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  
BSc. 18'  
Analyst, Glenview Capital

Jake Carman  
BSc. 18'  
Water Resource Engineer, Ecosystem Recovery Inc.

Jake Sawyer  
BSc. 18'  
Strategy Analyst, Accenture

Timothy Kuk  
BSc. 18'  
Test Engineering Specialist, L3 WESCAM
Natalya Whitla, BESc. 22' + HBA
Associate Consultant, Bain & Company
Prior to joining Bain, Natalya worked as a consulting summer analyst at Accenture and was a part 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.
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

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

Fundamental Engineering Courses

**Chemical and Biochemical**

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

**Civil and Environmental**

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

**Electrical and Computer**

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

**Mechanical and Materials**

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

**Integrated Engineering & Design Courses**

- IE 2297 Integrated System Engineering & Design
- IE 4499 Interdisciplinary Engineering Design Project
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
Integrated Engineering graduates were working in (but not limited to) the following roles (as of 2022):

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