



UNSW
THE UNIVERSITY OF NEW SOUTH WALES

FACULTY OF SCIENCE

SCHOOL OF BIOTECHNOLOGY AND
BIOMOLECULAR SCIENCES

BIOC2181

FUNDAMENTALS OF BIOCHEMISTRY

Course Manual

Session 1, 2018

BIOC2181 FUNDAMENTALS OF BIOCHEMISTRY

COURSE MANUAL

2018

TABLE OF CONTENTS

	Page Number
Course Outline: Information about the Course.....	2
Staff Involved in the Course.....	3
Course Details.....	3
Course Schedule.....	4
Assessment Tasks and Feedback.....	5
Course Topics and Additional Class Information.....	6
Additional Resources and Support.....	8
Required Equipment, Training and Enabling Skills.....	8
Administration Matters.....	9
UNSW Academic Honesty and Plagiarism	13
Metabolic Pathways	15
Laboratory Safety	16
Safety declaration	20
Laboratories: Spectrophotometry.....	21
Enzymes.....	37
Glycolysis.....	54
Oxygen Electrode Simulation.....	64
Separation Techniques.....	65
Glucose Tolerance Test.....	73
Appendix: Instrumentation.....	80

BIOC2181 Fundamentals of Biochemistry - Course Outline

1. Information about the Course

NB: Some of this information is available on the [UNSW Handbook](#)¹

Year of Delivery	2018			
Course Code	BIOC2181			
Course Name	Fundamentals of Biochemistry			
Academic Unit	School of Biotechnology and Biomolecular Sciences			
Level of Course	Level 2			
Units of Credit	6UOC			
Session(s) Offered	Session 1			
Assumed Knowledge, Prerequisites or Co-requisites	BABS1201 Molecules, Cells and Genes and CHEM1011 Chemistry A or CHEM1031 Higher Chemistry A or CHEM1831 Chemistry for Health, Exercise and Medical Science			
Hours per Week	6 HPW			
Number of Weeks	12 weeks			
Commencement Date	Monday 26 th February, 2018			
Summary of Course Structure (for details see 'Course Schedule')				
Component	HPW	Time	Day	Location
LECTURES	2-3			
Lecture 1	1	10 am	Monday	CLB 6
Lecture 2	1	3 pm	Tuesday	CLB 6
Lecture 3	1	5 pm	Thursday	Mathews B
LABORATORIES	3			
Lab – Option 1	3	10 am - 1 pm	Thursday	Wallace Wurth 122 Wallace Wurth 123
Lab – Option 2	3	2 pm - 5 pm	Thursday	Wallace Wurth 122 Wallace Wurth 123
TUTORIALS/SKILL SESSIONS	1-2			
Large Group Tutorials	1	10 am	Weeks 5 & 12	CLB 6
Small Group Skill Sessions*	1	10 am or 2 pm*	Thursday Weeks 2, 5, 8 and 11*	Wallace Wurth 122 / 123
TOTAL	6			
Special Details	* Small Group Skill Sessions are held during weeks in which no wet laboratory practicals are scheduled. These will be located in the teaching laboratories and will be held during the first hour of the allotted laboratory times.			

¹ UNSW Online Handbook: <http://www.handbook.unsw.edu.au>

2. Staff Involved in the Course

Staff	Role	Name	Contact Details	Consultation Times
Course Convenor		Dr Nirmani Wijenayake	b.wijenayakeg@unsw.edu.au	By appointment
Additional Teaching Staff	Lecturers	Dr Anne Galea A/Prof Vladimir Sytnyk Dr Rebecca LeBard A/Prof Kyle Hoehn	a.galea@unsw.edu.au v.sytnyk@unsw.edu.au r.lebard@unsw.edu.au k.hoehn@unsw.edu.au	By appointment
	Demonstrators & Tutors	See Moodle for demonstrator lists	Moodle Discussion Boards	Scheduled laboratory and skill session times
	Technical & Laboratory Staff	Dr Kate Roberts Dr Owen Sprod	Not Applicable	Scheduled laboratory times

3. Course Details

Course Description²	BIOC2181 Fundamentals of Biochemistry introduces modern biochemistry, fundamental aspects of the structure-function relationships of proteins and an overall coverage of intermediary metabolism. Major topics covered include: the nature and functions of enzymes; the metabolic working of cells, tissues and organs; the interrelationships between pathways of carbohydrate, lipid and amino acid metabolism; the vital roles of enzymes and hormones in catalysis and metabolic regulation; the energy-trapping mechanisms of animals and plants; and interesting variations on the central metabolic pathways in various life forms. The practical coursework complements the lectures and introduces the principles of biochemical analysis.
Course Aims³	<ul style="list-style-type: none"> • This course aims to introduce students to modern biochemistry with a particular emphasis on how we, as humans, convert foods to useful energy. • This course also aims to provide a solid context for new learning material by providing clinical, medical and everyday applications that correspond to the central themes and topics. • Practicals are designed to reinforce the core biochemical concepts covered in lectures and introduce students to current laboratory techniques and biochemical assays.
Student Learning Outcomes⁴	<p>By the end of this course, you will be able to:</p> <ul style="list-style-type: none"> • Describe and contrast the major metabolic pathways in humans. • Explain the various mechanisms that control and regulate anabolic and catabolic processes simultaneously in the cells of living tissues. • Discuss the integration of major metabolic pathways in the context of various human conditions, such as fasting, starvation, obesity and exercise. • Follow the correct procedures for working safely and effectively in a modern biochemical laboratory. • Perform a range of biochemical assays, analytical techniques and biochemical calculations through the application of current scientific methods in an experimental environment.

² UNSW Handbook: <http://www.handbook.unsw.edu.au>

³ [Learning and Teaching Unit: Course Outlines](#)

⁴ [Learning and Teaching Unit: Learning Outcomes](#)

4. Course Schedule

Week No.	Week Begins	LECTURE/TUTORIAL Monday 10am CLB 6	LECTURE Tuesday 3pm CLB 6	LECTURE Thursday 5pm Mathews B	PRACTICAL/SKILL SESSION Thursday 10am or 2pm Wallace Wurth 122/123	
1	26 Feb	Introductory Lecture – NWG	Amino Acids – AG	Proteins - AG	Online Safety Quiz Biochemical Calculations Online Task	
2	5 March	Enzymes – AG	Enzyme Kinetics – AG	Lecture Review 1: Online Activity	SKILL SESSION 1: Biochemical Calculations + Practical Skills	
3	12 March	Carbohydrates – VS	Glycolysis – VS	Regulation – VS	Practical 1. Spectrophotometry	
4	19 March	TCA Cycle – VS	TEST 1	Lecture Review 2: Online Activity	Practical 2. Enzymes	
5	26 March	Large Group Tutorial 1: Scientific Communication – NWG	Oxidative Phosphorylation (1) – NWG	Oxidative Phosphorylation (2) – NWG	SKILL SESSION 2: Test 1 Review Biochemical Calculations Quiz	
	2 April	MID-SESSION BREAK				
6	9 April	Oxidative Phosphorylation (3) - NWG	Glycogen Metabolism – NWG	Review Lecture 3: Online Activity	Practical 3. Glycolysis	
7	16 April	Gluconeogenesis – NWG	TEST 2	Review Lecture 4: Online Activity	Practical 4. Oxygen Electrode Simulation (Online Practical)	
8	23 April	Introduction to Fats – NWG	Lipoproteins – NWG	Fat oxidation – NWG	SKILL SESSION 3: Revision Activity Test 2 Review	
9	30 April	Fat synthesis and Ketone bodies – NWG	Protein Catabolism – RLB	Review Lecture 5: Online Activity	Practical 5. Separation Technique - TLC	
10	7 May	The Urea Cycle – RLB	TEST 3	Hormonal Control of Metabolism – RLB	Practical 6. Glucose Tolerance	
11	14 May	Fuel Supply in Exercise – RLB	Metabolic Specialisation of Tissues – KLH	Fuel Supply in Fasting – KLH	SKILL SESSION 4: Revision Activity Test 3 Review	
12	21 May	Large Group Tutorial 2: Integration of Metabolism – KLH	Concluding Lecture – NWG	Review Lecture 6: Online Activity	GROUP PRESENTATIONS	

NWG - Nirmani Wijenayake; **AG** – Anne Galea; **VS** - Vladimir Sytnyk; **RLB** – Rebecca LeBard; **KLH** – Kyle Hoehn

5. Assessment Tasks and Feedback

Task	Knowledge & abilities assessed	% of total mark	Date of Assessment Task	Feedback		
				WHO	WHEN	HOW
Mid-session Test 1*	Theory presented in All AG lectures	10 %	Week 4, Tuesday 20 th March 3-4 pm	Course Coordinator	Week 5	Review Tutorial
Biochemical Calculations Quiz	Ability to perform biochemical calculations	10 %	Week 5, Thursday 29 th March - during the lab	Tutor	Week 6	During the lab
Mid-session Test 2*	Theory presented in All VS lectures and NWG OX-PHOS lectures	10 %	Week 7, Tuesday 17 th April 3-4 pm	Course Coordinator	Week 8	Review Tutorial
Mid-session Test 3*	Theory presented in All NWG 's GM, GNG, and FATS lectures	10 %	Week 10, Tuesday 8 th May 3-4 pm	Course Coordinator	Week 11	Review Tutorial
Practical Group Presentation	Practical work conducted throughout Weeks 1 - 12 and reviewed in lectures and skills sessions	15%	Week 12 – Thursday 24 th May - during the lab	Tutor and Course Coordinator	Study Break	Through Moodle
Final Theory Examination* (2 hours)	Theory presented in Weeks 1 - 12 lectures	45 %	June examination period (date to be announced)	Course Coordinator	-	-
TOTAL:	-	100 %	-	-	-	-

* Please note that the format of all three mid-session tests and the final theory examination will consist of a combination of multiple choice, short answer and extended (short essay) answer questions. Further details of each assessment task will be released on Moodle prior to each test.

6. Course Topics and Additional Class Information

Major Topics	<ul style="list-style-type: none"> • Introduction to key biochemical themes and concepts (Lecturer: Dr Nirmani Wijenayake) • Amino acids, protein structure, enzymes and enzyme kinetics (Lecturer: Dr Anne Galea) • Carbohydrates, glycolysis and the TCA cycle (Lecturer: Dr Vladimir Sytnyk) • Oxidative phosphorylation (ATP generation) (Lecturer: Dr Nirmani Wijenayake) • Glycogen metabolism and gluconeogenesis (Lecturer: Dr Nirmani Wijenayake) • Fats: digestion, transport, breakdown & synthesis (Lecturer: Dr Nirmani Wijenayake) • Protein catabolism and the urea cycle (Lecturer: Dr Rebecca LeBard) • Integration of metabolic pathways, hormones and whole-body metabolism (Lecturers: Dr Kyle Hoehn and Dr Rebecca LeBard)
Large Group Tutorials	<p>Two large group tutorials will be held on Monday 10-11am on Weeks 5 and 12. (See course schedule on page 4). In preparation for these tutorials, you will be given small study tasks that MUST be completed PRIOR to each class in order to ensure that you gain the maximum learning experience from these exercises. The structure of the large group learning activities will facilitate optimal student-tutor and student-student interactions that provide you with the opportunity to question and clarify various aspects of the course content. Tutorials also aim to take you beyond the lecture material, assisting you to improve your general and scientific communication skills, as well as your examination techniques.</p>
Small Group Skill Session	<p>There are 4 small group skill sessions that will take place during your assigned laboratory time in weeks when you do not have a wet laboratory class scheduled. Most skill sessions will be conducted in the first hour of your assigned lab time and will take place in your allocated teaching laboratory. In most cases, your lab demonstrator will also be your tutor and you will work with your assigned lab group of students. Skill sessions will include a biochemical calculations workshop, various revision activities, and reviewing the answers for the three mid-session tests. Details of each session will be provided on Moodle and/or during the session itself.</p>
Lecture Reviews	<p>A total of 6 lecture reviews are scheduled for designated BIOC2181 lecture slots throughout the session (see course schedule on page 4). During these classes, previous lecture topics will be revised, and no new conceptual material will be covered. This will provide students with the opportunity to revise course content and reflect upon their own level of comprehension of the material presented in lectures and integrated with laboratory classes. For these reviews, you will work on an online tutorial independently. The tutorial will provide you with specific feedback based on your answers.</p>
Mid-Session Tests	<p>A total of 3 'mid-session' tests will be held during the semester. Each test is worth 10% of your overall assessment. Tests 1, 2 and 3 will be conducted during the Tuesday lecture slot of Weeks 4, 7 and 10, respectively, and will be held under strict examination conditions in the designated lecture theatre (see course schedule on page 4).</p> <p>NOTE: Students who experience any difficulty in writing English for academic purposes such as reports, exam short answer or written questions, or problems comprehending multiple choice questions should consult an advisor at "The Learning Centre" located in the foyer of the main library entrance to obtain relevant information or up to one hour a week of private consultation with a peer writing assistant.</p>

<p>Practical Program</p>	<p>Students will be enrolled in one of the following laboratory times:</p> <ul style="list-style-type: none"> • Thursday 10am – 1pm • Thursday 2pm – 5pm <p>BIOC2181 laboratory classes will be scheduled as outlined below. There will not be a lab class in Week 1; instead, all students are required to complete an online safety quiz and biochemical calculations online task. No laboratory work can be performed until these activities are successfully completed. Wet lab classes will be conducted in Weeks 3, 4, 6, 9 and 10 only. You will complete an online virtual lab in Week 7 and group presentations will be held in Week 12.</p> <p>Students are also required to do a compulsory pre-lab quiz prior to each lab. The pre-lab quiz will be released a week before the lab and will close at 9am on the day of the lab irrespective of your lab time. If you do not complete the pre-lab quiz and achieve a grade of 100% prior to the lab, you will not be allowed to participate in the lab and will be marked absent. More details about these quizzes can be found on page 9.</p> <p>Small group skill sessions are scheduled for Weeks 2, 5, 8 and 11; in the first hour of your lab time (self-directed study and course revision are highly recommended for the remaining 2 hours).</p> <p>BIOC2181 Laboratory Class Schedule:</p> <ul style="list-style-type: none"> • Week 1 – Online Safety Quiz + Biochemical Calculations Online Task • Week 3 – Spectrophotometry • Week 4 – Enzymes • Week 6 – Glycolysis • Week 7 – Online Oxygen Electrode Virtual practical • Week 9 – Separation Techniques – Thin Layer Chromatography • Week 10 – Glucose Tolerance Test • Week 12 – Group Presentations <p>NOTE: Final laboratory groups will be announced by Tuesday of Week 2. A list will be displayed on the BIOC2181 Moodle site.</p>
<p>Relationship to Other Courses within the Program</p>	<p>This course essentially covers the same material as BIOC2101 Principles of Biochemistry (Advanced), but in less detail and with more emphasis on the function of organisms and less emphasis on some of the underlying chemical mechanisms.</p> <p>As an alternative to BIOC2101, BIOC2181 Fundamentals of Biochemistry provides a comprehensive introduction to biochemistry for students who do not intend to proceed to Level III Biochemistry. It does not fulfill the prerequisite requirements for Level III Biochemistry, but the Head of School may give approval for students with a grade of credit to enroll in Level III courses.</p>

7. Additional Resources and Support

Text Books	<p>Recommended Texts:</p> <ul style="list-style-type: none"> • <i>Biochemistry - A Short Course</i> (3rd edition), by Tymoczko J.L., Berg J.M. & Stryer L. (W H Freeman and Company), 2015. <p>OR</p> <ul style="list-style-type: none"> • <i>Biochemistry and Molecular Biology</i> (4th Edition), by Elliot W.H. & Elliot D.C. (Oxford University Press), 2009. <p>Additional Biochemistry Reference Texts:</p> <ul style="list-style-type: none"> • <i>Essential Biochemistry</i>, by Pratt, C.W. & Cornely, K., 2004. • <i>Concepts in Biochemistry</i> (3rd Edition), by Boyer, R., 2006. • <i>Biochemistry</i> (7th Edition), by Berg J.M., Tymoczko J.L. & Stryer L., 2011. • <i>Fundamentals of Biochemistry</i> (4th Edition) Voet, Voet and Pratt, 2013.
Course Manual	<p>The BIOC2181 Course Manual is available for purchase through the UNSW Bookshop and can be downloaded via the BIOC2181 Moodle site.</p>
Required and Additional Readings	<p>Details of recommended readings and reference materials will be provided by individual lecturers during lectures and online via Moodle.</p>
Recommended Internet Sites	<p>Details of recommended internet sites will be provided by individual lecturers during lectures and online via Moodle.</p>
Societies	<p>ASBMB – Australian Society for Biochemistry and Molecular Biology www.asbmb.org.au</p>

8. Required Equipment, Training and Enabling Skills

Equipment Required	<p>Practical Requirements: Bound Lab manual, laboratory coat and closed shoes (no thongs, sandals, or open-toed shoes), and safety glasses.</p>
Enabling Skills Training Required to Complete this Course	<p>ELISE, Online OHS Quiz conducted via Moodle in Week 1 of Session.</p>

9. Administration Matters

<p>Expectations of Students</p>	<p>IMPORTANT NOTE: IF STUDENTS ATTEND LESS THAN EIGHTY PERCENT OF THEIR POSSIBLE CLASSES, THEY MAY BE REFUSED FINAL ASSESSMENT.</p> <p>PRACTICALS AND SKILL SESSIONS:</p> <p>The practical work is an integral and compulsory part of BIOC2181 Fundamentals of Biochemistry. The practicals are designed to introduce you to basic experimental techniques and methods. Practical classes will also reinforce and extend certain aspects of the lecture course. Therefore, you will find that if you make a serious attempt to understand the practicals, your understanding of the course as a whole will be helped considerably.</p> <p>A pass in BIOC2181 is conditional upon a satisfactory performance in the practical and skill session programs. A satisfactory performance means that:</p> <ol style="list-style-type: none"> 1. You have completed and achieved a mark of 100% in the online Laboratory H&S Quiz PRIOR to your first skill session in Week 2 2. You have completed all pre-lab quizzes and achieved a mark of 100% PRIOR to each lab. You will be allowed multiple attempts for each quiz until you achieve a mark of 100%. (further information will be provided during the introductory lecture in Week 1) 3. You have attended ALL of the practical and skill session classes 4. Within the laboratory section of this manual, each experiment is followed by one or two question pages in which data, associated calculations and answers to specific questions are to be written. Each student must complete these sheets in full before the end of lab class. Your Demonstrator will check and assess your work as being either 'Satisfactory' or 'Unsatisfactory'. If an 'Unsatisfactory' mark is awarded, it will be your responsibility to find out why and you will be given an opportunity to rectify any problems. 5. At the end of each laboratory class, your demonstrator will check to see that you have completed ALL of your work and that you have tidied and cleaned your equipment and workspace as instructed by the demonstrators and technical staff. <p>Students will be performing a laboratory-based exercise only every second week or so. In most of the remaining weeks, a one hour structured small group skill session will be held in the laboratory. The one-hour skill sessions will provide an opportune time to review both lecture and practical material with your tutor, and the remaining 2 hours would be well-spent further revising core material within smaller study groups or independently. In order to avoid 'cramming' material during the study period at the end of the semester, we strongly recommend that students keep up to date with their work and prepare ahead for lectures and practicals to come.</p> <p>A medical certificate is required from students who are absent from the practical or skill sessions due to illness. Medical certificates are to be submitted via email to the course coordinator within three days of the absence.</p> <p>LECTURES:</p> <p>Attend ALL lectures and try to take comprehensive lecture notes. DO NOT rely solely on online lecture recordings, lecture hand-outs, lecture notes from other students and text-books. The lecturer who presents the lectures will set the examination questions and will also be responsible for marking the relevant examinations/tests. Each lecturer will take you through the intricacies of the various topics in biochemistry in a way that you may find difficult to reproduce by simply reading through the syllabus, lecture hand-outs and the prescribed texts. The most efficient way of ensuring that you have covered all aspects of the syllabus is by attending ALL the lectures and participating in ALL tutorials, skill sessions and lab classes.</p>
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Health and Safety⁵

Covered shoes, safety glasses, and lab coats must be worn whenever you are working in the laboratory. Eating, drinking, smoking and running are not permitted in the lab. Anyone who violates these regulations will not be allowed to proceed with the practical class.

UNSW H&S policies and procedures (2001) stipulate that everyone attending a UNSW workplace must ensure their actions do not adversely affect the health and safety of others. This outcome is achieved through a chain of responsibility and accountability for all persons in the workplace.

As part of this, the School has undertaken detailed risk assessments of all course activities and identified all associated potential hazards. These hazards have been minimised and appropriate steps taken to ensure your health and safety. For each activity, clear written instructions are given and appropriate hazard warnings or risk minimisation procedures included for your protection. Please refer to the Risk Assessment sections at the beginning of each practical outline in this manual for specific risks and hazards associated with the laboratory component of this course.

It is your responsibility to prepare for all practical work. You should be familiar with the procedures scheduled for the practical class and identify all personal protection requirements needed to complete the exercise in a safe manner. Material Safety Data Sheets (MSDS) are available from your demonstrator for any hazardous chemicals. At the commencement of each new practical your demonstrator will review any risks with you. It is essential that you are present at the beginning of each class to ensure that you understand any risks and can review the safety procedures. If you are not present you may be excluded from the class.

You must comply with all safety instructions and observe all safety notices. Failure to comply with safety instructions may be considered a form of academic misconduct and may be investigated by WorkCover as a breach of the NSW OH&S Act (2000).

Following are some simple rules which will ensure good laboratory practice and minimise the consequences of risks:-

- Wear adequate protective clothing including, when appropriate, gloves and safety glasses.
- Acquaint yourself with the safety equipment in the lab.
- Do not eat, drink, smoke, or apply make-up in the lab. Do not bring food, drink etc. into the lab. Do not sit on laboratory benches.
- Do not invite anyone into the lab.
- In the event of an accident with a microbial culture, or hazardous chemicals (chemicals that cause harm to health, often over time), ask a fellow student to call someone in authority immediately. Do not move and risk the spread of contamination. If there is a fire or you are at risk from a chemical spill, remove yourself from immediate danger and call someone in authority immediately.
- Dispose of all waste correctly.
- Label all materials correctly and place in the relevant containers provided.
- Operate all equipment carefully and correctly. If in doubt regarding the correct method of operation consult a demonstrator before proceeding.
- Keep your bench tidy during experimental work and clean up and disinfect your bench before leaving the laboratory. Ensure that you wash your hands before leaving.
- If you feel physical discomfort from your work or have an allergic reaction, consult your demonstrator or another person in authority.
- If you get any biological or chemical substance in your eye, immediately go to the eye wash station and wash your eye for 20 minutes. While washing your eye, alert someone to your situation so that they can assist you and gain the attention of someone in authority. Continue to wash your eye until someone in authority indicates for you to do otherwise. Note that you should always wear safety glasses when handling hazardous substances.

⁵ [UNSW OHS Home page](#)

Health and Safety (continued)	<ul style="list-style-type: none"> Information on relevant H&S policies and expectations at UNSW: http://www.ohs.unsw.edu.au/ <p>Additional School of BABS OHS information can be found on the School website: http://www.babs.unsw.edu.au/ohs/school-babs-occupational-health-and-safety</p>
Assessment Procedures	<p>Missed Practical Classes or Small Group Skill Sessions:</p> <p>If you miss a practical class or a small group skill session due to illness or some other unavoidable circumstance that can be verified via professional documentation, email your course coordinator within three days of the absence. Separate “Catch-Up” labs/skill sessions are not conducted but if you are able to attend an alternative lab or skill session during the week of your absence, you may contact the course coordinator to ask for permission to do so. If you cannot attend an alternative lab/skill session, then you will need to catch up on missed work by speaking to your demonstrator/tutor or class colleagues.</p> <p>Missed Large Group Tutorials:</p> <p>If you miss a large group tutorial you do not need to do anything. Since these classes contain interactive activities, you are strongly encouraged to attend them in order to gain the full learning benefit from their design. In order to catch up on missed large group tutorial activities, you should complete any pre-work, listen to online lectures and access any supplementary materials via Moodle.</p> <p>Missed Mid-session Tests:</p> <p>If you miss a mid-session test due to illness or some other unavoidable circumstance that can be verified via professional documentation, <u>you must apply for special consideration</u> according to the UNSW Special Consideration and Further Assessment Policy outlined below. The applications for special consideration will be processed at the end of the semester and students will be invited to sit a supplementary exam on the supplementary exam date (see next page).</p>
UNSW Assessment Policy⁶	<p>Students who believe that their performance, either during the session or in the end of session final exams, may have been affected by illness or other circumstances may apply for special consideration. Students must make a formal application for Special Consideration for the course/s affected as soon as practicable after the problem occurs and within three working days of the assessment to which it refers.</p> <p>More information about special consideration is available on the web at: https://student.unsw.edu.au/special-consideration</p> <p>HOW TO APPLY FOR SPECIAL CONSIDERATION:</p> <p>Applications must be made via Online Services in myUNSW. You must obtain and attach Third Party documentation before submitting the application. Failure to do so will result in the application being rejected. Log into myUNSW and go to My Student Profile tab > My Student Services channel > Online Services > Special Consideration. After applying online, students must also verify supporting their documentation by submitting to UNSW Student Central:</p> <ul style="list-style-type: none"> Originals or certified copies of your supporting documentation (Student Central can certify your original documents), and A completed Professional Authority form. <p>The supporting documentation must be submitted to Student Central for verification within three working days of the assessment or the period covered by the supporting documentation. Applications which are not verified will be rejected.</p>

⁶ [UNSW Assessment Policy](#)

<p>UNSW Assessment Policy (continued)</p>	<p>Students will be contacted via the online special consideration system as to the outcome of their application. Students will be notified via <i>their official university email once an outcome has been recorded</i>. This could take up to a month.</p> <p>SUPPLEMENTARY EXAMINATIONS:</p> <p>The University does not give deferred examinations. However, further assessment exams may be given to those students who were absent from the mid-session or final exams through illness or misadventure. Special Consideration applications for these tests will only be considered after the final examination period when lists of students sitting supplementary exams/tests for each course are determined at School Assessment Review Group Meetings. Students will be notified via the online special consideration system as to the outcome of their application. It is the responsibility of all students to regularly consult their official student email accounts and myUNSW to ascertain whether they have been granted further assessment.</p> <div style="border: 1px solid black; padding: 5px; text-align: center;"> <p>For Session 1 2018, Supplementary Exams Period:</p> <p>14 July – 21 July</p> </div> <p>Further assessment exams will be offered on one of these days ONLY and failure to sit for the appropriate exam may result in an overall failure for the course. Further assessment will NOT be offered on any alternative dates.</p>		
<p>Equity and Diversity</p>	<p>Those students who have a disability that requires some adjustment in their teaching or learning environment are encouraged to discuss their study needs with the course Convenor prior to, or at the commencement of, their course, or with the Equity Officer (Disability) in the Equity and Diversity Unit (9385 4734 or http://www.studentequity.unsw.edu.au/).</p> <p>Issues to be discussed may include access to materials, signers or note-takers, the provision of services and additional exam and assessment arrangements. Early notification is essential to enable any necessary adjustments to be made.</p>		
<p>Student Complaint Procedure⁷</p>	<p>School Contact</p> <p>Prof Marc Wilkins Grievance Officer School of Biotechnology and Biomolecular Sciences m.wilkins@unsw.edu.au Tel: 9385 53633</p>	<p>Faculty Contact</p> <p>Dr Gavin Edwards Associate Dean (Academic Programs) g.edwards@unsw.edu.au Tel: 9385 4652</p>	<p>University Contact</p> <p>Student Conduct and Appeals Officer (SCAO) within the Office of the Pro-Vice-Chancellor (Students) and Registrar. Tel: 02 9385 8515, email: studentcomplaints@unsw.edu.au</p> <p>University Counselling and Psychological Services⁸ Tel: 9385 5418</p>

⁷ [UNSW Student Complaint Procedure](#)

⁸ [University Counselling and Psychological Services](#)

UNSW Academic Honesty and Plagiarism

What is 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 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.†

For the purposes of this policy, submitting an assessment item that has already been submitted for academic credit elsewhere may be considered plagiarism.

Knowingly permitting your work to be copied by another student may also be considered to be plagiarism.

Note that an assessment item produced in oral, not written, form, or involving live presentation, may similarly contain plagiarised material.

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

The Learning Centre website is main repository for resources for staff and students on plagiarism and academic honesty. These resources can be located via:

<http://www.lc.unsw.edu.au/academic-integrity-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.

* Based on that proposed to the University of Newcastle by the St James Ethics Centre. Used with kind permission from the University of Newcastle

† Adapted with kind permission from the University of Melbourne

ACADEMIC MISCONDUCT

Information concerning the University Regulations concerning Academic Misconduct can be found on the UNSW website:

<https://my.unsw.edu.au/student/academiclife/assessment/AcademicMisconduct.html> .

It is essential that all students read this information.

Academic Misconduct may apply to any work or document related to assessment that is submitted to the School; this includes the laboratory work you document/discuss within this manual, the three mid-session tests and the final examinations in June.

All work submitted for assessment must represent a student's own individual efforts. Copying or paraphrasing another person's work and using another student's experimental results are all examples of academic misconduct (see Academic Honesty and Plagiarism).