FACULTY OF SCIENCE

SCHOOL OF BIOTECHNOLOGY AND BIOMOLECULAR SCIENCES

BABBS1201
MOLECULES, CELLS & GENES

Term 3
2020

COURSE OUTLINE
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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 both independent and live classes.

All the independent activities are provided on Moodle, presented in a week-by-week structure. To keep up to date with the lectures, you can download the lectures notes (all uploaded in advance) and listen to the recordings once uploaded. These lectures closely follow the recommended textbook which is available from the UNSW Bookshop, as an ebook or from the library.

You must attend your timetabled online ‘laboratory’ class every week. You should prepare for this by familiarising yourself with the activities for the week and ensuring you have with access to the electronic Course Manual during the class.

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 addressed in the resources provided, please post on the course Moodle discussion forum. If your question is sensitive or of a personal nature, email us at BABS1201@unsw.edu.au.

We will also be having live Q&A sessions during the week on Teams – so look out for the Moodle announcements!

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
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?

Your demonstrator is employed for their teaching hours and preparation. While you can contact them Microsoft Teams, please know they are not expected to respond until your next 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 laboratory class. What should I do? Can I attend a make up class?

Attendance at your laboratory 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 contact your demonstrator so that you absence can be correctly recorded.

We do not offer make up classes in this course. This is because we use the time for demonstrators to catch up on how the small groups are progressing on their project and as we need to record attendance for each demonstrator group.
• 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 – T3, 2020

<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Lectures</th>
<th>Laboratory (Tue/Wed @ 10 am/2 pm)</th>
<th>Assessment &amp; activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>14 Sep</td>
<td>1. BABS1201 - RLB &amp; JW LIVE 14 Sep, 12 pm</td>
<td></td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Scientific literature - RLB</td>
<td></td>
<td>-</td>
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<tr>
<td></td>
<td></td>
<td>3. Scientific communication - JW</td>
<td></td>
<td>-</td>
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<tr>
<td>2</td>
<td>21 Sep</td>
<td>4. Life - RLB</td>
<td>Health &amp; Safety</td>
<td>Scientific literature lesson</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5. Cells I – RLB</td>
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<tr>
<td></td>
<td></td>
<td>6. Cells II - RLB</td>
<td></td>
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<tr>
<td>3</td>
<td>28 Sep</td>
<td>7. Macromolecules I (CHO &amp; fats) - RLB</td>
<td>Cell Structure</td>
<td>Quiz 1 (1%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>8. Macromolecules II (Proteins) - RLB</td>
<td></td>
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<tr>
<td></td>
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<td>9. Macromolecules III (DNA) RLB</td>
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<tr>
<td>4</td>
<td>5 Oct</td>
<td>10. Cell integrity - VS</td>
<td>Macromolecules</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>11. Nutrient and ion transport - VS</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>12. Revision – JW LIVE 9 Oct, 2 pm</td>
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</tr>
<tr>
<td>5</td>
<td>12 Oct</td>
<td>13. Metabolism I – JW</td>
<td>Osmosis &amp; diffusion</td>
<td>Quiz 2 (1%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>14. Metabolism II - JW</td>
<td></td>
<td>Essay (15%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>15. Photosynthesis I - JW</td>
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<tr>
<td>6</td>
<td>19 Oct</td>
<td><em>Flexibility Week</em></td>
<td>MID-TERM TEST</td>
<td>Mid-term test (15%)</td>
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<tr>
<td>7</td>
<td>26 Oct</td>
<td>16. DNA Replication - LLM</td>
<td>Respiration and photosynthesis</td>
<td>Proposal (5%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>17. Cell division and reproduction - LLM</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>18. Gene expression I - LLM</td>
<td></td>
<td></td>
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<tr>
<td>8</td>
<td>02 Nov</td>
<td>19. Gene expression II - LLM</td>
<td>Mitosis &amp; cell division</td>
<td>Quiz 3 (1%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>20. Polymerase Chain Reaction - LLM</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>21. Mutation - AMG</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>09 Nov</td>
<td>21. Mendel’s Laws of Heredity - PW</td>
<td>Genetic inheritance</td>
<td>Quiz 4 (1%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>22. Mechanisms of Inheritance - PW</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>23. Population genetics - PW</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>16 Nov</td>
<td>24. Exam &amp; assessment info – RLB &amp; JW LIVE 20 Nov, 2 pm</td>
<td>-</td>
<td>Presentation (15%), Portfolio (5%), Quiz 5 (1%)</td>
</tr>
</tbody>
</table>

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

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td><strong>Course Code</strong></td>
<td>BABS1201</td>
</tr>
<tr>
<td><strong>Course Name</strong></td>
<td>Molecules, Cells &amp; Genes</td>
</tr>
<tr>
<td><strong>Academic Unit</strong></td>
<td>School of Biotechnology and Biomolecular Sciences</td>
</tr>
<tr>
<td><strong>Level of Course</strong></td>
<td>First Year Undergraduate</td>
</tr>
<tr>
<td><strong>Units of Credit</strong></td>
<td>6</td>
</tr>
<tr>
<td><strong>Assumed Knowledge, Prerequisites or Co-requisites</strong></td>
<td>Nil</td>
</tr>
<tr>
<td><strong>Hours per Week</strong></td>
<td>6</td>
</tr>
<tr>
<td><strong>Number of Weeks</strong></td>
<td>10 weeks</td>
</tr>
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</table>

### Course Convenors

<table>
<thead>
<tr>
<th>Name</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr Rebecca LeBard</td>
<td><a href="mailto:r.lebard@unsw.edu.au">r.lebard@unsw.edu.au</a></td>
</tr>
<tr>
<td>John Wilson</td>
<td><a href="mailto:j.e.wilson@unsw.edu.au">j.e.wilson@unsw.edu.au</a></td>
</tr>
</tbody>
</table>

### Administrative Support

<table>
<thead>
<tr>
<th>Email</th>
<th>Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td><a href="mailto:BABS1201@unsw.edu.au">BABS1201@unsw.edu.au</a></td>
<td>UNSW.to/webforms</td>
</tr>
</tbody>
</table>
## Course Resources

### Recommended Textbook


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.”

![Campbell Biology](image)

### 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](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
Access to the course manual on OneNote is available via the BABS1201 Moodle site.

### Laboratory Classes
For all practical classes students are required to:
- Attend and contribute to their live small group session on Microsoft Teams as timetabled.
- Have access to the BABS1201 Molecules, Cells & Genes Course Manual.
- Arrive on time and be prepared to have you camera and microphone on. If for some reason you are unable to have your camera on, you may communicate this to you demonstrator at the start of the class.
<table>
<thead>
<tr>
<th>Assessment</th>
<th>Brief Description</th>
<th>Due Date</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Online quizzes</td>
<td>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.</td>
<td>Weeks 3, 5, 8, 9 and 10</td>
<td>5%</td>
</tr>
<tr>
<td>ESSAY</td>
<td>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.</td>
<td>Week 5</td>
<td>15%</td>
</tr>
<tr>
<td>PROPOSAL</td>
<td>TEAM proposal of ideas to your demonstrator for feedback on the design, biological content and feasibility of their project whilst providing similar feedback to other project teams in the class.</td>
<td>Week 7</td>
<td>5%</td>
</tr>
<tr>
<td>PRESENTATION</td>
<td>Utilise the peer feedback received in the pitch to finalise your TEAM presentation on your biology topic for submission.</td>
<td>Week 10</td>
<td>15%</td>
</tr>
<tr>
<td>PORTFOLIO</td>
<td>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.</td>
<td>Week 10</td>
<td>5%</td>
</tr>
<tr>
<td>Mid-term test</td>
<td><strong>Duration:</strong> 45 minutes. <strong>Format:</strong> Multiple choice questions. <strong>Content:</strong> Course content from Weeks 1-5 (inclusive). <strong>Time:</strong> your enrolled lab</td>
<td>Week 6</td>
<td>15%</td>
</tr>
<tr>
<td>Final Theory Exam</td>
<td><strong>Duration:</strong> 1.5 hours. <strong>Format:</strong> MCQ and short response (e.g., single word answer or drag and drop). <strong>Content:</strong> Course content from Weeks 1-10</td>
<td>Final exam period (Date to be advised by exams branch)</td>
<td>40%</td>
</tr>
</tbody>
</table>

Further details on the assessments are provided in the “Assessments” section of Moodle and on page 17.
<table>
<thead>
<tr>
<th>Course Themes</th>
</tr>
</thead>
<tbody>
<tr>
<td>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.</td>
</tr>
</tbody>
</table>

**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

| **Laboratory classes** | This 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:  
  - Health and safety  
  - Exploring cell structures  
  - Exploring cell functions  
  - Exploring genes  

  There are aims for each individual class and a range of activities for individual and group completion and discussion. These classes revise your lecture content and as such they are assessable.  

  **You are expected to familiarise yourself with the material for the week in the Course Manual on OneNote prior to the class commencing.**  

  Your attendance at every laboratory class is compulsory. Should you be unable to attend your practical class for any reason, you will not be able to do a “make-up” class. For unavoidable absences from 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 uniform 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.  

  Lecture notes and recordings are accessible via the BABS1201 Moodle site and it is highly recommended you keep up with the schedule as it aligns with your online laboratory classes and assessments. |
### UNSW Science Graduate Attributes Developed in this Course

<table>
<thead>
<tr>
<th>Science Graduate Attributes</th>
<th>Activities / Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research, inquiry and analytical thinking abilities</td>
<td>3 Guided laboratory practicals; independent and collaborative lab research; and independent research.</td>
</tr>
<tr>
<td>Capability and motivation for intellectual development</td>
<td>3 Small group discussions; essay and project presentation.</td>
</tr>
<tr>
<td>Ethical, social and professional understanding</td>
<td>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.</td>
</tr>
<tr>
<td>Communication</td>
<td>3 Development of scientific writing skills through introduction to scientific literature (essay); and the project.</td>
</tr>
<tr>
<td>Teamwork, collaborative and management skills</td>
<td>3 Team independent research project; facilitation of group discussions in class and on Moodle.</td>
</tr>
<tr>
<td>Information literacy</td>
<td>3 Introduction to finding reviews and primary scientific literature (essay), team project.</td>
</tr>
</tbody>
</table>

#### 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 referred 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](http://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.
<table>
<thead>
<tr>
<th>Lecture Program</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Please note that any changes to learning outcomes will be communicated via your lecturers.</strong></td>
</tr>
<tr>
<td><strong>Introducing BABS1201</strong></td>
</tr>
</tbody>
</table>
| **Scientific Literature** | L01 Explain the purpose of a scientific journal  
L02 Identify a primary article and list its features  
L03 Explain the differences between primary and secondary sources of scientific literature  
L04 Describe the term ‘peer review’ as it applies to scientific literature |
| **Life** | L01 List the major elements of life.  
L02 Describe some properties of water that make it essential for life as we know it.  
L03 Changes in pH affect living organisms |
| **Cells I** | L01 List the major elements of life  
L02 Explain how the diversity of life is classified  
L03 Define what a cell is  
L04 List some characteristics of life  
L05 Explain the fundamental differences between prokaryotes and eukaryotes  
L06 Describe the concept of endosymbiosis |
| **Cells II** | L01 Identify characteristic structures of eukaryotic and bacterial cells, and describe their basic functions  
L02 Describe the endomembrane system  
L03 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)** | L01 Provide a broad definition of the term “macromolecule”.  
L02 Explain the way in which macromolecules are generally synthesised and broken down by organisms.  
L03 Briefly describe the general structural features of each of the four major classes of macromolecules.  
L04 List some examples of members belonging to each of the four major classes of macromolecules.  
L05 Describe some of the key functions of members belonging to each of the four major classes of macromolecules. |
| **Cell Integrity** | L01 To describe the structure of cell membranes and their function in cell integrity.  
L02 To describe the different components of the cell membrane that are important in maintaining cell integrity.  
L03 To explain the non-selective diffusion of some small molecules across cell membranes and osmosis. |
| **Cellular transport** | L01 To explain the mechanisms by which small molecules may be selectively transported in and out of cells.  
L02 To describe the concept of a membrane potential arising from ionic imbalances across cell membranes.  
L03 To describe the different types of endocytosis. |
| **Metabolism I: Metabolic concepts** | L01 Explain the terms metabolism, catabolism and anabolism.  
L02 Explain the basic model for enzyme catalysis  
L03 Describe the structure and function of ATP  
L04 Describe the terms respiration and fermentation.  
L05 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 different organisms. This includes the concepts of dominant and recessive traits, sex-linked and autosomal inheritance, linkage and recombination, complex traits e.g. 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 live programs. We expect that you will have:

- Attempted/submitted all assessment items.
- Attended all of the live laboratory classes (an attendance record is kept), actively participated, and kept an up-to-date Course Manual.

For more details on UNSW class attendance policies, please refer to:  

### 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/](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 |
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<th><strong>Special Consideration and Further Assessment</strong></th>
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| **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** | Further assessment exams may be given to 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 exams will be scheduled by The Exam Office and in supplementary exam period. 

For Term 3 2020, Supplementary Exams will be scheduled between 11-15 Jan, 2021. 

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 lecture, 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.
- 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 Handbook, and are encouraged to seek advice from academic staff whenever necessary to ensure they avoid plagiarism in all its forms.

Information on plagiarism and academic honesty can be located at: [https://student.unsw.edu.au/plagiarism](https://student.unsw.edu.au/plagiarism)