

Office of Academic Affairs
Tarleton State University
January 2008

Master Course Syllabus

Department: Chemistry and Geosciences

Course Prefix/Number: GEOL 405

Official Course Title: Introduction to Field Geology

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

I. Catalog Description

An introduction to the identification and interpretation of rocks and geological structures in the field. Field and laboratory activities include rock identification and interpretation, surveying with plane table and alidade, measuring and describing geologic sections, and field mapping with brunton compass, air photos, and topographic maps. Prerequisites: GEOL 1054, 6 hrs upper level GEOL Lab fee \$10.

II. Prerequisites

GEOL 1054, 6 hrs upper level GEOL

III. Expanded Course Description

Field Geology is a laboratory oriented course where students learn identification and mapping techniques used in geological and environmental field studies. The course covers the identifying characteristics of igneous, metamorphic, and sedimentary rocks. Field exercises involve use of the Brunton Compass, the plane table and alidade, aerial photography, and GPS instrumentation. Mapping geological settings and geological structures is a crucial part of this course.

IV. Intended Student Learning Outcomes

Knowledge outcomes

Upon completion of this course students will:

- * understand the characteristics of igneous, metamorphic, and sedimentary structures
- * understand theories and methods of mapping
- * understand importance of accurate surveying

Skill outcomes

Upon completion of the course students will:

- * be able to use and interpret aerial photographs
- * be able to use: Brunton Compass, plane table and alidade, and GPS systems
- * be able to construct accurate maps

Value outcomes

Upon completion of this course students will:

- * be able to competently construct maps and studies in geological and environmental settings.

V. Unless stipulated in this master syllabus by the department, the following items are subject to faculty discretion 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)

A combination of lecture exams (2 to 4), lab exams (2 to 4), lab exercises (8-12), and field trips (1-3).

Required texts

A lecture text or texts on field geology.

Department Head Signature/Date

Signature

____/____/_____
Date