UNSW AUSTRALIA

Science

FACULTY OF SCIENCE

SCHOOL OF BIOTECHNOLOGY AND BIOMOLECULAR SCIENCES

BABS1201

MOLECULES, CELLS & GENES

Term 1
2020

COURSE OUTLINE

CONTENTS

Welcome to BABS1201 Molecules, Cells and Genes

This course aims to introduce you to the basic concepts of modern biology, and to develop your skills in scientific analysis and critical thinking – skills that will be useful in science and other careers.

The course consists of three interconnected learning components: a lecture series, a laboratory program, and online activities. These classes sequentially address cell structure, cell function and genes. The laboratory program comprises both practical and theoretical components. You will also be directed to electronic resources that revise and reinforce the concepts covered in the course.

To be ready for your first classes, ensure that you have purchased or printed a copy of the Course Manual (available from the UNSW Bookshop or the course Moodle site). In preparation for your lectures, you can download the notes from Moodle and can read relevant material from the course textbook (available from the UNSW Bookshop, as an ebook or from the library).

Prior to your laboratory classes, you need to purchase a laboratory coat and safety glasses (available at various stores on campus) and complete an online Health and Safety quiz. You must come to your timetabled lab class with a copy of the Course Manual, appropriate stationery and wearing closed shoes. As electronic resources will be used in class, you as encouraged to bring a laptop, tablet or similar device. If you do not have access to one, let your demonstrator know and we can arrange one for you.

To ensure you are organised for the year, look ahead in this outline for the due dates of assignments and enter them into your diary. Details of the assignments are included in this Course Manual and further information may be posted on Moodle as the due dates approach.

If you have a question that has not been addresed in the resources provided, please post on the course Moodle forum. If your question is sensitive or of a personal nature, email us at BABS1201@unsw.edu.au. Our laboratory classes are run relatively informally, so you are welcome to ask questions and discuss the material with your convenors, demonstrators and the technical staff in class as needed.

We hope your study of biology this term will be interesting, enjoyable and rewarding.

We look forward to teaching you.

Rebecca and John

Course Convenors

QUICK ANSWERS TO BABS1201 FAQS

GENERAL

- **I have a question about the course. Where do I find the answer?**

1. Look in this manual. Use the table of contents on **page 1** to help you.
2. Check the BABS1201 Moodle site: https://moodle.telt.unsw.edu.au/login/index.php
3. Post your question to the forums in the BABS1201 Moodle site.
4. Email your question to BABS1201@unsw.edu.au (this option is especially useful when your question is of a personal or sensitive nature). ALWAYS include your full name and student number in ALL email correspondence, and send from your UNSW email account
5. Take the time to clearly word your query as clearly and respectfully as you would like us to answer it!

- **How do I find answers to questions about specific lecture material?**

1. Read through the corresponding lecture notes whilst listening to the lecture audio recording (lecture notes and recordings can be accessed through the BABS1201 Moodle site). The lecturer may have answered your question during the lecture.
2. Refer to the corresponding reference(s) provided by the lecturer. If references are not provided or are not related to your question, use the index of a biology textbook (even if it is not the recommended text for the course) to search for information on the topic of interest. There are also copies of the recommended text in the library.
3. Use the Lightboard revision videos available via Moodle, if applicable.
4. Post your question on a discussion forum in the BABS1201 Moodle site.
5. Email your question to BABS1201@unsw.edu.au, including your full name and student number, as well as the full details of the exact lecture to which your question refers.

- **How do I contact my demonstrator? Can I email them?**

No, you cannot directly contact your demonstrator as they are only employed for their face-to-face hours. You can instead post your question to the Moodle forums for your convenor or the course administrator to answer. In this way, all students will have a chance to see the answer. If the matter is not on the content of the course eg. it relates to your attendance, you can email your question (clearly indicating your laboratory class and demonstrator name) to BABS1201@unsw.edu.au, and, if necessary, it will be forwarded to your demonstrator. Otherwise, your question can be addressed directly by your demonstrator during the next laboratory class.

- **Will I have access to past BABS1201 exam papers?**

No, past BABS1201 exams are not available to students. Sample questions are provided throughout the course and the Lightboard videos and quizzes are particularly useful for exam preparation.

ABSENCES AND ASSESSMENTS

- **I missed a lab class. What should I do?**

Attendance at all lab classes is compulsory. If you miss a lab class due to illness or some other unavoidable circumstance that can be explained using professional documentation (e.g. a medical certificate), you should provide your demonstrator with this documentation the following week.

- **I missed the mid-term exam. What should I do?**

  If you miss the mid-term exam due to illness or some other unavoidable circumstance that can be explained using professional documentation (e.g. a medical certificate), you should apply for Special Consideration online (see **page 15** for instructions). You will be notified of the outcome of your application before the end of term through myUNSW and/or your UNSW email account.

- **I could not submit my assessment on time. What should I do?**

  If you cannot submit your essay or practical report by the due date due to illness or an unavoidable circumstance that can be explained using professional documentation (e.g. a medical certificate), you should apply for Special Consideration online (see **page 15** for instructions) and submit the assessment item **as soon as possible**. You will be notified of the outcome of your application before the end of term through myUNSW and/or your UNSW email account. If you do not submit an assessment item by the submission deadline and you do not have a valid excuse, the appropriate late penalties will be applied to your final mark for that assessment item.

- **I missed (or was sick during) the final exam. What should I do?**

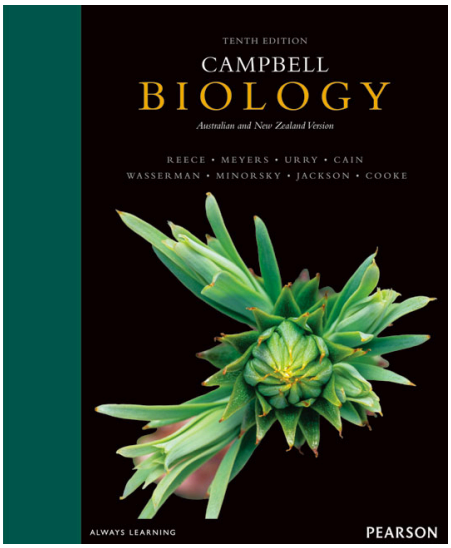
  If you miss the final exam due to illness or some other unavoidable circumstance that can be explained using professional documentation (e.g. a medical certificate), you should apply for Special Consideration online (see **page 15** for instructions). If you were sick DURING the exam, you should obtain a medical certificate **on the day of the exam** and apply for Special Consideration online (see **page 15** for instructions). You will be notified of the outcome of your application and details of the supplementary examination (if applicable) through your UNSW e-mail account. See **page 15** for details of the supplementary exam.

BABS1201 Weekly Class and Assessment Schedule – T1, 2020

Week No.	Week Commencing	**LECTURE A** **Tuesday 9-10 am, Clancy OR Wednesday 9-10 am, Mathews A**	**LECTURE B** **Thursday 9-10 am, Clancy OR Thursday 5-6 pm Clancy**	**LECTURE C** **Friday 1-2 pm, Clancy OR 2-3 pm, Clancy**	**Laboratory**	**Assessments & *activities***
1	17 Feb	1. Introducing BABS1201 - RLB & JW	2. Life - RLB	3. Cells I - RLB	Laboratory introduction	*Health and safety quiz*
2	24 Feb	4. Cells II - RLB	5. Scientific literature - RLB	6. Scientific communication - JW	Prac 1 Cell structure I	*Scientific literature lesson* *Pre-lab 1 quiz*
3	02 Mar	7. Macromolecules I (CHO & fats) - RLB	8. Macromolecules II (Proteins) - RLB	9. Macromolecules III (DNA) RLB	Prac 2 Cell Structure II	*Pre-lab 2 quiz* **Quiz 1 (1%)**
4	09 Mar	10. Cell integrity VS	11. Nutrient and ion transport - VS	REVISION - JW	Prac 3 Osmosis & diffusion	*Pre-lab 3 quiz*
5	16 Mar	12. Metabolism I – JW	13. Metabolism II - JW	14. Photosynthesis I - JW	Prac 4 Respiration and photosynthesis	*Pre-lab 4 quiz* **Quiz 2 (1%)** **Essay (15%)**
6	23 Mar	REVISION - RLB	15. DNA Replication - LLM	16. Cell division and reproduction - LLM	**MID-TERM TEST**	**Mid-term test (15%)**
7	30 Mar	17. Gene expression I - LLM	18. Gene expression II - LLM	19. Polymerase Chain Reaction - LLM	Prac 5 Mitosis & cell division	*Pre-lab 5 quiz* **Quiz 3 (1%)** **Pitch in lab (5%)**
8	06 Apr	20. Mutation - AMG	21. Mendel's Laws of Heredity - PW	**PUBLIC HOLIDAY**	Prac 6 Genetic inheritance (Fri class: no lab)	-
9	13 Apr	22. Mechanisms of Inheritance - PW	23. Population genetics - PW	24. Exam & assessment information – RLB & JW	Mon-Thu classes: no lab (Fri class: Prac 6 Genetic inheritance)	*Pre-lab 6 quiz* **Quiz 4 (1%)**
10	20 Apr	-	-	-	Presentations	**Presentations (15%) & portfolios (5%) in lab**
11	27 Apr	-	-	-		**Quiz 5 (1%)**

JW:John Wilson, RLB: Rebecca LeBard, AMG: Anne Galea, VS: Vladimir Sytnyk, LLM: Louise Lutze-Mann, PW: Paul Waters

Course Identity	
Course Code	BABS1201
Course Name	Molecules, Cells & Genes
Academic Unit	School of Biotechnology and Biomolecular Sciences
Level of Course	First Year Undergraduate
Units of Credit	6
Assumed Knowledge, Prerequisites or Co-requisites	Nil
Hours per Week	6
Number of Weeks	10 weeks
Course Convenors	**Dr Rebecca LeBard** Room 220D, Level 2, Biological Sciences Building (D26 west) (appointment only as entry to office area requires security access) ✆ (02) 9385 2026; Email: r.lebard@unsw.edu.au
	John Wilson Student Office, Biological Sciences Building ✆ (02) 9385 8156 Email: j.e.wilson@unsw.edu.au
Administrative Support	E-mail: BABS1201@unsw.edu.au
	Questions: UNSW.to/webforms

Course Resources	
Recommended Textbook	Reece, Jane B., Noel Meyers, Lisa A. Urry, Michael L. Cain, Steven A. Wasserman, Peter V. Minorsky, Robert B. Jackson, Bernard Cooke, and Neil A. Campbell. 2015. *Campbell biology*. The textbook is available for purchase at the UNSW bookshop in print form and in electronic format via http://www.pearson.com.au/9781488619878. Multiple hard copies are available from the UNSW library and they have an electronic version. Search the library catalogue for "Campbell Biology Australian and New Zealand Edition." 
Course Web Site	BABS1201 uses Moodle as the learning management system. This contains background information, links to resources, lecture notes, and discussion forums. Once you are enrolled in BABS1201, you can access the Moodle site at: **https://moodle.telt.unsw.edu.au/login/index.php** Your username is your student number preceded by a lower-case 'z' e.g. z1234567. Your password is your zpass.
Course Manual	A course manual is required and may be purchased from the UNSW Bookshop or downloaded from the BABS1201 Moodle site.
Practical Class Requirements	For all practical classes students are required to: • Bring with them the complete BABS1201 Molecules, Cells & Genes Course Manual. • Read the relevant practical before class and complete the pre-lab quiz. • Bring a laboratory coat and closed shoes. This is required by Health and Safety (HS) regulations, and you will not be permitted to participate in practicals if you are inappropriately clothed. If you have long hair, you must also wear it tied back during practical classes. Laboratory coats can be purchased from various stores on campus. • Material for recording your observations and findings as appropriate for each class. These items include: a pen, an HB pencil, eraser, ruler and lined paper for written observations and plain paper for drawings. • Arrive on time. You will not be permitted to enter once the class has commenced.

Course Assessment Schedule & Summary			
Assessment	**Brief Description**	**Due Date**	**Weight**
A. Online Laboratory Safety Quiz	This online laboratory safety quiz is accessable through the BABS1201 Moodle site. It is COMPULSORY to complete this quiz with a mark of 100%.	**Week 1**	N/A
B. Online quizzes	Online quizzes are designed to provide you with formative feedback on how you are progressing in the course. Each task is a short quiz worth 1% of your final assessment for the course.	**Weeks 3, 5, 7, 9 and 11**	5%
C. Science Communication Project	**ESSAY**. The essay should be approximately 1000 words long, excluding references. You must prepare and submit your INDIVIDUAL essay online via the Turnitin plagiarism checking software in Moodle. Check Moodle announcements regularly for any changes.	**Week 5**	15%
	PITCH. TEAM presentation of ideas to your laboratory group for peer feedback on the design, biological content and feasibility of their project whilst providing similar feedback to other project teams in the class.	**Practical 5**	5%
	PRESENTATION. Utilise the peer feedback received in the pitch to finalise your TEAM presentation on your biology topic for submission and showcasing at the end of term.	**Week 10**	15%
	PORTFOLIO. TEAM submission documenting the proceedings of all team meetings, including an inventory of ideas, team member roles, major decisions, and other notes on the presentation design and execution.	**Week 10**	5%
D. Mid-term test	**Duration**: 45 minutes. **Format**: Multiple choice questions. **Content**: All theory and practical material from Weeks 1-5 (inclusive). **Venue**: your enrolled lab **Time**: your enrolled lab	**Week 6**	15%
E. Final Theory Exam	**Duration**: 2 hours. **Format**: the front page of the exam paper, detailing the format (including the number and type of questions) will be available uploaded to Moodle after submission to the exams branch. **Content**: all theory and practical material from Weeks 1-10.	**Final exam period** (Date to be advised by exams branch)	40%

Further details on the assessments are provided in the “Assessments” section of Moodle and on page 17.

Course Themes	
The course, Molecules, Cells and Genes encompasses four major themes. These themes are not presented in turn, but rather will be presented in an integrated fashion.	
Theme 1: Thinking like a scientist	This theme introduces the skills of scientific thinking, including how to decide what is true or plausible, and how scientists communicate. It also exposes you to cutting edge research being conducted at UNSW. Lectures and practical classes on this theme are interspersed through the term, enabling you: • To comprehend that science is a never-ending exploration, and that knowledge is provisional. • To identify the principal characteristics of scientific evidence. • To understand how scientists approach the investigation of a topic. • To communicate the principles of scientific findings to other scientists.
Theme 2: Cell biology and cell architecture	This theme describes the principal types of living cells, the key components of cell structure, their functions, and how they relate to each other. Lectures and practical classes on this theme should enable you: • To understand the evolutionary origins of life, and of the diversity of life. • To identify the different types of living cells, and the main similarities and differences between them. • To explain how different cell types are identified. • To describe important cell structures and relate these to function. • To compare and contrast cell structures in eukaryotes and bacteria.
Theme 3: Metabolism	This theme outlines the key concepts of metabolism, the consumption and generation of energy by living cells. Lectures and practical classes on this theme should enable you: • To describe the essential differences between proteins, carbohydrates and lipids. • To describe the processes by which these molecules enter cells. • To comprehend the processes of generating energy for cellular function. • To compare and contrast energy generation in animals and plants.
Theme 4: Genetics	This theme introduces the key concepts of modern genetics, including what genes are, how they are regulated, how genetic information is transmitted and how modern molecular biology can use genetics to understand biology. Lectures and practical classes on this theme should enable you: • To describe the essential structures of genetic material (nucleic acids, genes, chromosomes). • To explain the processes by which cells divide. • To describe the principal steps in the control of gene expression and the production of functional proteins. • To relate these structures and processes to the inheritance of genetic characteristics. • To explain the uses of recombinant DNA technology in at least one situation relating to investigation of gene function.

Course Structure	
Practical classes	Laboratory based experimentation is an important part of modern biology, and this course gives you the opportunity to conduct laboratory explorations and to acquire basic skills. The practical component of this course is designed as an exploration of cell structure and function, and of the genetic material of those cells. It is divided into three sequences of practicals that are linked to the lecture series: o Introduction to laboratory safety o Exploring cell structure (Practicals 1-2) o Exploring cell function (Practicals 3-4) o Exploring genes (Practicals 5-6) There are aims for each individual practical class, and overall goals for each section. Each practical class is assessable. **LABORATORY PREPARATION: <u>PRIOR</u> to each class, you are expected to complete a pre-lab quiz in Moodle.** Your attendance at **EVERY** laboratory class is **COMPULSORY**, including the introductory term on laboratory safety and procedures in Week 1. Should you be unable to attend your practical class for any reason, you will not be able to do "make-up" labs. For unavoidable absences from practical classes, you must provide your demonstrator with a medical certificate or other professional documentation that supports the reason for your absence. See FAQ on **page 3** and Expectations of Students on **page 17** for details on absences from classes.
Lectures	A unifrom set of lecture notes is provided for each lecture, that provides the learning outcomes and relevant textbook references. This is provided particularly of those students that wish to prepare ahead of time and the notes cover all assessable material. Please note that your lecturers will often provide another set that they use in class, these may extend the information for those interested and provide more context and examples from research. At UNSW, the people who teach you biology have made significant contributions to your area of study. We are aware that the students in this course have widely varying backgrounds in biology, so we are concerned that all students are being appropriately catered for. If you feel that a lecture is dealing with something that is already familiar to you, you may use it as an opportunity for revision, or choose not to attend in person. If you choose to attend, please be quiet when the lecturer is speaking. Chatting makes it difficult for your fellow students to listen, and for the person giving the lecture. Remember that it is a real person up there, not a TV screen, and that we can hear you as well as you can hear us! Repeated disruption of lectures by talking, or through other inappropriate behaviour, constitutes academic misconduct. Lecturers may also ask a disruptive student to leave the lecture theatre. Please note: Mobile phones are to be switched to silent during lectures and practicals. Lecture notes and recordings are accessible via the BABS1201 Moodle site.

UNSW Science Graduate Attributes Developed in this Course		
Science Graduate Attributes	***0 = no focus*** ***1 = minimal*** ***2 = minor*** ***3 = major***	**Activities / Assessment**
Research, inquiry and analytical thinking abilities	3	Guided laboratory practicals; independent and collaborative lab research; and independent research.
Capability and motivation for intellectual development	3	Small group discussions; essay and project presentation.
Ethical, social and professional understanding	2	Science communication topics may address some of the ethical and social issues of biology, and the "how to think like a scientist" theme throughout the course addresses professional understanding.
Communication	3	Development of scientific writing skills through introduction to scientific literature (essay); and the project.
Teamwork, collaborative and management skills	3	Team independent research project; facilitation of group discussions in class and on Moodle.
Information literacy	3	Introduction to finding reviews and primary scientific literature (essay), team project.
Teaching strategies	Lectures are used to introduce the concepts of fundamental cell biology and laboratory sessions are used to both complement the lecture material and provide practise in standard biological techniques used in research. Laboratories are used to encourage teamwork. Discussion groups and electronic resources referrred to within scheduled laboratory classes are additionally designed to further reinforce the concepts presented in lectures and practised in the laboratory, and support students in their assigned projects. The laboratory program forms an essential element of the students' scientific training. The laboratory program, as integrated with the other components of the course, have been designed in accordance with the UNSW Guidelines on Learning that Inform Teaching (www.guidelinesonlearning.unsw.edu.au) to: ○ Teach students the process of scientific inquiry through progressive cycles of critical analysis of their research and their own thinking; ○ Facilitate multidisciplinary thinking to reflect current research and professional practice in the sciences; ○ Reinforce deep learning and promote collaborative inquiry; ○ Integrate students' disciplinary understanding and research practice with the development of their communication skills, teamwork, and information literacy skills.	

Lecture Program	
Please note that any changes to learning outcomes will be communicated via Moodle.	
Introducing BABS1201	In this lecture you will meet your coordinators, receive information on the course structure, expectations, assessments and procedures.
Scientific Literature	LO1 Explain the purpose of a scientific journal LO2 Identify a primary article and list its features LO3 Explain the differences between primary and secondary sources of scientific literature LO4 Describe the term 'peer review' as it applies to scientific literature
Scientific Communication	Introduces the Biology Threshold Learning outcomes, see pg 17-18.
Life	LO1 List the major elements of life. LO2 Describe some properties of water that make it essential for life as we know it. LO3 Changes in pH affect living organisms
Cells I	LO1 List the major elements of life LO2 Explain how the diversity of life is classified LO3 Define what a cell is LO4 List some characteristics of life LO5 Explain the fundamental differences between prokaryotes and eukaryotes LO6 Describe the concept of endosymbiosis
Cells II	LO1 Identify characteristic structures of eukaryotic and bacterial cells, and describe their basic functions LO2 Describe the endomembrane system LO3 List the main components of the cytoskeleton and briefly describe their roles in the cell
Macromolecules I (CHO & lipids), II (proteins) and III (nucleic acids)	LO1 Provide a broad definition of the term "macromolecule". LO2 Explain the way in which macromolecules are generally synthesised and broken down by organisms. LO3 Briefly describe the general structural features of each of the four major classes of macromolecules. LO4 List some examples of members belonging to each of the four major classes of macromolecules. LO5 Describe some of the key functions of members belonging to each of the four major classes of macromolecules.
Cell Integrity	LO1 To describe the structure of cell membranes and their function in cell integrity. LO2 To describe the different components of the cell membrane that are important in maintaining cell integrity. LO3 To explain the non-selective diffusion of some small molecules across cell membranes and osmosis.
Cellular transport	LO1 To explain the mechanisms by which small molecules may be selectively transported in and out of cells. LO2 To describe the concept of a membrane potential arising from ionic imbalances across cell membranes. LO3 To describe the different types of endocytosis.
Metabolism I: Metabolic concepts	LO1 Explain the terms metabolism, catabolism and anabolism. LO2 Explain the basic model for enzyme catalysis LO3 Describe the structure and function of ATP LO4 Describe the terms respiration and fermentation. LO5 Describe the importance of redox reactions in metabolism, including the common cofactors.

Metabolism II: Extracting energy from food	LO1 Describe the catabolism of different macromolecules. LO2 Describe the central features of glycolysis, the TCA cycle and oxidative phosphorylation. LO3 Explain the process of chemiosmosis. LO4 Compare the advantages and disadvantages of fermentation and aerobic respiration. LO5 Explain the control of cellular respiration via feedback.
Photosynthesis: Synthesising food from energy	LO1 To explain the functions of the different stages in photosynthesis; light harvesting, the conversion of light energy into chemical energy, and carbon dioxide fixation. LO2 To explain the overall organisation of the light reactions in photosystems I and II. LO3 To describe, in overview, the fixation of carbon dioxide and synthesis of glucose in the Calvin cycle. LO4 To compare and contrast the generation of energy from photosynthesis and oxidative phosphorylation.
DNA replication	LO1 Explain the semi-conservative model of DNA replication. LO2 Describe the basic steps involved in the process of DNA replication. LO3 Describe the function of the major enzymes involved in DNA replication.
Cell division and reproduction	LO1 To explain the difference between a gene and a chromosome and describe the way in which DNA is packaged within a cell. LO2 To explain the processes of mitosis and meiosis and the differences between them.
Gene expression I: Transcription	LO1 Describe the genetic code. LO2 Explain how the instructions contained within DNA are transcribed into RNA. LO3 Define the three stages of transcription. LO4 State the main differences in gene expression between bacteria and eukaryotes.
Gene expression II: Translation	LO1 Explain the process of translation, and relate it to cell function and the role of ribosomes. LO2 Describe the basic structure and function of tRNA. LO3 Describe the three main stages of translation. LO4 Explain the main differences between control of gene expression in bacteria and eukaryotes.
The polymerase chain reaction	LO1. To describe the PCR including the steps involved. LO2. To list several applications of PCR.
Mutation	LO1 To explain at mechanisms by which mutations can arise. LO2 To elate the occurrence of mutations to the outcomes for cells and whole organisms. LO3 To appreciate the importance of the rate of mutation for the evolution of species.
Mendel's laws of heredity	LO1 To describe Mendel's laws. LO2 To explain the basis of inherited characteristics. LO3 To explain why genotype does not always equal phenotype.
Mechanisms of inheritance	LO1 To explain the varied modes of inheritance in difference organisms. This includes the concepts of dominant and recessive traits, sex-linked and autosomal inheritance, linkage and recombination, complex traits eg codominance
Population genetics	LO1 To explain the evolutionary forces that influence population genetics using the Hardy-Weinberg model.

Administrative Matters		
Expectations of Students	A pass in BABS1201 is conditional upon a satisfactory performance in both the assessment and practical programs. We expect that you will have: ○ Attempted/submitted all assessment items. ○ Attended all of the practical classes (an attendance record is kept) and actively participated including by keeping an up-to-date laboratory manual recording all data and completion of calculations and questions. Holidays are NOT considered a valid reason for student absences from classes and assessments. For more details on UNSW class attendance policies, please refer to: https://student.unsw.edu.au/attendance	
Assignment Submissions	Requirements vary with each assigned task. All information regarding submissions is explained in this manual, by your practical class demonstrator and online via Moodle announcements.	
Equity and Diversity	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 (93854734 or http://www.studentequity.unsw.edu.au/). Issues 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. Information on designing courses and course outlines that take into account the needs of students with disabilities can be found on the above website.	
Student Complaint Procedure Note: issues must first be raised with course convenors.	**BABS School Contact**	Marc Wilkins m.wilkins@unsw.edu.au Tel: 9385 3633
	Science Faculty Contact	Gavin Edwards Associate Dean (Undergraduate programs) g.edwards@unsw.edu.au Tel: 9385 7111
	University Contact	Student Conduct and Appeals Officer (SCAO) within the Office of the Pro-Vice-Chancellor (Students) Registrar Tel: 9385 8515 studentcomplaints@unsw.edu.au

Special Consideration and Further Assessment	
Explanation	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 (laboratories and tutorials), 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. 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. You must obtain and attach Third Party documentation before submitting the application. Failure to do so may result in the application being rejected. Further information on special consideration can also 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). Students will be contacted via *their official university email* as to the outcome of their application.
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 and received Special Consideration approval. Mid-term supplementary exam will be held during the term at the convenient period determined by the course convenor. Final supplementary exam will be run by The Exam Office and in supplementary exam period. For Term 1 2020, Supplementary Exams will be scheduled between 25-29 May 2020 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. 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.

Academic Honesty and 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.
- Claiming credit for a proportion a work contributed to a group assessment item that is greater than that actually contributed.
- Submitting an assessment item that has already been submitted for academic credit elsewhere may also be considered plagiarism.
- The inclusion of the thoughts or work of another with attribution appropriate to the academic discipline does *not* amount to plagiarism.

Students are reminded of their Rights and Responsibilities in respect of plagiarism, as set out in the University Undergraduate and Postgraduate Handbooks, and are encouraged to seek advice from academic staff whenever necessary to ensure they avoid plagiarism in all its forms.

The Learning Centre website is the central University online resource for staff and student information on plagiarism and academic honesty. It can be located at: www.lc.unsw.edu.au/plagiarism

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

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

Individual assistance is available on request from The Learning Centre.

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

Course Assessment – Detailed Instructions

A. ONLINE LABORATORY SAFETY QUIZ

In order to be permitted to take part in laboratory classes, you must also complete an online Laboratory Safety Quiz that is accessed through the BABS1201 Moodle site.

When you have finished the quiz and submitted all your answers, you will receive a mark out of **10**. If **ANY** of your answers were incorrect, then you **MUST** attempt the quiz again and keep repeating this process until you have scored a mark of **10/10.** Since it is crucial that you are aware of all important health and safety rules and regulations, you can attempt the quiz as many times as required for you to get **ALL** the answers correct.

If you have not scored 100% in the quiz you will NOT be permitted to attend lab classes until you have satisfied this requirement.

B. ONLINE QUIZZES

Online quizzes are designed to provide you with formative feedback on how you are progressing in the course. Each task is a short quiz worth 1% of your final assessment for the course.

Each quiz is open for two weeks, with the due dates on Friday of weeks 3, 5, 7, 9 and 11. You are strongly encouraged to complete the quiz ahead of the deadline.

C. SCIENCE COMMUNICATION PROJECT

The Science Communication Project is a group assignment with multiple components that runs throughout the term. The project focuses on advanced biology topics and aims to develop, exercise and enhance your science communication skills. Working in a team of four (4), students you will:

1. Select a topic from the list provided, and read a about it in the link provided;

2. **Perform a literature search on the chosen topic** (see Moodle for a module on how to conduct a literature search);

3. Write and submit an **individual ESSAY** (15%) that compares primary and secondary scientific journal articles on their topic (see Moodle for a module on scientific literature that describes primary and secondary scientific journal articles);

4. Meet regularly with your team to discuss findings on your topic, and develop a presentation that effectively communicates the central biological concepts, especially with respect to how those concepts align with BABS1201 course themes and learning activity topics;

5. **PITCH** (5%) your presentation ideas to the larger laboratory group for peer feedback on the design and biological content of the presentation whilst providing similar feedback to other project teams in the class;

6. Utilise the peer feedback received in the pitch to finalise your 10 minute **team PRESENTATION** (15%) on your biology topic for submission and showcasing at the end of term;

7. Submit a **team PORTFOLIO** (5%) that documents the proceedings of all team meetings, including an inventory of ideas, team member roles, major decisions, and other notes on the presentation design and execution.

This project incorporates the following UNSW Science graduate attributes:

- Research, inquiry and analytical thinking abilities;
- Capability and motivation for intellectual development;
- Communication;
- Teamwork, collaborative and management skills; and,
- Information literacy.

This project also incorporates many of the Biology Threshold Learning Outcomes recognised by the Australian Council of Deans of Science:

Upon completion of a bachelor degree or major in biology, graduates will:	
Understanding biology	1.1 Demonstrate a coherent understanding of biology by articulating the methods of biology, and explaining why current biological knowledge is both contestable and testable through further inquiry. 1.2 Demonstrate a coherent understanding of biology by explaining the role and relevance of biology in society. 1.3 Recognise that biological knowledge has been acquired by curiosity and creativity, and demonstrate creativity in thinking and problem solving. 1.4 Recognise and appreciate the significant role of biodiversity in sustaining life on our planet.
Biological knowledge	2.1 Exhibit depth and breadth of biological knowledge by demonstrating well-developed understanding of identified core concepts in biology. 2.2 Exhibit depth and breadth of biological knowledge by demonstrating that these 'core concepts' have interdisciplinary connections with other disciplines.
Inquiry and problem solving	3.1 Gather, synthesise and critically evaluate information about biological phenomena from a range of sources. 3.2 Critically analyse observations of biological phenomena by creating and developing models and/or proposing and testing hypotheses. 3.3 Design and conduct field, laboratory based, or virtual biological experiments. 3.4 Select and apply practical and/or theoretical techniques. 3.5 Collect, accurately record, interpret, analyse, and draw conclusions from biological data.
Communication	4. Effectively synthesise and communicate biological results using a range of modes (including oral, written, and visual) for a variety of purposes and audiences.
Personal and professional responsibility	5.1 Be accountable for their own learning and biological work by being independent and self-directed learners. 5.2 Work effectively, responsibly and safely in individual and peer or team contexts. 5.3 Demonstrate knowledge of the regulatory frameworks and ethical principles relevant to their sub-disciplinary area within biology, and apply these in practice.

SUMMARY OF ASSESSABLE PROJECT COMPONENTS:

Assessable Component	Learning Outcomes Assessed	Weighting	Due Date
Scientific Literature Essay	The following LO from the lecture: Scientific literature" will be assessed: • Identify a primary article and list its features • Explain the differences between primary and secondary sources of scientific literature • Describe the term 'peer review' as it applies to scientific literature *Graduate Attributes developed:* • Research, inquiry and analytical thinking abilities; • Communication; • Information literacy. *Biology Threshold learning outcomes developed:* 4. Effectively synthesise and communicate biological results using a range of modes (including oral, written, and visual) for a variety of purposes and audiences. 5.1 Be accountable for their own learning and biological work by being independent and self-directed learners.	15%	Week 5
Presentation Pitch	*Graduate Attributes developed:* • Capability and motivation for intellectual development; • Communication; • Teamwork, collaborative and management skills; and, • Information literacy. *Biology Threshold learning outcomes developed:* 4. Effectively synthesise and communicate biological results using a range of modes (including oral, written, and visual) for a variety of purposes and audiences. 5.2 Work effectively, responsibly and safely in individual and peer or team contexts.	5%	Week 7 Practical 5
Presentation	*Biology Threshold learning outcomes developed:* 3.1 Gather, synthesise and critically evaluate information about biological phenomena from a range of sources. 4. Effectively synthesise and communicate biological results using a range of modes (including oral, written, and visual) for a variety of purposes and audiences. 5.2 Work effectively, responsibly and safely in individual and peer or team contexts.	15%	Week 10
Portfolio	*Biology Threshold learning outcomes developed:* 5.1 Be accountable for their own learning and biological work by being independent and self-directed learners. 5.2 Work effectively, responsibly and safely in individual and peer or team contexts.	5%	Week 10
Total Weighting:		**40%**	

LIST OF PROJECT TOPICS:

As a team, select a topic for your project from the list below. These topics align with the core course themes, and also provide new information. It is possible that your team may be permitted to select a topic of interest that is not on the list, but such topics must firstly be first approved by your demonstrator and then by your course convenors.

1. What does the koala genome tell us about the taste of eucalyptus? https://www.sciencedaily.com/releases/2018/07/180710101646.htm
2. The Tardigrade (water bear) genome has been sequenced and it's even weirder than we thought https://sciencealert.com/the-tardigrade-genome-has-been-sequenced-and-it-has-the-most-foreign-dna-of-any-animal
3. A new mechanism of action of the Replisome means all the biology text books need to be re-written http://www.labmanager.com/news/2015/11/study-reveals-the-architecture-of-the-molecular-machine-that-copies-dna?fw1pk=2#.VjoxtyserSg
4. The science of genetic inheritance is weirder than we thought http://www.sciencealert.com/watch-the-science-of-genetic-inheritance-is-weirder-than-we-thought
5. Gene-editing technique used to create low-gluten bread suitable for celiacs http://www.iflscience.com/health-and-medicine/geneediting-technique-used-to-create-lowgluten-bread-suitable-for-celiacs/
6. This biohacker became the first person to edit their own DNA http://www.iflscience.com/health-and-medicine/this-biohacker-became-the-first-person-to-edit-his-own-dna/
7. CRISPR gene editing tool used to treat genetic disease in an animal for the first time http://www.sciencealert.com/crispr-gene-editing-tool-used-to-treat-genetic-disease-in-an-animal-for-the-first-time
8. A protein found in human breast milk could help kill drug resistant bacteria http://www.sciencealert.com/a-protein-found-in-human-breast-milk-could-help-kill-drug-resistant-bacteria
9. Do we all carry the genes for autism? http://www.sciencealert.com/we-all-carry-the-genes-for-autism-study-finds
10. The first eukaryotes without a normal cellular power supply have been found http://www.sciencemag.org/news/2016/05/first-eukaryotes-found-without-normal-cellular-power-supply?utm_source=sciencemagazine&utm_medium=facebook-text&utm_campaign=noeukaryote-4260
11. Can the 'RNA World' be used to explain the origins of life? http://www.sciencemag.org/news/2016/05/rna-world-inches-closer-explaining-origins-life?utm_source=sciencemagazine&utm_medium=facebook-text&utm_campaign=rnaworld-4268
12. Humans are still evolving and we can watch it happen http://www.sciencemag.org/news/2016/05/humans-are-still-evolving-and-we-can-watch-it-happen?utm_source=sciencemagazine&utm_medium=facebook-text&utm_campaign=huvolution-4363
13. Scientists have found a woman whose eyes have a whole new type of colour receptor http://www.sciencealert.com/scientists-have-found-a-woman-whose-eyes-have-a-whole-new-type-of-colour-receptor
14. Scientists think they finally know why our genes are made of DNA and not RNA http://www.sciencealert.com/scientists-think-they-finally-know-why-our-genes-are-made-of-dna-not-rna
15. Forget what you learned in high school – this new carbon molecule has 6 bonds http://www.sciencealert.com/forget-what-you-learned-in-high-school-this-new-carbon-molecule-has-6-bonds
16. We might finally know what triggered living cells to evolve for the first time http://www.sciencealert.com/scientists-might-have-discovered-what-allowed-life-to-evolve
17. Scientists have successfully reversed DNA aging in mice http://www.sciencealert.com/scientists-have-successfully-reversed-dna-ageing-in-mice

18. The energy generators inside our cells reach a sizzling 50°C https://www.newscientist.com/article/2129849-the-energy-generators-inside-our-cells-reach-a-sizzling-50c/?utm_term=Autofeed&utm_campaign=Echobox&utm_medium=Social&cmpid=SOC%7CNSNS%7C2017-Echobox&utm_source=Facebook#link_time=1493901004
19. Antibody-powered nucleic acid release using a DNA-based nanomachine https://www.nature.com/articles/ncomms15150
20. High intensity workouts could slow down your aging by almost a decade http://www.iflscience.com/health-and-medicine/highintensity-workouts-could-slow-down-your-aging-by-almost-a-decade/
21. A new study identifies 52 genes associated with human intelligence https://www.facebook.com/nature/posts/10154856218303167
22. The brain starts to eat itself after chronic sleep deprivation https://www.newscientist.com/article/2132258-the-brain-starts-to-eat-itself-after-chronic-sleep-deprivation/?utm_term=Autofeed&utm_campaign=Echobox&utm_medium=Social&cmpid=SOC%7CNSNS%7C2017-Echobox&utm_source=Facebook#link_time=1495578558
23. CRISPR kills HIV and eats Zika 'like Pac-man'. Its next target? Cancer https://www.wired.co.uk/article/crispr-disease-rna-hiv
24. This Is the first ever nanoscale image of a living cell membrane. It's beautiful. http://www.sciencealert.com/researchers-close-a-debate-with-a-nanoscale-image-of-a-living-cell-membrane
25. Gastric bypass surgery gives patients a new set of helpful microbes http://www.sciencealert.com/gastric-bypass-surgery-gives-patients-a-new-set-of-helpful-microbes
26. Can gene therapy be used to switch off asthma? http://www.sciencealert.com/gene-therapy-used-to-switch-off-asthma
27. Tea consumption leads to epigenetic changes in women https://medicalxpress.com/news/2017-05-tea-consumption-epigenetic-women.html
28. Designer viruses successfully stimulate the immune system to fight cancer https://www.technologynetworks.com/cancer-research/news/designer-viruses-successfully-stimulate-the-immune-system-to-fight-cancer-289203
29. Scientists discover plants have ‘brains’ that determine when they grow http://www.iflscience.com/plants-and-animals/scientists-discover-plants-brains-determine-grow/
30. New semi-synthetic organism can make molecules we’ve never seen before http://www.sciencealert.com/new-semi-synthetic-organism-can-make-molecules-we-ve-never-seen-before-dna-unnatural
31. Latest DNA analysis shows the Yeti are actually just a bunch of bears http://www.sciencealert.com/dna-analysis-yeti-samples-asian-bears-no-proof-of-cryptids
32. Babies who get more cuddles have their genetics changed for years http://www.sciencealert.com/cuddling-babies-alters-their-genetics-dna-for-years
33. Living bacteria “From outer space” have been found on the outside of the ISS http://www.sciencealert.com/living-bacteria-from-outer-space-found-clinging-to-iss-alien-life
34. This protein in your brain could be at the heart of creating memories http://www.sciencealert.com/rna-binding-protein-staufen2-linked-to-synaptic-plasticity-learning-memory
35. World’s smallest tape recorder has been built inside a living bacterium http://www.sciencealert.com/smallest-tape-recorder-crispr-cas-bacterium

SUGGESTED PROJECT TIMELINE

Your demonstrator will help facilitate project planning, but you are asked to be proactive in this. For any issues that cannot be resolved in class, please email your course convenor at BABS1201@unsw.edu.au

Check Moodle announcements for updates and supporting materials to guide your project.

In Lab Class Practical:

- Form project groups
- Select project topic
- Schedule a meeting time and venue for your team in Week 3/4

Individual (in own time):

- Work through the 'Scientific Literature' lesson on Moodle. Other lessons on conducting a literature search and referencing may also be useful. For this assessment if you are unfamiliar with academic writing.
- Team members should start individually researching their topic prior to their arranged meeting time with their group. You need to conduct *literature* search (not an internet search) eg. using Google Scholar or PubMed. The online lesson linked to via Moodle on conducting a literature search may be useful here. You should identify some reviews related to your topic. Note: You should not pay for any of the scientific literature, you will be able to access most references you need for free through the UNSW library online.

Week 3/4 Team Meeting (out of class):

- Scheduled meeting team meeting - ensure an agenda is distributed prior and that one person takes minutes (including action items) and distributes then to members shortly after the meeting.
- Confirm topic and discuss scientific literature essay and assign one primary and one secondary research article to each team member for the purpose of completing the scientific literature essay. The review may be the same across members, but primary articles should be different.

Week 4 In Lab Class

- Consultation with tutor: provide them with details of the initial meeting and any additions ones, confirm team members and topic, ask questions you may have on the assignment and conduction literature searches. You may also briefly discuss you articles with the tutor.

Week 4/5 Team Meeting (out of class):

- Scheduled team meeting.
- Team members should continue to research their topic, with a focus on peer-reviewed scientific literature (i.e. journal articles).
- Start developing ideas for the content and format of your major presentation (see assignment guidelines below; presentation 'pitch' is due in Prac 5 and final presentation is due in Week 10.

Week 4/5 Individual (in own time):

- Each team member should be individually researching and writing their "scientific literature essay", due in Week 5. You may share the same review article.

Week 5/6 In Lab Class

- Consultation with tutor on progress and presentation ideas.

Week 6 Team Meeting (out of class):

- Scheduled meeting team meeting.
- Develop a brief 3-5 minute project 'pitch' that encapsulates the fundamental elements of your presentation plan (see below for pitch guidelines). You will pitch your presentation plan to the rest of your demonstrator group in the next laboratory class.

Prac 5 In Lab Class

- Research into topic should be complete and presentation design finalised.
- Project Presentation Pitches delivered in lab class. Your demonstrator will facilitate both the individual team pitches and the peer feedback sessions after each pitch.

Week 7-9 Team Meeting (out of class):

- Scheduled meeting team meeting
- Continue with the plan for your team presentation

Week 9 In Lab Class

- Consultation with tutor
- Finalise your team's presentation and portfolio for submission

Week 10 In Lab Class:

- Project Final Presentations: Each team will have 10 minutes to showcase/highlight their presentation to the class.
- Your demonstrator will help facilitate the presentations for your group.
- Team Portfolios due to demonstrators.

Scientific Literature Essay – 15%

Due: Friday Week 5, 5 pm via the Turnitin submission box on Moodle.
Word count: 1000 words, excluding references.

This essay assesses some of the learning outcomes from the Scientific Literature lecture and online lesson, and develops some Graduate Attributes and Biology Threshold learning outcomes, as detailed on page 19.

As one of the learning outcomes being assessed is whether YOU are able to differentiate between primary and secondary journal articles, your demonstrator or lecturers will NOT provide you with an answer if you ask them to check the articles you are considering. However, as some can be difficult, they may discuss HOW to differentiate between the two with you in class.

Instructions:

As a team of approximately four, choose your topic from the list provided in the Course Manual. The link will provide you with some information on the topic.

Using the information on your topic, search the scientific literature to identify a REVIEW article (ie. secondary literature) and a PRIMARY research article (ideally, the primary article will be chosen from the cited literature in the review, as this will make adressing (6) below easier). It is highly recommended that you complete the online lesson on how to search the scientific literature located on the course Moodle site.

Your essay will be assessed on the following criteria:

1. A simple description of the nature of the review article. This should include a description of the topic of the review as well as a description of the audience for which the review has been written. This will require you to reflect upon the journal, and the audience that the journal is produced for. What is the discipline? For example, is it zoology, microbiology, genetics or something else that you think best describes the work? Remember that there may be more than one discipline. You should say a little bit about the discipline/s.
2. A description of the journal. Find out about the journal. In some cases, this will mean you will find out a little about a professional society that is associated with the journal. The journal may be a general one, which 'serves' many disciplines, or may be a journal that is strongly associated with a particular scientific sub-discipline. The journal may target regional, national or international audiences.
3. Identify one PRIMARY research paper from the reference list of your review article. Locate and read through a primary research article selected from the citations in your review article. Briefly describe the article in your essay and discuss its role in or contribution to the review article. This article should be cited in your own reference list for your essay.
4. A description of the purpose of the primary article and a brief summary of the results of the investigations that are reported within it. What was the main outcome? Why is it significant? Don't get bogged down with the detail, focus on the main points only. You may not understand very much and that is okay – you are a first year biology student and the article may be written for an audience of specialised researchers. Do not use quotes or paraphrase from the article, as you are writing for a very different audience.
5. What was the aim / hypothesis investigated in the primary article? The Scientific Literature lecture/lesson steps you through the parts of a journal article and will help you identify where to look for this. Which section did you find the aim? Can your write it in your own words, suitable for a BABS1201 audience rather than an expert?
6. Explain how the primary article relates / contributes to the review article.

The above criteria will be marked using the rubric found in the Assessments section of Moodle.

You must REFERENCE both the review article and primary research article (and any other articles you use) at the end of your essay so markers can assess your essay accurately. This does not mean you include the references cited within the two articles ie. do NOT paste in the references section from your two articles, only provides details of references you use! A module on how to find and reference scientific articles correctly is available on Moodle, this provides a suggested referencing style and explains how to use in text citations.

The essay should be approximately **1000 words** long, excluding references. You must perform a word count and indicate the count at the begnning of your essay. You will not be penalised for going slightly over 1000 words, but penalties will apply to essays that exceed the limit by more than 5%.

Tip: Write as if your reader is another BABS1201 student, this means that your descriptions of the science need to be in your own words. All assignments will be screened for plagiarism.

Pitch – 5%

The pitch gives you the opportunity to describe your plan for the presentation to your demonstrator and group to receive feedback. The pitch is done in a conversation style, ie. it is not a formal presentation, and you have five minutes to do so.

Some ideas to cover:

- You need to define / describe your topic. What is it that you have chosen to present on? If the topic has diverged somewhat from your initial article, you can describe this.
- How does your topic align with the themes of the course? You will obtain feedback on whether your topic aligns well, if the material is too simple, too complex, or if you are trying to cover too much.
- You should also describe how you will present - as you are encouraged to engage the audience in your final presentation eg. NOT simply deliver a talk with slides (in 2018 most groups used Kahoo, but we would love you to be even more creative by not using Powerpoint). You can use your pitch to get feedback on any ideas you have, and also describe how you plan to approach the rest of the project and workload allocations.

In brief, the pitch is your chance to see if you are on the 'right track' with the project. The assessment portion is there to motivate you to prepare ahead, as the pitch will be most useful if you know what you most want feedback on.

You do not need to upload anything to Moodle associated with the presentation.

Presentations – 15%

The marking rubric for your presentations in available under "Assessments" and information on the learning outcomes assessed is on page 19.

Time: You have 10 minutes, and will be stopped at that time! You may not need to take up the full 10 minutes, for example if you are very concise or have less team members.

If you have a video that is less than five minutes in length, it is fine to briefly introduce it and simply play the video and answer questions,

Alignment with the course themes - This should have been covered in the pitch, where you were asked to state how your topic aligned with the course themes. If you received feedback on this, you must ensure this is responded to. You do not need to be explicit about how it aligns in your presentation if your demonstrator and group saw clear alignment in your pitch.

More questions? Please ask them on the Moodle forum.

You do not need to upload anything to Moodle associated with the presentation.

Portfolio – 5%

The portfolio should be complied as you progress through the project. How you organise this is up to the group, for example, you may dedicate one member to collate the documentation every two weeks. The aim is to ensure you have clear communication between members to ensure no issues arise within the group and, if they do, you have a record of communication, inclusion and the work allocated and performed by all members.

This is the documentation of your teams process and progress towards developing the presentation. The portfolio does not have a set format, although optional templates for planning and recording meetings were provided on Moodle. You need to hand in a group submission to your demonstrator that shows how each member was included, how tasks were allocated etc.

You do not need to upload anything to Moodle associated with the presentation.

D. MID TERM TEST – 15%

Duration: 45 minutes. **Format**: Multiple choice questions. **Content**: All theory and practical material from Weeks 1-5 (inclusive).

The mid-term test is taken in your enrolled laboratory time. As the format is multiple choice and you are required to bring a pencil and eraser to complete the multiple choice answer sheet. You need to arrive on time as you may not be permitted late entry.

If you miss this assessment due to illness or misadventure, please apply for special consideration online (see **page 15** for instructions).

E. FINAL THEORY EXAM – 40%

Date, Time and Venue to be advised by the exams branch.

The final examination is conducted externally during the UNSW T3 examination period. The date, time and location is determined by the exams branch and your course convenors are not permitted to communicate this information to you once the exam timetable is released (incase we make a mistake!). It is up to you to consult the exam timetable when released. The BABS1201 exam is often held across mutliple locations, so we strongly advvise you to consult your own timetable and not to ask a classmate.

The exam can address ANY material covered in lectures and practical classes throughout the BABS1201 program. The format and weighting of questions in the final exam will be shown on the front cover of the exam paper, which will be posted on Moodle after submission to the exams branch part way through the course. PLEASE NOTE that the final exam is a COMPULSORY assessment and must be completed in order to satisfy the requirements for passing the course. If you miss this exam due to illness or misadventure, please apply for special consideration online (see **page 15** for instructions).

Please note that there are NO PAST EXAM PAPERS provided in this course. To prepare, we recommend you revise the lecture notes and corresponding learning outcomes, using the quizzes, textbook, lightboard videos and any other revision acvitvies provided for you via Moodle and your lecturers.