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1 Course information

<table>
<thead>
<tr>
<th>Year of Delivery</th>
<th>2017</th>
</tr>
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<tbody>
<tr>
<td>Course Code</td>
<td>BABS3291</td>
</tr>
<tr>
<td>Course Name</td>
<td>Genes, Genomes and Evolution</td>
</tr>
<tr>
<td>Academic Unit</td>
<td>School of Biotechnology and Biomolecular Sciences</td>
</tr>
<tr>
<td>Level of Course</td>
<td>3rd year</td>
</tr>
<tr>
<td>Units of Credit</td>
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<td>Session(s) Offered</td>
<td>S2</td>
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<tr>
<td>Assumed Knowledge, Prerequisites or Co-requisites</td>
<td>Second year genetics (BABS2204/BABS2264)</td>
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<tr>
<td>Hours per Week</td>
<td>6</td>
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<td>Number of Weeks</td>
<td>13 weeks</td>
</tr>
<tr>
<td>Commencement Date</td>
<td>Week 1</td>
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</table>

Summary of Course Structure (for details see ‘Course Schedule’)

<table>
<thead>
<tr>
<th>Component</th>
<th>HPW</th>
<th>Weeks</th>
<th>Time</th>
<th>Day</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lecture 1</td>
<td>1</td>
<td>1-12</td>
<td>0900-1000</td>
<td>Mon</td>
<td>Pioneer Theatre</td>
</tr>
<tr>
<td>Lecture 2</td>
<td>1</td>
<td>1-12</td>
<td>0900-1000</td>
<td>Wed</td>
<td>CLB 5</td>
</tr>
<tr>
<td>Tutorial</td>
<td>1</td>
<td>1-12</td>
<td>1300-1400</td>
<td>Fri</td>
<td>Mathews 102</td>
</tr>
<tr>
<td>Practical (Computer labs)</td>
<td>3</td>
<td>2-10, 13</td>
<td>1000-1300</td>
<td>Mon</td>
<td>D26/142</td>
</tr>
<tr>
<td>Practical (Seminars)</td>
<td>3</td>
<td>11-12</td>
<td>1000-1300</td>
<td>Mon</td>
<td>Matthews 106</td>
</tr>
</tbody>
</table>

TOTAL 6 Students with clashes should contact the BSB Student Office.

Summary of Assessment (for details see ‘Course Assessment’)

<table>
<thead>
<tr>
<th>Assessment task</th>
<th>Weight</th>
<th>Date/Deadline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mid-term exam (Lectures 1-12)</td>
<td>25%</td>
<td>4-Sep 1000-1200</td>
</tr>
<tr>
<td>Final exam (Lectures 13-24)</td>
<td>25%</td>
<td>See exam timetable</td>
</tr>
<tr>
<td>Examination total</td>
<td>50%</td>
<td></td>
</tr>
<tr>
<td>Bioinformatics Prac Report</td>
<td>30%</td>
<td>27-Oct 1400</td>
</tr>
<tr>
<td>Science communication: Genome blog</td>
<td>10%</td>
<td>7-Aug 0900</td>
</tr>
<tr>
<td>Science communication: Journal club seminars</td>
<td>10%</td>
<td>6-Oct 1400</td>
</tr>
<tr>
<td>Coursework total</td>
<td>50%</td>
<td></td>
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</table>

All coursework to be submitted via Moodle.

2 Staff Contact Details

<table>
<thead>
<tr>
<th>Position</th>
<th>Name</th>
<th>Contact details</th>
<th>Availability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course Convener</td>
<td>Rich Edwards (RE)</td>
<td><a href="mailto:richard.edwards@unsw.edu.au">richard.edwards@unsw.edu.au</a></td>
<td>Email for appointment</td>
</tr>
<tr>
<td>Lecturers</td>
<td>Bill Ballard (BB)</td>
<td><a href="mailto:w.ballard@unsw.edu.au">w.ballard@unsw.edu.au</a></td>
<td>Email for appointment</td>
</tr>
<tr>
<td></td>
<td>Mark Tanaka (MT)</td>
<td><a href="mailto:m.tanaka@unsw.edu.au">m.tanaka@unsw.edu.au</a></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Paul Waters (PW)</td>
<td><a href="mailto:p.waters@unsw.edu.au">p.waters@unsw.edu.au</a></td>
<td></td>
</tr>
<tr>
<td></td>
<td>William Sherwin (WS)</td>
<td><a href="mailto:w.sherwin@unsw.edu.au">w.sherwin@unsw.edu.au</a></td>
<td></td>
</tr>
<tr>
<td>Guest Lecturer</td>
<td>Phil Bell (PB)</td>
<td>Contact via Dr Edwards</td>
<td>n/a</td>
</tr>
<tr>
<td>Lab Demonstrator</td>
<td>Fatemeh Vafaee (FV)</td>
<td><a href="mailto:f.vafaee@unsw.edu.au">f.vafaee@unsw.edu.au</a></td>
<td>During labs</td>
</tr>
</tbody>
</table>
# Course Schedule

Please note that the course schedule may change in response to changing circumstances during the Semester. Changes will be announced through Moodle.

## Lecture Schedule

<table>
<thead>
<tr>
<th>Week starting</th>
<th>Lecture 1 (Mon 9-10 Pioneer Theatre)</th>
<th>Lecture 2 (Wed 9-10 CLB 5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 24-Jul</td>
<td>24-Jul Course introduction (RE)</td>
<td>26-Jul Genes, genomes &amp; evolution (RE)</td>
</tr>
<tr>
<td>2 31-Jul</td>
<td>31-Jul “Junk” DNA: introns (RE)</td>
<td>02-Aug “Junk” DNA: repetitive sequences (RE)</td>
</tr>
<tr>
<td>3 07-Aug</td>
<td>07-Aug De novo genome sequencing (RE)</td>
<td>09-Aug Diploid genome assembly (RE)</td>
</tr>
<tr>
<td>4 14-Aug</td>
<td>14-Aug Synthetic biology: genome engineering (RE)</td>
<td>16-Aug Evolving a new phenotype in yeast (RE/PB)</td>
</tr>
<tr>
<td>5 21-Aug</td>
<td>21-Aug Mutation and genetic variation (MT)</td>
<td>23-Aug Selection and fitness landscapes (MT)</td>
</tr>
<tr>
<td>6 28-Aug</td>
<td>28-Aug Genetic drift and population size (MT)</td>
<td>30-Aug The coalescent (MT)</td>
</tr>
<tr>
<td>7 04-Sep</td>
<td>04-Sep Molecular phylogenetics (RE)</td>
<td>06-Sep Gene duplications &amp; gene families (RE)</td>
</tr>
<tr>
<td>8 11-Sep</td>
<td>11-Sep Horizontal gene transfer (RE)</td>
<td>13-Sep Recombination, evolution and sex (WS)</td>
</tr>
<tr>
<td>9 18-Sep</td>
<td>18-Sep Genetic sex determination (PW)</td>
<td>20-Sep Epigenetics and imprinting (PW)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Week starting</th>
<th>Lecture 1 (Mon 9-10 Pioneer Theatre)</th>
<th>Lecture 2 (Wed 9-10 CLB 5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 02-Oct</td>
<td>02-Oct PUBLIC HOLIDAY</td>
<td>04-Oct Genetic and non-genetic inheritance (WS)</td>
</tr>
<tr>
<td>11 09-Oct</td>
<td>09-Oct Evolution of cooperation (WS)</td>
<td>11-Oct Host pathogen coevolution (MT)</td>
</tr>
<tr>
<td>12 16-Oct</td>
<td>16-Oct Symbiosis (BB)</td>
<td>18-Oct The evolving metabolome (BB)</td>
</tr>
<tr>
<td>13 23-Oct</td>
<td>23-Oct NO lecture</td>
<td>25-Oct NO lecture</td>
</tr>
</tbody>
</table>

Attendance at Review and Helpdesk tutorials is optional. **Attendance at all other tutorials and practicals is compulsory unless otherwise announced or prior arrangements have been made.**
4 Course Assessment

Details of assessments will be provided on Moodle and presented in tutorials. See Course Schedule for overview of dates in the context of the rest of the course.

4.1 Assessment overview

<table>
<thead>
<tr>
<th>Assessment task</th>
<th>Duration</th>
<th>Weight</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mid-term Exam</td>
<td>2 hours</td>
<td>25%</td>
<td>4-Sep (Week 7)</td>
</tr>
<tr>
<td>Final exam</td>
<td>2 hours</td>
<td>25%</td>
<td>Check exam timetable</td>
</tr>
</tbody>
</table>

EXAMINATION TOTAL 50%

<table>
<thead>
<tr>
<th>Assessment task</th>
<th>Duration</th>
<th>Weight</th>
<th>Release date</th>
<th>Due date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assignment 1, Science communication: Blog post of a primary research article</td>
<td>2 weeks</td>
<td>10%</td>
<td>28-Jul (Week 1)</td>
<td>7-Aug (Week 3) 0900</td>
</tr>
<tr>
<td>Assignment 2, Science communication: Journal club seminar on primary research</td>
<td>2 weeks</td>
<td>10%</td>
<td>22-Sep (Week 9)</td>
<td>6-Oct (Week 11) 1400</td>
</tr>
<tr>
<td>Assignment 3, Bioinformatics practical: Report paper on original data analysis</td>
<td>7 weeks</td>
<td>30%</td>
<td>4-Aug (Week 2)</td>
<td>27-Oct (Week 13) 1400</td>
</tr>
</tbody>
</table>

COURSEWORK TOTAL 50%

4.2 Submission of Assessment Tasks

All assignments must be typed and submitted online via Moodle. Hand-written submissions will not be marked.

Assignment 1 must be submitted by 9am on the due date. Late submissions will NOT be accepted.

Assignments 2 and 3 must be submitted by 2pm on the due date. Late submission will incur a penalty of 20% of the total value per day.

4.3 Examinations (50%)

BABS3291 has two examinations: a mid-term (25%) in Week 7 and a final exam (25%) in the exam period. Each examination will consist of six essay questions in three sections. Each section will correspond to one lecture block. Students must answer ONE question from EACH SECTION. Details will be released via Moodle, Tutorials and lectures.

4.4 Science communication assignments (20%)

BABS3291 has two science communication coursework assignments, due in Weeks 3 and 11:

1. Genome Paper Blog (10%). The first task is to write a short scientific blog post for an educated lay audience. The subject for the blog post is a Genome paper of your choice.

2. Journal Club Seminar (10%). The second task is a short seminar presentation of an original research paper as part of a two session BABS3291 mini-conference. The chosen paper can be related to any of the subjects covered in the course.

Details will be released via Moodle and Tutorial briefings.

4.5 Bioinformatics genomics practical (30%)

The main practical in BABS3291 is a seven-week bioinformatics practical in which we will be analysing original data from BABS genome sequencing projects. You will first learn core bioinformatics skills and good data management practices. You will then apply these to gene finding/annotation in recently sequenced unpublished genomic data from the cane toad and “BABS Genome”. Considerable freedom will be given for your own analyses. Assessment will be in the form of a journal-style research report.
5 Course details

| Course Description¹ | This course covers cutting edge concepts in genetics, genomics and evolution: genome structure (how genes are organised into genomes), genomics (genome sequencing, assembly and manipulation), genome variation and the forces that shape it (mutation, recombination and genetic drift), molecular phylogenetics (capturing and using patterns of evolution), and the evolution of different genetic systems (sex, epigenetics, cooperation and symbiosis). Multiple aspects of genome biology will be studied and integrated to understand how genomes function and evolve. Examples will be taken from humans, native species and model organisms. Core concepts and methods in genomics, molecular evolution and population genetics will be supported by an integrated set of tutorials, science communication tasks and bioinformatics practicals using modern research methods and unpublished genome sequencing data. |
| Course Aims | 1. This course will introduce and explore current concepts, methods of genetics as applied in the context of genomics and evolution. Science communication exercises will develop skills to present these concepts to scientific and lay audiences.  
2. Large sequencing datasets are the new norm in genomics. The practical component of this course will expose students to the handling and analysis of real genomics data in a research setting. |
| Student Learning Outcomes² | Upon successful completion of this course, students should be able to:  
- Compare and contrast the “gene” as a unit of function versus heredity.  
- Critically evaluate the gene-centric (“selfish gene”) view of evolution.  
- Critically evaluate the concept of “Junk DNA”.  
- Describe modern de novo sequencing and assembling approaches.  
- Understand core principles of molecular evolutionary theory and apply them to homology searching and genome annotation.  
- Discuss the evolution of different genetic systems, including sex and epigenetics.  
- Compare and contrast molecular phylogenies with species phylogenies.  
- Run bioinformatics tools in both Windows and Linux, using graphical user interfaces and command line prompts.  
- Apply bioinformatics sequence analysis tools to explore the function and evolutionary history of DNA and protein sequences. |

Graduate Attributes Developed in this Course³

<table>
<thead>
<tr>
<th>Science Graduate Attributes²</th>
<th>FOCUS</th>
<th>Activities / Assessment</th>
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</thead>
<tbody>
<tr>
<td>Research, inquiry and analytical thinking abilities</td>
<td>3 (Major)</td>
<td>Tutorials, bioinformatics practicals, bioinformatics report</td>
</tr>
<tr>
<td>Capability and motivation for intellectual development</td>
<td>3 (Major)</td>
<td>Lectures, tutorials, bioinformatics practicals, bioinformatics report, journal club seminar</td>
</tr>
<tr>
<td>Ethical, social and professional understanding</td>
<td>2 (Minor)</td>
<td>Science communication blog, journal club seminar</td>
</tr>
<tr>
<td>Communication</td>
<td>3 (Major)</td>
<td>Bioinformatics research report, science communication blog, journal club seminar</td>
</tr>
<tr>
<td>Teamwork, collaborative and management skills</td>
<td>1 (Minimal)</td>
<td>Journal club discussions, bioinformatics practicals, tutorials</td>
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</table>

² Learning and Teaching Unit: Learning Outcomes  


<table>
<thead>
<tr>
<th>Information literacy</th>
<th>3 (Major)</th>
<th>Bioinformatics practicals, science blog, written reports</th>
</tr>
</thead>
</table>

### Major Topics (Syllabus Outline)

- **Genes and Genomes.** What is a gene? What is a genome? “Junk” DNA.
- **Genomics.** De novo genome sequencing and assembly. Synthetic genomes. Genomics and evolution.
- **Population genetics & Molecular Evolution.** Mutation & variation. Selection & fitness. Genetic drift. The coalescent.
- **Molecular Phylogenetics.** Gene duplications and gene families. Horizontal gene transfer.
- **Beyond Genomes.** Evolution of Cooperation. Host pathogen coevolution. Symbiosis. The evolving metabolome.

### Relationship to Other Courses within the Program

- Builds on Year 2 course **Genetics (BABS2204/BABS2264)**
- Complements the session 1 courses, **Human Molecular Genetics & Disease (BABS3151)** and **Applied Bioinformatics (BINF3010)**

Other courses related to Genes, Genomes and Evolution:
- Molecular Biology of Nucleic Acids (BABS3121)
- Microbial Genetics (MICR3021)
- Molecular Frontiers (BABS3281)
- Animal Behaviour (BIOS3011)
- Conservation Biology and Biodiversity (BIOS3071)
- Population and Community Ecology (BIOS3111)
- Evolution (BIOS3171).

### 6 Rationale and Strategies Underpinning the Course

#### Teaching Strategies

The lectures, given by experts in the field, will introduce students to essential concepts and principles in genetics, genomics and evolution, as well as recent developments. The practicals explore some aspects of the material introduced in lectures and extend the discussion to other relevant topics and skills. Computer-based exercises will provide hands-on exposure to methods, tools and concepts used in genomics. The presentation emphasises developing the ability to communicate and evaluate research results. Effective communication of science is also evaluated through written reports.

#### Rationale for learning and teaching in this course

This is a third year course that builds on ideas taught in second year genetics (BABS2204/BABS2264). In developing these ideas, we aim to contextualise the material by using examples of current relevance in the discipline and in society. Emphasis is placed on critical thinking, analytical skills, information literacy and communication because these are qualities that will aid learning in the long term. The objectives and activities of this course are designed to develop UNSW and Science Faculty graduate attributes.
7 Lecture Content
Lectures for BABS3291 are divided into six broad topic areas:

**Topic 1: Genes and Genomes**
1. Course introduction (What is a gene?) (RE)
2. Genes, genomes and evolution (RE)
3. “Junk” DNA: introns (RE)
4. “Junk” DNA: repetitive sequences (RE)

**Topic 2: Genomics**
5. De novo genome sequencing (RE)
6. Diploid genome assembly (RE)
7. Synthetic biology: how to engineer a genome (RE)
8. Evolving a ‘gain-of-function’ phenotype in yeast (RE/PB)

**Topic 3: Population genetics & Molecular Evolution**
9. Mutation and genetic variation (MT)
10. Selection and fitness landscapes (MT)
11. Genetic drift and population size (MT)
12. The coalescent (MT)

**Topic 4: Molecular Phylogenetics**
13. Molecular phylogenetics (RE)
14. Gene duplications and gene families (RE)
15. Horizontal gene transfer (RE)

**Topic 5: Evolution of genetic systems**
16. Recombination, evolution & sex (WS)
17. Genetic sex determination (PW)
18. Epigenetics and imprinting (PW)
19. **PUBLIC HOLIDAY**
20. Genetic & non-genetic inheritance (WS)

**Topic 6: Beyond Genomes**
21. Evolution of Cooperation (WS)
22. Host pathogen coevolution (MT)
23. Symbiosis (BB)
24. The evolving metabolome (BB)
8 Coursework

8.1 Science Communication Blog (10% final mark)
– week 1 (Mat 102, Fri 1300-1400) / weeks 2-3 (D26/142, Mon 1000-1300)

AIM: Effectively communicate original research to a lay audience.

TASK: Write a brief blog post about a published journal article that reports the sequencing of a new genome. Which organism was sequenced and why? What were the methods and technologies used? What state was the final genome? What interesting things did the genome reveal?

SUBMISSION: Blog posts will be submitted through Moodle. The blog post will be entered directly into a Moodle object, with the primary paper attached as a PDF. Text only must be submitted via a separate Turnitin assignment for plagiarism checking. Aim for ~500 words. Maximum 700 words 1-3 images/videos (Sources cited) Use the media, e.g. hyperlinks to external webpages or resources.

ASSESSMENT: Each blog post will be assessed under four criteria:

1. Clarity
   o Is the writing style clear?
   o Is the article well structured?
2. Content
   o Is the post informative/educational?
   o Is it accurate?
3. Presentation
   o Are pictures/videos/media well used?
   o Are sources adequately cited/acknowledged?
4. Interest
   o Did the post tell an interesting story?

Each element will be rated on a scale of 1 (Very Poor) to 5 (Excellent):
1. Very poor. No redeeming features.
2. Poor. Some effort made but falls short of meeting the brief.
3. OK. Enough to pass but not very impressive.
4. Good. Clear effort made. Not perfect but some impressive features. Good enough to publish online with some minor edits.
5. Very Good. Of sufficient quality to be published online without change.

Each student will peer mark 5 other randomly-allocated students during the Week 3 practical slot. For this reason, late submissions will not be accepted. Peer marks will be based on the mean total grade given, excluding the highest and lowest marks. The final grade will be the mean of the peer and staff marks.

A brief for the assignment will be given at the tutorial in Week 1.
8.2 Science Communication Seminars (10% final mark)
– weeks 9-10 (Mat 102, Fri 1300-1400) / weeks 11-12 (D26/142, Mon 1000-1300)

AIM: Effectively communicate original research to a scientific audience and assess media coverage.

TASK: Present a short* journal club seminar on an original research article of your choice, discovered through a science blog or media post. The presentation should cover four sections:

- Introduction
  - What is the question being asked?
  - Why did the blog/news item cover that paper?
- Methods
  - How did they address the question?
- Results
  - What were the main findings?
- Discussion
  - What did the media item say about this paper?
  - Do you agree?

Seminars will be presented over two weeks (11 and 12) in the style of a mini-symposium. Each student will be expected to ask one question each week.

*Presentation lengths will be determined based on course numbers and released during the briefing session in Week 9.

SUBMISSION: Seminar slides will be submitted through Moodle and must be in PowerPoint or PDF format.

ASSESSMENT: Each blog post will be given 1-10 marks under each of four criteria:

1. Delivery – Pace; Clarity; Confidence; Engagement
2. Visual Aids – Slide design & colours; Use of pictures; Use of text; Use of animations
3. Content – Clear introduction/background; Scientific accuracy; Informative coverage of topic; Interest
4. Organisation – Time-keeping; Flow; Clarity of key message; Cited sources & images

Each student will peer mark all other students during the mini-symposium. Peer marks will be based on the mean total grade given, excluding the highest and lowest marks. The final grade will be the mean of the peer and staff marks.

A brief for the assignment will be given at the tutorial in Week 9.
8.3 Bioinformatics Genomics Practical (30% final mark)
– weeks 2-5, 7-8, 11 (Mat 102, Fri 1300-1400) / weeks 4-6, 8-10, 13 (D26/142, Mon 1000-1300)

AIM: Learn how to perform, manage and write up analysis of real data using real bioinformatics tools.

TASK: The main coursework for BABS3291 is a six-week practical, supported by tutorials and split into two blocks to complement the lecture timetable. A final seventh week is set aside in Week 13 for completing analysis and preparation of figures.

In these practicals, you will use a variety of bioinformatics tools to identify and analyse predicted protein-coding genes from recent unpublished genome sequencing projects performed at UNSW:

1. The BABS Genome. (Species to be revealed in Week 1.)
2. The cane toad.

Emphasis throughout the project will be on transferable bioinformatics skills and exposure to a variety of potential methods and environments. Rather than being trained to execute a specific analysis one way, course material will promote self-directed learning and exploration of different tools and methods, according to the background and prior knowledge of each student.

Programming will not be a required part of the practicals but is encouraged and will enable faster, larger and/or better analyses to be performed.

TIMELINE: As this is a research project using real data, the exact details and timeline will be adapted during the course of the practical. The approximate timeline is as follows:

- Week 1. Introduction to Linux and short read sequence data.
- Week 2. Introduction to RStudio and Kmer analysis.
- Week 3. Gene finding and homology searching.
- Week 4. Multiple Sequence alignment and IGV. Optional: specificity and functional prediction

ASSESSMENT: Assessment will be in the form of a single write-up in the style of a submitted journal article to BMC, which is a modern open access journal series. Marks will be awarded for presentation, adherence to journal formatting instructions, clarity and precision of methods, quality of figures, and scientific insight. Instructions and further details will be posted on Moodle.

SUBMISSION: Research reports will be submitted through Moodle and must be in MS Word or PDF format. Submission deadline: Friday 27th October @ 1400.

LATE SUBMISSIONS WILL BE SUBJECT TO A 10% PENALTY PER WORKING DAY

11
9 UNSW Academic honesty and plagiarism

What is Plagiarism?

Plagiarism is the presentation of the thoughts or work of another as one’s own.

*Examples include:
- direct duplication of the thoughts or work of another, including by copying material, ideas or concepts from a book, article, report or other written document (whether published or unpublished), composition, artwork, design, drawing, circuitry, computer program or software, web site, Internet, other electronic resource, or another person’s assignment without appropriate acknowledgement;
- paraphrasing another person’s work with very minor changes keeping the meaning, form and/or progression of ideas of the original;
- piecing together sections of the work of others into a new whole;
- presenting an assessment item as independent work when it has been produced in whole or part in collusion with other people, for example, another student or a tutor; and
- claiming credit for a proportion a work contributed to a group assessment item that is greater than that actually contributed.†

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

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

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

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

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

https://student.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.

Careful time management is an important part of study, and one cause of plagiarism is poor time management. Allow sufficient time for research, drafting, and proper referencing of sources material.

* Based on that proposed to the University of Newcastle by the St James Ethics Centre. Used with kind permission from the University of Newcastle
† Adapted with kind permission from the University of Melbourne
10 Special Consideration and further assessment - Semester 2 2017

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. **Students must make a formal application for Special Consideration** for the course/s affected as soon as practicable after the problem occurs and **within three working days of the assessment to which it refers**.

Students should consult the “Special Consideration” section of the UNSW current students’ website for further information [https://student.unsw.edu.au/special-consideration](https://student.unsw.edu.au/special-consideration).

10.1 How to apply for Special Consideration

Applications must be made via Online Services in myUNSW. **You must obtain and attach Third Party documentation before submitting the application. Failure to do so will result in the application being rejected.** Log into myUNSW and go to My Student Profile tab > My Student Services channel > Online Services > Special Consideration. After applying online, students must also verify supporting their documentation by submitting to UNSW Student Central:

- Originals or certified copies of your supporting documentation (Student Central can certify your original documents), and
- A completed Professional Authority form (pdf - download here).

The supporting documentation must be submitted to Student Central for verification **within three working days** of the assessment or the period covered by the supporting documentation. Applications which are not verified will be rejected.

Students will be contacted via the online special consideration system as to the outcome of their application. Students will be notified via their official university email once an outcome has been recorded.

10.2 Supplementary examinations

The University does not give deferred examinations. However, further assessment exams may be given to those students who were absent from the final exams through illness or misadventure. Special Consideration applications for final examinations and in-session tests will only be considered after the final examination period when lists of students sitting supplementary exams/tests for each course are determined at School Assessment Review Group Meetings. Students will be notified via the online special consideration system as to the outcome of their application. **It is the responsibility of all students to regularly consult their official student email accounts and myUNSW in order to ascertain whether or not they have been granted further assessment.**

For Semester 2 2017, BABS Supplementary Exams will be scheduled on:

4th - 8th of December 2017

Further assessment exams will be offered on this day ONLY and failure to sit for the appropriate exam may result in an overall failure for the course. Further assessment will NOT be offered on any alternative dates.
11 Expected Resources for students

| **Text Books** | There is no textbook set for this course because the topics covered are diverse and no single book covers all the material adequately. Lecturers will suggest additional reading material throughout the course. |
| **Course Manual** | This document. For additional information see also the Moodle site for this course. |
| **Additional Readings** | Will be suggested throughout the lecture and practical series |
| **Recommended Internet Sites** | Moodle site for this course.  
Library website and resources: [http://info.library.unsw.edu.au/](http://info.library.unsw.edu.au/)  
Ensembl: [http://www.ensembl.org/index.html](http://www.ensembl.org/index.html) |
| **Societies** | Genetics Society of AustralAsia [http://genetics.org.au/](http://genetics.org.au/) |
| **Computer Laboratories** | D26/142 |
| **Enabling Skills Training Required to Complete this Course** | ELISE - Take this online tutorial if you have not already done it. [http://subjectguides.library.unsw.edu.au/elise](http://subjectguides.library.unsw.edu.au/elise) |

12 Course evaluation and development

The course will be evaluated via discussion and feedback during practicals. Responses to MyExperience surveys are taken seriously, and suggestions considered for incorporation into subsequent years. As a newly revamped course all constructive feedback is valuable and greatly appreciated.

13 Other information

| **Practicals & Tutorials** | Details of the practicals and tutorials for this course will be provided during the introductory lectures/tutorials and on Moodle. |
| **Expectations of Students** | Attendance at all practicals and tutorials is compulsory unless you have a valid and documented medical or other reason. Be punctual. Do not talk or eat during lectures. Mobile phones must be switched off during lectures and practicals. Attendance and arrival times at practicals will be marked. |
| **Occupational Health and Safety** | Information on relevant Occupational Health and Safety policies and expectations both at UNSW: [http://www.ohs.unsw.edu.au/](http://www.ohs.unsw.edu.au/) |
| **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 (9385 4734 or [http://www.studentequity.unsw.edu.au/](http://www.studentequity.unsw.edu.au/)).  
Issues to be discussed may include access to materials, signers or note-takers, the provision of services and additional exam and assessment arrangements. Early notification is essential to enable any necessary adjustments to be made. Information on designing courses and course outlines that take into account the needs of students with disabilities can be found at: [https://teaching.unsw.edu.au/guidelines](https://teaching.unsw.edu.au/guidelines) |