

MSc Data Science

DESCRIPTION: The remarkable increase in the volume and complexity of available data and new technologies that have been developed to process them requires a combined multi-disciplinary approach to design an overall strategy aimed at transforming data into useful information. Key ingredients to develop a successful strategy are data manipulation and visualization, large scale computing, statistical modeling, learning techniques, algorithmic thinking.

Laurea Magistrale in Data Science is a joint i3S Faculty initiative combining the expertise of four Departments:

- Department of Computer Science (DI)
- Department of Computer, Control and Management Engineering (DIAG)
- Department of Information Engineering, Electronics and Telecommunications (DIET)
- Department of Statistics (DSS)

This Master's program provides a solid and modern preparation to understand and manage the multi-facet aspects of carrying out a complete data analysis, including acquisition, management, and statistical analysis.

Curricular requirements: a 3-year degree or university diploma, or other adequate educational qualifications gained abroad, in the fields of Computer Science, Computer Engineering, Statistics, Mathematics, Physics, Engineering, Economic Science or a related field.

Personal preparation: The Adequate personal preparation (APP) addresses two aspects:

- (APP-a) Results and relevance of previous career;
- (APP-b) Knowledge regarding Mathematics, Probability and Computer Science.

The following aspects will be taken into account for the verification of the requirements **(APP-a)**:

1. the final grade obtained in the Bachelor's degree and the relative average grade point paying particular attention to the grades obtained in the area of Mathematics, Probability and Computer Science.
2. the relevance of the Bachelor's degree curriculum.

The verification of adequate preparation with regard to Mathematics, Probability and Computer Science **(APP- b)** will examine the knowledge acquired on the following subjects:

(APP-b1). Mathematics: Differential and integral calculus for functions of one or more real variables; basic notions of linear algebra and analytical geometry in the plane

(APP-b2). Probability: Random variables, distributions and expected values; main classes of parametric distributions of random variables; convergence of sequences of random variables.

(APP-b3). Computer Science: Principles of programming, object-oriented design; at least one programming language among C, C++, C#, Java, Python.

Students passing (APP-a) evaluation will take an on-line test to verify their (APP-b) knowledge and if they successfully pass they will attend an online interview with the Master's Committee.

Minimum GPA: 80/100

The submission of a GRE certificate is strongly recommended and will constitute a positive element in the evaluation for admission to the programme

Minimum English Language Requirements:

Upper Intermediate

Common European Framework of Reference for Languages (CEFR) Level B2

The following test scores are accepted:

- **IELTS 5.5** or higher
- **TOEFL iBT 80** or higher
- **Cambridge English B2 First** or higher
- **Trinity College London Integrated Skills in English - ISE II** or higher

Please note that the above English language requirements are waived for:

- Native speakers of English;
- Students holding an English-taught diploma/degree from an accredited institution in the EU/EEA/Schengen or Australia, Canada, New Zealand, the United Kingdom, and the United States;
- Students holding an International Baccalaureate, GCSE or comparable diplomas/certificates.

Please make sure to read the last year [Call for Application](#) <<choose the selected Course << Apply<< **Read the Requirements** (which may be subject to changes for 2024/2025)

For more information: admissiondatascience@diag.uniroma1.it

