Course Descriptions None 2013-2014

Course Title	Life Insurance I
Course Code	EBC4119
ECTS Credits	6,5
Assessment	None

Period

Period	Start	End	Mon	Tue	Wed	Thu	Fri
2	28-10-2013	20-12-2013	X			X	

Level	Advanced
Coordinator	Antoon Pelsser For more information:a.pelsser@maastrichtuniversity.nl
Language of instruction	English
Goals	In this course we aim to teach students the basic principles of product pricing and measuring value creation (Embedded Value) on a market-consistent basis. The underlying principle for this course is the notion that the market-consistent value of an insurance contract is based on the market-value of the Replicating Portfolio plus an 'add-on' for the remaining (unhedgeable) portions of the risk that are not covered by the Replicating Portfolio.
Description	1. Pricing by Replication: Role of the actuary; Basic idea fair value; Duration; Inflation Risk. 2. Non-Financial Risks: Non hedgeable risks; Cost-of-Capital Method; Utility-based Pricing. 3. Equity Options: Unit linked insurance; Intro to option theory; With-Profit Policies. 4. Interest Rate Options: Interest rate swaps; Swaptions; Profit sharing; Approximation Formulas. 5. Pricing in Incomplete Markets: Cost-of-Capital Approach, Good-Deal-Bound Approach, Robustness Approach; Portfolio Replication. 6. Risk Management: Risk measures; Calculation of VaR; Solvency II; Quantitative Impact Studies. 7. Market-Consistent Embedded Value: From Measurement to Management; Pricing New Contracts: MCEV(0); Transfer Pricing.
Literature	To be announced.
Prerequisites	Bachelor Level Econometrics and Operations Research, including preparatory courses Actuarial Sciences.
Teaching methods	PBL / Lecture / Assignment
Assessment methods	Participation / Written Exam
Evaluation in previous academic year	For the complete evaluation of this course please click http://iwio-sbe.maastrichtuniversity.nl/rapporten.asp?referrer=codeUM

This course belongs to the following programme / specialisation

Master Econometrics and OR	Actuarial Science
Master Econometrics and OR	Econometrics & OR Electives
SBE Exchange Master	Master Courses
SBE Non Degree Courses	Master Courses