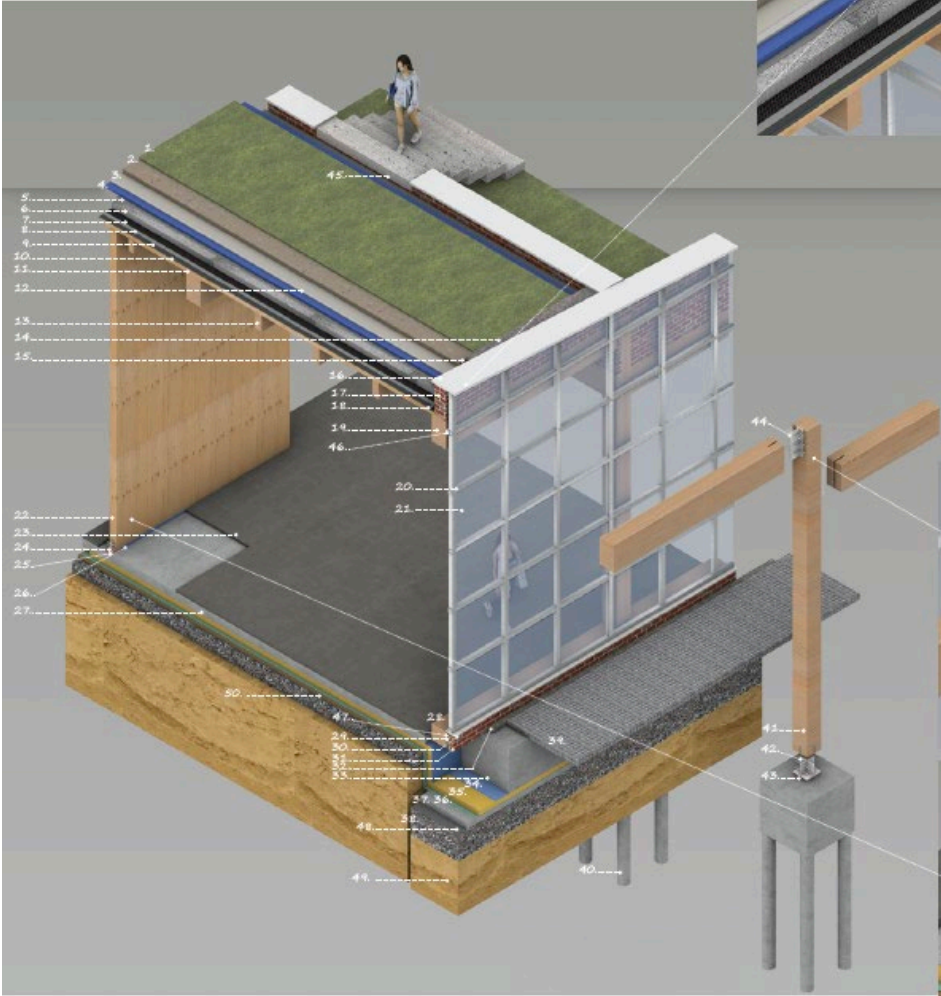


**Glasgow School of Art Course Specification
Course Title: Architectural Technology 3**



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 2024-25 Academic Year.

Course Code	HECOS Code	Academic Session
		2024-25

Course Title	Architectural Technology 3
Course Contact	Virginia Rammou

Credits	30
SCQF Level	Level 9
When Taught	Semester 1

Associated Programmes	Bachelor of Architecture with Honours
Lead School	Mackintosh School of Architecture
Other Schools	N/A
Date of Approval	Programme Approval March 2024

Course Introduction

The Architectural Technology 3 course is designed to support students to integrate architectural technology in the conception and development of their studio projects, fostering a holistic approach to the design of buildings and spaces.

Knowledge gained and tested from the previous year enables students to apply architectural science in a meaningful and effective manner into their design projects.

The course is delivered and assessed in **three** components as follows:

- The Principles of Building component explores building forms, materials and methods of construction that provide architectural solutions to environmental and energy challenges, exploring a range of factors including weathering and climate adaption. Using a 'fabric first' approach, the Component explores the fundamental principles of 'water-out, heat-in, stand-up', while promoting the design and making of buildings that are in balance with their environment.
- The Structural Design component introduces students to structural systems, components, and materials in relation to more complex buildings and structural challenges as well as integrated design concept with structural solutions.
- The Environmental Design component explores the control of building environments in relation to contemporary building performance requirements and associated technologies, with a focus on energy-use and carbon expenditure.

Whilst the course components are delivered individually and address specific aspects of architectural technology, the compound technical knowledge the components deliver is applied holistically through integration with the studio courses. Regenerative design as a response to the Climate Emergency is fundamental to the content and ethos of the course.

Throughout the course students are supported to develop and demonstrate the professional competencies and graduate attributes required to meet the standards for exemption from the ARB and RIBA Part 1 Examination in Architecture.

Course Aims

The Architectural Technology 3 Course consists of three components: Principles of Building, Structural Design and Environmental Design focusing on:

- construction and materials
- the building envelope
- structural design
- building performance
- fire and life safety design
- sustainable design principles

The aims of the course are to:

professional: reinforce students' understanding of the principles and practices of building construction and materiality, structural design and environmental design of architectural projects

design/create: reinforce students' understanding of the technical knowledge required to address the environmental, socio-economic, ethical, cultural and aesthetic demands of architecture through design

research: reinforce students' understanding of the research skills, and tools that focus on the principles and practices of building construction and materiality, structural design and environmental design of architectural projects

communication: reinforce students' understanding of the visual and verbal conventions of the principles and practices of building construction and materiality, structural design and environmental design of architectural projects

skills: reinforce students' understanding of analogue tools and computer-aided design software to undertake basic structural and environmental evaluation and analysis of building performance data

knowledge: reinforce students' knowledge of technology that address the principles and practices of building construction and materiality, structural design and environmental design of architectural outputs

Course Intended Learning Outcomes

On successful completion of the three components of the Course, students will be able to **analyse, evaluate and demonstrate:**

professionalism: knowledge of the principles and practices of the architectonic impact, technical and ethical aspects of architectural projects in the context of the Studio 3 course

design/ create: the technical knowledge required to address the environmental, socio-economic, ethical, cultural and aesthetic demands of architecture through design in the context of the Studio 3 course

research: the research skills, and tools that focus on the architectonic impact, technical and ethical aspects required to analyse, design, and the constructions of architectural projects in the context of the Studio 3 course

communication: the visual and verbal conventions of the architectonic impact, technical and ethical aspects of architectural projects in the context of the Studio 3 course

skills: the ability to use analogue tools and computer-aided design software to undertake basic structural and environmental evaluation and analysis of building performance data in the context of the Studio 3 course

knowledge: the technologies that address the architectonic impact, technical and ethical aspects in the design of architectural projects in the context of the Studio 3 course

Indicative Content

At stage 3, students will further develop their knowledge of Architectural Technology and will be able to analyse, evaluate and demonstrate technology into their design projects. The three Architectural Technology components enable students to experiment and highlight their understanding of technology in a tangible manner within their design project. The Architectural Technology components aim to challenge and enhance design decision making with respect to environmental, material, structural and constructional implications.

During the Architectural Technology course students will:

- undertake research and analysis to enable experimenting and evaluating integrated technical and design solutions
- produce a comprehensive and complete design project based on sound environmental, material, structural, and constructional analysis
- explore methods of decision making with regards to structural, material selection, and environmental performance
- evaluate emerging and innovative technologies and their impact on their design projects,
- collaborate with peers and staff to develop technical and design outputs
- use of digital tools to evaluate the environmental performance of their proposed buildings

Description of Learning and Teaching Methods

Pedagogy:

The Architectural Technology Course 3 consists of three components, Principles of Building, Structural Design and Environmental Design which reinforces students' specialist technical knowledge and its application to technologically informed architectural solutions, while exploring their individual position as an architect and designer. Student learning is developed through specialist lectures, group work and discussion, site visits to specific buildings and construction sites.

Delivery:

The course is delivered through weekly lectures, using a range of learning and teaching activities, including lectures, small-group work and site visits.

Private study consists of both staff-directed study and independent student-directed study.

Timetable:

Lectures are delivered on a weekly basis, with additional workshop activities and site visits.

Canvas:

The virtual learning environment tool Canvas is used for the dissemination, discussion, and access to relevant course information, and to signpost students to other relevant teaching and learning platforms used by GSA.

Indicative Contact Hours	Notional Learning Hours
30	300

Description of Formative Assessment and Feedback Methods

Formative feedback is delivered during the course, offering students the opportunity to obtain ongoing staff and peer feedback through presentation, discussion and review of technical studies.

As such Formative feedback provided throughout the course fosters reflective learning while supporting the Summative graded assessment and feedback process, which generally happens at the end of the course.

Description of Summative Assessment arrangements

Summative assessment, generally undertaken at the end of the course, is designed and delivered to support student learning through evaluation of the Intended Learning Outcomes (ILOs) for each course, aligned with the professional competencies required for architectural practice. Summative assessment in this course is undertaken through coursework assignments in the form of technical research based on design projects. Coursework assignment submissions involve visual and text-based submissions utilising both digital and physical tools and formats. Students are supported in preparing their submissions with feedback and provided with example submissions. Written feedback is provided on all summative assessments.

All submissions will be assessed and moderated in line with the GSA Code of Assessment. Reassessment opportunities where a student has not passed the course are outlined in the GSA Code of Assessment.

Description of Summative Assessment Method	Weight %	Submission week
Assignment AT 3.1 Students are required to submit a Technical Study for Course Component: Structural Design. The technical Study requires students to examine the interdependence of technology and aesthetics and how structure and construction are a unified system.	33%	Week 13
Assignment AT 3.2 Students are required to submit a Technical Study for Course Component: Principles of Building. The Technical Study requires students to examine the impact of location, orientation, placement, form, and the effects of material choices, spatial organisation/proportion and user/function on the choice and development of structure and construction.	33%	Week 13

Assignment AT 3.3 Students are required to submit a Technical Study for Course Component: Environmental Design. The Technical Study requires students to examine building form, material and method of construction, to identify architectural solutions to environmental and energy challenges, while providing sustainable solutions to weather protection and climate adaption.	33%	Week 13
--	-----	---------

Exchange/Study Abroad	
Can this course be taken by Exchange/Study Abroad students?	Yes
Are all the students on the course taught wholly by distance learning?	No
Does this course represent a work placement or a year of study abroad?	No
Is this course collaborative with any other institutions?	No
If yes, then please provide the names of the other teaching institutions	

Reading and On-line Resources
<p>A supporting course indicative Reading and on-line resource list is accessible via Keylinks. This list will be reviewed and updated annually. Supervisors, tutors and peers will provide further recommendations appropriate to student's chosen research subject.</p> <p>Keylinks: https://gsa.keylinks.org/new-ui/hierarchy/list/846</p>