



UNSW
SYDNEY

Course Outline

MATH1041

Statistics for Life and Social Sciences

School of Mathematics and Statistics

Faculty of Science

Semester 2, 2017

Contents

1. Staff	3
Staff Consultations.....	3
2. Course information	3
Course summary	3
Course aims	4
Relation to other mathematics courses	4
Course learning outcomes (CLO).....	4
Teaching strategies underpinning the course	4
3. Learning and teaching activities.....	5
Lectures and tutorial schedule	5
Class tutorials and online (computer) labs	5
Week 10 public holiday Monday 2 nd October, 2017	6
UNSW Moodle.....	6
Assessment overview.....	7
Online tutorials.....	7
Mid-semester test	7
Assignment.....	8
End of semester final examination	8
Schedule of all assessments	9
Course evaluation and development.....	9
Course schedule.....	9
Approximate schedule of topics	10
* The prescribed textbook is Moore et al. (9 th ed), see page 12. Calculator information	10
4. Expectations of students	11
School Policies	11
5. Academic integrity, referencing and plagiarism	11
6. Readings and resources	12
Course pack	12
Textbook.....	12
7. Administrative matters.....	12
Contacting the Student Services Office.....	12
8. Additional support for students	13
Applications for Special Consideration.....	14
Important Notes	15
University Statement on Plagiarism	16

1. Staff

Position	Name	Email	Contact Details
Course Authority/ Lecturer	Dr Jakub Stoklosa	j.stoklosa@unsw.edu.au	Location: RC-3071
Course Lecturer	Prof William Dunsmuir	w.dunsmuir@unsw.edu.au	Location: RC-2057
Student Services Office	Mrs Markie Lugton	Fy.mathsstats@unsw.edu.au	Location: RC-3072

Staff Consultations

Your lecturers will each have one or more office hours when they will be available in their office and happy to answer queries. If you would like to speak outside of these, please arrange an appointment via email.

There will be a Walk-in Consulting Service, in which a member of the statistics staff will be available for consultation, usually around lunchtime each day, Monday to Friday. If there are any ideas introduced in class that you don't understand, this is the ideal place to take your questions. Details of who will be available when are coming soon. Consultation times will be finalised in Week 1 and advertised during lecturer and on UNSW Moodle (<http://moodle.telt.unsw.edu.au>).

There will also be a MATH1041 Discussion Forum accessible through Moodle.

If you have any questions in class, do not hesitate to ask! Out of class times, feel free to use the advertised consultation hours or the discussion forum on Moodle.

2. Course information

Units of credit: 6

Pre-requisite(s): There are no formal pre-requisites for this course. The level of mathematics knowledge that is assumed is that you have achieved the equivalent of a mark of at least 60 in HSC Mathematics, or a minimum level of 70 in HSC General Mathematics.

Exclusions for MATH1041: ECON1203, ECON2292.

Timetable for course MATH1041:

<http://www.handbook.unsw.edu.au/undergraduate/courses/2017/MATH1041.html>

Course summary

This course will provide the following Science Faculty Graduate Attributes, in decreasing order of emphasis:

1. **Research, inquiry and analytical thinking abilities;** Statistics is an analytic field and statistical analysis plays a key role in the research process, hence there is a major focus on this attribute.

2. **Capability and motivation for intellectual development;** Foundation skills in statistical inference and an understanding of random variables is essential in order to achieve a higher-level understanding in most applied science majors.
3. **Information literacy;** Computers play an important role in modern statistics, hence there will be weekly online computing classes, and the computing skills you develop will be assessed in the computing assignment.
4. **Communication;** Discussions in class and written submissions for assessment will develop your skills in communicating statistical ideas.

Course aims

This course provides an introduction to statistics: the study of collecting, analysing, and interpreting data, which is fundamental to doing any form of quantitative research.

Relation to other mathematics courses

This course is primarily aimed at students intending to pursue a major in a field involving quantitative research (hence knowledge of introductory statistics is essential) but for which higher level mathematics or statistics is not essential. Maths courses MATH1231, MATH1241 or MATH1251 are pre-requisites for many later year mathematics courses, so if you have an interest in pursuing further study in mathematics or statistics, you should consider whether MATH1041 is the right course for you.

It is possible to study higher-level statistics courses after completing MATH1031 and MATH1041, provided that you received a credit grade in MATH1031. However, if you wish to complete a Major in Statistics, you will be better prepared if you study MATH1131 and MATH1231 (or MATH1141 and MATH1241 Higher Mathematics), as most of our stats major students do.

Course learning outcomes (CLO)

At the successful completion of this course you (the student) should be able to:

1. Recognise which analysis procedure is appropriate for a given research problem involving one or two variables.
2. Understand principles of study design.
3. Apply probability theory to practical problems.
4. Apply statistical procedures on a computer using *RStudio/R*.
5. Interpret computer output for statistical procedure.
6. Calculate confidence intervals and conduct hypothesis tests by hand for small datasets.
7. Understand the usefulness of Statistics in your professional area.

Teaching strategies underpinning the course

New ideas and skills are introduced and demonstrated in lectures, and then students develop these skills by applying them to specific tasks in tutorials, and assessment tasks. Assessment in this course will use problem-solving tasks of a similar form to those practiced in class tutorials and online computing tutorials, to encourage the development of the core analytical and computing skills

underpinning this course. Hence this course is structured with a strong emphasis on problem-solving tasks in tutorials and in assessment tasks.

3. Learning and teaching activities

Lectures and tutorial schedule

In MATH1041, each week there are four hours of lectures, a one hour classroom tutorial, and an online tutorial.

There will be **four hours of lecturers per week, during Weeks 1–12**. There are two lecture streams, and lectures have been scheduled in the Physics Lecture Theatre (see below). Each lecture stream is linked to one of your lecturers; however, the lecturers may swap from time to time so that over the session each stream may expect to have had lectures from both lecturers.

Lecture stream 1 (Professor William Dunsmuir)		Lecture stream 2 (Dr Jakub Stoklosa)	
Monday 2-4pm	Physics Theatre	Wednesday 9-11am	Physics Theatre
Wednesday 4-6pm	Physics Theatre	Friday 10-12pm	Physics Theatre

Classes	Mon	Tue	Wed	Thurs	Fri
Labs: <u>Weeks 2-3</u> <u>only</u>	10-11am 4-5pm	10-11am 12-1pm 5-6pm	11-12pm 1-2pm 3-4pm	9-10am 10-11am 11-12pm 12-1pm 1-2pm 2-3pm 3-4pm 4-5pm 5-6pm	9-10am 12-1pm 1-2pm 2-3pm 3-4pm
Tutorials: Weeks 2-13	9-10am 12-1pm	9-10am 12-1pm 4-5pm	12-1pm 2-3pm		

Note: Lecture and Tutorials on Monday 2nd October are cancelled due to a public holiday. No replacement Lecture for public holiday.

Class tutorials and online (computer) labs

Each student will have one classroom tutorial and one online tutorial per week, **starting from Week 2 and running to Week 13**. Please refer to your myUNSW timetable.

Class tutorials: The exercises for each week's tutorial are available in the Course pack and on UNSW Moodle. You will learn a lot more in tutorials if you regularly try the exercises before going to class.

As part of University Policy, students are required to attend tutorials, and a record will be kept of tutorial attendance.

Short solutions to selected tutorial exercises are available in the Course pack. In cases where there is no solution in the Course pack, you will be given an opportunity to work through the exercise in class and get feedback from your tutor.

You may change your tutorial through myUNSW if necessary up until the end of Week 1. After Week 1, it will only be possible to change classes at the Student Services Office, and proposed changes will only be approved if you present evidence in the form of work commitments or a timetable clash.

Please attend your tutorial. If however, due to unforeseen circumstances you miss a tutorial, you are welcome to attend another class later in the week to catch up if there is sufficient space in the class. Please check with the tutor in charge of that class first in this case.

Online tutorials: This year the computer tutorials for MATH1041 are taking a new form (see page 7 for further details). We will be using *RStudio* which is an interface to the freely available statistical language *R* (see <http://www.r-project.org>).

RStudio can be downloaded and installed at home from:

<http://www.rstudio.com/products/rstudio/download/>.

We encourage you to install this (free program) on your own computer as well as using the UNSW labs. We will be having online tutorials for Weeks 2 to 13. There is still a computer lab booked, as in your myUNSW timetable, however these will only be staffed for Weeks 2 and 3. Please attend the labs in those weeks to become familiar with *RStudio*. **From Week 4 onwards, the online tutorials completed in your own time, and may be done in the lab or on your own computer.**

The final mark for this course includes 10% from the online tutorials (further details of regarding online computing tutorials will be announced in lectures and on Moodle).

Help with *RStudio* can be obtained from the regular consultation times for the course, and in addition there will be *RStudio* consultants available in the computer labs (UNSW computer labs are located in the Red Centre RC-G012 and RC-M020) at times to be announced (on Moodle).

Week 10 public holiday Monday 2nd October 2017

Please note that there is a public holiday on Monday 2nd October (Week 10).

UNSW Moodle

The School of Mathematics and Statistics uses the Learning Management System called Moodle. To log into Moodle, use your zID and zPass at the following URL: <http://moodle.telt.unsw.edu.au>

In the general information section there is a link called "Maths & Stats Marks". This takes you to a page where you can log in with your zPass and see the marks recorded for various assessment tasks.

If you are unable to log in to Moodle or cannot access MATH1041 once logged in, you should contact the IT Service Centre. Contact information is provided on the Moodle login page.

You should check UNSW Moodle regularly, and especially around the time that assessments are due. A useful summary of the course schedule is given on pages 9 – 10.

Study space is available in the foyer of the Centre Wing of the Red Centre. There are two computer laboratories (RC-G012 and RC-M020), and these are open from 8am – 9pm Monday to Friday on teaching days. You are welcome to use either lab, provided the lab area in question is not being used by a class. Any changes to lab opening hours will be reported at the website:

<http://www.maths.unsw.edu.au/currentstudents/computing-information>

Assessment overview

The final mark for MATH1041 will be made up as follows (see also page 9):

Online tutorials	10%
Mid-semester test	15%
Assignment	15%
Final examination	60%

Students can expect their in-session class assessment marks to be in the School's database within a week (at most a fortnight) of the assessment being sat. These marks are then available to you through the Student Web Portal accessed via the Mathematics and Statistics marks link on the MATH1041 page on the UNSW Moodle. It is your responsibility to check that these marks are correct and you should keep marked tests/assignments until the end of semester in case an error has been made in recording the marks. If there is an error, either speak to your tutor or bring your test paper to the Student Services Office as soon as possible, but no later than Friday Week 13. Once the final exam period commences, no disputes of during-semester marks will be considered.

All assessment tasks will evaluate your progress towards the learning outcomes outlined above.

Assessment criteria: UNSW assesses students under a standards based assessment policy. For how this policy is applied within the School of Mathematics and Statistics, please visit the web site:

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

In assessments, we look for a demonstrated understanding of key concepts and analysis procedures. We will award marks on the basis of correctness of final responses, correctness of working used to derive the final answer, and the logic of the setting out of the response. In the case of written responses (as opposed to symbolic, numerical or graphical responses), we are just as interested in your *reasoning* as we are in your final answer.

Online tutorials

Rationale: Online tutorials are designed to give immediate in-session feedback to students on their progress and mastery of the material. These tutorials are done using the MapleTA system which can be accessed via Moodle. Your "User login" is your zID (z followed by your UNSW student number) and the "Password" is your zPass. In Weeks 2 and 3 there is a computer lab booked, as in your myUNSW timetable. Please attend the labs in those weeks to become familiar with *RStudio*.

Mid-semester test

Rationale: The mid-semester test is held under exam conditions in Week 8. It is designed to give students feedback on progress and mastery of the first parts of the course, **under exam conditions** and to evaluate progress towards the stated learning outcomes.

More information about what will be assessed in the class test will be made available closer to the time in lectures and on Moodle.

The mid-semester test will be held in your tutorial. *You must attempt the test in the tutorial in which you are **formally enrolled only**.*

You may bring your own UNSW-approved Calculator to the mid-semester test. Calculators will not be provided for you.

Illness and misadventure: If you miss the mid-semester test due to illness or misadventure, then submit relevant documentation to the Course Authority Dr Jakub Stoklosa, located in the Red Centre room 3071, within 3 days of the test or as soon as practicable in order to apply to sit an additional assessment task.

Assignment

Rationale: The rationale for assignments is to give students feedback on their progress and mastery of the material, and to obtain measures of student progress towards the stated learning outcomes. Assessing using take-home assignments rather than under exam conditions offers the opportunity to assess more challenging questions, and gives you the opportunity to think more deeply about your responses. It also enables the assessment of computer-aided data analysis and problem solving.

The computing assignments will be made available on Moodle at least 2 weeks before they are due for submission. Assignments will require the use of *RStudio*.

Details of how and when the assignment is to be submitted will be made available in lectures and on Moodle, 3-4 weeks before the assignment is due.

End of semester final examination

The duration is two hours and is weighted 60% of your final mark.

Rationale: The final examination will assess student mastery of the material covered in classes.

Note:

- You will be able to view your final exam timetable once Exams Central has finalised the timetable. Please visit the web page: <https://my.unsw.edu.au/student.unsw.edu.au/exams> for details.
- It is very important that you understand the University's rules for the conduct of Examinations and the penalties for **Academic Misconduct Guide**. This information can be accessed through myUNSW at: <https://student.unsw.edu.au/exams> NB: In recent years there have been cases where severe penalties have been imposed for misconduct in relation to tests and exams in Maths courses.
- If you are unwell / miss your **final examination**, please refer to the Special Consideration Policy by visiting the website: <https://student.unsw.edu.au/special-consideration>
- As from S1, 2016 students with a **final mark in the range of 45-49** will be permitted to take the Additional Assessment Exam as a Concessional Additional Assessment (AA). There will be no notification to the individual student of the right to take the Concessional AA, but the details of the courses AA exam schedule will be provided on the School's website Notice Board, after the Provisional Results are published (normally 1 week after the exam period ends).

The final mark after completing the Concessional AA will not increase to a mark higher than 50. Website to School Notice Board: <http://www.maths.unsw.edu.au/currentstudents/current-students>

Schedule of all assessments

Task	When Due	Where	Weight	Duration	Material
Online tutorials (12 modules)	End of each week	MapleTA	10%	2 weeks for each module	All topics
Mid-semester test	Week 8	Your tutorial	15%	45 minutes	Weeks 1-6
Assignment	Week 11	TBA	15%	2 weeks	TBA
Final examination	TBA	TBA	60%	2 hours	All topics

Course evaluation and development

The School of Mathematics and Statistics evaluates each course each time it is offered. We carefully consider your responses and their applications for course development.

Course schedule

Four general topics are covered in MATH1041:

Descriptive Statistics; useful tools for graphically and numerically summarising data.

Study Design; some key ideas to consider when collecting data.

Probability Theory; an introduction to probability and random variables. Many of the ideas developed in probability theory depend on an appropriate study design.

Statistical Inference; how to make general statements (*inferences* about populations) based on just a sample of data. You will learn a set of powerful and important inferential tools for quantitative research, particularly the life and social sciences, which will come in handy later in your degree and probably when you enter the workforce.

These topics are closely intertwined. In particular, you need a sound knowledge of key Probability Theory concepts (Weeks 4-6) in order to gain a deep understanding of Statistical Inference (Weeks 6-12). So please make sure you prepare well for the Mid-semester test, which assesses core Probability Theory material!

Statistical Inference involves some quite subtle concepts, and it often takes people a while to understand the core ideas. Hence, 7 weeks of the course are devoted to inference, to give you as much time as possible to master these subtle but important concepts. The following table shows the order in which the course material is covered and approximately which week we will begin each topic. Note that sometimes a topic may take more or less than one week, so some variations from this schedule are inevitable.

Approximate schedule of topics

Week	Lecture topic	Text*
1	Descriptive Statistics: Graphical and numerical summaries	§1.1-3
2	Transformations Relationships between variables	§2.2 §2.1-4
3	Study Design: Design of experiments Sampling designs	§3.2 §3.3
4	Probability Theory: Probability General probability rules	§4.1-2 §4.5
5	Random variable Means and variances of random variables	§4.3 §4.4
6	The Normal distribution	§1.4
	Statistical Inference: Sampling distribution of counts and proportions	§5.3
7	The Central Limit Theorem Central Limit Theorem applications	§5.2
8	Confidence intervals	§6.1-2
	Hypothesis testing	§6.2
9	Inference about a population proportion	§8.1
	Inference about the mean using a <i>t</i> -distribution	§7.1
10	Use and abuse of hypothesis testing	§6.3
	Comparing two means	§7.2
11	Data analysis for two-way tables	§2.6
	Inference for two-way tables	§9.1-2
12	Inference for regression	§10.1
	Lectures are scheduled to finish in Week 12.	
	Tutorials continue in Week 13	

* The prescribed textbook is Moore *et al.* (9th ed), see page 12.

Calculator information

For end of semester UNSW exams, students must supply their own calculator. Only calculators on the UNSW list of approved calculators may be used in the end of semester exams. Before the exam period, calculators must be given a “UNSW approved” sticker, obtained from the School of Mathematics and Statistics Office, and other student or Faculty centres. The UNSW list of calculators approved for use in end of semester exams is available at: <https://student.unsw.edu.au/exams>

4. Expectations of students

School 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:

<http://www.maths.unsw.edu.au/currentstudents/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.

5. Academic integrity, referencing and plagiarism

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.¹ 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 and **plagiarism** can be located at:

- The *Current Students* site <https://student.unsw.edu.au/plagiarism>, and
- The *ELISE* training site <http://subjectguides.library.unsw.edu.au/elise/presenting>

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

¹ International Center for Academic Integrity, 'The Fundamental Values of Academic Integrity', T. Fishman (ed), Clemson University, 2013.

6. Readings and resources

Course pack

It is strongly recommended that you purchase a MATH1041 Course pack from the UNSW Bookshop. This contains essential information and learning resources that will form the basis of all MATH1041 classes.

Textbook

It is recommended that you purchase the following textbook:

Introduction to the Practice of Statistics, by David S. Moore, George P. McCabe, and Bruce A. Craig, 9th Edition, W.H. Freeman and Co., New York.

Not only will this text be useful for this course, but it will be a handy book to have available on your shelf in later years!

MATH1041 is closely based on the above Moore *et al.* text, and students need to have access to it. It can be purchased from the UNSW bookshop, or used in the library in Special Reserve. Most tutorial exercises come from this text.

For students who are looking for additional resources to assist their study, there are additional learning resources related to the textbook available from the textbook's website:

<http://www.macmillanlearning.com/Catalog/studentresources/ips8e> (Including some useful applets and additional exercises).

7. Administrative matters

Contacting the Student Services Office

Please visit the School of Mathematics and Statistics web-site for a wide range of information on School Policies, Forms and Help for Students by visiting the "**Student Services**" page.

For information on Courses, please go to "Current Student", "Undergraduate and/or Postgraduate" "**Courses Homepage**" for information on all **course offerings**.

The "Student Notice Board" can be located by going to the "Current Students" page; Notices are posted regularly for your information here. Please familiarise yourself with the information found in these locations. The School web page is found: <http://www.maths.unsw.edu.au>

If you cannot find the answer to your queries on the web pages you are welcome to contact the Student Services Office directly. The First Year Advisor in the Student Services Office is Mrs Markie Lugton. All administrative enquiries concerning first year Mathematics courses should be sent to M Lugton, either:

- By email to fy.mathsstats@unsw.edu.au
- By phone: 9385 7011
- Or in person to the Red Centre building, Level 3, room 3072

Change of tutorials, due to timetable clashes or work commitments, permission to take class tests outside your scheduled tutorial, advice on course selection and other administrative matters are handled in the Student Services Office. Constructive comments on course improvement may also

be emailed to the Director of First Year Mathematics, Dr Jonathan Kress. Should we need to contact you, we will use your official UNSW email address of Zstudentno@student.unsw.edu.au in the first instance. **It is your responsibility to regularly check your university email account. Please state your student number in all emails to the Student Services Office.**

8. Additional support for students

- The Current Students Gateway: <https://student.unsw.edu.au/>
- Academic Skills and Support: <https://student.unsw.edu.au/academic-skills>
- Student Wellbeing, Health and Safety: <https://student.unsw.edu.au/wellbeing>
- Disability Support Services: <https://student.unsw.edu.au/disability-services>
- UNSW IT Service Centre: <https://www.it.unsw.edu.au/students/index.html>

Applications for Special Consideration

If you feel that your performance in, or attendance at a final examination has been affected by illness or circumstances beyond your control, or if you missed the examination because of illness or other compelling reasons, you may apply for special consideration. Such an application may lead to the granting of Additional Assessment.

It is essential that you take note of the rules 1, 2, 3 and 4, which apply to applications for special consideration in all first year Mathematics courses.

1. Within 3 days of the affected examination, or at least as soon as possible, you must submit a request for Special Consideration to UNSW Student Central **ON-LINE** with supporting documentation attached.

Visit website to Apply for Special Consideration: <https://student.unsw.edu.au/special-consideration>

2. Please do not expect an immediate response from the School. All applications will be considered together. See the information below.

3. **You will NOT be granted Additional Assessment in a course if your performance in the course** (judged by attendance, class tests, assignments and examinations) **does not meet a minimal standard**. A total mark of greater than 40% on all assessment not affected by a request for Special Consideration will normally be regarded as the minimal standard for award of Additional Assessment.

4. It is YOUR RESPONSIBILITY to find out from the School of Mathematics and Statistics, whether you have been granted Additional Assessment and when and where the additional assessment examinations will be held. Do NOT wait to receive official results from the university, as these results are not normally available until after the Mathematics Additional Assessment Exams have started.

Information about award of Additional Assessment and a provisional list of results will be made available on the Mathematics and Statistics Marks page later in the semester. A link to the Mathematics and Statistics Marks page is provided on Moodle.

5. **Additional Assessment exam will be either 4th or 5th December 2017**. A link to the Additional Assessment timetable, including locations, will be placed on the Current Students Notice Board under heading "Special Consideration and Additional Assessment" information.

6. The timetables for the Additional Assessment examinations will be available on the Mathematics website at the same time as the provisional list of results. A link to the timetable will be placed on the Current Students Notice Board under heading "Special Consideration and Additional Assessment" information.

Web link: <http://www.maths.unsw.edu.au/currentstudents/current-students>

7. If you have two Additional Assessment examinations scheduled for the same time, please consult the Student Services Office either by email or phone (fy.mathsstats@unsw.edu.au or 9385 7011), so that special arrangements can be made.

8. You will need to produce your UNSW Student Card to gain entry to the Additional Assessment examination.

Important Notes

- The Additional Assessment exam may be of a different form to the original exam and must be expected to be at least as difficult.
- If you believe your application for Special Consideration has not been processed, you should immediately consult the Director for First Year Mathematics, Dr Jonathan Kress (Room 3073, Red Centre).
- If you believe that the above arrangements put you at a substantial disadvantage, you should send full documentation of the circumstances to: Director of First Year Mathematics, School of Mathematics and Statistics, University of NSW, Sydney NSW 2052, at the earliest possible time.
- 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 Disability Support Services who provide confidential support and advice. Their web site is: <https://student.unsw.edu.au/disability>

Disability Support Services (DSS) 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 DSS.

- Additionally, if you have suffered misadventure during semester then you should provide full documentation to the Director of First Year Mathematics as soon as possible. In these circumstances it may be possible to arrange discontinuation without failure or to make special examination arrangements.

Professor B Henry
Head, School of Mathematics and Statistics

University Statement on Plagiarism

Plagiarism is the presentation of the thoughts or work of another as one's own. 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.
- 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: www.lc.unsw.edu.au/plagiarism

The Learning Centre also provides substantial educational written materials, workshops, and tutorials to aid students, for example, in:

- Correct referencing practices;
- Paraphrasing, summarising, essay writing, and time management;
- Appropriate use of, and attribution for, a range of materials including text, images, formulae and concepts.

Individual assistance is available on request from The Learning Centre.

Students are also reminded that careful time management is an important part of study and one of the identified causes of plagiarism is poor time management. Students should allow sufficient time for research, drafting, and the proper referencing of sources in preparing all assessment items.