

**Concordia University**  
Department of Geography, Planning and Environment  
**Introduction to Geographic Information Systems**  
**May 27<sup>th</sup> – May 31<sup>st</sup> 2019**

**CONTENT OF THE PROGRAM**

**Course runs from 9Am to 5PM, with a lunch break and 2 coffee/tea breaks (provided)**

**Two-day module**

**Certificate: Introduction to Geographic Information Systems (Using QGIS)**

- Introduction to GIS, Spatial data models and QGIS
- Coordinate systems and projections in QGIS
- Data collection and visualization: GPS field exercise
- Visualizing data using Google Earth
- Making maps in QGIS (cartographic elements and exporting finished maps)
- GIS analysis in QGIS – Reproject, query
- Georeferencing data and digitizing vector data from georeferenced satellite basemaps
- **Guest Lecture**

**Three-day module**

**Certificate: Introduction to Geographic Information Systems (Using QGIS and Carto)**

- Two-day module content
- GIS analysis in QGIS – Reproject, query, buffer, clip, dissolve
- Making thematic maps in QGIS: finding, downloading, joining and querying Census data and Census boundaries
- Creating and sharing online maps
- **Guest Lecture**

**Four-day module**

**Certificate: Introduction to Geographic Information Systems (Using QGIS, Carto and GRASS GIS)**

- Three-day module content
- Finding and preparing raster data for analysis (digital elevation and satellite images)
- Visualizing elevation and hillshade in QGIS
- Introduction to Satellite Image Classification using GRASS GIS
- **Guest Lecture**

**Five-day module**

**Certificate: Introduction to Geographic Information Systems (Using QGIS, Carto and GRASS GIS)**

- Four-day module content
- Introduction to geographic inquiry process and GIS project development
- Individual project support
- Presentation of Final Projects by participants