

**Glasgow School of Art Course Specification**  
**Course Title: Architectural Technology 2**

*Please note that this course specification is correct on the date of publication but may be subject to amendment prior to the start of the 2023-24 Academic Year.*

<b>Course Code:</b>	<b>HECOS Code:</b>	<b>Academic Session:</b>
UBAR202		2023-24

<b>1. Course Title:</b>
Architectural Technology 2

<b>2. Date of Approval:</b>	<b>3. Lead School:</b>	<b>4. Other Schools:</b>
Academic Council December 2023	Mackintosh School of Architecture	N/A

<b>5. Credits:</b>	<b>6. SCQF Level:</b>	<b>7. Course Leader:</b>
30	8	Virginia Rammou

<b>8. Associated Programmes:</b>
Bachelor of Architecture with Honours

<b>9. When Taught:</b>
Semester 1

<b>10. Course Aims:</b>
<p>The aims of the course Architectural Technology 2 are for students to achieve:</p> <ul style="list-style-type: none"> <li>• 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.</li> <li>• A basic understanding of the techniques of functional analysis of building performance including computer applications.</li> </ul>

<b>11. 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>Category 1 Knowledge and Understanding</p> <ul style="list-style-type: none"> <li>• An understanding and interpretation of the briefing and performance of buildings</li> </ul> <p>Category 2 Practice: Applied Knowledge and Understanding</p> <ul style="list-style-type: none"> <li>• Execute defined projects supported by selected areas of research, development or investigation and identify and implement relevant outcomes.</li> </ul>

- 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

### 12. 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.

### 13. Description of Summative Assessment Methods:

Pass in ALL components required

Assessment Method	Description of Assessment Method	Weight %	Submission week (assignments)
Course Work	Environmental Design 2 submission	33.3	Semester 1 week 12
Course Work	Principles of Building 2 submission	33.3	Semester 1 week 12
Course Work	Structural Design 2 submission	33.3	Semester 1 week 12

#### 13.1 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 Code of Assessment).

**14. Description of Formative Assessment Methods:**

Formative feedback through review presentation

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

Students present interim work for formative feedback at a mid-point of the course

**15. Learning and Teaching Methods:****Formal Contact Hours**

64

**Notional Learning Hours**

300

**15.1 Description of Teaching and Learning Methods:**

Weekly lectures for all 3 x components

**16. Pre-requisites:**

A pass in BArch Hons Stage 1 or equivalent

**17. Can this course be taken by Exchange/Study Abroad students?**

Yes

**18. Are all the students on the course taught wholly by distance learning?**

No

**19. Does this course represent a work placement or a year of study abroad?**

No

**20. Is this course collaborative with any other institutions?**

No

**20.1 If yes, then please enter the names of the other teaching institutions:**

N/A

**21. Additional Relevant Information:**

N/A

**22. Indicative Bibliography:**

Recommended reading list:

Barry's Introduction to the Construction of Buildings, Emmitt & Gorse, 2018.

Studio Craft and Technique for Architects Deleaney, M. Gorman G. 2018, RIBA Publishing.

Materials, Form and Architecture, Richard Weston, Laurence King, 2008.

Building Construction Handbook, Chudley & Greeno, 2020, Routledge

Materials for Design Ballard Bell, V. Rand, P. 2006, Laurence King, 2006.

Timber Construction Manual, Thomas Herzog et al., Basel : Berlin : Birkhäuser ; Springer, 2003

Blan, A, McEvoy, M, Plank, R, (1993), Architecture and Construction in Steel,

Spon Case, J. Chilver, H. Ross, C.T. F. (2003)

Strength of Materials and Structures, Butterworth Gault, B. J. B. (1995b)

Structures for architects, Longman Gordon, J. E. (2009).

Structures: or why things don't fall down. Da Capo Press Hanaor, A. (1998),

Principles of Structures, Wiley-Blackwell Reid Esmond, (1984)

'Understanding Buildings', London: Longman Group Limited. Sandaker, B. N., Eggen, A. P., & Cruvellier, M. R. (2011).

The structural basis of architecture. Routledge. Seward, D. (2009),

Understanding Structures, Palgrave Macmillan Baden-Powell, C. (2011).

Architect's pocket book. Routledge. (Chapter 3) Stacey, M. (2010),

Concrete – a studio design guide, RIBA Publishing Salvadori, M (1991)

Why Buildings Stand up, W. W. Norton & Company; New edition (16 Jan 1991)

DETAIL PUBLICATIONS:

Detail Practice: Concrete, Birkhauser  
Detail Practice: Glass in Building, Birkhauser  
Detail Practice, Insulating Materials Principles, Materials, Applications, Birkhauser  
Detail Practice, Timber Construction Details, Products, Case Studies, Birkhauser  
Detail Practice, E Mommertz; Acoustics and Sound Insulation, Birkhauser  
Detail Practice, A Reichel: Building with Steel Details, Principles, Examples, Birkhauser  
Detail Practice, K Tichelmann and J Pfau: Dry Construction Principles, Details, Examples, Birkhauser

Hocine Bougdah, Environment, Technology and Sustainability: 02 (Technologies of Architecture) Paperback, Taylor & Francis; 1st edition, 2009.

Peter Tregenza and Michael Wilson, Daylighting: Architecture and Lighting Design, Routledge; 1st edition, 2 Nov. 2015.

N/A Acentech and James Cowan, Architectural Acoustics Design Guide, McGraw-Hill Education, September 2000.