Module Specification

Global Forest Systems

Version: 2025-26, v6.0, Approved

Contents

Part 1: Information

Module title: Global Forest Systems

Module code: USSKN6-15-3

Level: Level 6

For implementation from: 2025-26

UWE credit rating: 15

ECTS credit rating: 7.5

College: College of Health, Science & Society

School: CHSS School of Applied Sciences

Partner institutions: None

Field: Applied Sciences

Module type: Module

Pre-requisites: Life on Earth 2025-26

Excluded combinations: None

Co-requisites: None

Continuing professional development: No

Professional, statutory or regulatory body requirements: None

Part 2: Description

Overview: This module introduces tree and forest biology and ecology, anthropogenic impacts, management and conservation measures.

Pre-requisite: Students must have passed USSK5C-30-1 Life on Earth before starting on this module.

Features: Not applicable

Educational aims: This module aims to develop student understanding of diverse forest biomes and the underlying processes that shape them. Students will make linkages between pressures on forests, management regimes, and the forest ecosystem functions that underpin ecosystem services

Outline syllabus: Introduction to trees and forests: Range of different forest biomes and key features of different tree families; key tree physiological processes including water relations, nutrient cycling, photosynthesis and reproduction.

Forest ecology: Forest structures and their impact on other forest organisms; niche differentiation and adaptation strategies of forest plants and animals; native, naturalised and exotic species; concepts of wildwood and ancient woodland; the role of large herbivores in woodland structure.

Nutrient Cycling and Climate Change: Nutrient cycling in undisturbed forest ecosystems; carbon sequestration in relation to tree species and management; possible impacts of climate change on forest ecosystems.

Tree Health and Disease: concepts of forest and tree health; causes of poor health in trees including air pollution, soil conditions, pests and diseases; case studies in contemporary tree health issues (eg. ash dieback, oak decline, effects of ozone on trees).

Forest Management and Protection: methods of forest management including clear felling, selection felling, coppicing and pollarding. Sustainable methods of timber production; Non-timber forest products and their use by indigenous peoples; tree and forest protection at national and global levels.

Part 3: Teaching and learning methods

Teaching and learning methods: Scheduled contact time is structured around a series of lectures that introduce the key concepts, identify current levels of understanding and pin-point areas of scientific uncertainty. Theory is under-pinned

by case studies drawn from different systems from around the world. Lectures will be supported by workshops and seminars where appropriate, that will allow more in-depth analysis and discussion around key concepts. Learning will be enhanced by field visits which will allow students to explore first-hand aspects of their learning, and to interact with experts and practitioners in the field.

Module Learning outcomes: On successful completion of this module students will achieve the following learning outcomes.

MO1 Describe and critically assess forest ecosystems in terms of their ecosystem functions and ability to deliver ecosystem services.

MO2 Critically evaluate forest management and production systems in terms of their long term sustainability, including their resilience to anthropogenic and environmental pressures.

Hours to be allocated: 150

Contact hours:

Independent study/self-guided study = 114 hours

Face-to-face learning = 36 hours

Reading list: The reading list for this module can be accessed at readinglists.uwe.ac.uk via the following link https://uwe.rl.talis.com/modules/usskn6-15-3.html

Part 4: Assessment

Assessment strategy: Assessment: Written Assignment (3,000 words maximum)

Students will write a report linking the contemporary pressures on a specific forest biome, with ecological functioning/ecosystem service provision. They will draw on the ecological and physiological mechanisms that underlie these processes, as well as evidence from authoritative literature sources. They will evaluate the degree to which management regimes are sustainable in light of ongoing anthropogenic and/or environmental pressures.

Opportunities to develop ideas and gain for formative feedback, will be embedded into workshop sessions.

Assessment tasks:

Written Assignment (First Sit)
Description: 3000 word written assignment
Weighting: 100 %
Final assessment: Yes
Group work: No
Learning outcomes tested: MO1, MO2

Written Assignment (Resit)
Description: 3000 word written assignment
Weighting: 100 %
Final assessment: Yes
Group work: No
Learning outcomes tested: MO1, MO2

Part 5: Contributes towards

This module contributes towards the following programmes of study:

Wildlife Ecology and Conservation Science [Zoo] BSc (Hons) 2022-23

Wildlife Ecology and Conservation Science {Foundation} [Zoo] BSc (Hons) 2022-23

Biological Sciences [Frenchay] BSc (Hons) 2023-24

Biological Sciences [Frenchay] MSci 2023-24

Wildlife Ecology and Conservation Science [Frenchay] MSci 2023-24

Environmental Science [Frenchay] MSci 2023-24

Wildlife Ecology and Conservation Science [Zoo] BSc (Hons) 2023-24

Environmental Science [Frenchay] BSc (Hons) 2023-24

Environmental Science {Foundation} [Sep][SW][Frenchay][5yrs] BSc (Hons) 2021-22

Environmental Science {Foundation} [Sep][SW][Frenchay][6yrs] MSci 2021-22

Wildlife Ecology and Conservation Science {Foundation} [Sep][SW][Frenchay][6yrs] MSci 2021-22

Biological Sciences {Foundation} [Frenchay] BSc (Hons) 2022-23

Biological Sciences [Frenchay] BSc (Hons) 2022-23

Biological Sciences {Foundation} [Sep][SW][Frenchay][6yrs] MSci 2021-22

Biological Sciences {Foundation} [Frenchay] MSci 2022-23

Biological Sciences [Frenchay] MSci 2022-23

Biological Sciences {Foundation} [Sep][SW][Frenchay][5yrs] BSc (Hons) 2021-22

Wildlife Ecology and Conservation Science {Foundation} [Sep][SW][Zoo][5yrs] BSc (Hons) 2021-22

Wildlife Ecology and Conservation Science [Frenchay] MSci 2022-23

Wildlife Ecology and Conservation Science {Foundation} [Frenchay] MSci 2022-23

Environmental Science {Foundation} [Frenchay] BSc (Hons) 2022-23

Environmental Science [Frenchay] BSc (Hons) 2022-23

Environmental Science {Foundation} [Frenchay] MSci 2022-23

Environmental Science [Frenchay] MSci 2022-23