



Module Specification

Sustainable Technologies

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Part 1: Information

Module title: Sustainable Technologies

Module code: UBGMMH-15-1

Level: Level 4

For implementation from: 2025-26

UWE credit rating: 15

ECTS credit rating: 7.5

College: College of Arts, Technology and Environment

School: CATE School of Architecture and Environment

Partner institutions: None

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: The module enables students to explore a range of sustainable technologies and includes contents from a range of resources such as academic literature, current research and policy documentations. The module includes a number of guest lectures, field visits and research tasks opportunities to support learning.

Features: Not applicable

Educational aims: The overarching intention and purpose of the module is to explore the role of sustainable technologies in tackling environmental problems and promote greater sustainability. The focus is on some examples of sustainable technologies from a range of sectors to unpack the drivers that might support the development of sustainable technologies, the implementation challenges that are being encountered and how these might be addressed.

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 way in which technology can help tackle environmental problems and promote greater sustainability.

MO2 Outline the significance, and environmental contribution, of a chosen technology across the transport, energy, waste and water sectors.

MO3 Critically consider and demonstrate an understanding of the process through which a technological innovation is developed and reflect on the factors, and potential barriers, that could affect its delivery and implementation.

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://rl.talis.com/3/uwe/lists/EB5D1D15-D573-25AE-C62A-1F14F7B3E1FB.html?lang=en-GB&login=1>

Part 4: Assessment

Assessment strategy: The presentation consists of 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 a start-up 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 a start-up organisation, the module will help them to think about their future work place, thereby supporting the employability goals of the programme.

Assessment

The first sit assessment tasks will be: Individual presentation to the same brief as above. (100% of mark)

The resit assessment tasks would be: Individual presentation to the same brief as above. (100% of mark)

Assessment tasks:

Presentation (First Sit)

Description: Individual presentation (10 mins plus questions)

Weighting: 100 %

Final assessment: Yes

Group work: No

Learning outcomes tested: MO1, MO2, MO3

Presentation (Resit)

Description: Individual presentation (10 mins plus questions)

Weighting: 100 %

Final assessment: Yes

Group work: No

Learning outcomes tested: MO1, MO2, MO3

Part 5: Contributes towards

This module contributes towards the following programmes of study:

Environmental Management {Apprenticeship-UWE}[Frenchay] BSc (Hons) 2024-25

Energy Technology and Management {Foundation} [GCET] BSc (Hons) 2024-25

Environmental Management and Practice {Foundation} [GCET] BSc (Hons) 2024-25

Urban and Regional Planning {Foundation} [GCET] BSc (Hons) 2024-25

Environmental Management and Practice {Foundation} [GCET] DipHE 2024-25

Urban and Regional Planning {Foundation} [GCET] DipHE 2024-25

Energy Technology and Management {Foundation} [GCET] DipHE 2024-25

Environmental Management and Practice {Foundation} [GCET] BSc (Hons) 2024-25

Energy Technology and Management {Foundation} [GCET] BSc (Hons) 2024-25

Urban and Regional Planning {Foundation} [GCET] BSc (Hons) 2024-25

Environmental Management [Frenchay] BSc (Hons) 2025-26