UNICUSANO
ROME

Code: ING-IND/35 **Credits: 9**
Matter: Innovation and project management
Main language of instruction: Italian
Other language of instruction: English

Teaching Staff

Head instructor
Prof. Tamara Menichini - tamara.menichini@unicusano.it

Introduction

1. *Objective of the course:*

Innovation as the ability to define and implement new or significantly improved product, process, marketing technique or organizational method, is a fundamental source of the company's competitive advantage. The course of innovation and project management (IPM) aims to make the student acquire the knowledge and technical tools to manage strategic processes that transform ideas and proposals into innovative and sustainable projects. Specifically, the IPM's objectives are:
-understanding the fundamentals of innovation dynamics and the relationship between innovation and company competitiveness.
-understanding the process of defining and developing an innovation strategy.
-understanding project management phases relating to the development of new products and/or production and organizational processes.
-the acquisition of project management tools, techniques, and practices.
-understanding the implications of the sustainability principles for planning, analysing, and controlling of innovative projects' management.

Objectives

2. *Course Structure:*

The course is organized in two main subjects. The first one regards *Innovation Management*. The course deals with the management of innovation as a strategic process starting from the analysis of the competitive dynamics that characterize the market and the technological environment. Then, the course presents the process of developing an innovation strategy and it concludes with the implications of the corporate structure on the strategy implementation process.

The second one regards *Project Management*. The course presents the phases that characterize the project management of new or improved products and/ or production and organizational processes. The course also presents inputs, outputs, tools, techniques, and practices for project starting, planning, monitoring and controlling.
A particular focus is placed on sustainability in project management presenting processes and tools that support company to analyse how project objectives, activities and results meet the needs and interests of stakeholders and generate benefits and/or economic, environmental, and social impacts.

The course includes two non-compulsory e-tivities. The first one is related to the first part of the IPM's programme, "Innovation Management" with the aim to develop skills for analysing innovation strategy through a business case approach.
The second e-tivity is related to the second part of the IPM's programme, "Project Management", with the aim to develop problem solving skills, by applying tools and technique of project management and sustainability project management to a real project proposal.

Competencies:

A. Knowledge and understanding:
   The student will have knowledge of the key aspects that characterize the strategic process of innovation management, starting from the definition of the company's strategic orientation to the formulation and implementation of a technological innovation strategy. The student will also have knowledge of the phases that characterize the management of a project, be it related to the development of new products and/or to the improvement of production and organizational processes. The student will know the main tools, techniques and practices of project management for the planning, analysis and control of project, useful to ensure technical effectiveness, profitability and economic, environmental and social sustainability of the project.
B. Applying knowledge and understanding:
   The student will be able to use the knowledge of innovation management to formulate a well-structured innovation strategy and adequately define its implementation processes. The knowledge of project management techniques and tools will allow the student to trace the development of an innovative project maximizing its probability of success from both technical and commercial points of view. The knowledge of the implications that sustainability has on the phases of definition, analysis, and control of projects, will allow the student to integrate the analysis and assessment of

environmental and social impacts with the development of innovative projects. Overall, the course will enhance the student's organizational skills aimed at managing innovation and change processes.

C. Making judgements:
The student will be able to identify, analyse and subsequently manage strategic processes of innovation and change management, according to a multidisciplinary approach, based on the relationship between innovation, competitiveness, and sustainability. The student will be able to contribute to project activities that are: oriented towards satisfying the needs of stakeholders and their involvement in decision-making processes; carried out by project teams identified according to criteria for the optimal assignment of roles; completed in compliance with the established time and cost; oriented towards monitoring, analysing, and reducing project risks.

D. Communication skills:
The technical and scientific language, needed to interact with other experts in the discipline and with decision makers inside public administrations and companies in the sector, will be gained. The student will be able to communicate information regarding innovation management, the innovative projects and project sustainability using appropriate terminology. The student will be able to ensure the timely and appropriate generation, collection, and distribution of information regarding project management.

E. Learning skills:
The student will have the knowledge to analyse and solve complex organizational and management problems related to innovation and project management. This will allow her/him to be aware of the management engineer's responsibilities in innovative and sustainable projects.

Syllabus

3. *Programme of the course:*

Innovation Management:
Subject 1. Introduction and dynamics of technological innovation.
Subject 2. Innovation strategy development.
Subject 3. Innovation strategy implementation.
Subject 4. R&D in the Italian and European contexts.
Project Management:
Subject 5. introduction to project management.
Subject 6. Project starting.
Subject 7. Planning (Part 1).

Subject 8. Planning (Part 2).
Subject 9. Executing, monitoring and closing.
Subject 10. Sustainability management.
Subject 11. Exercises on exam tests.

Evaluation system and criteria

The final exam consists of a written test with open-ended questions and multiple-choice questions.
Each open-ended question is evaluated from a minimum of 0 to a maximum of 6 points each. Multiple choice questions are assessed: 0 points for wrong or not expressed answer; 1, 2, or 3 points for correct answer depending on the level of question's difficulty degree.
The first e-tivity is evaluated from 0 to a maximum of 2.5 points. The second e-tivity is evaluated from 0 to a maximum of 3 points.

Bibliography and resources

4. *Materials to consult:*

Lecture notes. Ask to the teacher by email to **tamara.menichini@unicusano.it**

5. *Recommended bibliography:*

Schilling, M. (Fifth edition). Strategic Management of Technological Innovation. McGraw-Hill Education
Wysocki, R. K. (2011). Effective project management: traditional, agile, extreme. John Wiley & Sons.