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Data Science is the profession of the future. International reports show that data scientist will be the most sought after skill for at least the next fifty years.

During the master, the students will learn how to manage and use the "Big Data" which are the footprint of our time. They will learn how to use machine learning to extract useful information to support the decisional process in almost all fields of the human endeavour: science, finance, medicine, complex systems, public administration, management

The master in data science relies on a core of methodological skills covering hardware, software, statistics, machine learning and artificial intelligence. All this basic skills will then be specialised in one or more application domain.

Coordinator

Prof. Giuseppe Longo giulongo@unina.it





Useful links Polytechnic and Fundmental Sciences School www.scuolapsb.unina.it

Department of Physics Ettore Pancini http://www.fisica.unina.it

Master degree in Data Science-LMDS http://datascience.unina.it/

Contact person for student orientation Prof. Roberta Siciliano roberta@unina.it

Student's secretary LMDS Dipartimento di Fisica, Monte Sant'Angelo segrdid @fisica.unina.it opening hours Monday through Friday from 9,00 to17,00



COLLEGE OF

Master Degree in Data Science LMDS







2020|21

EDUCATIONAL TARGETS

The goal is to create a "Data Scientist": a highly skilled professional capable to manage the large data sets (Big Data) which have become ubiquitous in all fields, and to use advanced statistics and artificial intelligence methods to extract from them the information needed to solve complex problems.

The course is structured around two pillars : methodology and domain knowledge. In the first part the student will acquire all needed competences in statistics, machine learning, data mining, ethics of Big Data, ecc.

In the second part the student will learn -in an operational context- how to apply these methods to a specific domain such as: complex systems, economy and social sciences, fundamental sciences and engineering, science of life.



PRE- REQUISITES

To enter the master the student needs to have completed a Bachelor (three years degree) in sciences and/or to have a minimum of 30 CFU's in math, statistics, physics or in computer sciences. A working knowledge of English is required

TRAINING

FIRST YEAR	CFU
HW & SW infrastructures for big data	12
Data management and computer networks	12
Data Mining	12
Statistics and data anlysis	12
^D ython laboratory	6
Theory and Ethics of Big data	6

At the ened of the first year the student must choose among the following curricula:

- Data Science for intelligent systems
- Data Science for public administration, economy and society

 Data Science for fundamental sciences and engineering
Data Science for Real World Evidence inpharmacology and nncology

The second year will therefore be finalised to the acquisition of the skills needed for the choosen curriculum.

SECONDO ANNO

Curriculum oriented course I	12
Curriculum oriented course II	6
Curriculum oriented course III	6
Free choice Course	6
Other activities	2
Authonomous activities	2
Final Project	22

For the intelligent systems curriculum the first year courses are slightly different. Please see the master's web page at: http://datascience.unina.it/ for details.

JOB OPPORTUNITIES

Data Scientist are sought after by public bodies, financial and marketing companies, industries and laboratories as well as in all those fields which need big data to achieve their goals.

In order to easy the transfer of the acquired skills in an operative working context, the Master foresees stages, projects and thesis to be performed in private and public companies.

THE VENUE

All activities will take place in the Monte Sant'Angelo Campus of the University Federico II which also hosts, the laboratories, the student's office, the library.

