UCLouvain

lactu2220

2026

Asset and Liability Management

5.00 credits	30.0 h	Q2

This learning unit is not open to incoming exchange students!

Teacher(s)	Barbarin Jérôme ;
Language :	English > French-friendly
Place of the course	Louvain-la-Neuve
Prerequisites	· Mastery of English at the level of LANGL1330 course. · LACTU2170 Valorisation financière des engagements actuariels.
Main themes	Liquidity risk, interest rate risk, duration-convexity, immunization, interest rate derivatives, hedging strategies.
Learning outcomes	
Evaluation methods	The evaluation is based on a case study that will be provided during the year. Students will then be required to submit a written report, which will have then to be defended orally.
Teaching methods	The course consists of 10 lectures during which the theoretical concepts will be explained and illustrated through various examples.
Content	The aim of this course is to present the basic principles of Asset and Liability management applied to insurance companies. At the end of the course, the students must understand the main ALM problems of an insurance company as well as the ALM tools that can be used to manage these. More precisely, this course covers the following topics: · The Assets and Liabilities of an insurance company and their associated risks. · The main deterministic ALM tools: gap analysis, duration and convexity, key-rate durations and key-rate convexities,... · The main stochastic ALM tools: Stochastic Asset and Liability modelling, risk-neutral valuation and delta-hedging, performance and risk measures (value-at-risk, economic and regulatory capital), replicating portfolio and least-square Monte-Carlo.
Faculty or entity in charge	LSBA

Programmes containing this learning unit (UE)

Program title	Acronym	Credits	Prerequisite	Learning outcomes
Master [120] in Actuarial Science	ACTU2M	5		
Master [120] in Mathematical Engineering	MAP2M	5		