UCLouvain

ETRI2M

2024 - 2025

ETRI2M - Introduction

Introduction

Introduction

Organised in collaboration with the UNamur and the KU Leuven and equivalent to the MPhil programmes of foreign universities (UK, Netherlands, for example), the master in economic sciences, econometrics orientation is designed for students who envisage continuing their training with a third cycle (doctorate) and wish to receive in two years a training in research that will enable them to pursue a doctoral thesis project under ideal conditions. The courses are given in English by researchers who propose advanced questions in topics of pure economics.

THIS PROGRAMME IS GIVEN AND EVALUATED ENTIRELY IN ENGLISH.

Your profile

- You have good skills in mathematics and statistics and wish to contribute to the analysis of the most recent economic and social questions;
- you wish to do research and envisage continuing your education with a doctorate;
- you are interested in pure economics and wish to acquire an analytical expertise on economic matters.

Your future job

Our graduates will orient themselves both towards the private sector and towards the public or institutional sector, where they will hold analytical positions and participate in decision-making of all kinds: economic policy decisions or strategic corporate decisions.

Your programme

The master offers you

-

ETRI2M - Teaching profile

Learning outcomes

Become an expert actor in economic life, capable of rigorously and critically analyzing contemporary socio-economic issues as well as specific questions with an analytical expertise perspective rooted in quantitative economics, and capable of undertaking high-level research projects or holding key strategic positions in the private, public, or institutional sectors.
These are the challenges that students of the Master [120] in Economics: Econometrics (jointly offered by UCLouvain-UNamur) are prepared to meet.

As with any second-cycle program offered by the School of Economics at UCLouvain, this master aims to train university economists capable of understanding and analyzing concrete economic and social issues of their time with clear and rigorous analytical reasoning, capable of explaining and communicating their analyses to diverse audiences, and capable of integrating their analyses into broader contexts.

The more specific objective of the Master [120] in Economics: Econometrics, is to train university economists who:

- Master specialized knowledge in quantitative economics subjects,
- Master advanced methodological tools and strong analytical skills,
- Have developed expertise in a specific domain,
- Are capable of thinking about, understanding, and analyzing complex and specific economic and social issues as well as advanced questions in quantitative economics:
    - By developing clear and rigorous economic reasoning, highly conceptual, and demonstrating analytical expertise rooted in quantitative economics,
    - With a global approach, at the local, national, European, and global levels,
- Are capable of discussing and debating specific questions with researchers/experts/specialists,
- Are capable of writing scientific articles in their chosen field of specialization.

Aware of the responsibility inherent to their profession, graduates will have integrated a critical university actor attitude, capable of making autonomous decisions and taking responsibilities for them. Versatile in their expertise, especially on the methodological and conceptual level, they are capable of **questioning, enriching, and evolving the contents, processes, and purposes of professional practices, critically examining innovations from research and mobilizing them to inform professional practices**. They will have integrated a continuous development logic that allows them to be professionals demonstrating expertise, versatility, and the ability to adapt and evolve positively in their social and professional environment.

On successful completion of this programme, each student is able to :

1. Develop an advanced economic reasoning

Develop an advanced economic reasoning: create an analysis with an expert perspective rooted in the quantitative economics of complex questions/problems, implementing a rigorous scientific approach and using advanced methodological tools and strong analytical skills.

1.1. Identify the relevant questions and discerningly synthesize the essential elements for their understanding.

1.2. Identify and justify what makes a model useful and in which context to use it, particularly by identifying the role of assumptions.

1.3. Identify and justify, in relation to concrete problems and their specificities, the relevant analytical methods.

1.4. Develop clear and rigorous analytical reasoning, demonstrating a high level of conceptualization and analytical expertise rooted in quantitative economics.

1.5. Identify and justify the relevant empirical methods to evaluate and study theoretical and/or practical questions.

1.6. Collect and select relevant data, assess their limitations, and conduct an appropriate statistical analysis.

1.7. Interpret the results of the statistical analysis, explain the underlying statistical problems and limitations, and develop relevant conclusions regarding the questions studied.

2. "Problem solver"

Think, analyze, and solve complex and specific socio-economic questions as well as advanced quantitative economic issues in a relevant, critical, and innovative manner, using an approach rooted in advanced economic reasoning and in interaction with other disciplines in the social sciences, demonstrating intellectual and methodological autonomy.

2.1. Identify and take into account the interactions between economic analyses and analyses from other social sciences and humanities, and exercise a critical perspective.

2.2. Develop a critical perspective, specifically by distinguishing the positive and normative aspects of economics.

2.3. Propose an original way, rooted in advanced economic reasoning, to think about and solve an economic and social problem.

2.4. Demonstrate the ability to use economic tools, including advanced quantitative economic tools, in an innovative manner.

2.5. Think about, analyze, and solve complex and specific socio-economic problems/questions with a global perspective: "Helicopter view and Strategic Thinking," at the local, national, European, and international levels.

2.6. Think about, understand, analyze, and debate advanced questions in quantitative economics..

3. Mobilize specialized skills in quantitative economics

Master and critically mobilize a body of knowledge, tools, and specialized skills in quantitative economics to develop expertise in a specific (research) field, aiming for high-level professional careers in research or consultancy.

3.1. Master and critically mobilize specialized and advanced knowledge, tools, and skills in microeconomics.

3.2. Master and critically mobilize specialized and advanced knowledge, tools, and skills in macroeconomics.

3.3. Master and critically mobilize specialized and advanced knowledge, tools, and skills in econometrics.

3.4. Master and critically mobilize specialized and advanced knowledge, tools, and skills in quantitative methods and applied mathematics in economics.

4. Develop a high-level personal scientific research project

Design and develop a high-level personal scientific research project (thesis), implementing a rigorous methodological approach to delve into an open research question in quantitative economics, demonstrating a level of expertise that qualifies them to join a leading research team in quantitative economics.

4.1. Effectively use basic and specialized tools for research in quantitative economics.

4.2. Understand, synthesize, and discuss high-level scientific articles within the framework of research seminars.

4.3. Formulate an open research question in quantitative economics.

4.4. Report on the state of knowledge regarding this question by utilizing high-level scientific articles.

4.5. Conduct an in-depth personal scientific study on this research question following a rigorous methodological approach, demonstrating original scientific content (produced by the student) that meets the required level for a scientific publication in an international economics journal.

4.6. Write high-level scientific articles that meet the standards of a scientific article published in a recognized international economics journal.

5. Communication and Interpersonal Skills

Communicate in French and English professionally and in accordance with the requirements of scientific communication, both orally and in writing, adapting to the audience and context.

Collaborate respectfully and constructively with the various stakeholders involved in a given situation, particularly in the context of high-level research or consultancy.

5.1. Communicate in writing clearly and structured according to the specific communication standards of the context, adapting both content and form to the intended audience and objectives, especially for a specialist audience.

5.2. Communicate orally clearly and structured according to the specific communication standards of the context, adapting both content and form to the intended audience and objectives, especially for a specialist audience.

5.3. Present arguments effectively using technical language, tailored to the intended audience.

5.4. Present arguments effectively using simplified language, tailored to the intended audience.

5.5. Integrate and collaborate effectively within a team and with various stakeholders involved in a given situation, especially with peers on current research issues.

5.6. Communicate clearly, coherently, argumentatively, nuanced, and precisely in English, both orally and in writing, with ease on general topics or those related to the field of economics, adapting to the audience and context, especially in the context of high-level research or consultancy.

5.7. Debate and participate in reflective discussions on advanced economic issues with researchers/experts/specialists.

6. Act in an International Professional Environment

Act in an international professional environment as an academic economist, with a scientifically based approach rooted in quantitative economics, as a critical and responsible actor, having embraced a logic of continuous development.

6.1. Adapt to diverse and complex contexts and situations and act appropriately in a demanding and ever-changing professional world.

6.2. Operate in an international and multicultural environment where English is the common language.

6.3. Utilize your skills as an economist (specialized in quantitative economics) to engage, decide, and act autonomously and responsibly, whether pursuing a Ph.D. in a leading research team in quantitative economics or holding key strategic positions in the private, public, or institutional sectors.

PLEASE NOTE THAT THIS PROGRAMME IS BOTH GIVEN AND ASSESSED Programme 2024-2025

Year
1 2

OPTIONS [15.0]

The student chooses three courses (15 credits) among the list Advanced Economic I or among the list Advanced Economic II or among the two lists indifferently. In the first cases, the option will be specifically mentioned in the diploma supplement issued, with the three courses chosen; in the latter case, the three chosen courses will also be repeated, but without an option title.

ADVANCED ECONOMICS II

EN

- 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...)

The student chooses three courses (15 credits) among the list Advanced Economic I or among the list Advanced Economic II or among the two lists indifferently.

Content:

Advanced Courses in Economics at UCLouvain

				Year 1	Year 2
LECON2701	Advanced course in economics I	William Parienté	EN [q1] [15h] [5 Credits]	x	x
LECON2702	Advanced course in economics II	Amma Panin	EN [q1] [15h] [5 Credits]	x	x
LECON2703	Advanced course in economics III	Francesca Monti	EN [q1] [15h] [5 Credits]	x	x
LECON2704	Advanced Course in Economics IV	Amma Panin	EN [q2] [15h] [5 Credits]	x	x
LECON2705	Advanced Course in Economics V		EN [q2] [15h] [5 Credits]		

Alternatives

Erasmus Mundus Joint Master Degree QEM (EMJMD): Models and Methods of Quantitative Economics

The QEM Models and Methods of Quantitative Economics is a Master's programme

- with a duration of **two academic years** (120 ECTS credits).
- It is expected that the student carries out their entire course work **attending at least two universities of the QEM Consortium** : Université catholique de Louvain - Université Paris 1 Panthéon-Sorbonne - Universitat Autònoma de Barcelona - Università Ca'Foscari Venezia - SGH Warsaw School of Economics

Note: The mobility track and a joint curriculum are defined and fixed for each accepted candidate during the admission process.

Program structure

The QEM Master is divided into **four semesters of study**,iT pln1 caatoryhe mobilits o[(at leasoonnr semest.cs)] TJ 1 0 0 -1 2 117613779945 Tm [(Tho)

☒ **En statistiques**
en fonction des connaissances de départ tout ou partie de :

Course prerequisites

There are no prerequisites between course units (CUs) for this programme, i.e. the programme activity (course unit, CU) whose learning outcomes are to be certified and the corresponding credits awarded by the jury before registration in another CU.

The programme's courses and learning outcomes

For each UCLouvain training programme, a reference framework of learning outcomes specifies the the skills expected of every graduate on completion of the programme. Course unit descriptions specify targeted learning outcomes, as well as the unit's contribution to reference framework of learning outcomes.

ETRI2M - Information

Access Requirements

Master course admission requirements are defined by the French Community of Belgium Decree of 7 November 2013 defining the

Access based on validation of professional experience

> It is possible, under certain conditions, to use one's personal and professional experience to enter a university course without having the required qualifications. However, validation of prior experience does not automatically apply to all courses. Find out more about Validation of priori experience.

Entry to all Masters (with the exception of Advanced Masters) can be gained through the special procedure for accrediting prior learning and experience known as VAE (validation des acquis de l'expérience).

Access based on application

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.

Admission and Enrolment Procedures for general registration

Academic supervisor: François Maniquet

Jury

-