



MASTER OF BIOTECHNOLOGY PROGRAM

Compulsory Course Component

BTC 2030H

**MANAGEMENT
OF
TECHNOLOGICAL
INNOVATION**

Ruben Gaetani

Winter/Spring Term, 2022

BTC 2030H: Management of Technological Innovation

MASTER OF BIOTECHNOLOGY

UNIVERSITY OF TORONTO MISSISSAUGA

BTC 2030H – Management of Technological Innovation

Course Outline (Winter/Spring, 2022)

Class Location:	KN-112 (unless declared as Online Synchronous)
Class Times:	Wednesdays 12-Jan to 23-Mar, 6:30-8:45PM; 30-Mar & 6-Apr 6:30-9:15PM
Instructor:	Ruben Gaetani
Office Location:	Kanef Centre, Room 242 (KN-242)
Office Hours:	Wednesdays, 4:30-6:30PM
Contact:	ruben.gaetani@utoronto.ca

Course Description

The objective of this course is to understand how organisations can use ideas and harness creativity to build and sustain a competitive advantage in the market and avoid when previous successful ideas become an obstacle for future performance. We will adopt a discussion-based approach to refine our ability to formulate *compelling, logically consistent, and insightful* arguments that can guide strategic decisions in highly uncertain environments, like the ones faced by innovative organisations today.

Throughout our course we will look at a broad range of cases, in which organisations at different stages face specific challenges or opportunities. You are expected to **read all the material in advance** (cases and additional readings) as it will constitute the starting point for our class discussion. There are several reasons why you should take this preparation seriously:

- 1) It will make your time in class more enjoyable and productive.
- 2) Active **class participation** will affect your final grade directly.
- 3) Every week I will assign some questions regarding the readings we will discuss the *following week*. For example, at the end of **Lecture 1** I will assign questions about the readings that will be discussed in **Lecture 2**. You should post your answers on Quercus in the form of **350-400 words** memos before the beginning of the class for which the memo is assigned (in this example, **Lecture 2**). I will then **randomly** pick, for each of you, **three** memos to evaluate. You are encouraged to work on your memos in teams, although everyone should write down their own version in their own words (even if you fully agree on the substance). You should see this as a strong commitment device to read and think through the material in advance. The three memos to be graded will be drawn at random for each of you, but (a) Each student will have one and only one of the first two memos (**Lecture 2** or **3**) graded with certainty, and (b) All marks of the third graded memos will be published at once after **Lecture 8** (note that this gives you an incentive to submit your memo *every week!*).

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- 4) As a **team project**, I will ask you to detect and study a different context in which similar challenges and opportunities arise. The team project will be presented in the last classes of the course.

The last minutes of each lecture will have a more academic format. I will sum up by offering additional considerations and hint at some academic research on the topic.

We will have an in-class **Midterm Exam** on **16 March** in which you will be tested on the ideas explored up to that point.

Team Project

In each of our lectures, a central challenge or opportunity will emerge. By **6PM on 17 March**, you and your team should have identified, and **made sure I approved**, a company or a technology in an environment where similar challenges emerged (or are expected to emerge). I have several examples in mind—and you should feel free to send a delegation of your team to talk to me to get ideas—but **ideally you should come up with your own case** to study. The team project will consist of a **25-minutes presentation** in which each team is expected to explain the context, substantiate a course of action to recommend, and provide evidence to support their conclusions. All the other classmates should try to actively challenge the team's point of view (this will count as Class participation). Group presentations will start on **30 March** and end with the last lecture (**6 April**) that will be entirely devoted to team presentations. Notice that some teams will present earlier than others, with the exact order of presentations to be selected at random. All teams should email me their slide set by the last day of class.

Course Material

You will find all the required cases in the course package. Additional readings can typically be found online (for example, the UofT library website) or will be made available on Quercus. Occasionally, Google and Wikipedia will be good companions.

Marking Scheme

The breakdown of the grade for the course will be as follows:

Component	Weight
Class participation	20%
Memos (3 graded per student)	15%
Midterm Exam (16-Mar)	40%
Team Project	25%
TOTAL	100%

SCHEDULE OF ACTIVITIES

[CP] = Course Pack

Unit	Date	Topic	Assignment
1	12-Jan	Innovation as Experimentation & Entrepreneurship	<ul style="list-style-type: none"> ○ R&R (HBS 9-386-019) [CP]. ○ Innovation Isn't an Idea Problem, <i>Harvard Business Review</i>. <p>NO MEMO DUE</p>
2	19-Jan	How Technology Shapes Incentives	<ul style="list-style-type: none"> ○ Arck Systems (HBS 9-911-056) [CP]. ○ Grading Teachers by the Test, <i>The New York Times</i>.
3	26-Jan	Managing Technology via Contracts & Alliances	<ul style="list-style-type: none"> ○ Nucleon, Inc. (HBS 9-692-041) [CP]. ○ How to Negotiate with Powerful Suppliers, <i>Harvard Business Review</i>.
4	2-Feb	Innovation & Network Effects	<ul style="list-style-type: none"> ○ Google Inc. in 2014 (Abridged) (HBS 9-915-005) [CP]. ○ Network Effects Aren't Enough, <i>Harvard Business Review</i>.
5	9-Feb	Innovation & Evolving Industries	<ul style="list-style-type: none"> ○ No assigned case, BUT please search for and read at least three high-quality newspaper articles or stories about the history, technology, and future outlook of Tesla (the manufacturer of electric vehicles) ○ Tesla Giving Away its Patents Makes Sense, <i>Forbes</i>
6	16-Feb	Guest Speaker	NO MEMO DUE
READING WEEK			
7	2-Mar	Innovating in Complex & Uncertain Environments	<ul style="list-style-type: none"> ○ 23andMe: A Virtuous Loop (Stanford GSB case E-688) [CP]. ○ Why Can't Uber Make Money?, <i>Forbes</i>
8	9-Mar	Theories of Disruptive Innovation	<ul style="list-style-type: none"> ○ The Disruption Dilemma, <i>Medium</i> ○ Keep Calm and Manage Disruption, <i>MIT Sloan Management Review</i>.
9	16-Mar	Midterm Exam	NO MEMO DUE
10	23-Mar	A.I. Revolution?	<p>How A.I. Will Change the Way We Make Decisions, <i>Harvard Business Review</i>.</p> <p>NO MEMO DUE</p>
11	30-Mar 2h45m	Managing Technology, Innovation and the Crowd + 2 Group Presentations	<ul style="list-style-type: none"> ○ How to Manage Outside Innovation, <i>Sloan Management Review</i>. <p>NO MEMO DUE</p>
12	6-Apr 2h45m	Remaining Group Presentations	NO MEMO DUE

Conduct of Classes

Full attendance, preparation and participation are required for all in-class sessions and group work. We recognise that there may be valid reasons of illness and other major circumstances which prevent full attendance. Due to the condensed nature of the course material any absence could seriously impact on your ability to satisfy the program requirements. We ask that you phone or email the instructor in advance and upon your return, provide the instructor with written documentation supporting the reason for your absence.

Expectation for Online Courses

Students are expected to display tolerance and respect in all communication. Communicate with others the same way you would in a traditional classroom. Comments and language should be respectful and appropriate for a university community. All comments should also follow acceptable grammar and spelling.

Students in an online course will login as requested by the instructor. Maintaining a professional appearance and attire throughout the duration of the online classes is required.

Online students must be self-starters and have the maturity and motivation to work independently. It is recommended to use time wisely, be organised, self-directed and be willing to use new modes of communication and learning. Students in online classes must follow the timetable of the class strictly. Although it is an online class, it is still a classroom session and punctuality is a must. It is important to put in the needed time for classes, read all the required course material carefully, and actively participate in online class activities.

Procedures & Rules

MISSED TEST(S)/FINAL EXAM: A student that misses a test due to illness must submit a completed University of Toronto Student Medical Certificate (available at: http://www.utm.utoronto.ca/registrar/sites/files/registrar/public/shared/pdfs/medcert_web.pdf) to the Instructor or Program Office (KN-209). Only the University of Toronto Student Medical Certificate will be accepted in support of petitions that cite illness as the reason for the request. Documentation concerning physician examinations must show that the physician was consulted on the day of the test date or immediately after, i.e. the next day. A statement from a physician that merely confirms a report of illness and/or disability made by the student is not acceptable. Documentation citing non-essential, preplanned medical procedures will not be acceptable. All documents must be originals and must be presented in person with a valid UofT student card within 72 hours of missing the test. Beyond 72 hours from the test date, further documentation of continued illness or disability will be required from a physician.

A student that misses a test due to domestic tragedy, at the discretion of the instructor, must provide acceptable documentation validating the explanation for absence. If a test is missed and the student does not provide acceptable documentation validating the explanation for absence, a grade of "0" may be assigned at the instructor's discretion.

If a test is missed and validating documentation is accepted the students are expected to write a make-up test. Students must contact the instructor immediately by phone or email to make suitable arrangements.

LATE ASSIGNMENTS: Team assignments are due at the beginning of each class. **No assignments will be accepted late and a grade of ZERO will be given for that assignment.**

ACADEMIC MISCONDUCT: Students should note that copying, plagiarising, 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 as outlined in the School of Graduate Studies academic handbook. Any student abetting or otherwise assisting in such misconduct will also be subject to academic penalties.

Students agree that by taking this course all required papers may be subject to submission for textual similarity review to Turnitin.com for the detection of plagiarism. All submitted papers will be included as source documents in the Turnitin.com reference database solely for the purpose of detecting plagiarism of such papers. The terms that apply to the University's use of the Turnitin.com service are described on the Turnitin.com web site.

Communication

LOGGING IN TO YOUR QUERCUS COURSE WEBSITE

Like many other courses, BTC2030H uses Quercus for its course website. To access the BTC2030H website, or any other Quercus-based course website, go to the UofT portal login 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 under the **Courses** menu item, where you'll find the link to the BTC 2030H course website along with the link to all your other Quercus-based courses.

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.

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.

You are responsible for—

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

Standard of Conduct in this Course

Since this course is part of a program designed to give you a broad understanding of the world of business, we aim to run the course in a manner which is consistent with the world of business. We strive to provide accurate information, quality materials, and good service, consistent with our obligations to maintain the high academic standards of the Department of Management at the University of Toronto Mississauga.

In return, we expect that you will conduct yourself in a way that prepares you for the world of work.

1. We start on time, so please do not arrive late and disrupt others.
2. Leaving class early is also disruptive to your colleagues and will not be permitted unless you have made prior arrangements with the instructor.

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3. Turn off all electronic devices (*e.g.*, cellular telephone, PDA, iPad, or similar devices, *etc.*) before entering class.
 4. Keep up to date. Make sure that you know the class schedule. Check on the course web page for updates and posted materials.
 5. During the class, respect the learning opportunities of others. Don't distract others by chatting with your neighbour. Our hope is that you will not only contribute to your own learning but also to that of others.