

Module Details	
Module Title	Information and Communications Technologies
Module Code	ENB3001-B
Academic Year	2021/2
Credits	20
School	Department of Mechanical and Energy Systems Engineering
FHEQ Level	RQF Level 3

Contact Hours	
Type	Hours
Lectures	72
Directed Study	128

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

Module Aims
To provide students with an appreciation of the breadth of the engineering profession and develop skills to successfully deploy the techniques and technologies used to generate and communicate engineering knowledge to a range of audiences.

Outline Syllabus
<p>Information technologies for engineers, Software Applications for Engineers. Information systems and environments, knowledge in the use of engineering spreadsheets (data entry, complex formulas, creating and interpreting graphs, performing analysis and problem solving).</p> <p>Communication Techniques and professional skills, Reading Skills: Effective reading, note taking, library search and referencing, Oral Communications: Group communications, presenting information using notes and visual aids.</p> <p>Personal Study Skills: Time management, examination techniques, planning your career, evaluation, prioritising and decision making</p> <p>Written Communications: Technical report writing, essay writing, plagiarism.</p> <p>Inter-personal Skills: Team work, leadership, networking, problem solving.</p> <p>The Engineering Profession: The engineering profession, engineering disciplines, Keynote lectures on: Civil, Mechanical, Medical, Chemical engineering, Placement and student opportunities</p>

Learning Outcomes	
Outcome Number	Description
01	Be proficient in the use of engineering tools and technologies. Describe of the key skills required for successful communication. Describe the range of activities commonly encountered in the engineering profession.
02	Use information and communication techniques practiced by engineers.
03	IT skills, systematic problem solving, communication, teamwork, leadership, and personal management. Strengthen your skills in numerical problem solving, file/data management, data presentation, and data analysis.

Learning, Teaching and Assessment Strategy
<p>Concepts, theories and principles explored in formal lectures, practiced in tutorials and demonstrated in laboratory classes. Practical skills developed in laboratory sessions. Cognitive and personal skills developed in problem solving exercises.</p> <p>There are a number of assessments designed to assess learning outcomes 1-3. Specifically the Academic Referencing assesses the library sessions relating to understanding how to correctly source and cite engineering material. (LO1) The Technical Group Presentation is designed to strengthen time management and develop effective working in groups and improve communication techniques. (LO3) The Computer Based Assessments EWP, Excel 1 & 2 focus on developing digital literacy and individually assess the student's proficiency in the use of the tools and technologies. (LO1, LO3) Finally the Reflective Essay is designed to assess written reflective communication related to the student's future career options as a result of guest lecture series. (LO1, LO3)</p>

Mode of Assessment			
Type	Method	Description	Weighting
Summative	Coursework	Submission of powerpoint slides with annotation	15%
Summative	Coursework	Discipline Reflection essay	10%
Summative	Computer-based assessment	Online Assessment: Academic Referencing	10%
Summative	Examination - Open Book	3 Computer Assessments: EWP (1 hr for 10%); Excel 1 (1hr for 20%); Excel 2 (1.5hrs for 35%)	65%

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.

