MODULE SPECIFICATION

Part 1: Information			
Module Title	Engineering Principles (Building Engineering)		
Module Code	UBLLWQ-15-1	Level	Level 4
For implementation from	2020-21		
UWE Credit Rating	15	ECTS Credit Rating	7.5
Faculty	Faculty of Environment & Technology	Field	Architecture and the Built Environment
Department	FET Dept of Architecture & Built Environ		
Module Type:	Standard		
Pre-requisites	None		
Excluded Combinations	None		
Co-requisites	None		
Module Entry Requirements	None		
PSRB Requirements	None		

Part 2: Description

Educational Aims: See Learning Outcomes

Outline Syllabus: Underpinning Physics:
Force, energy, work and power.

Thermodynamics and Fluids:
Thermodynamic laws, reversible processes, steady flow energy equation, gas laws, pressure in static fluids, atmospheric pressure, Bernoulli's equation, flow measurement device

Statics and Dynamics:
Forces, moments and centre of gravity, equilibrium and reactions in statically determinate structures

Bending moment and shear force diagrams. Truss analysis, Axial stress and strain

Kinematics, projectiles, angular motion, Newton's laws of motion, and vibration

Teaching and Learning Methods: Typically the scheduled teaching hours take the form of whole group lectures, workshops, laboratories and tutorials

Contact time: 36 hours
Assimilation and development of knowledge: 74 hours
Examination and assessment preparation: 40 hours
TOTAL: 150 HOURS

Scheduled learning: Lectures, seminars, tutorials, and laboratory demonstrations.

Independent learning: Directed reading, and laboratory work.

Part 3: Assessment

Component A: The Component A mark is calculated by averaging the marks of four e-tests. The four e-tests are taken outside the class throughout the year after each of the main topics are completed (times may vary). Students have three attempts at each test with the highest scoring attempt recorded as their test score.

First Sit Components	**Final Assessment**	**Element weighting**	**Description**
Online Assignment - Component A		100 %	Average mark of four e-tests taken throughout module
Resit Components	**Final Assessment**	**Element weighting**	**Description**
Online Assignment - Component A		100 %	Average mark of four e-tests taken throughout module

Part 4: Teaching and Learning Methods

Learning Outcomes

On successful completion of this module students will achieve the following learning outcomes:

Module Learning Outcomes	**Reference**
Manipulate units and expressions defining physical properties	MO1
State and apply physical laws relating to statics and dynamics to the solution of engineering problems	MO2
State and apply physical laws relating to thermodynamics and fluids to the solution of engineering problems	MO3
Communicate in written form the relationship between underlying physical laws and engineering principles	MO4
Apply experimental method to laboratory demonstrations of engineering principles	MO5

Contact Hours

Independent Study Hours:

Independent study/self-guided study	114
Total Independent Study Hours:	114

	Scheduled Learning and Teaching Hours:	
	Face-to-face learning	36
	Total Scheduled Learning and Teaching Hours:	36
	Hours to be allocated	150
	Allocated Hours	150
Reading List	*The reading list for this module can be accessed via the following link:* https://uwe.rl.talis.com/modules/ubllwq-15-1.html	

Part 5: Contributes Towards
This module contributes towards the following programmes of study: Building Services Engineering [Sep][FT][Frenchay][3yrs] BEng (Hons) 2020-21 Building Services Engineering {Apprenticeship} [Sep][PT][Frenchay][5yrs] BEng (Hons) 2019-20 Architecture and Environmental Engineering {Foundation} [Sep][SW][Frenchay][6yrs] BEng (Hons) 2019-20 Architecture and Environmental Engineering {Foundation} [Sep][FT][Frenchay][5yrs] BEng (Hons) 2019-20