

Module Details	
Module Title	Integrated Sustainable Design Studio 3
Module Code	CSE6019-B
Academic Year	2024/5
Credits	20
School	School of Built Environment, Architecture & Creative Industries
FHEQ Level	FHEQ Level 6

Contact Hours	
Type	Hours
Directed Study	152
Lectures	12
Tutorials	18
Practical Classes or Workshops	18
Practical Classes or Workshops	<p>?Amidst a backdrop of unprecedented and irreversible changes to our climate and an increasing number of climate change commitments, the future is Net Zero Carbon in both retrofit of existing building stock and new construction. Any building not either operating at Net Zero Carbon performance or designed to be capable of this becomes an expensive liability for future generations.? The module aims to Build on the knowledge gained from the two pre-requisites above to apply the necessary design skills required to meet building users? requirements within the constraints imposed by Net Zero Carbon targets, cost factors, feasibility, CDM and building regulations. Provide an opportunity for students to work within a multi discipline team to further explore the role that environmental variables inform a low energy building design / retrofit and help student to reflect on appropriate environmental variables that respond to occupants? needs, design brief, and building performance. Explore, identify and evaluate the interrelationships between the various environmental mechanisms and address them in a rigorous manner by developing design strategies that deliver comfortable environments for building users. Train students to practice self-management in respect of planning, monitoring, recording and evaluation within the portfolio work that is produced.</p>
Practical Classes or Workshops	<p>Developing programmes of occupation and use including future use, adaptation and/or retrofit. Design skills required to meet building users? requirements Application of structural, environmental and construction principles in a design project Environmental mechanisms and their impact on design strategies that deliver comfortable environments for building users. Professional and ethical responsibilities to clients, building users, constructors and the wider society. Constraints of cost factors, feasibility, CDM and building regulations on design projects. Local and global issues (such as inequalities and sustainability) and potential solutions to address those through project work to create positive social impact on the wider society. Problem solving skills: to have the ability to analyse problems and to propose solutions. Be able to think critically: to reflect upon feedback and to improve performance Critical thinking skills: to interpret, utilise and communicate complex and interrelated information in a manner that is appropriate, rigorous, creative and legible. Contribute constructively and creatively to a shared production process by applying appropriate modes of professional practice and behaviour. Prepare a portfolio that is edited, organised and clearly labelled so that it can be evaluated in terms of range, depth, creativity and originality as well as standards of accuracy and skills of execution.</p>
Practical Classes or Workshops	<p>The teaching and learning methods have been selected to engage students in developing their knowledge and understanding of Integrated Sustainable Design through formal learning opportunities such as lectures and tutorials, and informal and social learning through team-working in projects. Throughout the module, students will be set formative assessment activities that will help develop confidence in tackling data analysis problems and in the use of the software tools that will support them. The timely constructive feedback from this formative assessment will support students develop the skills and knowledge required for the summative assessment. The module will be summatively assessed through a design portfolio and presentations. Design work is developed in the studio environment through workshops, group and individual tutorials, to continually appraise, evaluate and develop the work. All design work is regularly presented to academics and peers for critical feedback. Students receive written feedback on their progress after each review as formative assessment, though no marks are formally awarded. The design project enables students to demonstrate that they have understanding and ability to integrate technological, professional and design concepts to develop a detailed design proposal. Learning and teaching is organised around a series of subject-based lectures giving an overview of relevant professional and industry issues, principles of structures, environmental design,</p>

Type	Hours
	materials and construction and sustainability. This knowledge and understanding is tested and developed through individual research and application to the Design project, resulting in a design proposal resolved to a high degree of detail. Each student's progression from principle through application to detailed resolution is supported by group seminars and project tutorials, which inform and test their individual design response. If a student requires supplementary assessment for re-assessment, the assessment method will be the same as original.

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

Module Aims
<p>Amidst a backdrop of unprecedented and irreversible changes to our climate and an increasing number of climate change commitments, the future is Net Zero Carbon in both retrofit of existing building stock and new construction. Any building not either operating at Net Zero Carbon performance or designed to be capable of this becomes an expensive liability for future generations.</p> <p>The module aims to</p> <ul style="list-style-type: none"> <li>Build on the knowledge gained from the two pre-requisites above to apply the necessary design skills required to meet building users' requirements within the constraints imposed by Net Zero Carbon targets, cost factors, feasibility, CDM and building regulations.</li> <li>Provide an opportunity for students to work within a multi discipline team to further explore the role that environmental variables inform a low energy building design / retrofit and help student to reflect on appropriate environmental variables that respond to occupants' needs, design brief, and building performance.</li> <li>Explore, identify and evaluate the interrelationships between the various environmental mechanisms and address them in a rigorous manner by developing design strategies that deliver comfortable environments for building users.</li> <li>Train students to practice self-management in respect of planning, monitoring, recording and evaluation within the portfolio work that is produced.</li> </ul>

## Outline Syllabus

Developing programmes of occupation and use including future use, adaptation and/or retrofit.

Design skills required to meet building users' requirements

Application of structural, environmental and construction principles in a design project

Environmental mechanisms and their impact on design strategies that deliver comfortable environments for building users.

Professional and ethical responsibilities to clients, building users, constructors and the wider society.

Constraints of cost factors, feasibility, CDM and building regulations on design projects.

Local and global issues (such as inequalities and sustainability) and potential solutions to address those through project work to create positive social impact on the wider society.

Problem solving skills: to have the ability to analyse problems and to propose solutions. Be able to think critically: to reflect upon feedback and to improve performance

Critical thinking skills: to interpret, utilise and communicate complex and interrelated information in a manner that is appropriate, rigorous, creative and legible.

Contribute constructively and creatively to a shared production process by applying appropriate modes of professional practice and behaviour.

Prepare a portfolio that is edited, organised and clearly labelled so that it can be evaluated in terms of range, depth, creativity and originality as well as standards of accuracy and skills of execution.

## Learning Outcomes

Outcome Number	Description
01	Work collaboratively with multi disciplines to develop an appropriate programme of occupation and use including future use, adaptation and/or retrofit.
02	Apply structural, environmental and construction principles in a design project that demonstrates understanding of professional and ethical responsibilities to clients, building users, constructors, the environment and the wider society.
03	Develop, refine and test their design at all stages, demonstrating experimentation and iteration, informed by critical feedback and discussion demonstrating evidence of self-motivation, reflection and critical thinking, as well as qualities of curiosity and engagement, and a creative and responsible approach.
04	Prepare a portfolio that is edited, organised and clearly labelled so that it can be evaluated in terms of range, depth, creativity and originality as well as standards of accuracy and skills of execution.

## Learning, Teaching and Assessment Strategy

The teaching and learning methods have been selected to engage students in developing their knowledge and understanding of Integrated Sustainable Design through formal learning opportunities such as lectures and tutorials, and informal and social learning through team-working in projects.

Throughout the module, students will be set formative assessment activities that will help develop confidence in tackling data analysis problems and in the use of the software tools that will support them. The timely constructive feedback from this formative assessment will support students develop the skills and knowledge required for the summative assessment.

The module will be summatively assessed through a design portfolio and presentations. Design work is developed in the studio environment through workshops, group and individual tutorials, to continually appraise, evaluate and develop the work. All design work is regularly presented to academics and peers for critical feedback.

Students receive written feedback on their progress after each review as formative assessment, though no marks are formally awarded.

The design project enables students to demonstrate that they have understanding and ability to integrate technological, professional and design concepts to develop a detailed design proposal. Learning and teaching is organised around a series of subject-based lectures giving an overview of relevant professional and industry issues, principles of structures, environmental design, materials and construction and sustainability. This knowledge and understanding is tested and developed through individual research and application to the Design project, resulting in a design proposal resolved to a high degree of detail. Each student's progression from principle through application to detailed resolution is supported by group seminars and project tutorials, which inform and test their individual design response.

If a student requires supplementary assessment for re-assessment, the assessment method will be the same as original.

### Mode of Assessment

Type	Method	Description	Weighting
Summative	Coursework - Written	Design Portfolio including presentation	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.*