



Course Outline

BABS7030

Foundations in Biotechnology Finance

Graduate Certificate in Commercial Biotechnology

School of Biotechnology and Biomolecular Sciences
Faculty of Science

Term 1, 2021

1. Staff

Position	Name	Email	Locations	Consultation Times
Course Convenor	Lisa Selbie, PhD	l.selbie@unsw.edu.au		Online by appointment
Program Director	A/Prof Wallace Bridge	wj.bridge@unsw.edu.au	Room 420C, Bioscience North Building	By appointment

2. Course information

Units of credit: 6UOC

Core Course: Graduate Certificate in Commercial Biotechnology

Pre-requisite(s): None

Timetable details: tbc

2.1 Course summary (Handbook entry)

This course focuses on the biotechnology financial life cycle. Effective management of money is key to the success of any enterprise, and even more so in the biotechnology sector due to the long lead times before sustainable and profitable revenue is achieved. Students will become aware of the internal and external challenges business leaders must address to reach each key milestone of a company's development and how these successes must be leveraged to create the value necessary to foster and maintain investor confidence. The funding cycle and the processes involved in securing government support (grants, tax incentives, and other commercialisation incentives and resources), private investment (business angel, venture capital, private equity), industry partnerships, stock exchange listing (IPO) through to mergers and acquisitions will be introduced. Students will learn how to interpret and prepare financial statements and to negotiate term sheets and contractual agreements. Through completing the course, students will learn the language of business and finance and gain insight into how biotechnology success is determined by effective risk and financial management. This insight will be reinforced through case studies and assignments that involve the business analysis of successful and failed companies.

2.2 Course aims

Students taking this course will be science-trained professionals looking to acquire the skills and knowledge to be effective managers in the biotechnology industry. In general, biotechnology businesses are heavily reliant on equity investment and it is essential that those managing the technical R&D understand business and financial imperatives in order

to remove product development risk, create value for the business, and attract and maintain investment.

To give students an understanding of:

- the financial issues involved in the start-up and management of biotechnology company.
- accounting principles, financial statements, the biotechnology financial life cycle, and the need to manage industry-based R&D to meet business imperatives.
- how to negotiate investment into biotechnology businesses
- the information needs of all stakeholders (investors, community, lay, regulatory, media, customers) in the commercialisation process

2.3 Course learning outcomes (CLO)

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

1. Understand basic business and financial management concepts.
2. Demonstrate the ability to interpret, analyse and evaluate financial statements.
3. Describe, analyse and assess the business opportunities in the funding cycle, the types of ventures that can be established, and the processes and requirements to access multiple sources of capital investment and resource assistance in Australia and Asia.
4. Determine the value of biotechnology ventures and investments based on interpretation, evaluation and assessment of industry-specific financial and business information.
5. Identify potential risks and develop risk management approaches to enable sustainable funding of the biotechnology venture.
6. Assess the potential impacts of current trends in biotechnology ventures and investment

2.4 Relationship between course learning outcomes and assessments

Course Learning Outcome (CLO)	LO Statement	Related Tasks & Assessment
CLO 1	Understand basic business and financial management concepts.	Lectures and discussions Assessments 1-2
CLO 2	Demonstrate the ability to interpret, analyse and evaluate financial statements.	Lectures and discussions Assessments 1-2
CLO 3	Describe, analyse and assess the business opportunities in the funding cycle, the types of ventures that can be established, and the processes and requirements to access multiple sources of capital investment and resource assistance in Australia and Asia.	Lectures and discussions Assessments 1-2
CLO 4	Determine the value of biotechnology ventures and investments based on interpretation, evaluation and assessment of industry-specific financial and business information.	Lectures and discussion Assessments 2-4
CLO 5	Identify potential risks and develop risk management approaches to enable sustainable funding of the biotechnology venture.	Lectures and discussion Assessments 2-4
CLO 6	Assess the potential impacts of current trends in biotechnology ventures and investment	Lectures and discussion Assessment 2-4

3. Strategies and approaches to learning

3.1 Learning and teaching activities

This course will be taught entirely in the online environment on the [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, detailed in section 7, will be used for the entire course to communicate with students, provide content, lectures, video links, quizzes and assessments and, importantly, facilitate all class discussion forums.

Throughout the course, students are encouraged to develop problem-solving skills and to critically evaluate concepts, ideas and research results by participating in all learning activities including the viewing lectures and videos, reading relevant articles and websites,

participating in the discussion learning forums, completing online timed quizzes, and completing two assessment projects.

Lectures available on the course Moodle site 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.

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 participate in the online course in a consistent and professional manner throughout each week of the class. Lectures, as well as providing facts, will provide an understanding of processes by which scientific enquiries and discoveries are made and commercialised. Learning activities are designed to help students to revise the lecture materials and complete assessment tasks.

Students who miss an occasional class due to illness or other approved absence should contact the course convenor. As a rule, there will be no extensions for assignments, unless you have approved special circumstances. <https://student.unsw.edu.au/special-consideration>

If you do foresee issues with submission of an assignment, immediately contact the instructor before the assignment deadline to see if any accommodations can be made.

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 for questions and answers that might be of benefit to all students in the course.

If more help is needed, you may contact or email (from their UNSW email) the Course Convener or alternative contacts listed in the course website. 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. Assessment

To pass the course, it is advised that you submit all the assignments. However, if you are confident of passing the course without submitting an assessment, you are not obliged to do so (notice that you will not receive a mark for any unsubmitted assessments).

4.1 Assessment tasks

- 1 Quizzes** 15% weighting Individual
Description: Three online, 'open book', timed quizzes to assess the learning of basic concepts and ability to interpret and evaluate aspects of company financial statements and industry-specific financial and business information

- 2 Class Discussion** 25% weighting Individual
Description: Participation in five asynchronous class discussions to analyse, interpret and reflect on examples of specific company case studies. Participation will be assessed on the quality and consistency of contributions

- 3 Individual Assignment** 30% weighting Individual
Topic: Comparison of Australian and US biotechnology company drivers
Description: Each student will financially analyse two public biotechnology companies (one listed in Australia and the other in the US). They will attempt to reconcile the companies' share price trends in the context of internal (e.g. IP, regulatory, investment, partnerships, management) and external factors (e.g. global economics, politics, legislation, regulatory). Students will report on how the companies' share price performance has impacted on their capacity to raise capital and maintain investor confidence. The report will also reflect on internal and external differences between companies listed on Australian (ASX) and US (NASDAQ, New York) exchanges.

- 4 Team Assignment** 30% weighting Team
Topic: Biotechnology business performance analysis
Description: Teams (4 students) will analyse a biotechnology company's financial statements and its technology in order to evaluate the company's future potential. This due diligence process will investigate all key areas essential to biotechnology company commercial success. These include finance, technology and product development, competitive advantage and market opportunity, IP management, targeted or potential exit strategies, and risk management.

4.2 Assessment criteria and standards

The major components of this course are the content which is delivered through lectures, readings and discussion forums. This will be assessed by written or oral assignments, and quizzes, and quality participation in discussion forums. 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).

4.3 Submission of assessment tasks

Assessment submission

Details on assessment submission are given in the course manual or online via Moodle (also please refer to the table provided in section 5.1). 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.

4.4. 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.

Further information

UNSW grading system: <https://student.unsw.edu.au/grades>

UNSW assessment policy: <https://student.unsw.edu.au/assessment>

5. Academic integrity, referencing and plagiarism

No particular recommended referencing style is required 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.¹ 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>.

¹ International Center for Academic Integrity, 'The Fundamental Values of Academic Integrity', T. Fishman (ed), Clemson University, 2013.

6. Readings and resources

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 for the entire course to communicate with students, provide content, lectures, video links, quizzes and assessments and importantly facilitate all class discussion forums.

This includes:

- Lectures, videos and website links
- Readings (available online through the library and Leganto (<https://subjectguides.library.unsw.edu.au/leganto>))
- Discussion Forums
- Assessments - detailed information
 - online timed quizzes
 - marks
 - further information resulting from special consideration
- Self-management resources

Resources

Literature Searching: <http://www.ncbi.nlm.nih.gov/pubmed>

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

7. Administrative matters

Biosciences Student Office

Student Advisor (BABS)

Email: BABStudent@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>
- School of Biotechnology and Biomolecular Sciences website for current students: <https://www.babs.unsw.edu.au/current-students/undergraduate-programs>
- UNSW Faculty of Science: <https://www.science.unsw.edu.au/>
- MyUNSW: <https://my.unsw.edu.au/>

8. 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 Handbook: <http://www.handbook.unsw.edu.au/2018/index.html>
- 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>

9. Special consideration/further assessment - Term 1 2021

Students who believe that their performance, either during the session or in the end of session assessments, 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 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 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**. After applying online, students must also verify supporting their documentation by submitting to Student Central at <https://nucleus.unsw.edu.au/>

- Originals or certified copies of your supporting documentation. Visit <https://nucleus.unsw.edu.au/Studentadmin/special-consideration>. Student Central can certify your original documents), and/or
- A completed Professional Authority form which can be downloaded at <https://student.unsw.edu.au/sites/all/files/uploads/group47/forms/ProfessionalAuthority.pdf>

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.

SUPPLEMENTARY ASSESSMENTS:

The University does not give deferred examinations. However, further assessments and/or exams may be given to those students who were absent from the final sessions through illness or misadventure. Special Consideration applications for final assessments/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.**

10. 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.