

# ERASMUS MUNDUS QEM - MATHÉMATIQUES

Programmes internationaux

---

## The Erasmus Mundus Joint Master Degree - Models and Methods of Quantitative Economics (EMJMD QEM)

### About the EMJMD QEM

The EMJMD QEM is a **Master degree program in Economics co-funded by the Erasmus+ ERASMUS MUNDUS program of the European Union, approved by The Education, Audiovisual and Culture Executive Agency (EACEA) under the Erasmus +: Erasmus Mundus Joint Master Degree (EMJMD) brand.** It is a true joint full-time advanced Master Degree in economics for elite cohorts of students with many specializations. All scientific courses are taught in English. The EMJMD QEM program is designed by a Consortium of five Partner Universities from 5 European countries [**Universitat Autònoma de Barcelona (Barcelona, Spain), Université Paris 1 Panthéon-Sorbonne (Paris, France) Université catholique de Louvain (Louvain-la-Neuve, Belgium) and Università Ca' Foscari Venezia (Venice, Italy), and Warsaw School of Economics (Warsaw, Poland)**] with a network of Associated Partners consisting of international academic institutions as well as public and private companies.

**The EMJMD QEM program offers a rigorous education in fundamental quantitative tools** by combining core economic theory with related quantitative disciplines (Probability, Statistics, Econometrics, Finance, Actuarial Science, Mathematical Modelling, Computation and Simulation, Experimental Design, and Political Science). The range of courses offers students the opportunity to specialize in these many areas according to their interests and several course tracks. These areas of specialization in economics are increasingly vital in further research studies and the job market in government organizations, private companies, or financial institutions.

The course prepares students to utilize their competency **in economics**, including **economic theory, macroeconomics**, Financial economics, financial forecasting, financial engineering and risk management, quantitative asset management, computational economics, quantitative economics trading, and applied and theoretical research.

DURING THEIR TWO-YEAR STUDY, the QEM students can spend between one semester and three semesters at the University of Paris 1 Panthéon-Sorbonne. The mobility between at least two partner universities of the COnsortium is mandatory. For a complete presentation of the program, please consult the webpage [🔗 https://master-economics-qem.eu/](https://master-economics-qem.eu/)

The EMJMD QEM program prepares students to use competencies in economics, including economic theory, macroeconomics, financial forecasting, Financial economics, financial engineering, risk management, quantitative asset management, computational economics, quantitative trading, and applied and theoretical research.

## Application

*Application* to the Erasmus Mundus Joint Master Degree QEM program can be easily completed online. To apply please refer to the Webpage <https://master-economics-qem.eu/application-practical>

### **Application Schedule: Call for students application 2022/2024**

- \* For admission to the **cohort 2022/2024** starting **September 1st, 2022**, you can apply **from November 22nd, 2021, until June 30th, 2022**.
- \* **The deadline for the application process for the Erasmus+: Erasmus Mundus Scholarship (Erasmus+: EMS) attached to cohort 2022/2024 is March 4th, 2022.**

*NB:* Please note that all documents, including reference letters, must be submitted by the respective deadline.

### **Contact:**

If you have any questions concerning your registration, application, and other related issues, please an e-mail to [✉ qemapp@univ-paris1.fr](mailto:qemapp@univ-paris1.fr)

In any e-mail correspondence, please always mention your: Full name, ID number, Phone number, and e-mail address.

The QEM Help Desk office hours are Monday-Friday from 10:00 am - 12:30 pm and 2:00 pm - 4:00 pm, local Paris time. Please allow 48 hours for a response. Before contacting the QEM Help Desk, please ensure that your questions have not been answered already on the QEM website.

## **Infos pratiques**

**Composante :** UFR de mathématiques et informatique (UFR27)

**Durée :** 2 ans

**Crédits ECTS :** 120

**Campus :** Maison des Sciences Économiques

### **EMJMD QEM Coordination and Partner Universities contacts:**

\* Coordination Office

Email: [✉ qemapp@univ-paris1.fr](mailto:qemapp@univ-paris1.fr); Phone. +33 1 44 07 76 68;  
Fax. +33 1 44 07 76 61

## **Présentation**

## **Organisation**

### **Membres de l'équipe pédagogique**

Mailing Address: Office B14, [✉ Maison des Sciences Économiques](#), 106-112, Boulevard de L'Hôpital, 75647 Paris CEDEX 13, France

\* Universitat Autònoma de Barcelona

Website: <http://www.uab.es>

E-mail: [idea@uab.es](mailto:idea@uab.es)

\* Université catholique de Louvain

Website: <https://uclouvain.be/en/>

E-mail: [geraldine.carette@uclouvain.be](mailto:geraldine.carette@uclouvain.be)

\* Université Paris 1 Panthéon-Sorbonne

Website: <http://www.pantheonsorbonne.fr/>

E-mail: [qem-paris@univ-paris1.fr](mailto:qem-paris@univ-paris1.fr)

\* Università Ca' Foscari Venezia

Website: <http://www.unive.it>

E-mail: [qem-venice@unive.it](mailto:qem-venice@unive.it)

\* Warsaw School of Economics

Website: <https://ssl-www.sgh.waw.pl/en/>

E-mail: [dkrysi@sgh.waw.pl](mailto:dkrysi@sgh.waw.pl)

## Admission

### Conditions d'admission

#### General Requirements:

The selection of candidates is based on common admission criteria that rely on academic excellence. They must have a recognized Bachelor in Economics or an equivalent degree (three years, 180 credits) in line with national legislation. In any case, a basic training in quantitative methods is required. The applicants must have performed well above average during their undergraduate studies, have good knowledge of English certified by a TOEFL or IELTS by a score of 213 (TOEFL, computer-based) or 6.0 (IELTS).

Academic assessment is done by experts from the field, on defined criteria and under exclusion of any conflict of interests. The Committee will classify candidates pursuant to the following criteria, chosen to select the best-suited candidates: academic record, relevant academic background in quantitative methods, motivation of the candidate, recommendations, work experience, internships, research paper, and social competence.

NB: Application to the programme is possible even if the candidate has not yet realized the studies required by the date of application submission. However, the applicant must have completed the appropriate degree level before the cohort starting date that is the first September of the starting year of the cohort.

Admission to the Erasmus Mundus Joint Master Degree (EMJMD) QEM programme requires an English-language test certificate such as TOEFL (Minimum score required: 76 for IBT, 230 for Computer based, 550 for paper based) or IELTS (Minimum score required: 6.0) or Cambridge Examination (Minimum score required: C). Applicants coming from an English-speaking country or having a sufficient degree taught in English are waived from this requirement.

## Et après

### Poursuite d'études

### Insertion professionnelle



# Programme

## Organisation

## Course of Study

Courses are taught in English and are structured according to the ECTS (European Credit Transfer System) with 120 credits for the two years.

### First Year: Foundation courses (60 credits)

First semester in a partner University (30 credits) and the second semester in another partner University (30 credits):

#### **56 ECTS Credits of Scientific Courses: 7 x 7 Credits mandatory + 7 Credits elective**

The first year is focused on building a solid foundation in Economics and quantitative methods, thus there are seven mandatory courses and each are awarded 7 ECTS credits (7 x 7). Four of these mandatory courses are taken during the first semester and three are taken during the second semester. The remaining 7 ECTS are allocated to elective courses (which vary by institution, see below).

#### **4 ECTS Credits of Foreign Language Courses: 2 x 2 Credits mandatory**

Each semester, students take courses in French. The course is mandatory of 2 ECTS credits are awarded for these courses, which correspond to approximately 50 hours of language classes and cultural excursion. These courses are graded either pass or fail.

## List of Courses

### **First Semester: 30 ECTS Credits**

- \* Microeconomics 1 (7 ECTS credits, mandatory)
- \* Macroeconomics 1 (7 ECTS credits, mandatory)
- \* Optimization (7 ECTS credits, mandatory)
- \* Probability and Statistics (7 ECTS credits, mandatory)
- \* Foreign Language Course in French, German, Italian or Spanish (2 ECTS credits, mandatory)

### **Second Semester: 30 ECTS Credits**

- \* Microeconomics 2 (7 ECTS credits, mandatory)
- \* Macroeconomics 2 (7 ECTS credits, mandatory)
- \* Econometrics (7 ECTS credits, mandatory)
- \* Foreign Language Course in French, German, Italian or Spanish (2 ECTS credits, mandatory)
- \* Elective courses, see the following links for lists of the range of electives available at each partner university: [Barcelona](#), [Paris](#), [Venice](#), [Louvain-la-Neuve](#) and [Warsaw](#) (7 ECTS credits)

In each semester, students may elect to attend tutorials in Economics and Mathematics without grade or accumulating any ECTS credits. In addition, students have access to a computer laboratory with tutorship organised as necessary.

## Second Year (Semester 3 and Semester 4): Specialization (60 credits):

- \* Specialization courses (40 credits): in the major university (chosen among the five partners of the consortium, according to the student's specialization)
- \* Master dissertation (20 credits): research project or internship report prepared under the joint supervision of the major university and one of the four others.

## Members of the teaching team

The teaching team are from five full partners' higher education institutions involved in the EMJMD QEM Consortium as full Partners. These full partner institutions are:



Université

Paris

1

Panthéon-

Sorbonne

(Coordinator),

France



Università

Ca' Foscari

Venezia,

Barcelona,

Spain



Warsaw

School

of

Economics

Furthermore, there are 16 Associated Partners who act as complementary members of the EMJMD QEM Consortium and provide diversity to the Consortium regarding geographical origins, organizations' types, etc.

*Academic Associated Partners:*

Ten of these Associated Partners are academic institutions with a solid scientific and research background in economics and related disciplines:

Paris School of Economics (France), ESCP Europe (France), Sciences Po (France), University of Queensland (Australia), École Polytechnique de Tunisie (Tunisia), American University in Cairo (Egypt), University of Tokyo (Japan), University of Zhejiang (China), Hanoi Water Resources University (Vietnam), and Fundação Getulio Vargas (Brasil).

*Non-Academic Associated Partners:*

Six of the Associated Partners are public and private companies that aid in the administration of the Consortium:

CIC Banque, ABN Amro Bank NV, Banque de France, Fraunhofer-Chalmers Research, Saletelligence and Axa Group.

**Erasmus Mundus Joint Master  
Degree QEM - Models and Methods of  
Quantitative Economics (EMJMD QEM) -  
Mathématiques**