Module Specification

Managing Numerical Data

Version: 2023-24, v2.0, 21 Jul 2023

Contents

Part 1: Information

Module title: Managing Numerical Data

Module code: UZYRGT-15-0

Level: Level 3

For implementation from: 2023-24

UWE credit rating: 15

ECTS credit rating: 7.5

Faculty: Faculty of Health & Applied Sciences

Department: HAS School of Health and Social Wellbeing

Partner institutions: None

Field: Allied Health Professions

Module type: Module

Pre-requisites: None

Excluded combinations: None

Co-requisites: None

Continuing professional development: No

Professional, statutory or regulatory body requirements: None

Part 2: Description

Overview: Not applicable

Features: Not applicable

Educational aims: See Learning Outcomes.

Outline syllabus: Number:

Calculations including ratio, percentages, decimals and fractions

The results of calculations

Place value and round numbers to a stated accuracy

Appropriate levels of accuracy to express an answer

Metric and imperial system of units

Numerical values into simple formulae

Addition, subtraction, multiplication and division using algebraic terms

Graphs:

Interpret and sketch graphs

Handling Data:

Organise discrete and continuous data into groups and classifications

Methods of data collection and bias

Charts and graphs, e.g. bar charts, pie charts, line graphs, scatter graphs and cumulative frequency graphs

Charts and graphs, explaining the main features of the data represented

Mean, median and mode from lists, ungrouped and grouped frequency tables

Range and interquartile range

Probability of a single event and two events occurring

Probability and relative frequency of an event occurring

Shape, Space and Measures:

Triangles, quadrilaterals and other polygons

3D shapes and recognise simple nets

Angles in 2D shapes and deduce size using e.g. angles in a straight line, angles around a point and opposite, alternate and corresponding angles

Perimeters, areas, surface areas and volumes of simple shapes and solids

Scale drawings and calculate measurements using similar shapes

Reflections, translations, enlargements and rotations

Pythagoras' theorem and sin, cos, tan in right-angled triangles

Cosine and sine rule in non-right angled triangles

Further Algebra:

Simple linear equations

Change the subject of a formula

Simplify expressions including using factorisation and the rules of indices

Graphs of algebraic functions

Formula $y = mx + c$ to calculate the values of m and c from a graph or table of data

Simultaneous equations containing two variables

Quadratic equations of the form $x^2 + ax + b = 0$

Algebraic equations using a 'trial and improvement' method

Part 3: Teaching and learning methods

Teaching and learning methods: Contact time for the module is 100 hours.

This subject requires intensive coaching for some students often in one to one or small group situations.

A variety of Learning and Teaching methods will be used which may include face to face and online:
lectures, seminars, workshops and formative mock papers and feedback.

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

MO1 Demonstrate an understanding of mathematical language and representation

MO2 Demonstrate an understanding of Geometry, Trigonometry and Algebra

MO3 Collect, organise, represent and interpret data

MO4 Interpret graphical information

MO5 Perform mathematical calculations and solve mathematical problems

MO6 Utilise and apply a range of mathematical techniques to solve problems

MO7 Organise and clearly present relevant information to suit purpose

MO8 Demonstrate and apply a range of numeracy skills accurately and appropriately

Hours to be allocated: 150

Contact hours:

Independent study/self-guided study = 50 hours

Face-to-face learning = 100 hours

Total = 150

Reading list: The reading list for this module can be accessed at readinglists.uwe.ac.uk via the following link https://uwe.rl.talis.com/index.html

Part 4: Assessment

Assessment strategy: Assessment Task 1: 1 x 1.5 hour exam

Assessment Task 2: 1 x 1.5 hour exam

This is informed by evidence from GCSE mathematics (this is the level taught on this programme) which indicates that 'coursework' does not fully assess mathematical skills and does not represent a fair reflection of students' ability in this subject. Two 1.5 hour exams allow functional skills assessment in the form of evidence of mathematical development and application.

Regular formative assessment will take place throughout the module delivery to enable students to gauge their progress and learning to date.

Assessment tasks:

Examination (First Sit)
Description: Exam (1.5 hour)
Weighting: 50 %
Final assessment: No
Group work: No
Learning outcomes tested: MO1, MO2, MO3, MO4, MO5, MO6, MO7, MO8

Examination (First Sit)

Description: Exam (1.5 hour)

Weighting: 50 %

Final assessment: Yes

Group work: No

Learning outcomes tested: MO3, MO4, MO5, MO6, MO7

Examination (Resit)

Description: Exam (1.5 hour)

Weighting: 50 %

Final assessment: No

Group work: No

Learning outcomes tested: MO1, MO2, MO3, MO4, MO5, MO6, MO7, MO8

Examination (Resit)

Description: Exam (1.5 hour)

Weighting: 50 %

Final assessment: Yes

Group work: No

Learning outcomes tested: MO3, MO4, MO5, MO6, MO7

Part 5: Contributes towards

This module contributes towards the following programmes of study:

Health Professions [COBC] Found 2023-24