

APPROVED**ARCH7033: Studio: Hybrid Multi-storey**

Module Details	
Module Code:	ARCH7033
Title:	Studio: Hybrid Multi-storey APPROVED
Long Title:	Studio: Hybrid Multi-storey
NFQ Level:	Intermediate
Valid From:	Semester 1 - 2022/23 (September 2022)
Duration:	1 Semester
Credits:	10
Field of Study:	5810 - Architecture & Urban Environment
Module Delivered in:	1 programme(s)
Module Description:	Studio for hybrid multi-storey commercial buildings explores technical design strategies for complex hybrid systems through exemplar architecture. The scale/type of building would be appropriate to a complex Commercial, Office, Educational or Retail Development.

Learning Outcomes	
On successful completion of this module the learner will be able to:	
#	Learning Outcome Description
LO1	Integrate comprehension of current societal concerns and environmental context and their changing nature into architectural technology and technical design practice.
LO2	Produce technical drawings, details and written technical documentation as part of an integrated technical design response for a complex building structure.
LO3	Integrate relevant regulations, legislation and design standards into technical design.
LO4	Understand the implications the structural system of the building has on the selection of the building envelope materials and systems
LO5	Analyse & propose technical design strategies for the building fabric envelope taking into account the complex nature of the hybrid structure of the building.
Dependencies	
Module Recommendations	
Incompatible Modules	
No incompatible modules listed	
Co-requisite Modules	
No Co-requisite modules listed	
Requirements	
No requirements listed	

Indicative Content	
Methodology Investigation, exploration and integration of precedent; the experience of architecture; societal conditions and concerns; technical design challenges; teamwork; architectural design concept reinforcement through detail; and architectural tectonic expression.	
Technical Design Ability to compile and carry out technical drawings and documentation to show compliance with building regulations and building control, Fire Cert Application and Disability Access Cert application. Explore material selection, specification and installation appropriate for the building envelope of a complex commercial buildings. Demonstrate an understanding of the regulations and design parameters involved in the design layout of an underground basement carpark and site plan. Introduction to Passive House standards and principles.	
Principles Structural Systems. Understand the complexity of hybrid structural systems has on the implications of the design of the building. Explore the parameters of various types of structural systems for basement construction, service shafts, walls, floors and roofs both load bearing and non load bearing from heavyweight to light weight frame systems, solid construction systems, masonry, site cast and pre cast systems through detailing.	
Policies & Legislation Comply with national legislative building regulations, with particular focus on Technical Guidance Document's Part B Fire, Part M Access and Use, Part K Stairs & Part L Conservation of Fuel & Energy - Buildings other than Dwellings. Building Control Act (forms and procedure for Fire Cert & DAC), BS 9999-2017 Code of Practice for fire safety in design of management and buildings, BR187 – External fire spread -building separation and boundary distances (awareness), British Standard – Sanitary Installations BS 6465 part 1 & 2, Building Bulletin 100 – Schools, IS 3217-2013 Emergency Lighting, IS 3218-2013 Fire detection and alarm systems for buildings - system design, installation, servicing and maintenance, Buildings for Everyone (NDA), BS 8102: 2009 Code of practice for the protection of below ground structures against water from the ground.	

Module Content & Assessment	
Assessment Breakdown	%
Coursework	100.00%

Assessments

Coursework			
Assessment Type	Critique	% of Total Mark	15
Timing	Week 2	Learning Outcomes	2,3
Assessment Description Basement and Site plan layout design.			
Assessment Type	Project	% of Total Mark	40
Timing	Week 7	Learning Outcomes	1,2,3
Assessment Description Produce compliance report with building regulations, TGD Part B,M,K.			
Assessment Type	Project	% of Total Mark	45
Timing	Sem End	Learning Outcomes	1,4,5
Assessment Description Building fabric analysis, research materials, analyse problem areas and propose solutions for complex details in key locations of a building taking into account the structure of the building.			
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 Workload	Hours
Lecture	Contact	Studio based delivery of module	Every Week	1.00	1
Tutorial	Contact	Group tutorial	Every Week	0.50	0.5
Independent & Directed Learning (Non-contact)	Non Contact	Completion of studio assignments	Every Week	12.50	12.5
Total Hours					14.00
Total Weekly Learner Workload					14.00
Total Weekly Contact Hours					1.50

Workload: Part Time					
Workload Type	Contact Type	Workload Description	Frequency	Average Weekly Learner Workload	Hours
Lecture	Contact	Studio based delivery of module	Every Week	1.00	1
Tutorial	Contact	group tutorial	Every Week	0.50	0.5
Independent & Directed Learning (Non-contact)	Non Contact	Completion of studio based assignments	Every Week	12.50	12.5
Total Hours					14.00
Total Weekly Learner Workload					14.00
Total Weekly Contact Hours					1.50

Module Resources

Recommended Book Resources
Edward Allen, Joseph Iano. (2017), The Architect's Studio Companion: Rules of Thumb for Preliminary Design, 6th. John Wiley & Sons, Hoboken, New Jersey, [ISBN: 978-111909241]. Klaus Seilbauer, Eberhard Schenk, Rainer Barthel, Hartwig M. Künzel. (2010), Flat Roof Construction Manual, 2nd. Birkhäuser, Basel, Switzerland, [ISBN: 978-303460658]. M. Pfundstein, R. Gallert, M. Spitzner, A. Rudolphi. (2008), Detail Practice: Insulating Materials: Principles, Materials and Applications (Detail Practice Series), 1st. Birkhäuser, Basel, Switzerland, [ISBN: 978-3-7643-86]. Thomas Herzog, Roland Krippner, Werner Lang. (2018), Facade Construction Manual (Construction Manuals (englisch)), 2nd. DETAIL, Birkhäuser, Basel, Switzerland, [ISBN: 978-395553369]. Department of the Environment, Heritage and Local Government. (2017), Building Control Act, Building Regulations and Technical Guidance Documents, Government Publications.
Supplementary Book Resources
Jonathan Hetreed, Ann Ross, Charlotte Baden-Powell. (2017), Architect's Pocket Book, 5th. Routledge, London, [ISBN: 978-113864399]. Victoria Ballard Bell, Patrick Rand. (2006), Materials for Architectural Design 2, 1st. Princeton Architectural Press, [ISBN: 9781780670898]. Sofie Pelsmakers. (2015), The Environmental Design Pocketbook:, 2nd. RIBA Publishing, [ISBN: 9781859465486]. Charles Broto. (2011), New Façades, 1st. Links International, [ISBN: 9788492796830]. Mark Lawson, Ray Ogden, Chris Goodier. (2014), Design in Modular Construction, 1st. CRC Press, USA, [ISBN: 978-041555450].
<i>This module does not have any article/paper resources</i>
Other Resources
Website, Department of Housing Planning & Local Government. Technical Guidance Documents, Dublin, Ireland, Department of Housing Planning & Local Government, https://www.housing.gov.ie/housing/building-standards/tgd-part-d-materials-and-workmanship/Technical-guidance-documents Website, Centre for Excellence in Universal Design. Buildings for Everyone; A Universal Design Approach, Dublin, Ireland, Centre for Excellence in Universal Design, http://universaldesign.ie/Built-Environment/Building-for-Everyone/ Website, TRADA. learning resource for timber as a material, Timber Research And Development Association, https://www.trada.co.uk/Academic/

Module Delivered in

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