Analytics Emphasis Requirements Prior to June 2019

**Note:** only students who began their MEng studies prior to June 2019 can qualify for the Emphasis in Analytics using the requirements below. Students who start their studies September 2019 and after must meet the most recent Emphasis in Analytics requirements listed on https://gradstudies.engineering.utoronto.ca/professional-degrees/emphasis-in-analytics/

Master of Engineering (MEng) students in graduate units in the departments of Chemical Engineering & Applied Chemistry, Civil Engineering, Electrical & Computer Engineering, and Mechanical & Industrial Engineering can earn an Emphasis in Analytics by successfully completing four courses from the two lists presented below. At least one (1) course must be from the list of core courses. The other courses must be selected from the list of elective courses.

**Core Courses**

MIE 1624H: Introduction to Data Science and Analytics  
ECE1513H: Introduction to Machine Learning (exclusion: ECE1504)

**Elective Courses**

APS 502H: Financial Engineering  
APS 1017H: Supply Chain Management and Logistics  
APS 1022H: Financial Engineering II  
APS 1040H: Quality Control for Engineering Management  
APS 1050H: Blockchain Technologies  
APS 1051H: Investment Portfolio Management  
APS 1052H: A.I. in Finance  
CHE 507H: Data-based Modelling for Prediction and Control  
CHE1147H: Data Mining in Engineering  
CHE 1148H: Process Data Analytics  
CHE 1434H: Six Sigma for Chemical Processes  
CIV 1504H: Applied Probability and Statistics for Civil Engineering  
CIV 1506H: Freight Transportation and ITS Applications  
CIV 1507H: Public Transport  
CIV 1532H: Fundamentals of ITS and Traffic Management  
CIV 1538H: Transportation Demand Analysis  
CEM 1002H: Empirical Study of Cities  
ECE 537H: Random Processes
ECE1504H: Statistical Learning (new course offered in the 2018-2019 academic year; exclusion: ECE1513)
ECE 1505H: Convex Optimization
ECE 1510H: Advanced Inference Algorithms
ECE 1657H: Game Theory and Evolutionary Games
ECE 1778H: Creative Applications for Mobile Devices
ECE 1779H: Introduction to Cloud Computing
MIE 562H: Scheduling
MIE 1413H: Statistical Models in Empirical Research
MIE 1501H: Knowledge Modelling and Management
MIE 1512H: Data Analytics
MIE 1513H: Decision Support Systems
MIE 1620H: Linear Programming and Network Flows
MIE 1621H: NonLinear Optimization
MIE 1622H: Computational Finance and Risk Management
MIE 1623H: Introduction to Healthcare Engineering
MIE1628H: Big Data Science
MIE 1653H: Integer Programming Applications
MIE 1721H: Reliability
MIE 1723H: Engineering Asset Management
MIE 1727H: Statistical Methods of Quality Assurance