

**Course Code:**

UBAR102

**Session:**

2017/2018

**1. Course Title:**

Architectural Technology 1

<b>Version</b>	<b>2. Date of Production/ Revision:</b>	<b>Date of Approval</b>
1.1	February 2018	February 2018

<b>3. Level:</b>
SCQF 7

<b>4. Credits:</b>
30

<b>5. Lead School/Board of Studies:</b>
Mackintosh School of Architecture

<b>6. Course Contact:</b>
Tim Sharpe

<b>7. Course Aims:</b>
<p>The aim of Architectural Technology 1 is for all students to:</p> <ul style="list-style-type: none"><li>• Achieve a basic knowledge of the principles of building and construction and of the materials and processes employed, and begin to apply them in designing a simple building where the choice of construction and materials contributes to the quality and character of the design.</li><li>• Achieve a sufficient knowledge of environmental science to understand the nature of human comfort in the environment and its consequences for architectural design.</li><li>• Begin taking responsibility for learning and achieve the ability to set and self-manage a programme of study.</li></ul>

<b>8. Intended Learning Outcomes of Course:</b>
<p>At the end of the course each student should have the ability to demonstrate and/or work with:</p> <p><b>Category 1 Knowledge and Understanding</b></p> <ul style="list-style-type: none"><li>• An awareness, through observation, of the intellectual and aesthetic content of significant</li></ul>

buildings. A basic knowledge of the briefing and performance of buildings.

**Category 2 Practice: Applied knowledge and understanding**

- Sufficient knowledge of environmental science to understand the nature of human comfort in the environment and its consequences for architectural design.
- A basic knowledge of building construction, materials, structural design, and the ability to apply them in coherent design projects.

**Category 3 Generic Cognitive Skills**

- Present and evaluate arguments, information and ideas concerning the discipline of architecture.

**Category 4 Communication, ICT and Numeracy skills**

- Communicate ideas, information and work comprehensibly in visual, oral and written forms.
- Convey complex ideas in well-structured and coherent form to peers and staff.

**Category 5 Accountability, Autonomy and Working with Others**

- Exercise some autonomy, initiative and independence in carrying out set project briefs.
- Demonstrate reasonable ability to manage time and physical resources in relation to set project briefs as an individual and a group member.
- Take account of Health and Safety Regulations in studio practice, and adhere to safe working practices. A basic understanding of collaboration with peers to develop design ideas.

**9. Indicative Content:**

The study of environmental design, structural design and principles of building:

Environmental Design introduces the basic design principles of thermal comfort, lighting and acoustics.

Structural Design introduces the basic design principles used in buildings.

Principles of Building provides an overview of the basic design principles in the construction of buildings.

**10. Description of Summative Assessment:**

Work assessed through programme work, practical examinations throughout the session and written examination.

No.	Assessment Method	Description of Assessment Method	Weight %	Submission week (assignments) or length (exam)
1	Written examination	Environmental Design examination paper	33.3	Semester 2 week 10 2 hours
2	Coursework	Principles of Building seminar	33.3	Semester 2 week 9

		submission and technical study		
3	Coursework	Structural Design seminar submission and technical study	33.3	Semester 2 week 9

*Pass in ALL components required*

**10.1 Please describe the Summative Assessment arrangements:**

Learning level outcomes stated for the course must be achieved, and ability to fulfil these is graded against the marking scheme (see Academic Regulations).

**11. Formative Assessment:**

Formative guidance given during studio based tutorials

**11.1 Please describe the Formative Assessment arrangements:**

N/A

**12. Collaborative:**

Yes

No

**12.1 Teaching Institutions:**

N/A

**13. Requirements of Entry:**

None

**14. Co-requisites:**

Studio Work 1; History of Architecture and Urban Studies 1; Studio Practices 1

**15. Associated Programmes:**

Bachelor of Architecture with Honours

**16. When Taught:**

Semesters 1 and 2

**17. Timetable:**

Lectures, 4 hours, weekly

**18. Available to Visiting Students:**

Yes

No

**19. Distance Learning:**

Yes

No

**20. Placement:**Yes No **21. Learning and Teaching Methods:**

Method	Formal Contact Hours	Notional Learning Hours (Including formal contact hours)
Lecture	38	50
Studio	10	127
Seminar/Presentation		
Tutorial	3	
Workshop	13	
Laboratory work		
Project work		
Professional Practice		
E-Learning / Distance Learning		
Placement		
Examination		3
Essay		
Private Study	Not Applicable	120
Other (please specify below)		
<b>TOTAL</b>	<b>64</b>	<b>300</b>

**22. Description of "Other" Teaching and Learning Methods:**

N/A

**23. Additional Relevant Information:**

N/A

**24. Indicative Bibliography:**

McMullan, R. (2007), Environmental Science in Building (6<sup>th</sup> Edition), Basingstoke, UK: Palgrave Macmillan.

Rasmussen, S. (1962), Experiencing Architecture, Boston, USA: MIT Press.

Banham, R. (1984), The Architecture of the Well-Tempered Environment, (2nd Revised edition), Chicago, USA: University of Chicago Press

Hensel, M. (2013), Performance-Oriented Architecture: Rethinking Architectural Design and the Built Environment (Architectural Design Primer), London: John Wiley & Sons.

C. Porteous, (2002, 2003), The New eco-Architecture, alternatives from the modern movement, London: Spon Press.

Grueneisen, P (2003), Soundspace: architecture for sound & vision, Basel: Birkhauser.

Buttiker, U. (1993), Light & Space, Basel: Birkhauser.

Reid, E (1984), Understanding Buildings, A multidisciplinary approach, (chapters 1-2), Harlow: Longman Scientific and Technical.

Hunt T. (1999), Tony Hunt's Sketch Book, Oxford: Architectural Press.

Silver, P., Evans, P., McLean, W. (2013), Structural Engineering for Architects: A Handbook, London : Laurence King.

Beukers, A., van Hinte, E. (1998), *Lightness: The Inevitable Renaissance of Minimum Energy Structures*, Rotterdam : 010 Publishers.

Ji, T., Bell, A. (2008), *Seeing and Touching Structural Concepts*, London & New York: Taylor & Francis.

Engel, H., (1997), *Structure Systems: Tragsysteme*, Ostfildern-Ruit : Verlag Gerd Hatje.

Deplazes, A. (2005), *Constructing Architecture: Materials Processes Structures*, Basel: Birkhauser.

Frampton, K. (1995), *Studies in Tectonic Cultures: The Poetics of Construction in Nineteenth and Twentieth Century Architecture*, Cambridge, Mass.: MIT Press.

Ford E. (2011), *The Architectural Detail*, New York: Princeton Architectural Press.

*Detail Magazine*, Munich: Institut für Internationale Architektur –Dokumentation.