

## FSE – Master of Science in Applied Economics

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On completion of this program, students will be able to:

### Overarching skill

- Conduct and communicate evidence-based analysis to support economic decisions, from private investment to public policies

### Knowledge and understanding acquired in the program:

- Identify key actors, motivation and constraints, socio-economic context, time and space frame
- Work with a set of key economic models that are useful for applied analysis
- Understand how causal relationships can be identified in a dataset using econometric techniques

### Applying knowledge and understanding:

- Apply abstract analytical frameworks to real-world issues
- Construct datasets that are relevant to a specific economic decision
- Undertake econometric analysis with specialized software

### Making judgements:

- Critically compile existing theories and/or empirical evidence on a specific economic issue
- Appraise value added, limitations and caveats of existing and own work
- Formulate recommendations to prepare economic decisions or policies

### Communication skills:

- Define clearly the objectives of the analysis and how it contributes to existing knowledge
- Combine different sources of information to form a coherent and sound argument
- Communicate results to specialists and non-specialists (orally and in writing)

### Learning skills:

- Adopt an analytical and scientific approach to solve individual or societal problems
- Establish contacts to gather the required information
- Contribute actively to teamwork and team-building

**MASTER OF SCIENCE IN APPLIED ECONOMICS (MSCAPEC)**

**MASTER OF SCIENCE EN ÉCONOMIE APPLIQUÉE**

OPTIONAL MAJOR IN : ENERGY AND ENVIRONMENTAL POLICY / DATA SCIENCE

**90 ECTS**

Code	MSCAPEC	Instructor	ECTS	H/week	Grading policy « In-class*»	Grading policy «Remote*»
	<b>Autumn semester (A)</b>					
	<b>Compulsory courses</b>					
5AF2017	Macroeconomic Policy	<i>Kaufmann D.</i>	6	4	EI+E	EI+E
5ER2028	Microeconomic Policy	<i>Farsi M.</i>	6	4	E	E
5ER2015	Economic Statistics	<i>Zarin M.</i>	3	2	E	E
5ST2001	Econometrics	<i>Starica C.</i>	6	4	EI+E	E
5ER2041	Empirical Research I	<i>Pecoraro M.</i>	3	2	EI+E	EI+E
	<b>Elective courses I<sup>1</sup></b>					
5ER2016	Public Policy Evaluation <sup>a)</sup>	<i>Weber S.</i>	3	2	EI+E	EI+E
5ER2017	Global Public Goods <sup>a)</sup>	<i>Solleder J.-M.</i>	3	2	E	O
5MI2017	Data Management <sup>b)</sup>	<i>Ciorascu I.</i>	6	4	EI+E	EI+E
	<b>Elective courses II<sup>1</sup></b>					
	<b>Total for the semester</b>		<b>24-36</b>	<b>16-24</b>		

	<b>Spring semester (S)</b>					
	<b>Compulsory courses</b>					
5ER2020	Applied Econometrics	<i>Lanz B.</i>	6	4	EI+E	EI+O
5ER2043	International Economics and Trade Policy	<i>Bacchetta M. and Monteiro J.-A.</i>	3	2	E	O
5ER2010	Economics of Regulation	<i>Rime B.</i>	3	2	E	O
5ER2019	Political Economy	<i>Fortunato P.</i>	3	2	E	E
5ER2042	Empirical Research II	<i>Grether J.-M., Gasparini L. and M. Marchionni</i>	3	2	EI+E	EI+E
			<b>18-36</b>	<b>12-24</b>		

<b>Elective courses I<sup>1</sup></b>						
5ER2032	Energy Economics <sup>a)</sup>	Farsi M.	3	2	EI	EI
5ER2033	Public Finance <sup>a)</sup>	Zarin M.	3	2	E	E
5ER2023	Environmental and Resource Economics <sup>a)</sup>	Mathys N.	3	2	E	E
5MI2012	Computational Thinking <sup>b)</sup>	Holzer A.	3	1 week <sup>2</sup>	EI	EI
5MI2018	Machine Learning <sup>b)</sup>	Ciorascu I.	6	4	EI+E	EI+E
<b>Elective courses II<sup>1</sup></b>						
5ZZ2011	Innovation and Technology Policies	Mack A.	3	2	EI+E	EI+E
5EN2022	Social Policy	Pacheco D.	3	2	EI+E	EI+E
5ER2045	International Monetary System	Siviero A. and Stuart R.	3	2	E	E
<b>Total for the semester</b>			<b>18-36</b>	<b>12-24</b>		
<b>Total</b>			<b>60</b>			
<b>Master thesis or internship thesis<sup>c)</sup></b>			<b>30</b>			
<b>GRAND TOTAL</b>			<b>90</b>			

<sup>a)</sup> Required to obtain a major in "Energy and Environmental Policy".

<sup>b)</sup> Required to obtain a major in "Data Science".

<sup>c)</sup> To obtain a major, the thesis must be written on a topic that is relevant for the targeted major.

<sup>1</sup> Students select elective courses in order to complete the required total of 60 ECTS. Elective courses that are not listed above require the program director's prior approval.

<sup>2</sup> One-week workshop organised the week before the beginning of spring semester.

E: written exam during the exam session at the end of the semester

EI: evaluation organized during the semester

Retake exam after 1 failure or a justified absence: written exam during the September session or the exam session at the end of the next semester the course is offered.

\*In the case of a re-take exam, the evaluation is repeated in the form of a written examination (E) for all 1st attempts of type E, EI +E, O or EI+O.

\*In the case of a re-take exam, the evaluation repeated in the form of an individual written assignment (EI) for all 1st attempts of type EI.

The detailed terms of evaluation and duration of exams are specified in the course description.