ACTU2M - Introduction

Introduction

ACTU2M - Teaching profile

Learning outcomes

Graduates of the master's degree in actuarial sciences will be able to design and implement, using a scientific and multidisciplinary approach, processes for managing the financial impact of risks (Quantitative Risk Management) faced by economic agents.

During his training, the future graduate of the master's degree in actuarial sciences will acquire solid methodological foundations but also know-how thanks to tutorials, practical case studies and an obligatory internship in a company or in a research laboratory.

The future graduate of the master's degree in actuarial sciences will thus acquire the knowledge and skills necessary to become:

- a high-level professional capable of analyzing the financial consequences of risks weighing on an economic agent (Enterprise Risk Management) and providing operational solutions;
- a scientist capable of understanding and modeling complex financial systems and their multiple interactions;
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Detailed programme by subject

CORE COURSES [64.0]

- Mandatory
- Optional
- Not offered in 2024-2025
- Not offered in 2024-2025 but offered the following year
- Offered in 2024-2025 but not the following year
- Not offered in 2024-2025 or the following year
- Activity with requisites
- Open to incoming exchange students
- Not open to incoming exchange students
- [FR] Teaching language (FR, EN, ES, NL, DE, ...)

Click on the course title to see detailed informations (objectives, methods, evaluation...)

Mémoire au choix (15 credits)

				Year 1	Year 2
LACTU2900	Master thesis : research		FR [q1 or q2] [] [15 Credits]		x
LACTU2910	Master Thesis : Project		FR [q1 or q2] [] [15 Credits]		x

Mathématiques de l'assurance (27 credits)

LACTU2010	

PROFESSIONAL FOCUS [30.0]

- Mandatory
- Optional
- Not offered in 2024-2025
- Not offered in 2024-2025 but offered the following year
- Offered in 2024-2025 but not the following year
- Not offered in 2024-2025 or the following year
- Activity with requisites
- Open to incoming exchange students
- Not open to incoming exchange students
- [FR] Teaching language (FR, EN, ES, NL, DE, ...)

Click on the course title to see detailed informations (objectives, methods, evaluation...)

Year
1 2

Content:

LACTU2210	Quantitative Risk Management	Christian Hafner	EN [q2] [30h] [5 Credits]

				Year 1	Year 2
LDATS2360	Seminar in data management: basic	Céline Bugli	FR [q1] [15h+10h] [4 Credits]	x	x
LINFO2275	Data mining & decision making	Marco Saerens	EN [q2] [30h+15h] [5 Credits] *> French-friendly*	x	x

Mathématiques de la finance

LMAT2470	Processus stochastiques (statistique)				

OPTIONAL COURSES

- Mandatory
- Optional
- Not offered in 2024-2025
- Not offered in 2024-2025 but offered the following year
- Offered in 2024-2025 but not the following year
- Not offered in 2024-2025 or the following year
- Activity with requisites
- Open to incoming exchange students
- Not open to incoming exchange students
- [FR] Teaching language (FR, EN, ES, NL, DE, ...)

Click on the course title to see detailed informations (objectives, methods, evaluation...)

These credits are not counted within the 120 required credits.

Content:

Code	Title	Teachers	Details	Year 1	Year 2
LSST1001	IngénieuxSud	Stéphanie Merle Jean-Pierre Raskin	FR [q1+q2] [15h+45h] [5 Credits]	x	x
LSST1002M	Information and critical thinking - MOOC	Anne Bauwens (compensates Jean-François Rees) Myriam De Kesel	FR [q2] [30h+15h] [3 Credits]	x	x

Supplementary classes

Course prerequisites

The **table** below lists the activities (course units, or CUs) for which there are one or more prerequisites within the programme, i.e. the

Access based on application : access may be granted either directly or on the condition of completing additional courses of a maximum of 60 ECTS credits, or refused.

Foreign students who have completed a university education (minimum 3 years) with strong quantitative connotation and who have obtained at least 70% (or 14/20) of average for all successful university years in their home university, without the slightest failure in mathematics courses, calculation of probabilities and statistics, have the possibility to apply for admission to the program of the Master in Actuarial Science (120 ECTS).

Moreover students who wish to be admitted on the basis of a dossier are invited to consult the criteria for the evaluation of application.

Admission and Enrolment Procedures for general registration

Students must draw up their individual programmes and submits it to the Jury who is responsible for accrediting prior learning and experience.

Specific professional rules

Graduates of UCLouvain's ACTU2M program have direct access to the Belgian professional association (Institut des Actuaires en Belgique - IABE, www.iabe.be) and are authorized to use the title of actuary.

The ACTU2M program is certified as Global Center of Insurance Excellence (GCIE) by the International Insurance Society (IIS), recognizing universities and colleges with outstanding Risk Management and Insurance programs. It ranks in the top 5 worldwide, both in terms of education and fundamental research in actuarial science.

Teaching method

In addition to strong methodological contents, the cursus includes case studies, personal projects and an internship (optional) in an insurance or reinsurance company, consulting firm, pension fund.

Evaluation

Entity

Structure entity	SST/SC/LSBA
Denomination	(LSBA)
Faculty	Faculty of Science (SC)
Sector	Sciences and Technology (SST)
Acronym	LSBA
Postal address	Voie du Roman Pays 20 - bte L1.04.01 1348 Louvain-la-Neuve Tel: +32 (0) 10 47 43 14 - Fax: +32 (0) 10 47 30 32
Website	https://uclouvain.be/fr/facultes/sc/lsba