COURSE SPECIFICATION DOCUMENT

NOTE: ANY CHANGES TO A CSD MUST GO THROUGH ALL OF THE RELEVANT APPROVAL PROCESSES, INCLUDING LTPC.

Academic School/Department:	General Education
Programme:	Combined Studies
***FHEQ* Level:**	3
Course Title:	Foundations of Geology
Course Code:	ENV 3110
Course Leader:	Dr Peter A. Bolton
Student Engagement Hours:	120
Lectures:	45
Seminar / Tutorials:	
Independent / Guided Learning :	75
Semester:	Fall and Summer
Credits:	12 UK CATS credits 6 ECTS credits 3 US credits

Course Description:
Introduces the evolution, physical structure and composition of our planet. Topics covered include the interaction of the lithosphere, hydrosphere, atmosphere and biosphere. Issues associated with minerals, volcanoes, sediments, weathering, glaciers, oceans, earthquakes and global tectonics are also discussed.

Pre- or co-requisite: MTH 3000 or Mathematics Assessment exemption.

Aims and Objectives

This course aims to expose students to an understanding of the natural and physical world around us. This course will enable the student to be able to relate present geological landforms to earth history and the continuing dynamic forces which apply today. To be able to confidently describe the formation and properties of a variety of minerals different rock types and fossils and to be able to describe and explain the forces operating on the earth today which result in volcanic and earthquake activity and the formation of, and destruction of, natural landforms.

Programme Outcomes :
3Ai, 3Bi, 3Ci, 3Di.

A detailed list of the programme outcomes are found in the Programme Specification. This is located at the Departmental/Schools page of the portal.

Learning Outcomes:

a) Identify a wide range of minerals and rocks, and relate their physical structure to mode of formation. Knowledge of the process of fossilisation and the major groups of fossils through time.
b) Demonstrate a basic knowledge of the structure and changes taking place on the Earth today and in the past.
c) Be familiar with the formation and occurrence of some common geological events such as earthquake, volcanic eruptions.
d) Have a basic knowledge of the geological forces which have operated and still operate within the Earth today.

Indicative Content:

- Origin of the Solar System and structure of the Earth
- Atoms, elements, minerals and different rock types
- Igneous rocks and intrusive igneous activity
- Introduction to deformation and mountain building
- Global tectonics: sea floor spreading and magnetic anomalies
- Magmas and Volcanoes. Introduction to fossils
- Geologic time and the rock record
- Relative and absolute dating methods-James Hutton
- Weathering and Soils
- Earthquakes and Seismology
- Resources of the earth and energy
- Evolution, extinctions and catastrophes.

Assessment:
This course conforms to the Richmond University Standard Assessment Norms approved by Academic Council on 28 June 2012.

Teaching Methodology:
The course material will be presented by means of lectures (Powerpoint Presentations) with full handouts. There are weekly reading assignments (see course schedule) and additional topical material will be introduced as and when it appears. Class discussions will be based on DVD presentations and current news topics.

Bibliography: See Syllabus for complete Reading List

IndicativeText(s): Skinner B. J., Porter S.C. and Park J. (2004). Dynamic Earth: An Introduction to Physical Geology. (5th Edition).

Please Note: The core and reference texts will be reviewed at the time of designing the semester syllabus

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Change Log for this CSD:

Major or Minor Change?	Nature of Change	Date Approved & Approval Body (School or LTPC)	Change Actioned by Academic Registry