

COURSE NAME**COURSE NUMBER****I. COURSE DESCRIPTION**

This course is designed to provide the student with an understanding of Geographical Information Systems (GIS) and related technologies. The topics will deal with the theory, application and maintenance of a GIS, data collection, input and management.

II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:

(Generic skills learning outcomes placement on the course outline will be determined and communicated at a later date.)

Upon successful completion of the course the student will demonstrate an ability to:

1. Demonstrate a basic knowledge of Geographical Information Systems.

Potential Elements of the Performance:

- define a GIS
- discuss applications to specific fields of endeavour
- describe the various components of a GIS

2. Demonstrate an ability to search and query a GIS for a variety of applications.

Potential Elements of the Performance:

- use the ArcView software interface for moving around and displaying spatial information
- apply fundamental file management techniques for storing and retrieving GIS files
- demonstrate an ability to relate attribute information to spatial information
- define and describe the components of topology
- search and query a GIS database for a variety of applications
- perform spatial analysis for a small GIS project

3. Produce charts, graphs and presentation maps using a desktop GIS mapping system.

Potential Elements of the Performance:

- prepare charts and graphs for presentation
- prepare presentation plans including maps, charts, tables, graphs and other appropriate map information
- prepare a presentation layout for a small GIS project

COURSE NAME**COURSE NUMBER****II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:**

(Continued)

4. Describe spatial referencing systems.

Potential Elements of the Performance:

- define projection systems
- demonstrate an understanding of the Universal Transverse Mercator projection
- describe vector and raster spatial referencing techniques

5. Demonstrate a basic understanding of data input, output and data management methods.

Potential Elements of the Performance:

- demonstrate spatial and attribute data input
- digitise spatial information
- describe fundamental data security, integrity and updating issues

III. TOPICS

Note: Topics inherently overlap and are not necessarily developed as isolated units or in the order presented.

1. Introduction and GIS Fundamentals
2. GIS Software
3. Presentation of Charts, Tables, Graphs and Layouts
4. Spatial Referencing
5. Data Input, Output and Management

IV. REQUIRED RESOURCES, TEXT, MATERIALS

Required Text Getting to Know ArcView GIS

Materials One new high density 3.5" Floppy diskette

GEOGRAPHICAL INFORMATION SYSTEMS**CIV 307****COURSE NAME****COURSE NUMBER****V. METHOD OF EVALUATION (GRADING)**

Students will be assigned a final grade based on successful completion of tests, assignments, projects and attendance, weighted as follows:

| | |
|--------------------------|-------------|
| Assignments and Projects | 40% |
| Midterm Test | 30% |
| Final Test | 30% |
| TOTAL | 100% |

The course and curriculum are designed and limited to time based competency. Late assignments will receive a C (60) grade maximum. Assignments more than seven days overdue will receive a grade of zero.

A final letter grade will be assigned as follows:

| | |
|----|--|
| A+ | 90-100% |
| A | 80-89% |
| B | 70-79% |
| C | 55-69% |
| R | Repeat |
| X | A temporary grade limited to situations with extenuating circumstances, giving a student additional time to complete course requirements |
| U | Unsatisfactory (mid-term grade only) |
| S | Satisfactory (mid-term grade only) |

If at the end of the semester the overall mark is below 55%, then it will be up to the instructor whether or not a rewrite will be granted. The criteria employed for arriving at that decision is class and field attendance, class participation and overall grade which must be at least 45%. In the case a rewrite is granted, it will be permitted only once, it will cover the entire course outline and the overall maximum obtainable grade for the course will be limited to 60%.

COURSE NAME

COURSE NUMBER**VI. SPECIAL NOTES**

1. If you are a student with special needs (e.g. physical, visual impairments, hearing impairments, learning disabilities), you are encouraged to discuss required accommodations with the instructor and/or contact the Special Needs Office, Room E1204, Ext. 493, 717, 491 so that support services can be arranged for you.
2. Retention of Course Outlines It is the responsibility of the student to retain all course outlines for possible future use in acquiring advanced standing at other post-secondary institutions.
3. Substitute Course Information is available at the Registrar's Office.
4. The instructor reserves the right to modify the course and course outline as deemed necessary to meet the needs of the students.

VII. PRIOR LEARNING ASSESSMENT:

Students who wish to apply for advanced credit in the course should consult with the instructor and/or the Prior Learning Assessment Office. Credit for prior learning will be given upon successful completion of the requirements of the Prior Learning Assessment (PLA) as defined in the Course Analysis Form provided for this course.

