Università Commerciale
Luigi Bocconi

Department of Management
and Technology

Via Röntgen 1
I - 20136 Milan

30154 – TECHNOLOGY AND INNOVATION MANAGEMENT

COURSE SCHEDULE A.Y. 2014-2015

Class 32

Teacher: Proff. Stefano Breschi, Silvia Zamboni

Date	Hours	Room
Thursday	16.15-17.45	34
Friday	8.45 10.15	34

Class timetable available at: http://didattica.unibocconi.eu/lezioni/
Insert course code: 30154

Course Description and Objectives:

Technological innovation is increasingly the source of sustainable competitive advantage for firms around the world. This course enables students to develop an understanding of analytic frameworks for managing the innovation process. In particular, students are able to examine the patterns and sources of technological change and the mechanisms for capturing the economic benefits from innovation as well as to identify the strategic and organizational challenges involved in managing technological innovation.

The objectives of the course are:
- To review and reinforce the core concepts and ideas concerning innovation. To better interpret the technological environment and identify meaningful trends.
- To develop a more rigorous understanding of firm decisions about innovation and technology.
- To be able to craft a firm's strategic direction and formulating its innovation strategy, including project selection, collaboration strategies, and strategies for protecting the firm's intellectual property.
- To understand how a firm's organizational structure affects its ability to innovate and to profit from innovation.

The main course contents can be summarized in:
- What is innovation and why is it important? Sources, types and patterns of innovation.
- Diffusion of innovation and technology standards.
- Choosing innovation projects.
- Profiting from innovation.
- Licensing of innovation.

- Protecting innovation.
- Organizing for innovation.
- Managing the NPD process.
- Technological diversification and convergence.
- Managing technogical discontinuity.

Standard lectures will be alternated with more interactive classes where students' participation is required. A number of the classes will be devoted to case discussion where the task of analyzing the issues in the case will be undertaken by the class as a whole. In other classes we will be expecting students to contribute their ideas on the issues being discussed and examples drawn from reading the business press.

Course Material:

The course textbook is M.A. Schilling, Strategic Management of Technological Innovation, 4th edition, McGraw-Hill, 2013.
Most other readings are available electronically through the e-learning website: http://lwp.unibocconi.it.

Instructors

Stefano Breschi
He obtained his PhD from the Department of Economics, Università di Pavia (Italy) in 1994. He is Professor of Applied Economics and Deputy Director of the Center for Research on Innovation, Organization and Strategy (CRIOS) at the Università Commerciale L. Bocconi, Milan (Italy). His main research interests are in the economics of technical change, industrial dynamics, social networks, economics of science, economics of the patent system, economic geography and regional economics. He carried out several research projects for international (e.g. European Commission DG Research, DG Information Society) and national (e.g. ENEA, Confindustria) organisations. He is author of numerous articles in journals like Economic Journal, Research Policy, Industrial and Corporate Change, Regional Studies, Journal of Economic Geography among others. He is Associate Editor of the journal Industrial and Corporate Change.

Silvia Zamboni
She has a Degree in Business Administration, Bocconi University, Milan, 2001, Ph.D in Logistics and Supply Chain Management, Bergamo University in collaboration with Zaragoza University and MIT-Zaragoza Logistic Center.
Lecturer of the Department of Management and Technology at Bocconi University and SDA Professor of the Operations and Technology Management Unit, SDA Bocconi School of Management.
Her research interests refer to the collaboration along the supply chain (and network) to innovate, innovation and technology management, and knowledge management in collaborative projects.

Detailed Description of Assessment Methods:
Coursework, exam & assessment

Team assignments

During the course there will be 4 team activities (Sept 26, Oct 16, Nov 20 and Nov 27). These will consist in answering questions about a case that has been assigned the class before or distributed directly in class. Each team hands in a single document (with the names of team members that are present in class that day) to the instructor. Team assignments are performed in class and last around 45m.

IMPORTANT: To qualify as an attending student, you need to turn in at least 3 team assignments.

In-class tests

During the course there will be 3 in-class tests (Oct 10, Nov 7, Dec 4). These will consist in answering multiple choice questions about the material covered in the previous classes. It might also include questions on the cases and readings assigned for in-class discussion. In-class tests are performed individually. They last 30m and consist of 15 multiple-choice questions.

IMPORTANT: To qualify as an attending student, you need to turn in at least 2 tests.

Class Participation

Please come to class having read the assigned materials, having thought about the relevant questions, and anticipating how the concepts and frameworks in the assigned readings relate to the issues in the case/article.

Your class participation grade will reflect (a) attendance (b) the instructor's assessment of your contribution to class learning.

a) From time to time, I will check who is in class that given day. I will also try to keep track of attendance through other means.

b) I strongly suggest to send me an email after you have made a contribution in class. Please include in the email a quick (1 line) description of the point/question/issue you raised in class.

* Class participation will be graded as follows: best 2 students (2,0), outstanding (1,5), good (1,0), average (0,5), poor (0,0). These points will be summed to the rest of the grade to obtain the final grade of each student. Put it differently, the participation grade does not discount from your final grade and only adds up.

Final Exam (attending students)

The final exam will consist of a set of questions on the material covered during the course (chapters of the textbook indicated in the syllabus, and the slides and materials made available through E-learning).

Grading - Attending students
Your final grade will be determined as follows:

In-class evaluations	40%
Class participation	extra*
Final exam	60%
Total	100%

Final Exam (non-attending students)

The final exam will consist of a set of questions on the material covered during the course (chapters of the textbook indicated in the syllabus, and the slides and materials made available through E-learning).

In addition, non-attending students will have a second part that will have 25 multiple-choice questions on any chapter of the textbook. The two parts are weighted respectively 60% and 40%

Grading - Non - Attending students

Your final grade will be determined as follows:

Final exam   100%

Exam sessions

Exam sessions available at: http://didattica.unibocconi.eu/esami/
Insert course code 30154

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Detailed syllabus

SS	Date Hour	Topic	Teacher	Lesson/ Exercise*	Reference
1	11/09/2014 16.15-17.45	Introduction & ground rules	Breschi	L	Ch1
2	12/09/2014 8.45-10.15	Sources of innovation	Breschi	L	Ch2; Case distributed in class: Technology and jobs
3	18/09/2014 16.15-17.45	Types and patterns of innovation	Breschi	L	Ch3; Case from textbook: Getting an Inside Look
4	19/09/2014 8.45-10.15	S-curves and diffusion of innovation	Breschi	L	Ch3
5	25/09/2014 16.15-17.45	Standards battles I	Breschi	L	Ch4
6	26/09/2014 8.45-10.15	Standard battles II	Breschi	TA1	Ch4; Case: Videogame console industry in 2012
7	01/10/2014 10.30–12.00	Review of key strategy concepts	Zamboni	L	Ch6; Formulating technological innovation strategy Material distributed in class
8	03/10/2014 8.45-10.15	Choosing innovation projects I	Zamboni	L	Ch7, Choosing innovation projects
9	09/10/2014 16.15-17.45	Choosing innovation projects II	Zamboni	L	Ch7, Choosing innovation projects
10	10/10/2014 8.45-10.15	Profiting from innovation I	Breschi	MCT1	Ch8; Teece (1986)
11	16/10/2014 16.15-17.45	Profiting from innovation II	Breschi	TA2	Case: Abgenix and the XenoMouse
12	30/10/2014 16.15-17.45	Networks of innovators	Breschi	L	TBD
13	31/10/2014 8.45-10.15	Protecting innovation I	Breschi	L	Ch9
14	06/11/2014 16.15-17.45	Protecting innovation II	Breschi	L	Material available on e-learning
15	07/11/2014 8.45-10.15	Systems of innovation	Breschi	MCT2	Malerba (2002)
16	13/11/2014 16.15-17.45	Organizing for innovation I	Zamboni	L	Ch10
17	14/11/2014 8.45-10.15	Organizing for innovation II	Zamboni	L	Ch10; Minicase: Organizing for Innovation at Google; Fosfuri & Ronde (2013) on skunkworks

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18	20/11/2014 16.15-17.45	Managing the NPD process	Zamboni	TA3	Ch11; Minicase: frog design
19	21/11/2014 8.45-10.15	Technological diversification	Zamboni	L	Case: Google from R. Grant
20	26/11/2014 10.30-12.00	Technological convergence	Zamboni	L	Minicase: Google, Apple, Amazon and Facebook
21	27/11/2014 16.15-17.45	Why do leaders (sometimes) fail with innovation?	Zamboni	L	Slides distributed in class
22	28/11/2014 8.45-10.15	Disruptive innovation	Zamboni	TA4	The Innovator Dilemma by C. Christensen Minicase: Portable imaging technology
23	04/12/2014 16.15-17.45	The digital transformation	Zamboni	MCT3	
24	05/12/2014 8.45-10.15	Wrap-up	Zamboni	L	

*MCT= Multiple Choice Test, TA = Team Activity

Office hours

Office hours are available at (http://www.uni-bocconi.it > Quick Reference for > Current Students > Timetables, Calendars and Rooms > Student consultation hours).
Office hours could vary: please check on the website.

Department of Management and Technology

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Honor code

Università Bocconi conceives of education as an ongoing process that stretches across a person's entire professional life. The University hopes that the entire Bocconi community will respect the values of fairness and correctness associated with it, values which inspire and guide the conduct of all community members as they pursue common objectives and a shared mission. The Università Bocconi Honor Code is published at http://www.unibocconi.eu/honorcode. We encourage all students to read it.