Syllabus
Course description

<table>
<thead>
<tr>
<th>Course title</th>
<th>INNOVATION MANAGEMENT</th>
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<tbody>
<tr>
<td>Course code</td>
<td>27238</td>
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<tr>
<td>Scientific sector</td>
<td>SECS-P/08</td>
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<tr>
<td>Degree</td>
<td>Master Entrepreneurship and Innovation</td>
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<tr>
<td>Semester and academic year</td>
<td>2nd semester, ay 2019-20</td>
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<tr>
<td>Year</td>
<td>2nd</td>
</tr>
<tr>
<td>Credits</td>
<td>9</td>
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<tr>
<td>Modular</td>
<td>No</td>
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| Total lecturing hours | 54 |
| Total lab hours       | -- |
| Total exercise hours  |     |
| Attendance             | suggested, but not required |
| Prerequisites          | not foreseen |

Specific educational objectives
The course refers to the typical educational activities and belongs to the scientific area of Business Administration.

To learn models, tools, methods to manage innovation within organizations. To develop critical and analytical reasoning about firms innovation management. To analyze and solve problems that arise in organizations that work on innovative projects. To learn how to read, summarize and present scientific papers on innovation management.

Lecturer
Alessandro Narduzzo, E508, anarduzzo@unibz.it; lecturer’s page https://www.unibz.it/en/faculties/economics-management/academic-staff/person/5125-alessandro-narduzzo

Siavash Farahbakhsh, sfarahbakhsh@unibz.it; https://www.unibz.it/en/faculties/economics-management/academic-staff/

Scientific sector of the lecturer
SECS-P/08

Teaching language
English

Office hours
please refer to the lecturer’s web page

Lecturing assistant
Not foreseen

Teaching assistant
Not foreseen

Office hours
27

List of topics covered
Innovation in a systemic view - Sources of innovation – Types of innovation
Teaching format

The course is based on both theoretical lectures and the discussion of case-studies and other empirical materials, and it requires the active participation of students in class discussions.

Learning outcomes

Knowledge and understanding of innovation as a systemic phenomenon involving the creation and the development of novel organizational knowledge that is commercialized into innovative products and services.

Applying knowledge and understanding to confront and analyse different models, to suggest the proper tools for specific situations, to understand how new products, organizational knowledge and managerial approach to innovation may create new value for the customers and new opportunities for the firm.

Making critical and autonomous judgments in the analysis of empirical cases of innovation and in the comparison of theoretical models and perspectives. Communication skills to describe concepts and models and to present in a persuasive and proper way the results of critical analyses of innovation cases.

Learning skills to deepen in an autonomous way a critical understanding of theoretical models on innovation and of the complex interaction between entrepreneurship and innovation.

Assessment

All students are regarded as attending students, unless they explicitly ask to be treated as non-attending students.

Assessment language

English

Evaluation criteria and criteria for awarding marks

Attending students’ evaluation.

The program covers the required readings ONLY:

- Final exam: 50% (and the exam grade is at least 18/30)
- Class leadership: presentation, workshop and post-class wrap-up report: 30%
- Class participation (class discussion, questions, answers to "cold" questions): 20%

Class leadership: During the first class, each student is assigned to a group that is in charge of one of the lectures (from L5 to L14) of the course. Each group is expected to perform the following tasks:

a) Key-concepts Review. to summarize and to comment the readings marked with (P);

b) Key-concepts Use. to design and to manage a workshop to foster the class understanding on the topic of the day.

c) Wrap-up Report

a) Key-concepts Review. The presentations assume that all the students in class have read in advance the readings. The suggested time for
presenting the assigned readings is about 15’ (with obvious exceptions). Slides of the presentations need to be sent to prof. Narduzzo at least two days before the class date.

To evaluate the presentations the following criteria are considered:
1. **Synthesis.** The presentation covers all the major topics introduced in all the readings.
2. **Clarity.** The presented topics are clearly explained.
3. **Connections.** Connections among the readings and with other contents of this course are present and appropriate.
4. **Time management.** The assigned time was well organized and balanced.

b) **Key-concepts Use.** We want to practice these concepts, to understand their analytic power, their impact on decision making. Any type of exercise/simulation/discussion that allow to understand how the key-concepts can be used is appropriate. To design the exercises/workshops you are invited to consult prof. Narduzzo in advance, during the office hours. To evaluate this task the following criteria are used:
1. **Relevance of the topic selected for the exercise/workshop.**
2. **Ability to stimulate and enable insightful reasoning on the selected topic.**
3. **Ability to involve the class.**
4. **Time management.**

c) **Wrap-up report:** At the end of the led class, each group writes a short report (about 2,000 words) that: a) summarizes the main elements (e.g. concept, problem, phenomenon) that characterize the topic, b) explains in what sense this topic changes the way we think about innovation management, c) describes the workshop designed and used in class to practice with that topic. The report should be a stand-alone document (i.e. please include references and use Harvard format) and other details that makes meaningful the document.

**Deadline for sending the document to the lecturer:** TBD.

**Non-attending students’ evaluation.**
Non-attending students do not have to write any report or assignment. Final exam: 100%. The program covers **both required and supplementary readings** listed in this syllabus. To evaluate non-attending students’ preparation, final exams for attending and non-attending students do not have exactly the same questions.

Final exam (90-100 minutes) consists of open questions to assess both knowledge acquired and analytical competencies. A case will be made available on the Reserve Collection before the exam. Students are expected to read the case in advance, and to bring a copy of the case at the exam. Some questions assess the students’ ability to use the acquired knowledge to analyze the case.

<table>
<thead>
<tr>
<th><strong>Required and supplementary readings</strong></th>
<th>Schilling M. 2013. Strategic management of technological innovation. 4th ed. McGraw-Hill. <strong>ONLY the Selected Chapters</strong> indicated for each topic of this course.</th>
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<tbody>
<tr>
<td>List of readings for each topic of the course is provided below. <strong>For each topic,</strong></td>
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readings are listed in the suggested order of reading.

For each topic readings are listed in the suggested order of reading.

1. Innovation, innovative firms, innovation management – An introduction (2h)
   Why does innovation matter? How practitioners and scholar think about innovation? Why and how do organizations want to manage the innovation journey.

Supplementary readings:

Additionally suggested readings:

2. Innovation management: problems, myths, traps (2h)
   This class offers a problematic perspective to frame innovation management and to provide a model for further theorizing.

Supplementary readings:

Additionally suggested readings:

3. Innovation: background and conceptualizations (4h)
   In this class we introduce and discuss standard definitions, conceptualizations and models. We use the Applied Mind case to review and discuss some topics. Read the case in advance.
   - Schilling 2013, Chapter 3.

Supplementary readings:

4. Managing innovation as exaptation (4h)
Innovation management through an evolutionary perspective. Innovation management consists of managing a system of interdependent and evolving components. Innovation as exaptation will be discussed.


**Supplementary readings:**

**Additionally suggested readings:**

5. Managing innovation as designing (2h)
How can ideas from design inform and improve management? And, how can designing complement analyzing and deciding as core managerial skills?


**Supplementary readings**

6. Managing Innovation in a Pareto World (2h)
We discuss how managing innovation changes when firms make decisions in a world where most of the phenomena display “power-law” distributions. How does this affect business and management decisions on innovation?

- Andriani, P. and Mckelvey, B., 2011. Managing in a Pareto world calls for new thinking. M@n@gement, 14(2), pp.89-118. (P)

**Supplementary readings:**

7. Managing innovation in open systems (2h)
To innovate, firms often need to draw from a wide number of different sources of knowledge from outside their organization. At the same time as firms need to be open to external sources, they also need to be focused on capturing returns to their innovative ideas. This gives rise to a paradox of openness - the creation of innovations often requires openness and commercialization of innovations requires appropriability.

Supplementary readings:


Additionally suggested readings:


8. Laboratory on Complexity and Innovation Dynamics - 1 (2h +2h)
We introduce Agent-based modeling (ABM) to explore and reflect on the complex dynamics that characterizes the management of innovation. We start analyzing the interdependencies, then we discuss the diffusion processes.
Together with Siavash Farahbakhsh, PhD Candidate

Additionally suggested readings:


9. Innovation management: techniques and tools (2h)
We review a repertoire of tools traditionally associated to innovation management. We discuss to what extent they cope with the problems introduced in Class 3. In particular, we wish to focus on those tools that deal with complexity and uncertainty.

Additionally suggested readings:

10. Innovation management: innovation measurements (2h)
Measuring innovation is a tricky issue. On the one hand, there is a need to assess the impact of innovation; on the other hand, the complexity of the phenomenon suggests avoiding simplistic solutions. The most common measures of innovation look at input (e.g. intensity of R&D investment) or output (e.g. number of patents). The approach proposed for this class is radically different and is grounded on the conceptualization of innovation as a process.
- Gamal D. 2011. How to measure organizational innovativeness? An overview of Innovation framework and Innovation audit. TIEC. (P)

Additionally suggested readings:

11. Building innovative organizations: ambidexterity and improvisation (3h)
Firms may adopt organizational arrangements that are support innovation. Through the concepts of organizational ambidexterity and organizational bricolage we discuss how firms may combine exploration and exploitation.

Supplementary readings

Additionally suggested readings:

12. Managing innovation through experimentation (3h)
Innovation is conceived as a process of trial and error. Its effectiveness depends on the organizations’ ability to adapt to this logics/practice.

13. Building innovative organizations: psychological safety (3h)
Organizational culture may inhibit organization. Building a psychologically safe environment is regarded a contextual condition to nurture innovation.

14. Management innovation (3h)
Management innovation is the invention and implementation of a management practice, process, structure, or technique that is new to the state of the art and is intended to further organizational goals.

Supplementary readings:

Additionally suggested readings:

15. Managing Technological Innovation (3h)
Managing innovation often implies creation, development, adoption and change of technology. This is particularly relevant when technology is perceived as the driver of the innovation. We discuss perspectives and problems of technology based innovation from the management perspective.

Additional suggested readings:

16. Design Thinking (4h)
This approach to innovation combines creative and analytical approaches, and requires collaboration across disciplines. This process—which has been called design thinking—draws on methods from engineering and design, and combines them with ideas from the arts, tools from the social sciences, and insights from the business world.

Supplementary readings
• https://dschool.stanford.edu/groups/designresources/wiki/de476/Project_Topic_Wallet_GiftGiving_or_other.html
• http://dschool.stanford.edu/use-our-methods