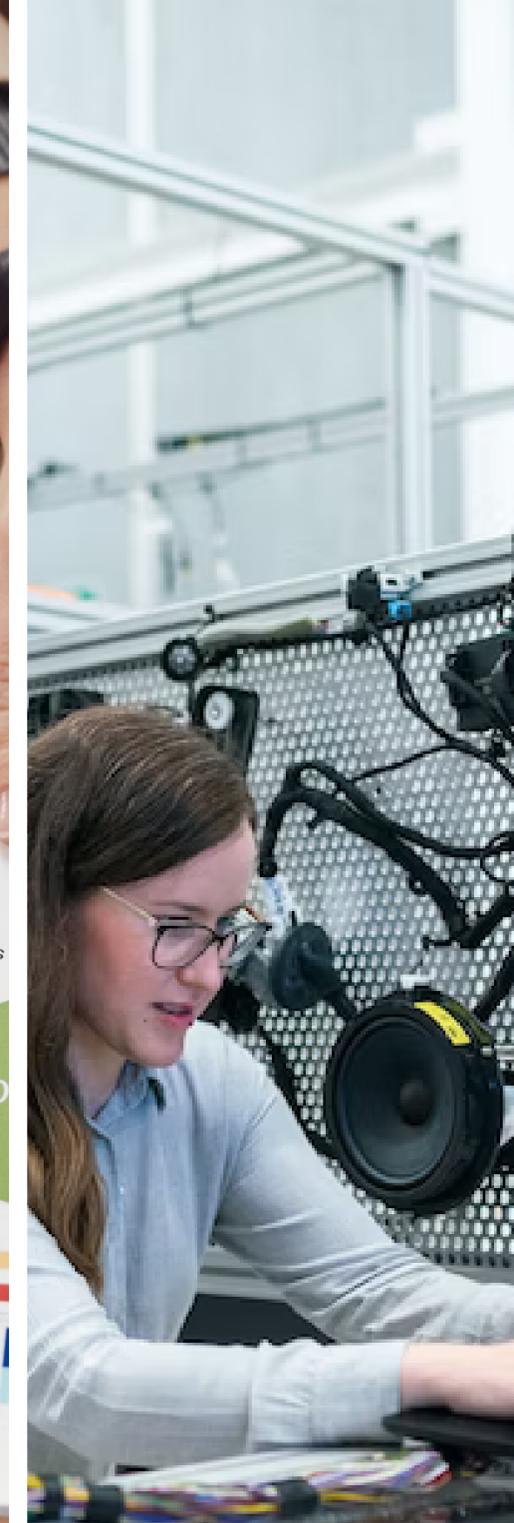
Water Resource Engineer,
**Ecosystem Recovery
Inc.**



Jake Sawyer

BESc. 18'

Strategy Analyst,
Accenture

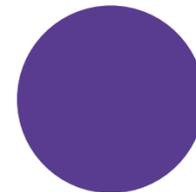


Timothy Kuk

BESc. 18'

Test Engineering
Specialist, **L3 WESCAM**

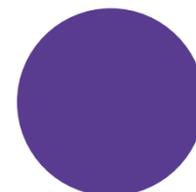
RECENT ALUMNI



Natalya Whitla, BESC. 22' + HBA

Associate Consultant, **Bain & Company**

Prior to joining **Bain**, Natalya worked as a consulting summer analyst at **Accenture** and was apart of engineers without border, working for **Ensibuuko** as a fundraising Associate.



John Vergeer, BESC. 22' + HBA

Analyst, **Roland Berger**

Prior to joining **Roland Berger**, John worked as a demand planning analyst for **Lactalis Canada** and as a technology risk consulting intern at **Earnest & Young**.



Colin Bryan, BESC. 22'

Analyst, **Accuracy**

Prior to joining **Accuracy**, he worked as a corporate development Intern at **Pivotree** and Data Mining intern at **Environics**. Colin is pursuing a CFA and P.Eng certification in his current role.

OUR PROGRAM

Engineering Leadership & Innovation

- **Core Courses:**
 - ELI 3000 Managing the Innovation Process
 - ELI 4100 Engineering Leadership
- **Electives (2 of 4):**
 - ELI 3100 Planning and Project Management
 - ELI 3200 New Venture Creation
 - ELI 4200 The Entrepreneurial Environment
 - ELI 4300 Risk Assessment & Management

Program Tracks

- **Integrated Engineering:** non-technical electives included
- **HBA Option:** Business courses included
- **Law Option:** Law course options included

Themed Modules & Technical Electives

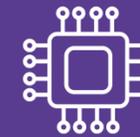
- Machine learning
- Manufacturing processes
- Interdisciplinary research

Fundamental Engineering Courses



Chemical and Biochemical

- CBE 2291 Computational Methods for Engineers
- CBE 3322 Heat Transfer Operations



Electrical and Computer

- ECE 2238b Introduction to Electrical Engineering
- ECE 3374a Introduction to Electronics for MSE



Integrated Engineering & Design Courses

- IE 2297 Integrated System Engineering & Design
- IE 4499 Interdisciplinary Engineering Design Project



Civil and Environmental

- CEE 2220 Introduction to Structural Theory
- CEE 2221 Structural Theory and Design II



Mechanical and Materials

- MSE 2213b Dynamics
- MME 2285b Engineering Experimentation
- MSE 3360b Finite Element Methods

EVENT #1:

Engineering Leadership Seminar with **MARILYN SPINK**

An award-winning engineer with 25+ years of global experience in **large-scale engineering projects** that also facilitated economic development and environmental sustainability in Madagascar, Tunisia, Kentucky, and Canada. Marilyn has also served on corporate boards and on the Professional Engineers of Ontario Council.

She mentors many engineers to take on leadership roles in the profession and will explain the increasing demand for Engineering graduates who have **integrated knowledge** that does not fit into traditional areas of engineering.

Location - ACEB 1410 Classroom

Date - January 18th, 12:30 - 1:30 PM



EVENT #2:

IE MEET & GREET

Come meet faculty members and student representatives at the event!

Location - ACEB 1420

Date - January 25th, 12:30 - 1:30 PM

Food - Pizza Provided

Questions - Email jli3442@uwo.ca

Interest Form/Registration -
<https://forms.office.com/r/TbYsUjZhPu>



APPENDIX IE GRADUATES

Integrated Engineering graduates were working in (but not limited to) the following roles (as of 2022):

- **Water Resources Manager**
- **Product Manager**
- Junior Engineer/Scientist
- **Test Engineering Specialist**
- Investment Analyst
- Enterprise Account Associate
- **Vice President of Operations**
- Franchising Manager
- Business Analyst
- Implementation Consultant
- **Electrical Designer**
- Founder (entrepreneur)
- Strategy Analyst
- Project Coordinator
- **Project Engineer**
- **Mechanical/Automation Designer**
- Technical Specialist
- **Continuous Improvement and Reliability Engineer**
- Component Engineer
- Technical Analyst in Consulting
- **Asset Management**
- **Management Consultant**

Their workplaces include Amazon, Telus, BMO, Deloitte, IBM, Kearney, Canada Post Pension Plan, Kinectrics, Ameresco Canada, KPMG, Accenture, and many others.