MATH 0017 MATHEMATICS FOR HEALTH SCIENCE (WSTC)

Credit Points 10

Legacy Code 900088

Coordinator Lyneene Orsini (https://directory.westernsydney.edu.au/search/name/Lyneene Orsini/)

Description This subject is designed to prepare you for further study at university level in the areas of Health Science and in particular, Nursing. Undergraduate study in Health Science places a particular emphasis on mathematical skills in the workplace and this subject provides a basis for developing those skills. The subject places equal emphasis on both theoretical and practical application of mathematical techniques as would apply in practice in the health environment.

School Western Sydney The College

Discipline Mathematical Sciences, Not Elsewhere Classified.

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

Equivalent Subjects None

Restrictions

This subject is only available to College students enrolled in the Undergraduate Preparation Programs.

Assumed Knowledge

Year 10 Mathematics or equivalent.

Learning Outcomes

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

1. Demonstrate an understanding of basic mathematical concepts (basic mathematical operations, fraction, percentages, ratios and measurements).
2. Apply different mathematical techniques to solve problems related to oral medication, with and without technological assistance.
3. Apply different mathematical techniques to solve problems related to parental and paediatric medicine, with and without technological assistance.
4. Apply different mathematical techniques to solve problems related in the areas of volume and rates, with and without technological assistance.
5. Interpret, analyse, and solve health-related problems in relation to specific patient case studies.

Subject Content

Module 1: Basic Mathematics
1.Basic mathematical operations with whole numbers, decimals and fractions.
2.Ratios and rates.
3.Percentages.
4.Metric system.
5.Graphs and data.
Module 2: Mathematical Calculations in Health Care
6.Oral Medication ? Dosage: tablets and mixtures.
7.IV Fluid Management ? rate of flow, drop factor, burettes, pumps.
8.Injections ? types, mixing solutions, calculating dosage.
9.Paediatrics ? determine body surface area, dosage by body weight, verifying safe dosages by comparison with recommendations.
10.Volumes/Rates ? calculating complex volumes using the metric system, oral, parenteral and intravenous medications.
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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.

Type	Length	Percent	Threshold	Individual/ Group Task	Mandatory
Quiz	30 minutes	10	N	Individual	N
Intra-session Exam	1 hour	30	N	Individual	N
Intra-session Exam	1 hour	30	N	Individual	N
Case Study	1 hour	30	N	Individual	N

Prescribed Texts

- Hext, V., Mayner, L., 2003, Practical Nursing Calculations , Allen and Unwin

Teaching Periods

Spring Block 3 (2025)
Campbelltown
On-site
Subject Contact Lyneene Orsini (https://directory.westernsydney.edu.au/search/name/Lyneene Orsini/)

View timetable (https://classregistration.westernsydney.edu.au/odd/timetable/?subject_code=MATH0017_25-SB3_CA_1#subjects)

Liverpool
On-site
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View timetable (https://classregistration.westernsydney.edu.au/odd/timetable/?subject_code=MATH0017_25-SB3_LP_1#subjects)