Course Outline

BABS3071

Commercial 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>
<tr>
<td>Financial statement lecturer</td>
<td>Mr Maurice Chiarella</td>
<td><a href="mailto:m.chiarella@unsw.edu.au">m.chiarella@unsw.edu.au</a></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. Course information

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

2.1 Course summary (Handbook entry)
This course is an introduction the biotechnology business cycle. Topics include the local and international biotechnology industry landscape, intellectual property processes; commercialisation strategy; government and private funding; internal and external drivers that affect performance; regulatory approval processes; manufacturing systems; research and business ethics; and the role of politics and associated controversy in the development of modern biotechnology products. Expert speakers who work in the biotechnology sector present most of the lectures. Supporting assignments will reinforce students' insight into how biotechnology commercialisation efforts are endeavouring to translate advances in science into benefits for society.

2.2 Course aims
To give students an understanding of:

- The scope and significance of the Australian and global biotechnology industry and the internal and external drivers that affect its performance
- All keysteps in the innovation process of turning ideas into products and applications, including scientific discovery, intellectual property, business strategy, funding, regulatory approval, manufacturing, sales and distribution
2.3 Course learning outcomes (CLO)

At the successful completion of this course you (the student) should be able to:

1. Analyse the technical and financial performance of Australian biotechnology companies
2. Recognise opportunities for intellectual property protection in scientific discovery
3. Evaluate commercialisation pathways for biotechnology-based opportunities
4. Address ethical, community, and political issues related to biotechnology commercialisation

2.4 Relationship between course and program learning outcomes and assessments

<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>Analyse the technical and financial performance of listed biotechnology companies</td>
<td>Tutorials Assessments 1-4</td>
</tr>
<tr>
<td>CLO 2</td>
<td>Recognise opportunities for intellectual property protection in scientific discovery</td>
<td>Lectures and tutorials Assessments 2-4</td>
</tr>
<tr>
<td>CLO 3</td>
<td>Evaluate commercialisation pathways for biotechnology-based opportunities</td>
<td>Lectures and tutorials Assessments 2-4</td>
</tr>
<tr>
<td>CLO 4</td>
<td>Recognise and address ethical, community, and political issues related to biotechnology commercialisation</td>
<td>Lectures and tutorials Assessment 4</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. The lectures provide a guide to the material that needs to be covered by 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’s Moodle website.

Tutorials are designed to help students revise the lecture materials and complete assignments. 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. 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 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 absence).

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 the course authority if in doubt as to their progress.
## 4. Course schedule

<table>
<thead>
<tr>
<th>Week</th>
<th>Class 1 (2hr)</th>
<th>Class 2 (3hr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Course Overview</td>
<td>No class</td>
</tr>
<tr>
<td>18 Feb</td>
<td>Translational Science. An overview of biotechnology commercialisation from an academic/government funded research agency (GFRA) perspective. A/Prof Wallace Bridge, BABS</td>
<td>1 22 Feb</td>
</tr>
<tr>
<td>2</td>
<td>Manufacturing therapeutic biologicals. An introduction to Good Manufacturing Practice (GMP) in the context of clinical trials and regulation processes. A/Prof Christopher Marquis, BABS</td>
<td>2 1 Mar</td>
</tr>
<tr>
<td>25 Feb</td>
<td>Stock Markets</td>
<td>Balance Sheet</td>
</tr>
<tr>
<td>2</td>
<td>Industrial Biotechnology Part 1</td>
<td>Assignment Progress</td>
</tr>
<tr>
<td>3 4 Mar</td>
<td>Commercialising stem cell technologies. Industry drivers and trends, Regeneus case study, Role of IP and keys to success in the biotechnology sector. Mr John Martin, CEO, Regeneus Ltd</td>
<td>3 8 Mar</td>
</tr>
<tr>
<td>3 8 Mar</td>
<td>Industrial Biotechnology Part 1</td>
<td>Biotechnology in the News</td>
</tr>
<tr>
<td>4 15 Mar</td>
<td>Industrial Biotechnology Part 2</td>
<td>Profit and Loss</td>
</tr>
<tr>
<td>4</td>
<td>Industrial Biotechnology Part 2</td>
<td>Maurice Chiarella,</td>
</tr>
<tr>
<td>4</td>
<td>Industrial Biotechnology Part 2</td>
<td></td>
</tr>
<tr>
<td>Week</td>
<td>Date</td>
<td>Topic</td>
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<tr>
<td>------</td>
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<td>----------------------------------------------------------------------</td>
</tr>
<tr>
<td>5</td>
<td>18 Mar</td>
<td>Monsanto, GMO’s in agriculture, current product pipeline and market</td>
</tr>
<tr>
<td></td>
<td></td>
<td>opportunities in Monsanto</td>
</tr>
<tr>
<td></td>
<td>22 Mar</td>
<td>Drug Approval Part 1 Processes (Australia and US) for having drugs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>approved with a discussion of the history that led to current</td>
</tr>
<tr>
<td></td>
<td></td>
<td>regulations and clinical trial structures</td>
</tr>
<tr>
<td>6</td>
<td>25 Mar</td>
<td>Patenting Process, Types of IP review. Why patent and what are the</td>
</tr>
<tr>
<td></td>
<td></td>
<td>requirements. The difference between discovery and invention. Patent</td>
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<tr>
<td></td>
<td></td>
<td>procedures Dr Simon Potter, Principal Spruson &amp; Ferguson</td>
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<tr>
<td></td>
<td>28 Mar</td>
<td>Professionals Australia Strategies for preparing for a professional</td>
</tr>
<tr>
<td></td>
<td></td>
<td>career post university Ms Monica Rawat. National Coordinator Student</td>
</tr>
<tr>
<td>7</td>
<td>1 Apr</td>
<td>Venture Capital, Finance and funding technology-based businesses.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mr Simon Uzcilas, Director Four Hats Capital</td>
</tr>
<tr>
<td>8</td>
<td>8 Apr</td>
<td>Biotechnology and IP, What is protectable and what isn’t. What</td>
</tr>
<tr>
<td></td>
<td></td>
<td>happens when patents expire. Defining inventorship. Dr Jacinta</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Flattery-O’Brien, Principal, Shelston IP</td>
</tr>
<tr>
<td>9</td>
<td>15 Apr</td>
<td>GMO’s and the Environment. Why GM crops – what’s the market need?</td>
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<tr>
<td></td>
<td></td>
<td>Why are so many people and groups anti-GMO? What does the science</td>
</tr>
<tr>
<td></td>
<td></td>
<td>have to say? A/Prof Paul Adam, BEES</td>
</tr>
<tr>
<td>10</td>
<td>22 Apr</td>
<td>No class – Easter Monday holiday</td>
</tr>
<tr>
<td></td>
<td>26 Apr</td>
<td>Assignment Progress.</td>
</tr>
<tr>
<td>11</td>
<td>1 May</td>
<td>No class</td>
</tr>
</tbody>
</table>
5. Assessment

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:
Week x Mon/Fri/Wed Session summary e.g. Week 6 Mon Session summary

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</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tutorials discuss financial reporting issues relevant to the analysis of a Biotech’s position and performance. Assessment involves the submission of answers to set financial statement interpretation problems.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A. Balance Sheet</td>
<td>3</td>
<td>Hardcopy at commencement of Lecture 2 and marked during class</td>
<td>Graded out of 10. Uploaded on Moodle Feedback given during tutorial. Students have opportunity to resubmit the following week. Awarded grade will be the average for the two submissions</td>
<td>Week 4</td>
</tr>
<tr>
<td>B. Profit and Loss</td>
<td>3</td>
<td></td>
<td></td>
<td>Week 6</td>
</tr>
<tr>
<td>C. Cash Flow</td>
<td>3</td>
<td></td>
<td></td>
<td>Week 8</td>
</tr>
<tr>
<td><strong>Assessment 2:</strong> Individual. Stock Market Game. Involves students investing in NASDAQ listed Biotechs. Students become familiar with the US Biotechnology sector’s structure, performance, the role of internal and external drivers, and how Biotechs are financed. Assessment involves the submission of a reflective report that critiques the sector and its drivers.</td>
<td>25</td>
<td>Via Moodle/Turnitin</td>
<td>Grade out of 10. Feedback – Rubric comments in Week 9 All uploaded on Moodle</td>
<td>Week 8 Friday 4 pm</td>
</tr>
</tbody>
</table>
### Assessment 3:

<table>
<thead>
<tr>
<th>Team</th>
<th>ASX Biotech Company Review. Involves a comprehensive technical and business analysis of an allocated company's performance.</th>
</tr>
</thead>
<tbody>
<tr>
<td>A: Report</td>
<td>Grade out of 10. Feedback – Rubric comments in Week 10. All uploaded on Moodle.</td>
</tr>
<tr>
<td>B: Presentation</td>
<td>Peer Review grading. Grades on Moodle. Feedback during class discussion.</td>
</tr>
</tbody>
</table>

#### Week 9
- **Friday 4 pm**

#### Week 10
- **Week 10 and 11**

### Assessment 4:

<table>
<thead>
<tr>
<th>Exam covering all lecture and tutorial content</th>
<th>35</th>
</tr>
</thead>
<tbody>
<tr>
<td>Centrally administered and timetabled</td>
<td>Multiple Choice and True/False</td>
</tr>
<tr>
<td>Grades posted on Moodle once grades released</td>
<td>Exam Week</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.
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 are provided in Section 10.

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
- The ELISE training site http://subjectguides.library.unsw.edu.au/elise/presenting

The Conduct and Integrity Unit provides further resources to assist you to understand your conduct obligations as a student: https://student.unsw.edu.au/conduct.

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](http://www.library.unsw.edu.au)

## 8. Administrative matters

**Biosciences Student Office**
Student Advisor (BABS)
Email: BABBStudent@unsw.edu.au
Tel: +61 (2) 9385 8047

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**

- Biosciences Student Office: [https://www.babs.unsw.edu.au/contact/biosciences-student-office](https://www.babs.unsw.edu.au/contact/biosciences-student-office)
- School of Biotechnology and Biomolecular Sciences website for current students: [https://www.babs.unsw.edu.au/current-students/undergraduate-programs](https://www.babs.unsw.edu.au/current-students/undergraduate-programs)
- MyUNSW: [https://my.unsw.edu.au/](https://my.unsw.edu.au/)

## 9. Additional support for students

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

10. Assessment Tasks

Assessment 1: Financial Statements. Individual. 9% Total Grade

Scientists and engineers working in industry require an understanding of commercial processes (imperatives and realities) in order to structure their R&D programs to meet the intellectual property and business needs of their employers. The language of business is accounting with the performance and status of businesses being reported in financial statements. Understanding how to read and interpret these statements will be of benefit to students’ professional careers, whether they be in academic research or industry.

Maurice Chiarella (industry financial accountant and UNSW lecturer) will deliver three two-hour workshops addressing the structure of each of the three financial statements, the Balance Sheet, the Profit and Loss Statement, and the Cash Flow. A fourth session will discuss how these financial statements can be interpreted to provide information and insight into a company’s progress and potential future performance, with a focus on key issues the biotechnology businesses.

To help ensure that students develop this knowledge, there will homework problems set for each of the three financial statement workshops. Each of these will be worth 3% of the final grade for the course (i.e. 9% in total). For each submission, half the marks will come from the grade awarded when the homework is first marked. Students will have the opportunity to submit a corrected copy the following week, which will contribute the other half of the marks for the submission. Should the student choose not to submit a corrected copy, the initial mark will reflect their total mark for that particular homework submission. Each set of homework has equal weighting.

Example 1.
Grade for initially submitted homework 7/10
Grade for corrected homework submitted following week 10/10.
Grade awarded for that particular homework set 8.5/10

Example 2.
Grade for initially submitted homework 7/10
Corrected homework not submitted following week
Grade awarded for that particular homework set 7/10

Example 3.
Homework not submitted on time 0/10
Corrected homework submitted following week 10/10
Grade awarded for that particular homework set 5/10

Recommended accounting/financial statement reference

By Ken Trotman & Michael Gibbins

Assessment 2: Stock Market Game. Individual. 25% total grade

Involves students investing in NASDAQ listed Biotechnology companies. Through this process become familiar with the US Biotechnology sector’s structure, performance, the role of internal and external drivers, and how Biotechs are financed. Students capacity to make educated investment decisions will be enhanced through the courses workshops on financial statements and lectures that
cover the key issues that affect the biotechnology sector. These include clinical trials and regulation, intellectual property, financing, politics and economics.

Assessment involves the submission of a reflective report that critiques the sector and its drivers. 

Students will gain insight into:

1. The overall range of listed biotechnology companies (products, size, history, etc.).
2. How the stock market works (by direct involvement in buying and selling on the Virtual Stock Exchange).
3. The thrill of profit and the despair of loss when investing
4. Annual reports (including financial statements) and their interpretation.
5. Business journals and Web databases (unbiased reports on expectations and announcements).
6. Professional investment services, analysts and stockbrokers.
7. Key success factors (drivers) in biotechnology

Hopefully you should find this assignment challenging but enjoyable. The game will run through Week 2-7 with the report due Friday April 12 (week 8) with students expected to trade on a weekly basis (note: weekly trading is not necessarily a recommended strategy for real life but for the short time frame of the game it is essential to assist students engage with the assignment and achieve the targeted learning outcomes. You will be expected to make at least 2 trades per week in the game (weeks 2-7), which will be monitored by the teaching staff. For any given week you must make your trades prior to midnight of the Friday. Any gaps in meeting the required trading activity will result in a pro rata penalty of up to 30% (5% per week) of the marks for the assignment.

The submitted report will be 3 pages in length. It will contain a 2-page reflective essay to briefly describe your portfolio development and performance, and most importantly, what you have learned. You will also select one of your purchased stocks and give a 1-page discussion of the changes in that stock price over the last 6 months. A list of all of your trades, from the Virtual Stock Exchange, will form an appendix. Should you do this you will be considered to be active in the competition and will not be penalised.

Marks will NOT be based on the performance of your portfolio but will be awarded according to what you have learned, the amount and type of trading you have done and the reasoning behind the decisions to purchase or sell a particular stock. However, just for fun there will be a prize ($50) for whoever meets the investment criteria throughout the competition and has the highest nett worth by competition close.

Template for Assignment 1 report (marks distributed according to page allocation)

Overview of investment/portfolio strategy and performance - ½ page

Critique of resources used to make investment decisions – ½ page

What you have learnt – ½ page

What you would do differently next time or in real life – ½ page

Featured stock – 1 page

Brief description of company (history, size, products, business model) – ¼ page

Why you bought it? – ¼ page

Key influences that affected the price in the last 6 months – ¼ page
The first tutorials will involve becoming familiar with NASDAQ listed biotechnology stocks and the free Internet services that are available for investment advice and information. We do not expect students to be financial whizzes from the start but will encourage you to dive in, using the information that you find. This is as much an exercise in using Web resources as it is in making (or losing) virtual money.

You will first need to register your personal details at the Virtual Stock Exchange (VSE) website (http://vse.marketwatch.com/Game/Homepage.aspx). Once you have done so, you can then join the Commercial Biotechnology private competition.

Game Name: BABS3071 Stock market game 2019
URL: www.marketwatch.com/game/babs3071-2019
Password: BABS30712019
Competition dates: 12th February 2019 to 5th April 2019
Starting value: $100,000

Note: You will receive limited formal instruction in this course on the stock markets. This is a self-learning exercise and you will be expected to answer your own questions by exploring resources available on the Web, including those on the Virtual Stock Exchange.

Assignment 3: ASX Biotech Company Review; a comprehensive technical and business analysis of an allocated company’s performance. 20% Final Grade

Teams of four students will study and report on various technology and business aspects of an allocated ASX listed Biotech Company. The 4-page report will discuss your chosen company in terms of history, products, IP position, and performance. You must reference your assignment extensively. The references should go at the end of the document (not included in the 4-page limit) and be cited appropriately in the text. You can also include an additional title page and a 2-page maximum appendix.

To assist students remain engaged with the assignment throughout the course, teams will be required to submit as homework a PowerPoint file providing specified information regarding their allocated company. For example, a key issue for all biotechnology companies is the intellectual property (in particular patents) that protects their business from competitors. The following template asks students to select a key patent from their company’s IP portfolio and to find information relating to the inventors, the status of the patent, the patent’s major claim (#1, the invention), and an overview of how the IP is being converted into a product. Teams also need to include a current snapshot of the company’s stock market performance on each of the slides they are required to prepare.
The sections to be addressed in the submitted report will be:

1.1 **Executive Summary.** Highlights of the report (Note: it is not a table of contents in text). ½ page

1.2 **Establishment and founders.** How and why was the company established? ¼ page

1.3 **IP position** of the company’s main products. 1 page
   - Patent family. Description of portfolio and the inventions being protected? Have the patents been granted? ¼ page
   - Market. What problem does the invention solve? i.e. What is the market opportunity and how large is it. ¼ page
   - Competitive advantage. How does it solve the problem better than current available solutions? i.e. what advances are being made with the IP? ¼ page
   - Product development. How are the patents being developed into products? What stages have been completed? ¼ page

1.4 **Share and dividend performance** (chart with comments on key events affecting price). 1 page

1.5 **Business model.** How does the company generate or intend to generate revenue? Who are the customers and why do (or will they) buy and how do you get your product to them (distribution)? ½ page

1.6 **Regulatory approval** (or other validation approvals) required. ¼ page

1.7 **Recommendations.** Your overall assessment of the strengths/weaknesses of the company’s activities. ¼ page

**Final Presentation:** 11% Final Grade

During Week 10 and 11, each team will give a 5-minute oral presentation to the class on their companies. Note. All team members must partake in the presentation delivery. After each presentation there will be a 3-minute Q&A session.

As the time allocated is short the presentation will need to focus on the:

a. Technology of the company
b. Market niches (description and $ value if available)
c. Size of the company (staff and value)
d. Key technology advantages or innovation
e. Expected future in the market place and any threats (from competing technologies/companies)
f. Expected investment potential (based on share price)

Presentations will be peer review graded by all teams and Wallace

At the end of each presentation, each team will negotiate, and agree on marks for presenting teams against the following criteria.

- the clarity of the presentation (was it understandable)
- analysis (was the analysis sufficient and credible)
- ability to respond to questions
Assessment 5. Exam. 35% Final Grade

The exam will be a combination of Multiple Choice, True/False and short answer questions. The details of the exam including exact structure, mark weighting and course content coverage will be discussed in the Week 11 tutorial. Examples of questions will also be presented and discussed.

Biotechnology in the News

Please find on the internet one item of recent (Australian or international) news that is relevant to the Biotech sector and of interest to you. Email the link to Wallace by 4 pm Friday 1 Mar and please use the Subject line: BABS3071 2019 News. These news items and their associated issues will be discussed throughout the course.

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.