



Science

MATHS 102 : Functioning in Mathematics (15 POINTS)

Course Prescription

An introduction to calculus that builds mathematical skills and develops conceptual thinking. MATHS 102 works as a refresher course for those who haven't studied Mathematics for some time, a confidence builder for those lacking Mathematical confidence and a preparation course for further study in Mathematics.

Course Overview

This course is intended for students who wish to gain mathematical confidence and develop skills in algebraic manipulation, mathematical thinking, trigonometry and calculus. It works well as a refresher course, for students who haven't studied maths for a while, or a catch-up course for those who didn't complete, and/or didn't excel in high school mathematics. After successfully completing MATHS 102 students will be well prepared for further courses in mathematics, such as MATHS 108/110 and MATHS 162. Those not wishing to continue studying mathematics will find that the mathematical foundations laid in MATHS 102 will support their confidence and mathematical competence in whatever they choose to do.

Course Requirements

Restriction: MATHS 102 may not be taken concurrently with any other Mathematics course, except MATHS 190 and may not be taken after ENGSCI 111 or any Mathematics course at Stage I or above, except MATHS 190/190G

Capabilities Developed in this Course

- Capability 1: Disciplinary Knowledge and Practice
- Capability 2: Critical Thinking
- Capability 3: Solution Seeking
- Capability 4: Communication and Engagement
- Capability 5: Independence and Integrity
- Capability 6: Social and Environmental Responsibilities

Graduate Profile: [Bachelor of Science](#)

Learning Outcomes

By the end of this course, students will be able to:

1. Display mastery of the basic algebra concepts covered. (Capability 1, 2 and 4)
2. Solve problems involving functions and/or calculus. (Capability 1, 2, 3, 4 and 5)
3. Use mathematical notation logically and correctly. (Capability 1, 2 and 4)
4. Validate and defend the ideas and axioms underpinning the mathematics. (Capability 1, 2 and 5)
5. Evaluate personally, mathematics as a subject or area of study. (Capability 1, 2, 3, 4, 5 and 6)
6. Engage in group discussions and critical interactions. (Capability 3, 4 and 6)

Assessments

Assessment Type	Percentage	Classification
Quizzes	8%	Individual Coursework
Assignments	12%	Individual Coursework
Creative Work	4%	Individual Coursework
Tutorials	8%	Group & Individual Coursework
Semester Test	17%	Individual Coursework
Final Exam	51%	Individual Coursework
6 types	100%	

Assessment Type	Learning Outcome Addressed					
	1	2	3	4	5	6
Quizzes	✓	✓	✓			
Assignments	✓	✓	✓	✓	✓	✓
Creative Work					✓	
Tutorials	✓	✓	✓	✓		✓
Semester Test	✓	✓	✓	✓		
Final Exam	✓	✓	✓	✓		

Tuākana

Whanaungatanga and manaakitanga are fundamental principles of our Tuakana Mathematics programme which provides support for Maori and Pasifika students who are taking mathematics courses. The Tuakana Maths programme consists of workshops and drop-in times, and provides a space where you are able to work alongside our Tuakana tutors and other Maori and Pasifika students who are studying mathematics.

For further information, please visit https://www.auckland.ac.nz/en/science/study-with-us/maori-and-pacific-at-the-faculty/tuakana-programme/tu_kana-maths.html

Key Topics

In Maths 102 you will explore the mathematical ideas and solve problems associated with the themes of:

- Algebra
- Functions
- Trigonometry

...and from calculus:

- Differentiation
- Summation
- Integration

Special Requirements

All coursework in Maths 102 is not compulsory. However, it is strongly recommended that you engage with all facets of the coursework for this course.

It is usual for the hour long Semester Test for Maths 102 to be held outside of normal hours (approx. 6pm to 7pm) during the working week.

Workload Expectations

This course is a standard 15 point course and students are expected to spend 10 hours per week involved in each 15 point course that they are enrolled in.

For this course, you can expect 3 hours of lectures, a 1 hour tutorial, 3 hours of reading and thinking about the content and 3 hours of work on assignments and/or test preparation.

Delivery Mode

Campus Experience

Attendance is required at course tutorials to receive credit for this component of the course.

Lectures will be available as recordings. Other learning activities including course tutorials will not be available as recordings.

Attendance on campus is not required for the semester test. The semester test will be administered as an online quiz through Canvas. Attendance on campus is required for the final examination. The activities for the course are scheduled as a standard weekly timetable.

Learning Resources

There is no prescribed textbook for this course. The primary resources for this course are the Maths 102 Coursebook and our Maths 102 Canvas interactive platform.

Student Feedback

During the course Class Representatives in each class can take feedback to the staff responsible for the course and staff-student consultative committees.

At the end of the course students will be invited to give feedback on the course and teaching through a tool called SET or Qualtrics. The lecturers and course co-ordinators will consider all feedback.

Your feedback helps to improve the course and its delivery for all students.

Digital Resources

Course materials are made available in a learning and collaboration tool called Canvas which also includes reading lists and lecture recordings (where available).

Please remember that the recording of any class on a personal device requires the permission of the instructor.

Academic Integrity

The University of Auckland will not tolerate cheating, or assisting others to cheat, and views cheating in coursework as a serious academic offence. The work that a student submits for grading must be the student's own work, reflecting their learning. Where work from other sources is used, it must be properly acknowledged and referenced. This requirement also applies to sources on the internet. A student's assessed work may be reviewed against online source material using computerised detection mechanisms.

Copyright

The content and delivery of content in this course are protected by copyright. Material belonging to others may have been used in this course and copied by and solely for the educational purposes of the University under license.

You may copy the course content for the purposes of private study or research, but you may not upload onto any third party site, make a further copy or sell, alter or further reproduce or distribute any part of the course content to another person.

Inclusive Learning

All students are asked to discuss any impairment related requirements privately, face to face and/or in written form with the course coordinator, lecturer or tutor.

Student Disability Services also provides support for students with a wide range of impairments, both visible and invisible, to succeed and excel at the University. For more information and contact details, please visit the [Student Disability Services' website](http://disability.auckland.ac.nz) <http://disability.auckland.ac.nz>

Special Circumstances

If your ability to complete assessed coursework is affected by illness or other personal circumstances outside of your control, contact a member of teaching staff as soon as possible before the assessment is due.

If your personal circumstances significantly affect your performance, or preparation, for an exam or eligible written test, refer to the University's [aegrotat or compassionate consideration page](https://www.auckland.ac.nz/en/students/academic-information/exams-and-final-results/during-exams/aegrotat-and-compassionate-consideration.html) <https://www.auckland.ac.nz/en/students/academic-information/exams-and-final-results/during-exams/aegrotat-and-compassionate-consideration.html>.

This should be done as soon as possible and no later than seven days after the affected test or exam date.

Learning Continuity

In the event of an unexpected disruption we undertake to maintain the continuity and standard of teaching and learning in all your courses throughout the year. If there are unexpected disruptions the University has contingency plans to ensure that access to your course continues and your assessment is fair, and not compromised. Some adjustments may need to be made in emergencies. You will be kept fully informed by your course co-ordinator, and if disruption occurs you should refer to the University Website for information about how to proceed.

With respect to COVID-19 levels, the following will apply:

Level 1: The Maths 102 course will be delivered normally as specified in delivery mode

Level 2: You will not be required to attend in person. All teaching and assessment will have a remote option.

Level 3 / 4: All teaching activities and assessments are delivered remotely

Student Charter and Responsibilities

The Student Charter assumes and acknowledges that students are active participants in the learning process and that they have responsibilities to the institution and the international community of scholars. The University expects that students will act at all times in a way that demonstrates respect for the rights of other students and staff so that the learning environment is both safe and productive. For further information visit [Student Charter](https://www.auckland.ac.nz/en/students/forms-policies-and-guidelines/student-policies-and-guidelines/student-charter.html) <https://www.auckland.ac.nz/en/students/forms-policies-and-guidelines/student-policies-and-guidelines/student-charter.html>.

Disclaimer

Elements of this outline may be subject to change. The latest information about the course will be available for enrolled students in Canvas.

In this course you may be asked to submit your coursework assessments digitally. The University reserves the right to conduct scheduled tests and examinations for this course online or through the use of computers or other electronic devices. Where tests or examinations are conducted online remote invigilation arrangements may be used. The final decision on the completion mode for a test or examination, and remote invigilation arrangements where applicable, will be advised to students at least 10 days prior to the scheduled date of the assessment, or in the case of an examination when the examination timetable is published.