

University of Wollongong
School of Mathematics and Applied Statistics

Information Sheet for
Math151 - General Mathematics 1A

Autumn Session 2006
Wollongong Campus

Subject Coordinator:

Associate Professor Graham Williams (Room 15.110)
Email: ghw@uow.edu.au
Phone: (02) 4221 3853
Consultation by appointment
The lecturer, Gerry Sozio, should be your first contact for questions about the subject.

Lecturer: Gerry Sozio
Email: gsozio@uow.edu.au
Phone: (02) 4221 3819
Consultation: Monday 19:30 – 20:30 (Rm 15.142)

Gerry Sozio is a part-time lecturer and will only be available at these times. Additional help times from lecturers will be advised at the first lecture.

Subject Prerequisites:

If you received a Band 4 or higher in the NSW HSC Mathematics course (or equivalent), you are not eligible to enroll in this subject.

Not to be counted with: MATH187, Math188, MATH141, MATH142, MATH161, MATH162 or MATH101 unless MATH151 has satisfactorily completed first.

This information sheet must be read in conjunction with the general information on educational issues and student matters provided in the document "Policies and Services of the University, Faculty and School" published by the School of Mathematics and Applied Statistics. A copy may be obtained from the subject coordinator or at <http://www.math.uow.edu.au/current/generic.html>.

Topics, Outline & Lecturers

Topics:

Introduction to Calculus	Indices
Logarithms	Vectors
Function Notation	Trigonometry
Exponential Growth and Decay	Data Modelling
Limits	Differentiation
Integration	

titles and contents.

Notices

MATH151 has a WebCT site which can be accessed via SOLS. Tutorial solutions, other handouts, notices and announcements will be posted at this site during the session. Most files will be in pdf format for downloading. *You should visit this site on a regular basis.*

Textbook & Reference Books

Text:

Notes for General Mathematics 1A: Autumn 2006

This book is available at the UniCentre Bookshop.

References:

Arya, J.C. and Lardner, R.W., Mathematics for the Biological Sciences – Prentice Hall, 1979 (soft cover)

Haines, B. and Haines, R., Work Out Pure Mathematics for Advanced Level – Macmillan 1986.

Higher School Certificate Mathematics (2 unit) text / reference books are a good resource for extra questions.

You are not required to purchase reference books. Several copies of all these books are available in the Library. These readings are recommended only and are not intended to be an exhaustive list. You are encouraged to use the Library catalogue and databases to locate additional readings with similar

Subject Learning Outcomes

The main purpose of this subject is to improve the Mathematics background of Science and other interested students to the minimum standard acceptable to the faculty of science for graduation with a Bachelor of Science degree.

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

- (i) apply mathematical principles to the interpretation of data, the formulation and solution of problems and the critical analysis of answers;
- (ii) use basic mathematical skills to solve a range of problems relevant to the scientific disciplines;
- (iii) graph two and three dimensional vectors and calculate vector sums, scalar products, dot products of vectors and the angle between two vectors.

- (iv) define the basic trigonometric ratios, sketch the graphs of trigonometric functions and to apply this knowledge to represent the periodic behaviour of natural events.
- (v) define the logarithmic and exponential functions and to apply these functions to natural growth and decay and to understand data represented by log-log and semi-log graphs.
- (vi) Differentiate basic functions, calculate rates of change and to apply anti-differentiation to the calculation of areas.

Lectures & Tutorials

Lectures for MATH151 are

Monday	17:30 – 19:30	Room 14.G01
Wednesday	17:30 – 18:30	Room 25.107

Practical Classes for MATH151 are

Wednesday	18:30 – 19:30	Room 25.107
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You are expected to attend *all Lectures* and Practicals in MATH151. Attendance will be monitored by a sign-on sheet that will be circulated each lecture. Experience has shown that poor attendance at lectures leads to poor performance in this subject.

Tutorials in MATH151 will begin in Week 2.

Attendance at assigned tutorials is *compulsory*. A record of tutorial attendance and your performance at those tutorials will be kept and may be taken into account in determining your final grade if you are on a borderline. You will not be counted as having attended a tutorial merely because you are physically present; your tutor must also judge that your participation has been satisfactory.

Assessment

Your final mark in MATH151 will be determined as follows*:

In-Class Tests	–	30%
Tutorial Assignments	–	10%
Final Exam	–	60%
Total	–	100%

*Attendance at tutorial classes and lectures may be taken into account.

Scaling of marks is **not** a standard procedure in this subject.

Note that you are not required to “pass” each individual component to receive a Pass grade in MATH151. However, you would seriously jeopardize your chances of passing this subject if you do not aim to be successful in every component of the assessment.

Calculators & Summary Sheet

Please note that single-line-display calculators are permitted during In-Class Tests and the Final Examination for this subject. They must not have alphanumeric keyboards (or capabilities) and they must not be programmable in any way. If you are not sure whether your calculator is acceptable, have it checked well before any exam.

Note that a one-page, A4-sized, double sided summary sheet is also permitted in the In-Class Tests and Final Examination for this subject.

Final Examination

The final examination in MATH151 will be as follows:

Duration:	3 hours and 15 minutes
Value:	60% of final mark.

The examination will be held during the examination period in June, at a time to be advised by the University. As a student enrolled in the University of Wollongong, you are required to be available for the entire examination period in June.

In-Class Tests

The In-Class tests for MATH151 will be as follows:

Date:	Wed 15 March 2006 (Week 4) Wed 12 April 2006 (Week 8) Wed 17 May 2006 (Week 12)
Time:	18:30 – 19:30
Location:	Room 25.107
Duration:	50 minutes
Value:	10% of final mark each.

If you are unable to attend the test you should contact the subject coordinator as soon as possible. Any request for special consideration regarding the test must be received by the subject coordinator within 7 days of the test.

Assignments

At the beginning of each weekly tutorial you will be given a Tutorial Assignment sheet. All questions must be attempted and must be handed in at the beginning of the tutorial in the following week. Selected questions (identified with an asterisk) will be marked during the ensuing week and returned one week after submission in class. All solutions to the Tutorial Assignments will be placed on the WebCT site. The eleven assignments will contribute a **total** of 10% towards your final mark in MATH151. Each tutorial assignment will be worth 1%, and the highest ten marks will count towards the final assessment.

- You must show working for each question on the assignment.
- Untidy or illegible work will not be assessed.
- Assignments will **not** be accepted outside classes or after the due date—unless you are successful in applying for special consideration (see later).
- Assignments **must** be submitted with the assignment cover sheet provided and you should make sure your receipt is initialed.
- Faxed or emailed assignments will not be accepted. You must submit your assignment in person.
- Assignments are only **part** of the expected weekly workload.
- You should keep a copy of all work submitted.

Assignments submitted will contribute towards your final assessment. *However, the primary purpose of each assignment is to give you feedback on your progress and understanding of the work.*

If you wish to seek special consideration for a late

assignment (because you missed a tutorial), you must apply for special consideration via SOLS, submit your documentation to the University Administration and then you should obtain a Special Consideration Form from the School Admin Assistant (Room 15.110). Submit the assignment with the completed form to the Admin Assistant as early as possible. In any case, assignments submitted more than 7 days after the original due date will not be accepted and other arrangements may be necessary. In this instance, contact the subject coordinator immediately.

Cheating and Plagiarism

The University does not tolerate cheating nor plagiarism and regards them very seriously. For more information, see the document "Policies and Services of the University, Faculty and School" and the section in the University Undergraduate Handbook entitled "Acknowledgement Practice/Plagiarism", or visit

<http://www.uow.edu.au/handbook/courserules/plagiarism.html>

Consultation

If you are having difficulty with MATH151, you are encouraged to seek advice from your lecturer or the subject coordinator (most tutors are casual staff and therefore are not available for consultation). For administrative matters, you should see the subject coordinator.

If you cannot come at the listed consultation times, contact the subject coordinator to arrange an appointment at a mutually convenient time

**If you are having any difficulty with MATH151,
you should seek advice before it is too late.**