UNIVERSITY of BRADFORD

Module Descriptor

Module Details	
Module Title:	Sustainability in the Built Environment
Module Code:	CSE6010-B
Academic Year:	2019-20
Credit Rating:	20
School:	Department of Civil and Structural Engineering
Subject Area:	Civil and Structural Engineering
FHEQ Level:	FHEQ Level 6
Pre-requisites:	
Co-requisites:	

Contact Hours	
Type	**Hours**
Lectures	36
Tutorials	12
Directed Study	152

Availability	
Occurrence	**Location / Period**
BDA	University of Bradford / Semester 2 (Feb - May)

Module Aims

To provide students with an understanding of the concepts, principles and assessment techniques of sustainable development in the and built environment with particular reference to sustainable practices and their use in an engineering, design, construction, maintenance and repair and demolition activities in the built environment

Outline Syllabus

Engineering and sustainable development, the impact of sustainability on civil engineering and the built environment, definition of sustainability (social, economic, environmental and technical impact), sustainability management systems, sustainability assessment tools and environmental impact assessment tools, sustainable design and construction, embedding sustainability into

construction projects, main objectives: minimisation of carbon, water, waste, use of environmentally and socially responsible materials, enhance biodiversity and ecology, support communities, transport, access and mobility, job creation, provide health and well-being, involve all stakeholders.

Sustainability-based decision making that adhere to the principles of sustainable development, interdisciplinary working, embodied energy of buildings and infrastructure, impact of climate change. Design system thinking (buildings, materials, construction, maintenance and repair, end of life, deconstruction, demolition, disposal, energy efficiency), multi-criteria analysis, stakeholders mapping, critical thinking. Appraise building and infrastructure options in the context of sustainability.

Learning Outcomes

1	Critically review the key principles of sustainable built environment and of sustainability
2	Use sustainability assessment tools and techniques Integrate sustainability into a building's design, construction, operation and maintenance
3	Interpret data and solve problems.

Learning, Teaching and Assessment Strategy

The module is delivered using a series of Power Point lectures supported by tutorials including video presentation and case studies. At least one guest speaker will provide further accounts of industrial experience on specific topics.

The module is assessed by group coursework to develop a sustainability assessment framework (each student will have a contribution of 1500 words to the group coursework) and by closed book examination.

Mode of Assessment

Type	Method	Description	Length	Weighting
Summative	Examination - closed book	Closed Book Examination	2 hours	70%
Summative	Coursework	Group coursework	2000 words	30%

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.