

MASTER GAMMA

ACTUARIAL MANAGEMENT & MATHEMATICAL MODELING



Level
Professional Master



Prerequisite
Bac + 3 & plus



Credits
120 ECTS



Duration
4 semestres



Study Mode
Initial training
Full time



**Opportunity to
Double Degree**



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Objective

The **Professional Master's in Actuarial Management and Mathematical Modeling** aims to train graduates with skills in mathematics, statistics and Artificial Intelligence.

Graduates of this Master's program will have expertise in Actuarial Science and Risk Management.

the **Professional Master's in Actuarial Management and Mathematical Modeling** is built in partnership with the Association Tunisienne des Actuaire, and is available as a double degree with the Master d'Actuariat at the University of Le Mans.

Content

ACTUARIAT

Introduction to Actuarial Science, Life Actuarial Science, Non-Life Actuarial Science, Actuarial Science for Reinsurance and Extreme Risk, Random Models for Actuarial Science and Finance, etc.

MATHEMATICS & STATISTICS

Integration and Probability, Inferential Statistics, Monte Carlo Methods, Statistical Learning, Time Series, etc.

DATA SCIENCE

Programming (Python, R and VBA), Databases, Machine Learning, Deep Learning, Big Data Analytics, etc.

RISK & INSURANCE MANAGEMENT

Portfolio Management, Asset And Liability Management, Risk Modeling and Measurement, Sector Accounting, Risk Management, Financial Models.

PROFESSIONAL PROJECTS

Integrated Projects, Company Visits, Internships, PFE, etc.

SOFT SKILLS

Seminars, Personal Development, Business Games, etc.

GAMMA



Skills

- ▶ Adapt statistical data processing tools
- ▶ Mathematically model managerial problems, simulate, test and verify to make purchasing and production decisions.
- ▶ Develop mathematical models for the creation of insurance or savings products.
- ▶ Develop explanatory or predictive models.
- ▶ Analyze big data.
- ▶ Carry out studies in financial data analysis.

Sectors of activity

- ▶ Banks, Insurance & Stock Exchanges
- ▶ Study & Survey Organization
- ▶ Retirement & Provident Fund
- ▶ Commercial or Industrial Companies

Professions

- ▶ Actuary
- ▶ Data Scientist / Data Analyst
- ▶ Field Investigation Manager
- ▶ Financial Markets Operator
- ▶ Trade
- ▶ Actuarial Research Officer in Insurance
- ▶ Banking Credit and Risk Analyst
- ▶ Financial Analyst

Professional partnerships

- ▶ Tunisian Association of Actuaries
- ▶ Banks & Insurance



✉ contact.esb@esprit.tn ☎ +216 70 168 700

📍 Campus ESB Lot N° 46, Z.I Chotrana II, 2088, Ariana, Tunisia