

GEOG 105, Introduction to Mapping, GPS, Remote Sensing and GIS

3 credits, 3 hours lecture, 3 hours lab

Course Description

The course will train students in the acquisition, presentation and interpretation of geospatial data. Topics will include understanding the nature of geographic data, scale, coordinate systems, and cartography, land survey systems, global positioning systems (GPS), vector and raster representations, and remote sensing through the use of geographic information systems (ArcGIS). Emphasis will be placed on practical applications, but some understanding of basic principles is also essential. Lab work will cover a broad spectrum of interest areas, but also linked where possible to environmental applications.

Pre and Co-requisites

None.

Course Learning Outcomes (CLOs)

Upon successful completion of the course, the student shall be able to:

CLO1 - Identify and effectively use GIS technologies with emphasis on ESRI's ArcGIS Desktop.

CLO2 - Explain topographic maps, map scales, symbols, and projection systems.

CLO3 - Explain GPS and GIS data and demonstrate this in data analyses and in mapping.

CLO4 - Describe and work with thematic maps and cartographic principles.

CLO5 - Work directly with remotely sensed images and create useable data.

CLO6 - Discuss the basic principles of remote sensing.

CLO7 - Explain GIS components and their functionality.

CLO8 - Describe GIS and illustrate applications at work, as well as in everyday life.

Evaluation

Assessment Type	Percentage
Lecture Exercises	10%
Lab Assignments	40%
Exams	50%
Total	100%

Course Completion Requirements

Minimum passing mark of D or 50% is required.

Grading Scale

4.0 Grade Scale	Alpha Grade	Percentage Grade
4.0	A+	93-100
4.0	A	85-92.9
3.7	A-	80-84.9
3.3	B+	77-79.9
3.0	B	74-76.9
2.7	B-	70-73.9
2.3	C+	67-69.9
2.0	C	64-66.9
1.7	C-	60-63.9
1.3	D+	55-59.9
1.0	D	50-54.9
0.0	F	0-49.9

Land Acknowledgement

We respectfully acknowledge that Keyano College is located on Treaty 8 territory, the traditional & contemporary meeting grounds and gathering places of the Denesuline, Cree and Métis Peoples of this region. Our name, Keyano (kiyânaw in nêhiyawêwin - Cree language), translates to “we, us, our” and speaks to the connection we have as a community and our commitment to being in right relationships with the First Peoples of these lands.

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