UNIVERSITY CENTRE TRURO & PENWITH

LEARNING TEACHING AND ASSESSMENT HANDBOOK

HNC MODERN METHODS OF CONSTRUCTION PART-TIME

2023-24

YEAR 1

September 2023 v1

TRURO COLLEGE PENWITH COLLEGE Pearson BTEC

WELCOME TO THE COURSE TITLE

This is your LTA handbook. It is a guide to all of the learning, teaching and assessment related to your study on programme. This LTA handbook contains information about what you are going to learn, how you are going to learn and how you will be assessed. Two other important sources of information that link to the LTA handbook are the University Centre Student Handbook and Pearson Course Specification.

Welcome to the Truro and Penwith University Centre and to your course. This handbook is designed to give you a general overview of the College. We hope that you will enjoy your time of study with us and that the course will provide a stimulating experience – assisting both your personal development and future progression to higher levels of study and employment in one of the most exciting and vibrant areas of endeavour available.

This is your Learning Teaching and Assessment (LTA) handbook. It is a guide to all the learning, teaching and assessment related to your study on HNC Modern Methods of Construction. This LTA handbook contains information about what you are going to learn, how you are going to learn and how you will be assessed.

Another important document that links to the LTA handbook is the 'Truro and Penwith HE Student Handbook' (TAPHESH).

The construction sector in Cornwall supports 2930 businesses and 29400 jobs1. CITB estimates a national requirement of 43,000 recruits every year until 2021 to replace an aging workforce. In Cornwall, construction and real estate employed 21200 in 20132 (8.6% of employment in Cornwall) and comprised 22.4% of economic activity (Gross Added Value). CIoS LEP estimate the value to Cornwall's economy will grow to £685.5 million by 2025 requiring an additional 3000 employees.

This course has been designed to help students in Cornwall and the south-west develop their knowledge and skills in Construction. The programme will provide them with understanding of the range of skills and areas in construction and enable them to develop skills across a range of practice. The programme emphasises a deeper professional practice and gives the opportunity for producing an appropriate portfolio that demonstrates a growing professional expertise.

The programme leader responsible for the course will be Ryan Bowles.

DISTINCTIVE FEATURES

There are many aspects of the HNC in Modern Methods of Construction, including:

• A range of core and specialist units, each with a clear purpose.

• Content that is closely aligned with the needs of employers, professional bodies, vendors and higher education for a skilled future workforce.

• The opportunity to develop transferable skills useful for work and for higher education (HE), including research skills, the ability to meet deadlines and communication skills'

• Assessments and projects chosen to help students progress to the next stage (this means some are set by the centre to meet local needs, while others are set by Pearson); students are required to apply their knowledge to a variety of assignments and activities, with a focus on the holistic development of practical, interpersonal and higher-level thinking skills

• An approach to demand at Level 4 which is aligned with the Framework for Higher Education Qualifications (FHEQ).

COURSE CONTACT LIST

PROGRAMME LEADER:

Ryan Bowles A member of the Chartered Institute of Civil Engineering Surveyors, with over 20 years of experience within the Geospatial industry, including as a Surveyor within the Royal Engineers, British Army. Area of expertise Engineering surveying, with a focus on new technology. Ryan joined Truro & Penwith College early 2022 to teach on both the HNC Construction and the Surveying, Design and Planning T Level course.

What does your programme leader do?

Your programme leader organises, teaches and completes all of the quality assurance paperwork associated with your programme.

Email: ryanbowles@truro-penwith.ac.uk

MODULE LEADERS:

Michelle Casserly Joined Truro and Penwith College in September 2019 after completing her degree at Falmouth University with a BA(Hons) Interior Design and previously to her degree a Foundation Diploma in Art, Design and Media at Truro College. Her area of expertise is 3D Design (REVIT), Computer Aided Design (CAD) and Building Information Modelling (BIM). She has worked within the Art and Design department and specialised in 3D Design and teaches on the on the Surveying, Design and Planning T Level course.

Email: michellecasserly@truro-penwith.ac.uk

David Stringer has been with the college for 6 years, teaching across the construction faculty for both trade and T level qualifications, for which he leads. Prior to the College, David was Head of Faculty for Technology at Penryn College, having spent ten years teaching in secondary education. David first began his career through an apprenticeship as a Carpenter and Joiner before studying Product and Furniture Design BA(Hons) gaining a First, and then commencing his teacher training. To further develop his CPD, David is currently part way through an MSc in Building Surveying which has many relevant aspects to the HNC and HND courses.

Email: davidstringer@truro-penwith.ac.uk

PERSONAL TUTOR: Michelle Casserly: 01872 305654: michellecasserly@truro-penwith.ac.uk

what does your personal tutor do?

Your personal tutor should be the first person at the College that you speak to if you are having any personal difficulties that are affecting your work. These could be academic, financial, health-related or another type of problem.

Your Personal Tutor is there to support your learning needs and he or she can offer advice or recommend that you enrol on a study skills course. Your main support for academic issues relating to specific modules will be the lecturer who is teaching that module.

Your tutor will be the person who, if the College is asked, will write a personal reference for you during, or on completion of course.

CURRICULUM SECRETARY: Lisa Ricket lisa@truro-penwith.ac.uk 01872 308336

What does the curriculum secretary do?

The Curriculum secretary is your first point of contact for all administrative paperwork to do with the programme.

HE STUDENT SUPPORT: Joceline Nason and Jackie Harrison hestudentsupport@truro-penwith.ac.uk 01872 267585

What does HE Student Support do:

HE Student support helps you if need any advice on finance or if you need a laptop loan. You may also contact them if you need support with your mental health or need any support for if you have learning difficulties/disabilities.

PROGRAMME STRUCTURE AND DELIVERY

Level 4/Year 1				
Module Code	Module Title	No. of Credits	Core / Optional	Term / Semester
J/618/8081	Unit 2: Construction Technology	15	Core	Autumn
R/618/8083	Unit 4: Construction Practice & Management	15	Core	Spring
Y/618/8103	Unit 24: Principles of Off-Site Construction	15	Core	Spring
F/618/8094	Unit 15: Principles of Alternate Energy	15	Core	Summer

Level 4/Year 2				
Module Code	Module Title	No. of Credits	Core / Optional	Term / Semester
T/618/8092	Unit 13: Building Information Modelling	15	Core	Autumn
M/618/8091	Unit 12: Tender & Procurement	15	Core	Spring
D/618/8104	Unit 26: Digital Applications for BIM	15	Core	Spring
F/618/8080	Unit 1: Construction Design Project (Pearson-set)	15	Core	Summer

PROGRAMME RESOURCES

The HNC in Modern Methods of Construction utilises an extensive range of facilities including:

- Well-equipped, classrooms and project rooms
- Industry standard design and simulation software – AutoCAD, REVIT & 3DS Max
- A wide range of physical and electronic resources

ENHANCEMENT ACTIVITIES

What enhancement activities does the programme provide?

An important aspect of this qualification is its vocational nature. All students are encouraged to seek relevant employment or work based experience during their studies – that is why the actual 'teaching' timetable leaves you with some free time during the week. But additionally, many of the modules have vocational elements, such as practical experience, visits to and from individuals and organisations in your vocational area and simulations.

Students of Truro and Penwith University Centre are encouraged to develop their PDPs in a variety of ways. The tutorial system, where programme leaders act as personal tutors and see their tutees on a regular basis clearly feeds into the principles of PDP. At the end of each module, students are encouraged to review what they have learnt and how it might contribute to their employability and their personal development. And there is a similar end of term and end of year review conducted by the tutor.

Your course may involve certain trips across the year. Any such trip is intended to develop transferable skills and graduate opportunities. Usually, these trips will be additional to your studies and there may be a cost. For example, costs may relate to travel and entry to a certain exhibition or museum. If you feel for any reason that you may face a financial burden to going on such trips or are involved with such things as caring responsibilities, please talk to your course leader as soon as you can. The nature of any such trip will be outlined in good time to outline the expectations, costs and logistics.

EMPLOYMENT AND PROGRESSION OPPORTUNITIES

As a student of University Centre Truro Penwith you have access to the Career Connect Platform that gives you access to job and career opportunities whist you study here.

Additionally the system is available to you for three years after you graduate, this service is unique. You will need to create a profile and work based learning you undertake can be recorded on this platform. Please make use of this system as it will help support you in career. For more information please contact Louise Clarke our dedicated HE careers support officer.

louiseclarke@truro-penwith.ac.uk

EMPLOYMENT OPPORTUNITIES

After completing a Pearson BTEC Level 4 Higher National Certificate, students can use their newly gained experience and qualifications to start progressing their chosen careers. The skills offered can provide graduates with the opportunity to work in many different areas of the Construction sector. Below are some examples of job roles the qualification could lead to.

- Assistant Design Co-ordinator
- Design & Build Co-ordinator
- Construction Site Supervisor
- Construction Design Technician
- Site Manager
- Project Manager
- Cad Technician
- Planning Supervisor

PROGRESSION OPPORTUNITIES

Following completion of the HNC students can progress onto the HND in Modern Methods of Construction and then expect progression onto top-up BSc Construction programmes with a number of Universities.

TUTORIAL SCHEME OF WORK

	TUTORIAL SCHEME LEVEL 4
Induction	Welcome to course with key information and contacts
Semester 1	**This semester tutorials will include:** Welcome to course – key info, Learning Teaching and Assessment (LTA) handbook, employment sector in Cornwall and wider SW region Learning Resource Centre (LRC) induction Student Representatives information and election processes Plagiarism and Extenuating Circumstances (ECs) HE Student Support ***Academic skills*** - Note taking ***Academic skills*** - Resilience and Time Management ***One to Ones - Individual tutorial meetings***
	READING WEEK
	How the qualification works - grading process and role of the external examiner (EE) Turnitin tutorial ***Academic skills*** - How to plan & write an assessment ***Academic skills*** - Referencing and academic writing ***One to Ones - Individual tutorial meetings***
	CHRISTMAS
Semester 2	**This semester tutorials will include:** Student Perception Questionnaire (eSPQ) Placement/Employability skills audit and action planning Reflection & development planning ***Academic skills*** - Excel introduction ***Academic Skills*** - Excel graphs and charts ***One to Ones - Individual tutorial meetings***
	HALF TERM
	Reviewing progress on employability skills action plan Study skills clinic (Course specific requirements) ***Academic skills*** - planning and delivering presentations ***One to Ones - Individual tutorial meetings***
	EASTER
Semester 3	**This semester tutorials will include:** Role of EE and previous year's EE report Review and updating of employability and study skills action plans Results transcript explanation & module review Level 5 overview – course and expectations Results day information and guidance ***Academic skills*** - Revision techniques and online time constrained assessments ***One to Ones - Individual tutorial meetings***
	READING WEEK
	Support with summative assessments over summer

ASSESSMENT SCHEDULE AND HAND-IN PROCESS

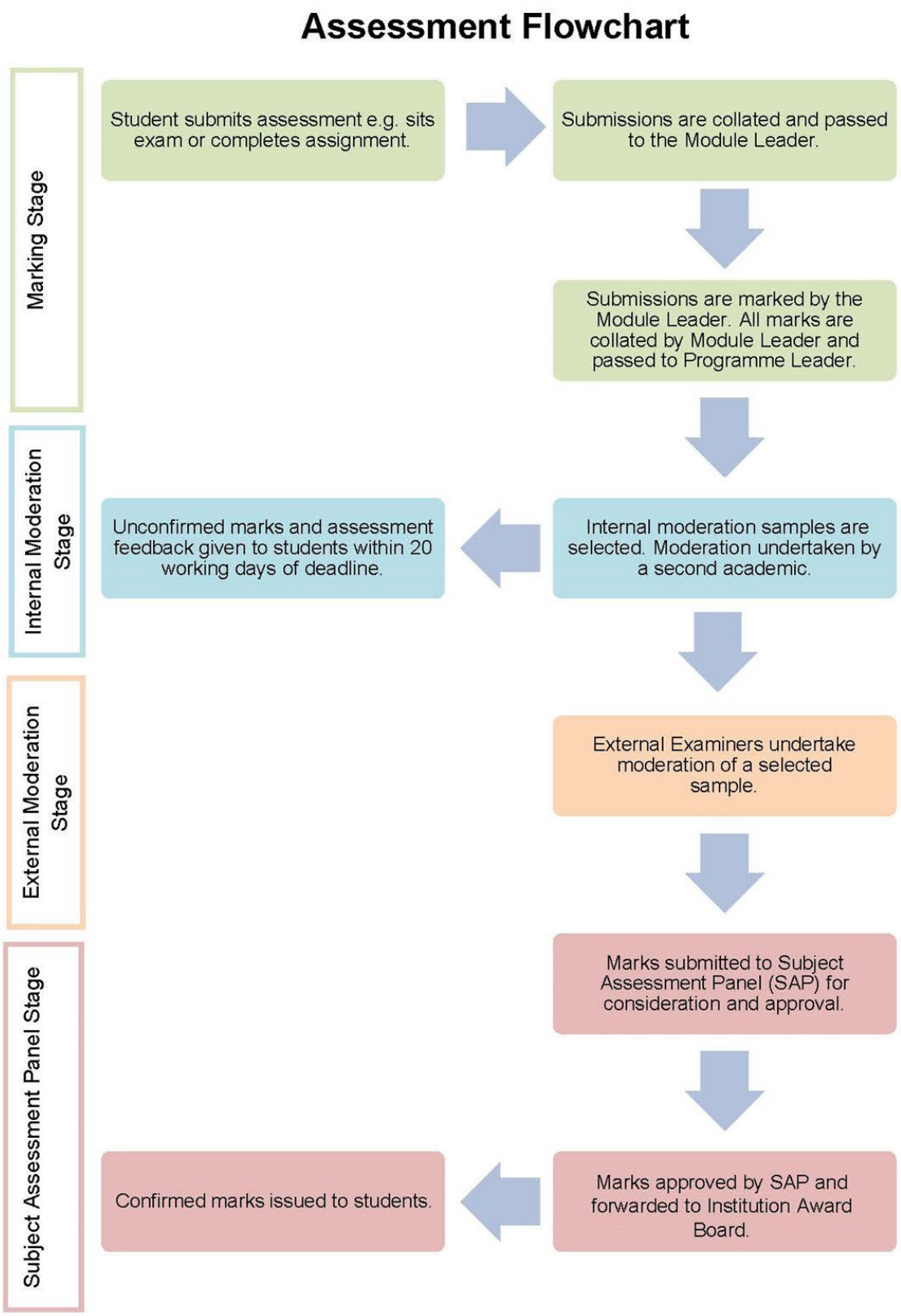
The following calendar outlines your assessment schedule. ***Work is to be electronically submitted via Turnitin before 1600hrs on the day indicated below.*** If you cannot make the deadline dates there is an extenuating circumstances process and details of this can be found on the University Centre Student Handbook **Year 1**

2023/ 2024	Week No	Unit 2: Construction Technology	Unit 4: The Construction Environment	Unit 15: Principles of Alternate Energy	Unit 24: Principles of Off-Site Construction
20-Sep	1				
27-Sep	2				
04-Oct	3				
11-Oct	4				
18-Oct	5	**Assessment**			
	Reading week: 23 – 27 October 2023				
01-Nov	6				
08-Nov	7				
15-Nov	8				
22-Nov	9				
29-Nov	10	Progress (formative)			
06-Dec	11				
13-Dec	12		**Assessment**		
	Christmas Holiday: 11 December: 2023 – 2 January 2024				
03-Jan	13	Hand in date			
10-Jan	14				
17-Jan	15				
24-Jan	16				
31-Jan	17		Progress (formative)		
07-Feb	18				**Assessment**
14-Feb	Reading Week: 12 – 16 February 2024				
21-Feb	19		Hand in date		
28-Feb	20				
06-Mar	21				
13-Mar	22				
20-Mar	23				Progress (formative)
27-Mar	24			**Assessment**	
	Easter Holiday: 29 March – 12 April 2024				
17-Apr	25				Hand in date
24-Apr	26				
01-May	27				
08-May	28				
15-May	29			progress (formative)	
22-May	30				
	Reading week: 27 – 31 May 2024				
05-Jun	31			Hand in date	

Year 2

2024/ 2025	Week No	Unit 13: Building Information Modelling	Unit 12: Tender & Procurement	Unit 1: Construction Design Project (Pearson-set)	Unit 26: Digital Applications for BIM
18-Sep	1				
25-Sep	2				
02-Oct	3				
09-Oct	4				
16-Oct	5	**Assessment**			
	Reading week				
30-Oct	6				
06-Nov	7				
13-Nov	8				
20-Nov	9				
27-Nov	10	Progress (formative)			
04-Dec	11				
11-Dec	12		**Assessment**		
	Christmas Holiday:				
08-Jan	13	Hand in date			
15-Jan	14				
22-Jan	15				
29-Jan	16				
05-Feb	17		Progress (formative)		
12-Feb	18				**Assessment**
19-Feb	Reading Week:				
26-Feb	19		Hand in date		
05-Mar	20				
12-Mar	21				
19-Mar	22				
26-Mar	23				Progress (formative)
02-Apr	24			**Assessment**	
	Easter Holiday				
16-Apr	25				Hand in date
23-Apr	26				
30-Apr	27				
07-May	28				
14-May	29			Progress (formative)	
21-May	30				
	Reading Week:				
04-Jun	31			Hand in date	

ASSESSMENT FLOWCHART



NOTE: The sample for the internal moderation process comprises of moderating any piece above 70% and below 40%, as well as a work across the range of achievement (at least 10 pieces of assessed work must be moderated per module).

ELECTRONIC SUBMISSION AND ASSIGNMENT FEEDBACK

SUBMITTING A PAPER

Student users of TurnitinUK submit papers to a class from the class portfolio page. The class portfolio page is viewed by clicking on the name of the class from the student homepage. The class portfolio page lists assignments created by the instructor for students to submit to.

Note: If there are no assignments listed, students will not be able to submit any papers to the course until the assignments are created. Ensure that the correct course is being accessed and contact the instructor if no assignments are available to submit to. Only the instructor controlling the class will be able to create assignments for students in the class.

The file size may not exceed 20 MB. Files of larger size may be reduced in size by removal of non-text content or the instructor may be contacted to request multiple assignments to submit the document in sections.

Note: Text only files may not exceed 2 MB.

Note: Some document formats can contain multiple data types. This includes text, images, embedded information from another file, and formatting. Non-text information that is not saved directly within the document will not be included in a file upload. This includes references to a Microsoft Excel® spreadsheet included within a Microsoft Office Word document.

Note: Users whose files are saved in a file type that is not accepted by TurnitinUK will need to use a word processing program to save the file as one of the accepted types. Rich Text Format and Plain Text file types are nearly universally available in word processing software. Neither file type will support images or non-text data within the file. Plain text format does not support any formatting, and rich text format supports only limited formatting options.

Tip: When converting a file to a new file format, users should rename their file with a name other than that of the original file. This is suggested to prevent permanent loss of the original formatting or image content of a file due to it being overwritten.

HOW TO SUBMIT A PAPER

To submit a paper to an assignment on TurnitinUK, the user must log in and upload a file to an existing assignment. Assignments on TurnitinUK cannot accept student submissions until the assignment start date and time has passed. Assignments may also reject submissions after the due date and time set by the instructor.

To check the start date and due date information, either click on the name of the assignment in the class portfolio page or view the start and due dates located under the assignment name. This action opens a pop-up window showing assignment preference information, including start and due dates/times as well as other assignment information or special instructions.

Note: After the submission has been completed on step 7 below, a digital receipt is displayed in your browser window. A copy is also sent via e-mail to the address for the user login. It is important to use a valid e-mail address to receive this copy of the digital receipt. Save the receipt and the submission id it contains, as this is proof of a completed submission.

Warning: If the digital receipt is not shown on screen after submission, return to the class portfolio page and view the assignment to ensure the paper submission completed correctly. Submissions can be checked and viewed by clicking on the title of the paper under the *title* column to the right of the assignment name.

SUBMISSION FORMAT

Your assignment needs to be titled as follows: Pearson (TPUC) Student Number Module Code (Module Code should be followed by assignment number e.g. Assignment 1, 2, 3 etc.)

E.g. 10565478 TRUR2010 Assignment 1

SUBMITTING A PAPER BY SINGLE FILE UPLOAD:

1. Start by clicking on the class name you would like to submit to after logging in to Turnitin UK
2. Click on the Submit button to the right of the assignment name
3. If necessary, select single file upload from the *Submit:* pull down menu
4. Enter a title for the submission
5. Once the requirements for single file upload have been reviewed, students have a choice to upload a file from:
   - the computer
   - Dropbox
   - or Google Drive

   Click one of the submission buttons and then select the file you would like to upload
6. Click upload to upload the file
7. Review the preview panel. Click the *Confirm* button to upload the file to the assignment
8. After the submission is complete a digital receipt is displayed on screen. A copy is also sent via e-mail to the address for the user login. Save the receipt and the submission id it contains, as this is proof of a completed submission.

For further information, visit the turnitin Student Guides

INTRODUCTION TO MICROSOFT TEAMS

Microsoft Teams is a centralised hub for communication and collaboration within a team, department or student group. If require, this will allow you to join lectures and interact within your group.

Microsoft Teams integrates directly with all Office 365 applications such as SharePoint and Planner, making it easy for you to communicate and collaborate securely wherever you are.

Get Microsoft Teams on your device

Microsoft Teams is available to all Truro & Penwith College Students and Staff.

- Download for Windows, macOS, or Linux
- Use the web version, which has the same features as the desktop version
- Get Teams on your iOS and iPadOS or Android device.

Simply enter your Truro & Penwith College username and password and you're ready to go
EXAMPLE: jb12345@truro-penwith. ac.uk

Features of teams

- Chat with text, audio, video, and file sharing
- Store all your files, docs, and more in one place
- Automatically integrate with your existing Outlook calendar
- Meet with up to 250 people at the same time
- Share your desktop, applications, or a whiteboard during meetings
- Automatically record and upload video, audio, and shared content from meetings to Microsoft Stream

How Teams can help you work together

Chat-based team workspaces

- **Chat** instantly with peers and staff from on or off-campus
- Quickly get in touch using **video calls**

Desktop and mobile apps

- Stay connected from your **Windows** or **Mac** computer, or on the go with the **Android** and **iOS** mobile apps
- Configure your **notifications**, so you never miss a message or project update

Integrated Office apps and OneDrive

- Work together on documents with integrated **Office 365** apps, like Word and Excel
  Easily access and **share files** from your OneDrive account, right from the app

Indirect Referencing (In text citations)

As the verb in the main clause, followed by a 'that' clause

Rees (2004) argues that …

Rees (2004) observes that …

as the verb in a 'comment' clause, followed by the main clause:

As Rees (2004) argues, …

As Rees (2004) observes, …

as a noun in the main clause

Rees (2004) uses the argument that …

Rees (2004) makes the observation that …

Direct Referencing (In text citations)

For quotation only

In the words of Rees (2004:6), '…'.

To quote Rees (2004:6), '…'.

With regard to … , Rees (2004:6) has the following to say: '…'.

If the suggestion that '…' (Rees, 2004:6), then a question must be asked about…

As noted by Weare (2005:3), 'the phenomenon observed is dramatic', which suggests that…

More Than Two Authors (In text citations)

On the first occurrence all authors should be listed. After that…..

If there are more than two authors, the surname of the first author only should be given, followed by '*et al*.' (Latin for 'and others', preferably in *italics* and followed by a full stop as it is an abbreviation), for example:

Chavez *et al.* (1997) conclude that the solution lies in improved education to promote sustainability literacy...

Secondary Sources (In text citations)

For a secondary source (i.e. if you refer to a source quoted in another work) ideally you should aim to trace the original source. If you are unable to check it, you need to cite both in the text, for example:

A study by French (1984, cited in Saunders, 1995:24) showed that...

(Note that you need to list the work you have used, i.e. Saunders, in the list of references section at the end of the essay and in the bibliography)

Repitition of Findings (In text citations)

If a number of different authors are essentially saying the same thing or agree on a particular issue, you can include all the different authors in one reference for example:

Many studies suggest (Smith and Stafford, 2006; Hassan, 2005; George, 1999; Bertelli, 1997) that...

Diagrams, photos, charts, maps and other illustrations

Diagrams, photos, charts, maps and other illustrations should be cited like quotations with the author and date given alongside the illustration and full details included in the list of references.

Reference List (Books)

If you are referring to a book, you should give the following information:

Surname, Initials. (year of publication). *Title*. Edition (if not the first). Place of publication: Name of publisher.

Soper, K. (1995). *What is nature? Culture, politics and the non-human* (2nd edn). Oxford: Blackwell.

Reference List (Articles)

If you are referring to an article, you should give the following information:

Surname, Initials. (year). 'Title of article', *Name of Journal* (with capitals as they appear in the journal), volume number (part number), pages.

Reference List (Websites)

What you need in order to use a website……

Author of the information (a person, group or organisation), if there is one

year (most web pages have a date at the bottom of the page)

Title

URL (i.e. whole web address including numbers, slashes etc.)

the date you accessed the web page.

> **Hayes, M. J. (2001). *Intellectual property rights*. Available at: www.jisclegal.ac.uk/ipr/IntellectualProperty.htm (Accessed: 8 June 2004).**

MODERN METHODS OF CONSTRUCTION– UNIT 2: CONSTRUCTION TECHNOLOGY

15 credit Module

Illustrated Report (1500–2000 words)

MODULE DESCRIPTOR

The basic principles of construction technology have not changed for hundreds of years. However, the materials and techniques used to achieve these basic principles are constantly evolving to enable the construction industry to deliver better quality buildings. Scarcity of resources and the continuing demand of more sophisticated clients, end users and other stakeholder interests, are driving the construction industry to provide buildings that facilitate enhanced environmental and energy performance, and greater flexibility. This is in response to ever-increasing financial, environmental, legal and economic constraints.

MODULE AIMS

This unit introduces the different technological concepts used to enable the construction of building elements, from substructure to completion, by understanding the different functional characteristics and design considerations that need to be borne in mind when selecting the most suitable technological solution.

THE ASSESSED LEARNING OUTCOMES

At the end of a module the learner **will be expected to be able to:**

L01 Explain the terminology used in construction technology.

L02 Describe the different techniques used to construct a range of substructures and superstructures, including their function and design selection criteria.

L03 Discuss different methods of dealing with site conditions to support building and infrastructure construction.

L04 Illustrate the supply and distribution of a range of building services and how they are accommodated within the building.

MODULE READING LIST

BRYAN, T. (2015), Construction Technology, John Wiley & Sons

CHARLETT, A., MAYBERY-THOMAS, C. (2013), Fundamental Building Technology, Routledge

CH UDLEY, R., GREENO, R. (2006), Advanced Construction Technology, Pearson Education

CH UDLEY, R., GREENO, R., KOVAC, K. (2020), Chudley and Greeno's Building Construction Handbook, Butterworth-Heinemann

EMMITT, S. (2018), Barry's Advanced Construction of Buildings, John Wiley & Sons

FLEMING, E. (2009), Construction Technology, John Wiley & Sons

MCDONOUGH, W., BRAUNGART, M. (2010), Cradle to Cradle: Remaking the Way We Make Things, North Point Press

SCHEME OF WORK

SESSION / WEEK	TOPIC / CONTENT
1	Seminar: Unit 2 - Introduction to construction technology Lecture: LO1 - Types of structures in the built environment Lecture: LO1 - Structures
2	Lecture: LO1 – Construction methods Lecture: LO1 - Materials
3	Lecture: LO1 – Environment Lecture: LO1 – Health and Safety
4	Lecture: LO2 - Pre-design studies Lecture: LO2 - Substructure design considerations
5	Lecture: LO2 - Superstructure design considerations Lecture: LO2 - Infrastructure types
6	Lecture: Assignment workshop – **Assignment Issued** Lecture: LO2 - Roofs
	READING WEEK:
7	Lecture: LO3 – Site and soil remediations Assessment work
8	Lecture: LO3 – De-watering / Piling / concrete methods Assessment work
9	Lecture: LO3 - Grout injection / Freezing / Temporary techniques Assessment work
10	Lecture: LO4 - Primary service supply / Heating Lecture: LO4 – Ventilation / Air conditioning Lecture: LO4 - Services distribution / Services accommodation
11	Workshop: **Assignment Formative:** 1 to 1 Meetings with Lecturer: Assignment
12	Assessment work
13	Assessment work
	CHRISTMAS:
14	**Assessment 1 hand in**

ASSIGNMENT BRIEF/S WITH MAPPED ALO

ASSIGNMENT ONE	
MODULE AND CODE:	Unit 2: Construction Technology
ASSESSMENT TITLE:	Title: Technology Services
LECTURER:	David Stringer
FORMAT:	Illustrated Report (1500–2000 words).
ASSESSMENT WEIGHTING:	15 credits
ASSESSED LEARNING OUTCOMES:	LO1 Explain the terminology used in construction technology. LO2 Describe the different techniques used to construct a range of substructures and superstructures, including their function and design selection criteria. LO3 Discuss different methods of dealing with site conditions to support building and infrastructure construction. LO4 Illustrate the supply and distribution of a range of building services and how they are accommodated within the building.
ASSESSMENT CRITERIA:	Learning outcomes (LO's) are graded Pass, Merit and Distinction. To attain an overall Pass in the assignment, all Pass LO's must be successfully answered. To gain a Merit both Pass and Merit LO's must be successfully answered. Finally, to gain a Distinction, students must successfully answer all Pass, Merit and Distinction learning Outcomes
CONTEXT/SCENARIO:	You have recently gained employment with the local construction firm Truro Build LTD. The company provides a wide range of services for projects of all sizes. Lately, the firm has been seeing a slowdown in new contracts. To address this, it has been decided that the company will produce a report to help potential clients understand the nature of the work that the company undertakes. The purpose of the report is to showcase recent projects that the company has undertaken throughout Cornwall, specifically the new Liner building at Gyllyngvase beach, Falmouth.

TASK:	You have been asked to prepare a report based on this project and should the cover the following areas. **Construction Terminology** – This will provide potential clients with key information about the terminology used in construction and construction technology. It should describe the key features of different types of project (e.g. residential, commercial, industrial, infrastructure) and how sustainability can be promoted in projects. There should be also some analysis of the way that projects address health & safety and, where there are different terms used for different types of project, some consideration of these differences. **Superstructure and Substructure** – This section will assist clients in understanding the particulars of structural and civil engineering work, and should: ● Describe the role of pre-design studies and the functional characteristics of superstructures and substructures. In addition, there should be some analysis of how site conditions impact on the design of foundations and the ways in which the site for the project was remediated prior to the start of works on site by civil engineering works. ● Explain the characteristics and criteria for primary and secondary elements of superstructures/substructures, and detail how component parts of a superstructure or substructure work together to fulfil the required functions of the project ● Compare different types of structural frames that could have been used to carry the primary and secondary elements of the superstructure. **Building Services** – This section of the report will help the client understand the types of work included in building services contracts and should: ● Describe the range of services required within the building and analyse how the supply and distribution of the primary services impacted on the overall design of the selected building ● Demonstrate how primary services may be facilitated by superstructure elements within the construction process. The report should make use of any drawings, diagrams and data that may help to support your explanation of the various aspects. Any material that is taken from other sources must be suitably cited and referenced.

Pass	Merit	Distinction
LO1 Explain the terminology used in construction technology		
P1 Describe the differences between residential, commercial, industrial buildings and infrastructure projects. **P2** Discuss the ways in which sustainability can be promoted in construction projects.	**M1** Analyse the way that construction projects address risk and health and safety.	**D1** Compare the construction terminology used in different types of construction project.
LO2 Describe the different techniques used to construct a range of substructures and superstructures, including their function and design selection criteria		
P3 Describe the pre-design studies carried out and types of information collected for a given construction site. **P4** Explain the functional characteristics and design criteria for primary and secondary elements of a substructure and superstructure.	**M2** Analyse how site conditions impact on the design of foundations.	**D2** Evaluate a given construction project with regard to the ways that superstructure, substructure and civil engineering structures are used to support the structure.
LO3 Discuss different methods of dealing with site conditions to support building and infrastructure construction		
P5 Describe techniques used for remediating the site prior to construction commencing. **P6** Describe the types of substructure works carried out by civil engineers.	**M3** Compare different types of structural frame used to carry the primary and secondary elements of the superstructure.	

Pass	Merit	Distinction
LO4 Illustrate the supply and distribution of a range of building services and how they are accommodated within the building		
P7 Describe the supply arrangements for primary services. **P8** Explain the distribution arrangements for primary services.	**M4** Demonstrate the elements of the superstructure used to facilitate the primary services.	**D3** Analyse the ways in which the distribution of the primary services impact on the overall design of the building.

MODERN METHODS OF CONSTRUCTION – UNIT 4: THE CONSTRUCTION ENVIRONMENT

15 credit Module

- A2 Posters
- Presentation (15 minutes)
- Research File

MODULE DESCRIPTOR AND MODULE AIMS

Construction is a complex and dynamic sector of the local, regional, national and international economy. In many countries it is a driving force in the growth of finance, property and employment. This also means that it has considerable impact on many factors beyond its direct influence on the buildings and infrastructure that are created and maintained. The construction industry is one of the major contributors to CO2 emissions. Also, the way that buildings are designed, constructed and maintained means they have an ongoing impact on the environment. Similarly, as a major employer, the industry has an ongoing impact on the working conditions of those in the sector and the way that people are educated, trained and supported through their careers. In this unit, students will explore the make-up and the impact of the construction industry on the environment and society. By exploring the roles and relationships of individuals and organisations in the construction sector, students will gain an overview of the organisational and the personal ways in which the sector works to continue to improve the built environment and limit its impact on the environment, while maintaining economic sustainability and growth.

THE ASSESSED LEARNING OUTCOMES

At the end of a module the learner **will be expected to be able to:**

LO1 Explore the development of the construction industry through the roles and relationships of the professionals involved.

LO2 Assess the impact of the construction industry.

LO3 Discuss the ways in which the construction industry ensures quality, timely completion and safety.

LO4 Examine the routes to employment and progression within the construction industry.

MODULE READING LIST

FEWINGS, P. (2008), Ethics for the Built Environment, Routledge

GRUNEBERG, S., FRANCIS, N. (2019), The Economics of Construction, Economics of Big Business

MCDONOUGH, W., BRAUNGART, M. (2010), Cradle to Cradle: Remaking the Way We Make Things, North Point Press

MIRSKY, R., SCHAUFELBERGER, J. (2014), Professional Ethics for the Construction Industry, Routledge

MURRAY, M., DAINTY, A., MURRAY, M. (2008), Corporate Social Responsibility in the Construction Industry, Routledge

SCHLEIFER, T. (1990), Construction Contractors' Survival Guide, John Wiley & Sons

MODULE RESOURCES

- https://bit.ly/3rKsWPc **Chartered Association of Building Engineers**
- https://bit.ly/3f9vzoo **Chartered Institute of Architectural Technologists**
- https://bit.ly/3xbOxB5 **Chartered Institution of Building Services Engineers**
- https://bit.ly/3fsrTP1 **Institution of Civil Engineers**
- https://bit.ly/3j46TyG **Royal Institute of British Architects**
- https://bit.ly/3ihhMhP **Royal Institution of Chartered Surveyors**

SCHEME OF WORK

SESSION / WEEK	TOPIC / CONTENT
1	Seminar: Unit introduction Lecture: LO1 - Introduction to the construction industry
2	Lecture: LO1 **-** Relationships between organisations Lecture: LO1 - Roles in the construction industry
3	Lecture: LO1 - Summary of the key concepts Lecture: LO2 - Assess the impact of the construction industry**.**
4	Lecture: LO2 - Economic and Employment impact and skills gap in the Construction Industry
5	Lecture: LO2 - Sustainability in the construction industry
	READING WEEK:
6	Lecture: LO2 - The future of the construction industry.
7	Lecture: LO3 **-** Introduction to cost control and cost monitoring.
8	Lecture: LO3 **-** Costs
9	Lecture: LO3 **-** Contracts
10	Lecture: LO3 **–** Case Studies
11	Lecture: LO4 **-** Employment
12	Lecture: Assignment workshop – **Assignment Issued**
	CHRISTMAS:
13	Lecture: LO4 **-** Routes
14	Lecture: LO4 **–** Education and Training
15	Workshop: Assignment
16	Workshop: Assignment
17	**Assignment Formative:** 1 to 1 Meetings with Lecturer
18	Workshop: Assignment
	READING WEEK:
19	**Assignment 1 hand in**

ASSIGNMENT BRIEF/S WITH MAPPED ALO

ASSIGNMENT ONE	
MODULE AND CODE:	**Unit 4: The Construction Environment**
ASSESSMENT TITLE:	Industry and the working environment
LECTURER:	Michelle Casserly
FORMAT:	A2 Posters Presentation (15 minutes) Research File
ASSESSMENT WEIGHTING:	15 Credits
ASSESSED LEARNING OUTCOMES:	**LO1** Explore the development of the construction industry through the roles and relationships of the professionals involved. **LO2** Assess the impact of the construction industry. **LO3** Discuss the ways in which the construction industry ensures quality, timely completion, and safety. **LO4** Examine the routes to employment and progression within the construction industry.
ASSESSMENT CRITERIA:	Learning outcomes (LO's) are graded Pass, Merit and Distinction. To attain an overall Pass in the assignment, all Pass LO's must be successfully answered. To gain a Merit both Pass and Merit LO's must be successfully answered. Finally, to gain a Distinction, students must successfully answer all Pass, Merit and Distinction learning Outcomes
CONTEXT/SCENARIO:	You have recently gained employment with a local Cornish construction firm that is seeking to expand. To support their growth, they are planning to recruit within the local community: aiming to inspire young people to join the construction industry. You have been asked to support the firm's marketing team by contributing to the materials they will use to distribute to local secondary schools and further education colleges. The marketing team has asked you to prepare a presentation that you will give to groups of students, and two different posters that can be distributed to schools and colleges. In preparing your presentation, you are asked to discuss how the construction industry has developed, ideally using examples to show key points in this development. As a part of this, you should consider the different roles and responsibilities of people working in the industry. Related to this, you should also give your analysis of the way that professional bodies support the industry and public, and evaluate how they promote equality and diversity, as well as growth in the sector. Your

	presentation is also intended to make clear the challenges facing construction and how the sector is responding. So, you are asked to explain the different forms of sustainability (environmental, social, cultural, economic) and how the sector is responding to them. It is also important to reflect on the challenges that currently exist with regards to equality and diversity, and to assess these challenges and why the sector needs to address them. This presentation is intended to make clear the opportunities and challenges within construction, and to support young people in recognising that they can play a part in addressing those challenges. The first poster you are asked to develop is intended to provide a graphic/infographic way of communicating some key features of the construction industry and employment opportunities. This poster is aimed at communicating the way that quality and safety are ensured in projects. It should show the importance of cost monitoring, health & safety, and quality standards. You should include (based on your research and analysis) reference to key legislation that supports safety and the role that professional bodies play in this process. The second poster you are asked to develop will communicate employment opportunities and progression in construction. It should communicate the relationship between technical and employability skills, and the importance of Continuing Professional Development and lifelong learning, both as part of personal development but also meeting the requirements of professional bodies and how all this help to build toward leadership and management roles. In support of your presentation and posters, the marketing team has asked that you include a Research File, which documents the development of your work and includes your analysis and evaluation of the areas you have researched. This is to allow them to understand how your presentation and posters have been developed and may indicate areas for future marketing.
TASK:	Your presentation should be developed in PowerPoint (or a similar application). In giving your presentation, you should be mindful of the audience that you are addressing and the message that you wish to communicate. Therefore, you should ensure that you maintain a professional approach and remember that you are representing your employer. Your presentation should not exceed 15 minutes. Posters should be presented on A2 paper and use graphics, illustrations, charts, etc. as much as possible to communicate. Remember, a poster is NOT an essay or a report so you should aim to avoid large blocks of text. Remember, your Research File will provide the underpinning analysis and evaluation that supports your decisions about what you have

	included in your posters (and presentation). The Research File should be a structured document, NOT simply a collection of 'bits and pieces'. When reviewing the Research File in relation to a poster or the presentation, it should be easy to refer to the specific research materials that relate to the output. Remember, your research is the 'in-depth' study of what you have found and considered - it supports your presentation and posters.

MODERN METHODS OF CONSTRUCTION – UNIT 24: PRINCIPLES OF OFF-SITE CONSTRUCTION

15 credit Module

- Off-site Research Report (2000 words)
- Presentation (15 minutes)

MODULE DESCRIPTOR

Construction in the 21st century is (in most cases) still carried out along the same principles as medieval construction. Large amounts of material are delivered to a building site where weather conditions and physical constraints can cause not just delays and defects but often unattractive working conditions. Off-site construction offers a range of potential benefits for increasing the efficiency, accuracy and quality of the end product.

MODULE AIMS

In this unit, students will explore different approaches to off-site construction, focusing on building development and delivery. This includes modular construction, factory construction, automation and robotics, and 3D printing. Students will consider the way in which off-site processes and technologies may influence building design and delivery.

By the end of this unit, students will be able to assess potential options for off-site production and develop design and manufacturing strategies to enable building delivery.

THE ASSESSED LEARNING OUTCOMES

At the end of a module the learner **will be expected to be able to:**

L01 Explain the different forms of off-site construction and how they provide potential benefits for building production and delivery.

L02 Explore the ways that design is influenced by different forms of off-site construction.

L03 Discuss the benefits of a selected off-site construction method or technology in relation to efficiency, sustainability, and cost of project delivery.

L04 Present a proposal for off-site construction of a given building type, highlighting the benefits of the method for quality, efficiency, and cost of delivery.

MODULE READING LIST

COTTERELL, J., DADE BY, A. (2012), The Passivhaus Handbook: A practical guide to constructing and retrofitting buildings for ultra-low energy performance, Green Books

DUFFY, A., ROGERS, M., AYOMPE, L. (2015), Renewable Energy and Energy Efficiency, John Wiley & Sons

GRINNELL, S. (2015), Renewable Energy & Sustainable Design, Cengage Learning

HAIRSTANS, R. (2017), Building Offsite, ARCA Media

HICKEY, T. (2014), Construction Technology: Designing Sustainable Homes, Gill Education

LAWSON, M., OGDEN, R., GOODIER, C. (2014), Design in Modular Construction, CRC Press

SINOPOLI, J. (2009), Smart Buildings Systems for Architects, Owners and Builders, Butterworth-Heinemann

MODULE RESOURCES

https://bit.ly/2WnuEKv Build Offsite (General Reference)

https:/ /bit.ly/3I8DEO0

https://bit.ly/3rHZzwJ

https:/ /bit.ly/3zR4jCW

https:/ /bit.ly/3ycralj

ICE Virtual Library (General Reference)

Offsite Construction - Loughborough University (General Reference)

The Timber Research and Development Association (Professional Body)

The Renewable Energy Centre (General Reference)

SCHEME OF WORK

SESSION / WEEK	TOPIC / CONTENT
14	Unit 24 - Introduction to Principles of Off-Site Construction Lecture – LO1: Introduction to off-site construction
15	Lecture – LO1: Production benefits of off-site construction Workshop – LO1: Conclusion and reflection
16	Lecture – LO2: Different forms of off-site construction Lecture – LO2: Case studies of off-site construction projects
17	Workshop – LO2: Conclusion and reflection Lecture – LO3: Benefits of off-site construction
18	Lecture – LO3: The future of off-site construction in the UK
19	Lecture: Assignment workshop – **Assignment Issued** Lecture – LO3 In-depth study of a specific off-site construction method or technology
	READING WEEK:
20	Workshop – LO3: Wrap-up and discussion
21	Lecture – LO4: Challenges and risks associated with off-site construction
22	Lecture – LO4: Identification of the specific benefits of the method or technology in terms of quality, efficiency, and cost of project delivery.
23	Workshop– LO4: Wrap-up and discussion / Summary of the key concepts and learnings from the course
24	Workshop: **Assignment Formative:** 1 to 1 Meetings with Lecturer: Assignment
25	Workshop: Assignment
	EASTER:
26	**Assessment 2 hand in**

ASSIGNMENT BRIEF/S WITH MAPPED ALO

Assignment to be confirmed.

Pass	Merit	Distinction
LO1 Explain the different forms of off-site construction and how they provide potential benefits for building production and delivery		
P1 Explore the different forms of off-site construction. **P2** Discuss the benefits of off-site construction for building production and delivery.	**M1** Compare the benefits and challenges of different types of off-site construction.	**D1** Critically analyse the way in which a specific off-site construction method will support the achievement of design outcomes and cost-effective production.
LO2 Explore the ways that design is influenced by different forms of off-site construction		
P3 Discuss the relationship between design and construction. **P4** Explore the ways in which specific off-site construction methods may influence design decisions.	**M2** Evaluate the merits of a specific method of off-site construction to support a specific design outcome.	

Pass	Merit	Distinction
LO3 Discuss the benefits of a selected off-site construction method or technology in relation to efficiency, sustainability and cost of project delivery		
P5 Explore a given brief to select a suitable method of off-site construction. **P6** Discuss how the selected off-site construction method achieves efficiency, sustainability and cost effectiveness for a given brief.	**M3** Analyse the relationship between design, efficiency, sustainability and cost for a selected off-site construction method in meeting a given brief.	**D2** Evaluate comments and feedback, in response to a presentation, to inform future off-site construction proposals.
LO4 Present a proposal, for off-site construction of a given building type, highlighting the benefits of the method for quality, efficiency and cost of delivery		
P7 Prepare research, analysis and information necessary to support a proposal for off-site construction, in response to a given brief. **P8** Present, to a diverse audience, an off-site construction proposal, highlighting the achievement of quality, efficiency and cost effectiveness.	**M4** Justify a position, in response to presentation comments, through the detailed explanation of a strategy.	

MODERN METHODS OF CONSTRUCTION – UNIT 15: PRINCIPLES OF ALTERNATIVE ENERGY

15 credit Module

- Presentation (15-20 Minutes)
- Downloadable PDF Case Study (1000-1500 words)

MODULE DESCRIPTOR AND MODULE AIMS

Buildings use about 40 per cent of global energy, 25 per cent of global water and 40 per cent of global resources in their construction and operation. Governments around the world have recognised the importance of tackling energy consumption in the built environment and have instituted legislation to address these issues. These resulting measures have often been supported by financial incentives to implement alternative energy systems and processes. They are also governed by rigorous targets and deadlines. Technologies that harness solar, wind and hydro energy are now established systems for generating power and heat. Along with other innovations, such as heat pumps and biofuel, these sustainable energy systems are often incorporated into the design of new construction projects. The aim of this unit is to develop students' knowledge of current and future energy technologies and to be able to apply that knowledge to the analysis and assessment of their effectiveness. Students will also apply their knowledge and research to a design activity. On successful completion of this unit, students will be able to research and design alternative energy systems and assess new technologies available to the construction industry.

THE ASSESSED LEARNING OUTCOMES

At the end of a module the learner **will be expected to be able to:**

LO1 Examine the different contexts that inform discussions on environmental sustainability.

LO2 Discuss types of alternative energy systems and how they support sustainability.

LO3 Explain the factors that inform the selection of a renewable energy system in relation to a specific installation.

LO4 Present a strategy for a cost-effective upgrade to an existing building, utilising an appropriate form of alternative energy.

MODULE READING LIST

ARMSTRONG, J. (2021), The Future of Energy: The 2021 Guide to the Energy Transition - Renewable Energy, Energy Technology, Sustainability, Hydrogen and More, Energy Technology Publishing

DUFFY, A., ROGERS, M., AYOMPE, L. (2015), Renewable Energy and Energy Efficiency, John Wiley & Sons

GRINNELL, S. (2015), Renewable Energy & Sustainable Design, Cengage Learning

JELLEY, N. (2020), Renewable Energy: a Very Short Introduction, Oxford University Press, USA

TWIDELL, J., WEIR, T. (2015), Renewable Energy Resources, Routledge

USHER, B. (2019), Renewable Energy, Columbia University Press

MODULE RESOURCES

https://bit.ly/3f5HmUD **Energy Saving Trust** (General Reference)

https://bit.ly/3l4rkOS **NRDC Renewable Energy: The Clean Facts** (General Reference

SCHEME OF WORK

SESSION / WEEK	TOPIC / CONTENT
20	**Seminar: Unit introduction** Lecture: LO1 - Definitions of sustainability
21	Lecture: LO1 - Environment context Lecture: LO1 - Resource Context
22	Lecture: LO1 - Political context Lecture: LO2 - Renewables
23	Lecture: LO2 - Conservation Lecture: LO2 - Advances
24	Lecture: Assignment workshop – **Assignment Issued** Lecture: LO3 - Environmental Factors
	EASTER:
25	Lecture: LO3 - Political Factors Lecture: LO3 - Social Factors Lecture: LO3 - Technical and design factors
26	Lecture: LO3 - Access Lecture: LO3 - Cost Factors
27	Lecture: LO3 - Safety Factors Lecture: LO4 - Project characteristic
28	Lecture: LO4 - Client requirements Lecture: LO4 - Strategy Workshop: Assignment
29	Workshop: **Assignment Formative:** 1 to 1 Meetings with Lecturer: Assignment
30	Workshop: Assignment Workshop: Assignment
	READING WEEK:
31	**Assignment 4 Hand in**

ASSIGNMENT BRIEF/S WITH MAPPED ALO

ASSIGNMENT ONE	
MODULE AND CODE:	Unit 15: Principle of Alternative Energy
ASSESSMENT TITLE:	Alternate Energy - Upgrading Housing Stock
LECTURER:	Michelle Casserly
FORMAT:	The submission is comprised of the following: • Presentation (15-20 Minutes) • Downloadable PDF Case Study (1000-1500 words)
ASSESSMENT WEIGHTING:	15 Credits
ASSESSED LEARNING OUTCOMES:	**LO1** Discuss types of alternative energy system, and how they differ from common systems in use today. **LO2** Evaluate the factors that inform the selection of a renewable energy system in relation to a specific installation. **LO3** Present a strategy for a cost-effective upgrade to an existing building, utilising an appropriate form of alternative energy. **LO4** Describe ways in which different forms of alternative energy address broader environmental issues and provide sustainable solutions.
ASSESSMENT CRITERIA:	Learning outcomes (LO's) are graded Pass, Merit and Distinction. To attain an overall Pass in the assignment, all Pass LO's must be successfully answered. To gain a Merit both Pass and Merit LO's must be successfully answered. Finally, to gain a Distinction, students must successfully answer all Pass, Merit and Distinction learning Outcomes
CONTEXT/SCENARIO:	You are working as an assistant building services designer for Cornwall Housing who are responsible for the maintenance and refurbishment of social housing in Cornwall. Their new department is now specialising in up grading their housing stock by developing alternative energy solutions. Cornwall Housing is planning to redevelop their website to provide more information about the process and features of alternative energy. As part of this, they wish to have an online video/presentation that will allow potential tenants to understand both the opportunities and benefits of implementing an alternative energy solution.

TASK:	The managing director has asked you to develop the content for the online presentation. This should: • An explanation of purpose and principles associated with different forms or renewable energy, comparing them to traditional forms. • Analysis of the environmental impact of existing and renewable technologies, and an evaluation of renewables in addressing environmental issues. • Evaluation of the factors that influence the selection of a renewable energy system including a description of advances in renewables to meet specific installation needs. • Description of the ways that alternative energy addresses broad environmental issues, comparing different technologies and their addressing of broad environmental and sustainability issues. • Analysis of how specific renewable energy solutions meet (or contribute to) environmental initiatives (e.g. Kyoto Protocol, carbon trading, local/global targets). To accompany the online presentation, you are asked to develop a case study for the cost effective alternative energy upgrade to an existing building: This should include: • Select an alternative energy system appropriate to the site and present the strategy for integrating the system. • Justify the selection and design of the alternative energy system, providing information on cost and design factors. **Instructions and guidance to candidates** Your presentation should be submitted alongside a research document/script that highlights all references used. The presentation may include graphics and charts etc. You must ensure that you include 'credits' section (ideally at the end of the presentation), that provides credits for any material sourced from others. Your Downloadable PDF Case Study should be formatted as an A4 document, including any references. ***Note***: All information sources and resources, including websites used to complete this assignment must be stated and correctly referenced in the document and/or presentation. No credit will be given for wholesale copying from information sources and checks for plagiarism may be made on your submitted work.

Pass	Merit	Distinction
LO1 Examine the different contexts that inform discussions on environmental sustainability		
P1 Discuss the relationship between different forms of sustainability. **P2** Describe the ways that the construction industry impacts on the environment.	**M1** Assess the political context for sustainability and how the construction industry may contribute to achieving local/regional/global targets.	**D1** Evaluate how different forms of alternative energy systems contribute to achieving a more sustainable construction industry.
LO2 Discuss types of alternative energy systems and how they support sustainability		
P3 Explore the different types of energy systems available and their role in sustainable solutions. **P4** Describe advances in renewable energy technology.	**M2** Assess the impact of advances in renewable energy to improve efficiency, performance and sustainability.	
LO3 Explain the factors that inform the selection of a renewable energy system in relation to a specific installation		
P5 Review an existing renewable energy installation for a non-domestic building. **P6** Explain the factors that inform the choice of selected system for the given installation.	**M3** Analyse how a different renewable energy system would impact on the given project.	**D2** Evaluate how an alternative energy strategy meets client needs and addresses environmental, political and social factors.
LO4 Present a strategy for a cost-effective upgrade to an existing building, utilising an appropriate form of alternative energy		
P7 Select an appropriate renewable energy system for an existing building. **P8** Present a strategy for an existing building to integrate a form of alternative energy.	**M4** Justify design decisions based on external, cost and design factors.	

APPENDIX A: DESCRIPTOR FOR A HIGHER EDUCATION QUALIFICATION:

AT LEVEL 4

The descriptor provided for this level is for any Certificate of Higher Education which should meet the descriptor in full. This qualification descriptor can also be used as a reference point for other level 4 qualifications (adapted from the Framework for Higher Education Qualifications).

LEVEL 4 IS ACHIEVED BY STUDENTS WHO HAVE DEMONSTRATED:

- Knowledge of the underlying concepts and principles associated with their area(s) of study, and an ability to evaluate and interpret these within the context of that area of study.
- an ability to present, evaluate and interpret qualitative and quantitative data, in order to develop lines of argument and make sound judgements in accordance with basic theories and concepts of their subject(s) of study.

STUDENTS WHO ACHIEVE AT LEVEL 4 WILL BE ABLE TO:

- Evaluate the appropriateness of different approaches to solving problems related to their area(s) of study and/or work.
- Communicate the results of their study/work accurately and reliably, and with structured and coherent arguments
- Undertake further training and develop new skills within a structured and managed environment.

STUDENTS WHO ACHIEVE AT LEVEL 4 WILL HAVE:

- The qualities and transferable skills necessary for employment requiring the exercise of some personal responsibility.
- Students who achieve at Level 4 will have a sound knowledge of the basic concepts of a subject, and will have learned how to take different approaches to solving problems.
- They will be able to communicate accurately and will have the qualities needed for employment requiring the exercise of some personal responsibility.
- Students who achieve at Level 4 should have the ability to progress to Level 5 study

GENERIC ASSESSMENT CRITERIA AT LEVEL 4

The criteria set out in this handbook are in accordance with the requirements of Level 4 study at Truro & Penwith College. Students successfully completing their course of study at Level 4 should have **knowledge of the underlying concepts and principles in relation to their areas of study, and an ability to evaluate and interpret these within context.**

Students should also display the ability to **present, evaluate, and interpret data in order to develop coherent argument and make sound judgements in accordance with theories and concepts of their subject of study.**

APPENDIX C: ASSESSMENT GUIDANCE

Pearson HN Assessment Process

The assessment of Pearson HN students on RQF courses at University Centre Truro & Penwith aligns with the guidelines applied to students at T&PC who are studying UoP programmes enabling the Centre to follow a standard procedure to avoid confusion and demonstrate a fair and equitable process for all HE students.

INTERNAL VERIFICATION & MODERATION

Internal Verification (of Assignment Briefs)

All assignment briefs, are internally verified every year, prior to release to the students. The process will follow that outlined in the Guide to Higher National Centre Guide to Quality Assurance and Assessment 2019-20 p66.

Internal Verification (of Assessment decisions) also referred to as Moderation

Verification of the grades awarded to a sample of work from each assessment will be undertaken during the year, prior to the return of any grade to the student cohort. This will mirror the existing Moderation process followed internally on other HE programmes with a pass, merit and distinction level assignment sampled (when possible) plus at least 10% of the assignments or a total of 10 whichever is the larger.

MITIGATING CIRCUMSTANCES

Students who have mitigating circumstances at the time of assessment that will lead to the late submission of an assignment will be able to self-certify (5 day extension) or provide evidence for decision by the Mitigating Circumstances (MC) Panel. The MC Panel comprises staff who sit or have sat on the colleges Extenuating Circumstances (EC) panel. The same criteria and information will apply to the MC process as the existing EC process. *The college will normally operate a standard EC/MC policy and students will be able to use an online submission form to apply. In the light of external circumstances that impact students and the college (such as the Covid 19 pandemic) changes to EC/MC will be applied to ensure fairness across all programmes unless guidance from different awarding bodies diverges in which case students will be made aware of the differences.*

If you need to claim extenuating circumstances claim email heenquiry@truro-penwith.ac.uk

GRADING OF HIGHER NATIONAL UNITS

The grading of BTEC Higher National qualifications is at the unit and the qualification level Each successfully completed unit will be graded as a Pass, Merit or Distinction.

• A Pass is awarded for the achievement of all outcomes against the specified assessment criteria

• Merit and Distinction grades are awarded for higher level achievement.

For Higher National (RQF) qualifications, Pearson has produced specific Merit and Distinction criteria that are linked to every Pass criterion.

Grading Higher National units (RQF)

• To achieve a Pass, a student must have satisfied all the Pass criteria for the learning outcomes, showing coverage of the unit content and therefore attainment at Level 4 or 5 of the national framework.

• To achieve a Merit, a student must have satisfied all the Merit criteria (and the Pass criteria) through high performance in each learning outcome.

• To achieve a Distinction, a student must have satisfied all the Distinction criteria (and the Pass and Merit criteria), and these define outstanding performance across the unit as a whole.

The award of a Pass is a defined level of performance and cannot be given solely on the basis of a student completing assignments. Students who do not satisfy the Pass criteria should be reported as Unclassified.

LATE SUBMISSION OF WORK

If work is submitted late without evidence of MC (above) a student will have the work graded 'without penalty' with the late submission recorded. The student will be made aware at the return of the graded work that the assignment grade will be capped at pass level. Should there be subsequent evidence of Mitigating circumstances submitted, the MC panel will decide and advise the Award Assessment Board of whether the MC are considered valid. The final decision on whether late work will be capped will be taken at the Award Assessment Board. To conform with HE practice at T&PC, if a student identifies prior Mitigating Circumstances that lead to the non-submission of work linked to a unit, the evidence will be presented to the Award Assessment Board and, if accepted at the board, there will be an opportunity for the student to repeat that work as a resubmission, over the summer, without a cap at pass level (following the guidance on resubmission below).

RESUBMISSION OF WORK

A student is allowed one resubmission of work if a pass level is not achieved on first submission. Students will normally be given the same assignment to repeat as a resubmission over the summer period so as to not impact on the remainder of their work during the academic year. A reassessment will result in the unit being capped at Pass level.

If the Programme Leader or Assessment Board does authorise a resubmission, the following conditions apply:

• The resubmission must be recorded in the relevant assessment documentation

• The student must be given a clear and realistic deadline for resubmission that is consistent across all students granted a resubmission (within 15 working days of the student being notified that a resubmission has been authorised during term time).

• The resubmission must be undertaken by the student with no further guidance

• Only one opportunity for reassessment of each assessment criterion and Merit and Distinction descriptor (QCF only) will be permitted

• The original evidence submitted for the assessment can remain valid and be extended, or may need to be replaced partially or in full

• Arrangements should be made for resubmitting the assessment in such a way that does not adversely affect other assessments and does not give the student an unfair advantage over others.

The decision of whether to allow substantial resubmission work will be made at the Award Assessment Board and will consider the number of overall resubmissions for an individual and the likelihood of their being able to complete the work in the allocated time (normally 15 days from resubmission). The work will normally be a repeat of the original submission but if the Subject Panel feels that resubmission work could create an environment where a student may gain an advantage over others, a new assessment may be set.

Resubmission work will be reviewed by a Resubmission Award Board (normally in September/October)

REPEATING A UNIT

If a student has failed to achieve a pass for any unit following a resubmission opportunity, they may be provided with an opportunity to Repeat the Unit. The students must repeat with full attendance and (if required) payment of the Unit fee. The overall grade for the unit is capped at pass. A student will only have one opportunity to Repeat a unit.

The following applies to a student who, for the first assessment opportunity and resubmission opportunity, still failed to achieve a Pass for that unit specification:

• At the centre's discretion and Assessment Board, decisions can be permitted to repeat a unit

• The student must study the unit again with full attendance and (if required) payment of the unit fee

• The overall unit grade for a successfully completed repeat unit is capped at a Pass for that unit

• Units can only be repeated once.

A student who, for the first assessment opportunity within a repeated unit, has failed to achieve a Pass for that unit specification shall be expected to undertake a reassessment. This reassessment will be subject to the standard RQF resubmission rules and regulations as stated above.

If a student repeats an RQF unit and still does not achieve a Pass in neither their first submission nor resubmission, they will be required to either complete a different unit in full or take the unit as compensation following guidance form the Programme Lead and HE PTL.

HIGHER NATIONAL AWARD ASSESSENT BOARD

The Award Assessment Board will consist of the HE Programme team lead (Chair), the Programme Lead and Unit leads on the programme. The Award Assessment Board for each course will review the anonymised grades for each module and reflect on the number of passes, merits and distinctions awarded, any assessment issues that apply to any module, comments from internal verifiers and from the external examiner and will consider the distribution of grades awarded on every module with regard to other modules on the course to ensure parity of assessment and grading is in place. The Unit grades are then agreed and taken forward to the second part of the Award Assessment Board.

The Board will consider the overall grades for each student and determine whether resubmission is appropriate and whether capping for late submission should be upheld. Decisions on whether a student has to repeat a unit will also be taken at the Board or the Resubmission Board.

COMPENSATION

Compensation provisions for the HNC

Students can still be awarded an HNC if they have not achieved a Pass in one of the 15 credit units completed but have completed and passed the remaining units.

Compensation provisions for HND

Students can still be awarded an HND if they have attempted but not achieved a Pass in one of the 15 credit units completed at Level 4 and similarly if they have attempted but not achieved one of the 15 credit units at Level 5. However, they must complete and pass the remaining units for an HNC or HND as per the unit rules of combination of the required qualification.

APPEALS

If a student wishes to appeal their grade they can do so using the College appeals procedure or may choose to follow the College complaints procedure depending on the nature of the issue they want to raise. Appeals may be made against decisions regarding such matters as:

• Access to a programme of study
• Assessment gradings • Interpretation of performance criteria
• Payment of fees
• Operation of the Equality of Opportunity policy
• Non-completion of course/elements
• Non-accreditation of previous units/achievement
• Complete withdrawal from a course

Where a learner is dissatisfied with the assessment of their work, an informal appeals procedure is available.

(i) The learner should, in the first instance, ask the member of staff who has assessed the work for an explanation of why it has been graded in the way that it has.

(ii) If the learner is still unhappy, and wishes to challenge the grading, they may ask the appropriate Programme Leader to assess the work in question and moderate the grade.

(iii) Where the work in question was first marked by the Programme Leader, the moderation will be done by another member of the Programme Team. Alternatively, or where a learner feels that there is still a case to answer, they may invoke the College HE Appeals Procedure,

Students have a final right of appeal to Pearson, but only if the procedures in place at the centre have been fully utilised or if the student is dissatisfied with the outcome. Further details are given in the Enquiries and appeals about Pearson vocational qualifications policy. If students are not satisfied with the result of their appeal after following their centre's processes, they can also request that the Office of the Independent Adjudicator (OIA) review their complaint. The OIA will not deal with complaints about academic judgment but will look at academic appeals. Centres can check if they are a member of the OIA scheme in the list of providers covered in the OIA scheme. Following the OIA process does not prevent students from pursuing a complaint or appeal with Pearson and they may choose whichever route(s) they feel is the most appropriate.

MALPRACTICE AND ACADENIC OFFENCES

This section should be read alongside the T&PC Malpractice and Maladministration Policy 2021.

Malpractice is any act, omission or practice that breaches Pearson's rules or compromises:

- the process of internal and external assessments
- the integrity of Pearson qualifications
- the validity of results or qualifications
- the reputation and credibility of Pearson or of Truro & Penwith College.

The rules for Pearson Qualifications include regulations agreed with other awarding organisations through the Joint Council for Qualifications (JCQ), published policies and requirements set out in our qualification specifications.

Malpractice includes maladministration, which is any act, omission or practice that results in a school, college, learning provider or learner failing to comply with the Pearson administrative regulations and requirements. Malpractice and maladministration can be deliberate or the result of negligence.

Examples of learner malpractice / Academic Offences include:

- Altering or falsifying results documents, including certificates
- Copying from another learner or allowing work to be copied
- Plagiarism of any nature
- Bringing unauthorised material or instruments into an examination room or assessment
- Failure to abide by the instructions of an invigilator or supervisor
- Making inappropriate or offensive written comments in an examination or test
- Collusion - unauthorised collaboration of students (or others) in producing a submitted assessment. The offence of collusion occurs if a student copies any part of another student's work, or allows their own work to be copied. Collusion also occurs if other people contribute significantly to work that a student submits as their own
- Contract cheating, often called 'ghost writing', which occurs when another person or people are commissioned or otherwise engaged to undertake an assessment, totally or in part, and the assessment is submitted as the student's own work
- Misrepresenting or fabricating the outcomes and results of research, investigations, or experiments
- Making false declarations in an attempt to obtain special consideration in assessment. Examples include falsely claiming a need for modified assessment provision or making false extenuating circumstances claims.
- he inclusion in an assessment (other than an examination or test) of material which is identical or substantially similar to material which has already been submitted for any other assessment
- Persuading or attempting to persuade another member of the College to participate, in any way, in actions which would be in breach of these regulations

Examples of staff malpractice at a Pearson approved school, college or learning provider include:

- Providing Pearson with incorrect information during the centre or qualification approval process
- Failing to register genuine learners or registering learners who do not exist with the intention of financial gain
- Falsifying or fabricating learners' marks, assessment evidence, observation records, certification claims or results documentation
- Providing assistance to learners, beyond that which is permitted by the specification, which results in a potential or actual advantage in an examination or assessment
- Breaching the confidentiality of question papers, materials or learners' scripts

- Failing to report any instances of malpractice or suspected malpractice

Cases of alleged academic offence / malpractice by a student will follow the 2 stage procedure identified in the T&PC Policy:

- An initial counselling stage
- An investigation and report

RECOGNITION OF PRIOR LEARNING

RPL is about using a learner's evidence of earlier learning and achievement towards part of a qualification.

An assessor reviews whether the evidence is enough to show that a learner has met the assessment requirements for a current qualification. The learner needs to show that through knowledge, understanding or skills they already have, they do not need to complete a unit or complete extra assessment activity

If there is evidence that the learner has previously shown the knowledge, skills or understanding required by a qualification, this may be used towards achieving that qualification. The evidence must be:

- •valid;
- •current;
- •reliable;
- •authentic and
- •sufficient.

RPL is not normally used to provide evidence against achievement for an entire qualification. Further gudiance is available within our RPL policy.

CALCULATION OF AWARDED GRADE

Conditions for the award of the HNC

To achieve a Pearson BTEC Higher National Certificate qualification, a student must have:

• Completed units equivalent to 120 credits at Level 4

• Achieved at least a pass in 105 credits at Level 4.

Conditions for the award of the HND

To achieve a Pearson BTEC Higher National Diploma qualification, a student must have:

• Completed units equivalent to 120 credits at Level 5

• Achieved at least a pass in 105 credits at Level 5

• Completed units equivalent to 120 credits at Level 4

• Achieved at least a pass in 105 credits at Level 4.

Calculation of the overall qualification grade

The calculation of the overall qualification grade is based on the student's performance in all units. Students are awarded a Pass, Merit or Distinction qualification grade using the points gained through all 120 credits, at Level 4 for the HNC or Level 5 for the HND, based on unit achievement.

The overall qualification grade is calculated in the same way for the HNC and for the HND. All units in valid combination must have been attempted for each qualification. The conditions of award and the compensation provisions will apply as outlined above.

All 120 credits count in calculating the grade (at each level, as applicable). The overall qualification grade for the HND will be calculated based on student performance in Level 5 units only.

Units that have been attempted but not achieved, and subsequently granted compensation, will appear as 'Unclassified'; i.e. a 'U' grade, on the student's Notification of Performance, that is issued with the student certificate.

	Points per credit
Pass	4
Merit	6
Distinction	8

	Point boundaries
Pass	420 – 599
Merit	600 – 839
Distinction	840 +

REASONABLE ADJUSTMENT OF ASSESSMENT

We will support access to our vocational qualifications for learners who are eligible for reasonable adjustment and/or special consideration in assessments, without compromising the assessment of the skills, knowledge, understanding or competence being measured.

Reasonable adjustment should be put in place **before** the learner **starts** the **assessment**. You should identify whether any action is needed to help reduce the effect of a disability or difficulty, which will place a learner at a substantial disadvantage in the assessment. Reasonable adjustments must not, however, affect the reliability1 or validity2 of assessment outcomes or give a learner an advantage over other learners undertaking the same or similar assessments.

Reasonable adjustment must not affect the validity or reliability of assessment, influence the outcome of assessment or give the learner(s) an unfair assessment advantage, but may involve:

- Changing usual assessment arrangements.
- Adapting assessment materials.

- Providing assistance during assessment.
- Re-organising the assessment physical environment.
- Changing or adapting the assessment method.
- Alternative ways of presenting responses.
- Using assistive technology.

Any reasonable adjustment is recorded using the RA1 form, and stored with the learner records for three years.