UNIVERSITY of BRADFORD

# Module Descriptor

| Module Details | |
|---|---|
| Module Title | Sustainability in the Built Environment |
| Module Code | CSE6010-B |
| Academic Year | 2024/5 |
| Credits | 20 |
| School | School of Built Environment, Architecture & Creative Industries |
| FHEQ Level | FHEQ Level 6 |

| Contact Hours | |
|---|---|
| Type | Hours |
| Lectures | 32 |
| Tutorials | 8 |
| Directed Study | 160 |

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

## Module Aims

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.

This module will enable students:
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 | Use sustainability assessment tools and techniques Integrate sustainability into a building's design, construction, operation and maintenance. |
| 03 | Interpret data and solve 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 (1500 words individual contribution) / Supplementary individual coursework 1500w | 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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