



Graduate School of Economics

# MASTER IN DATA SCIENCE

[www.barcelonagse.eu/masters](http://www.barcelonagse.eu/masters)



- Seize the opportunity of a data-driven value creation within an organization.
- Define the rigorous methodology to approach and frame the problem.
- Manipulate raw data to extract insight from it and shape it into a business or policy answer.
- Deliver a value oriented solution and explain it effectively to a non-technical audience.

“ The Barcelona GSE Master in Data Science is one of the very few such programs available internationally, and its graduates will be among the first to get a formal training as data scientists. ”

**Director:** Christian Fons-Rosen (UPF and Barcelona GSE)  
**Scientific Director:** Omiros Papaspiliopoulos (ICREA-UPF and Barcelona GSE)

## PROGRAM DETAILS AND STRUCTURE

**Language:** English

**Structure:** 9 months, full time (September-June)

**Degree awarded by:** UPF and UAB

### Selected Courses

Statistical Modelling and Inference	Omiros Papaspiliopoulos <i>ICREA-UPF and Barcelona GSE</i>
Deterministic Models and Optimization	Marc Noy <i>Universitat Politècnica de Catalunya</i>
Data Warehousing and Business Intelligence	Guglielmo Bartolozzi <i>Kernel Analytics</i>
Computing Lab	Christian Brownlees <i>UPF and Barcelona GSE</i>
Economics for the Era of Big Data	Christian Fons-Rosen <i>UPF and Barcelona GSE</i>
Machine Learning	Gábor Lugosi <i>ICREA-UPF and Barcelona GSE</i>
Stochastic Models and Optimization	Mihalis Markakis <i>UPF and Barcelona GSE</i>
Data Visualization	Michael Greenacre <i>UPF and Barcelona GSE</i>
Topics in Big Data Analytics	Pau Agulló <i>Kernel Analytics</i>
Social and Economic Networks	Joan de Martí <i>UPF and Barcelona GSE</i>
Industrial Practicum	<i>Opportunity to work in a data science project with a company as part of the MSc thesis</i>

## STUDENT PROFILE

- Graduates in Economics and Business, Statistics, Mathematics, Engineering, Computer Science, and Physics with the ambition to work with real world problems and data.
- Early-career professionals who want to refocus their careers around data science and analytics.
- Aspiring PhD students looking for rigorous training in quantitative and analytical methods.

## CAREER OUTLOOK

The Barcelona GSE Master in Data Science is offered for the first time in the 2014-15 academic year. Alumni outlook data will be available in Fall 2015.

### Potential Employers

- Analytics departments in companies in several industries
- Finance and Insurance Industry
- Consulting Firms
- Research Institutes
- Public institutions, central banks and European agencies

### Companies with expressed interest to recruit

- Indra
- HP
- Oracle
- Everis
- Deloitte Analytics
- Globant
- Dataiku
- Amazon

### Practicum Collaborators

- La Caixa
- Banc Sabadell
- King
- Telefonica
- Accenture
- Kernel Analytics