

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: Biology

Course Code: BIO 3100

Course Leader: Dr Peter A. Bolton

Student Engagement Hours: 120

Lectures: 45

Seminar / Tutorials:

Independent / Guided Learning : 75

Semester: Fall

Credits: 12 UK CATS credits

6 ECTS credits

3 US credits

Course Description:

Under the broad heading of 'the variety of life', this course deals with the structure of the living cell, patterns of life in the environment, evolution and a survey of the main phyla of plants and animals.

Prerequisites:

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 provides students with a basic understanding of the concepts of life. Under the broad heading of "the variety of life", this deals with the structure of the living cell, patterns of life in the environment and evolution. Emphasis is given to current topics of biological interest such as 'Bird Flu', SARS, AIDS, etc. A survey of the main phyla of plants and animals is also undertaken.

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) Demonstrate knowledge of cell structure and metabolism. Knowledge of form and function.
- b) Demonstrate a knowledge of the differences between eukaryotic and prokaryotic cells and their structures with regard to form and function, plus a basic knowledge of processes such as Osmosis, diffusion, cell division, respiration and photosynthesis and the basic chemicals of life.
- c) Bring together principles and concepts from different areas of biology and apply them in a particular context. (synoptic skills).
- d) Demonstrate an ability to reflect upon and discuss the nature of biology as a science and it's role in medicine and industry.

Indicative Content:

- Nature of Life. Living and non-living. Characteristics of Life
- The Cell and Organelles-Prokaryotic and Eukaryotic
- Body Organisation and Biological Chemistry
- Photosynthesis and Respiration
- Plant and Animal Reproduction
- Nucleic acids and Protein synthesis. DNA .
- Major Animal Systems
- Plant Physiology
- Homeostasis
- Five Kingdoms
- Genetics and Inheritance
- Infectious and Lifestyle Diseases and their Prevention and Control. Introduction to Immunology
- Evolution-theories for and against. Evolution of man

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): Alters S. and Alters B.(2006). Biology: Understanding Life. Wiley

