Course Outline

BABS2011

Current Trends in Biotechnology

School of Biotechnology and Biomolecular Sciences

Faculty of Science

Term 1, 2019
1. Staff

<table>
<thead>
<tr>
<th>Position</th>
<th>Name</th>
<th>Email</th>
<th>Locations</th>
<th>Consultation Times</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course Convenor</td>
<td>A/ Prof Wallace Bridge</td>
<td><a href="mailto:wj.bridge@unsw.edu.au">wj.bridge@unsw.edu.au</a></td>
<td>Room 108, Samuels Building, F26</td>
<td>By appointment</td>
</tr>
</tbody>
</table>

Please refer to the course schedule section or Moodle for demonstrators/ tutors involved in this course.

2. Course information

Units of credit: 6
Pre-requisite(s): Level 1 Science

2.1 Course summary (Handbook entry)

Through case study presentations, students will be introduced to how biotechnology advances are impacting on society by solving problems in medicine, agriculture, and environmental management. Lectures discuss current analytical technologies that are enabling the performance of scientific fundamental and applied research. Through assignments, students will be provided with the opportunities to develop scientific expertise in a biotechnology targeted area of their interest and to develop the skills required to interpret scientific findings and report them to key technical and non-technical stakeholders involved in biotechnology commercialisation.

2.2 Course aims

The course aims to provide students with:
1. the expertise to interpret and report scientific literature to a range of audiences involved in technology commercialisation
2. an understanding of current technologies that are enabling biotechnology research
3. insight into biotechnology commercialisation processes

2.3 Course learning outcomes (CLO)

At the successful completion of this course, students should be able to:
1. Translate complex scientific reports into language comprehensible by key stakeholders involved in technology commercialisation.
2. Comprehensively analyse the literature to review biotechnology strategies for addressing market opportunities.
3. Identify and explain appropriate analytical technologies to be used in biotechnology-based research.
4. Develop insight into strategies for commercialising biotechnology-based opportunities in an Australian context.
2.4 Relationship between course and program learning outcomes and assessments

BABS2011;
- is a stage 2 course that follows from the Stage 1 course, BABS1202 Applied Biomolecular Sciences, though BABS1202 is not a prerequisite.
- is a required core course for students undertaking the 3053 program and biotechnology BSc Major.
- serves as an introduction to the stage 3 course BABS3071 Commercial Biotechnology.
- is a suitable elective for students wishing to understand more about innovation in the biosciences and the pathways to commercialisation

<table>
<thead>
<tr>
<th>Course Learning Outcome (CLO)</th>
<th>LO Statement</th>
<th>Related Tasks &amp; Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLO 1</td>
<td>Translate complex scientific reports into language comprehensible by key stakeholders involved in technology commercialisation</td>
<td>Assessment 1</td>
</tr>
<tr>
<td>CLO 2</td>
<td>Comprehensively analyse the literature to review biotechnology strategies for addressing market opportunities</td>
<td>Assessment 3</td>
</tr>
<tr>
<td>CLO 3</td>
<td>Identify and explain appropriate analytical technologies to be used in biotechnology-based research.</td>
<td>Tutorials and Assessment 2</td>
</tr>
<tr>
<td>CLO 4</td>
<td>Develop insight into strategies for commercialising biotechnology-based opportunities in an Australian context.</td>
<td>Lectures and Assessment 2</td>
</tr>
</tbody>
</table>

3. Strategies and approaches to learning

3.1 Learning and teaching activities

Throughout the course, students are encouraged to develop problem-solving skills and to critically evaluate concepts, ideas and research results by participating in all face-to-face activities including the lectures and tutorials. Also, online learning materials will be made available via Moodle to further assist students’ learning.

Lectures serve to emphasize principles, provide an overview and connect the individual components of the course. They may also cover current ideas and research. The lectures provide a guide to the material need to cover for the course. Students are encouraged to extend their knowledge by reading from a variety of sources. Lecture notes and recordings are also available on the course Moodle website.
Tutorials are small group activities that are designed to help students to revise the lecture materials, so that they can keep up to date with the content.

More details on learning activities and how they are going to assist students to achieve the intended learning outcomes will be provided during the course (the course manual and Moodle).

3.2 Expectations of students

Students are expected to be regular and punctual in attendance at all classes. Many of the lecturers in this course are esteemed professionals and are taking time from their work to give lectures, so it is common courtesy to show appreciation by being present in the lectures.

Lectures, as well as providing facts, will provide an understanding of processes by which scientific enquiries and discoveries are made and commercialised.

Tutorials are designed to help students to revise the lecture materials and complete assignment tasks. An 80% attendance is required and if this requirement is not met, a grade of Absent Fail (AF) will be given (unless there’s a reasoning for the absent).

All classes are recorded and uploaded on Moodle. Students who have approved clashes with other courses will be marked present for missed classes providing they email the course coordinator (Wallace Bridge) a one-page summary of the content of any missed classes within 6 days. Students who miss an occasional class due to illness or other approved absence can also be recorded as present for the class by submitting the one-page summary.

Social networks (i.e. Facebook, Twitter etc) will not be used to share class materials and a way to contact academics including demonstrators/tutors involved in this course. If students have course-related questions, they are encouraged to use discussion forums on the course’s Moodle website. These are monitored regularly. If more help is needed, students may send enquiries or requests for appointments from their UNSW email. When sending an email to the course coordinator, a student must state their name, student number and the course they are enrolled in.

Students are encouraged to consult with Wallace Bridge if in doubt as to their progress.
### 4. Course schedule (note: the lecture schedule may be subject to change)

This course consists of 5 hours of class contact hours per week. Additional non-class contact hours will be required to complete assessments, readings and exam preparation.

<table>
<thead>
<tr>
<th>Week</th>
<th>Sessions T1-3 (Lectures/workshops) (3 hr)</th>
<th>Session F4 (Lectures) (2hr)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Thu CLB 4 Weeks 2-9 14:00 – 17:00</td>
<td>Fri Mathews D</td>
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<td></td>
<td>Tue CLB 4 Week 11 14:00 – 17:00</td>
<td>Weeks 1-8,10</td>
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<td></td>
<td>14:00 – 15:00</td>
<td>11:00 – 13:00</td>
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<td>15:00 – 16:00</td>
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<td></td>
<td>16:00 - 17:00</td>
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<tr>
<td>1</td>
<td>No Class Week 1</td>
<td>Commercialisation process</td>
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<td></td>
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<td>and Course overview</td>
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<td></td>
<td></td>
<td>A/Prof Wallace Bridge (WB)</td>
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<tr>
<td>2</td>
<td>21 Feb Systems Biology Prof Marc</td>
<td>Medical Biotechnology</td>
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<tr>
<td></td>
<td>Wilkins</td>
<td>Dr Megan Lenardon, BABS</td>
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<td></td>
<td>28 Feb 28 Feb Learning outcomes Weeks 1</td>
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<td>&amp; 2. WB</td>
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<td></td>
<td>1 Mar</td>
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<tr>
<td>3</td>
<td>7 Mar</td>
<td>Minomic Ltd. Diagnostics and</td>
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<td></td>
<td>Biological Mass Spectrometry</td>
<td>therapeutics</td>
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<tr>
<td></td>
<td>Dr Russell Pickford</td>
<td>Dr Brad Walsh</td>
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<td></td>
<td>Science Communication WB</td>
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<td></td>
<td>8 Mar</td>
<td></td>
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<tr>
<td>4</td>
<td>14 Mar Flow Cytometry Dr Emma</td>
<td>Synthetic Biology and Robotics</td>
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<td></td>
<td>Johansson-Beve</td>
<td>Dr Dominic Glover, BABS</td>
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<tr>
<td></td>
<td>DNA sequencing Dr Helena Mangs</td>
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<td></td>
<td>15 Mar 15</td>
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<tr>
<td>5</td>
<td>21 Mar Cyanobacteria and water quality</td>
<td>SpeeDx P/L. Precision Medicine</td>
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<td></td>
<td>Dr Brendan Burns, BABS</td>
<td>Dr Alison Todd</td>
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<td></td>
<td>Fluorescence and Confocal Microscopy,</td>
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<td>Live Imaging Dr Rene Whan</td>
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<td>22 Mar 22 Mar</td>
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<td>6</td>
<td>28 Mar Quiz 1, Covers all Week 1-5</td>
<td>Bioworma ®</td>
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<td></td>
<td>content</td>
<td>Mr Kevin Healey, International</td>
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<td></td>
<td></td>
<td>Animal Health Products P/L</td>
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<tr>
<td>7</td>
<td>4 Apr Magnetic Resonance Spectroscopy</td>
<td>Microbiogen P/L.</td>
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<tr>
<td></td>
<td>Prof Caroline Rae</td>
<td>Dr Philip Bell (Microbiogen)</td>
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<td></td>
<td></td>
<td>/Dr Rich Edwards, BABS</td>
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<tr>
<td></td>
<td>Assessment 3 A. Literature Review</td>
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<td></td>
<td>Learning outcomes Weeks 6 &amp; 7. WB</td>
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<td></td>
<td>Quiz 1/Assess 1B feedback. WB</td>
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<td>5 Apr 29 Apr</td>
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<tr>
<td>8</td>
<td>11 Apr Lipidomics &amp; Metabolomics</td>
<td>Phage Therapy</td>
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<tr>
<td></td>
<td>Dr Russell Pickford</td>
<td>Dr Tony Smithyman, Cellabs</td>
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<td></td>
<td>Proteomics Dr Gene Hart-Smith</td>
<td>P/L.</td>
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<td></td>
<td>Learning Outcomes Week 8</td>
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<tr>
<td></td>
<td>WB</td>
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<tr>
<td>9</td>
<td>18 Apr Quiz 2, Covers all Week 6-8</td>
<td>No Class. Good Friday</td>
</tr>
<tr>
<td></td>
<td>content</td>
<td></td>
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<tr>
<td></td>
<td>Review of Quiz and Course reflection</td>
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<td></td>
<td>19 Apr 19 Apr</td>
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<tr>
<td>10</td>
<td>25 Apr No Class. Anzac Day</td>
<td></td>
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<tr>
<td></td>
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</tr>
<tr>
<td>11</td>
<td>2 May Student Presentations. Assessment 3B. WB</td>
<td>Course overview/ Assessment 3 B/ Presentation/Quiz 2 feedback.</td>
</tr>
</tbody>
</table>
## 5. Assessment

### 5.1 Assessment tasks

<table>
<thead>
<tr>
<th>Assessment task and methods</th>
<th>Weighting (%)</th>
<th>Submission methods</th>
<th>Mark and feedback style</th>
<th>Week due</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Assessment 1:</strong> Individual A. Project plan for completing the Technology Brochure assignment</td>
<td>10</td>
<td>Via Moodle/Turnitin</td>
<td>Graded out of 10. Feedback via class discussion in week 4</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>20</td>
<td></td>
<td>Graded out of 10. Feedback via Moodle with rubric comments in Week 7. Class discussion week 7</td>
<td>6 Friday 4 pm</td>
</tr>
<tr>
<td><strong>Assessment 2:</strong> Individual Quiz 1. Covers material in lectures. Weeks 1-5</td>
<td>20</td>
<td>In class - 1 hr duration. Comprises multiple choice, True/False, and Short answer questions</td>
<td>Marked out of 100. Quiz 1 is discussed in week 7 and Quiz 2 in week 10</td>
<td>6</td>
</tr>
<tr>
<td>Quiz 1. Covers material in lectures. Weeks 6-8</td>
<td>20</td>
<td></td>
<td></td>
<td>9</td>
</tr>
<tr>
<td><strong>Assessment 3:</strong> A. Literature Review</td>
<td>20</td>
<td>Via Moodle/Turnitin</td>
<td>Graded out of 10 Feedback via Moodle with rubric comments in Week 10</td>
<td>8 Friday 4 pm</td>
</tr>
<tr>
<td>B. Presentation</td>
<td>10</td>
<td>Recorded presentation submitted by Moodle</td>
<td>Peer review graded out of 10. Feedback discussion in Week 11 following presentations</td>
<td>11 In class</td>
</tr>
</tbody>
</table>

**Further information**

UNSW grading system: [https://student.unsw.edu.au/grades](https://student.unsw.edu.au/grades)

5.2 Assessment criteria and standards

The major components of this course are the content which is delivered through lectures and tutorials. This will be assessed by written or oral assignments and exams. More details on the assessment tasks and how they will be graded will be provided during the course (in the course manual or online via Moodle).

5.3 Submission of assessment tasks

Assignment submission

Details on assignment submission are given in the course manual or online via Moodle (also please refer to the table provided in section 5.1). For assignments that are to be submitted to the Biosciences Student Office (BSO, G27, Biological Sciences Building), students are required to attach and complete a cover sheet which is available from both Student Office and online via Moodle.

Information on extension of deadline and penalties for late submission are explained in the course manual.

Special consideration

Applications must be made via Online Services in myUNSW. Students must obtain and attach Third Party documentation before submitting the application. Failure to do so will result in the application being rejected.

Further information is provided in the course manual.

5.4. Feedback on assessment

Students will receive constructive feedback on their assignments in a timely manner (within 2 weeks after submissions as instructed in the UNSW assessment Policy). The delivery method of feedback may vary depending on the assessment type. Brief outline of assessment feedback is presented in the table provided in section 5.1. Full details will be provided in the course manual and on the course Moodle site.

6. Academic integrity, referencing and plagiarism

There's no recommended referencing style for this course thus, students can choose a style they desire from an accepted journal in the field. However, the chosen style needs to be used throughout an assignment, keeping the consistency is valued the most.

Referencing is a way of acknowledging the sources of information that you use to research your assignments. You need to provide a reference whenever you draw on someone else’s words, ideas or research. Not referencing other people's work can constitute plagiarism.

Further information about referencing styles can be located at https://student.unsw.edu.au/referencing

Academic integrity is fundamental to success at university. Academic integrity can be defined as a commitment to six fundamental values in academic pursuits: honesty, trust, fairness, respect, responsibility and courage. At UNSW, this means that your work must be your own, and others’ ideas should be appropriately acknowledged. If you don’t follow these rules, plagiarism may be detected in your work.

Further information about academic integrity and plagiarism can be located at:

- The Current Students site https://student.unsw.edu.au/plagiarism, and

7. Readings and resources

Course Manual

The course manual containing materials for tutorials and assignments is available through download via Moodle. Any additional resources will be provided online via Moodle.

Course Website (Moodle)

All students enrolled in courses offered at BABS automatically have access to the course Moodle site https://moodle.telt.unsw.edu.au. This site will be used to distribute course notes and information and should be checked at regular intervals. This includes:

- Lecture handouts
- Tutorial notes
- Assessments - detailed information
  - marks
  - further information resulting from special consideration
- Information about examination arrangements
- Self-management resources

Resources


UNSW Library: http://www.library.unsw.edu.au

8. Administrative matters

Biosciences Student Office

Student Advisor (BABS)
Email: BABSStudent@unsw.edu.au
Tel: +61 (2) 9385 8915

School Contact (set up in progress)

Director of Teaching
Email: BABSTeaching@unsw.edu.au

Faculty Contact
Dr Gavin Edwards
Associate Dean (Academic Programs)
Email: g.edwards@unsw.edu.au
Tel: +61 (2) 9385 4652

Additional Websites
9. Additional support for students

- The Current Students Gateway: [https://student.unsw.edu.au/]
- Academic Skills and Support: [https://student.unsw.edu.au/academic-skills]
- Student Wellbeing, Health and Safety: [https://student.unsw.edu.au/wellbeing]
- Disability Support Services: [https://student.unsw.edu.au/disability-services]
- UNSW IT Service Centre: [https://www.it.unsw.edu.au/students/index.html]
- UNSW Academic Calendar Key Dates: [https://student.unsw.edu.au/dates]
- UNSW Learning Centre: [http://www.lc.unsw.edu.au/]
- UNSW Student Equity and Disabilities Unit: [https://student.unsw.edu.au/disability]
- Counselling and Support: [https://www.counselling.unsw.edu.au/]
- University Health Service: [http://www.healthservices.unsw.edu.au/]
- The Hub: [https://student.unsw.edu.au/hub]
- UNSW Careers and Employment Service: [http://www.careers.unsw.edu.au/]
- ARC- Student Life: [https://www.arc.unsw.edu.au/]
- UNSW Student Life: [https://www.unsw.edu.au/life]

10. Lecture/workshop outlines

**Week 1**

F4. Commercialisation Process and Course Overview – Wallace Bridge, BABS

**Week 2**

T1. Systems Biology – Prof Marc Wilkins, BABS.

T2. Learning outcomes Weeks 1 & 2 – A/Prof Wallace Bridge (WB)

T3. Project Planning and Assessment 1 A – WB.

F4. Medical Biotechnology – Dr Megan Lenardon, BABS

**Week 3**

T1. Biological Mass Spectrometry - Dr Russell Pickford

T2. Science Communication - WB

T3. Assessment 1B. Writing the Technical Report - Wallace Bridge

F4. Minomic Ltd. Diagnostics and therapeutics - Dr Brad Walsh
Week 4
T1. Flow Cytometry – Mr Chris Brownlee
T2. Learning outcomes Weeks 3 & 4 - Wallace Bridge
T3. Assessment 1 A feedback - Wallace Bridge
F4. Phage Therapy - Tony Smithyman, Cellabs P/L.

Week 5
T1. Cyanobacteria and water quality - Dr Brendan Burns, BABS
T2. Fluorescence and Confocal Microscopy, Live Imaging - Dr Rene Whan
T3. Learning outcomes Week 5, Quiz 1 preparation - WB
F4. SpeeDx P/L. Diagnostics and therapeutics - Dr Alison Todd

Week 6
T1. Quiz 1. Covers all Week 1-5 content
T2. Nuclear Magnetic Resonance - Dr Don Thomas
T3. Cryo-electron microscopy - Dr Juanfang Ruan
F4. Bioworma ®, Mr Kevin Healey, International Animal Health Products P/L

Week 7
T1. Magnetic Resonance Spectroscopy - Prof Caroline Rae
T2. Assessment 3 A. Literature Review, Learning outcomes Weeks 6 & 7 - WB
T3. Quiz 1/Assess 1B feedback
F4. Microbiogen P/L - Dr Philip Bell (Microbiogen) / Dr Rich Edwards, BABS

Week 8
T1. Lipidomics & Metabolomics - Dr Russell Pickford
T2. Proteomics - Dr Gene Hart-Smith, BABS
T3. Learning outcomes Week 8 - WB
F4. Synthetic Biology and Robotics - Dr Dominic Glover, BABS

Week 9
T1. Quiz 2. Covers all Week 6-8 content
T2 -3. Industrial Biotechnology - A/Prof Christopher Marquis, BABS
11. Assessment guidelines

**Class Attendance.** Students must attend at least 80% of all classes to pass the course. All sessions are recorded. To be not marked absent, students who miss a class for any reason (including those with approved clashes) must email a minimum one-page summary of the missed content prior to the next week’s class. This deadline may be extended in special consideration circumstances. Note. There will be a roll circulated for each class.

The summaries should be emailed as attachments to Wallace Bridge using the following subject line: BABS2011 Week x Tue/Thu/Fri Session summary e.g. BABS2011 Week 6 Tue Session summary

**Assessment 1. Technology brochure. Individual assessment.**

**Objective** Students will prepare a report suitable for an educated lay audience that covers a scientifically published scientific discovery that underpins a technology under development.

**Introduction.** The traditional means for communicating scientific discovery is through publishing in peer review journals. These reports are replete with highly technical information and jargon, meaning that only those with scientific expertise in the particular discipline will be in a position to read the reports and understand the content. Even those who are science educated are likely to have difficulty understanding the content if they are unfamiliar with the field of study and its experimental design and language.

In the commercialisation of scientific discovery, a broad range of stakeholders need to be engaged in the process and top fulfil their roles they all need to understand the underlying concepts of the science and the problems it can solve i.e. the technology the science enables. Business people, managers, marketers, investors, etc. will not be able to gain this insight into the science by reading the scientific reports.

**Learning outcome.** Your mission in this assignment is to develop the communication skills required by biotechnologists to translate scientific reports to something digestible by the educated lay community. These capabilities are not only required for industry-based scientists but also those in government funded research agencies that are seeking government funding (grants).

These skills will also become invaluable should you wish to become a science communicator (e.g. journalist), a school teacher, or a marketing copywriter for science-based products.

**Source of journal article**

1. Pick your favourite unmet need (what excites you about biotechnology – i.e. why are you in this class?)
2. **Search** using [Google Scholar](https://scholar.google.com) for recent papers (2016 and beyond with impact factors greater than 3) that are addressing this need.
3. Find a paper that reports findings that have potential for translating into a solution to address the unmet need.
4. Read it – can you understand it?
   a. No – try reading whilst searching (e.g. Wikipedia) for explanations of technical/scientific terms. If this proves too difficult look for something that better suits your current scientific understanding.
   b. Yes – is it interesting to you, do the findings excite you to want to find out more? If so, then perhaps you have found the paper for your assignment. If not, continue searching.

**Getting the skills to do the job.** Search for publications and on-line resources that can provide you with advice and instructions on how to effectively translate science for lay audiences and in particular those that relate to your planned brochure. Examples of resources previously used by students are also uploaded on Moodle.
**A. Project Plan for completing assignment. Individual. 10% final grade.** Submitted on-line through Turnitin

To plan for the preparation of the technology brochure students will need to complete the template Project Plan uploaded in Moodle. The project plan will introduce the selected scientific publication, the target audience for the brochure, suggest resources to assist guide the preparation of the brochure, suggest a feedback strategy, and define the action plan to complete the assignment task.

**B. Technology brochure. Individual. 20% final grade.** Submitted on-line through Turnitin

The submission will have two components

1) The Technical brochure strictly limited to two-pages (A4, coloured)

2) A maximum two-page (including bibliography) referenced (Vancouver style) Appendix that defines the target audience and describes and justifies the structure and content of your report. You will need to cite/discuss references to justify your strategy for each major section of the brochure. All references must be hyperlinked to the articles or resources.

Examples of previous student efforts that have received high grades will be uploaded on Moodle.

**Assessment 2. Quizzes** (Two quizzes both worth 15% final grade)

**Quiz format**

Section A: 30 marks - 10 M/C questions (3 marks each, 5 answer options, no negative marking)

Section B: 40 marks - 20 short answer questions (2 marks each)

Section C: 30 marks – 30 T/F questions (1 mark correct, 0 mark no attempted answer, -0.5 marks incorrect answer).

Quiz 1. Week 6 Thursday 28 March. 2 – 3 pm Tutorial. Content tested W1 – W5 lectures/tutorials (enabling technologies)

Quiz 2. Week 9 Thursday 18 April 2 – 3 pm Tutorial. Content tested W6 – W8 lectures/tutorials (enabling technologies)

Note: tested content includes any elaborations on the lectures discussed during the tutorial sessions

**Assessment 2. Literature Review (25% final grade).**

Submitted on-line through Turnitin

**Objective.** Teams of four students will produce a four-page scientific report that covers the history and current status of science-based efforts to address a specific problem or unmet need.

**Introduction.** When considering whether there is an opportunity for a research finding to be translated into a solution to solve a problem, it is essential that the researcher becomes familiar and expert in all the competing technologies that are targeting the same market opportunity. The research must develop the knowledge and insight that will allow them to understand the competitive advantages and the technical limitations of each strategy to solving the problem

**Learning outcome.** The assignment will give you the opportunity for your team to collaboratively expand your scientific knowledge and expertise of a particular problem of you team’s collective interest (e.g. a disease, a type of cancer, bioremediation of oil spills, antibiotic resistance, etc.). The team work component will allow you to collectively critically reflect on how current and emerging biotechnologies can address problems for industry and society.

These benchmarking skills will be invaluable for your scientific career for when you are considering initiating research in either an industry or academic setting.

**Market problem/unmet need examples**

*Medical* (be specific not general e.g. choose melanoma not cancer not skin cancer)
Examples: HIV/AIDS, diabetes type 1, Alzheimer’s Disease, Parkinson’s disease, Golden staph, motor neuron disease, acute respiratory distress syndrome (ARDS), hepatitis C, lupus, multiple melanoma, scleroderma, rapid syphilis diagnostic

Agricultural (can be specific or more general)

Examples: salt tolerance, insect resistance, herbicide resistance, drought tolerance of crops; vaccine production in crops, improved nutrition of crops, lowered toxicity; improved yields; biofuels (ethanol or biodiesel).

Environmental (can be specific or more general)

Examples: biodegradation of hydrocarbons (oil spills); metal leaching for mining (accumulation of detoxification); degradation of biofilms; pathogen diagnosis in waterways

Food (can be specific or more general)

Examples: Enzymes (e.g. renin), biomass (dairy starters, bakers yeast), fermented foods (yoghurts, salami), beer, process control

Team forming. Teams will be formed in Wk 2 on the basis of common interest in a particular problem.

Submission structure

Fully referenced (Vancouver style) 4-page (not including bibliography) literature review, written for a scientifically trained audience, that should cover;

1. the problem/unmet need
2. current strategies to address the opportunity
3. technologies under development
4. competitive advantages and SWOT analysis
5. conclusions and recommendations.

Examples of previous high-quality efforts will be uploaded on Moodle

Assessment 3. Team recorded presentation (15% final grade)

Due Date: Week 12. 2 pm Friday Oct 26. Submitted on-line through Turnitin

Each team will prepare an (7 min max) automated PowerPoint (or similar) voiced over presentation covering their literature review topic. The presentations will be uploaded on Moodle in Week 12 and shown in the Week 13 tutorial class. Grading will be by academics (50%) and peer review (50%).

Note: The assignment requirements and the grading rubrics will be discussed in further detail during the tutorial sessions.

Examples of previous high-quality efforts will be uploaded on Moodle

Managing team assignments.

It is expected that each team member will contribute equal amounts of quality effort to the preparation of the literature review and presentation and that the marks awarded will be equally distributed. If, however, during the assignment process you are having problems within your team, where you feel one or more members are not carrying their weight or meeting the team’s expectations or deadlines, then you must contact the course convener ASAP. If your team is dysfunctional throughout the entire process, and you do not speak up until the assignment is due to be submitted you will not get a sympathetic hearing. Each team should keep a log and minutes of their meetings, a copy of which must be submitted should there be any argument about individual team member contribution levels. The minutes of each meeting should include; attendance; the date, time and venue; purpose of the meeting; actions (i.e. delegated tasks); updates on task performance; and should be signed off by all team members.
If you do not maintain a log, we will not be able to help you with remedial action to address any team dynamic problems.

Should any member of a team, following consultation with the course convenors continue to repeatedly fail to deliver on their delegated assignment tasks, final grades for each team member will be then based on the quality and volume of individual contributions.

11. Special consideration/further assessment - Term 1 2019

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. Students should consult the A-Z section of the “Student Guide 2016”, particularly the section on “Special Consideration”, for further information about general rules covering examinations, assessment, special consideration and other related matters. This is information is published free in your UNSW Student Diary and is also available on the web at:

https://student.unsw.edu.au/special-consideration

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.

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.

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 Term 1 2019, BABS Supplementary Exams will be scheduled on:

► BABS-coded courses, TBA
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.

12. UNSW Academic Honesty and Plagiarism

The University regards plagiarism as a form of academic misconduct and has very strict rules regarding plagiarism. For UNSW policies, penalties, and information to help you avoid plagiarism see: https://student.unsw.edu.au/plagiarism

What is Plagiarism?

Plagiarism is the presentation of the thoughts or work of another as one’s own. *Examples include:

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

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

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

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

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

The Learning Centre website is main repository for resources for staff and students on plagiarism and academic honesty. These resources can be located via: http://www.lc.unsw.edu.au/academic-integrity-plagiarism

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

- correct referencing practices;
- paraphrasing, summarising, essay writing, and time management;
- appropriate use of, and attribution for, a range of materials including text, images, formulae and concepts.

Individual assistance is available on request from The Learning Centre.

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

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

† Adapted with kind permission from the University of Melbourne.