

Module Information

2022.01, Approved

Summary Information

Module Code	5204NATSCI
Formal Module Title	Diversity and Evolution of Life
Owning School	Biological and Environmental Sciences
Career	Undergraduate
Credits	20
Academic level	FHEQ Level 5
Grading Schema	40

Teaching Responsibility

LJMU Schools involved in Delivery
Biological and Environmental Sciences

Learning Methods

Learning Method Type	Hours
Lecture	30
Practical	16
Workshop	10

Module Offering(s)

Display Name	Location	Start Month	Duration Number Duration Unit
SEP-CTY	CTY	September	12 Weeks

Aims and Outcomes

Aims	To provide an introduction to the diversity of life on Earth. To explain origin and evolution of major taxonomic groups including prokaryotes and eukaryotes. To explain key evolutionary events such as transition from anaerobic to aerobic life, symbiosis and evolution of the eukaryotic cell, origin of multicellularity, colonization of land and air.
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After completing the module the student should be able to:

Learning Outcomes

Code	Number	Description
MLO1	1	Give an account of the main biological characteristics and features of the major taxonomic groups.
MLO2	2	Evaluate the phenotypic and molecular techniques by which living organisms are identified and species relationships determined.
MLO3	3	Discuss key events in the evolution of life.

Module Content

Outline Syllabus	Key evolutionary events including, a comparison of prokaryotic and eukaryotic organisms, the transition of anaerobic to aerobic life, evolution of multicellularity, symbiosis and endosymbiosis and the colonisation of the land and air by all major taxonomic groups. Principles of taxonomy and systematics adaptations and characteristic features of the major groups. Speciation, micro and macro evolution and the evolution of genomes. The applications of classical and molecular phylogenetics in modern taxonomical classification and the use of big data in classification and phylogenetics.
Module Overview	The aim of this module is to provide an introduction to the diversity of life on Earth and explain origin and evolution of major taxonomic groups including prokaryotes and eukaryotes. The module will explain key evolutionary events such as transition from anaerobic to aerobic life, symbiosis and evolution of the eukaryotic cell, origin of multicellularity, colonization of land and air.
Additional Information	Rules of nomenclature and principles of taxonomy and systematics. Phenotypic and molecular phylogenetic relationships and biology of the major groups. Evolution of structures and features. Key evolutionary events such as transition from anaerobic to aerobic life, symbiosis and evolution of the eukaryotic cell, evolution of multicellularity, colonization of land and air.

Assessments

Assignment Category	Assessment Name	Weight	Exam/Test Length (hours)	Module Learning Outcome Mapping
Report	Practical Write-Up	50	0	MLO1, MLO2
Centralised Exam	Exam essay style questions	50	2	MLO1, MLO2, MLO3

Module Contacts

Module Leader

Contact Name	Applies to all offerings	Offerings
Rachael Symonds	Yes	N/A

Partner Module Team

Contact Name	Applies to all offerings	Offerings
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