



# Course Outline

BABS3071

Commercial Biotechnology

School of Biotechnology and Biomolecular Sciences

Faculty of Science

Term 1, 2022

Welcome Message from the Course Convenor s

***Welcome to BABS3071 Commercial Biotechnology in 2022!***

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## 1. Course Information

Year of Delivery 202

### 3. Course Details

Course Description	<p>This course is an introduction to 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.</p>
Course Aims	<p>To give students an understanding of:</p> <ul style="list-style-type: none"><li>• The scope and significance of the Australian and global biotechnology industry and the internal and external drivers that affect its performance.</li><li>• All key steps 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.</li><li>•</li></ul>

## 4. Rationale and Strategies Underpinning the Course

Teaching Strategies	Course content is initially presented in lectures and tutorials. Key concepts are incorporated into face-to-face tutorials, discussions and workshops. Students are provided with avenues for revision, practice, and discussion of the course content through group tutorial sessions and online discussion forums.
Rationale for learning and teaching in this course	<p>Lectures and tutorials are used in the course to introduce new concepts and elaborate on core concepts. Face-to-face tutorials, discussions and workshops are designed to complement the course material, reinforce concepts presented in the lectures through problem solving, and to encourage further enquiry. Lectures, tutorials and discussion sessions aim to promote effective communication and teamwork.</p> <p>The integration of these main teaching areas of the course are in accordance with the UNSW Guidelines on Learning that inform Teaching. Specifically:</p> <ul style="list-style-type: none"><li>• Effective learning is supported when students are actively engaged in the learning process.</li><li>• Effective learning is supported by a climate of inquiry where students feel appropriately challenged and activities are linked to research and scholarship.</li><li>• Activities that are interesting and challenging, but which also create opportunities for students to have fun, can enhance the learning experience.</li><li>• Learning is more effective when students' prior experience and knowledge are recognised and built on.</li><li>• Students become more engaged in the learning process if they can see the relevance of their studies to professional, disciplinary and/or personal contexts.</li><li>• If dialogue is encouraged between students and teachers and among students (in and out of class), thus creating a community of learners, student motivation and engagement can be increased.</li><li>• Students learn in different ways and their learning can be better supported by the use of multiple teaching methods and modes of instruction (visual, auditory, kinaesthetic, and read/write).</li><li>• Clearly articulated expectations, goals, learning outcomes, and course requirements increase</li></ul>

## 5. BABS3071 Course Schedule T1 2022

Week Date	<u>Wednesday 2 -4 pm</u> Online Synchronous Lectures via MS Teams	Week Date	<u>Friday 2 -5 pm Tutorial Sessions</u> In Person (**unless stated otherwise) - Mathews Theatre B	
			<u>2-3pm</u>	<u>3-5pm</u>
1 16 Feb	Lecture 1: Course Overview and Translational Science. <i>Toni Ferrara (TF) &amp; Christopher Marquis (CM), BABS</i>	1 18 Feb	**Lecture 2: Venture Capital. Finance and funding technology -based businesses. <i>Simon Uzcilas, Director, Four Hats Capital</i> <b>**Online via MS TEAMS</b>	
2 23 Feb	Lecture 3: Patenting Process. Types of Intellectual Property (IP) review. <i>Daniel Sieveking, Principal, Spruson &amp; Ferguson</i>	2 25 Feb	Lecture 4: Stock Markets: ASX and Nasdaq. <i>Christopher Marquis, BABS</i>	Tutorial 1: Balance Sheets. <i>Maurice Chiarella, UNSW</i>
3 2 Mar	Lecture 5: Intellectual Property (IP): Commercialisation <i>Sylvie Tso, Principal, Spruson and Ferguson</i>	3 4 Mar	Startup Story 1. <i>Philip St Clair, DropBio</i>	Assessment Progress <i>Toni Ferrara, BABS</i>
				Discussion: Biotechnology in the News. <i>Toni Ferrara, BABS</i>
4 9 Mar	Lecture 6: The Continual -G story: from bench to market. <i>Wallace Bridge, BABS</i>	4 11 Mar	Discussion: ASX Listed companies & Assessment 3 <i>Christopher Marquis, &amp; Dr Toni Ferrara BABS</i>	Tutorial 2: Profit and Loss. <i>Maurice Chiarella, UNSW</i>
5 16 Mar	Lecture 7: Manufacturing therapeutic biologicals. <i>Christopher Marquis, BABS</i>	5 18 Mar	Startup Story 2. <i>James Brown, BondiBio</i>	Tutorial 3: Cash Flow. <i>Maurice Chiarella, UNSW</i>
6	Flexibility week (No Classes)			
7 30 Mar	Lecture 8: Commercialising Australian life science. <i>John Martin, former CEO, Regeneus Ltd</i>	7 1 Apr	Lecture 9: Pitching to the Pharmaceutical Industry. <i>Phil Kearney, Merck</i>	Tutorial 4: Interpreting Financial statements. <i>Maurice Chiarella, UNSW</i>
8 6 Apr	Lecture 10: Entrepreneurship and Incubators. <i>David Burt, Director of Entrepreneurship: UNSW Founders Program</i>	8 8 Apr	Lecture 11: Licensing. <i>Christian Touli, Bio-Link</i>	Assessment Progress <i>Toni Ferrara, BABS</i>
				Discussion: Biotechnology in the News. <i>Toni Ferrara, BABS</i>
9 13 Apr	Lecture 12: TBA.	9 15 Apr	Easter Friday No Classes	
10 20 Apr	Assessment Presentations (TF & CM) <b>In Person, Venue TBA</b>	10 22 Apr	Assessment Presentations (TF & CM) <b>In Person, Venue TBA</b>	Assessment Presentations (TF & CM) <b>In Person, Venue TBA</b>







Before you join the game you will need to “Signup” (click on the Green SIGNUP button) and enter your details.  
Once you have done this, the password is 190r.-0001 Tw 2.t59 0 Td ( )Tj -222 0 Td 51 0 Td [6r



- 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

## 2) Final Presentation (11% of the final grade)

During Week 10 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 marketplace 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 both course convenors (Toni and Chris).

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

1. the clarity of the presentation (was it understandable);
2. analysis (was the analysis sufficient and credible);
3. ability to respond to questions.

Assessment 4. Final Exam (35% of final grade) (n)-7.7 (a)-8.u.u04162,6.1 (v)4 (es)-2 (t)3.6 (m)1.7 (ent711 Tf -20d (5 0 T3

## 7. Additional Resources and Support

Course Manual	All BABS3071 course information, including the course outline and the assessment schedule, is available via Moodle.
Requirements	BABS3071 (0.003 TaABS30 n5 Tw 0.28 0 Td >>BDC LBody6.42 87.04297.38 25/C2_0m ( )T-2Tw0.7-.0013D/MC<0078>

## 10. Administration Matters

### 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 even if these are delivered on-line.

Participation in both lecture and tutorial sessions are integral to success in the course. Lectures, as well as providing facts, will provide an understanding of processes by which scientific enquiries and discoveries are made and commercialised. They also provide the opportunity to interact with experts in their respective fields.

Tutorials are designed to help students to revise the lecture materials and complete assignment tasks.

An 80% attendance of all classes (Lectures and Tutorials) is therefore required and if this requirement is not met, a grade of Absent Fail (AF) will be given (unless there is a permitted reason for the absence).

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 (Toni Ferrara) a one -page summary of the content of any missed classes prior to the next week's class. 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. This deadline may be extended in special consideration circumstances.

The summaries should be emailed as attachments to Toni Ferrara using the following subject line: Week x Mon Morning/afternoon Session summary (e.g. Week 5 Mon Morning Session summary).

Thinwas..afog Social media (i.e. Facebook, Twitter etc)

<p>Assessment Procedures</p> <p>UNSW Assessment Policy <sup>1</sup></p>	<p><b><u>ASSESSMENT CRITERIA AND STANDARDS</u></b></p> <p>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 via Moodle.</p> <p><b><u>SUBMISSION OF ASSESSMENT TASKS</u></b></p> <p><b><u>Assignment submission</u></b></p> <p>Assignments will be submitted on-line via Turnitin links on the class Moodle site unless otherwise stated. Further assessment details are found in Section 6 of this manual.</p> <p><b><u>FEEDBACK ON ASSESSMENT</u></b></p> <p>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. Full details are provided in Section 6.</p> <p><b><u>Further information on assessments</u></b></p> <p>UNSW grading system: <a href="https://student.unsw.edu.au/grades">https://student.unsw.edu.au/grades</a></p> <p>UNSW assessment policy: <a href="https://student.unsw.edu.au/assessment">https://student.unsw.edu.au/assessment</a></p> <p><b><u>SPECIAL CONSIDERATION AND FURTHER ASSESSMENT TERM 1 2022</u></b></p> <p>Students who believe that their performance, either during the term or in the end of term exams, may have been affected by illness or other circumstances may apply for special consideration. Applications can be made for assessment tasks and final examinations.</p> <p>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. You must obtain and attach Third Party documentation before submitting the application. Failure to do so may result in the application being rejected.</p> <p>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.</p> <p>Further information on special consideration can be found at <a href="https://student.unsw.edu.au/specialconsideration">https://student.unsw.edu.au/specialconsideration</a>.</p> <p><b><u>HOW TO APPLY FOR SPECIAL CONSIDERATION</u></b></p> <p>The application must be made through Online Services in <a href="#">myUNSW</a> (My Student Profile tab &gt; My Student Services &gt; Online Services &gt; Special Consideration).</p>
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<sup>1</sup> [UNSW Assessment Policy](#)

	<p>Students will be contacted via <i>their official university email</i> as to the outcome of their application. It is the responsibility of all students to regularly consult their official student email accounts and myUNSW to ascertain whether they have been granted further assessment.</p> <p><b><u>SUPPLEMENTARY EXAMINATIONS</u></b></p> <p>Supplementary examinations may be given to those students who were absent from final exams due to illness or misadventure. Only students who submit a compliant Special Consideration application (as per the above instructions) may be eligible for a supplementary examination. Students will be notified via the online special consideration system and their official UNSW email account as to the outcome of their application. Supplementary final examinations will be managed externally by UNSW Exams Branch and held during the official BABS Supplementary Final Examination period.</p> <p>Supplementary Final Exams will be offered during this period ONLY. Failure to sit for the appropriate exam that you have been offered may result in an overall failure for the course. Further assessment will NOT be offered on any alternative dates.</p>
Equity and Diversity	<p>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 (Toni Ferrara) prior to (or at the commencement of) their course. Such students may also contact Disability Services <a href="https://student.unsw.edu.au/disability">https://student.unsw.edu.au/disability</a> for more information on the types of support they can provide (Disability Services Ph: 9385 4734, Email: <a href="mailto:disabilities@unsw.edu.au">disabilities@unsw.edu.au</a>).</p> <p>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 on time and in full.</p> <p><b><u>SCHOOL OF BABS DIVERSITY AND INCLUSION VALUES</u></b></p> <p>In an ideal world, science would be</p>



and contacts for reporting issues. In addition, the Science Equity, Diversity and Inclusion Working Group of the Faculty of Science have recently launched a set of Classroom Inclusivity Guidelines that all staff and students are striving to work under. They can be found here:

<https://www.science.unsw.edu.au/our-faculty/classroom-inclusivity-guidelines>

Beyond the University protocols, it is our goal in BABS to create a learning environment for our students that supports a diversity of thoughts, perspectives and experiences, and honours student identities (including race, gender, class, sexuality, religion, ability). To help accomplish this, BABS staff will endeavour to use student's chosen name and pronouns, adapt as we learn about diverse perspectives and identities, and action any concerns raised as a result of any EDI-related student experiences.

In addition those students who have a disability that requires some adjustment in their teaching or learning environment (e.g. access requirements, assessment arrangements) are encouraged to discuss their study needs with the course convenor and with the Equitable Learning Service <https://student.unsw.edu.au/els>.

Finally, the School recognises the added challenges faced by students during the coronavirus outbreak, in particular those related to teaching and learning remotely while public health is managed. Specific details on how this course will be managed are given throughout this manual and will be highlighted further in the first lecture, but please be assured the School of BABS will strive to minimise stress to students while still endeavouring to deliver a high-

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<sup>2</sup> [UNSW Student Complaint Procedure](#)

<sup>3</sup> [University Counselling and Psychological Services](#)

## 11. UNSW Academic Honesty and Plagiarism

Academic misconduct may apply to any work or document related to assessment that is submitted to the School of Biotechnology and Biomolecular Science; this includes all assessments for the course and the final exam. All work must represent a student's own individual efforts. Copying or paraphrasing another person's work and using another student's results are all examples of academic misconduct.

### Referencing

There's no recommended referencing style for this course thus, students can choose a style they desire from

