Dynamic Earth

Earth Sciences 101

Section: D100

Term: 2007 Summer

Instructor: Robbie Dunlop

Discussion Topics: General: REQUIREMENT DESIGNATION: B-Sci

Geology is the science that studies Earth - how it was formed, how it evolved, how it works, and how we can help to preserve it. EASC 101 is an introductory course to the Earth Sciences that has been designed both as a foundation course for Earth Science majors and as a terminal course for those in other disciplines. Lectures investigate geologic theory, while laboratory sessions focus on "hands on" exercises emphasizing rock and mineral identification, Earth structure and processes.

PLEASE NOTE Students with credit for GEOG 112 cannot take this course for further credit.

Course Topics

1. Understanding Earth as a System

Minerals: Crystal structure, common rock-forming minerals

Igneous rocks: Magmas and volcanism

Sedimentary rocks: Weathering and erosion, sedimentary environments

Metamorphic rocks: Metamorphic environments

2. Surface Processes

Rivers, Oceans, Glaciers, Winds and Deserts

Mass Wasting

3. Structure of the Earth

Geologic Time and Rock Deformation

Earthquakes and plate tectonics

4. Earth Resources

Groundwater, energy and minerals

Course Organization

Dynamic Earth

Two 1-hour lectures and one 3-hour laboratory per week.

Grading:

Required Texts: Course Text:

Tarbuck, E.J, Lutgens F.K. and Tsujita, C.J. 2005. Earth: An Introduction to Physical Geology, Canadian Edition, Prentice-Hall. ISBN 0-13-121724-9

OR

Tarbuck, E.J and Lutgens,F.K. 2002. Earth: An Introduction to

Recommended Texts: None.

Materials/Supplies: None.

Prerequisite/Corequisite: None.

Notes: Inquiries:

Further information about this course can be obtained from the instructor, Robbie Dunlop, in TASC 7009 (Phone 291-4925 or e-mail rdunlop@sfu.ca)