douglas college **Course Information**

A: Division: ACADEMIC

DATE: December 7, 1992

B: Department: SCIENCE & MATHEMATICS

New Course: X

Revision of Course Information form: ____

DATED: ____

C:	D:	E:
GEOL 410	THE SOLID EARTH - A CLOSE UP LOOK AT ROCKS	4
Subject & Course No.	Descriptive Title	Semester Credit

F: Calendar Description

This course will investigate the fundamental character of igneous, sedimentary and metamorphic rocks, how they can be identified in the field and how they can be used to interpret conditions on the earth in the past. Field trips may be required.

Summary of Revisions:
(Enter date & section)
Ex: Section C,E,F, &R

G: Type of Instruction:

	Hours Per Week/ Per Semester	
Lecture	3	Hrs.
Laboratory	3	Hrs.
Seminar	____	Hrs.
Clinical Experience	____	Hrs.
Field Experience	____	Hrs.
Practicum	____	Hrs.
Shop	____	Hrs.
Studio	____	Hrs.
Student Directed Learning	____	Hrs.
Other	____	Hrs.

TOTAL 6 HOURS

H: Course Prerequisites:
GEOL 300 or instructors permission

I: Course Corequisites:

J: Course for which this course is a pre-requisite

K: Maximum Class Size:
Class 36
Lab 18

M: Transfer Credit:
Requested X
Granted ____
Specify Course Equivalents or Unassigned Credit as Appropriate

U.B.C. GEOL 202
S.F.U. GE GEOL (4)
U. Vic. EOS 200 Level (1.5)
OTHER:

L: College Credit Transfer X

College Credit Non-Transfer ____

COURSE DESIGNER(S)

DIVISIONAL DEAN

DIRECTOR/CHAIRPERSON

REGISTRAR

N: Textbooks and materials to be purchased by students
(Use Bibliographic Form):

Elhers, E.G., and Blatt, H. (1982) Petrology: Igneous, Sedimentary and Metamorphic W.H. Freeman & Co., San Francisco.

Raymond, LA., (1984) Petrography Laboratory Manual Vol. 1. Handspecimen Petrography, Geology Services International.

Complete Form with Entries Under the Following Headings:

O. Course Objectives; P. Course Content; Q. Method of Instruction;

R. Course Evaluation

O. Course Objectives:

Upon successful completion of this course the student will be able to:

1. Show an understanding of the use and care of the petrographic microscope.
2. Show an understanding of the optical properties exhibited by common rock forming minerals.
3. Determine the optical characteristics of a variety of minerals.
4. Identify a selection of common rock forming minerals in this section.
5. Show an understanding of the origin and classification of igneous rocks.
6. Identify and classify a variety of igneous rocks in hard sample, in their section and in the field.
7. Identify and show an understanding of the formation of a variety of igneous landforms in the field.
8. Show an understanding of the origin and classification of metamorphic rock.
9. Identify and classify a variety of metamorphic rocks in hard sample, their section and in the field.
10. Show an understanding of the origin and classification of sedimentary rocks and sedimentary environments.
11. Identify and classify a variety of sedimentary rocks and structures in hard sample, their section and in the field.
12. Show an understanding of the formation of a selected variety of ore deposits.

P. Course Content

Topics covered in this course include:

1. The petrographic microscope.
2. Optical properties of minerals.
3. Origin, classification and identification of igneous rocks.
4. Origin and classification of igneous landforms.
5. Origin, classification and identification of metamorphic rocks.
6. Origin, classification and identification of sedimentary rocks.
7. Sedimentary structures.
8. Field methods of mapping igneous, sedimentary and igneous rocks.

Q. Method of Instruction

1. The primary mode of instruction will involve lectures and laboratories.
2. Field trip and field projects will be scheduled when appropriate.
3. Readings will be assigned to supplement lectures.
4. Audio-Visual aids will be used where appropriate.

R. Course Evaluation

The evaluation for this course will consist of:

1.	Test No. 1 - Optical Mineralogy	10%
2.	Text No. 2 - Igneous Rocks and Landforms	30%
3.	Test No. 3 - Metamorphic Rocks	20%
4.	Test No. 4 - Sedimentary Rocks and Structures	30%
5.	Field Project	10%
		100%