

University of Campania  
"Luigi Vanvitelli"  
Polytechnic School  
and of the Basic Sciences  
Department of Mathematics  
and Physics

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### Where we are located

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### How to reach us

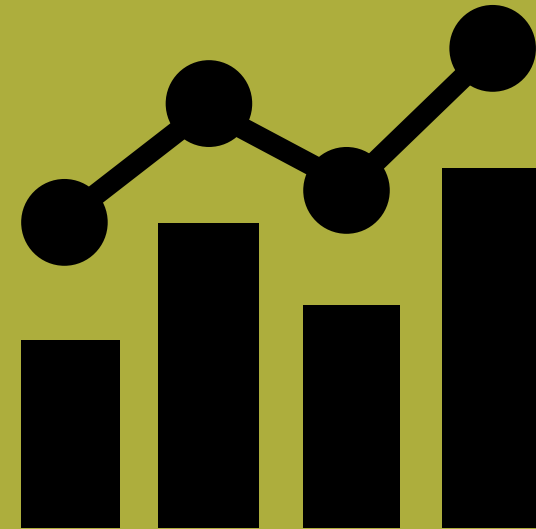
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**NEW  
COURSE!**

## Data Analytics

*Degree, 3 years - English language -  
Double-degree with Université  
Paris 13 - France*

*Prepare for a data science career.  
Learn the skills and tools to discover  
insights, communicate critical  
findings, and create data-driven  
solutions.*

**V** ●  
●  
Università  
degli Studi  
della Campania  
Luigi Vanvitelli

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## The Course

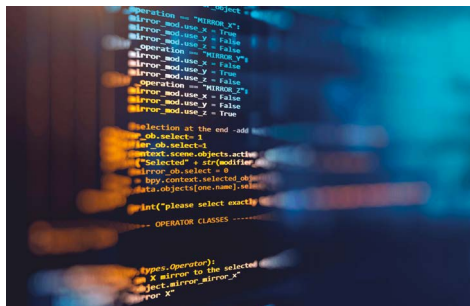
The goal is filling the gap in the national education programs to educate professionals in a fastly growing area of applications and eagerly required by the market. This Bachelor's degree belongs to class L-41 (Statistics), and additionally leverages quantitative and applied computer science related disciplines.

The programme focuses on methods and techniques in the area of maths (analysis and calculus), inferential statistics and exploratory data analysis, computer science methods and tools for database design and management, fundamentals of programming, basics of epistemology for the research, econometric, experimental and dynamic models. The graduate will gain knowledge and skills from different fields to get a broad and analytic vision on the tools for management, process and presentation of insights from data, in a strongly interdisciplinary and integrated context. The graduate will be able to use such tools in different application fields such as the economic-financial, social, demographic, biomedical, environmental and energy sectors, also by means of real data intensive practical case studies during stage periods in external organizations and by learning how to exploit the main software tools used in the field (SAS Miner, or the open-source Weka, R, Python).



## Professional skills

- Statistical and computational skills for the process and the analysis of high dimensional or complex data coming from different and unstructured sources; high throughput data (for example, from sensors of financial markets);
- Knowledge of statistical methodologies, and Data Mining and optimization techniques for the solution of complex problems and enforcement capacity in real scenarios;
- Experience in analysis of relational Big Data from the Web and knowledge of Social Network Analysis;
- Technical skills for prediction and monitoring of evolutionary phenomena;
- Use of statistical software and specific programming languages such as R and Python;
- Knowledge of database management systems and distributed computing, also in cloud environments;
- Communication of the analysis results skills by presentations and reports with visualization analytics tools.



## Opportunities for Data Analysts

This degree in Data Analytics is able to fulfill its goal by a program organization that is mainly oriented to the education of an applied analyst as a job-ready graduate, in the following fields:

- Production and commercial companies and e-commerce;
- Media and communication companies;
- Pharmaceutical and telecommunications industries;
- Logistics and transport industries;
- Insurance and financial institutes and banks;
- Health and health prevention companies;
- Consulting and market research companies;
- Public and private research institutions;
- Research and monitoring centers for energy and environment.

This degree in Data Analytics gives a solid background to access master's programs e.g. in Data Science, Statistics, Computer Science, Economics.

## DATA ANALYTICS Study Plan A.Y. 2018/19

### First Year (60 Credits)

Courses	Semester	Credits
<b>Fundamentals of computer science</b>	1	6
<b>Economics</b>	1	6
<b>Analysis</b>	1	9
<b>Statistics</b>	1	9
<b>Fundamentals of programming</b>	2	6
<b>Linear algebra</b>	2	6
<b>Probability theory</b>	2	6
<b>Methodology of social research</b>	2	6
<b>Free</b>	2	6

### Second year (60 Credits)

Courses	Semester	Credits
<b>Financial Mathematics</b>	1	6
<b>Inferential Statistics</b>	1	9
<b>Advanced data analysis and visualization</b>	1	9
<b>Numerical methods for data analysis</b>	1	6
<b>Statistical Learning</b>	2	6
<b>Econometrics or Business intelligence</b>	2	6
<b>Experimental Research Designs</b>		
<b>Psychometrics</b>	2	6
<b>Bioinformatics</b>		
<b>English</b>	2	6

### Third Year(60 Credits)

Courses	Semester	Credits
<b>Databases and Information Systems</b>	1	6
<b>Data mining and big data</b>	1	12
<b>Computer Systems Modelling and Semantic Web</b>	1	6
<b>Object oriented programming or Advanced Scientific Computing:</b>	1	6
<b>Numerical Methods</b>		
<b>Operational research or Behavioural finance</b>	2	6
<b>French</b>	2	6
<b>Free</b>	2	6
<b>Stage</b>	2	8
<b>Thesis examination</b>	2	4