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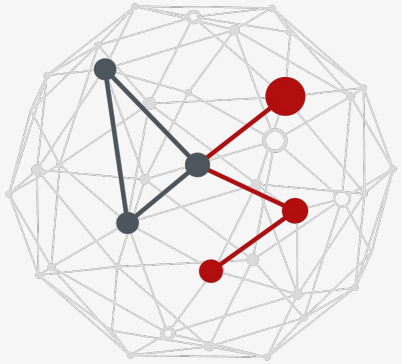
UNIVERSITÀ DEGLI STUDI DI PADOVA

DIPARTIMENTO MATEMATICA



DATA SCIENCE
UNIVERSITY OF PADOVA

Welcome to Data Science Master Degree

Master of Science in Data Science

Prof. Marco Ferrante - Head of Master Degree

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Presentation

In 2016, the University of Padua established a 2 year Master's degree in Data Science. This has been possible thanks to a fruitful collaboration between

- Departments of Mathematics
- Department of Statistics
- Department of Information Engineering
- Department of General Psychology
- Department of Biomedical Sciences

and the

- Bruno Kessler Foundation in Trento.

The Master's degree in Data Science is highly interdisciplinary, and is fully taught in English by internationally established researchers.

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Presentation

Since 2019 the Master in Data Science is structured according to 4 Curricula. Starting from the basic tools of probability theory, statistics and computer science, which are common to all the curricula in the first semester, we provide the students with all the fundamental theories and tools that are required by a Data Scientist today, including Machine Learning, Operational Research, Artificial Intelligence, Network Science and Big Data Computing.

Besides, we offer a wide range of courses where the previous tools find a practical application, like Biological Data, Human, Cognitive and Social data, or Economic and Financial data.

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Presentation

In the final fourth semester all the students have an opportunity to carry out an internship in a private company or in a research institution, to work on their Master thesis.

Presentation

Data Science Master Degree web page:

https://datascience.math.unipd.it/

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Curricula

1. Mathematics of Data Science

   https://datascience.math.unipd.it/curriculum-mds.html

2. Biological Data Analytics

   https://datascience.math.unipd.it/curriculum-bda.html

3. Machine Learning for Intelligent Systems

   https://datascience.math.unipd.it/curriculum-mlis.html

4. Cognitive, Social and Economic Data Analytics

   https://datascience.math.unipd.it/curriculum-cseda.html

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Foundations

MATHEMATICS	STATISTICS	COMPUTER SCIENCE	BIOLOGY, ECONOMICS, HUMAN & SOCIAL SCIENC
• STOC. METHODS • OPTIMIZATION FOR DS	• STATISTICAL LEARNING	• FUND. OF INF. SYSTEMS • MACHINE AND DEEP LEARNING	• COGN. BEHAV. & SOCIAL DATA

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Advanced Courses

MATHEMATICS

- HD PROBABILITY FOR DS
- MATHEMATICAL CELL BIO
- MATHEMATICAL MODELS AND NUM. METHODS 4 BIG DATA

STATISTICS

- STATISTICAL METHODS FOR HD DATA

COMPUTER SCIENCE

- HUMAN DATA ANALYTICS
- GAME THEORY
- NETWORK SCIENCE
- PROCESS MINING
- BIG DATA COMPUTING
- VISION AND COGNITIVE SERVICES
- KNOWLEDGE AND DATA MINING

BIOLOGY, ECONOMICS, HUMAN & SOCIAL SCIENCE

- BIOLOGICAL DATA
- OMICS IN HUMAN DISEASE
- BIOINFORMATICS
- INTRO MOL. BIOLOGY
- STRUCTURAL BIOINFORMATICS
- LAW AND DATA
- BUSINESS ECO. & FIN. DATA
- HUMAN COMPUTER INTERACTION

Internship – what is it?

- Period of work at
  - a company, industry, research centre, research lab.

- When?
  - Typically, carried out during the second semester of second year
- For how long?
  - Six to eight months
- MS thesis?
  - Yes, the internship and the final MS thesis's work are often combined

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Career Opportunities

Internships:

https://datascience.math.unipd.it/internships.html

Some of our partners

DIPARTIMENTO MATEMATICA

Torre Archimede

Opening hours

Monday to Friday, 8:00 AM to 7:00 PM.

Holidays, closing days arranged by the University or other opening hours reductions will be reported in the news of the Department website.

https://www.math.unipd.it/en/department/buildings-and-facilities/

University Library System:

http://bibliotecamatematica.cab.unipd.it/

Address: Via Trieste, 63 – 35121 Padova, Italy

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Coronavirus - updates UniPD

Protocols and guidelines:

https://www.unipd.it/coronavirus-updates

Address: Via Trieste, 63 – 35121 Padova, Italy

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Classroom and Laboratories

https://www.math.unipd.it/en/department/classrooms-and-laboratories/

Moodle Math

https://elearning.unipd.it/math/

1. Find Data Science Master Degree
2. Enroll with your SSO
3. Find the course unit and enroll

Enroll in *Data Science Information Space:*
https://elearning.unipd.it/math/course/view.php?id=659

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Lectures

During the first semester of this academic year:

- all the lectures will be **in person** and **online** (Zoom)
- all the laboratories will be **only in person**

The instructors usually post the videos of the lectures online on Moodle, but this is **not** compulsory.

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Lectures

Due to the COVID, we track the presence of the students.

It is necessary to register your attendance at each class using **OrariUniPD** app

https://www.unipd.it/en/easybadge

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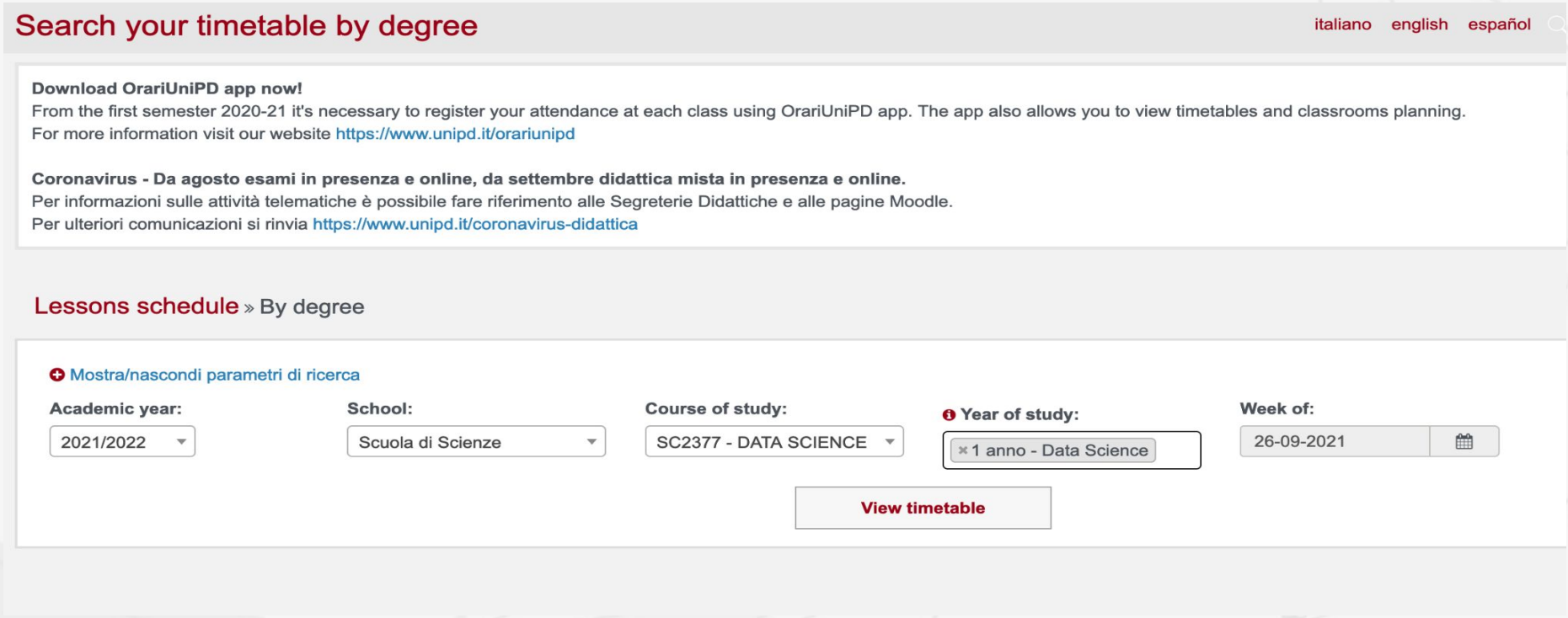
Lectures

Lecture timetable

http://agendastudentiunipd.easystaff.it/index.php?view=easycourse&_lang=en



Exams and Study plan

Exam calendar

http://agendastudentiunipd.easystaff.it/index.php?view=easytest&_lang=en

Study plan

from **November 10 to December 1st** - online form will be available

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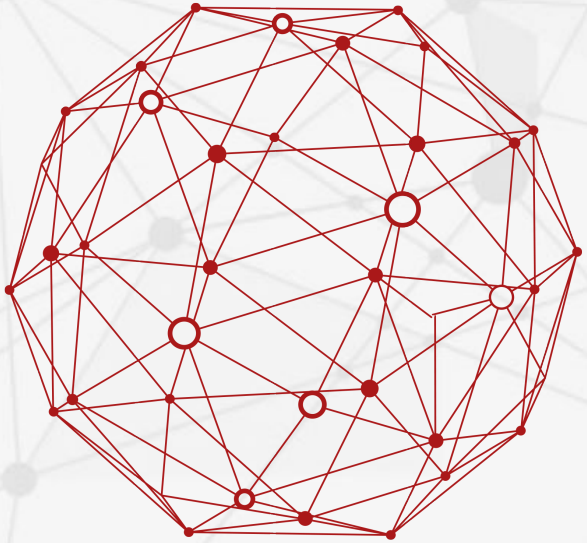
Contacts

E-mail

datascience@math.unipd.it

Website

https://datascience.math.unipd.it/index.html