

Title	Construction Technology
Level	10
GLH	100
Unit Aims:	Unit Learning Outcomes: The Learner can:
Knowledge & Understanding The unit provides a systematic understanding of the key aspects of managing the construction technology of complex projects.	1. Apply concepts in ground engineering techniques and substructure technology.
	2. Critically evaluate the design and operation of a building's superstructure.
	3. Examine and apply the principles of the installation of building services.
	4. Analyse the value of integrating off-site fabrication into a construction project.
Transferable Skills	5. Identify problems, gather data and evaluate approaches
	6. Makes informed judgements by critically analysing information and data which may be incomplete.
	7. Communicates ideas, information, arguments and results.
Indicative Content:	
Regulations - CDM, Planning and Building Control Foundations - reinforced strip, pile, raft Geotechnical issues - well points, grouting, ground consolidation & compaction, contaminated soil Structural frames - in-situ concrete, precast concrete, steel and timber frame, stability Cladding - Precast concrete, masonry, rain screen cladding, curtain walling Building Services installation - heating, mechanical and natural ventilation, fire safety engineering features, energy and building management systems, building security systems, the movement and circulation of people, telecommunications, power, water, gas, drainage, sustainable technologies, Moisture movement, dry shrinkage, electro-chemical performance, planned maintenance, acoustic and thermal performance Alterations and Refurbishment - Façade retention techniques, major structural repairs, underpinning, knocking through, tanking and basements, dry & wet rot, Modern Methods of Manufacture - industrialised building, off-site manufacture BIM	

Title	Construction Business Environment
Level	10
GLH	100
Unit Aims:	Unit Learning Outcomes: The Learner can:
Knowledge & Understanding The unit provides a systematic understanding of the key aspects of the business environment in which construction organisations operate.	1. Critically evaluate the impact of legislation that falls within the responsibility of the construction manager.
	2. Appraise environmental concepts and how they apply to organisational strategy and policy formation.
	3. Evaluate and apply different performance management techniques within the construction industry.
	4. Review and apply aspects of social responsibility and professional obligations in a construction context.
Transferable Skills	5. Identify problems, gather data and evaluate approaches
	6. Makes informed judgements by critically analysing information and data which may be incomplete.
	7. Communicates ideas, information, arguments and results.
Indicative Content:	
<p>Legal Framework – Common law and torts, statutes, byelaws, letters of intent, oral contracts, limitations and contracts under hand/deeds, remedies for non-performance including termination, damages., Bribery Act (UK)</p> <p>Environmental Frameworks - wildlife, pollution, waste management, sustainable communities, contaminated land, life cycle assessment, Environmental Impact Assessment, building and sustainable development, current technologies and anticipated future and legislative requirements.</p> <p>Performance Management - setting targets, KPIs, post contract evaluations, data analysis, LEAN, Value Engineering</p> <p>Social Obligations – Corporate Social Responsibility, environmental Impact assessments, Modern Slavery, professional conduct and ethics, considerate contractors, social wellbeing</p>	

Title	Health, Safety & Welfare
Level	10
GLH	100
Unit Aims:	Unit Learning Outcomes: The Learner can:
Knowledge & Understanding The unit provides a systematic understanding of the key aspects of the health, safety and welfare issues of complex construction projects.	1. Apply the legal framework which underpins health and safety in construction.
	2. Reflect on the manager's role in promoting and enhancing the health safety and well-being of stakeholders.
	3. Apply principles of risk management to enhance Health, Safety & Welfare on construction projects.
	4. Critically evaluate and deliver appropriate/enhanced H&S practice & procedures to projects.
Transferable Skills	5. Identify problems, gather data and evaluate approaches
	6. Makes informed judgements by critically analysing information and data which may be incomplete.
	7. Communicates ideas, information, arguments and results.
Indicative Content:	
<p>Legal Framework – Statutes, CDM, HSE (in the UK), codes of practice, company policies, accident investigations, actions and investigation techniques, presentation / interpretation of accident statistics, RIDDOR</p> <p>Manager's Role – leadership, culture, inductions, toolbox talks, training report improvements to prevent reoccurrence, mental health awareness</p> <p>Risk management - At pre-contract and contract stages: the principles of risk assessment (five steps to risk assessment), quantitative and qualitative risk techniques, principles of prevention (control measures to be applied)</p> <p>Best Practice schemes including Considerate Constructors etc.</p>	

Title	Management
Level	10
GLH	100
Unit Aims:	Unit Learning Outcomes: The Learner can:
Knowledge & Understanding The unit provides a systematic understanding of the key aspects of the management of complex construction projects.	1. Analyse and solve problems related to the construction process.
	2. Critically evaluate how construction works are procured.
	3. Appraise the management of resources used on projects.
	4. Apply appropriate project planning and scheduling tools for construction projects.
	5. Appraise and evaluate the financial management of construction projects.
Transferable Skills	6. Identify problems, gather data and evaluate approaches
	7. Makes informed judgements by critically analysing information and data which may be incomplete.
	8. Communicates ideas, information, arguments and results.
Indicative Content:	
Project Delivery - Inception/completion, procurement routes, supply chains, BIM Resource management – subcontractors, labour, plant, equipment & materials, storage, performance measurement, motivation and leadership Procurement - Traditional, design and build, management contracting, construction management, term contracting, partnering, single & two-stage, negotiated tenders; sub-contracting, Production Management – Just-in-time, critical path analysis, GANT charts, monitoring and controlling of works, time-risk analysis. Financial issues – Cost planning, cashflows, interim valuations and final accounts	