

Office of Academic Affairs
Tarleton State University
January 2003

Master Course Syllabus

Department: Chemistry and Geoscience **Course Prefix/Number:** E S 2203

Official Course Title: Geographic Information Systems for the Sciences

Master Syllabus Approved by Department on: ____/____/____
Month Day Year

I. Catalog Description

Applications of geographic information systems in the geological, environmental, earth, and other sciences. Laboratory exercises will apply GIS programs to geological and environmental problems.

II. Prerequisites

None

III. Expanded Course Description

This course is designed to introduce science students to a computer based system which integrates map information with charts, data files, pictures, and other information. The course covers the basic operating procedures of a widely used geographic information systems package. The course consists of a series of progressively more complex exercises utilizing features in the GIS package. The laboratory component focuses on how GIS is applied in a field of science. Lab exercises may cover geological, environmental, or hydrological topics. The course assumes students have no previous knowledge of GIS.

IV. Intended Student Learning Outcomes

Knowledge outcomes

Upon completion of this course students will:

- * understand how a commonly used GIS package works
- * understand how to design studies utilizing GIS

Skill outcomes

Upon completion of this course students will:

- * achieve competency with a GIS package

Value outcomes

Upon completion of this course students will:

- * appreciate the advantages and limitations of computer programs
- * understand the value of good data sets

V. Unless otherwise stipulated in this master syllabus by the department, the following items are subject to faculty discretion as described in each faculty member's individual course outline/syllabus.

Course Requirements (grading/evaluation procedures; class attendance policy; term papers; projects; field assignments; examinations; class participation; etc)

The major grading component is based on completion of daily classroom exercises. Several mid term tests (2 to 4) and a cumulative final. Several GIS projects (2-4).

Required Text GIS exercise manual, and lab manual.

Department Head Signature/Date

Signature

_____/_____/_____
Date