











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

# **Diploma Supplement**

The Diploma Supplement was developed by the European Commission, Council of Europe and by UNESCO/CEPES (European Centre for Higher Education).

The purpose of the supplement is to provide sufficient independent data to improve the international transparency and fair academic and professional recognition of qualifications (diplomas, degrees, certificates etc...). It is designed to provide a description of the nature, level, context, content and status of the studies that were pursued and successfully completed by the individual named on the original qualification to which this supplement is appended. It should be free from any value-judgements, equivalence statements or suggestions about recognition. Information in all eight sections should be provided. Where information is not provided, an explanation should be provided.

WARNING: This Diploma Supplement is only valid if presented with the official degree certificate. The QEM Consortium provides each student with only one official copy of all documents associated with their academic work. Notarized copies are to serve as official copies for all purposes. Translation in national language is provided if required by national legislation.

### 1. Information identifying the holder of the qualification

- 1.1 Family Name(s):
- 1.2 Given Name(s):
- 1.3 Date of Birth (day/month/year):
- 1.4 Student Identification Number:

### 2. Information identifying the qualification

2.1 Name of qualification(s) and title(s) conferred:

In view of the Consortium Agreement between Université de Paris 1 Panthéon-Sorbonne, Università Ca' Foscari Venezia, Universitat Autònoma de Barcelona, Université catholique de Louvain, and Warsaw School of Economics, Partner Universities of the Erasmus Mundus Joint Master Degree (EMJMD) QEM "Models and Methods of Quantitative Economics" Consortium, and according to the mobility track of the student, the national degrees checked below are conferred:

#### Universitat Autònoma de Barcelona

Master en Modelos y Métodos de Economía Cuantitativa / Models and Methods of Ouantitative Economics

#### Université Paris 1 Panthéon-Sorbonne

Master Mathématiques et Applications,

parcours Modélisation et Méthodes Mathématiques en Economie et Finance (MMMEF)" or Master Mathématiques et Applications,

parcours Ingénierie du Risque : Finance et Assurances (IRFA)

or Master Economie mention Analyse et Politique Economique (APE)

(only one appears on the joint degree depending on the Study Programme of the second year)

## Università Cà Foscari Venezia

Laurea Magistrale in Economia e finanza, curriculum Economics-QEM (LM-56)

### Université catholique de Louvain

Master en sciences économiques, orientation économétrie, à finalité approfondie

#### Warsaw School of Economics

Magister ekonomii

#### 2.2 Main field(s) of study for the qualification:

Economics and management, Mathematics and Finance

Students achieve a high level in quantitative tools, mathematical methods, and models in economics as well as in applications, preparing them for scientific research and academic careers or positions in banks, insurance companies, financial institutions, and industry, at both national and international levels.

#### 2.3 Names and status of awarding institutions:

According to the mobility track of the student, the awarding institutions are checked below:

- Universitat Autònoma de Barcelona, public university
- Université Paris 1 Panthéon-Sorbonne, public university
- Università Cà Foscari Venezia, public university
- Université catholique de Louvain, public university
- Warsaw School of Economics, public university
  - 2.4 Name(s) and status of institution(s) (if different from 2.3.) administering studies
  - 2.5 Language of instruction/examination:

English

## 3. Information on the level of the qualification

#### 3.1 Level of qualification:

Second cycle university studies. Five years (10 semesters) of higher education studies and research after high school, conferring a Master's degree (see section 8).

### 3.2 Official length of programme:

2 years corresponding to 120 ECTS (see section 8).

#### 3.3 Access requirement(s):

Admission is based on academic excellence and it is mandatory for a student to have a bachelor's degree or a degree at the level of a bachelor's degree. Admission is granted according to national laws which are specified in annex.

#### 4. Information on the contents and results gained

- 4.1. Mode of study:
- Full time during 2 years (4 semesters)
- Mobility in at least two universities of the QEM Consortium
- Mandatory language courses
- Mandatory Master Dissertation

All information on the organisation of studies can be found on the QEM website,

https://master-economics-qem.univ-paris1.fr/

#### 4.2. Programme requirements:

- The first year of study is devoted to the foundation courses (mandatory) in Microeconomics, Macroeconomics, Econometrics, Probability, Statistics and Mathematics.
- The second year is devoted to specialization in Macroeconomics, Theoretical and Applied Microeconomics, Finance, Mathematical Economics, Econometrics, and research pursuant to the Master Dissertation.
- Scientific courses: 92 ECTS.
- Master Dissertation over the last semester during the second year (QEM2): 20 ECTS. It is research oriented, either in a research center or through a qualifying internship at a firm.
- Mandatory foreign language training: 8 ECTS (2 ECTS per semester).
- 120 ECTS are required to earn the degree (some of these 120 ECTS are completed in mandatory classes, the remaining ECTS are completed in elective courses).
- A minimum GPA of 3.0 is needed to automatically earn the degree (B average, see section 4.4). All programme requirements are described in details in the QEM Consortium Programme (website https://master-economics-qem.univ-paris1.fr/)

This information can be obtained from the Faculty offices of the partner universities.

## 4.3. Programme details

The list of learning activities taken by the student, the corresponding credits, the language of instruction (where it is different than English) are detailed on the semesterly transcripts of results attached at the end of this document.

If the student has undertaken one or more internship(s) and/or a study period in another institution within the framework of a student mobility agreement, this information is also included on the transcript of results.

### Mobility track:

Semester 1:

Semester 2:

Semester 3:

Semester 4:

#### Master Dissertation:

- Title:
- Advisor:

Overall GPA:

### 4.4 Grading scheme and grade distribution guidance:

## Conversion table between the grades in the different institutions

QEM Grades	<i>GPA</i>	Paris QEMI	Paris QEM2	Barcelona QEM1 & QEM2	Venice QEM1 & QEM2	UCL QEM1 & QEM2	Warsaw QEM1 & QEM2
A+	4	95 – 100	>14	9,5 – 10	30 L	18 – 20	5
A	4	90 – 94	13 – 13.9	9 – 9,4	29 – 30	15 – 17	5
<i>A</i> -	3.7	87 – 89	12 – 12.9	8 – 8,9	28	13-14	4.5
B+	3.3	83 – 86	11 – 11.9	7 – 7,9	26 – 27	11-12	4.5
В	3	80 – 82	10 – 10.9	6 – 6,9	25	10	4

В-	2.7	75 – 79	9 – 9.9	5 – 5,9	23 - 24	9	4
C+	2.3	70 – 74	8 – 8.9	4,5 – 4,9	22	9	3.5
С	2	65 – 69	7 - 7.9	4 – 4,5	20 - 21	8	3
D	1	50 – 64	4 – 6.9	3 – 3,9	18 – 19	8	3
F	0	<50	<4	<3	<18	<8	2

The correspondence between the grading in Barcelona and the "letter grading" of the European Credit Transfer System (ECTS) is given by the table below:

ECTS Grades	Barcelona		
A+	10 with honours		
A (Highest 10%) EXCELLENT	9.0-10		
B (Next 25%) VERY GOOD	8 -8.9		
C (Next 30%) GOOD	7-7.9		
D (Next 25%) SATISFACTORY	6-6.9		
E (Next 10%) SUFFICIENT	5-5,9		
FX FAIL F FAIL no credit	0-4,9		

The language courses are mandatory. They are graded with a Pass/Fail. As per the scientific courses, students need to retake a failed language course.

- The Grade Point Average (GPA) is calculated at the end of each semester taking into account the conversion table between the grades in the different institutions.
- Students may be allowed to take more than 120 ECTS, in which case the GPA is calculated taking into account all the courses.
- Students who failed a class (F) need to retake the class. This means the student will need to take again the same class another semester or another year in which the class is offered again (and not a second session with another grade for the class where the student failed). The grade in the retake will then replace the F. The GPA (from 0 to 4) calculated at the end of each semester will not take into account the Failed (F) courses (so the average semester GPA can be different from the overall GPA).
- To receive the degree, it is mandatory that the students do not have any remaining Failed (F) courses at the end of the programme.
- The overall GPA takes into account the average grade of all the scientific courses including the Master Dissertation (but not the language courses which are graded PASS/FAIL).

The examination regulations can be found on the QEM website,

### 4.5 Overall classification of the graduate

The final national degree grade, if applicable is specified on the degree certificate and in annex.

### 5. Information on the function of the qualification

- 5.1 Access to further study:
  Holders of the joint master obtained in the QEM Programme may apply for a PhD programme (see sections 7).
- 5.2 Professional status: Not applicable

#### 6. Additional information

#### 6.1 Additional information:

The students enrolled in the Master QEM Programme have a mandatory mobility among the universities of the Consortium with a full academic acknowledgement of the credits acquired. During the two years of the programme, they must study in at least two universities.

- 6.2 Additional information sources:
- Master QEM web page: https://master-economics-qem.univ-paris1.fr/
- NIC-NARIC networks website http://www.enic-naric.net/

And also, web pages of the five universities of the Consortium:

- Université Paris 1 Panthéon-Sorbonne (France): http://www.univ-paris 1.fr/
- Universitat Autònoma de Barcelona (Spain): http://www.uab.es/
- Università Ca' Foscari Venezia (Italy): http://www.unive.it/
- Université catholique de Louvain (Belgium): <a href="https://uclouvain.be/">https://uclouvain.be/</a>
- Warsaw School of Economics (Poland): http://www.sgh.waw.pl/

## 7. Certification of the Supplement

- 7.1 Date (date/month/year):
- 7.2 Signature: Professeur Jean-Marc Bonnisseau
- 7.3 Capacity: Coordinator of the QEM programme Université Paris 1 Panthéon-Sorbonne
  - 7.4 QEM consortium seal:

#### 8. Information on the European Higher Education System

The purpose of the Bologna process (or Bologna accords) is to create the European higher education area

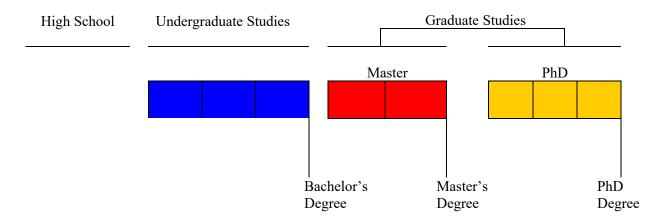
by making academic degree standards and quality assurance standards more comparable and compatible throughout Europe, in particular under the Lisbon Recognition Convention. It is named after the place it was proposed, the University of Bologna in the Italian city of Bologna, with the signing in 1999 of the Bologna declaration by Ministers of Education from 29 European countries.

European Credit Transfer and Accumulation System (ECTS) is a standard for comparing the study attainment and performance of students of higher education across the European Union and other collaborating European countries. For successfully completed studies, ECTS credits are awarded. One academic year corresponds to 60 ECTS-credits that are equivalent to 1500-1800 hours of study in all countries irrespective of standard or qualification type and is used to facilitate transfer and progression throughout the Union.

The basic framework adopted is of three cycles of higher education qualification. As outlined in the Bergen Declaration of 2005, the cycles are defined in terms of qualifications and ECTS credits:

- 1st cycle: typically 180–240 ECTS credits, usually awarding a Bachelor's degree.
- 2nd cycle: typically 90–120 ECTS credits (a minimum of 60 on 2nd-cycle level), usually awarding a Master's degree.
- 3rd cycle: Doctoral degree. 180 ECTS.

In most cases, these will take 3 (possibly 4), 2, and 3 years respectively to complete. The actual naming of the degrees may vary from country to country.



The Bologna system is thus comparable to the North American system with a slight difference in the structure of a PhD programme, which in the North American system is normally five years with no distinction between the first two years and the last three years (sometimes with a possibility of being awarded a Master's degree after the first two years of study).

Specific information on the national higher education systems are given in annex.

#### **Information on Erasmus Mundus Programmes**

Erasmus+: Erasmus Mundus is the international counterpart of the Erasmus+ programme, which is named after the Dutch scholar Desiderius Erasmus Roterodamus, who studied in different monastic schools in Europe in the 15th century. "Mundus" is Latin for world, meaning the name "Erasmus Mundus Programme" stands for the international version of the Erasmus programme.

It was created on 5 December 2003, gazetted on 31 December 2003 in the official journal of the European Union and became an official programme on 20 January 2004. Most of the programmes are called

"European Master" and lead to a joint or double Master's Degree. The main objective, from the European Union's Lisbon Strategy, is to make Europe "the most competitive and knowledge-based economy in the world and a reference for high quality and excellence in education". Specific objectives:

- Promoting a European model for higher education.
- Attracting qualified graduates and scholars from other parts of the world to obtain qualifications and experience in the EU.
- Increasing cooperation between the EU and institutions from outside Europe.
- Increasing the visibility of European higher education throughout the world.

The Erasmus Mundus recognition is very competitive at the European level. In 2009, there are over 100 master's programmes. The complete list of Erasmus Mundus master's programmes can be found on the European Commission website.