Curriculum Overview 2025 - 2026

Design Engineer Construct known as, Architecture, Engineering & Construction

Exam Board	Exam Specification		Qualification Type
TQUK	603/1992/6	Link to full details	Level 2 Award

Departmental Staff	
	• Mrs Dunne

Examined by:

x 1


x 1

Exam	Portfolio
Externally set and externally marked examination	Internally assessed and externally moderated portfolio
1 hour 30 minutes	120 hours, 50% in Year 9 and worked on continuously until completion in Year 11
	
The external exam for this course is first sat in January of Year 11. If necessary, there is the option to re-take the exam during the summer exam season.	

Trips, fieldtrips and visits

We are a very busy and active department and benefit particularly from visits from our industry partner, TG Escapes and other representatives from the Architecture, Engineering & Construction industry.

Useful revision website/ resource links

Designing Buildings, the *Construction Wiki*

RIBA, Plan of Work

The Ministry of Housing, Communities & Local Government, *Approved Documents*

The Planning Portal

Revision sessions

ACE your coursework, weekly drop-in sessions in G64 - Wednesday 15:15 - 16:15 - all welcome

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Unit 1 — Defining a sustainable construction project

Credit Value	7	
Guided Learning Hrs	40	
The learner will:	Understand a client's needs	**1.1** Identify the contextual needs of a client to create a design brief. **1.2** Record project requirements and client expectations. **1.3 (K)** Calculate benchmark costs in relation to the client's agreed needs.
	Be able to formulate a project-brief	**2.1 (K)** Outline the functional requirements of the project. **2.2** Establish quality objectives for the project. **2.3** Set the sustainability aspirations of the project.
	Understand constraints on the project	**3.1 (K)** Outline the functional requirements of the project. **3.2 (K)** Establish quality objectives for the project. **3.3 (K)** Set the sustainability aspirations of the project. **3.4** Carry out a feasibility study and present the results **3.5** Make a judgement on project viability based on evidence. **3.6 (K)** Explain how the building design helps minimise energy use.
	Be able to draft a project plan	**4.1** Create a draft project plan. **4.2 (K)** Match project planning to the human resources of the team. **4.3** Create an Organogram for the project. **4.4** Estimate the lifespan of the completed project. **4.5** Calculate facilities management costs.. **4.6** Take account of environmental considerations in planning the project.

Unit 2 — Developing a sustainable construction project

Credit Value	6	
Guided Learning Hrs	30	
The learner will:	Be able to develop a feasible proposal from a needs analysis	**1.1** Prepare concept diagrams to describe and communicate ideas. **1.2** Present the quality of the proposal to a client. **1.3** Communicate the concept design to the project team. **1.4(K)** Identify procurement options related to key elements of the project.
	Be able to produce technical support collateral for a project	**2.1** Prepare 3D representations of outline information. **2.2** Utilise the 3D environment to test the design in virtual locations. **2.3 (K)** Use quantitative methods to establish the lighting and energy requirements. **2.4** Produce detailed, scaled drawings that can form the basis of a planning application. **2.5** Describe the key features that form the basis of a planning application. **2.6** Establish a budget that aggregates the estimated benchmark costs of the project.

(K) – This symbol refers to Knowledge, indicating that the Assessment Criteria will also be measured by an External Synoptic Exam.

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	Understand constraints on the project	**3.1 (K)** Explain the importance of compatibility between existing infrastructure and the project proposals. **3.2 (K)** Explain the environmental and climate change reduction strategies **3.3 (K)** Monitor the execution of the plan to ensure compliance with client requirements, taking appropriate action where necessary. **3.4 (K)** Establish strategies for the proposed construction that support health and safety, occupancy, management, and operation. **3.5** Relate building design specification to energy efficiency **3.6** Inform planning through collaborative working groups.

Unit 3 — Delivering a sustainable construction project

Credit Value	6	
Guided Learning Hrs	30	
The learner will:	Be able to deliver a project	**1.1 (K)** Coordinate a design proposal to ensure mistakes are avoided. **1.2** Identify potential problems so appropriate action can be taken. **1.3 (K)** Identify needs that require specialists from outside the team. **1.4** Monitor progress in consultation with peers. **1.5** Ensure the project is developed on time and to budget.
	Be able to respond to technical issues	**2.1 (K)** Provide a 3D model to test the design. **2.2 (K)** Validate the design against the brief using a technical investigation. **2.3 (K)** Ensure that the project complies with building regulations as it progresses. **2.4** Explain how the building works in practice using quantitative monitoring. **2.5** Review progress and reflect on decisions. **2.6** Consult and respond appropriately to peer review.

Unit 4 — Evaluating a sustainable construction project

Credit Value	5	
Guided Learning Hrs	20	
The learner will:	Be able to test the final design against original intentions	**1.1 (K)** Explain how the building works so a user knows how to optimise performance. **1.2** Explain how well final outcomes meet original intentions. **1.3 (K)** Evaluate feedback and use it as a basis for improvement in future projects. **1.4** Analyse data and use it as evidence to inform evaluation. **1.5** Use data to forecast the long-term performance of the building.
	Be able to transfer project evaluation to other contexts.	**2.1 (K)** Identify issues in a building. **2.2 (K)** Make recommendations to improve existing buildings. **2.3 (K)** Carry out a qualitative audit reporting on aesthetics and sensory experiences of users. **2.4** Present the building project to a professional audience.

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