# Course Outline

# &

# Tutorial Exercises

**MATH1041**

**Statistics for Life and Social Sciences**

School of Mathematics and Statistics

Faculty of Science

Term 2, 2019

# Table of Contents

# 2. Staff

| Position | Name | Email | Room |
|---|---|---|---|
| Course Authority | Dr Jonathan Kress | j.kress@unsw.edu.au | RC-3073 |
| Lecturer, stream A | Dr Eka Shinjikashvili | eka@unsw.edu.au | RC-2054 |
| Lecturer, stream B | Dr Laure Helme-Guizon | l.helme-guizon@unsw.edu.au | RC-3090 |
| Student Services Office | Mrs Markie Lugton | ug.mathsstats@unsw.edu.au | RC-3072 |

Your lecturer will have office hours when they are available in their office and happy to answer queries. If you would like to speak outside of this hour, 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, 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 lectures and on UNSW Moodle (http://moodle.telt.unsw.edu.au). Staff consultation times will be posted on Moodle and on the School of Mathematics and Statistics website.

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.

# 3. Administrative Matters

## Contacting the Student Services Office

Please visit the School of Mathematics and Statistics website 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 ug.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 either your lecturer or 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](mailto: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.**

# 4. 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://timetable.unsw.edu.au/2019/MATH1041.html](http://timetable.unsw.edu.au/2019/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. Interpret computer output for a statistical procedure.
5. Calculate confidence intervals and conduct hypothesis tests by hand for small datasets.
6. Understand the usefulness of Statistics in your professional area.
7. Apply statistical procedures on a computer using RStudio/R.

## 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 practised 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.

# 5. 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.

Lectures and tutorials run in all weeks from 1 to 10 unless noted otherwise below.

| Classes | Mon | Tue | Wed | Thurs | Fri |
|---|---|---|---|---|---|
| **Lecture A** Shinjikashvili | 4pm to 6pm **Burrows Th.** (Weeks:1,3-11) | | 9am to 11am **Burrows Th.** (Weeks:1-10) | | |
| **Lecture B** Helme-Guizon | | | 4pm to 6pm **Burrows Th.** (Weeks:1-10) | | 12pm to 2pm **Mathews Th.B** |
| **Tutorials:** Weeks 1-10 | | 3-4 pm | 2-3 pm | 1-2 pm 4-5 pm | 2-3pm |
| Note: The stream A **lectures** on **Monday 10 June (Week 2)** will be cancelled due to a public holiday. There will be replacement Lectures in Week 11. | | | | | |

## Classroom Tutorials and online tutorials

**Classroom tutorials**: Each student will have one classroom tutorial per week, **starting from Week 1 and running to Week 10**. Please refer to your myUNSW timetable. As part of University Policy, **attendance is compulsory for all classroom tutorials** and a roll will be called at all tutorial classes. 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. Just go to the class and explain the situation to the tutor in charge of that class.

The exercises for each week's classroom tutorial are available in the MATH1041 Course Pack (purchased from the UNSW Bookshop) and on UNSW Moodle. The main reason for having Classroom Tutorials is to give you a chance to tackle and discuss problems which you find difficult or don't fully understand, so it is important to try at least a selection of tutorial problems before attending your class so that you know the questions you would like to ask of your tutor.

Short solutions to selected tutorial exercises are available in the MATH1041 Course Pack. In cases where there is no solution in the MATH1041 Course Pack, you will be given an opportunity to work through the exercise in class and get feedback from your tutor.

There is an additional tutorial in the tutorial booklet in week 11, covering the material of the last chapter, which you will need to do in your own time since there is no classroom tutorial in week 11. Detailed solutions are provided at the back of the book.

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 your present evidence in the form of work commitments or a timetable clash.

**Online Tutorials / computer labs:** There is a weekly online tutorial due at 6pm on **Tuesday** at the end of every week starting from week 1 and running to Week 10. There will also be an additional non-marked tutorial in week 11 to help you master the material of the last chapter.

The online tutorials are an integral part of this course. Your best marks from 8 of the 10 online tutorials will be counted towards your final mark.

We will be using *RStudio* which is a graphical interface to the freely available statistical language *R.*

*R can be downloaded and installed at home from:* 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 these free programs (note that you need both R and R-studio) on your own computer.

Online tutorials can be completed in your own time and may be done on your own computer or in the School of Mathematics and Statistics labs in the Red Centre (RC-G012 and RC-M020).

The Red Centre labs (RC-G012 and RC-M020) are open from 8am – 9pm Monday to Friday on teaching days. You are welcome to use the labs, 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

**There are still two computer labs booked, as in your myUNSW timetable, for Weeks 2 and 3. Please attend these labs to become familiar with RStudio. During the labs, your lab tutors will go through Online Tutorials 2 and 3.**

# UNSW Moodle

The School of Mathematics and Statistics uses the Learning Management System called Moodle. Log in to Moodle to find announcements, general information, notes, lecture slides, classroom tutorial and homework problems and links to online tutorials and assessments.

To log into Moodle, use your zID and zPass at the following URL:

http://moodle.telt.unsw.edu.au

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.

**Your marks**: In the general information section on MOODLE, 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. It is your responsibility to check that these marks are correct, and you should keep marked tests/assignments until the end of term 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 10. Once the final exam period commences, no disputes of during-term marks will be considered.

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.

## Maple TA

Online tutorials and online assessments in this course use a system called Maple TA.  Information on how to  access and use Maple TA is provided on Moodle.

# 6. Assessment

## Assessment Overview

The final raw mark for MATH1041 will be made up of the following weightings (see also page 9):

| | |
|---|---|
| Online tutorials | 10% |
| Mid-term online test | 15% |
| Assignment | 15% |
| Final examination | 60% |

Each type of assessment is described below in detail.

Note:

- You will be able to view your final exam timetable on myUNSW. Details of when this timetable will be released is available on the university website.

  https://student.unsw.edu.au/dates-and-timetables

- 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/conduct

  In recent years there have been cases where severe penalties have been imposed for misconduct in  relation to tests and exams in Maths courses.

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

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

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.

- For information on how the School implements special consideration policies for assessments during the term and the final examination, refer to the School's website:

    https://www.maths.unsw.edu.au/currentstudents/special-consideration-illness-misadventure

# 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 with a tutor in attendance to help and answer questions**. Please attend the labs in those weeks to become familiar with *RStudio*.
The best 8 of the 10 Weekly Online Tutorials will contribute 10% of your final mark.

Note:

- Your work on this must be your own work, but you are encouraged to discuss the methods required with other students.

- The number of attempts is unlimited and only your best attempts is recorded

- Only a limited number of users can have simultaneous access to Maple TA, so **do NOT** leave your work on these to the last day when the server may be busy.

- **No deadline extensions will be granted.** You should attempt these tests with sufficient remaining time to allow for unplanned services interruptions.

# Online Supervised Mid-term Test

**Rationale:** The mid-term test is held under exam conditions in Week 6 in the computer labs. 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. The contents of chapters 1 to 4 will be examined.

You will not have access any notes or to the internet during the test. You may bring your own UNSW-approved Calculator to the mid-term test.

All of the possible test problems will be provided prior the midterm test on Maple TA. There you will also find a practice test with the same format as the actual Online Tutorial Lab Tests. You are allowed an unlimited number of attempts at the practice tests.

You are expected to have worked out exactly how to answer the questions before you attend the tests because you are allowed unlimited practice at the actual test questions, and you can view your results for these tests in the Maple TA gradebook.

Details will also be given on Moodle on how to enrol to a specific time slot to sit for this test during Week 6.

**Illness and misadventure**: If you miss the mid-term test due to illness or misadventure, then you may apply for Special Consideration online (all relevant documentation is required). See page 13.

## 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 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, at least 2 weeks before the assignment is due.

## End of Term 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.

- 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

## Schedule of All Assessments

| Task | When Due | Where | Weight | Duration | Material |
|------|----------|-------|--------|----------|----------|
| Online tutorials (10 modules) | End of each week | MapleTA | 10% | 1 week for each module | All topics |
| Mid-term test | Week 6 | Computer Lab | 15% | 45 minutes | Weeks 1-4 |
| Assignment | Week 9 | TBA | 15% | 2 weeks | TBA |
| Final examination | TBA | TBA | 60% | 2 hours | All topics |

## Calculator information

For end of term UNSW exams, students must supply their own calculator. Only calculators on the UNSW list of approved calculators may be used in the end of term 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 term exams is available at: https://student.unsw.edu.au/exams

# 7. Course Schedule, Evaluation and Development

## 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 Content

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 3-5) in order to gain a deep understanding of Statistical Inference (Weeks 6-10). So please make sure you prepare well for the Mid-term 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, five 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 |
|:---:|---|
| 1 | **Descriptive Statistics:** <br> Graphical and numerical summaries |
| 2 | Scatterplots and correlation <br> Least-squares regression |
| 3 | **Study Design:** <br> Design of experiments <br> **Probability Theory**: <br> Probability <br> Independence and conditional probability |
| 4 | Discrete random variable <br> Means and variances of random variables <br> Binomial Distribution |
| 5 | Continuous random variables <br> Density curves <br> The Normal distribution |
| 6 | **Statistical Inference** <br> Point estimation and simple random samples <br> Confidence intervals and the *t*-distribution |
| 7 | Hypothesis testing <br> The Central Limit Theorem and Applications |

| 8 | Inference about a population proportion |
|---|---|
| 9 | Inference for two population parameters<br>Inference for two-way tables |
| 10 | Inference for linear regression |

# 8. 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.

# 9. 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.

# 10. Readings and Resources

## Course Pack

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

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

## 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, (2017), 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.

# 11. Getting help outside tutorials

## Stats walk-in Consultation services

There will be a Walk-in Consulting Service, in which a member of the statistics staff (including your lecturer) will be available for consultation. 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 lectures and on UNSW Moodle (http://moodle.telt.unsw.edu.au).  Please note that no appointment is necessary, this is a drop-in  arrangement to obtain one-on-one help.

## Lab Consultants

For help with the R-studio computing component of the first year courses, consultants will be available in the Red  Centre lab RC-G012B from 11am to 4pm each teaching day in weeks 1 to 9. For more details, visit website:

https://www.maths.unsw.edu.au/currentstudents/maple-lab-consultants

## 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

# 12. Applications for Special Consideration

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

Special Consideration web site: https://student.unsw.edu.au/special-consideration

Please note that the application is not considered by the Course Authority, it is considered by a centralised team of staff at the Nucleus Student Hub.

The School will contact you (via student email account) after special consideration has been granted to reschedule your missed assessment, for a *lab test or paper-based test* only.

For applications for special consideration for *assignment extensions*, please note that the new submission date and/or outcome will be communicated through the special consideration web site only, no communication will be received from the School.

For *final exams* with special consideration granted, the Exams Unit will email the rescheduled "supplementary exam" date, time and location to your student zID email account directly. Please ensure you regularly check your student email account (zID account) for this information.

The supplementary exam period/dates can be found at this web site:
https://student.unsw.edu.au/exam-dates

Please ensure you are aware of these dates and that you are available during this time. Thank you.


## Important Notes

- If you believe your application for Special Consideration has not been processed, you should email **specialconsideration@unsw.edu.au** immediately for advice.

- 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 significant misadventure that affects your ability to complete the course, please contact the Director of First Year, Associate Professor Jonathan Kress by email or in person for advice. The contact details are the Red Centre, level 3 room RC-3073 or by email to j.kress@unsw.edu.au

  Professor B Henry
  Head, School of Mathematics and Statistics


## Special consideration for the Online Midterm / laboratory test

It is because the computing tests can be sat at many different times, medical, or other reasons for missing the test will generally not be accepted. For this reason, you are advised to choose an early time to sit the test. If you consider that you have an exceptional reason for missing the test then you must speak to Dr Mak, Lecturer in Charge of First Year Computing as soon as possible after the tests have been completed.

Note that a medical or similar resit may be denied if there is insufficient evidence of preparation for the missed test.

Tutors do not have permission to accept medical certificates for the computing test.

If possible, special arrangements for the computing laboratory test will be made for students with supporting documentation from Disability Services. If you wish to exercise this option, you must contact Dr Mak before the laboratory tests have commenced so that any needed special facilities can be implemented.

Dr Chi Mak (Room: Red Centre 4073) Lecturer-in-Charge, First Year Computing


# 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 is actually contributed to.
- 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.