

Geomatics Engineering MEng (course-based) Regulations

Course-based Master (MEng) students must take a **minimum of 10 courses; at least 6 must be 600-level courses; at least 4 must be ENGO 600-level courses.** (<https://www.ucalgary.ca/pubs/calendar/grad/current/engineering-geomatics-eng.html>)

MEng students with a Geomatics Degree:

A minimum of 6 graduate level courses selected from lists A, B, D, with at least 4 of these courses from list B.
Up to 4 undergraduate level courses from lists C2 and E.

MEng students with a non-Geomatics Degree:

A minimum of 6 graduate level courses selected from lists A, B, D, with at least 4 of these courses from list B.
Up to 4 undergraduate level courses from lists C1, C2 and E.

2019-20 List of Courses

A. ENGG Courses:

- ENGG 687 – Ethics, Law, and the Engineering Profession
- ENGG 681 – Engineering Tools
- ENGG 684 – Introduction to Project Management
- ENGG 682 – Sustainability
- ENGG 683 – Innovation and Entrepreneurship

B. ENGO Graduate Courses

- ENGO 610 – Geospatial Vision
- ENGO 615 – Advanced Physical Geodesy
- ENGO 625 – Advanced GNSS Theory and Application
- ENGO 629 – Advanced Estimation Methods & Analysis
- ENGO 637 – Earth Observation for the Environment (ENEN 637)

- ENGO 623 – Inertial Surveying & INS/GPS Integration
- ENGO 612 – Wellbore Positioning by MWD sensors in the Directional Drilling
- ENGO 645 – Spatial Databases and Data Mining
- ENGO 694 – Advanced Topics in Sensor Web and Internet of Things

- ENGO 638 – GNSS Receiver Design

- ENGO 601 – Graduate Project
- ENGO 697 – Directed Studies

C1. ENGO Undergraduate Courses – Fundamentals

- ENGO 435 – Remote Sensing
- ENGO 351 – Introduction to Geospatial Information Systems
- ENGO 423 – Geodesy
- ENGO 431 – Principles of Photogrammetry

C2. ENGO Undergraduate Courses – Advanced Topics

ENGO 451 – Design and Implementation of Geospatial Information Systems
ENGO 531 – Advanced Photogrammetric and Ranging Techniques
ENGO 545 – Hydrographic Surveying
ENGO 563 – Data Analysis in Engineering
ENGO 573 – Digital Terrain Modelling
ENGO 579 – Survey Law and Practice
ENGO 455 – Land Tenure and Cadastral Systems
ENGO 465 – Satellite Positioning
ENGO 551 – Advanced Geospatial Topics
ENGO 559 – Digital Imaging and Applications
ENGO 581 – Land Use Planning
ENGO 583 – Environmental Modelling (ENEN 635)

D. Recommended Non-ENGO Graduate Courses

ENEN 637 – Earth Observation for the Environment (ENGO 637)
GEOG 603 – Remote Sensing: Basics & Beyond
GEOG 605 – Statistic Analysis: Basic & Beyond
GEOG 607 – Geographic Information Systems: Basics & Beyond
GOPH 671 – Inverse Theory and Applications I
ENEL 671 – Adaptive Signal Processing
ENEL 645 – Data Mining & Machine Learning
CPSC 615 – Computational Techniques for Graphics and Visualization
ENEN 635 – Environmental Modelling (ENGO 583)
GEOG 633 – Research & Applications in Remote Sensing
GEOG 639 – Advanced Spatial Analysis and Modeling
GEOG 647 – Advanced Research and Applications In Geographic Information Systems
GOPH 673 – Inverse Theory and Applications II

E. Recommended Non-ENGO Undergraduate Courses

CPSC 571 – Design & Implement Database Systems
CPSC 471 – Data Base Management Systems
GEOG 451 – Urban Systems Development

Courses not listed must be pre-approved by the Graduate Program Director.