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## Management and organization in the digital economy

PROF. MARIA CRISTINA FARIOLI

### Course aims and intended learning outcomes

In the last decade, enterprises have had to thoroughly rethink their relations with market and customers. Such rethinking is implemented through a reformulation of business models, often aided by the opportunities offered by the new technologies. Through an evolutionary approach, the course introduces and develops the fourth industrial revolution (Industry 4.0) and aims to survey the main changes occurring in the relations between market and enterprises. In specific, the course analyses the evolutionary processes taking place in the management and organization of enterprises and of their inter- and intra-organizational networks as well as the technology evolution and in particular digital technology and how they have accelerated the process of transformation and innovation of companies.

At the end of course the students will:

- know what it means "digital transformation" beyond the social channels having analyzed all its components: from big data concept to new disruptive business models.
- be aware about the four industrial revolutions and their key differentiations but also the common elements moved from a revolution to another.
- achieve the ability to analyze the main elements of a company Business Model and also to apply the Canvas business model in an enterprise thanks to the several exercises and examples will be carried out.
- have the basic knowledge on Information Technology which enabled and is still enabling the innovation of enterprises and the whole market.
- be familiar with digital economy terminology and able to communicate and present digital plans;
- be equipped with the knowledge basis and capacity to collect additional information that is needed to tackle more advanced digital topics.

### Course content

- Enterprises, environment, markets.
- The second industrial Revolution. Mass production and mass consumption.
- The third industrial revolution. Flexible automation and mass customization.
- Servitization, Networks and Business Modelling.
- The fourth industrial revolution and the Internet of things: from the concept to specific case histories in several industries such as manufacturing, healthcare and local government (smart cities)
- The five domains of Digital Transformation: Customers, Competition, Data, Innovation, Value. Each one will be analyzed in its own strategic themes and key concepts and also compared with the previous analog scenario.
- Mastering "disruptive" business models as the challenge of the digital era. Particularly will be presented the business model Canvas, commonly recognized, and its nine components.
- Presentation of the "new big" of digital economy: Amazon, Google and Facebook. Through the company testimonials will be presented the organization history and evolution. While later the students will analyze their business model.
- Evolution of Value Proposition understanding how the new technologies reshape opportunities and needs in the market.
- Turn data into assets: the new core of the digital companies also called "data driven".



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- Open innovation, start-ups and new emerging eco-system: they represent the new vocabulary of digital transformation and often the new way to do business and to survive for the companies.
- Opportunities and challenges of the digital transformation.
- New frontiers for business: Artificial intelligence and Blockchain technology

## Reading list

The reference book which will be used as first time in this course is “The Digital Transformation Playbook” of David L. Rogers issued by Columbia Business School.

It covers the core of lessons although it will be integrated by a selection of texts provided by the lecturer in the beginning of the course and uploaded on blackboard.

The parts which will be integrated are:

- The first three industrial revolutions
- The Information Technology Trend
- The business Model Canvas
- Artificial Intelligence and Blockchain

Given the novelty of the topic and the continuously changing technology there is not a specific textbook able to cover all the topics. Also for this reason students who option for this course are strongly recommended to attend the class.

## Teaching method

Interactive lectures; discussion of case studies and group projects; seminars by experts and professionals.

Project group activities will be coordinated via Blackboard and other collaborative digital tools.

## Assessment method and criteria

The exam is in written form and consists of both open and specific questions.

Furthermore the attendant students can have also the possibility to develop a group project as part of the exam.

Specifically the written exam for attendant students consists of:

- Open questions, finalized to understand if the student has absorbed the conceptual and methodological tools and is able to develop complex lines of reasoning interconnecting the different concepts and developing management suggestions;
- Specific questions, finalized to understand the level of study depth; Examples and applications, finalized to understand if the student is able to apply the concepts by using real world examples.
- Project work focussed on the business model development of a selected digital company or of a hypothetical start-up created by the team. The specific modalities will be communicated at the beginning of the course and made available on Blackboard.

Grades are based on:

- Group assignments (30%);
- One hour and a half of written examination to be held at the end of the course (70%);

### *Not Attending Students*

The exam consists of a 2 hours examination with both, open, specific questions and requests of examples and practical applications.

There are no oral tests of any kind, without exceptions



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At the end considering the common perception of the students that digital is simple when it's not there are two check tests in multiple choices formula just to feel the common understanding of the class. All the students which fill out the "check questions" will get an additional point to the overall final evaluation.

### Notes and prerequisites

Further information can be found on the lecturer's webpage at <http://docenti.unicatt.it/web/searchByName.do?language=ENG> or on the Faculty notice board.