

Programme syllabus and outline 2024-2025

Last update: July 8th, 2024

Structure

First year		Second year	
1 st term	2 nd term	3 rd term	4 th term
Compulsory courses 92,5 ECTS			Elective courses 17,5 ECTS Master thesis 10 ECTS

First term | Compulsory courses (30 ECTS)

Course title	ECTS	TYPE	Language
575277 Numerical Calculus. Programming languages	2,5	MAND	Spanish
575278 Statistics for Insurance	5	MAND	Spanish
575279 Actuarial Statistics	5	MAND	Spanish
575280 SAS+R Computational Data Analysis	5	MAND	Spanish
575285 Enterprise Risk Management	2,5	MAND	Spanish
575281 Insurance Company Accounting	2,5	MAND	Spanish
575290 Insurance Market. Elements i Agents	2,5	MAND	Spanish
575282 Financial Valuation Models	5	MAND	Spanish

Second term | Compulsory courses (30 ECTS)

Course title	ECTS	TYPE	Language
575283 Stochastic Finance	5	MAND	Spanish
575284 Financial Econometrics	5	MAND	Spanish
575286 Risk Modeling	5	MAND	Spanish
575287 Actuarial Mathematical Models and Life Applications	5	MAND	Spanish
575288 Actuarial Mathematical Models and Non-Life Applications	5	MAND	Spanish
575289 Actuarial Modeling of Public Pension Systems	5	MAND	Spanish

Third term | Compulsory courses (32,5 ECTS)

Course title	ECTS	TYPE	Language
575291 Statistical Models	5	MAND	Spanish
575292 International Financial Economics	5	MAND	Spanish
575293 Solvency	5	MAND	Spanish
575294 Financial Risk Management	5	MAND	Spanish
575295 Risk Quantification	5	MAND	Spanish
575296 Mathematical Models for Non-Life Provisions	2,5	MAND	Spanish
575297 Pension Plans. ALM	5	MAND	Spanish

Fourth term | Elective courses and Master thesis (27,5 ECTS)

Course title	ECTS	TYPE	Language
Optional credits (elective courses)	17,5	OPT	Spanish, English
575313 Final Project	10	FP	Spanish, Catalan, English

Elective courses. Students must complete 17,5 credits of these advanced specialties:

- 575298 Strategic Finance and Insurance Decisions: 2,5 ECTS (English)
- 575299 Health and Dependency: 2,5 ECTS (*) (Spanish/English)
- 575300 Tax Law, Banking and Capital Markets: 2,5 ECTS (Spanish)
- 575301 Computational Intelligence in Finance and Insurance: 2,5 ECTS (English)
- 575302 Advanced Financial Instruments. Structured Products: 2,5 ECTS (Spanish)
- 575303 Valuation of Financial and Insurance Companies: 2,5 ECTS (Spanish/English)
- 575304 Advanced Actuarial Mathematical Models: 2,5 ECTS (English)
- 575305 Advanced Stochastic Finance: 2,5 ECTS (English)
- 575306 Reinsurance: 2,5 ECTS (Spanish)
- 575307 Group and Disability Transactions: 2,5 ECTS (Spanish)
- 575308 Empirical Finance: 2,5 ECTS (Spanish)
- 575309 Multivariate Financial Analysis: 2,5 ECTS (English)
- 575310 Machine Learning: 2,5 ECTS (English)
- 575311 Credit Risk: 2,5 ECTS (*) (Spanish/English)
- 575312 Curricular internship: 5 ECTS (Spanish/Catalan/English)

(*) Not offered in the academic year 2024-2025.