Module Specification

Sustainable Technologies

Version: 2023-24, v2.0, 24 Jan 2023

Contents

Module Specification 1

Part 1: Information 2

Part 2: Description 2

Part 3: Teaching and learning methods 3

Part 4: Assessment 4

Part 5: Contributes towards 6

Part 1: Information

Module title: Sustainable Technologies

Module code: UBGMHM-15-1

Level: Level 4

For implementation from: 2023-24

UWE credit rating: 15

ECTS credit rating: 7.5

Faculty: Faculty of Environment & Technology

Department: FET Dept of Geography & Envrnmental Mgmt

Partner institutions: None

Delivery locations: Global College of Engineering and Technology (GCET)

Field: Geography and Environmental Management

Module type: Module

Pre-requisites: None

Excluded combinations: None

Co-requisites: None

Continuing professional development: No

Professional, statutory or regulatory body requirements: None

Part 2: Description

Overview: Not applicable

Features: Not applicable

Educational aims: See Learning Outcomes

Outline syllabus: There is growing recognition that technology can help to resolve some of the world's environmental challenges, from helping to identify and map the

size and extent of arising issues, to helping with their potential resolution. Collectively, the innovations involve the application of scientific knowledge, policy and engineering to solve certain environmental problems or to address specific sustainability challenges. Technological advances are being developed for a range of sectors including energy, transport, waste and water, at a range of spatial scales. This module focuses on these four sectors and explores the innovations being brought forward, the drivers supporting their delivery, and the implementation challenges that are being encountered and addressed. Innovations will be showcased from around the world with reference being given to such things as wind technology, solar power, autonomous vehicles, desalination and 'smart' recycling, for example.

Part 3: Teaching and learning methods

Teaching and learning methods: Learning will be progressed through a mixed programme of lectures and workshops, supplemented by guest lecturers and field visits where appropriate.

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

MO1 Recognise the ways in which technology can help to tackle environmental problems and promote greater sustainability

MO2 Outline the significance, and environmental contribution, of innovations across the transport, energy, waste and water sectors

MO3 Critically consider the type of innovations that might arise in the future and to reflect on how policy, legislation and other types of incentive can stimulate technological development

MO4 Demonstrate an understanding of the process through which a technological innovation is developed, and the mechanisms by which its performance can be measured in order to assess the magnitude of its environmental contribution

MO5 Reflect on the factors, and potential barriers, that could affect the delivery and implementation of technological innovations

Hours to be allocated: 150

Contact hours:

Independent study/self-guided study = 114 hours

Face-to-face learning = 36 hours

Total = 150

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/ubgmhm-15-1.html

Part 4: Assessment

Assessment strategy: Presentation - comprises an individual presentation that is designed to develop practice research and presentation skills. The presentation will require a library based research element engaging with sustainable environmental technology, environment, policy and legislation.
Students will be required to introduce an organisation that is actively engaged with the development of a sustainable / environmental technology. Their presentation should outline the drivers underpinning the emerging technology and provide a summary of how it is intended to operate and the benefits that it promises to deliver. The presentation should identify the innovative features of the technology, summarise the design process to date, and critique the systems in place to evaluate its performance. It should also consider the factors and / or barriers that could affect successful delivery and implementation. The chosen technology will need to relate to the transport, water or waste sectors. By requiring students to identify an organisation, the module will help them to think about their future work place, thereby supporting the employability goals of the programme.

Written Assignment - comprises an essay that is designed to further develop research skills, as well as written presentation skills to include data and diagrams as

appropriate, and the construction of a balanced argument, weighing up different innovations within the chosen theme.
Students will be required to reflect on how technology is being used to address a contemporary sustainable challenge connected to energy. They will be given flexibility with respect to its exact focus.

Resit Presentation - individual presentation to the same brief as above.
Resit Written Assignment - an essay to a similar brief as above, which may include an adjusted topic choice.

Assessment components:

Presentation (First Sit)
Description: Individual presentation (10 mins plus questions)
Weighting: 50 %
Final assessment: No
Group work: No
Learning outcomes tested: MO1, MO2, MO3, MO4, MO5

Written Assignment (First Sit)
Description: Essay (2000 words)
Weighting: 50 %
Final assessment: Yes
Group work: No
Learning outcomes tested: MO1, MO2, MO3, MO5

Presentation (Resit)
Description: Individual presentation (10 mins plus questions)
Weighting: 50 %
Final assessment: No
Group work: No
Learning outcomes tested: MO1, MO2, MO3, MO4, MO5

Written Assignment (Resit)

Description: Essay (2000 words)
Weighting: 50 %
Final assessment: Yes
Group work: No
Learning outcomes tested: MO1, MO2, MO3, MO5

Part 5: Contributes towards

This module contributes towards the following programmes of study:

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

Environmental Management {Foundation} [Sep][SW][Frenchay][5yrs] - Not Running BSc (Hons) 2022-23

Environmental Management {Foundation} [Sep][FT][Frenchay][4yrs] - Not Running BSc (Hons) 2022-23

Energy Technology and Management {Foundation} [GCET] BSc (Hons) 2022-23

Environmental Management and Practice {Foundation} [GCET] BSc (Hons) 2022-23

Urban and Regional Planning {Foundation} [GCET] BSc (Hons) 2022-23

Environmental Management {Apprenticeship-UWE}[Frenchay] BSc (Hons) 2022-23