

COURSE SPECIFICATION DOCUMENT

NOTE: ANY CHANGES TO A CSD MUST GO THROUGH ALL OF THE RELEVANT APPROVAL PROCESSES, INCLUDING AB (FORMERLY LTFC).

Academic School:	School of General Education
Programme:	Core Curriculum
FHEQ Level:	3
Course Title:	Foundations of Ecology
Course Code:	ENV 3140
Course Leader:	Wayne Clark
Student Engagement Hours:	120
Lectures:	45
Seminar / Tutorials:	
Independent / Guided Learning:	74
Semester:	Fall/Spring/Summer
Credits:	12 UK CATS credits 6 ECTS credits 3 US credits

Course Description:

This course will examine basic themes in the relationship between organisms and the environment. Students will study the basics of natural history, ecology, geology, and plant and animal adaptations in selected habitats. This course will also provide students with a basic understanding of the science of both ecosystem and evolutionary ecology. Topics will include basic introductions to autoecology, sociobiology, the development, structure and dynamics of ecosystems, organism interactions, population dynamics, genetics and Natural Selection, energy in ecosystems, keystone species, biodiversity, and conservation.

Prerequisites: None

Aims and Objectives:

This course aims to expose students to an understanding of the natural and physical world around us through a basic grounding in ecology. The course aims to provide students with a basic understanding of the concepts of the ecology of individual organisms, communities and ecosystems, conservation, and associated environmental implications.

Programme Outcomes:

3Ai, 3Bi, 3Ci, 3Di

A detailed list of the programme outcomes are found in the Programme Specification.

This is located at the archive maintained by the Academic Registry and found at:

<http://www.richmond.ac.uk/programme-and-course-specifications/>

Learning Outcomes:

By the end of this course, successful students should be able to:

- Demonstrate a basic knowledge of introductory ecological principles through selected examples.
- Demonstrate a basic knowledge of the structure and properties and interactions within the 'Environment'.
- Demonstrate a basic ability to understand the working and structure of ecosystems and their relevance to the interaction of all living organisms.
- Demonstrate a basic understanding of conservation.
- Demonstrate a basic ability to analyse and interpret basic ecological data.

Indicative Content:

- Introductory ecological principles:
 - ecological terminology, photosynthesis and respiration, the chemicals essential to life and energy flow, the concept of limiting factors and range of tolerance, the role of genetics and Natural Selection, energy budgets, and forms of organism nutrition.
- Structure and properties and interactions within the 'Environment':
 - food chains and webs, the concept of biomass, abiotic/biotic factors, population dynamics and regulation, organism interactions (including competition, predator-prey relationships, and symbiosis), trophic levels and energy transfer, the autoecology, sociobiology, and behavioural ecology of selected species, and organism stress tolerance and avoidance.

- The working and structure of ecosystems and their relevance to the interaction of all living organisms:
 - nutrient cycling, pollution within ecosystems, habitats and niches, communities, succession, biomes, co-evolution, biodiversity, alien/introduced species, keystone species, and associated environmental implications.
- A basic understanding of conservation.
- A basic ability to analyse and interpret basic ecological data.

Assessment:

This course conforms to the Richmond University Standard Assessment Norms approved at Learning and Teaching Policy Committee found at:
<http://www.richmond.ac.uk/content/academic-affairs/academic-standing.aspx>.

Teaching Methodology:

- Formal lectures with PowerPoint and handouts.
- DVDs
- Reading assignments
- Class discussion

Bibliography:

See syllabus for complete reading list

Indicative Text(s):

'Ecology: Principles and Applications', 2nd Edition, J.L. Chapman and M.J. Reiss, Cambridge University Press, 2007.

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

Change Log for this CSD:

Major or Minor Change?	Nature of Change	Date Approved & Approval Body (School or AB)	Change Actioned by Academic Registry
Major	Change to course title, course code and course description – course formerly BIO 3130	LTPC 16 December 2013	PC – 20 December 2013

