

MATH 1020 MATHEMATICS FOR ENGINEERS 2 (WSTC ASSOCD)

Credit Points 10

Legacy Code 700102

Coordinator Zdenka Misanovic ([https://directory.westernsydney.edu.au/search/name/Zdenka Misanovic/](https://directory.westernsydney.edu.au/search/name/Zdenka%20Misanovic/))

Description The content of this unit covers a number of topics that build on the student's calculus knowledge from Mathematics for Engineers 1. The subject matter includes: ordinary differential equations, Laplace transforms and multi-variable calculus. Offerings of alternate units are dependent on there being sufficient student enrolment numbers. If enrolments are low, the College may cancel delivery of the alternate unit.

School Eng, Design & Built Env

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 1 subject

Pre-requisite(s) MATH 1017

Equivalent Subjects MATH 1019 - Mathematics for Engineers 2 LGYB 0454 - Mathematics for Engineers 2 (WSTC)

Restrictions Students must be enrolled at Western Sydney University, The College in 7022 Associate Degree in Engineering

Learning Outcomes

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

1. Recognise and solve various types of first and second order differential equations and some higher order ordinary differential equations.
2. Set up a linear 2D system of differential equations and investigate its solution and the nature of its critical points.
3. Apply Laplace transforms in solving problems.
4. Use multivariable calculus techniques competently.
5. Evaluate multiple (double and triple) integrals.
6. Use mathematical reasoning to solve problems and communicate mathematical ideas using standard practices.

Subject Content

1. First Order Ordinary Differential Equations (O.D.E.) ? separable and linear equations and applicat

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
5 Online quizzes. Each minutes quiz is worth 3%	Approx. 30	15	N	Individual
Intra-session exam	90 minutes	25	N	Individual
4 Online quizzes each minutes quiz is worth 5%	Approx 30	20	N	Individual
End of Session exam (in parts). Part 1 Written Numerical Problem Solving Part 2: Viva Voce	Part 1: 2 hours +30 minutes for submission (20%) Part 2: Viva Voce 20 minutes per student (20%)	40	Y	Individual

Teaching Periods

Quarter 4

Nirimba Education Precinct

Composite

Subject Contact Zdenka Misanovic ([https://directory.westernsydney.edu.au/search/name/Zdenka Misanovic/](https://directory.westernsydney.edu.au/search/name/Zdenka%20Misanovic/))

View timetable (https://classregistration.westernsydney.edu.au/even/timetable/?subject_code=MATH1020_22-Q4_BL_C#subjects)