

Program 2022/2023



## AIMS AND SCOPE

Environmental issues such as pollution, climate change and the conservation of biodiversity are currently in the headlines of economic debate. Governments design public policies such as taxes or emission trading schemes to mitigate the negative impacts of air or water pollution. Firms launch green business strategies such as investments in cleaner technologies, product labelling or socially responsible investments to improve their competitiveness.

The Master in Environmental and Natural Resource Economics (ERNA) is providing students the analytical skills to assess, analyze and recommend economic policies and strategies to tackle environmental issues and manage natural resources. Students will target jobs in natural resources management and sustainable development (large businesses, public institutions and local communities), within international institutions, or will pursue an academic career.

This program is mainly led by thematic research groups, including in Environmental and Natural Resource Economics, which are parts of the Toulouse School of Economics.

**Note:** students can apply either to the full program (i.e., two years) or directly to the 2nd year (refer to the Admission section for further information)

## PROGRAM STRENGTHS

- The program combines recent developments in economic theory and quantitative techniques with applications in real-world problems in environmental and natural resource management such as water, air, energy, land, forestry, or fisheries.
- The teaching is mainly performed by highly qualified economists from Toulouse School of Economics. The environmental and natural resource economists are doing their research within a TSE dedicated research group, one of the major research centers in environmental and natural resource economics in Europe. The program is supported by INRA (French National Institute for Agricultural Research).
- Faculties have developed research projects with strong ties with public institutions (French Ministry of the Environment, French Water Agencies, The World Bank,...), as well as companies involved in environmental and natural resources issues (EDF, Areva, GDF, SUEZ, Veolia,...) and investors through the Chair on "Sustainable Finance and Responsible Investments"

## Courses

### 1<sup>st</sup> Year - Master in Applied Economics International Track

SEMESTER 1	SEMESTER 2
<p><b>Compulsory:</b></p> <ul style="list-style-type: none"> <li>• Macroeconomics *</li> <li>• Game Theory *</li> <li>• Theory of Incentives *</li> <li>• Applied Econometrics *</li> <li>• Intermediate Econometrics *</li> <li>• R Programming *</li> <li>• Professional Development *</li> <li>• French as a Foreign Language *</li> </ul> <p><b>2 electives:</b></p> <ul style="list-style-type: none"> <li>• Environmental Economics</li> <li>• Economic History</li> <li>• Markov Chains and Applications****</li> <li>• Probability Modeling</li> <li>• Evolution of Economic Behaviour</li> <li>• Experimental Economics</li> <li>• Understanding Real World Organizations</li> <li>• Political Economy</li> <li>• Project Management</li> <li>• Market Power &amp; Regulation</li> <li>• ENGAGE</li> </ul>	<p><b>Compulsory:</b></p> <ul style="list-style-type: none"> <li>• Public Economics *</li> <li>• Applied Econometrics *</li> <li>• Program Evaluation *</li> </ul> <p><b>4 electives:</b></p> <ul style="list-style-type: none"> <li>• Industrial Organization **</li> <li>• Environmental &amp; Resource Economics **</li> <li>• Economics of Human Development **</li> <li>• Corporate Finance **</li> <li>• Market Finance **</li> <li>• Dynamic Optimization</li> <li>• Martingales Theory and Applications</li> <li>• Panel Data **</li> <li>• Time Series **</li> <li>• Data Bases</li> <li>• Empirical Industrial Organization</li> <li>• Topics in Food Economics</li> <li>• Advanced Macroeconomics</li> <li>• Advanced Microeconomics</li> <li>• Behavioral and Experimental Economics</li> <li>• ENGAGE</li> </ul>
<p><b>Optional courses</b></p> <ul style="list-style-type: none"> <li>• Introduction to SAS (for newcomers in the first year of master)</li> <li>• Algebra refresher</li> <li>• Probabilité refresher</li> <li>• Static optimization refresher</li> </ul>	<p><b>Compulsory International internship or Master Thesis 1 *</b></p>

\*UE1/UE2/UE5 : A minimum score of 10 out of 20 is required

\*\*Masters 2 Directors highly recommend to attend these options :

- Industrial Organization: M2 EMO
- Environmental & Resource Economics: M2 ERNA
- Economic of Human Development: M2 PPD
- Corporate finance et Market Finance: M2 Finance
- Panel Data or Time series: M2 EEE

\*\*\* Math refresher courses opened to M1 and M2 students

Students must complete 8 courses of 30 hours and **write a Master thesis or do an internship** and write a report under the supervision of a TSE faculty.

## Courses

### 2<sup>nd</sup> Year - Master in Environmental and Natural Resource Economics

SEMESTER 3	SEMESTER 4
<p><b>Compulsory:</b></p> <ul style="list-style-type: none"> <li>• Fundamentals and policies for a greener economy</li> <li>• Valuing the Environment</li> <li>• Sustainable Development</li> </ul> <p><b>Choice 1 among 2:</b></p> <ul style="list-style-type: none"> <li>• Infrastructure and Development</li> <li>• Causal Inference with observational data</li> </ul> <p><b>Choice 1 among 3:</b></p> <ul style="list-style-type: none"> <li>• Datanomics : regulation of data spreading and data protection</li> <li>• Project Management (i)</li> <li>• Ethics of Social Studies</li> </ul>	<p><b>Compulsory:</b></p> <ul style="list-style-type: none"> <li>• Cost Benefit Analysis: Foundations and Practice</li> </ul> <p><b>3 courses among 8:</b></p> <ul style="list-style-type: none"> <li>• Energy Economics and Climate Policy****</li> <li>• Ecosystem Management and Policies</li> <li>• Agricultural and Global Value Chains</li> <li>• Advanced Environmental Economics*</li> <li>• Structural Models and Policy Evaluation</li> <li>• Industrial Organization of the Food Industry*****</li> <li>• Topics in Environmental Economics</li> <li>• Randomized Controlled Trials and Policy Evaluation</li> </ul>
<p><b>Non-Mandatory:</b></p> <ul style="list-style-type: none"> <li>• Professional Development**</li> <li>• Algebra Refresher***</li> <li>• Probability Refresher***</li> <li>• Dynamic Optimization Refresher***</li> </ul>	<p><b>Internship or dissertation</b></p>

\*Le choix de cette option est soumis à l'approbation du directeur du master ETE, en plus de l'approbation du directeur ERNA

\*\* Les étudiants ayant suivi le cours de Professional Development en M1 en 2021-2022 sont dispensés

\*\*\* Cours de remise à niveau en Mathématiques, ouverts aux étudiants des M1 et M2 de l'Ecole

\*\*\*\* 5 étudiants du M2EMO sont autorisés par le Directeur du M2ERNA à suivre le cours « Energy Economics and Climate Policy ». Le choix de cette option est soumis à l'approbation du directeur du M2EMO en plus de l'approbation du directeur du M2ERNA.

\*\*\*\*\* 5 étudiants du M2ERNA sont autorisés par le Directeur du M2EMO à suivre le cours « Industrial Organization of the Food Industry ». Le choix de cette option est soumis à l'approbation du directeur du M2ERNA en plus de l'approbation du directeur du M2EMO.

(i) Les étudiants ayant suivi Project Management en M1, ne peuvent pas le reprendre en M2

(i) Selon les compatibilités de calendrier

Students must complete 8 courses of 30 hours **and write a Master thesis or do an internship** and write a report under the supervision of a TSE faculty.

## ADMISSION

Admission is based on academic excellence.

### First year admission:

- Aimed at English speakers
- Students should hold a BSc in Economics, Applied Mathematics within a recognized curriculum considered as consistent with the program and approved by the TSE selection committee.

### Second year admission:

- Admission is based on academic excellence criteria.
- Applicants from the French system must have passed the TSE International track Master 1 (1st year Master's) in Applied Economics (or Economics for 2021 transitory admission campaign) or another French University master in Applied Mathematics or an equivalent degree (e.g., engineering school,...).
- For foreign degree holders, the required degrees are either a BSc, M.A., or MSc, within a recognized curriculum regarded as consistent with the program and approved by the TSE Selection Committee.  
Some brushing-up in Economics or Maths might be advisable in some cases. Working knowledge of English is obviously required..

## APPLICATION

For the 1<sup>st</sup> year, students have to apply to the Master in Applied Economics. For the 2<sup>nd</sup> year, student have to apply to the Master in Environmental and Natural Resource Economics.

Applications are considered in November for Eiffel scholarship applicants and in January for other international students and French degree holders applying to the 1<sup>st</sup> year. Applications to the second year take place in May for French degree holders.

For more details about enrollment and application process, we invite you to visit the Admission section

## CONTACT

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