



# RESEARCH MASTER BUSINESS DATA SCIENCE (Joint degree) 2024-25

First Year	Aug	Sept-Oct	Nov-Dec	Jan-Feb	Mar-Apr	May-July
Kick-off Principles of programming		Statistics/Asymptotic Statistics* (4 EC)	Econometrics 1/Advanced Econometrics 1* (4 EC)	Econometrics 2/Advanced Econometrics 2* (4 EC)	Econometrics 3/Advanced Econometrics 3* (4 EC)	Research Internship** (4 EC)
		Mathematics/Advanced Mathematics* (4 EC)	Machine Learning 1/Advanced Machine Learning* (4 EC)	Machine Learning 2/Reinforcement Learning* (4 EC)	Deep Learning (4 EC)	Natural Language Processing (4 EC)
		Decision Theory for Business (4 EC)	Parallel Computing (3 EC)	Track-Specific Elective (4 EC) (see below)	Simulation Analysis & Optimization (4 EC)	Track-Specific Elective (4 EC) (see below)
Business Foundation, Visits to Business Departments, Skills Workshop (Integrity) (1 EC)						TI Lectures
Quantitative Finance				Asset Pricing (4 EC)		Elective (4 EC) Empirical Asset Pricing, Empirical Corporate Finance, or Market and Systemic Risk Management
Management Science <small>(Marketing, Innovation, Strategy, Human Resources and Organization Behavior, Knowledge and Information Networks)</small>				Research Hackathon or Internship** (4 EC)		ABRI Elective** (4 EC)
Operations Research Analytics				Research Hackathon or Internship** (4 EC)		Integer Linear Programming (4 EC)

Tracks

\*depending on the students' own level, \*\*students can also opt for an elective



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Second Year

Sept-Oct

Nov-Dec

Jan-Feb

Mar-Apr

May-July

3 Electives (9 EC)

Bayesian Econometrics (3 EC) + 2 Electives (6 EC)

Skills Workshops (3 EC) + 3 Electives (9 EC)

Thesis (30 EC)



Tracks

Quantitative Finance

3 TI Electives, or 2 TI Electives and Research Internship

2 TI Electives (or 1 TI Elective and Research Internship)

Sustainable Finance and 2 TI Electives

Management Science  
(Marketing, Innovation, Strategy, Human Resources and Organization Behavior, Knowledge and Information Networks)

AI@Work  
Social Network Analysis  
Marketing Science

Social Media Data Analytics  
and Research Internship

Prediction & Forecasting,  
TI/BDS/ABRI elective,  
Research Internship

Operations Research  
Analytics

Decomposition Methods  
Heuristic Optimization  
Social Network Analysis

TI/BDS/LNMB/Master  
Math electives,  
Research Internship

2 TI/BDS/LNMB/Master  
Math electives,  
Research Internship

PhD