



Industrial Engineering Capstone Design

The Department of Mechanical and Industrial Engineering continues its Capstone Design course in 2015-16. Students will apply their skills to real world, externally sourced engineering design projects. This document invites organizations to state their industrial engineering design needs.

What We Offer Partner Organizations

- A team of three or four 4th-year industrial engineering students to address your design need
- Approximately 260 hours of coursework per student, from September 2015 to April 2016
- A faculty Supervisor for each project
- Faculty and staff who will handle course and logistical issues
- The potential for ongoing relationships with students, faculty members, and the Department

What We Need From Partner Organizations

- Real world needs with moderate-to-high upside value and low downside risk
- Timely access to the information and resources needed to address your Statement of Need
- Approximately 1-2 hours per week to support each of your student teams
- Occasional feedback on student and team performance

For More Information

Please contact Prof. Greg A. Jamieson, Clarice Chalmers Chair in Engineering Design and Capstone Coordinator at jamieson@mie.utoronto.ca

Key Dates

- June 30, 2015 – Statements of Need (SONs) submitted by partner organizations
- August 14, 2015 – Students matched to Client projects
- April 9, 2016 – Capstone Design Showcase (TBC)

Partner Organization Statement of Need

This Statement of Need (SON) provides students and faculty with a high level overview of your Organization's need. The SON will be used to match your design challenge with students and faculty members in the Industrial Engineering Program. The best SONs describe needs that have the potential for a high upside value, where the downside risks are minimal, and that provide both the students and your organization with a rich learning opportunity. The Capstone administrators will work with your organization to produce an accurate and compelling SON to iteratively refine it into formal Engineering Requirements.

Organization Information

Organization: _____ Website: _____
 Contact: _____ Position: _____
 Email: _____ Tel: _____

Statement of Need

Please be concise, emphasize a need, opportunity, or problem, and allow for multiple approaches and solutions.

Negotiations regarding non-disclosure / intellectual property will be required

Competencies

Please check all of the Industrial Engineering competencies that you anticipate being relevant to your organization's need.

Operations Research

- Discrete Event Simulation
- Mathematical Programming; Optimization
- Statistical Decision Analysis; Stochastic Models

Information Engineering

- Decision Support Systems
- Data and knowledge-based systems
- Business Process Systems

Human Factors

- Interaction Design
- Applied Statistics
- Work or Tool Design

Partner Organization SON Assessment

Please provide a candid self-assessment of your SON against the following criteria:

Upside Value	If the project is successful, how valuable are the results to your organization?	Low <input type="checkbox"/>	Medium <input type="checkbox"/>	High <input type="checkbox"/>
Downside Risk	If the project is unsuccessful, what is the potential impact on your organization?	Low <input type="checkbox"/>	Medium <input type="checkbox"/>	High <input type="checkbox"/>
Learning Opportunity	The extent of opportunity for students to refine existing skills, or learn new tools and skills?	Low <input type="checkbox"/>	Medium <input type="checkbox"/>	High <input type="checkbox"/>