

## COURSE OUTLINE

### TR 2202 – Technological Innovation

Session: Semester I, 2014-2015  
Modular Credits: 4 MCs  
Classroom hours per week: 3  
Number of hours of preparation per week: 3 -5  
Lecture time: 11AM-2PM or 5-8PM, Fridays

#### LECTURER

Dr. Vivek Tandon  
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Office Hours: 15:00-16:30 Fridays or by appointment

#### COURSE OVERVIEW

This course aims to equip students with a strong conceptual foundation for understanding the dynamic process of technological innovation. Students will be introduced to the importance of technological innovation as a driver for value creation and economic growth. The dynamics of technological change will be analyzed through concepts such as technology life-cycles, dominant design, network externalities, and first-mover advantage. The key technology commercialization processes through which an innovative idea is transformed into a successful product or service in the marketplace will be studied, and the key organizational/management factors and socio-economic/competitive environmental factors that influence the effectiveness of these processes will be highlighted.

Students will be exposed to the challenges in technological innovation, including formulating innovation strategy, coordinating collaboration, protecting innovation, and managing teams. Technological innovation within existing organizations as well as through new start-ups will be examined. Case studies of real world examples will be used for discussion.

#### ***Who should take this course?***

This course is designed for undergraduate students, to be taken as part of the ***Minor in Technopreneurship*** program offered by the NUS Business School.

There are no formal prerequisites for this course.

This course is a prerequisite for the *New Venture Creation* course.

## COURSE MATERIALS

Text: Schilling, Melissa A. 2012. *Strategic Management of Technological Innovation*. Fourth Edition. McGraw-Hill Irwin.

Additional readings (cases and journal articles) will be made available through IVLE.

## ASSESSMENT

### **Attendance (10%):**

Missing class will affect your grade and more importantly your own and your classmates' experience in the class. Attendance will be recorded every week after the first class. Absences will only be excused for valid reasons such as being certified medically unfit by a doctor, experiencing a death in the immediate family, involved in a serious accident (note that this does not include sports trainings, cultural events, etc.). If you are absent for a valid reason, please email the instructor in advance of the course meeting and provide documentary evidence in the subsequent class.

### **Individual Contribution (20%):**

Participation (10%): For each class, each student is expected to prepare the readings and case studies, listen closely to class discussion, and share their ideas. In particular, students are expected to provide thoughtful and constructive comments in response to case and project presentations by other groups.

Note that I may provide some supplemental readings that can be read at a later date. They are made available so that you can deepen the understanding of the corresponding topic at a time of your choosing. These materials will not be covered on the exam directly, but may be useful in preparation for the exam if you are uncertain on a given topic.

Individual Assignment (10%): There will be one individual assignment in the semester. Details will be provided in the course.

### **Group Work (40%):**

Students will be divided into learning teams (about 4-6 students per team) and will work together throughout the semester.

Team Case Presentation (10%): Each team will present a case to the class during the course. Details will be announced in the course.

Team Project (30%): Details regarding the team project will be provided during the class, including specific deadlines throughout the course. Each team will be graded on a written report, presentation slides, and verbal discussion. Each team will get an overall score for the team project, and the same grade will be applied to all the students within the team.

### **Final Exam (30%):**

The final exam will be a combination of short-answer and short-essay questions. Answer all parts of each question. The final exam is a **closed-book** test. You are not allowed to bring any books, documents, or electronic devices (e.g. PDAs, digital dictionaries, notebook computers).

### **CLASS ADMINISTRATION**

#### **Ground Rules:**

- Please display your **name card** in the front of your desk. If you forget your name card, please make a temporary name card for that session.
- Please silence your **cell-phone** before each course session.
- Finally, and most importantly, please respect group presenters by not using your **tablet or notebook computers** during their presentations.

#### **Missed Class Sessions:**

As noted above, attendance will be recorded every week after the first class. Absences will only be excused for valid reasons such as being certified medically unfit by a doctor, experiencing a death in the immediate family, involved in a serious accident (note that this does not include sports trainings, cultural events, etc.). If you are absent for a valid reason, please email the instructor in advance of the course meeting and provide documentary evidence in the subsequent class.

Please note that if you miss a course session for which your group is presenting, you will receive no points for the in-class portion.

#### **Assignments:**

Specific deadlines for assignments will be announced in the course. Please note that **LATE SUBMISSIONS WILL NOT BE GRADED** and that **SEVERE PENALTIES EXIST FOR PLAGIARISM**. If you have any questions regarding these policies please ask the instructor in advance of potential issues. The instructor is available during the course, office hours, and via email.

#### **Instructor Email:**

In order to expedite a response from the instructor, please start the email subject line with "TR2202".

## COURSE SCHEDULE

Week	Lecture Topics & Deadlines
Week 1 (15 Aug)	Introduction & Course Overview
Week 2 (22 Aug)	Sources of Innovation
Week 3 (29 Aug)	Types of Innovation / Technology S-Curves <b>Deadline:</b> Group Formation by Thursday, 28 August
Week 4 (5 Sep)	Standards / Design Dominance
Week 5 (12 Sep)	Entry Timing
Week 6 (19 Sep)	Defining Strategic Direction <b>Deadline:</b> Individual Assignment
<b>Recess Week (20 Sep to 28 Sep)</b>	
Week 7 (3 Oct)	Choosing Innovation Projects <b>Deadline:</b> "Elevator" Pitches
Week 8 (10 Oct)	Exploration-Exploitation
Week 9 (17 Oct)	Protecting Innovation
Week 10 (24 Oct)	Organizing for Innovation
Week 11 (31 Oct)	Team Project Presentations <b>Deadline:</b> All groups submit report
Week 12 (7 Nov)	Team Project Presentations
Week 13 (14 Nov)	Technological Change and Incumbents
<b>Reading Week (15 Nov - 21 Nov)</b>	
<b>Final Exam: 3 Dec 2014, Wednesday 1PM</b>	

Assigned course readings and case assignments will be posted in IVLE for each session.