

## MODULE DESCRIPTOR

### Module Title

Retrofit and Sustainability

Reference	SU2054	Version	1
Created	April 2023	SCQF Level	SCQF 8
Approved	June 2023	SCQF Points	30
Amended		ECTS Points	15

### Aims of Module

To provide students with an understanding of the overall context for domestic retrofit in the UK and the ability to examine appropriate and safe retrofit strategies and understand the financial costs and savings of retrofit and the effects on carbon dioxide emissions of properties

### Learning Outcomes for Module

On completion of this module, students are expected to be able to:

- 1 Report on the political and technical context of domestic retrofit in the UK and the benefits of a successful sustainable retrofit
- 2 Categorise UK climate and construction typologies as well as the impact these have on fabric improvement strategies
- 3 Use the basics of building physics to identify moisture risks
- 4 Compare exemplar strategies for retrofitting building services, including the specification of heating, ventilation, and renewables
- 5 Undertake critical reflection on the core contents of the module relative to their application within the workplace

### Indicative Module Content

This module prepares students for the technical challenges of retrofitting existing buildings to an excellent standard and avoiding unintended consequences. Weekly topics include: the UK retrofit context; climate and microclimate; construction typologies and fabric improvement strategies; heat and moisture movements; building services improvement; option evaluation and medium-term retrofit plans; monitoring and evaluation; case study analysis and knowledge application on workplace projects where applicable.

**Module Delivery**

The module is delivered in Blended Learning mode using structured online learning materials/activities and directed study, facilitated by regular online tutor support. Workplace Mentor support and work-based learning activities will allow students to contextualise this learning to their own workplace. Face-to-face engagement occurs through annual induction sessions, employer work-site visits, and modular on-campus workshops.

**Indicative Student Workload**

	Full Time	Part Time
Contact Hours	30	N/A
Non-Contact Hours	30	N/A
Placement/Work-Based Learning Experience [Notional] Hours	240	N/A
TOTAL	300	N/A
<i>Actual Placement hours for professional, statutory or regulatory body</i>	240	

**ASSESSMENT PLAN**

*If a major/minor model is used and box is ticked, % weightings below are indicative only.*

**Component 1**

Type:	Coursework	Weighting:	100%	Outcomes Assessed:	1, 2, 3, 4, 5
Description:	An integrated assignment consisting of illustrated written work to demonstrate understanding and application of the module learning outcomes and reflecting on the learning development throughout the module weeks that involves theory and practice.				

**MODULE PERFORMANCE DESCRIPTOR****Explanatory Text**

The overall module grade is based on 100% weighting of Component 1 (assignment). An overall minimum grade D is required to pass the module. Non-submission will result in an NS grade.

Module Grade	Minimum Requirements to achieve Module Grade:
<b>A</b>	A
<b>B</b>	B
<b>C</b>	C
<b>D</b>	D
<b>E</b>	E
<b>F</b>	F
<b>NS</b>	Non-submission of work by published deadline or non-attendance for examination

**Module Requirements**

Prerequisites for Module	None.
Corequisites for module	None.
Precluded Modules	None.

**INDICATIVE BIBLIOGRAPHY**

- 1 BAELI, M. ,2019. Residential retrofit: twenty case studies. Routledge.
- 2 BSI. ,2021. BS 5250: 2021 Management of moisture in buildings - code of practice
- 3 HUNT, R., & SUHR, M. ,2019. Old House Eco Handbook: A Practical Guide to Retrofitting for Energy Efficiency and Sustainability. Frances Lincoln.
- 4 INITIATIVE, L. E. T. ,2020. LETI Climate Emergency Design Guide. How New Buildings can Meet UK Climate Change.
- 5 MAY, N., & SANDERS, C. , 2017. Moisture in buildings: an integrated approach to risk assessment and guidance.
- 6 PIDDINGTON, J., Nicol, S., GARRETT, H., & CUSTARD, M. , 2020. The housing stock of the United Kingdom. BRE Trust: Watford, UK.
- 7 TRAYNOR, J. , 2020. ENERPHIT: A Step-by-Step Guide to Low Energy Retrofit. Routledge.