



ADVANCED CREDIT RISK MANAGEMENT | COURSE SYLLABUS

Module 1 – Credit Risk Environment

- Definition of credit risk
- The main quantities
- Basel I, Basel II, Basel III, Basel III reforms (Basel IV) and stress testing
- Credit lifecycle
- IFRS 9
- Supervisory review of internal models
- Technological developments

Module 2 – Probability of Default (PD)

- Structural models: Merton's model
- Structural models: Moody's KMV and CreditMetrics
- Copulas and threshold models
- Mixture models
- Factor-copula models
- Generalized linear models and logistic regression
- Rating methodologies
- Low default portfolios
- The IRB standardised formulas
- PIT PD and forward looking models
- Implementation challenges

Module 3 – Loss Given Default (LGD)

- Key concepts in default handling: clients, default, collateral and exposure
- Non performing loans management
- Performing versus in-default LGD
- Statistical approaches
- A full case study (including GLMs)
- A crash course on survival analysis for LGD (and PD)
- LGD and survival analysis
- Implementation challenges

Module 4 – Credit Risk Frameworks

- Wrong-way risk: when PD and LGD move together
- Data in CRM
- Overview of credit risk model use
- Capital and loan loss provision
- Pricing of loans
- Machine learning in credit risk management
- Climate risk assessment