MSc in Data Science
We consider Data Science as a **multidisciplinary science for the future**. Accordingly, this new MSc in Data Science aims at satisfying the emerging need for well trained and flexible **data analysis professionals**.

Our interdisciplinary approach allows our students to develop into **smart data managers**, with sound interpersonal, communicative and organizational skills.

Students will be provided with deep theoretical, methodological and technical knowledge in **Computer Science**, **Mathematics and Statistics**, along with a specific domain expertise in fields like **Social and Political Sciences**, **Industrial Engineering**, **Psychology and Cognitive Science**, and **Business**.

Traditional classes are complemented with **applied activities** like case studies analysis, working groups, internships, meetings and seminars with field experts, research institutions as well as public and private companies.

Data Science is in collaboration with Fondazione Bruno Kessler (FBK).
<table>
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<tr>
<th><strong>Programme overview</strong></th>
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<tr>
<td><strong>Degree awarded</strong></td>
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<tr>
<td>Master of Science - “Laurea Magistrale” - in Data Science</td>
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<tr>
<td><strong>Workload</strong></td>
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<td>The total workload for each student is 120 ECTS (European Credit Transfer System)</td>
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<td><strong>Intake</strong></td>
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<td>September each year</td>
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<td><strong>Duration</strong></td>
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<td>2 years full-time</td>
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<td><strong>Language</strong></td>
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<td>English</td>
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<td><strong>Class size</strong></td>
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<td>Up to 56 students</td>
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<td><strong>Fees and funding (approximate range)</strong></td>
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<td>• EU: 340€ - 3.400€ (based on income/merit)</td>
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<tr>
<td>• Non-EU: 1.000€ - 4.500€ (based on merit)</td>
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<tr>
<td>• Income/merit based scholarships and tuition waivers available</td>
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Requirements
• Bachelor’s degree (or equivalent)
• Courses taken in following areas:
  - Computer Science/Information Engineering
  - Sociology/Economics/Psychology/Law
  - Mathematics/Statistics
• English at B2 level of the Common European Framework of Reference for Languages

Selection criteria
• Assessment of previous studies and their coherence with the MSc
• Academic curriculum
• Statement of purpose
• Interview

Application deadlines (check on line for updates)
• February for all students (EU and non-EU citizens) wherever living
• June only for EU citizens and non-EU citizens regularly living in Italy

How to apply
• Access the online application form
• Upload the required documents
• Submit your online application by the deadline
• Check online for more information and updates: www.unitn.it/datascience
Study Plan

The Master is organized into two curricula according to the student’s academic background:

- **Curriculum A**, background in Computer Science, Mathematics, Physics, Statistics, Engineering;
- **Curriculum B**, background in Sociology, Economics, and Psychology.

**CURRICULUM A**

**Mandatory courses**
- Data mining
- Foundations of social and psychological science:
  - ICT and social science theory and models
  - ICT cognitive psychology theory and models
- Information, knowledge and service management

**In addition, one of the following courses:**
- Introduction to machine learning
- Intelligent optimization for data science

**CURRICULUM B**

**Mandatory courses**
- Mathematics for data science
- Scientific programming:
  - Programming
  - Algorithms and data structures
- Introduction to machine learning
- Computational social science
COMMON COURSES

- Big data technologies
- Statistical learning:
  - Statistical methods
  - Statistical models
- Data visualization lab
- Professional English for data science
- ICT and law privacy and security

- Elective and open-choice courses
- Elective laboratories
- Internship
- Thesis
Professional profiles

Social, economic, psychological oriented
- Computational Social Scientist
- Cognitive and Neuro-data Scientist
- Business Analytics Scientist

Matematic-statistical, informatic-engineering oriented
- Data Analyst
- Data Miner
- Industrial Data Scientist
There is a huge demand in most business sectors for the new professional figure of data scientist.

Following sectors and institutions are heavily recruiting data scientists:

- banking, manufacturing, telecommunications and media;
- public administration and health;
- large-scale distribution, utilities and insurance;
- public and private market research and analysis institutes;
- national and international organizations that develop and implement social and economical policies;
- innovative organizations devoted to the design of new services in the public sector;
- private companies, including SMEs, that use data and information to plan or restructure market strategies, process and product innovation and company management.
CONTACT DETAILS
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www.unitn.it/datascience