MATH 0008 MATHEMATICS 2 (WSTC PREP)

Credit Points 10

Legacy Code 700146

Coordinator Zdenka Misanovic (https://directory.westernsydney.edu.au/search/name/Zdenka Misanovic/)

Description This unit has been specifically designed for students who need to refresh or upgrade their understanding of basic mathematical concepts taught in high school mathematics. The topics include basic arithmetic and algebra, elementary functions, geometry, trigonometry and coordinate geometry.

School Western Sydney The College

Discipline Mathematics

Student Contribution Band HECS Band 1 10cp

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

Level Undergraduate Level 0 Preparatory subject

Pre-requisite(s) Students enrolled in 7162 Diploma in Engineering Extended 7138 Diploma in Information and Communication Technology Extended - ICT 7139 Diploma in Information and Communication Technology Extended 7140 Diploma in Information and Communication Technology Extended – Information Systems and 7141 Diploma in Information and Communication Technology (Health Information Management) Extended must pass MATH 0006 Mathematics 1 prior ro enrolling in this unit

Equivalent Subjects MATH 0009 - Mathematics 2 (UWSC)

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. Select and apply a variety of algebraic techniques to solve equations and problems.
2. Solve geometric and trigonometric problems that involve two and three dimensional objects.
3. Use the concept of a function and the relationship between dependent and independent variables to solve a variety of problems both algebraically and graphically.
4. Use algebra to solve geometrical problems in Cartesian and polar coordinate systems.
5. Apply a variety of strategies to find mathematical models for problems involving exponential and logarithmic functions.
6. Demonstrate an ability to solve problems by identifying interrelationships between ideas from different areas of mathematics.
7. Interpret and communicate mathematical ideas in a clear and effective manner, using logical arguments and appropriate notation.

Subject Content

1. Basic arithmetic operations (with whole numbers, fractions and decimals, index numbers, units and measurements)
2. Basic algebra (terminology, simplifying algebraic expressions, expanding and factorising, working with algebraic fractions, solving linear and quadratic equations, substituting into formulae and changing the subject, simultaneous equations)
3. Functions (terminology and notation, domain and range, graphs of functions, composite functions, inverse functions, elementary functions (linear, quadratics, exponential and logarithmic.))
4. Geometry (angles, triangles, rectangles, circles, Pythagoras Theorem, areas and volumes)
5. Trigonometry (basic trigonometric ratios, exact ratios, complementary angles, angles of any magnitude, sine and cosine rule, trigonometric functions and their graphs)
6. Coordinate geometry (Cartesian coordinate system, distance between two points, equation of a straight line, gradient of a line, distance of a point from a line, loci, equation of a circle, polar coordinates, Pythagoras Theorem in 3D)

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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.

Item	Length	Percent	Threshold	Individual/ Group Task
Numerical Problem Solving	1 hour	10	N	Individual
Numerical Problem Solving	1 hour	25	N	Individual
Numerical Problem Solving	1 hour	25	N	Individual
End-of-session Exam	2 hours	40	N	Individual

Prescribed Texts

- Breach, M 2011, Fundamental Maths for Engineering and Science, Palgrave Macmillan

Teaching Periods

Term 1

Nirimba Education Precinct

Day

Subject Contact Zdenka Misanovic (https://directory.westernsydney.edu.au/search/name/Zdenka Misanovic/)

View timetable (https://classregistration.westernsydney.edu.au/even/timetable/?subject_code=MATH0008_22-T1_BL_D#subjects)

Penrith (Kingswood)

Day

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Parramatta City - George St

Day

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Term 2

Nirimba Education Precinct

Day

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Penrith (Kingswood)

Day

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Term 3

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