

## ASP XIX Cycle **Winter School 2023**

### **DYNAMICS OF INNOVATION**

#### **COORDINATOR MARCO CANTAMESSA**

The Syllabus builds on the experience gained during the COVID emergency, blending remote and in presence activities. The format of the School is the following:

- Lectures, followed by Q&A and a discussion, will be offered in the month of March, in presence in a lecture room in Turin or Milan, and with the offsite students connecting via Teams.
- A few of "Meet the innovators" sessions will be carried out online in the month of March. This will allow students to have an exchange with entrepreneurs and managers involved at the leading edge of innovation, and gain both a first-hand experience on the technologies/industries they are operating on, as well as a sharing of the professional and human challenges that emerge in this context.
- The "Dynamics of Innovation" and the "Design Methods and Processes" schools will coordinate their syllabus in order to lead to a week-long "school" to be held with all students present, presumably in May 2022. This joint school will focus on tutorials and group work, to be carried out on the ASP projects the students have already been assigned to. This activity will take into account technical aspects pertaining to both schools, and can be considered to be useful to the students, allowing them to familiarize with the contents of their ASP projects and to start working on them on a sound methodological path.

The course builds on the experience gained with the previous ASP Cycles. It has the objective of introducing ASP students to the concept of innovation from an academic, cultural and practical perspective. More specifically, it aims at drawing their attention towards the challenges that must be tackled when trying to bring change in a given situation through technical means. This change can arise when bringing technological advances to the market in the form of new products and services and/or when proposing new solutions to satisfy explicit or latent needs.

From an academic perspective, it will deliver some foundational elements of the disciplines of economics of innovation and innovation management. Starting from the definition of the various types of innovation and their impact on the economy and on society, lectures will progress through the description of the dynamics of innovation, and discussing issues such as intellectual property rights and the financing of innovation. Lectures will explore these topics by looking at both sides of the innovation phenomenon, i.e., supply and demand.

From a cultural perspective, the course has the objective of filling in a gap that is often left by M.Sc. courses, which tend to give students the impression that “inventiveness” and “novelty” are values in their own right, somewhat neglecting that – until inventive and new solutions are driven all the way through economic and social acceptance – no real value can be ascribed to them. The course will therefore reinforce the concept that “execution” and “success” are by no means of lesser value than “insight” and “creativity”.

From a practical perspective, the course has the objective of providing ASP students with the mindset and some practical tools that will enable them to be more proficient in their work within ASP multidisciplinary projects, and in future innovation-oriented activities. From this same perspective, it is highly complementary to other ASP courses:

- It relates to the “Design Methods and Processes” course, which will focus on the process that goes from the identification of user needs to the embodiment design of technical solutions, by laying down a preliminary economic and strategic perspective (“is the idea financially viable and what steps ought to be made to make it happen?”).
- It relates to the “Decision-Making” course, by highlighting the problems associated to acceptance within political and organizational settings (“how can you align decision-makers to the solution being designed?”).

The expected outcome of the school is threefold.

1. Students will become able to interpret historical (and – hopefully – also contemporary) phenomena under the perspective proposed by the discipline of innovation management.
2. Students will be made aware of the hurdles to be overcome when attempting to develop, implement and diffuse innovations.
3. Future solutions generated for ASP multidisciplinary projects will not only be based on technical feasibility, but rest on a sounder analysis of their business and societal value.

## Lecturers

**Coordinator:** Marco Cantamessa, Politecnico di Torino, Department of Management and Production Engineering  
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Marco Magnani, Harvard Kennedy School and LUISS – Libera Università degli Studi Sociali  
Guido Carli  
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Giuseppe Scellato, Politecnico di Torino, Department of Management and Production  
Engineering  
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## Tutors

Graziana Blandino, Politecnico di Torino, Department of Management and Production  
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Samuele Colombo, Politecnico di Torino, Department of Management and Production  
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## Lectures Program

**Feb 27th, 17.30-19.00 CET**  
Room 15, Politecnico di Torino  
+ online

### **A long voyage, from Aeneas to Elon Musk**

Introduction to the school - Marco Cantamessa

**March 2nd, 17.15-20.00 CET**  
Room 3.1.3, Politecnico di  
Milano, Leonardo Campus +  
online

### **Change: Threat or Opportunity? Managing Disruptive Change in the Current Economic Scenario**

#### **Innovation and Economic Growth. Growth in Advanced Economies and Key Innovation Drivers**

The economic scenario and innovation - Marco Magnani

**March 13th, 17.30-19.30 CET**  
Room 15 (tbc), Politecnico di  
Torino + online

### **From Invention to Innovation**

Management of Innovation - Marco Cantamessa

**March 20th, 17.30-19.30 CET**  
Room 15 (tbc), Politecnico di  
Torino + online

### **The Dynamics of Innovation**

Management of Innovation - Marco Cantamessa

**March 30th, 17.30-19.00 CET**  
Room TBD, Politecnico di  
Torino + online

### **The Management of Intellectual Property Rights**

IPR and Innovation Financing - Giuseppe Scellato

**Apr 4th, 17.30-19.00 CET**

Room TBD, Politecnico di  
Torino + online

### **The Financing of Innovation**

IPR and Innovation Financing - Giuseppe Scellato

## **Course Structure and Teaching**

The course will be based on a range of learning experiences. During the "online" period (March-April 2023), the students will go through lectures and seminars.

- Lectures will provide students with the foundations used by the multiple disciplines that investigate the topic of innovation.
- Seminars by testimonials will allow students to gain some insights on the challenges that are inherent to the management of innovation in a variety of industries.

If a student cannot attend lectures and seminars, the ASP Offices must be informed by an email. Documented health problems or overlaps with other Laurea Magistrale courses/exams or relevant scientific activities external to the standard university course may be accepted as grounds for not attending in-person those events for which the in-person mode is planned; upon evaluation by the ASP Board an alternative option will be given.

During the "in presence" period (May 2023), they will go through tutorials and groupwork.

- Tutorials will provide students with practical tools for understanding innovation dynamics in an industry and formulating an innovation strategy.
- Group work will allow students to have a rapid reflection on the contents learned, so that they may immediately be applied to practical cases and, specifically, to their ASP projects.

## **Course format**

**What** Winter School 2023

**Where** Online and in Presence + MIND District

**When** March-April 2023 + May 2023

## **Students' Essays instructions**

**Deadline** End of August 2023

**Length** Papers have the objective of demonstrating students' capability to analyze a given situation associated to strategy and technology, under the perspective of innovation management. To this purpose, at the end of the school, students will writing a short essay on a historical case study.

Students will be given at random one topic X and one character Y taken from the assigned reading (i.e., the book whose reference is provided below on the XIX-XX century electricity industry). Then they will write a paper on the theme “Try assuming the perspective of Y, and consider his experience with respect to X”. As a guideline, students can use the following structure.

1. A short discussion of topic X from a theoretical perspective
2. Description of topic X in the experience of Y

Background material is mainly expected to come from the assigned reading but – of course – students are free to use other documented sources as well.

Jill Jonnes, 2004, “Empires of Light: Edison, Tesla, Westinghouse, and the Race to Electrify the World”, Random House.