PROGRAMME QUALITY HANDBOOK 2025-26

HNC Civil Engineering

- **Welcome and Introduction to HNC Civil Engineering**

Welcome to HNC Civil Engineering at City College Plymouth. This course has been designed to provide the base knowledge of Civil Engineering theory as well as essential skills required in the industry. Students will carry out practical design projects using proven theory to solve Civil Engineering problems.

The programms has been designed to develop skills and knowledge within core subjects related to Civil Engineering such as Mathematics, Structural Analysis and Materials. Along with these essential subjects included are topics covering the managerial aspects of Civil Engineering and a Computer Aided Design Project.

Alongside gaining, the essential knowledge students will undertake practical activities to allow for evaluation of industry standard design concepts.

This Programme Quality handbook contains important information including:

- The approved programme specification
- Module records

Note: The information in this handbook should be read in conjunction with the current edition of:

- Your Programme Institution & University Student Handbook which contains student support based information on issues such as finance and studying at HE
    - available in your Google Classroom
  - Your Module, Teaching, Learning and Assessment Guide
    - available in your Google Classroom
- University of plymouth's Student Handbook
  - available at: https://www.plymouth.ac.uk/your-university/governance/student-handbook

Programme Specification

Programme Title:	HNC Civil Engineering
Final Award Title:	HNC Civil Engineering
Intermediate Award Title:	N/A
UCAS Code:	P3R2
JACs Code:	H200
Date of Approval:	2017
Awarding Institution:	University of Plymouth
Teaching Institution:	City College Plymouth

Distinctive Features of the HNC Programme and the Student Experience

Following employer demand this HNC Civil Engineering has been designed to provide the base knowledge of Civil Engineering theory as well as essential skills required in the industry. Students will carry out practical design projects using proven theory to solve Civil Engineering problems.

This HNC programme has been designed to develop your skills and knowledge within core subjects related to Civil Engineering such as Mathematics, Structural Analysis and Materials. Along with these essential subjects included are topics covering the managerial aspects of Civil Engineering and a Computer Aided Design Project.

Alongside gaining the essential knowledge students will undertake practical activities to allow for evaluation of industry standard design concepts.

An HNC is an industry recognised qualification, supporting students to enter or continue in employment with a recognised higher level qualification. In addition the course has been

designed specifically to provide the opportunity to continue to develop further higher level knowledge and skills through direct progression to stage 2 of the Foundation Degree in Civil Engineering delivered at City College Plymouth.

The programme has been designed to provide high levels of flexibility for both full and part time students. The design model allows full time students to manage part time employment around their studies, and provides part time students with a day-release model of delivery.

Delivery of this course will be at our Kings Road Campus utilising the engineering facilities and the new Science Technology Engineering and Maths (STEM) centre.

Relevant QAA Subject Benchmark Group(s)

The subject benchmark statement (2015)1 defines the academic standard expected of graduates with an engineering degree. The defined learning outcomes are those published by the Engineering Council in the UK-SPEC UK standard for professional engineering competence www.engc.co.uk Third edition[2]
The QAA foundation benchmarks[3]

1. http://www.qaa.ac.uk/en/Publications/Documents/SBS-engineering-15.pdf
2. http://www.engc.org.uk/engcdocuments/internet/Website/UK-SPEC%20third%20edition%20(1).pdf
3. http://www.qaa.ac.uk/en/Publications/Documents/Foundation-Degree-qualification-benchmark-May-2010.pdf

HNC Programme Structure

The Programme of study comprises of 120 module credits across level 4. The aim of the programme is to develop skills consistent with Engineering Council and Engineering Subject Benchmarks. Our programme has been developed to provide for the varied roles across the city as Civil Engineers, as well as provide a solid grounding to our full time students wishing to further their study or enter employment.

Programme Structure

Full Time HNC			
Module Code	**Module Title**	**No. of Credits**	**Core / Optional**
CITY1077	Engineering Mathematics	20	**Core**
CITY1089	Structural Analysis and Design 1	20	**Core**
CITY1085	Materials	20	**Core**
CITY1086	ICT and Design	20	**Core**
CITY1090	Civil Engineering Construction	20	**Core**
CITY1088	Construction and Civil Engineering Management	20	**Core**

Part Time HNC Stage 1			
Module Code	**Module Title**	**No. of Credits**	**Core / Optional**
CITY1077	Engineering Mathematics	20	**Core**
CITY1089	Structural Analysis and Design 1	20	**Core**
CITY1085	Materials	20	**Core**
CITY1090	Civil Engineering Construction	20	**Core**
Stage 2			
CITY1086	ICT and Design	20	**Core**
CITY1088	Construction and Civil Engineering Management	20	**Core**

HNC Programme Aims

This programme aims to:

1. Develop engineering knowledge and understanding to apply technical and practical skills.
2. Provide an opportunity to 'contribute towards design' via practical and project based work.
3. Provide an opportunity for 'accepting and exercising personal responsibility.'
4. Provide an opportunity to use effective communication and interpersonal skills.

Programme Intended Learning Outcomes

Programme ILOs have been adapted from UK-SPEC
UK STANDARD FOR PROFESSIONAL
ENGINEERING COMPETENCE
Engineering Technician
www.engc.org.uk
Third edition

Progression criteria for Final and Intermediate Awards

HNC - Upon successful completion of this award, the guaranteed automatic progression route is the FdSc Civil Engineering at City College Plymouth at Level 5

Admissions Criteria, including APCL, APEL and DAS arrangements

NB The following table is a draft exemplar for an undergraduate programme

All applicants must have GCSE (or equivalent) Maths and English at Grade C or above.

Entry Requirements for FdSc Civil Engineering	
A-level/AS-level	Normal minimum entry requirements are 56 on new UCAS Tariff at A-level to include Grade D in Maths or Physics
BTEC National Diploma/QCF Extended Diploma	Candidates are interviewed before an offer is made. But an equivalent of 56 UCAS points in an Engineering Subject
Access to Higher Education at level 3	Candidates are interviewed before an offer is made. Pass an Access to HE Diploma in Science with an equivalent of 56 UCAS points
Welsh Baccalaureate	Normal minimum entry requirements are an equivalent of 56 on new UCAS Tariff include Maths, Physics or Engineering
Scottish Qualifications Authority	Normal minimum entry requirements are an equivalent of 56 on new UCAS Tariff include Maths, Physics or Engineering.
Irish Leaving Certificate	Normal minimum entry requirements are an equivalent of 56 on new UCAS Tariff include Maths, Physics or Engineering.
International Baccalaureate	Normal minimum entry requirements are an equivalent of 56 on new UCAS Tariff include Maths, Physics or Engineering.

Non Standard Qualifications with experience	All non-standard applicants are interviewed by the tutor and screened centrally to ensure impartial oversight.

Exceptions to Regulations

N/A

Learning Outcomes map

	LEVEL 4			
FHEQ Descriptors	Subject Benchmark(s)	Programme Aims	Programme Outcomes	Core Modules linked to outcomes
Students will have demonstrated: Knowledge of the underlying concepts and principles associated with their areas of study;	A2, Use appropriate scientific, technical or engineering principles.	1. Establish broad foundation knowledge on which to develop further skills as technology advances and to enable students to apply engineering principles to the analysis and design of civil engineering structures.	8.1.1) A sound theoretical approach to the application of technology in civil engineering practice. 8.1.2) The ability to identify, review and select techniques, procedures and methods to undertake engineering tasks. 8.2.1) The ability to Identify, review and select techniques, procedures and methods to undertake civil engineering tasks.	CITY1077; ALO1, ALO4 CITY1085; ALO1, ALO2 CITY1086; ALO1 CITY1088; ALO4 CITY1089; ALO3 CITY1090; ALO2, ALO3
Ability to evaluate and interpret these within the context of that area of study;	A1, Review and select appropriate techniques, procedures and methods to undertake tasks. B1, Identify problems and apply appropriate methods to identify causes and achieve satisfactory solutions. B2, Identify, organise and use resources	1. Establish broad foundation knowledge on which to develop further skills as technology advances and to enable students to apply engineering principles to the analysis and design of civil engineering structures.	8.1.2) The ability to identify, review and select techniques, procedures and methods to undertake engineering tasks. 8.1.3) A sound evidence-based approach to problem-solving and contribute to continuous improvement. 8.2.2) The ability to use results of analysis to solve civil engineering problems, apply	CITY1077; ALO1, ALO4 CITY1089; ALO1, ALO2, ALO3, ALO4 CITY1090; ALO3

Ability to present, evaluate and interpret qualitative and quantitative data;	effectively to complete tasks, with consideration for cost, quality, safety, security and environmental impact. D1, Use oral, written and electronic methods for the communication in English1 of technical and other information.	2. Provide the opportunity to 'learn through design' via practical and project based work, particularly within the context of structural design. 4. Provide the opportunity to develop communication, data collection and analysis, ingenuity, problem solving, application and diagnostic skills. 5. Provide the opportunity to develop communication, data collection and analysis, ingenuity, problem solving, application and diagnostic skills.	technology and implement solutions. 8.4.2) The communication, planning and management skills to successfully complete and present a relevant work based project, through liaison with industrial links 8.2.2) The ability to use results of analysis to solve civil engineering problems, apply technology and implement solutions. 8.3.1) Communicate ideas and information; through verbal and written forms using appropriate terminology and presentation of data. 8.4.2) The communication, planning and management skills to successfully complete and present a relevant work based project, through liaison with industrial links	CITY1085; ALO2, ALO4 CITY1088; ALO1, ALO2
Students will be able to:	A1, Review and select appropriate techniques,	6. Provide the opportunity to develop communication, data	8.1.2) The ability to identify, review and select techniques,	CITY1077; ALO1, ALO3, ALO4 CITY1085; ALO2 CITY1086; ALO4

Evaluate the appropriateness of different approaches to solving problems related to their area of study; Communicate the results of their study accurately and reliably and with structured and coherent argument	procedures and methods to undertake tasks. A2, Use appropriate scientific, technical or engineering principles. B1, Identify problems and apply appropriate methods to identify causes and achieve satisfactory solutions. D1, Use oral, written and electronic methods for the communication in English1 of technical and other information.	collection and analysis, ingenuity, problem solving, application and diagnostic skills. 4. Provide the opportunity to develop communication, data collection and analysis, ingenuity, problem solving, application and diagnostic skills.	procedures and methods to undertake engineering tasks. 8.1.3) A sound evidence-based approach to problem-solving and contribute to continuous improvement. 8.2.2) The ability to use results of analysis to solve civil engineering problems, apply technology and implement solutions. 8.3.1) Communicate ideas and information; through verbal and written forms using appropriate terminology and presentation of data. 8.4.2) The communication, planning and management skills to successfully complete and present a relevant work based project, through liaison with industrial links	CITY1088; ALO4 CITY1089; ALO1, ALO2 CITY1085; ALO4, ALO5 CITY1086; ALO4 CITY1088: ALO2, ALO3 CITY1089; ALO3, ALO4.
Undertake further training and develop new skills within a structured and managed environment	E4, Carry out and record CPD necessary to maintain and enhance competence in own area of practice including:	1. Establish broad foundation knowledge on which to develop further skills as technology advances and to enable students to apply engineering principles to the analysis and design	8.4.1) Good student centred learning skills, which will promote lifelong learning and a commitment to continuing professional development to achieve flexibility within the work environment.	All level 4 modules base the assessments on this Intended learning outcome

	• Undertake reviews of own development needs • Plan how to meet personal and organisational objectives • Carry out planned (and unplanned) CPD activities • Maintain evidence of competence development • Evaluate CPD outcomes against any plans made • Assist others with their own CPD.	of civil engineering structures. 2. Provide the opportunity to 'learn through design' via practical and project-based work, particularly within the context of structural design. 3. Provide an awareness of the business implications of engineering decisions and a knowledge of the inter-relationship between the market, engineering activities and the management structures. 4. Provide the opportunity to develop communication, data collection and analysis, ingenuity, problem solving, application and diagnostic skills.			
Students will also have: The qualities and transferable skills necessary for	C1, Work reliably and effectively without close supervision, to the appropriate codes of	1. Establish broad foundation knowledge on which to develop further skills as technology advances and to enable students to apply engineering principles to	8.4.1) Good student centred learning skills which will promote lifelong learning and a commitment to continuing professional development to	CITY1086; ALO4 CITY1088; ALO3 CITY1089; ALO3 CITY1090; ALO1, ALO3	

employment requiring the exercise of some personal responsibility	practice. E1, Comply with the Code of Conduct of your institution. E2, Manage and apply safe systems of work.	the analysis and design of civil engineering structures. 3. Provide an awareness of the business implications of engineering decisions and a knowledge of the inter-relationship between the market, engineering activities and the management structures. 4. Provide the opportunity to develop communication, data collection and analysis, ingenuity, problem solving, application and diagnostic skills.	achieve flexibility within the work environment. 8.4.2) The communication, planning and management skills to successfully complete and present a relevant work based project, through liaison with industrial links	

SECTION A: DEFINITIVE MODULE RECORD. Proposed changes must be submitted via Faculty Quality Procedures for approval and issue of new module code.

MODULE CODE: CITY1077	**MODULE TITLE**: Engineering Mathematics

CREDITS: 20	**FHEQ LEVEL**: 4	**JACS CODE**: G160

PRE-REQUISITES: N	**CO-REQUISITES**: N	**COMPENSATABLE**: Y

SHORT MODULE DESCRIPTOR:
To develop the student's mathematical ability and to apply principles to the solution of engineering problems and to make use of mathematical computer based packages.

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ELEMENTS OF ASSESSMENT					
WRITTEN EXAMINATION		**COURSEWORK**		**PRACTICE**	
E1 (Formally scheduled)	50%	**C1**	50%	**P1**	
E2 (OSCE)					
T1 (in-class test)		**A1**			

SUBJECT ASSESSMENT PANEL Technology

Professional body minimum pass mark requirement: n/a

MODULE AIMS:

- To gain a solid foundation in algebra, trigonometry, functions and calculus in order to associate and recognise the importance of mathematics in the analysis of engineering problems
- To develop mathematical problem solving simultaneously with other science and engineering modules.

ASSESSED LEARNING OUTCOMES: (additional guidance below)
At the end of a module the learner **will be expected to be able to:**

LO1. use basic mathematical techniques to solve engineering problems of an electrical, mechanical or civil engineering nature.
LO2. recognise and solve first and second order ordinary differential equations
LO3. understand the use of complex number and matrix theory in practical engineering applications

LO4. understand a variety of techniques of differential and integral calculus to calculate various functions in their associated applications in engineering	
DATE OF APPROVAL: April 2017	**FACULTY/OFFICE: Academic Partnerships**
DATE OF IMPLEMENTATION: Sept 2017	**SCHOOL/PARTNER: City College Plymouth**
DATE(S) OF APPROVED CHANGE:	**TERM: All Year**

SECTION B: DETAILS OF TEACHING, LEARNING AND ASSESSMENT

Items in this section must be considered annually and amended as appropriate, in conjunction with the Module Review Process.

ACADEMIC YEAR: 2025/26	NATIONAL COST CENTRE: 119

MODULE LEADER: Owais Raja	OTHER MODULE STAFF: N/A

Summary of Module Content

Revision of Algebra and Arithmetic

Basic number and arithmetic operations, algebraic techniques including evaluation of formula, rearranging formula, solving simple equations, laws of logarithms, laws of indices, etc. These skills will be built upon throughout the delivery of each individual topic in this module.

Trigonometric functions and graphs

Simple trigonometric functions of sine, cosine, tangent and hyperbolic functions of $\sinh^{-1}$, $\cosh^{-1}$ and $\tanh^{-1}$. The applications of these functions in engineering including vectors and waveform combination.

Complex numbers

Addition, subtraction, multiplication and division of complex numbers in Polar and Cartesian form. The Argand diagram. The modulus and argument. Applications in engineering.

Differential Calculus

Basic differentiation techniques of polynomial, trigonometric, exponential and logarithmic functions. Further techniques including the product, quotient and chain rules. Engineering applications to optimisation and higher order differentials.

Integral calculus

Basic integration techniques of polynomial, trigonometric and exponential functions. Further techniques including integration by parts and substitution. The methodical applications of definite and indefinite integration with and without engineering scenarios including the interpretation of areas under a curve.

Matrices

General arithmetic operations on matrices. Solve equations by using the inverse matrix method and apply to engineering problems. Understand the different types of solutions: no, unique and infinite solutions. Diagonalisation to find eigenvalues and corresponding eigenvectors.

SUMMARY OF TEACHING AND LEARNING		
Scheduled Activities	**Hours**	Comments/Additional Information
Lecture	60	30 x 2 hour lectures
Tutorial	15	Academic Support (Contact and VLE)
Independent Study	125	Guided self-study
Total	**200**	

Category	***Element***	***Component Name***	***Component weighting***	***Comments*** *Include links to learning objectives*
Written exam	E1	Module Examination	100%	LO1 - 2 End of Semester 1 Exam
Coursework	C1	Assignment	100%	LO3 – 4 Engineering Problems relevant to discipline

Updated by: Owais Raja Date: August 2025	**Approved by**: Hollie Galpin-Mitchell Date: August 2025

SECTION A: MODULE RECORD. ***Proposed changes must be submitted via Faculty Quality Procedures for approval and issue of new module code.***

MODULE CODE: CITY1089	**MODULE TITLE: Structural Analysis & Design 1**

CREDITS: 20	**FHEQ LEVEL: 4**	**JACS CODE: H210**

PRE-REQUISITES: **None**	**CO-REQUISITES:** **None**	**COMPENSATABLE:** **Yes**

SHORT MODULE DESCRIPTOR:
The purpose of this module is to enable learners to evaluate structural concepts and develop the ability to analyse structures and produce designs of structural elements in accordance with relevant British and European Codes of Practice

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ELEMENTS OF ASSESSMENT					
WRITTEN EXAMINATION		COURSEWORK		PRACTICE	
E1 (Formally scheduled)		**C1**	40%	**P1**	
E2 (OSCE)					
T1 (in-class test)	60%	**C3**			

SUBJECT ASSESSMENT PANEL Group to which module should be linked:
Technology

Professional body minimum pass mark requirement: None

MODULE AIMS:
- To introduce the differences between statically determinate and statically indeterminate structures and to apply knowledge of behaviour to analytical solutions.
- To apply concepts of equilibrium and compatibility and their use to statically determinate beams and frameworks.
- Introduce methods of determining loadings on structural elements.
- Understand methods of design elements in structural steelwork & reinforced concrete.

ASSESSED LEARNING OUTCOMES:
At the end of the module the learner will be expected to be able to:
LO1. Investigate statically determinate beams to determine reactions, shear forces and bending moments and produce designs for beams in accordance with current codes of practice.
LO2. Determine the forces in members of statically determinate frameworks.

LO3. Demonstrate the ability to transfer the skills of analysis to actual design. LO4.Evaluate, Determine and Produce designs for members in tension/compression.

DATE OF APPROVAL: April 2017	**FACULTY/OFFICE**: Academic Partnerships
DATE OF IMPLEMENTATION: September 2017	**SCHOOL/PARTNER**: City College Plymouth
DATE(S) OF APPROVED CHANGE:	**TERM:** All Year

SECTION B: DETAILS OF TEACHING, LEARNING AND ASSESSMENT

Items in this section must be considered annually and amended as appropriate, in conjunction with the Module Review Process.

ACADEMIC YEAR: 2025/26	**NATIONAL COST CENTRE: 118**
MODULE LEADER: Dan Burnard	**OTHER MODULE STAFF:**

Summary of Module Content

Structural Behaviour - elements, structures, equilibrium, compatibility, determinacy and indeterminacy, loads, restraints and reactive forces, shear force, bending moment, deflected forms, stresses.

Beams - dead, imposed and total loads, reactions, bending moments and shear forces diagrams. Principle of superposition. Bending theory. **Frames** - analysis of statically determinate plane frames. **Introduction to design -** British Standard Codes of Practice, Eurocodes, design handbooks, design charts, the use of AutoCAD. **Steelwork** - design of simple structural steelwork elements; restrained beams and axially loaded universal columns for given heights and end conditions. **Reinforced Concrete** - design of simple solid reinforced concrete sections and RC slabs, rectangular beams, short axially and eccentrically loaded columns; mass concrete and reinforced strip and pad foundations.

SUMMARY OF TEACHING AND LEARNING		
Scheduled Activities	**Hours**	**Comments/Additional Information**
Lectures	52	26 x 2hrs lectures
Lab	8	4 x 2hrs lab sessions
Academic Support	15	Group and individual tutorials
Independent Study	125	Self-study and guided reading
Total	**200**	

Category	***Element***	***Component Name***	***Component weighting***	***Comments*** *Include links to learning objectives*
Coursework	C1	Assignment	100 %	LO1, LO2 Structural Analysis Engineering Problem assignment
In Class	T1	Test	100 %	LO3, LO4 2 hr in class test on design and analysis

s Test				

Updated by: Dan Burnard Date: August 2025	**Approved by**: Hollie Galpin-Mitchell Date: August 2025

SECTION A: MODULE RECORD. ***Proposed changes must be submitted via Faculty Quality Procedures for approval and issue of new module code.***

MODULE CODE: CITY1085	MODULE TITLE: Materials

CREDITS: 20	FHEQ LEVEL:4	JACS CODE: K200

PRE-REQUISITES: None	CO-REQUISITES: None	COMPENSATABLE: Yes

SHORT MODULE DESCRIPTOR: *(max 425 characters)*
This module explores the principles and properties of a range of construction materials. Learners are to select and promote materials for a specific construction related task, considering manufacturing , performance, appearance, sustainability and health & safety.

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ELEMENTS OF ASSESSMENT ***[Use HESA KIS definitions}***

WRITTEN EXAMINATION		COURSEWORK		PRACTICE	
E1 (Formally scheduled)		**C1**	50%	**P1**	50%
E2 (OSCE)					
T1 (in-class test)		**A1**			

SUBJECT ASSESSMENT PANEL Group to which module should be linked: **Technology**

Professional body minimum pass mark requirement: None

MODULE AIMS:

- To introduce the learner to a range of materials used in the construction industry.
- To investigate the major factors affecting the performance of construction materials with particular regard to strength, thermal and acoustic resistance, aesthetics and sustainability.
- to enable competence in producing COSHH and Risk assessments in line with current Health and Safety regulations.

ASSESSED LEARNING OUTCOMES: (additional guidance below)
At the end of the module the learner will be expected to be able to:

1. Compare the methods of manufacture and physical properties of a range of materials used in construction and civil engineering.
2. Rank appropriate materials for a range of construction applications.
3. Select sustainable concepts relating to material usage considering product lifecycle.
4. Compile a COSHH assessment reviewing the safe use of specific construction materials
5. Devise a risk assessment and identify the requirements of monitoring and reviewing.

DATE OF APPROVAL: April 2017	**FACULTY/OFFICE:** Academic Partnerships
DATE OF IMPLEMENTATION: September 2017	**SCHOOL/PARTNER:** City College Plymouth
DATE(S) OF APPROVED CHANGE:	**TERM:** All Year

SECTION B: DETAILS OF TEACHING, LEARNING AND ASSESSMENT

Items in this section must be considered annually and amended as appropriate, in conjunction with the Module Review Process.

ACADEMIC YEAR: 2025/26	**NATIONAL COST CENTRE: 118/ 123**
MODULE LEADER: Dan Burnard	**OTHER MODULE STAFF:**

Summary of Module Content

Introduction – range of materials, codes of practice and health and safety materials
Cements – manufacture, types, chemical composition properties and performance
Aggregates – lightweight, normal, heavy, natural and artificial types, sources, properties, production, testing and impurities.
Timber – types, structure, stress grading, structural properties, attacks by fungi, insects and marine borers, prevention and treatment.
Bitumens – origin, blown and cutback bitumens. Classification, penetration, softening point, uses, asphalts, failures.
Metals – ferrous and non-ferrous, steel properties and uses
Masonry – manufacture of bricks and blocks, strengths and serviceability properties, uses.
Concrete – properties of concrete, production, transporting, placing, compacting, curing, formwork.

Health and Safety- Production of COSHH assessment

SUMMARY OF TEACHING AND LEARNING ***[Use HESA KIS definitions}***		
Scheduled Activities	**Hours**	**Comments/Additional Information**
Lectures	50	25x2hr lectures
Workshops	6	3x2hr workshop sessions
Fieldwork	4	1x4hr on site feasibility study
Academic Support	15	A mix of group and individual tutorials
Independent Study	125	
Total	**200**	**(NB: 1 credit = 10 hours of learning; 10 credits = 100 hours, etc)**

Category	***Element***	***Component Name***	***Component weighting***	***Comments***
Coursework	C1	Report	100%	LO1, LO3, LO5 200 word Report on Sustainability
Practice	P1	Presentation	100%	LO2, LO4 10 minute Presentation on Materials

Updated by Dan Burnard Date: August 2025	**Approved by**: Hollie Galpin-Mitchell Date: August 2025

SECTION A: MODULE RECORD*. Proposed changes must be submitted via Faculty Quality Procedures for approval and issue of new module code.*

MODULE CODE: CITY1086	MODULE TITLE: ICT and Design

CREDITS: 20	FHEQ LEVEL: 4	JACS CODE: H200

PRE-REQUISITES: None	CO-REQUISITES: None	COMPENSATABLE: Yes

SHORT MODULE DESCRIPTOR:
The module is based around a project where BIM, LUSAS, Autodesk products or similar software and ICT skills relevant to construction and civil engineering are brought together through formulating and implementing a design project.

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ELEMENTS OF ASSESSMENT *[Use HESA KIS definitions}*

WRITTEN EXAMINATION		COURSEWORK		PRACTICE	
E1 (Formally scheduled)		**C1**	100%	**P1**	
E2 (OSCE)					
T1 (in-class test)		**A1**			

SUBJECT ASSESSMENT PANEL Group to which module should be linked: **Technology**

Professional body minimum pass mark requirement: None

MODULE AIMS:
- Introduce student to BIM and other industry standard ICT
- To introduce students to the latest software and technology used within the construction industry, on a focussed project.
- To introduce formal draughting as part of the design process.
- Practice skills necessary to produce 2D drawings to British Standards
- Practice skills of transferring and moving drawing files between various drawing, presentation and office packages.

ASSESSED LEARNING OUTCOMES: (additional guidance below)
At the end of the module the learner will be expected to be able to:
LO1. Generate detailed 2 dimensional drawings to British Standards.
LO2. Analyse the effectiveness of transferring 2D files to a 3D package and integrating ICT and other modelling software within the design project.

LO3 Work as a member of a team to Formulate a design project LO4. Implement, evaluate and present a design project

DATE OF APPROVAL: April 2017	**FACULTY/OFFICE**: Academic Partnerships
DATE OF IMPLEMENTATION: September 2017	**SCHOOL/PARTNER**: City College Plymouth
DATE(S) OF APPROVED CHANGE:	**TERM**: All Year

SECTION B: DETAILS OF TEACHING, LEARNING AND ASSESSMENT

Items in this section must be considered annually and amended as appropriate, in conjunction with the Module Review Process.

ACADEMIC YEAR: 2025/26	**NATIONAL COST CENTRE: 115**
MODULE LEADER: Ian Jenkin	**OTHER MODULE STAFF:**

Summary of Module Content

- Use and integrate ICT within a focused project – BIM and other industry standard modelling software and technologies
- CAD & Drawings in the design process
- Drawing standards and formats
- The use of 2D CAD drawing and editing commands
- Transfer & Simple 3D manipulation of learner generated 2D CAD files
- Transfer and manipulation of learner generated 2D CAD files in industry standard business software
- Investigate the theories and principles of design.

SUMMARY OF TEACHING AND LEARNING		
Scheduled Activities	**Hours**	**Comments/Additional Information**
Lectures	20	10x2hr lectures
Practice sessions	40	Application of techniques and methods learnt
Academic Support	15	A mixture of group and personal tutorials
Independent Study	125	Working on own projects and directed self-study
Total	**200**	

Category	***Element***	***Component Name***	***Component weighting***	***Comments*** *Include links to learning objectives*
Coursework	C1	Portfolio of Work	100%	LO1, LO2 – CAD drawing portfolio: A professionally presented portfolio of 2D and 3D drawings LO3, LO4 - Project report: 2500 word report of a design and evaluation of the project

Updated by: Dan Burnard Date: August 2025	**Approved by**: Hollie Galpin-Mitchell Date: August 2025

SECTION A: MODULE RECORD. ***Proposed changes must be submitted via Faculty Quality Procedures for approval and issue of new module code.***

MODULE CODE: CITY1088	**MODULE TITLE : Construction and Civil Engineering Management**

CREDITS: 20	**FHEQ LEVEL: 4**	**JACS CODE: K220**

PRE-REQUISITES: **None**	**CO-REQUISITES:** **None**	**COMPENSATABLE:** **Yes**

SHORT MODULE DESCRIPTOR: *(max 425 characters)*
This module investigates the processes of management, the methods of procuring construction works and introduces the learners to the management processes used in the construction industry.

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ELEMENTS OF ASSESSMENT ***[Use HESA KIS definitions}***					
WRITTEN EXAMINATION		COURSEWORK		PRACTICE	
E1 (Formally scheduled)		**C1**	60%	**P1**	40%
E2 (OSCE)					
T1 (in-class test)					

SUBJECT ASSESSMENT PANEL Group to which module should be linked: **Technology**
Professional body minimum pass mark requirement: None

MODULE AIMS:

- To develop an understanding of the principles and processes of management
- To develop an understanding of the methods of procuring construction and civil engineering works
- Investigate some of the techniques used in the management of construction and civil engineering projects
- Research the organisation and structure of the construction and civil engineering industry.
- Understand the implications of regulations and legislation within management.

ASSESSED LEARNING OUTCOMES: (additional guidance below)
At the end of the module the learner will be expected to be able to:

1. Distinguish current trends and opportunities within the construction or civil engineering industry

2. Compare a range of principles and processes of management within the construction or civil engineering industry, reviewing legislative constraints and their management.
3. Identify the main methods used to procure construction or civil engineering works.
4. Analyse the methods used to plan the sequence of activities and control of the costs of construction or civil engineering projects.

DATE OF APPROVAL: April 2017	**FACULTY/OFFICE:** Academic Partnerships
DATE OF IMPLEMENTATION: September 2017	**SCHOOL/PARTNER:** City College Plymouth
DATE(S) OF APPROVED CHANGE:	**TERM:** All Year

SECTION B: DETAILS OF TEACHING, LEARNING AND ASSESSMENT

Items in this section must be considered annually and amended as appropriate, in conjunction with the Module Review Process..

ACADEMIC YEAR: 2025/26	**NATIONAL COST CENTRE: 118 / 123**

MODULE LEADER: Dan Burnard	**OTHER MODULE STAFF:**

Summary of Module Content

- **Principles and processes of management -** management concepts, Organisations, Communications, Planning, Programming, Teamwork, Leadership and Motivation.
- **Planning Techniques** – Programming and bar charts.
- **Methods of procurement** - strategies, Conditions of Contract; contract documents, contractor selection, partnering, Government Initiatives.
- **Construction costs -** Estimates, Cost Control, Value Engineering, Measurement
- **Markets and activities -** Business environment, organisation and structure of the construction industry

SUMMARY OF TEACHING AND LEARNING ***[Use HESA KIS definitions}***		
Scheduled Activities	**Hours**	**Comments/Additional Information**
Lectures	58	29 x 2hr lectures
Fieldwork	2	A trip to site to investigate project management techniques
Academic Support	15	A mix of group and individual tutorials
Independent Study	125	
Total	**200**	**(NB: 1 credit = 10 hours of learning; 10 credits = 100 hours, etc)**

Category	***Element***	***Component Name***	***Component weighting***	***Comments*** *Include links to learning objectives*
Coursework	C1	Essay	100%	LO3, LO4 2000 word essay
Practice	P1	Presentation	100%	LO1, LO2 10 minute presentation

Updated by: Dan Burnard Date: August 2025	**Approved by**: Hollie Galpin-Mitchell Date: August 2025

SECTION A: MODULE RECORD. ***Proposed changes must be submitted via Faculty Quality Procedures for approval and issue of new module code.***

MODULE CODE: CITY1090	MODULE TITLE: Civil Engineering Construction

CREDITS: 20	FHEQ LEVEL: 4	JACS CODE: H200

PRE-REQUISITES: None	CO-REQUISITES: None	COMPENSATABLE: Yes

SHORT MODULE DESCRIPTOR:
To develop learners understanding of the processes used in a range of civil engineering activities. This will include legislation, regulations, safety procedures and systems of work in a variety of Civil Engineering works.

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ELEMENTS OF ASSESSMENT					
WRITTEN EXAMINATION		COURSEWORK		PRACTICE	
E1 (Formally scheduled)		**C1**	100%	**P1**	
E2 (OSCE)					
T1 (in-class test)		**A1**			

SUBJECT ASSESSMENT PANEL Group to which module should be linked: **Technology**

Professional body minimum pass mark requirement: None

MODULE AIMS:
- To develop an awareness of the type of work undertaken by civil engineers, the structure of the industry and the impact of civil engineering activities on society and the environment.
- Provide an understanding of the processes involved in a range of civil engineering activities
- Research and analyse case studies.
- To be able to recognise the importance of Health and Safety

ASSESSED LEARNING OUTCOMES: (additional guidance below)
At the end of the module the learner will be expected to be able to:

LO1: Understand the organisations involved in the delivery of civil engineering activities and the responsibilities of the parties in accordance with current Health & Safety Legislation.

LO2: Describe the methods and resources used in a range of civil engineering activities.

LO3: Develop a logical and rational approach to civil engineering problems by developing appropriate methods of working which satisfy requirements for safe systems of work and sustainability. LO4: Investigate the effect of construction activities upon the environment, the need for sustainable development and the implications of quality, programme and cost.

DATE OF APPROVAL: April 2017	**FACULTY/OFFICE:** Academic Partnerships
DATE OF IMPLEMENTATION: September 2017	**SCHOOL/PARTNER**: City College Plymouth
DATE(S) OF APPROVED CHANGE:	**TERM:** All Year

SECTION B: DETAILS OF TEACHING, LEARNING AND ASSESSMENT

Items in this section must be considered annually and amended as appropriate, in conjunction with the Module Review Process. Some parts of this page may be used in the KIS return and published on the extranet as a guide for prospective students. Further details for current students should be provided in module guidance notes.

ACADEMIC YEAR: 2025/26	**NATIONAL COST CENTRE: 118**

MODULE LEADER: Dan Burnard	**OTHER MODULE STAFF:**

Summary of Module Content

Introduction to the Civil Engineering Industry – nature of work undertaken, sustainability and environmental issues. **Organisational Structures -** Organisation, functions, responsibilities and interaction of Consultants, Contractors and Clients. **Health, safety and welfare legislation** in the construction sector and the implications of noncompliance: **Environmental Law :Construction (Design & Management) Regulations Earthworks** - Categorisation of materials. Ease of excavation. Cut and fill. Borrow pits. Surplus disposal. Imported fill. Suitable fill. Mechanical plant. Compaction. Soil stabilisation. Slope stability. Land drainage. Safety procedures. Groundwater control. **Foundations -** Type of foundations. Vidro-replacement. Underpinning. Piling. Pile behaviour. Piling plant. Pile caps. Pile testing. Safety procedures. Waterproofing basements. Basement buoyancy. Diaphragm walling. Caissons. **Work below ground -** Cofferdams. Retaining walls, Shaft sinking. Tunnels. Culverts. Outfalls. Cut and cover. Sewers. Pipelines. Trench support. Manholes. Access Chambers. Safety procedures. Gabions. Crib walls, Trenchless technology. **Temporary works –** false work and formwork, methods of placing concrete **Superstructures –** Bridges, commercial and industrial buildings, structural steelwork, precast and in-situ concrete, structural timber, flooring and cladding systems

SUMMARY OF TEACHING AND LEARNING		
Scheduled Activities	**Hours**	**Comments/Additional Information**
Lectures	60	30 x 2hr lectures

Academic Support	15	Group and individual tutorials
Independent Study	125	Guided self-study and reading list material
Total	**200**	

Category	***Element***	***Component Name***	***Component weighting***	***Comments*** *Include links to learning objectives*
Coursework	C1	Report Assignment	35% 65%	2000 words Sustainability Report LO4 Engineering Problem Assignment LO1,LO2,LO3

Updated by: Dan Burnard **Date:** August 2025	**Approved by**: Hollie Galpin-Mitchell **Date:** August 2025