

Module Details	
Module Title:	Steel and Composite
Module Code:	CSE6005-A
Academic Year:	2019-20
Credit Rating:	10
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	20
Tutorials	12
Directed Study	68

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

Module Aims
To introduce to students the concept of steel and composite design and their applications in engineering. To provide a basic means for design and analysis of steel and composite structures and to familiarise students with a range of typical processing techniques.

Outline Syllabus
1. Robustness design of steel framed buildings 2. Sway stability design for steel framed buildings 3. Design of multi-storey unbraced steel framed constructions. 4. Design of steel-concrete composite structures.

Learning Outcomes	
1	a). be able to apply their prior knowledge and understanding of the scientific and mathematical principles of engineering to design steel and composite structures. b). have an appreciation of the fundamental design philosophies adopted in the area of design of unbraced steel structures. c). be able to apply mathematical and computer-based models for solving problems in engineering and be able to assess the limitations of each particular case. d). be aware of the latest research and developing technologies related to the design of composite structures
2	a). design of unbraced steel structures. b). design of steel-concrete composite structures.
3	General learning outcomes (UK-SPEC): the ability to apply new concepts and methods (in the context of advanced steel & composite design). Specific learning outcomes (UK-SPEC): Underpinning Science & Mathematics (Knowledge and understanding of mathematical models as applied to steel & composite design; an appreciation of the limits of such models); Engineering Analysis (the ability to apply mathematical models to solve problems in structural engineering; the ability to assess the limitations of particular cases); Design (broader knowledge and understanding of design processes for structural st

Learning, Teaching and Assessment Strategy
Concepts, principles & theories explored in formal lectures, practised in tutorials

Mode of Assessment				
Type	Method	Description	Length	Weighting
Summative	Examination - closed book	Examination - closed book. Final Assessment	2 hours	100%

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.