

MASTER OF ENGINEERING **INDUSTRIAL ENGINEERING PROGRAM**

Note: Web Registration is available to M.Eng. (course option) students only.
For Program Requirements see Section 2 below.

1. Advising Information for Web Registration

Go to MyConcordia Portal and select the section for Registration. Follow the instructions.

Link to School of Graduate Studies on-Line Registration

<http://www.concordia.ca/encs/mechanical-industrial/programs/graduate/mechanical-engineering-meng.html>

M.Eng. Industrial Students are permitted:

- To register for courses in the M.Eng. Industrial program curriculum ONLY
- New Students can register for a maximum of 2 courses in their first semester
- Current Students can register for more than 2 courses as long as they are in good academic standing

M.Eng. Industrial Students are NOT permitted:

- To register for Audit

Permission is required for the following:

- To register for Qualifying (QP) courses (e.g. English courses) before being permitted to register for Engineering courses
- To register for courses outside of the Department (e.g. INSE courses)
- To register for courses without the listed Pre-Requisites

Students will be blocked from registering for the following reasons:

- Academic Block – GPA is below 3.00, F grade on record, more than one C grade on record: Permission from Department is required. Go to EV 4.150.
- Accounts Restriction, outstanding balance of fees due. Go to Birks Students Service Centre, LB-185.
- Student Visa, CAQ Block, Go to International Students Office, GM 330.

For more information, please contact:

Charlene Wald, EV 4.150, Tel: 514 848-2424 ext. 3131 – cwald@encs.concordia.ca

2. Industrial Engineering Program Requirements

Students must complete 45 credits distributed as follows and must specialize in ONE of the following branches:

- I. Lean Systems Engineering
- II. Supply Chain Engineering
- III. Industrial Optimization and Systems Analytics
- IV. Reliability and Maintenance Management
- V. General Stream (no option selected)

I. Lean Systems Engineering (45 credits)

Industrial Engineering Core Courses (5 courses - 25 credits)

INDU 6121 Applied Optimization
INDU 6211 Production Systems and Inventory Control
INDU 6310 Applied Probability and Statistics for Engineers
INDU 6311 Discrete Systems Simulation
INDU 6990 Industrial Engineering Capstone Project (**9 credits**)

Area courses (4 courses -16 credits)

INDU 6221 Lean Enterprise
INDU 6241 Lean Manufacturing
INDU 6251 Facilities Planning and Warehouse Operations
INDU 6321 Introduction to Six Sigma

Elective courses (maximum 1 course - 4 credits)

INDU 6151 Decision Models in Service Sector
INDU 6351 System Reliability
INDU 6381 Application of Reliability Engineering
INDU 6391 Reliability and Maintenance Program for Design and Manufacturing
INDU 6421 System Safety Engineering and Management
INDU 6411 Human Factors Engineering
INDU 6521 Quantitative Methods in Healthcare Systems

II. Supply Chain Engineering (45 credits)

Industrial Engineering Core Courses (5 courses - 25 credits)

INDU 6121 Applied Optimization
INDU 6211 Production Systems and Inventory Control

INDU 6310 Applied Probability and Statistics for Engineers
INDU 6311 Discrete Systems Simulation
INDU 6990 Industrial Engineering Capstone Project (**9 credits**)

Area courses (minimum 4 courses - 16 credits)

INDU 6141 Logistics Network Models
INDU 6151 Decision Models in Service Sector
INDU 6161 Design and Operations of Supply Chain Networks
INDU 6231 Scheduling Theory
INDU 6251 Facilities Planning and Warehouse Operations
INSE 6290 Quality in Supply Chain Design
INSE 6300 Quality Assurance in Supply Chain Management

Area Electives Courses (maximum 1 course - 4 credits)

INDU 6361 Discrete Optimization
INDU 6371 Stochastic Optimization
INDU 6351 System Reliability
INDU 6391 Reliability and Maintenance Program for Design and Manufacturing

III. Industrial Optimization and Systems Analytics (45 credits)

Industrial Engineering Core Courses (5 courses - 25 credits)

INDU 6121 Applied Optimization
INDU 6211 Production Systems and Inventory Control
INDU 6310 Applied Probability and Statistics for Engineers
INDU 6311 Discrete Systems Simulation
INDU 6990 Industrial Engineering Capstone Project (**9 credits**)

Area courses (minimum 4 courses - 16 credits)

INDU 6151 Decision Models in Service Sector
INDU 6181 Systems Analytics
COMP 6321 Machine Learning
INDU 6361 Discrete Optimization
INDU 6371 Stochastic Optimization
INDU 6521 Quantitative Methods in Healthcare Systems

Area Elective Courses (maximum 1 course - 4 credits)

Courses must be chosen from the [Engineering and Computer Science Courses](#) section

IV. Reliability and Maintenance Engineering

The reliability and maintenance option aims at training engineers and computer scientists who have a desire to explore a career in the reliability and maintenance management area. Students in this option are strongly suggested to select their elective courses from the department most closely relevant to their undergraduate studies.

Area Core Courses (41 Credits)

INDU 6310 Applied Probability and Statistics for Engineers

INDU 6321 Introduction to Six Sigma

INDU 6351 System Reliability

INDU 6381 Application of Reliability Engineering

INDU 6391 Reliability and Maintenance Program for Design and Manufacturing

INDU 6421 System Safety Engineering and Management

INDU 6331 Advanced Quality control

INDU 6341 Advanced Concepts in Quality Improvement

INDU 6990 Industrial Engineering Capstone Project (**9 credits**)

Area Elective Courses (maximum 1 course - 4 credits)

Courses must be chosen from the [Engineering and Computer Science Courses](#) section

V. General Stream (no option selected)

Industrial Engineering Core Courses (5 courses - 25 credits)

INDU 6121 Applied Optimization

INDU 6211 Production Systems and Inventory Control

INDU 6310 Applied Probability and Statistics for Engineers

INDU 6311 Discrete Systems Simulation

INDU 6990 Industrial Engineering Capstone Project (**9 credits**)

Area Electives

A minimum of 5 courses - 20 credits must be completed from courses listed under Topic Area E12.

Topic Area E12

INDU 6121 Applied Optimization

INDU 6141 Logistics Network Models (Prerequisite: INDU 6121)

INDU 6151 Decision Models in Service Sector

INDU 6161 Design and Operations of Supply Chain Networks (Prerequisite:INDU 6121)

INDU 6181 Systems Analytics

INDU 6211 Production Systems and Inventory Control (Prerequisite: INDU 6121)

INDU 6221 Lean Enterprise

INDU 6231 Scheduling Theory

INDU 6241 Lean Manufacturing

INDU 6251 Facilities Planning and Warehouse Operations

INDU 6310 Applied Probability and Statistics for Engineers

INDU 6311 Discrete Systems Simulation

INDU 6321 Introduction to Six Sigma

INDU 6331 Advanced Quality control

INDU 6341 Advanced Concepts in Quality Improvement

INDU 6351 System Reliability

INDU 6361 Discrete Optimization

INDU 6371 Stochastic Optimization

INDU 6381 Application of Reliability Engineering

INDU 6391 Reliability and Maintenance Program for Design and Manufacturing

INDU 6411 Human Factors Engineering

INDU 6421 System Safety Engineering and Management (Prerequisite: INDU 6310)

INDU 6521 Quantitative Methods in Healthcare Systems (Prerequisite: INDU 6121)

INDU 6611 Systems Analytics (Prerequisite: INDU 6310 and INDU 6121)

INDU 6990 Industrial Engineering Capstone Project (**9 Credits**)

