FACULTY OF SCIENCE

SCHOOL OF BIOTECHNOLOGY

AND

BIOMOLECULAR SCIENCES

BIOC3271 Molecular Cell Biology

and

BIOC3671 Molecular Cell Biology (Advanced)

SESSION 2, 2020

Table of Contents

1. Information about the Course

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

Year of Delivery	2020
Course Code	BIOC3271 and BIOC3671
Course Name	Molecular Cell Biology 2 and Molecular Cell Biology 2 (Advanced)
Academic Unit	School of Biotechnology and Biomolecular Science
Level of Course	3rd UG
Units of Credit	6 UOC
Session(s) Offered	S2
Assumed Knowledge, Prerequisites or Co-requisites	BIOC2101, BIOC2201
Hours per Week	7 HPW
Number of Weeks	10 weeks
Commencement Date	01.06.20

Summary of Course Structure (for details see 'Course Schedule')

Component	HPW	Time	Day	Location
Lectures	3			
Lecture 1		3 - 4 pm	Tuesday	online
Lecture 2		9 - 10 am	Wednesday	online
Lecture 3		11 am - 12 pm	Friday	online
Laboratory/Discussion classes	4	1 - 5 pm	Friday	online
TOTAL	7			

Special Details	The lecture programs for BIOC3271 Molecular Cell Biology 2 and BIOC3671 Molecular Cell Biology 2 (Advanced) are 'integrated' such that lectures are common to the two courses. The program of the practical work is different. BIOC3271 students have practical classes and discussion classes, while BIOC3671 students perform a short project with the help of self-identified BABS faculty members. BIOC3671 students are expected to write a review article / report about their project and present it at the final practical classes to BIOC3271 students.

[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		A/Prof. Vladimir Sytnyk	v.sytnyk@unsw.edu.au tel.: 9385 1108	*via email*
Additional Teaching Staff	Lecturers & Facilitators	Prof. Andrew J. Brown	aj.brown@unsw.edu.au	*via email*
		Dr. Frances Byrne	frances.byrne@unsw.edu.au	
		A/Prof. Antony Cooper	a.cooper@garvan.org.au	
		Prof. Sally L. Dunwoodie	s.dunwoodie@victorchang.edu.au	
		A/Prof. Kyle Hoehn	k.hoehn@unsw.edu.au	
		Dr. Michal Janitz	m.janitz@unsw.edu.au	
		A/Prof. Louise Lutze-Mann	l.lutze-mann@unsw.edu.au	
		Dr. Joshua McCarroll	jmccarroll@ccia.org.au	
		Prof. H. Rob Yang	h.rob.yang@unsw.edu.au	
	Tutors & Demonstrators	A/Prof. Vladimir Sytnyk	v.sytnyk@unsw.edu.au tel.: 9385 1108	
	Technical & Laboratory Staff	Dr. Elessa Marendy	e.marendy@unsw.edu.au	
	Other Support Staff			

3. Course Details

Course Description	The discipline known as Molecular Cell Biology investigates how cells develop, operate, communicate, construct multicellular organisms, control their activities, and (on occasion) go awry. To study the properties of the molecules that contribute to all these activities, modern researchers employ concepts and experimental techniques drawn from biochemistry, molecular biology, genetics and cell biology. The courses will present an overview of our current understanding of the myriad processes that control cellular processes and the techniques that are used to arrive at that understanding.	
Course Aims	The overall aim of the course is to provide a solid foundation in eukaryotic molecular cell biology, to demonstrate techniques used to study cell biology, and to show how this knowledge is applied to solve problems involving eukaryotic cells, for example to improve understanding and treatment of the human diseases	
Course Learning Outcomes (CLO)		
CLOs	**CLO statement**	**Related Tasks & Assessment**
CLO 1	Describe complexity of eukaryotic cells and cellular processes in healthy and diseased cells and tissues using knowledge acquired from facts, concepts, principles and procedures employed in the field of biochemistry, molecular biology, genetics and cell biology.	Mid-term and Final exams (BIOC3271/BIOC3671)
CLO 2	Perform effective and efficient experimental analysis of cells and their functional components. This includes adequate planning of work in the laboratory, recording accurate observations, analysis and interpretation of the results and developing skills in using laboratory equipment safely.	Protein-protein interaction assignment (BIOC3271) Project article (BIOC3671)
CLO 3	Apply acquired knowledge of theory and practical methods for understanding cell biological problems, analysing current strategies and designing new approaches for solving cell biological problems. This includes writing, presenting and discussing the research ideas, projects and outcomes of the research work.	Protein-protein interaction assignment (BIOC3271) Project article (BIOC3671) Discussion classes (BIOC3271) / Project presentation (BIOC3671)
CLO 4	Engage with a specific research project in a selected area of cell biology within a scope of work in an individual laboratory, and work on this project as a team member of the laboratory.	Project article (BIOC3671)

Major Topics (Syllabus Outline)	**CELL ADHESION AND RECOGNITION (3 lectures)** **A/Prof. Vladimir Sytnyk, School of Biotechnology and Biomolecular Sciences, room 3101, L3 West, Bioscience South E26** Cell adhesion and recognition molecules play an important role in the development of individual cells and structuring of the tissue. These lectures will provide an overview of the major classes of cell adhesion molecules and their structure. Using nervous system as an example, we will discuss the mechanisms of cell-to-cell adhesion and recognition and consider how specific types of cell-to-cell contacts are established and maintained. We will discuss the functions of cell adhesion molecules at contacts between cells by considering highly specialized contacts between neurons, which are called synapses. We will also talk about how cell adhesion molecules convert extracellular signals into intracellular signaling cascades, which induce gene expression and cytoskeleton remodeling required for cell survival and morphogenesis. **MAMMALIAN GENOME (1 lecture)** **Dr. Michael Janitz, School of Biotechnology and Biomolecular Sciences, room 3106, L3 West, Bioscience South E26** Mammalian genomes, and human genome in particular, are characterized by highly complex structure and mode of action. This complexity reflects the need of the mammalian cell to control thousands of metabolic processes in a highly coordinated manner. Recent advances in genome research powered by massive parallel sequencing and DNA microarrays technologies revealed a number of common functional and structural features of the genomes in higher vertebrates. The lecture will cover topics of genome replication, structure and function of regulatory sequences, haplotypic variations, the role of non-coding sequences, including small RNAs and RNA interference. **TRANSCRIPTOME REGULATION (1 lecture)** **Dr. Michael Janitz, School of Biotechnology and Biomolecular Sciences, room 3106, L3 West, Bioscience South E26** The term transcriptome refers to the total number of mRNA molecules expressed in a particular cell type, tissue or an organism. The concept of transcriptome emerged as a result of studies of gene expression on the genome-wide level using modern techniques of molecular biology such as DNA microarrays, high-throughput RNA interference and, very recently, next-generation DNA sequencing. In higher vertebrates, including human, there are several common functional and structural features of the transcriptome which allow the genes to be expressed in tightly coordinated manner during development and adult life. Furthermore, changes in transcriptome profile may also indicate the onset of the disease and might be observed long before any clinical symptoms emerge. The lecture will address regulation of gene expression, the role of transcriptional factors, structure of promoter regions, coordination of transcription on the level of the whole genome, molecular technologies to study the transcriptome. **CYTOSKELETON AND HUMAN DISEASE (2 lectures)** **Dr. Joshua McCarroll, Children's Cancer Institute Australia.** **Dr. Frances Byrne, School of Biotechnology and Biomolecular Sciences.** The cytoskeleton is a network of fibres that fills the cytosol of all cells. It can be considered to be composed of three fibre systems (microfilaments, microtubules and intermediate filaments). The cytoskeleton is responsible for:

giving a cell its shape; supplying a framework for vesicular transport; and providing an essential role in mitosis.

We shall be studying the monomeric and polymerised forms of these structural molecules and relating them to their function. The interactions among the major filament systems will be considered to illustrate the three points above. The final section of this series of lectures will address the cytoskeleton as a target for anticancer therapy.

CELLULAR STRESS (3 lectures)
A/Prof. Antony Cooper, The Garvan Institute of Medical Research, St Vincent's Hospital
Cells are constantly subjected to various stresses that can lead to cell dysfunction or death. Such stresses originate through either extracellular or intracellular means and include oxidative stress, stress from misfolded proteins (ER stress), DNA damage, hypoxia (a shortage of oxygen). Cell stress is implicated in many diseases including diabetes, neurodegenerative diseases (Parkinson's, Huntington's, Alzheimer's) and heart disease.
The three lectures will focus on types of stresses including ER and oxidative stress, cellular stress sensors, signal transduction and stress responses. These stress responses act initially at reversing or compensating for damage but can eventually trigger cell death/apoptosis if the cellular dysfunction is severe or prolonged.

LIPID TRANSPORT (1 lecture)
Prof. H. Robert Yang, School of Biotechnology and Biomolecular Sciences, room 3104, L3 West, Bioscience South E26
Little is known about the molecular mechanisms of intracellular lipid transport. In this lecture, we will discuss the roles of membrane lipid sensors, flippases and cytoplasmic lipid carriers in the transport of sterols and other lipid species.

LIPID DROPLETS (1 lecture)
Prof. H. Robert Yang, School of Biotechnology and Biomolecular Sciences, room 3104, L3 West, Bioscience South E26
Lipid droplets have long been viewed as an inert storage form of neutral lipids and energy. However, recent studies suggested that lipids droplets may represent a novel cellular organelle. In this lecture, we will discuss the biogenesis and dynamics of lipid droplets including their role in human obesity and diabetes.

CELL BIOLOGY OF ATHEROSCLEROSIS (1 lecture)
Prof. H. Robert Yang, School of Biotechnology and Biomolecular Sciences, room 3104, L3 West, Bioscience South E26
Heart attacks and stroke arise from atherosclerosis. In this lecture, I will provide an overview of the cellular mechanisms leading to atherosclerosis. Oxidized LDL (low density lipoprotein), inflammation, macrophages and form cells will be the focus.

CELLULAR MEMBRANES / LIPID RAFTS (1 lecture)
Prof. A.J. Brown, School of Biotechnology and Biomolecular Sciences, Room 3103, L3 West, Bioscience South E26
The lecture will focus on aspects of cell membranes particularly functions of the plasma membrane that go beyond that of a simple barrier. Topics will include:

Properties and types of membrane lipids; Role of cholesterol; Membrane asymmetry; Membrane phospholipids as a source of signalling molecules; Membrane proteins; Beyond the Fluid-Mosaic Model - Lipid rafts and lipid anchors.

ER-TO-GOLGI TRANSPORT (1 lecture)
Prof. A.J. Brown, School of Biotechnology and Biomolecular Sciences, Room 3103, L3 West, Bioscience South E26
Proteins are made in the endoplasmic reticulum (ER). If destined for other organelles or secretion from the cell, proteins must first be transported to the Golgi. The fidelity of this early protein secretory pathway within cells is essential for the maintenance of intracellular organisation and correct cellular function. I will firstly discuss the assembly of COPII vesicles which mediate this trafficking. We will then explore how this transport may be regulated by the actions of particular kinases and how this then impacts on metabolic processes, with a particular focus on lipid metabolism.

MOLECULAR APPROACHES TO CANCER THERAPY (3 lectures)
A/Prof. L.H. Lutze-Mann, School of Biotechnology and Biomolecular Sciences, room 3108, L3 West, Bioscience South E26
Advances in molecular and cellular techniques have provided a greater understanding of changes that occur in cells as they become tumour cells. It is now possible to exploit this understanding to induce the selective death of cancer cells while leaving normal cells intact. These lectures will provide an overview of these strategies and will focus on some specific examples that have been successfully employed in the clinic.

CELL BIOLOGY OF DEVELOPMENT (2 lectures)
Prof. Sally L. Dunwoodie, Developmental Biology Division, Victor Chang Cardiac Research Institute.
1) Notch signalling, Somitogenesis and Abnormal Vertebral Segmentation.
Somites form during embryonic development and give rise to the axial skeleton and associated muscles and tendons. The Notch signalling pathway is critical for normal somite formation. This lecture describes the process of somite formation in the mouse embryo and describes Notch signalling and the function of various pathway components. Genetically modified mouse models and Notch signalling assays in cultured cells are described. Severe disruption of human vertebral development is seen in the abnormal vertebral segmentation syndrome spondylocostal dysostosis (SCD). That SCD is caused by mutation of Notch pathway components is discussed.

2) Nodal Signalling and Establishing the Left-Right Body Axis of the Embryo
The vertebrate body is bilaterally asymmetric. The left-right body axis is established early in embryonic development and the developing visceral organs take cues from the left-right axis for normal development. The heart is particularly susceptible to alterations in left-right patterning. Nodal (TGFbeta) signalling (on the left of the embryo) determines the left side of the embryo. This lecture describes how bilateral symmetry is broken in the mouse embryo and how the left-right body axis is established though the action of Nodal.

CELL BIOLOGY OF ALZHEIMER'S DISEASE (1 lecture)
A/Prof. Vladimir Sytnyk, School of Biotechnology and Biomolecular Sciences, room 3101, L3 West, Bioscience South E26
Alzheimer's disease is the leading cause of dementia among the elderly. This

	disease arises from accumulation of a small peptide, the β amyloid, which is produced from a precursor protein through sequential proteolysis and which blocks neuronal function and induces neuronal death in the brain. In this lecture, we will discuss methods to study the factors that regulate the generation of β amyloid and cell biological mechanisms of β amyloid toxicity. **METHODOLOGICAL APPROACHES FOR CANCER CELL BIOLOGY (1 lecture)** **Dr. Frances Byrne, School of Biotechnology and Biomolecular Sciences, 3102, L3 West, Bioscience South E26** This lecture will discuss common techniques that researchers use to investigate cancer cell phenotypes including proliferation, migration, invasion, and anchorage-independent growth. **METHODOLOGICAL APPROACHES FOR MOUSE TUMOUR BIOLOGY (1 lecture)** **A/Prof. K.L. Hoehn, School of Biotechnology and Biomolecular Sciences, 3102, L3 West, Bioscience South E26** Mice are frequently used as pre-clinical models to test anti-cancer therapeutics and to study how genetics and environment (carcinogens, ultraviolet light, etc) affect tumour initiation and progression. This lecture will detail the differences between xenograft, syngeneic, orthotopic, and endogenous models of cancer. Rationale will be provided concerning why specific models should be used for specific experiments including metastasis, tumourigenesis, and anti-cancer therapeutics testing.
Relationship to Other Courses within the Program	BIOC3271 and BIOC3671 are mutually exclusive 6 uoc courses in Session 2. The two courses share the same lecture program but have some different practical components, with BIOC3671 having an increased focus on research experience. They build on concepts and knowledge of biochemistry, cell biology and molecular biology developed in the two pre-requisite courses BIOC2101 and BABS2201. Both courses are core components in Molecular and Cell Biology majors and plans, and electives in other related discipline areas.

4. Rationale and Strategies Underpinning the Course

Teaching Strategies	The teaching in Molecular Cell Biology requires the active engagement of students in the learning process and reflects the active enquiry process underlying scientific research and discovery. Face-to-face lectures and practical classes are complemented by online materials provided at the course website to allow efficient revision and self-directed learning.
Rationale for learning and teaching in this course	While lectures and practical classes provide solid theoretical foundation, the protein-protein interaction assignment (3271), discussion classes (3271) and article-writing (3671) encourage student engagement with the latest developments in research methods and equipment, and the current research literature.

5. Course Schedule

Some of this information is available on the Online Handbook[2] and the UNSW Timetable[3].

Week	Lecture 1 Tue, 3-4 pm online	Lecture 2 Wed, 9-10 am online	Lecture 3 Fri, 11 am - 12 pm online	Practical Fri, 1-5 pm online
Week 1 **starts on 01/06**	Introduction (Vladimir Sytnyk)	Transcriptome Regulation (Michael Janitz)	Mammalian Genome (Michael Janitz)	
Week 2 **starts on 08/06**	Cell Adhesion and Recognition (Vladimir Sytnyk)	Cell Adhesion and Recognition (Vladimir Sytnyk)	Cell Adhesion and Recognition (Vladimir Sytnyk)	Cell adhesion
Week 3 **starts on 15/06**	Cellular Stress (Antony Cooper)	Cellular Stress (Antony Cooper)	Cellular Stress (Antony Cooper)	Protein analysis I
Week 4 **starts on 22/06**	Lipid transport (H. Rob Yang)	Lipid Droplets (H. Rob Yang)	Cell Biology of Atherosclerosis (H. Rob Yang)	Protein analysis II
Week 5 **starts on 29/06**	Cytoskeleton and human disease (Frances Byrne / Josh McCarroll)	Cytoskeleton and human disease (Frances Byrne / Josh McCarroll)	ER to Golgi Transport (Andrew J. Brown)	Functional genomics
Week 6 **starts on 06/07**				
Week 7 **starts on 13/07**	Membranes/lipid RAFTs (Andrew J. Brown)	Cell biology of development (Sally Dunwoodie)	Cell biology of development (Sally Dunwoodie)	**Mid-term exam**
Week 8 **starts on 20/07**	Molecular Approaches to Cancer Therapy (Louise Lutze-Mann)	Molecular Approaches to Cancer Therapy (Louise Lutze-Mann)	Molecular Approaches to Cancer Therapy (Louise Lutze-Mann)	Fluorescent microscopy
Week 9 **starts on 27/07**	Cancer (Kyle Hoehn)	Cancer (Frances Byrne)	Cell Biology of Alzheimer's Disease (Vladimir Sytnyk)	Protein interactions
Week 10 **starts on 03/08**	Discussion class I (BIOC3271)	Discussion class II (BIOC3271)	Discussion class III (BIOC3271)	Project presentations (BIOC3671)

[2] UNSW Virtual Handbook: http://www.handbook.unsw.edu.au
[3] UNSW Timetable: http://www.timetable.unsw.edu.au/

6. Assessment Tasks and Feedback

Assessment task and methods		Weighting (%)	Submission methods	Mark and feedback style	Due date (normally midnight on due date)
Formative Assessment:					
Reports at the end of practical classes (BIOC3271) Project description (BIOC3671)			In class Online	Convenor, written Convenor, written	after practical classes Week 2, 14/06
Summative Assessment Tasks:					
Assessment 1:	Protein-Protein interaction assignment (BIOC3271)	20	Online	Convenor, written	Week 10, 03/08
	Project article (BIOC3671)	30	Online	Convenor, written	Week 10, 03/08
Assessment 2: Mid-term exam		30	Online	Convenor, provide upon request	Week 7, 17/07
Assessment 3:	Discussion classes (BIOC3271)	10 – presentation 10 – participation	Online	Convenor / students, written	Week 10
	Project presentation (BIOC3671)	10	Online, In class	Convenor / students, written	Week 9-10
Assessment 4: Final exam		30	In class	Convenor, provide upon request	Final exam period

7. Additional Resources and Support

Text Books	Alberts B., Johnson A., Lewis J., Morgan D., Raff M., Roberts K. and Walter P. Molecular Biology of the Cell (6th Ed.) Garland Science (2014). availability– bookshop, UNSW library https://www.bookshop.unsw.edu.au/details.cgi?ITEMNO=9780815344643 https://unswbookshop.vitalsource.com/products/-v9781317563754
Course Manual	Course manual and, as far as possible, all course notes and information will be available to view or download from the Course Moodle site. This will include the various sections of the "Course Outline", all practical notes, lecture handouts and/or copies of powerpoint presentations, links to lecture recordings, additional information about assessment tasks and course administration as it becomes available, and announcements. Students should consult the course Moodle site on at least a weekly basis and are encouraged to use it for posting inquiries about the course content or administration.
Required Readings	In addition to textbooks, students are encouraged to find and read scientific papers published in scientific journals and available online, especially if they contain methodological details required for completion of assignments. The details will be posted at the course website.
Additional Readings	Lodish, H., Berk, A., Kaiser, C.A., Krieger, M., Bretscher, A, Ploegh, H., Amon A., and Martin, K. Molecular Cell Biology (8th Ed.) Macmillan learning (2016). availability – bookshop, UNSW library https://www.bookshop.unsw.edu.au/details.cgi?ITEMNO=9781464187445 See also references to original research and review articles given by the lecturers and available online
Recommended Internet Sites	The online Bookshelf of the US National Center for Biotechnology Information: http://www.ncbi.nlm.nih.gov/books PubMed Central (PMC) - the U.S. National Institutes of Health (NIH) free digital archive of biomedical and life sciences journal literature. http://www.ncbi.nlm.nih.gov/pmc/ iBiology: http://www.ibiology.org/ Neuronline: http://neuronline.sfn.org
Societies	The Australia and New Zealand Society for Cell and Developmental Biology http://www.anzscdb.org/ The American Society for Cell Biology http://www.ascb.org/
Computer Laboratories or Study Spaces	Personal computers should be used.

8. Required Equipment, Training and Enabling Skills

Equipment Required	Computer and internet access to online course resources.
Enabling Skills Training Required to Complete this Course	The course is built on concepts and knowledge of biochemistry, cell biology and molecular biology developed in the two pre-requisite courses BIOC2101, BIOC2201.

9. Course Evaluation and Development

Student feedback is gathered periodically by various means. Such feedback is considered carefully with a view to acting on it constructively wherever possible. This course outline conveys how feedback has helped to shape and develop this course.

Mechanisms of Review	Last Review Date	Comments or Changes Resulting from Reviews
Major Course Review	01.05.2020	There have been changes to the lecture and laboratory program in 2020 caused by COVID-19 pandemic, but also reflecting the staff's intention to maintain an overall balance in the content while introducing new concepts and techniques in what is a rapidly developing area of scientific research. The current system of examining lecture content arises from student feedback in previous years.
CATEI[4] myExperience	10.12.2015 01.05.2020	Student evaluative feedback from UNSW's Course and Teaching Evaluation and Improvement (CATEI) and myExperience process is gathered each year, and the staff involved in teaching will review all aspects of the course at the end of the session. Student feedback is valued and forms part of the basis for continual improvement.
Other	10.05.2020	Course manual and other supporting documentation including UNSW and BABS WHS documentation available at BABS website (https://www.babs.unsw.edu.au/) are updated each year using recommendations of the Learning and Teaching Unit and WHS unit at UNSW and BABS.

[4] CATEI process

10. Administration Matters

Expectations of Students	Students are encouraged to attend all online lectures and participate in Q/A sessions. Students should use online lecture recordings if they cannot attend the lectures. BIOC3271 students are expected to attend online introductory and Q/A sessions of practical classes and submit reports by the end of the practical class. Submissions of reports will be considered as confirmation of attendance at practical classes. Attendance at less than 80% of classes may result in the grade of UF. BIOC3671 students are expected to spend equivalent time working on the project in one of the BABS laboratories. The student's supervisor will be asked to confirm the attendance. Students are expected to consult the course Moodle site on at least a weekly basis.
Assignment Submissions	All written assignments must be submitted as Word (.doc) files or pdf files via the course Moodle site. Late submission of assignments normally attracts a penalty (10% of the maximum possible marks per day). Extensions for late submission of assignments without penalty will only be granted by staff before the submission deadline, not retrospectively.
Occupational Health and Safety[5]	OHS issues in School of BABS are covered at the school website: http://www.babs.unsw.edu.au/ohs/school-babs-workplace-health-and-safety BIOC3671 students must discuss Health and Safety requirements with the project supervisors and complete training required for their projects.
Assessment Procedures **UNSW Assessment Policy**[6]	**SPECIAL CONSIDERATION AND FURTHER ASSESSMENT** Students who believe that their performance, either during the session or in the end of session exams, may have been affected by illness or other circumstances may apply for special consideration. Applications can be made for compulsory class absences such as practical classes, in-session assessments tasks, and final examinations. You must submit the application prior to the start of the relevant exam, or before a piece of assessment is due, except where illness or misadventure prevent you from doing so. If you become unwell on the day of the exam or fall sick during an exam, you must provide evidence dated within 24 hours of the exam, with your application. You must obtain and attach Third Party documentation before submitting the application. Failure to do so may result in the application being rejected. UNSW has a fit to sit/submit rule which means that if you sit an exam or submit a piece of assessment, you are declaring yourself fit to do so. Further information on special consideration can be found at https://student.unsw.edu.au/specialconsideration. HOW TO APPLY FOR SPECIAL CONSIDERATION The application must be made through Online Services in myUNSW (My Student Profile tab > My Student Services > Online Services > Special Consideration).

[5] UNSW OHS Home page
[6] UNSW Assessment Policy

	Students will be contacted via their official university email as to the outcome of their application. It is the responsibility of all students to regularly consult their official student email accounts and myUNSW in order to ascertain whether or not they have been granted further assessment. **SUPPLEMENTARY EXAMINATIONS:** The University does not give deferred examinations. However, further assessment exams may be given to those students who were absent from the final exams through illness or misadventure. Special Consideration applications for final examinations and in-session 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 in order to ascertain whether or not they have been granted further assessment.** **For Semester 2 2020, BABS Supplementary Exams will be scheduled on:** **Mon 7 Sep 2020 – Fri 11 Sep 2020** **Further assessment exams will be offered on this day 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.**
Equity and Diversity	In an ideal world, science would be objective. However, the reality is much of science is subjective and is historically built on a small subset of voices. In this course, I will make an effort to expose you to literature from a diverse group of scientists, despite limits still existing on this diversity. I acknowledge that it is possible that there may be some biases in the material due to the lens with which it was written, and please contact me if you have any suggestions to improve the quality (or diversity) of the course materials. There are challenges inherent in communicating between people from other cultures, but I will strive to ensure my passion for science is appreciated through different eyes. I have a genuine desire to experience new cultures, expand my own horizons, and transcend any barriers that interacting with diverse groups could impose. I am acutely aware of the importance of diversity and inclusion in all aspects of life and want to uphold these values as an educator. The School of BABS is dedicated to creating a positive, inclusive educational environment that embraces diversity in all forms and rejects any form of hostile workplace, discrimination, or bullying. We have a clear statement of behavioural expectations (as well as definitions of discrimination, (sexual) harassment and bullying, which can be found here: https://student.unsw.edu.au/harassment. On this website, you can also find resources and contacts for reporting issues. In addition, the Science Equity, Diversity and Inclusion Working Group of the Faculty of Science have recently launched a set of Classroom Inclusivity Guidelines that all staff and students are striving to work under. They can be found here: https://www.science.unsw.edu.au/our-faculty/classroom-inclusivity-guidelines

Beyond the University and Faculty protocols, **it is my goal as course convenor to create a learning environment for my students that supports a diversity of thoughts, perspectives and experiences, and honors your identities** (including race, gender, class, sexuality, religion, ability). To help accomplish this:

- If you choose, please let me and the class know your chosen name and pronouns.
- Your classmates and demonstrators (like many people) are still in the process of learning about diverse perspectives and identities. If something was said in class (by anyone) that made you feel uncomfortable, please talk to me about it.
- As a participant in course discussions, you should also strive to honor the diversity of your classmates (e.g. make sure all voices are being heard, etc.).
- If you feel like your performance in the class is being impacted by your experiences outside of class, please do not hesitate to contact me.

Finally, the School recognises the added challenges faced by students during the coronavirus outbreak, in particular those related to teaching and learning remotely while public health is managed. Specific details on how this course will be managed are given throughout this manual and will be highlighted further in the first lecture, but please be assured I will strive to minimise stress to students while still endeavoring to deliver a high-quality teaching experience.

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 (+61 2 8374 9201 or http://www.studentequity.unsw.edu.au/).

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.

Student Complaint Procedure[7]	**School Contact**	**Faculty Contact**	**University Contact**
	BABS Grievance Officer: A/Prof. Louise Lutze-Mann l.lutze-mann@unsw.edu.au Tel: 9385 2024	Dr Gavin Edwards g.edwards@unsw.edu.au Tel: 9385 4652	The Student Integrity Unit studentcomplaints@unsw.edu.au Tel: 02 9385 8515, University Counselling and Psychological Services[8] counselling@unsw.edu.au Tel: 9385 5418

[7] UNSW Student Complaint Procedure
[8] University Counselling and Psychological Services

1. 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 of 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/resources

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

12. LABORATORY WORK FOR BIOC3271 STUDENTS

LABORATORY HOURS

Online laboratory classes will take place on Fridays 1 - 5 pm.

Students are expected to complete their experimental work within these hours**. Most laboratory sessions will commence with a brief talk by the lecturer in charge and will conclude with the Q/A session via BB Collaborate. It is imperative that you attend these sessions.**

Students are encouraged to prepare for the class beforehand in their own time, **not** after the practical class begins. **Before** each practical class you must read the practical notes in this manual.

Satisfactory attendance at the practical sessions is *required to pass the course as a whole*. At the end of the class you will need to submit via Moodle a short report summarizing your calculations and conclusions. This report will serve as confirmation of your presence at the class. If you are absent from the practical class for a medical reason, please submit a medical certificate to A/Prof. Vladimir Sytnyk via email: v.sytnyk@unsw.edu.au.

PRACTICAL NOTES

Practical notes and all materials required for the class will be made available on Moodle before the class. Please, check the course website for updated practical notes before each laboratory session.