UNSW Course Outline

MATH1081 Discrete Mathematics - 2024

Published on the 25 Sep 2024

General Course Information

Course Code : MATH1081
Year : 2024
Term : Term 3
Teaching Period : T3
Is a multi-term course? : No
Faculty : Faculty of Science
Academic Unit : School of Mathematics & Statistics
Delivery Mode : Multimodal
Delivery Format : Standard
Delivery Location : Kensington
Campus : Sydney
Study Level : Undergraduate
Units of Credit : 6

Useful Links

Handbook Class Timetable

Course Details & Outcomes

Course Description

This course will enhance students' research, inquiry, and analytical thinking abilities and provide them with the mathematical language and mathematical techniques to unravel many seemingly unrelated problems. The course content addresses five major pillars of discrete mathematics:

set theory, number theory, proofs and logic, combinatorics, and graph theory. The theory covered will provide a good foundation for understanding many problems that arise in all science disciplines, particularly higher mathematics and computer science.

The mathematical problem-solving skills that students will develop are based on logical arguments and mathematical language that can be applied in multidisciplinary work. The course will also engage students in independent and reflective learning through independent mastery of a wide range of tutorial problems. The course also develops students' communication skills through active participation in tutorials, critical analysis of the work of their peers, and presenting clear, logical arguments when solving problems.

The course is delivered through 5 hours of lectures and 2 hours of tutorials per week, along with weekly self-paced online lessons. All topics are taught from first principles, but due to the relatively fast pace of delivery, it is recommended for students with a solid background in HSC Mathematics Advanced. The course provides a strong foundation for students intending to study higher-level mathematics or computer science.

Course Aims

The course aims to provide students with foundational knowledge of Discrete Mathematics, broken into five main topics: set theory, number theory, proofs and logic, combinatorics, and graph theory. This course introduces important problem-solving skills to students and develops their mathematical thinking and communication skills. It provides an important foundation for studying higher-level pure mathematics, as well as areas in computer science and informatics.

Course Learning Outcomes

Course Learning Outcomes
CLO1 : State the definitions and theorems of the Discrete Mathematics topics taught and recognise how they can be applied to standard numeric problems.
CLO2 : Apply the concepts and proof techniques taught to solve problems requiring rigorous logical and mathematical arguments.
CLO3 : Communicate mathematical ideas effectively in written and oral form using correct terminology.
CLO4 : Use technology as an aid to communicate mathematical ideas by properly typesetting mathematical proofs.

Course Learning Outcomes	Assessment Item
CLO1 : State the definitions and theorems of the Discrete Mathematics topics taught and recognise how they can be applied to standard numeric problems.	• Weekly Lessons • Assignment • Final Examination • Lab Tests
CLO2 : Apply the concepts and proof techniques taught to solve problems requiring rigorous logical and mathematical arguments.	• Weekly Lessons • Assignment • Final Examination • Lab Tests
CLO3 : Communicate mathematical ideas effectively in written and oral form using correct terminology.	• Weekly Lessons • Assignment • Final Examination
CLO4 : Use technology as an aid to communicate mathematical ideas by properly typesetting mathematical proofs.	• Assignment

Learning and Teaching Technologies

Moodle - Learning Management System | Numbas (weekly exercises and lab tests); Mobius (final exam) | Echo 360 | Blackboard Collaborate

Learning and Teaching in this course

Lectures and Tutorials

Each week there will be five scheduled hours of live lecture content and two hours of live tutorials.

Lectures can be attended in person or viewed online. We would encourage you to attend in

person where possible. You may also (or additionally) view prerecorded web stream lectures that cover the same content. The schedule for both streams is available on Moodle.

The two hours of tutorials are delivered in different formats. The **first** hour of tutorial in the week is a large, tutor-led tutorial. This takes place early in the week and will cover problems related to the previous week's lecture. In Week 1, we discuss the kinds of problems and thinking that you will learn throughout MATH1081 and how it differs from some other first year MATH courses. You should prepare for these tutorials by attempting the problems (available on Moodle) in advance.

The **second** hour of tutorial is the Board Tutorial. This is a smaller session during which you will work on unseen problems in small groups with tutor guidance and feedback. One problem in each week's Board Tutorial set is from the Exam Bank and it is guaranteed that one problem from the collection of Board Tutorial sheets will appear on your final exam (note that the specific question may not be the same for every student). Students who participate in 5 out of 9 Board Tutorials will be eligible for an additional attempt at either Lab Test 1 or Lab Test 2 if their initial attempt results in a grade of less than 15/20. These attempts will capped at 15/20 and be organised after Week 10.

Assessments

Assessment Structure

Assessment Item	Weight	Relevant Dates
Weekly Lessons Assessment Format: Individual	15%	Start Date: Weekly on Fridays from O-Week (Numbas lessons); as per individual timetable (Board Tutorials) Due Date: Weekly Numbas Lessons are due on Wednesdays at 5pm. The first deadline is in Week 2.
Assignment Assessment Format: Individual	15%	Start Date: Questions will be released at the end of Week 3 Due Date: 5pm Thursday Week 5 (Stage 1); 5pm Tuesday Week 7 (Stage 2); 5pm Thursday Week 9 (Stage 3)
Final Examination Assessment Format: Individual	50%	Start Date: See exam timetable Due Date: Not Applicable
Lab Tests Assessment Format: Individual	20%	Start Date: Practice tests for Lab Tests 1 and 2 released in Weeks 3 and 9. Due Date: See the EXM class in your myUNSW timetable for your Lab Test time.

Assessment Details

Weekly Lessons

Assessment Overview

The weekly lessons come every week in two parts:
• a set of online Numbas exercises (10%) that are designed to help you understand the course content and practise solving standard problems
• tutorial class participation (5%) in which you work together with other students to solve both standard, and more complex problems that are more suited to discussion and oral communication of mathematical ideas.

For the weekly Numbas lessons, you will have unlimited attempts at randomly-generated formative questions related to the content taught in lectures each week. The questions are automatically marked and provide immediate feedback that can be used for repeated attempts. You are encouraged to work collaboratively on this weekly work to enhance your learning and understanding. Please ensure that while you discuss concepts and solve problems together, each of you submits your own independent work.

Course Learning Outcomes

- CLO1 : State the definitions and theorems of the Discrete Mathematics topics taught and recognise how they can be applied to standard numeric problems.
- CLO2 : Apply the concepts and proof techniques taught to solve problems requiring rigorous logical and mathematical arguments.
- CLO3 : Communicate mathematical ideas effectively in written and oral form using correct terminology.

Detailed Assessment Description

Weekly Numbas Lessons (10% for combined best 6 of 9 scores)

Each week there will be a Numbas lesson to complete on Moodle. These lessons will extend on material covered in lectures up to the middle of that week. Further instructions will be provided on Moodle. The Numbas lesson for Week N will be available by Friday of Week N-1 and will have a deadline of 5pm Wednesday of Week N+1. Numbas lessons will be available every week from Week 1 until Week 10 (inclusive), excluding Week 6. The best 6 of 9 weeks will count towards final assessment marks.

These Numbas lessons will cover basic skills. The material covered in each lesson might include new topics to help prepare for upcoming lectures and tutorials, as well as material already covered in lectures and tutorials to help consolidate ideas and prepare for other assessment

tasks.

You are encouraged to work on these exercises in groups with other students, but you must only enter answers that you have worked out for yourself.

The weekly Numbas lessons allow you to check you answers are you go so you should aim to achieve a near perfect score for this assessment task. You can repeat these lessons as many times as you like, and you may find this useful for practice and revision. After each weekly deadline, a revision version of that Numbas lesson will be available but will not count towards your final mark.

Classroom Tutorial Participation (5%)

Each week you will have two types of tutorial, a Board Tutorial (Wednesday to Friday) and a Tutor-Led tutorial (Monday or Tuesday). In the Board Tutorial you will work in small groups and the tutor will mark you as participating if you are engaging with your group to solve the tutorial problems. Each week in which you are marked as participating, you will gain 1%, up to a maximum of 5%, towards the Classroom Tutorial Participation component of the Weekly Lessons. *Participation is only recorded for a student's enrolled tutorial.*

Assessment Length

One week

Submission notes

All responses will be submitted digitally using Numbas (Weekly Numbas Lessons). No submission is required (Participation).

Assessment information

No late submissions will be accepted past the deadline.

As the best 6 out of 9 Weekly Numbas lessons count towards final assessment, Special Consideration applications will only be considered where impact can be demonstrated for **at least four** affected lessons.

Assignment submission Turnitin type

This is not a Turnitin assignment

Generative AI Permission Level

No Assistance

This assessment is designed for you to complete without the use of any generative AI. You are not permitted to use any generative AI tools, software or service to search for or generate information or answers.
For more information on Generative AI and permitted use please see here.

Assignment

Assessment Overview

The assignment is designed to help you construct rigorous mathematical arguments and communicate mathematical ideas in clear and correct mathematical language. It is comprised of 3 questions covering content from Topics 1-3 that require carefully-written proof solutions. The assignment is broken into three stages. First you will submit a typeset draft version of your solutions to 2 of the 3 assignment questions by the end of Week 5. You will then be allocated another student's draft and tasked with critically analysing their work, with your written review due by the middle of Week 7. Finally, you will use the feedback provided by a peer on your own draft to improve your typeset solutions, with the final submission due by the end of Week 9. You will receive feedback on the peer review that you write and the one that you receive, as well as on your final solutions submission. You will receive a mark out of 10 for the peer review that you write, and a mark out of 20 for your final solutions submission. The first draft submission is not marked, but must be submitted in order to move on to the peer review stage.

Course Learning Outcomes

- CLO1 : State the definitions and theorems of the Discrete Mathematics topics taught and recognise how they can be applied to standard numeric problems.
- CLO2 : Apply the concepts and proof techniques taught to solve problems requiring rigorous logical and mathematical arguments.
- CLO3 : Communicate mathematical ideas effectively in written and oral form using correct terminology.
- CLO4 : Use technology as an aid to communicate mathematical ideas by properly typesetting mathematical proofs.

Detailed Assessment Description

The assignment is delivered in three stages.

Stage 1 - Draft Submission (0% but submission required to proceed to Stage 2)

You will submit full solutions to at least two of three allocated proof-style questions. These must be typeset using an equation editor where appropriate and demonstrate engagement with approaches to proofwriting demonstrated in lectures and tutorials.

Stage 2 - Peer Review (5%)

You will review the draft of one other student using a provided set of criteria. You will be assessed on the quality and correctness of feedback provided while staying within the allocated word count.

Stage 3 - Final Submission (10%)

You will submit complete full solutions to all three allocated questions, taking on board feedback provided during Stage 2, as well as your own developed judgement through lectures and tutorials.

Assessment Length

Stage 2 should be at most 600 words. Lengths of Stages 1 and 3 should be guided by lectures and tutorials.

Submission notes

Stages 1 and 3 should be typeset using an equation editor where appropriate. Stage 2 should use the provided Word document template.

Assessment information

Standard late submission penalties (5% per day late up, no submission accepted after 5 days) apply for each stage of the assignment with the penalty applying to the *final* assignment mark. So although the formal weightings of Stages 1, 2, and 3 are 0, 10, and 20 marks respectively, one day late for any stage attracts a 1.5 mark penalty applied to the final assignment mark. Additionally, if students do not submit a draft at Stage 1, they are ineligible to complete a peer review.

Assignment submission Turnitin type

This assignment is submitted through Turnitin and students do not see Turnitin similarity reports.

Generative AI Permission Level

No Assistance

This assessment is designed for you to complete without the use of any generative AI. You are not permitted to use any generative AI tools, software or service to search for or generate information or answers.
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Final Examination

Assessment Overview

The final examination is designed for you to demonstrate a mastery of the course content. It is a 2-hour Mobius exam comprised of multiple-part questions addressing content from all five topics taught in the course. The questions include short-form numeric or algebraic answers as well as long-form explanations or proofs and test a greater depth of understanding than those questions seen in the Numbas exercises. The exam is held in the standard examination period. You will be allowed to review your marked answers once the supplementary exam period has passed.

Course Learning Outcomes

- CLO1 : State the definitions and theorems of the Discrete Mathematics topics taught and recognise how they can be applied to standard numeric problems.
- CLO2 : Apply the concepts and proof techniques taught to solve problems requiring rigorous logical and mathematical arguments.
- CLO3 : Communicate mathematical ideas effectively in written and oral form using correct terminology.

Detailed Assessment Description

In Term 2 2024 the End of Term Examination will be conducted using Möbius. The exam will be conducted under supervised conditions in the Anita B Lawrence Centre computer labs during the official exam period. The date and time of the final examination will be available on myUNSW and further details of the exam arrangements will be available on Moodle when the final exam timetable is released.

The end of term exam covers material from the whole syllabus. The best guide to the style and level of difficulty is the Exam Bank that will be made available towards the end of term. Additionally, the course pack contains a book of past exam papers with worked solutions and additional past exams will be posted on Moodle. Examination questions are, by their nature, different from short test questions. They may test a greater depth of understanding. The questions will be longer, and sections of the course not covered in other assessments will be examined.

More specific information on the format will be provided on Moodle close to the end of Term.

The assessment tasks during the term allow repeated attempts over an extended period and resources are available to students attempting these assessments. As a result, students should be aiming for a high mark in the pre-exam assessment and this indicates significant progress

towards achieving the learning outcomes of this course. The exam is time limited and has more complex questions. Therefore, a high mark in the pre-exam assessment is not always an accurate indication of the final course mark.

Submission notes

All responses will be submitted online via Mobius.

Assignment submission Turnitin type

Not Applicable

Generative AI Permission Level

No Assistance

This assessment is designed for you to complete without the use of any generative AI. You are not permitted to use any generative AI tools, software or service to search for or generate information or answers.
For more information on Generative AI and permitted use please see here.

Lab Tests

Assessment Overview

For the lab tests you will answer questions, similar to the Weekly Numbas Exercises, from a bank of randomly-generated questions under timed conditions. You will have access to the lab test questions at least 1 week in advance, and will have unlimited practice attempts available before sitting the timed version. Feedback for the Lab Tests will be immediate. The Lab Tests consist of two tests aimed to measure your understanding of the discipline material. These tests are worth 10% each and occur just before the census date and the end of the teaching period.

Course Learning Outcomes

- CLO1 : State the definitions and theorems of the Discrete Mathematics topics taught and recognise how they can be applied to standard numeric problems.
- CLO2 : Apply the concepts and proof techniques taught to solve problems requiring rigorous logical and mathematical arguments.

Detailed Assessment Description

You will take two Lab Tests in Weeks 4 and 10 respectively that each contribute 10% to your final mark. These will be conducted in the computer labs in the Anita B Lawrence Centre at times specified by the EXM class in your timetable on myUNSW. (You may need to select the week of the test to see this in your timetable.) The Lab Test questions will be provided on Moodle for practice at least one week before the beginning of the tests.

If you are marked as participating 5 out of 9 of their Board Tutorials (in the second half of each week) you will be eligible for a bonus attempt at either Lab Test 1 or Lab Test 2 (but not both) if your initial attempt results in a grade of less than 15/20. The grade from a bonus attempt will be capped at 15/20. There will be a range of times for the bonus attempt during Week 11 and the exam period.

Assessment Length

40 minutes

Submission notes

Numbas

Assignment submission Turnitin type

This is not a Turnitin assignment

Generative AI Permission Level

No Assistance

This assessment is designed for you to complete without the use of any generative AI. You are not permitted to use any generative AI tools, software or service to search for or generate information or answers.
For more information on Generative AI and permitted use please see here.

General Assessment Information

Grading Basis

Standard

Requirements to pass course

To pass this course a students needs a final overall mark of at least 50%. There is no requirement to obtain a pass in any one assessment task to pass the course.

Course Schedule

Teaching Week/Module	Activity Type	Content
Week 1 : 9 September - 15 September	Lecture	Topic 1 (Live); videos 1.01 - 1.10 (WEB stream)
	Online Activity	Numbas Lesson 1: Set theory
	Tutorial	Tutor-led: Problem Set 0 Q's 1-7 Board: Set theory
Week 2 : 16 September - 22 September	Lecture	Topic 1-2 (Live); videos 1.11-1.16; 2.01-2.05 (WEB stream)
	Online Activity	Numbas Lesson 2: Functions and the Euclidean Algorithm
	Tutorial	Tutor-led: Problem Set 1 Q's 1-24 Board: Set Operations and Algebra
Week 3 : 23 September - 29 September	Lecture	Topic 2 (Live); videos 2.06-2.11 (WEB stream)
	Online Activity	Numbas Lesson 3: Modular Arithmetic and Relations
	Tutorial	Tutor-led: Problem Set 1 Q's 25-39 Board: Functions
Week 4 : 30 September - 6 October	Lecture	Topic 3 (Live); videos 3.01-3.11 (WEB stream)
	Online Activity	Numbas Lesson 4: Partial orders and statements of proof
	Tutorial	Tutor-led: Problem Set 2 Q's 1-13 Board: Modular Arithmetic
	Assessment	Lab Test 1
Week 5 : 7 October - 13 October	Lecture	Topic 3 (Live); videos 3.12-3.21 (WEB stream)
	Online Activity	Numbas Lesson 5: Multiple quantifiers and proof techniques
	Tutorial	Tutor-led: Problem Set 2 Q's 14-26 Board: Relations
	Assessment	Assignment Stage 1 due
Week 6 : 14 October - 20 October	Other	Flexibility Week - no lectures, tutorials, or Numbas deadlines
Week 7 : 21 October - 27 October	Lecture	Topics 3,4 (Live); videos 4.01-4.16 (WEB stream)
	Online Activity	Numbas Lesson 6: Truth tables and counting
	Tutorial	Tutor-led: Problem Set 3 Q's 1-29 Board: Proof techniques
	Assessment	Assignment Stage 2 due
Week 8 : 28 October - 3 November	Lecture	Topic 4 (Live); videos 4.17-4.30 (WEB stream)
	Online Activity	Numbas Lesson 7: Further counting
	Tutorial	Tutor-led: Problem Set 3 Q's 30-63 Board: Symbolic Logic & Counting Problems I
Week 9 : 4 November - 10 November	Lecture	Topic 4,5 (Live); videos 5.01-5.09 (WEB stream)
	Online Activity	Numbas Lesson 8: Recurrence relations and graph theory
	Tutorial	Tutor-led: Problem Set 4 Q's 1-25 Board: Counting Problems II & Recurrence Relations
	Assessment	Assignment Stage 3 due
Week 10 : 11 November - 17 November	Lecture	Topic 5 (Live); videos 5.10-5.15 (WEB stream)
	Online Activity	Numbas Lesson 9: Further graph theory
	Tutorial	Tutor-led: Problem Set 5 Q's 1-17 Board: Graph theory
	Assessment	Lab Test 2

Attendance Requirements

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

General Schedule Information

Course content

MATH1081 consists of 5 topics.

1. Sets and Functions
2. Number Theory and Relations
3. Logic and Proofs
4. Combinatorics
5. Graph Theory

A detailed list of topics is provided below.

References are to the textbook *Discrete Mathematics with Applications* (4th edition) by S.S. Epp unless marked otherwise. F indicates the textbook *Proofs in Mathematics: An Introduction* by Franklin and Daoud, and R indicates the book *Discrete Mathematics with Applications* (6th edition) by K.H. Rosen. The references do *not* define what you will be expected to know. They are a guide to finding additional relevant material. Some parts of the course are not covered in the textbooks and some parts of the textbooks (even in sections mentioned in the references below) are not included in the course. All assessable content will be covered in lectures, tutorials, and Weekly Numbas lessons.

Within sections of the course, the topics may not be covered in exactly the order in which they are listed below.

1. Sets and Functions

- Sets, subsets, power sets. Equality, cardinality. (1.2, 6.1, 6.3)
- Set operations: union, intersection, difference. (6.1)
- Universal sets, complements. Cartesian product. (6.2)
- Functions. Domain, codomain and range. Arrow diagrams. (1.3, 7.1, 4.5)
- Ceiling and floor functions. Images and inverse images of sets. Injective (one-to-one), surjective (onto), and bijective functions. (7.2)
- Composition of functions. (7.3)
- Inverse functions. (7.2)

2. Number Theory and Relations

- Prime numbers and divisibility. (4.1, 4.3)
- Fundamental Theorem of Arithmetic. (4.3)

- Euclidean algorithm. (4.8)
- Modular arithmetic. (4.4, 8.4)
- Solving linear congruences. (R3.7)
- General relations. (8.1)
- Reflexivity, symmetry, anti-symmetry, and transitivity. (8.2)
- Equivalence relations. (8.3)
- Partially-ordered sets and Hasse diagrams. (8.5)

3. Logic and Proofs

- Proof versus intuition. Direct proof. (F1)
- Proof of universal statements, proof by exhaustion of cases. (3.1, F2, F3)
- Proof of existential statements. Constructive and non-constructive proofs. Counterexamples. (3.1, 4.1, F4, F6)
- Negation of quantified statements. (3.2)
- Contrapositive, indirect proof, proof by contradiction. (2.2, 4.6, 4.7, F6)
- Quantifiers, statements with multiple quantifiers. (3.1, 3.2)
- Common mistakes in reasoning. Converse and inverse fallacies. (3.3, 3.4, 4.1)
- Mathematical induction. (5.2-5.4, F8)
- Propositions, connectives, compound propositions. (2.1)
- Truth tables. Tautology, contingency, contradiction. Logical equivalence. (2.1)
- Implication, converse, inverse, biconditional. (2.2)
- Rules of inference. (2.3)

4. Combinatorics

- Counting. (9.1)
- Multiplication rule. (9.2)
- Addition rule. (9.3)
- Principle of inclusion-exclusion. (9.3)
- Pigeonhole principle. (9.4)
- Permutation and combinations. (9.5, 9.6)
- Binomial and multinomial theorem. (9.7, R5.4)
- Recurrence relations. (5.6, 5.7, 5.8)
- Recursively-defined sequences. (5.9)

5. Graphs

- Basic terminology for graphs and multigraphs. Directed graphs, subgraphs, complementary graphs. (10.1)
- Vertrex degree, Handshaking lemma. (10.1)
- Bipartite graphs. (10.1)
- Adjacency matrices. (10.3)
- Isomorphism, isomorphism invariants. (10.4)
- Walks, trails and tours, paths and circuits. Euler and Hamilton walks. Connected graphs,

connected components. (10.2)
- Planar graphs. Euler's formula. Dual graphs. Necessary conditions for planarity. Kuratowski's Theorem. (R9.7)
- Trees, spanning trees. (10.5, 10.7)
- Weighted graphs. Minimal spanning trees. Kruskal's and Dijkstra's algorithms. (10.6, 10.7)

Course Resources

Prescribed Resources

All required resources will be provided on Moodle.

Recommended Resources

There are no required textbooks but students looking for additional resources may find the following books of interest:

- S.S. Epp, "Discrete Mathematics with Applications", Fourth Edition, 2011.
- J Franklin and A. Daoud, "Introduction to Proofs in Mathematics", Quakers Hill Press, 1995.

Additionally, any book with "Discrete Mathematics" and many with "Finite Mathematics" in their title should help. Previous texts include "Discrete Mathematics and its Applications" by K.H. Rosen and "An Introduction to Discrete Mathematics and its Applications" by K. Kalmanson. A more advanced reference is "Discrete Mathematics" by K. Ross and C.R.B. Wright. For interesting applications in Computer Sciences, try "The Art of Computer Programming" by D.E. Knuth.

Course Evaluation and Development

Feedback will be collected at the end of term via myExperience forms. Your feedback informs our decisions about course organisation and individual lecturer and tutor practices.

Staff Details

Position	Name	Email	Location	Phone	Availability	Equitable Learning Services Contact	Primary Contact
Convenor	Sean Gardiner				Via email	No	Yes
Administrator	Hilda Cahya		H13 Anita Lawrence Building Centre Wing 3072			Yes	No
Lecturer	Sean Gardiner				Staff consultation schedule available on Moodle from Week 2	No	No
	Daniel Chan				Staff consultation schedule available on Moodle from Week 2	No	No
Year coordinator	Bill Ellis		H13 Anita Lawrence Building Centre Wing 3073		Via email	No	No

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 Plagarism

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

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.**