Prifysgol Wrecsam
Wrexham University

Module specification

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Module Code	AUR491_AUR491
Module Title	Architectural Design Technology 1
Level	4
Credit value	10
Faculty	Faculty of Art, Computing and Engineering
HECoS Code	100121
Cost Code	GABE

Programmes in which module to be offered

Programme title	Is the module core or option for this programme
HNC Construction Technology	Option
BSc(Hons) Architectural Design Technology	Core
BSc(Hons) Building Surveying Degree Apprenticeship	Option
BSc(Hons) Building Surveying	Option
BSc(Hons) Construction Management Degree Apprenticeship	Option
BSc(Hons) Construction Management	Option
BSc(Hons) Quantity Surveying Degree Apprenticeship	Option
BSc(Hons) Quantity Surveying	Option

Pre-requisites

There are no pre-requisites for this module.

Breakdown of module hours

Learning and teaching hours	8 hrs
Placement tutor support	0 hrs
Supervised learning e.g. practical classes, workshops	10 hrs
Project supervision (level 6 projects and dissertation modules only)	0 hrs
Total active learning and teaching hours	**18** hrs
Placement / work based learning	0 hrs
Guided independent study	82 hrs
Module duration (total hours)	**100 hrs**

For office use only	
Initial approval date	3rd July 2024

For office use only	
With effect from date	September 2024
Date and details of revision	
Version number	1

Module aims

The principal aim of 'Architectural Design Technology 1' is to explain the role of the architectural technologist in the design and development of buildings and infrastructure, and to provide opportunities for students to develop appropriate skills, knowledge, experience and behaviours through simulated design scenarios.

The module also aims to demonstrate how architectural technologists make a significant contribution to the work of the professional design team in the initiation, design, construction, use and eventual decommissioning of buildings and infrastructure.

Module Learning Outcomes - at the end of this module, students will be able to:

1	Illustrate the extensive range of contexts that influence the practice of Architectural Design Technology.
2	Visually communicate the sequence of project development from 'Strategic Definition' to decommissioning, explaining the roles, responsibilities and interdisciplinary relationships of those involved.
3	Develop and visually communicate design responses to given project briefs in the design, construction, use and decommissioning of domestic, industrial and commercial buildings and infrastructure.

Assessment

Indicative Assessment Tasks:

This section outlines the type of assessment tasks the student will be expected to complete as part of the module. More details will be made available in the relevant academic year module handbook.

'Architectural Design Technology 1' will be assessed through a series of individual pieces of coursework which will combine in aggregate to arrive at the recommended final assessment mark for the subject. Coursework will comprise a mixture of individual and group tasks that explore central themes in the practice of architectural technology to replicate situations that architectural technologists engage in during the initiation, design, construction, use and eventual decommissioning of buildings and infrastructure.

The nature of individual pieces of coursework will vary at the discretion of the module tutor, so that learning outcomes are achieved through the application of a range of personal and interpersonal skill sets including effective research, teamwork, conceptual and technical analysis, sketching, drawing, modelling, creative thinking, presenting and the effective use of appropriate digital software.

Coursework will comprise at least three discrete sets of tasks, including at least one in the form of a group exercise, all of which will seek to provide students opportunities to express themselves in creative ways through the initiation, development and presentation of design projects that lend themselves to developing all of those skill sets identified above.
In aggregate, tasks will accommodate theoretical, technical and creative aspects of architectural technology practice, and will provide students with opportunities to transform

original ideas and concepts into workable and potentially constructable buildings and infrastructure.

Assessment number	Learning Outcomes to be met	Type of assessment	Weighting (%)
1	1,2 &3	Coursework	100

Derogations

There are no derogations associated with this module.

Learning and Teaching Strategies

Learning and teaching strategies in the context of 'Architectural Design Technology 1' will accommodate both didactic and supervised practical opportunities to ensure that students gain knowledge and understanding through traditional teaching delivery and are able to apply it through the development of design projects undertaken during supervised design studio sessions. Delivery will incorporate the principles of the University's Active Learning Framework (ALF), so that learning opportunities are both synchronous and asynchronous, and are supported by an accessible range of material resources.

Peer review makes a particularly important contribution to the evolution of design projects, and students will be expected to regularly engage in the critique of the work of their fellow students under the supervision of the module tutor. The architectural technology community is familiar with such a 'crit'-based methodology of learning, the principal benefit being that constructive feedback is shared with all of those who attend supervised studio sessions rather than on a one-to-one basis; this methodology accelerates design development because students learn from the experiences of others.

It should be emphasised that to maintain sufficient progress in the development of design projects, students will be required to dedicate a significant proportion of guided independent study time to the manufacture of drawings and models, and that the design studio will be made available for this purpose during non-timetabled sessions.

The nature of architectural design is such that initial progress through the early stages of the design process can be relatively slow for fear of making mistakes; students should be encouraged to overcome this fear by accepting that significant unknowns are always present at the outset of a project, and that errors of judgement are 'likely' throughout these early developmental stages. It is also important that students understand that learning from mistakes or errors of judgement in the early stages of a design project is a critical part of the process, and is essential to arriving at a successful, functional and fit for purpose building design solution.

It is suggested that 'Architectural Design Technology 1' lends itself well to the creation of an 'end of year' exhibition of student work, which itself might constitute an opportunity for a final piece of group coursework.

Indicative Syllabus Outline

The practice of Architectural Design Technology:

- culture, history and politics
- ethics, inclusivity, cooperation and teamwork
- economics, socio-economics and costs
- legal and regulatory frameworks
- health, safety and welfare

- environmental impact
- materials and innovative technologies
- digitisation

Project development:

- stakeholders
- professional specialisms and working as part of a team
- design management
- hazards, risks and safe systems of work
- sustainability and environmental impact

Design:

- performance requirements
- concept design
- regulatory requirements
- hazards and risks
- environmental impact
- spatial coordination
- building elements, components and systems
- emerging technologies

Indicative Bibliography:

Please note the essential reads and other indicative reading are subject to annual review and update.

Essential Reads:

McLean, W. & Silver, P. (2021), *Introduction to Architectural Technology Third Edition.* 3rd ed. London: Quercus Publishing.

Other indicative reading:

Ching, F. D. K. (2020), *Building Construction Illustrated.* 6th ed. Chichester: John Wiley and Sons Ltd.

Emmitt, S. (2023), *Barry's Introduction to Construction of Buildings.* 5th ed. Chichester: John Wiley And Sons Ltd.

Other sources:

Chartered Institute of Architectural Technologists: www.ciat.org.uk

Royal Institute of British Architects www.architecture.com

Chartered Institute of Building www.ciob.org.uk

Ordnance Survey www.ordnancesurvey.co.uk/

Royal Institution of Chartered Surveyors www.rics.org

Institution of Civil Engineers www.ice.org.uk

Designing Buildings Wiki www.designingbuildings.co.uk

Institution of Structural Engineers www.istructe.org.uk

IHS Database www.ihsti.com