

Course Code:

ARCHTECH 2

1. Course Title:

Architectural Technology 2

2. Academic Session:

2011/12

3. Level:

SCQF 8

4. Credits:

30

5. Lead School/Board of Studies:

Mackintosh School of Architecture

6. Course Contact:

Tim Sharpe

7. Course Aims:

The aims of the course Architectural Technology 2 are for students to achieve:

- An integrated knowledge of building construction, structural systems, material choices and energy transfer mechanisms and the ability to synthesize them into a coherent project that expresses architectural intentions.
- A basic understanding of the techniques of functional analysis of building performance including computer applications.

8. Intended Learning Outcomes of Course:

At the end of the course each student should have the ability to demonstrate and/or work with:

Category 1 Knowledge and Understanding

- An understanding and interpretation of the briefing and performance of buildings

Category 2 Practice: Applied Knowledge and Understanding

- Execute defined projects supported by selected areas of research, development or investigation and identify and implement relevant outcomes.
- An integrated knowledge of building construction and materials, structural design, and energy transfer mechanisms synthesized in coherent design projects that express architectural intentions
- An integrated knowledge of building construction and materials, structural design, and energy transfer mechanisms, synthesized in coherent design projects that express architectural intentions.

Category 3 Generic Cognitive Skills

- Undertake critical analysis, evaluation and synthesis of ideas, concepts, information and issues which are within the common understanding of the discipline.
- Critically evaluate evidence-based responses to defined problems.

Category 4 Communication, ICT and Numeracy skills

- Communicate and articulate ideas, information and work in a clear and concise way in visual, oral and written forms
- Convey complex information to a range of audiences and for a range of purposes

9. Indicative Content:

Architectural Technology 2 entails the following areas of study:

Environmental Design – investigates the principles underlying models and methods, and the working techniques for assessing performance, relating to the acoustic and sonant, lighting and optical, and thermal aspects of architecture; including energy transfer mechanisms, building components and services systems, applicable in Studio Work 2 and acknowledging environmental impact.

The Principles of Building – studies the principles underlying the design, construction and assembly of building elements with particular regard to performance requirements, all based on principles conveyed in stage 1 and applicable in Studio Work 2.

Structural Design - the course describes selected principles and methods of structural design with emphasis on the performance of structural components and acknowledging issues of sustainability, building on theory and principles learned in Stage1, applicable in Studio Work 2.

10. Description of Summative Assessment:

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

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 2; History of Architecture and Urban Studies 2; Studio Practices 2

15. Associated Programmes:

Bachelor of Architecture

16. When Taught:

Terms 1 and 2

17. Timetable:

Lectures 3 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	20	20
Studio	20	134

Seminar/Presentation	20	2
Tutorial		
Workshop		
Laboratory work		
Project work		
Professional Practice		
E-Learning / Distance Learning		
Placement		
Examination		6
Essay		
Private Study	Not Applicable	120
Other (please specify below)		
TOTAL	60	300

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

N/A

23. Additional Relevant Information:

N/A

24. Indicative Bibliography:

Recommended reading list:

Carried over from Architectural Technology 1

R. McMullan, (London, 1983, 1989, 1992 etc.), *Environmental Science in Building*, The McMillan Press Ltd.,

R. Banham, (London, 1969, 1984), *The Architecture of the well-tempered environment*, The Architectural Press

ed. J. Goulding, J. Owen Lewis and T. C. Steemers (1992), *Energy Conscious design, a Primer for Architects*, Batsford for the CEC. The New eco-Architecture, alternatives from the modern movement, C. Porteous, Spon Press, London, 2002, 2003.

P. Borer and C. Harris (1998), *The Whole House Book, Ecological building design & materials*, The Centre for Alternative Technology, Machynlleth, Wales.

Leo Beranek, (2003), *Concert Halls and Opera Houses: Music, Acoustics and Architecture*, Springer-Verlag.

Emily Thomson, (2004), *The Soundscape of Modernity: Architectural Acoustics and the Culture of Listening in America*.

Gesil Kay, (1999), *Fibre Optics in Architectural Lighting: Systems, Design and Application*.