

## **Course in Business Practice of Data Science**

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### **COURSE DESCRIPTION**

This course is intended to equip Data Scientists with practical and theoretical tools for maximizing their impact in the business environment. It covers organizational and operational challenges related to Big Data Analytics implementations in companies, and provides real case studies coming from Manufacturing and Retailing industries. The course is balanced between the more theoretical, inspirational aspects related to the pervasive nature of Big Data applications and the more practical, pragmatic utilization of Data Science techniques for supporting day-to-day business needs, such as Data Storytelling and Collaboration frameworks for Data Insights generation.

### **LEARNING OUTCOMES**

1. Demistify Big Data Analytics in Business Context and understand real impact of Data Science to business processes and organizations.
2. Understand Data Insights-generation process and methods of collaboration across data scientists and business managers
3. Revise industry business cases (from marketing, FMCG, retail) so to unveil the unique role of data scientists in decision making and process reengineering.

### **METHODOLOGY**

In-classroom frontal teaching and group work.

### **ASSESSMENT**

- Written exam through multiple choice quiz and open questions; weighting: 50%
- Group project and presentation; weighting: 50%

### **OUTLINE**

- Demistify Big Data Analytics in the Business environment
  1. Overview of Big Data and Data Science in Business
  2. ITMI Model: Information, Technology, Methods, Impacts
  3. Data professional roles and skillsets required
  4. Organizational maturity models for Data exploitation
- Business Toolkit of a Data Scientist
  1. Techniques for Data Storytelling and Practical principles of Data Visualization
  2. Collaborative Data Insights Generation process
- Industry Cases
  1. Case study: Data-based Marketing vs. Traditional Marketing
  2. Case study: Retail analytics with transactional data

### **TEXTBOOKS**

- *(optional)* T. H. Davenport, Big Data at Work: Dispelling the Myths, Uncovering the Opportunities Big Data at Work, HBS Publishing, 2014.
- *(optional)* A. De Mauro, Big Data Analytics, Apogeo edizioni, 2019.

#### **ADDITIONAL SUGGESTED READING**

- B. Marr, Big Data in Practice: How 45 Successful Companies Used Big Data Analytics to Deliver Extraordinary Results, John Wiley & Sons Inc, 2016.
- S. Few, Show Me the Numbers: Designing Tables and Graphs to Enlighten, Analytics Press, 2012.