



TOR VERGATA  
UNIVERSITÀ DEGLI STUDI DI ROMA



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# Master in Big Data in Business

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ONE-YEAR PROGRAM IN ENGLISH

2019/2020 ACADEMIC YEAR

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# What is about?



It is a **one-year** graduate program (*Master di secondo livello*) entirely taught in **English**, designed to provide the participants with the necessary scientific, managerial, and technical background to work, at the highest professional level, in the area of Big Data.



# Who we are

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The Master in “Big Data in Business” is an interdisciplinary program offered by:

- ❑ Department of Economics and Finance,
  - ❑ Department of Electronic Engineering,
  - ❑ Department of Business Engineering, and
  - ❑ Department of Physics
- of the University of Rome “Tor Vergata”.

# Who we are - Faculty

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- **Prof. Gianluca Cubadda - Coordinator)**
- Prof. Gianpaolo Abatecola
- Prof. Vittorio De Pedys
- Prof. Luca Gnan
- Prof. Giuseppe Bianchi
- Prof. Danilo Croce
- Prof. Roberto Basili
- Prof. Gianluca Rossi
- Prof. Fabio Massimo Zanzotto
- Prof. Alessio Farcomeni
- Prof. Stefano Domenico Salsano
- Prof. Roberto Benzi
- Prof. Antonio Parisi
- Prof. Giorgio Gambosi
- Prof. Stefano Grassi
- Prof. Marco Bianchi
- Prof. Federico Belotti

# Why the Master in Big Data?

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Students will acquire skills needed to manage advanced technologies in:

- ☐ Statistics;
- ☐ Software Engineering
- ☐ Telecommunication Engineering
- ☐ Strategic Management

# Why the Master in Big Data?

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More and more companies are using big data and related analysis as a way to give more information to better support their company and serve their customers.

Big data is the combination of 3 factors (**3 Vs of Big Data**):

- **High volume,**
- **High velocity,**
- **High variety.**

# Why the Master in Big Data?

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*The more efficiently a company uses its data,  
the more potential it has to grow.*



# How is it structured?

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The program **starts in January and ends in December** of the same year. In particular:

- **Lectures** are held in three terms, from January to May
- **Exams** take place in June/early July  
*(pre-exams at the end of each module)*
- **Internships and thesis** take place from June to December.

The course implies activities for a total of 60 university credits (ECTS).

# How is it structured?

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For the first 7 months, the participants will attend classes where they will acquire the necessary theoretical and methodological training.

In the following 5 months, **participants are required to produce a written final work (Master thesis), which corresponds to 9 ECTS (credits).**

Its topic should be agreed with the coordinator of the program.

**The Master thesis could be also carried out during an internship** in Italian or international companies and institutions.

During his visiting as an intern, the student will have two tutors, one selected by the Master Coordinator and the second one indicated by the hosting institution.

# Course structure – I semester

Courses	Scientific Disciplinary Sector (SDS)	Theoretical classes	Practical classes	ECTS credits
Supervised learning	SECS-S/03	36	18	6
Unsupervised learning	SECS-S/01	36	18	6
Data management for big data analysis	INF/01	18	9	3
Security & Privacy	ING-INF/03	18	9	3

# Course structure – II semester



Courses	Scientific Disciplinary Sector (SDS)	Theoretical classes	Excercises and Seminars	ECTS credits
High Dimensional Time Series	SECS-S/03	18	9	3
Topics in machine learning	INF/01	24	12	4
Architectures and systems for big data	INF/01	18	9	3
Cloud & mobile	ING-INF/03	12	6	2
Designing communication of results	SECS-P/10	12		2
Decision making processes & models	SECS-P/10	12		2
Strategic management of results	SECS-P/10	12		2

# Course structure – Elective courses



Courses	Scientific Disciplinar Sector (SDS)	Theoretical classes	Excercises and seminars	ECTS credits
Blockchain technology and applications	ING-INF/03	18	9	3
Economic complexity	FIS 02	18	9	3
Fundamentals of corporate finance	SECS-P/10	18	9	3
Scientific data handling and image processing	FIS/05	18	9	3
Network virtualization and softwarization	ING-INF/03	18	9	3
Panel Data	SECS-P/05	27		
Social media analysis	INF/01	18	9	3
Text mining and document analysis	INF/01	18	9	3
Business Practice of Data Science	ING-IND/3	27		

# How to apply

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Documents required for the application procedure:

- Curriculum vitae (CV)
- Transcripts of Bachelor and Master of Science degree
- English language proficiency certificate (or, as second best, self-declaration)
- Reference letter
- Motivation letter

# Which is the class size?

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The **maximum number of enrolled students is 30** and the minimum required is 15.

If the number of applicants will exceed the maximum availability, **the first 30 ranked will be selected.**

# International environment

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Students enrolled in the Master in Big Data in Business come from a **variety of countries, including East Asia, Africa, the Middle East and Europe.**

Diversity is a key asset to the University of Rome Tor Vergata, where students can encounter different cultures, meet others from diverse backgrounds and share important life experiences.

International friendships open the door to new professional networks for many graduates.

# Tuition Fees and scholarships

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Eligible candidates should enroll by mid-December.

**The tuition fee is € 6.000 divided in two installments.**

The Master Board may grant, according to the Master's regulation, full or partial tuition fee waiver.

For the 2019/2020 academic year, the master offers several merit-based scholarship opportunities.

# Scholarships a. y. 2019/2020

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- ❑ Almaviva offers a total reimbursement of €6.000 for the tuition fee;
- ❑ Almawave offers a total reimbursement of €6.000 for the tuition fee;
- ❑ Enel offers a total reimbursement of €6.000 for the tuition fee;
- ❑ Iccrea offers two (2) total reimbursement of € 6.000 for the tuition fee;
- ❑ Iconsulting offers a total reimbursement of €6.000 for the tuition fee;
- ❑ OCTO Telematics offers two (2) total reimbursement of € 6.000 for the tuition fee;
- ❑ INPS offers three scholarships to the sons and daughters of active-duty, retired or deceased public servants

# Internships and Placement

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Students will have the opportunity to find very good placement in the job market. Among others:



The Master in Big Data in Business provides its students with competencies that are highly requested in the labour market, thus allowing its graduates to draw up **successful careers in companies and institutions in Italy and abroad**. The programme also provides an excellent basis for those who wish to pursue doctoral studies and research at prestigious institutions.

# Contacts

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## **The Coordinator of the Master in Big Data in Business:**

Prof. Gianluca Cubadda

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## **Programme Officer:**

Federica Corrente

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