

Steel and Composite

Module Code:	CSE6005-A
Academic Year:	2018-19
Credit Rating:	10
School:	Department of Civil and Structural Engineering
Subject Area:	Civil and Structural Engineering
FHEQ Level:	FHEQ Level 6
Module Leader:	Professor Dennis Lam

Additional Tutors:

Pre-requisites:

Co-requisites:

Contact Hours

Type	Hours
Lectures	20
Tutorials	12
Directed Study	66
Examinations DO NOT USE	2

Availability Periods

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.

Module Learning Outcomes

On successful completion of this module, students will be able to...

- 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	Final Assess'
Summative	Examination - closed book	Examination - closed book. Final Assessment	2 hours	100%	Yes

Legacy Code (if applicable)

ENG3104M

Reading List

To view Reading List, please go to [rebus:list](#).

