

**APPROVED****ARCH8016: Technical Design Resolution**

Module Details	
Module Code:	ARCH8016
Title:	Technical Design Resolution <b>APPROVED</b>
Long Title:	Technical Design Retrofit Resolution
NFQ Level:	Advanced
Valid From:	Semester 1 - 2022/23 ( September 2022 )
Duration:	1 Semester
Credits:	10
Field of Study:	5810 - Architecture & Urban Environment
Module Delivered in:	<a href="#">1 programme(s)</a>
Module Description:	This module focuses on technical architectural design solutions for buildings. The emphasis is on the exploration and manipulation of the building envelope and servicing systems to demonstrate a sustainable approach based on best practice.

Learning Outcomes	
On successful completion of this module the learner will be able to:	
#	Learning Outcome Description
LO1	Propose technical solutions at a variety of scales which comply with relevant legislation & follow best practice to deliver a low-energy building meeting industry recognized comfort conditions.
LO2	Produce supporting technical specification documentation of an element of the building.
LO3	Integrate structural solutions, building services and sustainable design practice into technical design proposals.
LO4	Present quantitative data on performance based solutions related to energy and water use in the building.
Dependencies	
<b>Module Recommendations</b>	
<b>Incompatible Modules</b>	
No incompatible modules listed	
<b>Co-requisite Modules</b>	
No Co-requisite modules listed	
<b>Requirements</b>	
No requirements listed	

Indicative Content
<b>Technical Design &amp; Detailing</b> Selection and application of materials and resolution of external envelope treatments to multi-storey buildings including thermal insulated products, air tight systems, rainscreens, curtain wall systems, shading devices, terraces, flooring & roofing systems. Detailing of all proposals to best-practice industry standard.
<b>Technical Specification</b> Compilation of specification in a specification document - NBS format.
<b>Building Fabric &amp; Services</b> Interface of envelope and servicing systems following a Fabric First approach.
<b>Legislation</b> Application of legislative requirements pertaining to parts of TGD: L, B & M to proposed envelope design.
<b>Calculations</b> Building analysis and calculation of space heat demand to demonstrate compliance with Passivhaus and best practice.

Module Content & Assessment	
Assessment Breakdown	%
Coursework	100.00%

**Assessments**

Coursework			
<b>Assessment Type</b>	Critique	<b>% of Total Mark</b>	25
<b>Timing</b>	Week 5	<b>Learning Outcomes</b>	1,4
<b>Assessment Description</b> Stage 1- Building Envelope Design Proposal			
<b>Assessment Type</b>	Critique	<b>% of Total Mark</b>	25
<b>Timing</b>	Week 10	<b>Learning Outcomes</b>	1,3,4
<b>Assessment Description</b> Stage 2 Integration of Envelope and Systems.			
<b>Assessment Type</b>	Project	<b>% of Total Mark</b>	10
<b>Timing</b>	Week 11	<b>Learning Outcomes</b>	2
<b>Assessment Description</b> Specification document			
<b>Assessment Type</b>	Critique	<b>% of Total Mark</b>	20
<b>Timing</b>	Week 13	<b>Learning Outcomes</b>	1,2,3,4
<b>Assessment Description</b> Stage 3: Refinement of Proposal			
<b>Assessment Type</b>	Presentation	<b>% of Total Mark</b>	20
<b>Timing</b>	Sem End	<b>Learning Outcomes</b>	1,2,3,4
<b>Assessment Description</b> Dissemination/Exhibition			
No End of Module Formal Examination			

<b>Reassessment Requirement</b>
<b>Coursework Only</b> <i>This module is reassessed solely on the basis of re-submitted coursework. There is no repeat written examination.</i>

## 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	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	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>Corner, Donald. (2022), Passive House Details, 1st. Independent, [ISBN: 9798805008154].</p> <p>Austrian Institute for Healthy and Ecological Building. (2018), Details for Passive Houses: New Buildings, 4th. Birkhauser, [ISBN: 9783035616866].</p> <p>Walshaw, Emma. (2018), Understanding Architectural Details - Commercial, 2nd. First in Architecture, [ISBN: 9781916334366].</p> <p>Hopfe, Christina, McLeod Robert. (2015), The Passivhaus Designer's Manual, Routledge, [ISBN: 9780415522694].</p> <p>Hall, Andrew (Editor). (2010), Details in Architecture, 1st. The Images Publishing Group Pty Ltd, Australia, [ISBN: 9781864703429].</p> <p>Bizley, Graham. (2010), Architecture in Detail II, 1st. Routledge, [ISBN: 9780080965352].</p> <p>Mike Riley. (2009), Construction Technology 2: Industrial and Commercial Building, 2nd. Palgrave Macmillan, UK, [ISBN: 978-0230575714].</p>
<i>This module does not have any article/paper resources</i>
<i>This module does not have any other resources</i>

## Module Delivered in

Programme Code	Programme	Semester	Delivery
CR_CARCT_8	<a href="#">Bachelor of Science (Honours) in Architectural Technology</a>	-1	Mandatory