

Module code

SPB-1202

Type of module

Undergraduate: Biological Sciences – Major Core

Organisms and Environment



Modular credits

4

Total student
engagement

56 hours

Prerequisite

None

Anti-requisite

None

Aims

To provide a foundation in ecological principles, ecosystem functioning, and natural environments on Earth. To develop an understanding of biotic and abiotic factors influencing the distribution of plants and animals geographically and temporally. To address current issues related to human impacts on the global environment.

Module learning outcomes (MLO)

On successful completion of this module, a student will be expected to be able to:

MLO 1

Analyse ecological principles and the development of ecology as a science.

MLO 2

Analyse major features of global environments and their influence on organism distribution.

MLO 3

Analyse energy flow patterns and ecological functioning in ecosystems.

MLO 4

Analyse human impacts on major biomes, both past and present.

MLO 5

Explore biotic interactions and their ecological consequences in various ecosystems.

Module contents

Biogeography of Asia	Island biogeography and conservation	Climate and plant distribution
Soils and plant distribution	Vegetation types	Decomposition; nutrient cycling; biogeochemical cycles
Population ecology: population dynamics	Models of population growth; inter- and intraspecific interactions	Marine ecology: Properties of seawater; marine microbes
Primary producers in the ocean and marine food webs and energy flows	Community ecology	The global biodiversity crisis: Global trends and predictions

Assessment

60% Examination
40% Coursework



■ Examination — 60% ■ Written practical reports — 15% ■ Class tests — 15% ■ Written assignment — 10%

Formative assessment

Weekly discussion and feedback

Summative assessment

COMPONENT	WEIGHTING
Examination	60%
Coursework	40%
Individual	40%
Written practical reports	15%
Class tests	15%
Written assignment	10%

Graduate attributes and skills

Programme learning objectives (PLO) addressed

- | | |
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| 1 PLO 1 (Fundamental Theoretical Knowledge in Biology) | 2 PLO 2 (Application of Scientific Methods and Data Analysis) |
| 3 PLO 3 (Integrated Laboratory, Field and Technical Skills) | 4 PLO 4 (Critical Thinking and Problem-Solving Skills) |

Sustainability concept addressed

4 SDG 4 Quality Education

13 SDG 13 Climate Action

15 SDG 15 Life on Land

Digital skills/software used (not limited to)

- Microsoft Office software (e.g. Word)
- Application software (e.g. Web browsers, statistical program, cloud-based storage, file sharing platform)
- eLearning platforms (e.g. CANVAS, Zoom)

Micro-credentialling option

No

Stackable towards GenBESTARI Undergraduate Degree Programme or other relevant Lifelong Learning Programmes

No

Document details

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