

Module Details	
Module Title	Design, Build and Test (Chemical)
Module Code	CPE4001-B
Academic Year	2021/2
Credits	20
School	Department of Chemical Engineering
FHEQ Level	FHEQ Level 4

Contact Hours	
Type	Hours
Lectures	12
Seminars	18
Practical Classes or Workshops	17
Online Tutorials (Synchronous)	12
Directed Study	141

Availability	
Occurrence	Location / Period
BDA	University of Bradford / Academic Year

Module Aims
(1) To develop problem-solving skills through applied project work. (2) To develop team working in both discipline specific and interdisciplinary, time management and communication skills. (3) To introduce experimental techniques in engineering and technology. (4) To develop understanding of professionalism, engineering ethics and sustainability.

Outline Syllabus
<p>Students will study topics directly relevant to the three projects and include Material Balances with and without Reactions and with Recoveries; Energy Balances and Phase Equilibria. Students will also study Dimensions and Units pertinent to Chemical Engineering.</p> <p>In addition, the module establishes professional skills with supplementary online lectures/workshops on: Sketching, Health and Safety, Project Management, Time Management, Team Building, Financial Management, sustainability, Engineering Ethics, Presentation skills and Technical Report Writing including searching for and referencing information</p>

Learning Outcomes	
Outcome Number	Description
01	Explain the design process as applied to simple engineering systems, critique a solution and recognise opportunities for design improvements
02	Analyse the role of health and safety, professional conduct and engineering ethics in the design and development of an engineering product
03	Apply knowledge of the principles of sustainability on the basic design methods for the analysis and solution of simple engineering problems
04	Effectively utilise appropriate laboratory equipment, computer software and instrumentation in order to accomplish the objectives of a project in a safe working environment
05	Participate effectively in the operation of a team and collaborate effectively with members of the team.
06	Deliver a paper or presentation that succeeds in communicating effectively with members of the team.
07	Analyse data using appropriate tools and techniques

Learning, Teaching and Assessment Strategy
N/A

Mode of Assessment			
Type	Method	Description	Weighting
Summative	Examination - practical/laboratory	Project 1 (20M ins)	20%
Summative	Examination - practical/laboratory	Project 2 (20 Mins)	40%
Summative	Examination - practical/laboratory	Project 3 (20 Mins)	40%
Referral	Coursework	Evaluative Report on projects (including personal reflection) (3500 words)	100%

Reading List
To access the reading list for this module, please visit https://bradford.rl.talis.com/index.html

Please note:

This module descriptor has been published in advance of the academic year to which it applies. Every effort has been made to ensure that the information is accurate at the time of publication, but minor changes may occur given the interval between publishing and commencement of teaching. Upon commencement of the module, students will receive a handbook with further detail about the module and any changes will be discussed and/or communicated at this point.

