

Module Details	
Module Title	Sustainability in the Built Environment
Module Code	CSE7016-B
Academic Year	2024/5
Credits	20
School	School of Built Environment, Architecture & Creative Industries
FHEQ Level	FHEQ Level 7

Contact Hours	
Type	Hours
Lectures	32
Tutorials	8
Directed Study	160

Availability	
Occurrence	Location / Period
BDA	University of Bradford / Semester 1

Module Aims
<p>1/3 of energy consumption and emissions are from the built environment, more than 1/2 of waste generated in the UK are from CDE (construction, demolition and excavation), women are under-represented in the built environment industry, modern slavery is on the rise in infrastructure projects, amongst other climatic issues.</p> <p>This module will enable students:</p> <ol style="list-style-type: none"> 1. To understand the concepts, principles and assessment techniques of sustainable development in the built environment 2. To embed sustainable practices in engineering, design, construction, maintenance, repair and demolition activities in the built environment.

Outline Syllabus

The following syllabus will be considered in this module:

1. Evolution of Sustainable Development and description of sustainability
2. Introduction to United Nations Sustainable Development Goals (UNSDGs)
3. Embedding and mapping UNSDGs to infrastructure projects and the built environment sector (i.e., UNSDGs 3,5,6,7,8,9,11,12,13,15)
4. Sustainability assessment frameworks and tools, i.e., Environmental Impact Assessment, BREEAM schemes, etc.
5. Sustainable waste management concepts, i.e., circular economy, zero avoidable waste, etc.
6. Energy Futures and Smart Cities
7. Sustainable Transportation

Learning Outcomes

Outcome Number	Description
01	Critically review the key principles of sustainable built environment and of sustainability
02	Apply and critically evaluate sustainability assessment tools and techniques. Integrate sustainability into a building's or infrastructure design, construction, operation, maintenance and decommissioning.
03	Apply advanced problem-solving skills, interpret data and solve problems.
04	Plan, implement, monitor and adjust on an on-going basis, a self-directed part of a group coursework, evidencing collection and critical analysis of research data, use, to tackle unfamiliar problems..

Learning, Teaching and Assessment Strategy

This module is delivered through lectures and tutorials using a series of PowerPoints supported by tutorials, including video presentations and case studies. Learning materials and other documents are available on the Learning Management Platform (Canvas). Guest speakers will be invited to provide further accounts of industrial experience on specific topics.

This module is assessed through coursework (30% weight) and examination (70%). The coursework is designed to encourage teamwork between students. The coursework achieves all learning outcomes, and the examination achieves learning outcomes 1 and 2.

Mode of Assessment

Type	Method	Description	Weighting
Summative	Coursework - Written	Group coursework (2000 words individual contribution) / Supplementary individual coursework 2000w	30%
Summative	Examination - Closed Book	Closed book examination (2 hours)	70%

Reading List

To access the reading list for this module, please visit <https://bradford.rl.talis.com/index.html>

Please note:

This module descriptor has been published in advance of the academic year to which it applies. Every effort has been made to ensure that the information is accurate at the time of publication, but minor changes may occur given the interval between publishing and commencement of teaching. Upon commencement of the module, students will receive a handbook with further detail about the module and any changes will be discussed and/or communicated at this point.

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