



UNSW Course Outline

MATH3560 History of Mathematics - 2024

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General Course Information

Course Code : MATH3560

Year : 2024

Term : Term 1

Teaching Period : T1

Is a multi-term course? : No

Faculty : Faculty of Science

Academic Unit : School of Mathematics & Statistics

Delivery Mode : In Person

Delivery Format : Standard

Delivery Location : Kensington

Campus : Sydney

Study Level : Undergraduate

Units of Credit : 3

Useful Links

[Handbook Class Timetable](#)

Course Details & Outcomes

Course Description

This course brings mathematics to life as a human endeavour, influenced by the people and circumstances surrounding its discovery.

This course is focused on the original motivations and reflective processes behind the familiar mathematical concepts taught in high school and University. Through study of the past, students will experience mathematics as a living and evolving subject.

By the end of this course students will have a better understanding of how mathematics evolved into its present form, which is useful for researchers and teachers alike.

Course Aims

The course aims to introduce the student to important themes of mathematics from a historical perspective across a wide range of cultures. It will aim to look carefully at ancient mathematics and how the subject has developed over time. The course also aims to augment and enhance material that students have already taken or are studying in other mathematics courses. We aim to provide a unifying historical framework for these areas and give insight into the mathematicians who created these subjects.

There will be a strong focus on clear communication and writing in expressing ideas.

Course Learning Outcomes

Course Learning Outcomes
CLO1 : Describe the historical motivations behind key strands of mathematics, including geometry, algebra, astronomy and calculus.
CLO2 : Present and communicate mathematical and historical ideas in writing.
CLO3 : Explain how mathematics is influenced by the circumstances in which it was originally discovered, and how this can enhance the teaching of modern mathematics.

Course Learning Outcomes	Assessment Item
CLO1 : Describe the historical motivations behind key strands of mathematics, including geometry, algebra, astronomy and calculus.	<ul style="list-style-type: none">• Assignment• Class Test• Final Exam
CLO2 : Present and communicate mathematical and historical ideas in writing.	<ul style="list-style-type: none">• Presentation• Final Exam
CLO3 : Explain how mathematics is influenced by the circumstances in which it was originally discovered, and how this can enhance the teaching of modern mathematics.	<ul style="list-style-type: none">• Assignment• Class Test• Final Exam

Learning and Teaching Technologies

Moodle - Learning Management System | Blackboard Collaborate | Echo 360

Assessments

Assessment Structure

Assessment Item	Weight	Relevant Dates
Presentation Assessment Format: Individual	20%	Start Date: Not Applicable Due Date: Week 8: 01 April - 07 April
Assignment Assessment Format: Individual	5%	Start Date: Not Applicable Due Date: Week 3: 26 February - 03 March
Class Test Assessment Format: Individual	20%	Start Date: Not Applicable Due Date: Week 5: 11 March - 17 March
Final Exam Assessment Format: Individual	55%	Start Date: Not Applicable Due Date: Not Applicable

Assessment Details

Presentation

Assessment Overview

You will deliver a 5-minute video on a topic chosen from a topic list. You will create a PowerPoint presentation that summarises the topic. You will be marked on your delivery and response to questions; the accuracy of your research and synthesis on the topic presented orally and in your slides; and the cohesion of your oral and visual presentation. Feedback will be provided one week later through a marked rubric with comments from teaching staff.

Course Learning Outcomes

- CLO2 : Present and communicate mathematical and historical ideas in writing.

Detailed Assessment Description

Your presentation assessment is to make an (approx) 5-minute video where you compare how Pythagoras' Theorem was understood in ancient Mesopotamia and **one** other culture chosen from: Egypt, India, China or Greece.

Assessment Length

5 minute video

Assessment information

Standard late submission penalties apply

Assignment submission Turnitin type

Not Applicable

Assignment

Assessment Overview

The Assignment is designed to assess your knowledge of the topics covered in lectures during weeks 1 and 2. Typical questions will include problem solving and computation.

These questions will ask you to perform computations and reasoning in the way they were done in antiquity.

You will have one week to complete the assignment with the task due in week 3.

Feedback will be given one week after the submission of the assignment.

Course Learning Outcomes

- CL01 : Describe the historical motivations behind key strands of mathematics, including geometry, algebra, astronomy and calculus.
- CL03 : Explain how mathematics is influenced by the circumstances in which it was originally discovered, and how this can enhance the teaching of modern mathematics.

Detailed Assessment Description

A simple set of exercises designed to provide students with some initial feedback regarding the Arithmetic and Algorithms sections of this course.

Assessment information

Standard late submission penalties apply

Assignment submission Turnitin type

Not Applicable

Class Test

Assessment Overview

The Class Test is designed to assess your knowledge of the topics covered in lectures in weeks 1-4 inclusive.

The test will be typically scheduled during class time in Week 5 with a one-hour limit. Typical

questions include problem-solving and computation.

You will be provided with feedback with comments and/or solutions.

Course Learning Outcomes

- CL01 : Describe the historical motivations behind key strands of mathematics, including geometry, algebra, astronomy and calculus.
- CL03 : Explain how mathematics is influenced by the circumstances in which it was originally discovered, and how this can enhance the teaching of modern mathematics.

Detailed Assessment Description

A comprehensive review of the Arithmetic, Algorithms and Basic Geometry sections of this course, with an emphasis on Basic Geometry.

Assessment Length

1 hour

Assignment submission Turnitin type

Not Applicable

Final Exam

Assessment Overview

The final exam is designed to summarise your learning and problem-solving skills on all topics delivered across all weeks of the term, including historical approaches to arithmetic, algorithms and geometry. The exam is typically 2 hours long and consists of MCQ, short numerical and short answer responses - details will be confirmed during the course. The examination will occur during the official university examination period. Feedback is available through inquiry with the course convenor.

Course Learning Outcomes

- CL01 : Describe the historical motivations behind key strands of mathematics, including geometry, algebra, astronomy and calculus.
- CL02 : Present and communicate mathematical and historical ideas in writing.
- CL03 : Explain how mathematics is influenced by the circumstances in which it was originally discovered, and how this can enhance the teaching of modern mathematics.

Detailed Assessment Description

This is a traditional paper-based and in-person exam.

Assignment submission Turnitin type

Not Applicable

General Assessment Information

Grading Basis

Standard

Requirements to pass course

Achieve a composite mark of at least 50 out of 100

Course Schedule

Teaching Week/Module	Activity Type	Content
Week 1 : 12 February - 18 February	Lecture	Arithmetic
Week 2 : 19 February - 25 February	Lecture	Algorithms
Week 3 : 26 February - 3 March	Lecture	Basic Geometry
	Assessment	Notebook
Week 4 : 4 March - 10 March	Lecture	Basic Geometry
Week 5 : 11 March - 17 March	Assessment	Mid-Session test
Week 7 : 25 March - 31 March	Lecture	Applied Geometry
Week 8 : 1 April - 7 April	Lecture	Applied Geometry
	Assessment	Video Presentation
Week 9 : 8 April - 14 April	Lecture	Pure Geometry
Week 10 : 15 April - 21 April	Lecture	Pure Geometry

Attendance Requirements

Students are strongly encouraged to attend all classes and review lecture recordings.

Course Resources

Prescribed Resources

None

Recommended Resources

None

Additional Costs

None

Course Evaluation and Development

Feedback is collected anonymously at the end of term and incorporated into future iterations of this course. For example, the cross-cultural component of this course was the result of student

feedback in 2021.

Staff Details

Position	Name	Email	Location	Phone	Availability	Equitable Learning Services Contact	Primary Contact
Lecturer	Daniel Mansfield					Yes	Yes

Other Useful Information

Academic Information

Upon your enrolment at UNSW, you share responsibility with us for maintaining a safe, harmonious and tolerant University environment.

You are required to:

- Comply with the University's conditions of enrolment.
- Act responsibly, ethically, safely and with integrity.
- Observe standards of equity and respect in dealing with every member of the UNSW community.
- Engage in lawful behaviour.
- Use and care for University resources in a responsible and appropriate manner.
- Maintain the University's reputation and good standing.

For more information, visit the [UNSW Student Code of Conduct Website](#).

Academic Honesty and Plagiarism

Referencing is a way of acknowledging the sources of information that you use to research your assignments. You need to provide a reference whenever you draw on someone else's words, ideas or research. Not referencing other people's work can constitute plagiarism.

Further information about referencing styles can be located at <https://student.unsw.edu.au/referencing>

Academic integrity is fundamental to success at university. Academic integrity can be defined as a commitment to six fundamental values in academic pursuits: honesty, trust, fairness, respect, responsibility and courage. At UNSW, this means that your work must be your own, and others' ideas should be appropriately acknowledged. If you don't follow these rules, plagiarism may be

detected in your work.

Further information about academic integrity, plagiarism and the use of AI in assessments can be located at:

- The [Current Students site](#),
- The [ELISE training site](#), and
- The [Use of AI for assessments](#) site.

The Student Conduct and Integrity Unit provides further resources to assist you to understand your conduct obligations as a student: <https://student.unsw.edu.au/conduct>

Submission of Assessment Tasks

Penalty for Late Submissions

UNSW has a standard late submission penalty of:

- 5% per day,
- for all assessments where a penalty applies,
- capped at five days (120 hours) from the assessment deadline, after which a student cannot submit an assessment, and
- no permitted variation.

Any variations to the above will be explicitly stated in the Course Outline for a given course or assessment task.

Students are expected to manage their time to meet deadlines and to request extensions as early as possible before the deadline.

Special Consideration

If circumstances prevent you from attending/completing an assessment task, you must officially apply for special consideration, usually within 3 days of the sitting date/due date. You can apply by logging onto myUNSW and following the link in the My Student Profile Tab. Medical documentation or other documentation explaining your absence must be submitted with your application. Once your application has been assessed, you will be contacted via your student email address to be advised of the official outcome and any actions that need to be taken from there. For more information about special consideration, please visit: <https://student.unsw.edu.au/special-consideration>

Important note: UNSW has a “fit to sit/submit” rule, which means that if you sit an exam or submit a piece of assessment, you are declaring yourself fit to do so and cannot later apply for

Special Consideration. This is to ensure that if you feel unwell or are faced with significant circumstances beyond your control that affect your ability to study, you do not sit an examination or submit an assessment that does not reflect your best performance. Instead, you should apply for Special Consideration as soon as you realise you are not well enough or are otherwise unable to sit or submit an assessment.

Faculty-specific Information

Additional support for students

- [The Current Students Gateway](#)
- [Student Support](#)
- [Academic Skills and Support](#)
- [Student Wellbeing, Health and Safety](#)
- [Equitable Learning Services](#)
- [UNSW IT Service Centre](#)
- Science EDI Student [Initiatives](#), [Offerings](#) and [Guidelines](#)

School-specific Information

School of Mathematics and Statistics and UNSW Policies

The School of Mathematics and Statistics has adopted a number of policies relating to enrolment, attendance, assessment, plagiarism, cheating, special consideration etc. These are in addition to the Policies of The University of New South Wales. Individual courses may also adopt other policies in addition to or replacing some of the School ones. These will be clearly notified in the Course Initial Handout and on the Course Home Pages on the Maths Stats web site. Students in courses run by the School of Mathematics and Statistics should be aware of the School and Course policies by reading the appropriate pages on the web site starting at: [The School of Mathematics and Statistics assessment policies](#)

The School of Mathematics and Statistics will assume that all its students have read and understood the School policies on the above pages and any individual course policies on the Course Initial Handout and Course Home Page. Lack of knowledge about a policy will not be an excuse for failing to follow the procedure in it.

Special Consideration - Short Extension Policy

The School of Mathematics and Statistics has carefully reviewed its range of assignments and projects to determine their suitability for automatic short extensions as set out by the UNSW

Short Extension Policy. Upon comprehensive examination of our course offerings that incorporate these types of assessments, we have concluded that our current deadline structures already accommodate the possibility of unexpected circumstances that may lead students to require additional days for submission. Consequently, the School of Mathematics and Statistics has decided to universally opt out of the Short Extension provision for all its courses, having pre-emptively integrated flexibility into our assessment deadlines. The decision is subject to revision in response to the introduction of new course offerings. Students may still apply for Special Consideration via the usual procedures.

Computing Lab

The main computing laboratory is room G012 of the Anita B. Lawrence Centre (formerly Red Centre). You can get to this lab by entering the building through the main entrance to the School of Mathematics (on the Mezzanine Level) and then going down the stairs to the Ground Level. A second smaller lab is Room M020, located on the mezzanine level through the glass door (and along the corridor) opposite the School's entrance.

For more information, including opening hours, see the [computing facilities webpage](#). Remember that there will always be unscheduled periods when the computers are not working because of equipment problems and that this is not a valid excuse for not completing assessments on time.

School Contact Information

School Contact Information

Please visit the [School of Mathematics and Statistics website](#) for a range of information.

For information on Courses, please go to "Student life & resources" and either Undergraduate and/or Postgraduate and respective "Undergraduate courses" and "Postgraduate courses" for information on all course offerings.

All school policies, forms and help for students can be located by going to the "Student Services" within "Student life & resources" page. We also post notices in "Student noticeboard" for your information. Please familiarise yourself with the information found in these locations. If you cannot find the answer to your queries on the web you are welcome to contact the Student Services Office directly.

Undergraduate

E: ug.mathsstats@unsw.edu.au

P: 9385 7011 or 9385 7053

Postgraduate

E: pg.mathsstats@unsw.edu.au

P: 9385 7053

Should we need to contact you, we will use your official UNSW email address of in the first instance. **It is your responsibility to regularly check your university email account. Please use your UNSW student email and state your student number in all emails to us.**