

Course Outline

Contents

Contents	2
1. Staff	4
2. Administrative matters	4
Contacting the Student Services Office	4
3. Course information	5
Course description	5
Course aims	5
Course learning outcomes (CLO)	5
4. Learning and teaching activities	6
Lectures	6

Text Book.....	16
9. Getting help outside tutorials	16
Staff Consultations	16
Mathematics Drop-in Centre and Lab Consultants	16
Additional support for students	16
10. Special Consideration	17
University Statement on Plagiarism	18
11. Syllabus, Lecture Schedule and References	19
12. Tutorial Schedule	21

1. Staff

Position	Name	Email	Room*
Director of First Year	Assoc Prof Jonathan Kress	j.kress@unsw.edu.au	RC-3073
Course Convenor	Dr Joshua Capel	j.capel@unsw.edu.au	RC-5107

Lecturer-in-charge of
Mobius

3.

5. Assessments

Overview

Your final raw mark will be made up as follows:

Assessment task	Weight	Course Learning Outcomes
Online tests	10%	1, 2 and 4
Mastery tests	45%	1, 2 and 4
Assignment	10%	1, 2, 3 and 5
End of term exam	35%	1, 2, 3, 4 and 5

Note:

Students who complete the Online tests, Mastery tests, and Assignment to a satisfactory level will pass the course without the need to sit the end of term exam. A detailed explanation of the assessment structure is below.

The end of term exam is aimed at students who are seeking a credit or above. The final exam will not contain any routine questions, it will contain substantial questions requiring a good understanding of the material presented in the course and thorough and clear explanation. The final exam mark will be moderated. See later section on the final exam for more details.

Only students who have obtained 50 of the available 65 pre-exam marks will be permitted to sit the paper final exam

All online tests will be closed by Friday Week 10. Although students can attempt any of the available online tests until they are closed, students are expected to take these tests in their designated weeks and failure to do so may result in rejection of applications for special consideration.

Each online test contains a Mastery test component and a computing component. There will be six questions in the Mastery test component and two questions in the computing component. Make sure to review the gradebook after each attempt to better prepare yourself for the next attempt.

Questions in the Mastery test component cover the materials from lectures.

In MATH1031 you will learn how to use the computer algebra software called Maple. During on-campus teaching this software can be accessed on the computer Red-Centre labs, but at all other times you can Maple on your own computer via the myAccess service:

<https://www.myaccess.unsw.edu.au/>

Worksheets and notes are provided on Moodle for learning how to use software Maple. The questions in the computing component test your understanding of the worksheets and notes and the use of Maple.

More details of the Computing Component of this course are provided later in this course outline.

A passing student would be expected to score at least 80% in these tests. The best 6 of these 8 tests will count 10% towards your final grade.

The Online Tests are available for an extended period so no medical certificates or other reasons will be accepted for missing these tests.

Mastery Tests

The largest component of the assessment in MATH1031 is the Mastery Tests (MTs, 15% each). The Mastery Tests will be in-person and taken place in weeks 4, 7 and 10. Information for about how the tests will be posted on Moodle. Make sure to read every announcement.

The three Mastery Test 1, 2, 3 will contain a selection of questions from the Mastery Test components in OT1 to OT3, OT4 to OT5, OT6 to OT8, respectively.

A mark of 80% in each of the Mastery Tests is considered to be a passing level.

If you miss a Mastery Test due to illness or other misadventure, you must obtain a medical certificate, or other suitable documentation, for the day of your test, and apply for special consideration online through myUNSW. Please refer to the information on Special Consideration and the fit-to-sit rule for details.

If your pre-exam mark (composed of marks from the online tests, the assignment and the Mastery tests) is less than 50, there will be an opportunity to re-sit each of the Mastery Tests on a day in the study period at the end of the term chosen by the director of the first year. A student may retake any or all of the Mastery Tests to increase their pre-exam mark, but the new pre-exam mark will be capped at 50 out of 65.

After the resit opportunity, eligibility to sit the final exam will be determined. Students who at this time have not achieved 50 of the 65 pre-exam marks will not be able to take the final exam but will be permitted to retake any of the Mastery Tests at the same time as the scheduled final exam. In that case

For example, a student gets 6 out of 10 for the assignment, 8 out of 10 from the online tests, 13, 10 and 8 in the Mastery Tests at the closing date of the online tests. The pre-exam mark will be 45. They

will be allowed to re-sit the Mastery tests in the study period. If they improve the marks of the three MTs to 15, 12 and 11, the total raw marks for the pre-exam components will be 53. Since, in this case, the pre-exam mark is capped at 50, the student will only get 50 for the pre-exam mark. This student would then be allowed to sit the final exam.

Written Assignment

The purpose of the assignment is to improve your mathematical writing by providing feedback on your writing and helping you to recognise good mathematical writing. The assignment will be in two parts.

In part A, several short videos on how the mathematics you are studying in MATH1031 is being used by someone working in a non-mathematical field will be provided. You will choose one of these and write a few paragraphs about the video.

In part B, exam style questions will be presented to you on Mobius and your job will be to write solutions to these questions. You will be able to check the correctness some parts of your answer using Mobius so your main task will be to present your answers well with good explanations of your working.

Your work will need to be typed (not handwritten and scanned) and you will submit your work online through links on Moodle. After submission you will need to assess your own work and the work of 4 other students. Tutors will also grade parts of your submission and provide feedback on your writing.

Complete details of the process for this will be provided when the assignment is released.

Note that you must submit your work in two places – there are separate submission processes for the tutor to mark and for the peer review.

The assignment will be marked out of 10. A penalty of 0.5 marks per day late will be applied to late submissions up to a maximum of 5 days late. Work submitted later than 5 days will be marked, and feedback given, but a grade of zero will be recorded.

A 4pm deadline means you must submit before 4pm. A submission at 4pm is late. If you submit late to the peer review, then you will need to wait an extra week before you complete your peer review.

Timeline

Week 6 Monday 9am (or earlier)	Assignment opens and details released
Week 8 Friday 4pm	Submission deadline
Week 8 Friday 5pm	Peer assessment opens
Week 9 Friday 4pm	Peer assessment deadline
Week 10 Friday 4pm	Feedback released

Schedule of pre-exam assessments

Week	Online Tests	Mastery Tests	Assignment
Week 1			
Week 2	OT1		
Week 3	OT2		
Week 4	OT3	Based on Mastery test component of OT1 to OT3	
Week 5	OT4		
Week 6			Assignment released

What will I have to do and when?

You will learn how to use the application Maple via working through a set of Maple worksheets. There will be questions that require the use of Maple in the weekly Online Tests.

You use Maple via myAccess, you should follow the instruction on the myAccess web page to install Citrix Receiver and access your applications. You then should watch the introductory videos for Maple provided on Moodle.

You can continue to work through the Maple worksheets and notes. Information about which worksheet is relevant to which online test will be provided on Moodle.

Getting help

There is a wide range of self-help material in the computing pages of our School web site and in MATH1031 module on UNSW Moodle. These should be the places you check in the first instance.

The Maths Drop-in Centre incorporates Lab Consultations who can help with Maple if you need help using this software.

attempting to gain unauthorised access to files within the system (hacking);
deliberately introducing computer viruses;
copying of assignments (by email or any other means).

Electronic mail (email) facilities are provided by the University so that you can communicate with lecturers and tutors. All use of email is monitored, and action will be taken against anyone who makes excessive use of email or uses it to send annoying, obscene, sexist or racist messages to other users or to engage in academic misconduct. Internet and other electronic communication services are provided to allow you to access our computers from other parts of the campus and from home and to transfer assignments which have been completed on other computers. These services are NOT provided so that you can play games, watch videos, or indulge in other activities not related to university studies. All electronic communications using the School's facilities are monitored to ensure that these facilities are being used in a responsible manner. Likewise, the disk space allocated to your account should be used only for keeping files related to your course, and the system administrator may remove any files which are not associated with University work.

These restrictions are imposed because computing resources are limited and there are thousands of other users of the system (over 4000 students with logins for the Red Centre labs). We all have to live and work together and you are expected to be considerate to other users. This is the bottom line when it comes to acceptable behaviour. If you have any doubts about whether an action is acceptable, don't do it.

Health and Safety Issues

Students should be aware that using a keyboard or performing any repetitive task for a long uninterrupted period may be associated with physical discomfort and/or muscular or other injury. To lessen the risk of such problems, a break from typing should be taken at regular intervals, a good body position adopted, wrists should be kept straight as much as possible and not rested on a sharp edge.

If you feel pain, numbness, tingling, weakness, cramping, or stiffness in your hands, wrists, arms, shoulder, neck, or back, see a qualified health professional. For further information contact the School of Mathematics and Statistics General Office.

7. Expectations of students

School 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 Maths Stats web site starting at:

<https://www.maths.unsw.edu.au/currentstudents/assessment-policies>

Completing the ELISE tutorial and quiz will enable you to:

- analyse topics, plan responses and organise research for academic writing and other assessment tasks
- effectively and efficiently find appropriate information sources and evaluate relevance to your needs
- use and manage information effectively to accomplish a specific purpose
- better manage your time
- understand your rights and responsibilities as a student at UNSW
- be aware of plagiarism, copyright, UNSW Student Code of Conduct and Acceptable Use of UNSW ICT Resources Policy
- be aware of the standards of behaviour expected of everyone in the UNSW community
- locate services and information about UNSW and UNSW Library

Some of these areas will be familiar to you, others will be new. Gaining a solid understanding of all the related aspects of ELISE will help you make the most of your studies at UNSW.

The *ELISE* training webpages:

<https://subjectguides.library.unsw.edu.au/elise/aboutelise>

Equitable Learning Services (ELS)

If you suffer from a chronic or ongoing illness that has, or is likely to, put you at a serious disadvantage, then you should contact the Equitable Learning Services (previously known as SEADU) who provide confidential support and advice.

They assist students:

- living with disabilities
- with long- or short-term health concerns and/or mental health issues
- who are primary carers
- from low SES backgrounds
- of diverse genders, sexes and sexualities
- from refugee and refugee-like backgrounds
- from rural and remote backgrounds
- who are the first in their family to undertake a bachelor-level degree.

Their web site is: <https://student.unsw.edu.au/els/services>

Equitable Learning Services (ELS) may determine that your condition requires special arrangements for assessment tasks. Once the School has been notified of these, we will make every effort to meet the arrangements specified by ELS.

Additionally, if you have suffered significant misadventure that affects your ability to complete the course, please contact your Lecturer-in-charge in the first instance.

Academic Skills and Support: <https://student.unsw.edu.au/academic-skills>

Student Wellbeing, Health and Safety: <https://student.unsw.edu.au/wellbeing>

Equitable Learning Services: <https://student.unsw.edu.au/els> (formerly Disability Services Unit)

UNSW IT Service Centre: <https://www.it.unsw.edu.au/students/index.html>

10. Special Consideration

Please adhere to the Special Consideration Policy and Procedures provided on the web page below when applying for special consideration.

University Statement on Plagiarism

This statement has been adapted from statements by the St James Ethics Centre, the University of Newcastle, and the University of Melbourne.

Plagiarism is the presentation of the thoughts or work of another as one's own.¹ Examples include:

Direct duplication of the thoughts or work of another, including by copying work, or knowingly permitting it to be copied. This includes copying material, ideas or concepts from a book, article, report or other written document (whether published or unpublished), composition, artwork, design, drawing, circuitry, computer program or software, web site, Internet, other electronic resource, or another person's assignment without appropriate acknowledgement

Paraphrasing another person's work with very minor changes keeping the meaning, form and/or progression of ideas of the original;

Piecing together sections of the work of others into a new whole;

Presenting an assessment item as independent work when it has been produced in whole or part in collusion with other people, for example, another student or a tutor; and,

Claiming credit for a proportion a work contributed to a group assessment item that is greater than that actually contributed.²

Submitting an assessment item that has already been submitted for academic credit elsewhere may also be considered plagiarism.

The inclusion of the thoughts or work of another with attribution appropriate to the academic discipline does not amount to plagiarism.

Students are reminded of their Rights and Responsibilities in respect of plagiarism, as set out in the University Undergraduate and Postgraduate Handbooks, and are encouraged to seek advice from academic staff whenever necessary to ensure they avoid plagiarism in all its forms.

The Learning Centre website is the central University online resource for staff and student information on plagiarism and academic honesty. It can be located at:

11.

Topics To Be Covered		References
9	Linear first order differential equations	(1): App D3
	Modelling with first order differential equations	(1): App D3
	Homogeneous second order differential equations	(3): 2.2, 2.3
	Non-homogeneous second order differential equations	(2): 10.7

12. Tutorial Schedule



1

Welcome to MATH1031 Tutorials
Revision on basic algebra and trigonometry