

APPROVED**ARCH6051: Studio: Timber & Steel**

Module Details	
Module Code:	ARCH6051
Title:	Studio: Timber & Steel APPROVED
Long Title:	Studio: Timber & Steel
NFQ Level:	Fundamental
Valid From:	Semester 1 - 2019/20 (September 2019)
Duration:	1 Semester
Credits:	10
Field of Study:	5810 - Architecture & Urban Environment
Module Delivered in:	2 programme(s)
Module Description:	Technical Design Studio which explores simple structures in timber and in steel.

Learning Outcomes	
On successful completion of this module the learner will be able to:	
#	Learning Outcome Description
LO1	Describe the properties of traditional building materials, systems and technologies in timber and steel frame construction.
LO2	Identify and evaluate information, apply critical judgement and formulate a creative structural solution for a timber or steel frame building.
LO3	Analyse and discuss the various design solutions for the building envelope, thermal performance for a timber or steel frame building.
LO4	Participate in a group project
Dependencies	
Module Recommendations	
Incompatible Modules	
No incompatible modules listed	
Co-requisite Modules	
No Co-requisite modules listed	
Requirements	
No requirements listed	

Indicative Content
Technical Design Simple structures in timber and steel, understanding of relevant regulations and legislation
Properties Load bearing, non load bearing, frame, floor, roof, enclosure, junction
Methodology/ Pedagogy Exploration of structure and form through models; An understanding of design and technical design concepts through exploration of exemplary architecture; Investigation/ familiarisation with materials; Exploration of ergonomics - human scale/ proportion; Exercises in detailing; Development of a sketchbook; Representation through freehand drawing, sketching, 3-D drawing; Development of skills in critical thinking, critique and discussion
Team Activity Successful participation in a team, the dynamics of team building and management, design team resolution

Module Content & Assessment	
Assessment Breakdown	%
Coursework	100.00%

Assessments

Coursework			
Assessment Type	Project	% of Total Mark	20
Timing	Week 3	Learning Outcomes	1,2,4
Assessment Description Design a simple frame structure (group project)			
Assessment Type	Project	% of Total Mark	22
Timing	Week 6	Learning Outcomes	2
Assessment Description Stage 1: Propose structural solution for simple timber frame building (drawings & model)			
Assessment Type	Project	% of Total Mark	20
Timing	Week 8	Learning Outcomes	3
Assessment Description Stage 2: Building Envelope Solutions			
Assessment Type	Project	% of Total Mark	38
Timing	Week 13	Learning Outcomes	1,2,3
Assessment Description Stage 3: Produce a set of working drawings that illustrate technical solutions for a simple timber frame 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
Tutorial	Contact	Group tutorial	Every Week	0.50	0.5
Lecture	Contact	Studio based delivery of module	Every Week	1.00	1
Independent & Directed Learning (Non-contact)	Non Contact	Completion of studio assignments self directed	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 assignments self directed	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
<p>Roy Chudley, Roger Greeno BA(Hons.) FCIQB FIPHE FRSA. (2016), Building Construction Handbook, 11th. Routledge, [ISBN: 9781138907096].</p> <p>Francis D. K. Ching. (2014), Building Construction Illustrated, 5th. John Wiley & Sons, Hoboken, N.J., [ISBN: 9781118458341].</p> <p>Stephen Emmitt. (2018), Barry's Introduction to Construction of Buildings, 4th. Wiley-Blackwell, United Kingdom, [ISBN: 9781118977163].</p> <p>J S Foster, Roger Greeno. (2007), Mitchell's Structure and Fabric, 7th. Pearson Education Limited, England, [ISBN: 9780131970946].</p> <p>Department of the Environment, Heritage and Local Government. (2017), Building Control Act, Building Regulations and Technical Guidance Documents, Government Publications.</p>
Supplementary Book Resources
<p>Eugene Farrell, John A McCarthy, Anthony McFeely. (1993), Homebond House Building Manual, 7th. National House Building Guarantee, Dublin, [ISBN: 9780952361466].</p> <p>Andrea Deplazes (Editor), G. H. Söffker (Translator). (2018), Constructing Architecture: Materials, Processes, Structures; a Handbook, 4th. Birkhauser Verlag AG, Basel-Boston-Berlin, [ISBN: 9783035616699].</p> <p>Stephen Emmitt, John Olie, Peter Schmid. (2004), Principles of Architectural Detailing, 1st. Wiley-Blackwell, [ISBN: 9781405107549].</p> <p>edited by Pamela Buxton. (2018), Metric Handbook, 6th. Routledge, [ISBN: 9781138714687].</p> <p>Ernest Neufert, Peter Neufert. (2012), Architects' Data, 4th. Wiley Blackwell, [ISBN: 9781405192538].</p> <p>Edward Allen, Patrick Rand. (2016), Architectural Detailing: Function, Constructability, Aesthetics, 3rd. Wiley, [ISBN: 9781118881996].</p> <p>Victoria Ballard Bell, Patrick Rand. (2006), Materials for Design, 1st. Laurence King, [ISBN: 9781568985589].</p> <p>Miriam Delany, Anne Gorman. (2015), Studio Craft & Technique for Architects, Laurence King Publishing, London, England, [ISBN: 9781780676579].</p>
<i>This module does not have any article/paper resources</i>
Other Resources
<p>Website, TRADA Group Ltd. (2002), Wood and Timber Specification, United Kingdom, TRADA, http://www.trada.co.uk</p> <p>Website, COFORD. (2006), Wood specification, Dublin, COFORD, http://www.woods-spec.ie</p> <p>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</p>

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