

Division: ACADEMIC

 DATE: December 3, 1992

 B: Department: SCIENCE & MATHEMATICS

 New Course: X

Revision of Course Information form: \_\_\_\_\_

DATED: \_\_\_\_\_

 C: GEOL 121  
 Subject & Course No.

 D: HISTORY of the EARTH  
 Descriptive Title

 E: 3  
 Semester Credit

**F: Calendar Description**

This course is concerned with topical and interesting events which have occurred throughout the development of the earth. Topics include: the origin of the earth, origin and development of life, mass extinction, extinction of the Dinosaurs and ancient climates. Techniques used to date events of the past and reconstruct ancient environments will be discussed. 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	<u>2</u>	Hrs.
Laboratory	<u>2</u>	Hrs.
Seminar	_____	Hrs.
Clinical Experience	_____	Hrs.
Field Experience	_____	Hrs.
Practicum	_____	Hrs.
Shop	_____	Hrs.
Studio	_____	Hrs.
Student Directed Learning	_____	Hrs.
Other	_____	Hrs.
<b>TOTAL</b>	<b><u>4</u></b>	<b>HOURS</b>

**H: Course Prerequisites:**  
 NONE

**I: Course Corequisites:**
**J: Course for which this course is a pre-requisite**  
 Geol 300, 410

**K: Maximum Class Size:**  
 35

**M: Transfer Credit:**  
 Requested X  
 Granted \_\_\_\_\_

Specify Course Equivalents or Unassigned Credit as Appropriate

 U.B.C. GEOL 205  
 S.F.U. GEOL 111  
 U. Vic. EOS 101  
 OTHER:

 L: College Credit Transfer X  
 College Credit Non-Transfer \_\_\_\_\_

  
 COURSE DESIGNER(S)

  
 DIRECTOR/CHAIRPERSON

  
 DIVISIONAL DEAN

  
 REGISTRAR

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

1. TEXT T.B.A.
2. SCIENTIFIC AMERICAN OFFPRINTS
3. LAB MANUAL (Douglas College Geology Department)

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Complete Form with Entries Under the Following Headings:

- O. Course Objectives;      P. Course Content;      Q. Method of Instruction;  
R. Course Evaluation

R. Course Objectives:

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

1. Show an understanding of the current theories describing the origin of the earth and solar system.
2. Describe the conditions prevailing during the early stages of the earth's history and how they governed the origin and early development of life on the earth.
3. Describe the major events in the history of life.
4. Show an understanding of the development of the geological time scale and the techniques used to date rocks and events in the history of the earth.
5. Describe the lithostratigraphic, magnetostratigraphic and biostratigraphic techniques used to correlate stratigraphic sections.
6. Draw facies maps and complete correlation diagrams.
7. Show an understanding of the process of fossilization and discuss the reliability of the fossil record.
8. Describe the criteria used to identify and classify fossil organisms and apply these to samples supplied in the laboratory.
9. Describe the criteria used to interpret and reconstruct the character of ancient environments.
10. Show an understanding of the theories used to explain mass extinction of biota in the fossil record.
11. Describe how the study of fossil plants can be used to reconstruct ancient climates.

## P. Course Content:

WEEK	LECTURE TOPIC	LAB TOPIC
1	Origin of the Earth	Review of Rocks and Minerals
2	Origin and Early Evolution of Life	Rock structures and relative dating
3	Geological Time - Relative Dating	Relative Dating Techniques
4	Geological Time - Geochronology	Absolute Dating Techniques
5	Stratigraphic Principles - Lithostratigraphy	Correlation Techniques
6	Stratigraphic Principles - Magnetostratigraphy	Facies Maps Magnetic Polarity Lab
7	Stratigraphic Principles - Biostratigraphy	Biostratigraphic correlation
8	Taphonomy - Reliability of the Fossil Record	Palaeontology Lab 1. (Classification)
9	Extinction	Palaeontology Lab 2. (Micropalaeontology/Trace fossils)
10	Organisms and the Environment Reefs	Palaeontology Lab 3. (Major Phyla)
11	Palaeoenvironments - Burgess Shale	Palaeoenvironment Lab.
12	Palaeobotany - Ancient Climates	Palaeobotany Lab.
13	Palaeobiogeography	Palaeobiogeography Lab.

Q. Method of Instruction:

Instructional methodology in this course will include:

1. Lectures
2. Laboratories
3. Field trips
4. Audio-visual aids where appropriate

R. Course Evaluation:

Evaluation in this course will consist of:

1.	Midterm Exam	30%
2.	Laboratory Tests (2)	20%
3.	Laboratory Assignments (2)	20%
4.	Final Exam	<u>30%</u>
		<b>100</b>