APPROVED

ENVI7003: Climate Adaptation & Services

Module Details

Module Code:	ENVI7003
Title:	Climate Adaptation & Services APPROVED
Long Title:	Climate Adaptation & Services
NFQ Level:	Intermediate
Valid From:	Semester 1 - 2019/20 (September 2019)
Duration:	1 Semester
Credits:	5
Field of Study:	5810 - Architecture & Urban Environment
Module Delivered in:	2 programme(s)
Module Description:	This module explores global, EU and Irish policy surrounding climate design and the built environment. Site, building design and material strategies for a changing climate are explored. Mechanical cooling/ventilation systems and an introduction to energy assessment for dwellings is included.

Learning Outcomes

On successful completion of this module the learner will be able to:

#	Learning Outcome Description
LO1	Trace the development of policies and legislation as it relates to climate mitigation & adaptation in the built environment.
LO2	Apply climate adaptation measures to a theoretical or actual multi-storey residential building.
LO3	Make informed decisions with respect to passive, active & hybrid cooling and ventilation servicing systems for a multi-storey residential building.
LO4	Determine impact of building envelope and servicing decisions on overall energy consumption.

Dependencies

Module Recommendations

Incompatible Modules

No incompatible modules listed

Co-requisite Modules

No Co-requisite modules listed

Requirements

No requirements listed

Indicative Content

Legislation & Policy
EU directives, legislation, national & international policy on mitigation, adaptation and resilience to climate change as it relates to the built environment.

Buildings for a changing climate
Modifying site and building design to deal with predicted climate change: temperature swings, overheating, flooding, drought, changing ground conditions, storms, energy and food security issues.

Services
Cooling and ventilation systems applicable to domestic buildings.

Energy Assessment
Introduction to building regulations associated with the energy assessment of domestic buildings using software.

Module Content & Assessment

Assessment Breakdown	%
Coursework	100.00%

Assessments

Coursework

Assessment Type	Short Answer Questions	**% of Total Mark**	25
Timing	Week 6	**Learning Outcomes**	3

Assessment Description
Ventilation & Cooling servicing systems for a multi-storey residential building.

Assessment Type	Project	**% of Total Mark**	50
Timing	Week 12	**Learning Outcomes**	1,2

Assessment Description
Propose climate adaptation measures to a multistorey residential building to ensure future proofing.

Assessment Type	Written Report	**% of Total Mark**	25
Timing	Sem End	**Learning Outcomes**	4

Assessment Description
Energy performance report.

No End of Module Formal Examination

Reassessment Requirement

Coursework Only
This module is reassessed solely on the basis of re-submitted coursework. There is no repeat written examination.

Module Workload

Workload: Full Time

Workload Type	*Contact Type*	*Workload Description*	*Frequency*	*Average Weekly Learner*	*Hours*

				Workload	
Lecture	Contact	Course Content	Every Week	3.00	3
Independent & Directed Learning (Non-contact)	Non Contact	Self Study	Every Week	4.00	4
				Total Hours	7.00
				Total Weekly Learner Workload	7.00
				Total Weekly Contact Hours	3.00

Workload: Part Time

Workload Type	*Contact Type*	*Workload Description*	*Frequency*	*Average Weekly Learner Workload*	*Hours*
Lecture	Contact	Course Content	Every Week	3.00	3
Lecturer Supervised Learning (Non-contact)	Non Contact	Self Study	Every Week	4.00	4
				Total Hours	7.00
				Total Weekly Learner Workload	7.00
				Total Weekly Contact Hours	3.00

Module Resources

Recommended Book Resources

Richard Hyde et al.. (2007), The Environmental Brief, Taylor and Francis, Abingdon, [ISBN: 0415290457].

Fred Hall & Rodger Greeno. (2006), Building Services Handbook, Butterworth, [ISBN: 9780750682206].

The Chartered Institute of Building Services Engineers. (2000), Mixed Mode Ventilation CIBSE AM13:2000, [ISBN: 1903287014].

The Chartered Institute of Building. (2005), Natural ventilation in non-domestic buildings : CIBSE Applications Manual AM10, [ISBN: 1903287561].

Sofie, Pelsmakers. (2012), The Environmental Design Pocketbook, RIBA Publishing, London, [ISBN: 9781859463741].

This module does not have any article/paper resources

Other Resources

Website, Energy Data,
http://www.seai.ie

Website, RIBA Climate Change Toolkits,
http://www.architecture.com

Website, Tools & Calculators,
http://www.energysavingtrust.org.uk

Module Delivered in

Programme Code	Programme	Semester	Delivery
CR_CARCT_8	Bachelor of Science (Honours) in Architectural Technology	-1	Mandatory
CR_TARCH_7	Bachelor of Science in Architectural Technology	-1	Mandatory