

# EARTH SCIENCE 11

**INSTRUCTOR:** Caroline Lennan  
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**SCHEDULE:** Tuesday 10:00am-2:00pm; 5:00pm-9:00pm  
Thursday 10:00am-2:00pm; 5:00pm-9:00pm  
**LEARNING CENTRE HOURS:** Monday-Thursday 10:00am-2:00pm  
Monday-Thursday 5:00pm-9:00pm  
The Learning Centre is closed all statutory and school holidays.

## INTRODUCTION

Earth Science 11 is an overview of the major branches of earth science. It provides an introduction to geology, oceanography, astronomy, and meteorology.

## OUTLINE

Earth Science is presented in six units, each covering four to six chapters of the textbook.

- Unit 1: Introduction to earth science, general structure of the earth, mineral structure and identification, rock structure and identification
- Unit 2: weather and erosion, running water, glaciers, wind and waves
- Unit 3: Plate tectonics, volcanism, earthquakes, mountain building, geologic time scale
- Unit 4: Composition of the ocean, the ocean floor, ocean currents, natural resources
- Unit 5: The stars and galaxies, the sun and solar system, the planets, the moon, movement of the earth in the solar system
- Unit 6 : The atmosphere, precipitation, condensation and evaporation  
Pressure and winds, weather, climate

## **EARTH SCIENCE 11 AT CLOC**

Earth science 11 at CLOC is a self-paced, self directed course. It is a textbook course with a 'hands on' component for both mineral and rock identification. There are assignment sheets for each unit that outline the specific information that needs to be covered. You will be responsible for reading the assigned pages and answering specific questions in the textbook. The answers to these questions will form the notes you need to study to be successful on the unit tests.

You may write your tests during any of the hours that CLOC is open. Make sure that you allow enough time to complete your test comfortably.

## **TEXTBOOK**

Earth Science - Heath

## **PRESCRIBED LEARNING OUTCOMES**

### **Introduction to Earth and Space Science**

*A1 explain the significance of Earth and space science*

### **Astronomy**

*B1 compare various methods used to study the universe*

*B2 demonstrate knowledge about the origins of the universe and about astronomical entities*

*B3 summarize scientific findings and views about the origin and components of the solar system*

*B4 explain the relationship between the sun, the Earth, and its moon*

*B5 assess space technologies and their applications*

### **Earth Materials (Rocks and Minerals)**

*C1 differentiate between rocks and minerals*

*C2 assess the extraction and use of geological resources*

### **Geological Time**

*D1 assess the significance of age dating, the fossil record, and the Geological Time Scale*

### **Internal Processes and Plate Tectonic Theory**

*E1 explain the significance of seismology*

*E2 compare extrusive and intrusive volcanic features and action*

*E3 outline the development of plate tectonic theory*

### **Surface Processes and the Hydrosphere**

*F1 explain the characteristics and significance of the atmosphere*

*F2 describe the function of the hydrologic cycle*

*F3 relate the processes associated with weathering and erosion to the resulting features*

*F4 describe features and processes associated with physical oceanography*

## **EVALUATION**

### **Mineral Identification Quiz**

**5%**

This is a 'hands on' identification of mineral samples using an identification chart that you have made up using a mineral sample set and information from reference materials. You will not be expected to 'memorize' the minerals.

### **Rock Identification Quiz**

**5%**

This is a 'hands on' identification of rock samples using an identification chart that you have made up using a rock sample set and information from reference materials. You will not be expected to 'memorize' the rocks.

### **Unit tests**

**6 @ 10% = 60%**

At the end of each unit there will be a unit test. It will cover the material that you have studied from the textbook. Unit 1 will have a rewrite available. The rewrite mark is the mark you will receive. There are no rewrites on units 2 to 6.

### **Final**

The final will cover all the material in the course.

**30%**