UNIVERSITY of BRADFORD

Module Descriptor

Module Details	
Module Title	Foundation Mathematics
Module Code	BIC3003-A
Academic Year	2022/3
Credits	10
School	UoB International College
FHEQ Level	RQF Level 3

Contact Hours	
Type	Hours
Directed Study	50
Lectures	50

Availability	
Occurrence	Location / Period
BDA	University of Bradford / Semester 1
BDA	University of Bradford / Semester 2

Module Aims

This module is the first of two that aims to ensure that students have the mathematical skills and knowledge to cope with the mathematical content of their degree course.
In this first module, students will be able to check that they can remember the maths that they did at school and ensure that they can identify the terminology in English for the different types of calculations in mathematics. This will help students to prepare for the module in term two in which they will need to apply their knowledge and skills to more complex problems they will encounter in their specialist subject area, whether that is business, computing, science or engineering.

Outline Syllabus

Numbers, decimals, averages, percentages, ratios, fractions, approximations.

Formulae ? for calculating areas, circumferences, statistical formulae.

Diagrammatic representations: charts; graphs; frequency diagrams, use of computer packages.

Algebra - Identities. Equations and inequality. Quadratic equations, quadratic functions. Polynomials, remainder theorem, the principle of undetermined coefficients. Binomial theorem for positive integers. Rational functions. Simultaneous equations (at least one linear). Curve sketching. Indices and logarithms. Arithmetic and geometric series.

Statistical measures - mean, mode, median, quartiles, interquartile ranges Set Theory and Probability: Algebra of sets, Venn diagrams. Permutations. Relative frequency and probability. Samples. Mutual exclusivity. Laws of probability.

Learning Outcomes

Outcome Number	Description
1	Demonstrate the ability to use appropriate techniques to solve a range of mathematical problems.
2	Present and interpret data in charts and graphs.
3	Demonstrate the use of a range of basic statistical measures.
4	Apply the skills and knowledge learnt to systematic problem-solving processes.

Learning, Teaching and Assessment Strategy

This module will present concepts, principles & practical calculations and enable students to practise these in tutorials and small classes, involving a high degree of interactivity between students.

An interim summative classroom test will assess the student's ability to use appropriate techniques to solve a range of mathematical problems and be able to present and interpret data in charts and graphs (LO1, LO2). A formal examination at the end of the course will assess to demonstrate and apply appropriate mathematical techniques (LO1, LO3, LO4).
Throughout the course, formative assessments will be set and marked to provide a high level of detailed and helpful feedback to the students and cognitive and personal skills will be developed by problem-solving exercises.

Mode of Assessment

Type	Method	Description	Weighting
Summative	Classroom test	Midterm test of students' ability to solve a range of mathematical problems and present/interpret data in charts, graphs	30%
Summative	Examination - Closed Book	Unseen end of term examination to demonstrate and apply appropriate mathematical techniques	70%

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.

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