Foundation Mathematics

Course Description

Foundation Mathematics provide for the continuing mathematical development of students with respect to problems encountered in practical contexts in everyday life at home, in the community, at work and in study. In undertaking these units, students are expected to be able to apply techniques, routines and processes involving integer, rational and real arithmetic, sets, lists and tables, contemporary data displays, diagrams, plans, geometric objects and constructions, algorithms, measures, equations and graphs, with and without the use of technology. They should have facility with relevant mental and by-hand approaches to estimation and computation.

Course structure

Unit 1 and 2

Area of Study 1 – Algebra, number and structure

In this area of study students cover estimation, and the use and application of different forms of number and related calculations, including formulas and other symbolic expressions, in practical, everyday and routine work contexts.

Area of Study 2 – Data analysis, probability and statistics

In this area of study students cover collection, presentation and analysis of gathered and provided data from community, work, recreation and media contexts, including consideration of suitable forms of representation and data summaries.

Area of Study 3 – Discrete mathematics: Financial and consumer mathematics

In this area of study students cover the use and interpretation of different forms of numbers and calculations, and their application in relation to the understanding and management of personal, local and national financial matters.

Area of Study 4 – Space and measurement

In this area of study students cover cover time, shape and location concepts, and the use and application of the metric system and related measurements in a variety of domestic, societal, industrial and commercial contexts.

Unit 3 and 4

Area of Study 1 – Algebra, number and structure

In this area of study students cover estimation, the use and application of different forms of numbers and calculations, algorithmic and computational thinking, and the representation of formal mathematical expressions and processes including formulas and other algebraic expressions to solve practical problems in community, business and industry contexts.

Area of Study 2 – Data analysis, probability and statistics

In this area of study students cover collection, presentation and analysis of gathered and provided data from community, work, recreation and media contexts, including consideration of suitable forms of representation and summaries. This area of study incorporates the ability to critically reflect on statistical data and results, and to be able to communicate and report on the outcomes and any implications.

Area of Study 3 – Discrete mathematics: Financial and consumer mathematics

In this area of study students cover the use and interpretation of different forms of numbers and calculations, relationships and formulae, and their application in relation to the analysis of, and critical reflection on, personal, local, national and global financial, consumer and global matters.

Area of Study 4 – Space and measurement

In this area of study students cover the use and application of the metric system and related measurement in a variety of domestic, societal, industrial and commercial contexts, including consideration of accuracy, precision and error.

Entry and Recommendations

There are no prerequisites for entry to Unit 3; however, students must undertake Unit 3 prior to undertaking Unit 4.

Assessment

Satisfactory Completion

Demonstration of achievement of outcomes and satisfactory completion of a unit are determined by evidence gained through the assessment of a range of learning activities and tasks.

Level of Achievement

Unit 1 and 2

- Coursework
    - Assignments
    - Tests
    - Summary or review notes
    - Modelling tasks
    - Problem-solving tasks
    - Mathematical investigations
    - Examination

Unit 3 and 4

- Unit 3 School-assessed Coursework (40 %)
    - Mathematical Investigation 1
    - Mathematical Investigation 2
- Unit 4 School-assessed Coursework (20%)
    - Mathematical Investigation 3
- Examination (40%)