MATH 0006 MATHEMATICS 1 (WSTC PREP)

Credit Points 10

Legacy Code 700284

Coordinator Frank Gutierrez (https://directory.westernsydney.edu.au/search/name/Frank Gutierrez/)

Description This subject has been designed to enhance students' numeracy skills and their understanding of basic mathematical concepts taught in high school mathematics. The topics include arithmetic and algebra, elementary functions, and basic geometry and trigonometry. The subject will prepare students and help them follow more advanced topics in Mathematics 2, Mathematics for Engineers Preliminary and Mathematics for Engineers 1, as well as various other Engineering and ICT subjects.

School Western Sydney The College

Discipline Mathematics

Student Contribution Band HECS Band 1 10cp

Check your fees via the Fees (https://www.westernsydney.edu.au/currentstudents/current_students/fees/) page.

Level Undergraduate Level 0 Preparatory subject

Restrictions

Students must be enrolled at Western Sydney University, The College.

Assumed Knowledge

Mathematics Year 10 equivalent.

Learning Outcomes

On successful completion of this subject, students should be able to:

1. Perform operations and solve simple problems involving whole numbers, decimals, fractions and surds.
2. Apply algebraic rules and techniques to solve simple equations and manipulate formulas
3. Demonstrate conceptual understanding of a function, the domain and range, function graph, and the inverse function, and apply it to model and analyse relationships between quantities.
4. Relate functions (linear and quadratic) and the corresponding equations and apply the relationship to analyse engineering applications.
5. Apply the basic trigonometric ratios and Pythagoras fs theorem to solve problems involving. triangles.
6. Calculate areas and volumes.

Subject Content

1. Arithmetic (numbers, operations with numbers including whole numbers, fractions, decimal and percentages, properties of real numbers). Measurements and units, estimates, scientific notation and rounding, uncertainties.
2. Algebra (algebraic rules and techniques, equations and identities, working with formulas).
3. Functions (definition and notation, domain and range, graphs, the inverse function).
4. Linear and Quadratics functions and equations; linear systems of 2 equations.
5. Basic Geometry and Trigonometry (angles, triangles, Pythagoras?fs theorem, trigonometric ratios).
6. Areas and Volumes.
1. Arithmetic (numbers, operations with numbers including whole numbers, fractions, decimal and percentages, properties of real numbers). Measurements and units, estimates,

Assessment

The following table summarises the standard assessment tasks for this subject. Please note this is a guide only. Assessment tasks are regularly updated, where there is a difference your Learning Guide takes precedence.

Type	Length	Percent	Threshold	Individual/ Group Task	Mandatory
Numerical Problem Solving	1 hour	10	N	Individual	N
Report	400 words	20	N	Individual	N
Numerical Problem Solving	1.5 hours	30	N	Individual	N
Numerical Problem Solving	2 hours	40	N	Individual	N

Prescribed Texts

- None