

## GRADUATE PROGRAM SPECIALIZATION COURSES

Specialization	Course Numbers
Geodesy, Remote Sensing and Earth Observation	612, 615, 629, 637, 667, 681, 691
Positioning, Navigation and Wireless Location	620, 623, 625, 629, 633, 638, 663
Digital Imaging Systems	610, 623, 629, 639, 642, 667
GIScience and Land Studies	617, 645, 658, 661, 667, 675, 693, 694

### Course Titles

ENGO 610: Geospatial Vision  
 ENGO 612: Wellbore Positioning by MWD Sensors in the Directional Drilling Engineering  
 ENGO 615: Advanced Physical Geodesy  
 ENGO 617: Participatory Geographic Information Systems (PGIS)  
 ENGO 620: Estimation for Navigation  
 ENGO 623: Inertial Surveying and INS/GPS Integration  
 ENGO 625: Advanced GNSS Theory and Applications  
 ENGO 629: Advanced Estimation Method and Analysis  
 ENGO 633: Atmospheric Effects on Satellite Navigation Systems  
 ENGO 637: Earth Observation for the Environment  
 ENGO 638: GNSS Receiver Design  
 ENGO 639: Advanced Topics in Digital Image Processing  
 ENGO 642: Optical Imaging Metrology  
 ENGO 645: Spatial Databases and Data Mining  
 ENGO 658: Geocomputation  
 ENGO 667: Advanced Topics in Photogrammetry  
 ENGO 675: Spatial Statistics  
 ENGO 681: Advanced Global Geophysics and Geodynamics  
 ENGO 691: Polarimetric Synthetic Aperture Radar  
 ENGO 693: Cadastral Information Systems  
 ENGO 694: Advanced Topics in Sensor Web and Internet of Things

Graduate course descriptions can be found in the [University of Calgary Graduate Calendar](#).

Students are also encouraged to take relevant courses from other departments to widen the scope of their studies and strengthen their thesis research. Such courses should be approved by the student's supervisor.