University of the West of England
BRISTOL

MODULE SPECIFICATION

Part 1: Information			
Module Title	Global Forest Systems		
Module Code	USSKN6-15-3	Level	3
For implementation from	September 2017		
UWE Credit Rating	15	ECTS Credit Rating	7.5
Faculty	Health & Applied Sciences	Field	Applied Sciences
Department	Applied Sciences		
Contributes towards	MSci Environmental Science BSc (Hons) Environmental Science MSci Wildlife Ecology and Conservation Science BSc (Hons) Wildlife Ecology and Conservation Science MSci Biological Sciences BSc (Hons) Biological Sciences		
Module type:	Standard		
Pre-requisites	USSK5C-30-1 Life on Earth		
Excluded Combinations	None		
Co- requisites	None		
Module Entry requirements	None		

Part 2: Description
In this module you will examine the structure and function of global forest systems in detail, and explore how human activity is impacting on them, both directly and indirectly. We will explore the roles that forests play in terms of providing key ecosystem services such as biodiversity protection, carbon storage, climate regulation, and the production of timber and other forest products, and we will evaluate different strategies for their sustainable management. You will cover: • 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.

Scheduled contact time is structured around a series of lectures (face-to-face and on-line) 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 a series of workshops and seminars, including the use of 'flipped classroom' where appropriate, that will allow more in-depth analysis and discussion around key concepts. Students will be expected to undertake a significant amount of preparation for these sessions, including undertaking guided reading, textual and web-based research. 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. Revision will be embedded in the workshop sessions, which will offer opportunities to practice past exam questions.

Part 3: Assessment

The Assessment for this module is designed to test the breadth and depth of students' knowledge, as well as their ability to analyse, synthesize and summarise information critically, including published research and data from the 'grey' literature.

The two hour examination provides students with the opportunity to demonstrate their knowledge and understanding of the key concepts and paradigms associated with the subject matter, to use case studies and other evidence critically to support their arguments, and to make evaluations of possible sustainable futures for forest systems.

The 2,500 word written case study provides the opportunity for the student to complete an in-depth analysis of a forest system in terms of an agreed, contemporary environmental issue, for example carbon storage and emissions offsetting, biodiversity conservation, sustainable supply of timber or non-timber products, impacts of climate change, or management for disease resistance and resilence. By choosing a specific forest system and environmental issue to focus on, students will be able to tailor their study to fit their specific areas of interest, and this also helps ensure the individual nature of each piece of work. Students will be expected to use a range of advanced research methods including: critical review of published research; 'mining' and analysis of secondary data; scenario-testing; expert and practitioner opinion.

Opportunities for formative assessment and feedback are built into the workshop and seminar series, through discussion of current research, the evaluation of research methods, and review of past exam papers.

All work is marked in line with the Department's Generic Assessment Criteria and conforms with university policies for the setting, collection, marking and return of student work. Where an individual piece of work has a specific assessment criteria, this is supplied to the students when the work is set.

Identify final timetabled piece of assessment (component and element)	Component A	
	A:	**B**:
% weighting between components A and B (Standard modules only)	**60**	**40**

First Sit	
Component A (controlled conditions) **Description of each element**	**Element weighting** (as % of component)
1. Exam (2 hours)	100
Component B **Description of each element**	**Element weighting** (as % of component)

1. 2500 word written assignment	100

Resit (further attendance at taught classes is not required)	

Component A (controlled conditions) **Description of each element**	**Element weighting** **(as % of component)**
1. Exam (2 hours)	100
Component B **Description of each element**	**Element weighting** **(as % of component)**
1. 2500 word written assignment	100

Part 4: Teaching and Learning Methods

Learning Outcomes	On successful completion of this module students will be able to: • Describe and critically assess forest ecosystems in terms of their biodiversity, nutrient cycling and energy balances, and their ability to deliver key ecosystem services *(Component A).* • Critically evaluate a range of forest management and production systems in terms of their long term sustainability, and their robustness and resilience to climate change and other forms of pollution, and to pests and diseases *(Component A).* • Research and evaluate in detail a specific forest system in terms of its contribution to sustainable resource production and ecosystem services *(Component B).* • Collate, analyse, interpret and present data using advanced analytical techniques, and present these data to a target audience *(Component B).* • Critically evaluate research in forest systems at the cutting edge of the subject *(Component A, B).*
Key Information Sets Information (KIS) Contact Hours Total Assessment	

Key Information Set - Module data					
Number of credits for this module			15		
Hours to be allocated	Scheduled learning and teaching study hours	Independent study hours	Placement study hours	Allocated Hours	
150	36	114	0	150	✅

The table below indicates as a percentage the total assessment of the module which constitutes a;

Written Exam: Unseen or open book written exam
Coursework: Written assignment or essay, report, dissertation, portfolio, project or in class test
Practical Exam: Oral Assessment and/or presentation, practical skills assessment, practical exam (i.e. an exam determining mastery of a technique)

	Total assessment of the module:			
	Written exam assessment percentage		60%
	Coursework assessment percentage		40%
	Practical exam assessment percentage		0%
				100%
Reading List	https://uwe.rl.talis.com/lists/68181CE5-D92D-D06C-15A0-D0ECBCAA9DED.html			

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First CAP Approval Date	31/5/2017			
Revision CAP Approval Date *Update this row each time a change goes to CAP*		Version	1	RIA 12112