

COURSE IMPLEMENTATION DATE: [May 1994]
 COURSE REVISED IMPLEMENTATION DATE: [September 2001]
 COURSE TO BE REVIEWED DATE: [September 2005]
 (Four years after implementation date)

OFFICIAL COURSE OUTLINE INFORMATION

Students are advised to keep course outlines in personal files for future use.

Shaded headings are subject to change at the discretion of the department and material will vary
 - see course syllabus available from instructor

FACULTY/DEPARTMENT: GEOGRAPHY

GEOG 202 4
 COURSE NAME/NUMBER FORMER COURSE NUMBER UCFV CREDITS

INTRODUCTION TO GEOMORPHOLOGY

COURSE DESCRIPTIVE TITLE

CALENDAR DESCRIPTION:

GEOG 202 builds on many topics introduced in GEOG 102 with emphasis placed on drainage basins, groundwater, mass movements, and glacial geomorphology. A weekend field trip and local in-class trips will develop skills in land form analysis and an understanding of the geomorphology of southwestern British Columbia.

PREREQUISITES: GEOG 102

COREQUISITES: None

SYNONYMOUS COURSE(S)

(a) Replaces: N/A
 (Course #)
 (b) Cannot take N/A for further credit
 (Course #)

SERVICE COURSE TO:

(Department / Program)
(Department / Program)

TOTAL HOURS PER TERM: 60

STRUCTURE OF HOURS:

Lectures: 30 hrs
 Seminar: hrs
 Laboratory: 15 hrs
 Field Experience: 15 hrs
 Student Directed Learning: hrs
 Other (Specify): hrs

TRAINING DAY-BASED INSTRUCTION

LENGTH OF COURSE:
 HOURS PER DAY:

MAXIMUM ENROLMENT: 35

EXPECTED FREQUENCY OF COURSE OFFERING:

WILL TRANSFER CREDIT BE REQUESTED? YES X NO

TRANSFER CREDIT EXISTS IN BCCAT TRANSFER GUIDE: YES X NO

AUTHORIZATION SIGNATURES:

Course designer(s): S. Vanderburgh Chairperson: (Curriculum Committee)
 Department Head: D. Nicol Dean: Virginia B. Cooke
 PAC Approval in Principle Date: PAC Final Approval Date: December 13, 2000

 COURSE NAME / NUMBER

LEARNING OBJECTIVES / GOALS / OUTCOMES/ LEARNING OUTCOMES:

This course is intended to introduce students to the fields of geomorphology necessary for understanding the physiography of British Columbia. Particular emphasis will be placed on the diverse natural landscape of the Fraser Valley and Lower Mainland and on developing practical field skills for the identification and analysis of landforms. Upon successful completion of this course students will be able to advance to Geography 302 and will demonstrate an understanding of basic fluvial geomorphology, glacial geomorphology, coastal geomorphology, and mass movement processes. Throughout the course the application of lecture material to contemporary geomorphic-environmental problems will be addressed.

METHODS:

The format of the course includes lectures, laboratory sessions and assignments, assigned readings, out-of-class projects, and field trips. The lecture topics will emphasize conceptual and theoretical issues and will be supplemented by the use of audio visual aids and field experience.

PRIOR LEARNING ASSESSMENT RECOGNITION (PLAR):

Credit can be awarded for this course through PLAR YES X NO

METHODS OF OBTAINING PLAR:

Application to the Department
 Course challenge
 Presentation/assessment of portfolio.

TEXTBOOKS, REFERENCES, MATERIALS:

Easterbrook, D.J., 1993. Surfaces Processes and Landforms. MacMillan Publishing Company, Toronto.

SUPPLIES / MATERIALS:

Courses in Geography may have mandatory field trips with additional fees. Details are available on course outlines distributed in class.

STUDENT EVALUATION:

Field Trip Report	10%
Laboratory Exercises	20%
Lab Exam	20%
Midterm Examination	20%
Final Examination	30%

COURSE CONTENT:Lecture Topics

1. Nature and scope of geomorphology
2. Brief history of geomorphology
3. Review of geology (plate tectonics, rock types, and structural geology)
4. Rocks and weathering
5. Mass movement processes, fundamentals of soil mechanics
6. Drainage basins and river networks
7. Fluvial processes, basic flow mechanics, concept of the graded river
8. Alluvial channel patterns
9. Glacial processes, mass budget and flow behaviour, glacial landforms, effects of Pleistocene Glaciations in North America
10. Periglacial landforms and permafrost
11. Coastal and tidal processes and deposits
12. Deltaic sedimentary systems

Laboratory Sessions and Assignments (6-8 assignments per semester):

1. Review of Map and Aerial Photograph Interpretation Techniques
2. Basic Statistical Analysis
3. Structural Geology and Mapping
4. Sediment Analysis
5. Drainage Basin Analysis and Mapping
6. Flood Frequency Analysis
7. Hydraulic Geometry
8. Fluvial Geomorphology - Map and Aerial Photograph Interpretation and Analysis
9. Glacial Geomorphology - Map and Aerial Photograph Interpretation and Analysis
10. Coastal Geomorphology - Map and Aerial Photograph Interpretation and Analysis

Note: All laboratory sessions and assignments are an essential supplement to the lecture component and are designed to tie in to various lecture topics.

Field Trips:

Cache Creek: a two-day trip through the Fraser Valley and Fraser Canyon. The trip will introduce students to a variety of geomorphic environments with particular emphasis on mass movements and the impact of mass movements on the landscape and human structures.

Glacial Features of the Fraser Valley: a one-day trip in the Fraser Valley that introduces students to landforms and stratigraphy associated with Pleistocene glaciations.