



INSTITUTE OF MANAGEMENT & INNOVATION

Elective Course



IMI 3003H

BIOCOMMERCIALISATION II

Tim Lee & Duncan Jones

Winter/Spring Term, 2022

INSTITUTE OF MANAGEMENT & INNOVATION

UNIVERSITY OF TORONTO MISSISSAUGA

IMI 3003H – Biocommercialisation II

Course Outline (Winter/Spring 2022)

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| Class Location: | Online |
| Class Times: | Mondays, 10-Jan to 4-Apr, 6:30-9:00PM excluding 21-Feb |
| Instructors: | Duncan Jones , MSc, MBA, PMP Tim Lee , PhD |
| Office Location: | Online |
| Office Hours: | By appointment |
| Contact: | duncan.jones@utoronto.ca (416) 301-6700 tim.lee@utoronto.ca |

Course Description

In IMI3003H, student teams are given the opportunity to learn more about the issues and opportunities facing early-stage (bio)technology ventures through direct experiences working on real projects for select early-stage firms within the community. Each team selects a 'client' company to work with and a number of defined 'work packages' to tackle. These work packages typically involve market and competitive research, intellectual property, regulatory questions, new product investigation, or financial planning and fundraising. The teams are mentored by both the 'client' company senior management and the course instructors on a weekly to bi-weekly basis as required. At the conclusion of the course, a report to the client company is to be completed along with class presentation.

The course lectures explore analytical tools and evaluation frameworks that can be applied to such analysis and problem-solving. A complete list is outlined in the Course Schedule (below).

This course is complimentary course to the IMI3001H, building on the lecture series and case-based material. Students who have not completed IMI3001H may still take this course providing they have some previous commercial biotechnology knowledge upon approval by the instructors.

Course Objectives

The purpose of this course is three-fold—

- To build on the knowledge and understanding that the students have of the process of biotech product development and the issues and problems that can arise during this journey.

- To allow students to build experience employing various analytical tools and evaluation frameworks in real world situations.
- To challenge the students to hone their creative, critical thinking, collaborative (i.e. teamwork) and communicative skills through problem-solving and opportunity identification.

Reading Materials

No textbook is required for the class. Pre-read materials will be posted on Quercus to introduce the materials and to provide additional context for class discussion as well as assist in completion of the work packages.

Marking Scheme

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|--|-------------|
| A. Individual participation | 50% |
| 1) Pre-read quizzes | 10% |
| 2) Class participation | 10% |
| 3) Contribution to team presentation | 5% |
| 4) Final exam | 25% |
| B. Team presentation | 50% |
| 1) Research | 10% |
| 2) Final presentation | 10% |
| 3) Final report | 20% |
| 4) Client feedback | 10% |
| TOTAL | 100% |

Class Attendance & Participation

All students will be required to attend in person unless they have an approved exemption. Students are expected to actively participate in class discussions and to ask questions. Active class involvement augments the learning experience, increases assimilation of material and stimulates the level of class discussion. Contribution is expected to be relevant to the current discussion and includes: asking questions pertinent to the lectures and presentations, clarifying difficult concepts, answering questions, and advancing the discussion to a new issue. Just as important is listening attentively to your classmates and critiquing ideas constructively.

Simple 5-6 multiple choice/short answer quizzes we also be posted before class based on the assigned readings. In addition, *Quickwrite* exercises, where students are given 1-2 minutes to write down their thoughts on a topic or response to a question, will also take place during class.

Group Report & Presentation

Each team (2-4 students per team) having selected a company to work with and appropriate work packages will work on these throughout the term with instructor guidance. The analysis will consist of—

- A 10-minute presentation of the issue(s) at hand, the results to date, the plans going forward and the identification of operational questions or issues.
- A 15-minute presentation/pitch to the class including the findings and recommendations as well as an overview of the process undertaken.

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- A report covering the results of the research undertaken on the work packages as well as recommendations and next steps. The written portion of this report is to be approximately 12 pages in length (Margins: all 2.54 cm, 1.5 line spacing, New Times Roman 12-point, additional Figures, Tables, References and Appendices can also be included). The report will be marked by the instructors for completeness, quality and value. Feedback from the client companies will also be sought.

Assignment Due Dates

All assignments (individual report, peer-review report, final individual report and group report) are due by 6:00PM on the assigned date as outlined in this syllabus. Any updates to the course outline will be announced to the class and posted on Quercus. Assignments are to be submitted to Quercus in the specified format (PDF, MS Word, MS PowerPoint). Late penalties equal to 20% per day (24-hour period) will be assessed until the assignment is submitted.

Recording

The Zoom lectures will be recorded and the slide decks will be posted to Quercus in order to assist in note-taking and study for personal use only. The lectures are the intellectual property of the instructor or presenters, and the use of recordings and slide decks must respect this. More specifically, students are not to upload the recordings or slide decks to a shared drive, folder or hosted platform such as YouTube or Facebook, nor publish an instructor's or peer's notes to a website or sell them.

Re-marking

Requests for remarking will be entertained. This may result in a higher or a lower grade than that initially given. Requests for remarks are to be provided to the professor within one week of receipt of the grade and each request is to be accompanied by a written explanation (up to one page) from the student outlining why he/she believes the paper is worthy of a higher grade.

Missed Assignments & Tests

In the event a student fails to submit an assignment or misses the final exam due to illness or domestic tragedy, the student must contact the professor and submit a completed University of Toronto official "Student Medical Certificate" (available at: <http://www.utm.utoronto.ca/access/medcert.pdf> indicating type of illness and date of illness (or other applicable documentation for domestic situations) to the MBiotech office within 48 hours of the due/test date, if possible.

Academic Misconduct

Students should note that copying, plagiarizing, or other forms of academic misconduct will not be tolerated. Any student caught engaging in such activities will be subject to academic discipline ranging from a mark of zero on the assignment, test or examination to dismissal from the University. Any student abetting or otherwise assisting in such misconduct may also be subject to academic penalties.

Students agree that by taking this course all required papers may be subject to sub-

mission for textual similarity review to <https://www.ouriginal.com/> for the detection of plagiarism. The terms that apply to the University's use of this tool are described at <https://teaching.utoronto.ca/ed-tech/teaching-technology/pdt/pdt-faq/>

Logging in to your Quercus Course Website

Like many other courses, IMI3001H uses Quercus for its course website. To access the IMI3001H website, or any other Quercus-based course website, go to the U of T portal log-in page at <https://q.utoronto.ca> and log in using your UTORid and password. Once you have logged in to the portal using your UTORid and password, look for the **Dashboard** module, where you'll find the link to the course website along with the link to all your other courses.

Activating your UTORid and Password

If you need information on how to activate your UTORid and set your password for the first time, please go to www.utorid.utoronto.ca. Under the "First Time Users" area, click on "activate your UTORid" (if you are new to the University) or "create your UTORid" (if you are a returning student), then follow the instructions. New students who use the link to "activate your UTORid" will find reference to a "Secret Activation Key." This was originally issued to you when you picked up your T-Card at the library. If you have lost your Secret Activation Key you can call 416-978-HELP or visit the Help Desk at the Information Commons on the ground floor of Robarts Library to be issued a new one. **The course instructor will not be able to help you with this.** 416-978-HELP and the Help Desk at the Information Commons can also answer any other questions you may have about your UTORid and password.

E-mail Communication with the Course Instructor

At times, the course instructor may decide to send out important course information by e-mail. To that end, all UofT students are required to have a valid UofT e-mail address. You are responsible for ensuring that your UofT e-mail address is set up AND properly entered in the ROSI system. You can do that by using the following instructions:

- To submit the information to activate your UTORid and password (see above), you will need to click the "Validate" button.
- Follow the instructions on the subsequent screens to receive your utoronto.ca address.
- Once you have your UofT e-mail address, go to the ROSI system at www.rosi.utoronto.ca, log in and update the system with your new UofT e-mail address.

You can **check your UofT e-mail** account from:

- The UofT home page <http://www.utoronto.ca>: Under **Resources**, click 'Webmail & Scheduling' and on the next page, under **Quicklinks**, click either UTOReMail or UTOReXchange (depending upon your setup). Enter your UTORid and password, and proceed to your mailbox.
- E-mail software installed on your computer, for example Microsoft Outlook or Mozilla Thunderbird. Visit the Help Desk at the Information Commons or call 416-978-HELP for help with the set up.

Forwarding your utoronto.ca e-mail to a Hotmail, Gmail, Yahoo or other type of e-mail account is not advisable. In some cases, messages from utoronto.ca addresses sent to

Hotmail, Gmail or Yahoo accounts are filtered as junk mail, which means that e-mails from your course instructor may end up in your spam or junk mail folder.

As a student you are responsible for:

1. Ensuring that you have a valid UofT e-mail address that is properly entered in the ROSI system.
2. Checking your UofT e-mail account on a regular basis.

Standard of Conduct in this Course

As this course is part of a professional graduate degree program, it will be run in a manner consistent with the world of business. For example:

1. Be on time for class.
2. Be prepared for class (*i.e.*, homework) and be prepared to participate.
3. Cell phones, pagers, *etc.* turned off, except as required in the course.
4. Respect the learning opportunities of others. Contribute to your own learning and also to the learning of others.
5. Be engaged, ask questions and also, have some fun.

Course Schedule v1.0

NOTE: The dates are fixed, however the order of the presentation of the various topics may change as a result of speaker/company availability. Notification of all changes will be made on Quercus as early as possible.

| # | Date | Who is responsible? | Proposed Readings |
|---|--------|--|--|
| 1 | 10-Jan | <u>Duncan Jones:</u> Components of a business plan | Blog articles by DJ— 1) To Business Plan or Not 2) 6 Tenets model 3) Magic 4) Opportunity Identification |
| 2 | 17-Jan | <u>Tim Lee:</u> Market research | 1) Thakor, R. 2017. Just how good an investment is the biopharmaceutical sector. <i>Nature Biotechnology</i> 35, 1149-1157 2) Lee, J. 2021. Public workshop Summary Report on Fiscal Year 2021 Generic Drug Regulatory Science Initiatives <i>Bioequivalence</i> 110, 5, 1190-1196 3) Rosales-Mendoza, S. 2020. Will plant-made biopharmaceuticals play a role in the fight against COVID-19. <i>Expert Opinion on Biological Therapy</i> 20, 6, 545-548 |

| # | Date | Who is responsible? | Proposed Readings |
|---------------------|--------|--|--|
| 3 | 24-Jan | <u>Duncan Jones:</u> Project management | 1) HBR Editors 2016. The four phases of project management 2) HBR Editors 2016. Five critical roles in project management 3) Wrike. What are project management skills? |
| 4 | 31-Jan | <u>Tim Lee:</u> Consulting/reporting | 1) Allmendinger, A. 2021. Opportunities in an evolving Pharmaceutical Development Landscape: Product Differentiation of Biopharmaceutical Drug Products. Pharm Res 38: 739-757 2) Williams, D. and Pouder, R. 2020. Are explicit knowledge transfers clustered or diffused in the US biopharmaceutical market sector? Entrepreneurship & Regional Development 32, Nos 7-8, 492-507 3) Global Industry Snapshot Management Consulting Industry October 18, 2021 |
| 5 | 7-Feb | <u>Duncan Jones:</u> Pitching/presenting | Blog articles by DJ— 1) How do you ensure that your business opportunity has enough Magic=? 2) Startup pitches and slide decks |
| 6 | 14-Feb | Half-way check-in on the company projects | |
| READING WEEK | | | |
| 7 | 28-Feb | <u>Duncan Jones:</u> Financial modelling and patents | Blog articles by DJ— 1) Intro to Financial modelling 2) Establishing ownership, IP rights and governance 3) Intro to patents |
| 8 | 7-Mar | Company presentations 1 | |
| 9 | 14-Mar | Company presentations 2 | |
| | 21-Mar | No class/informal review | |
| 10 | 28-Mar | Final student presentations on company projects | |
| 11 | 4-Apr | Final exam | |