Toulouse School of Economics

Master in Applied Economics

Environmental and Natural Resources in Economics

Director: Henrik Andersson

Program 2022/2023

DIPLÔME NATIONAL DE MASTER CONTRÔLÉ PAR L'ÉTAT

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”

1. Master in Applied Economics - Environmental policy and Natural Resource Economics – 1st Year

SEMESTER 1	SEMESTER 2
Compulsory: • Game Theory* • Theory of Incentives* • Macroeconomics* • Intermediate Econometrics • R programming* • Professional Development • French as a Foreign Language **Choice: 2 among 11:** • Environmental economics • Economic History • Evolution of economic behaviour • Understanding Real World Organizations • Markov Chains and applications • Probability Modeling • Political Economy • Project Management • Experimental economics • Market Power & Regulation • ENGAGE	**Compulsory:** • Public economics * • Applied Econometrics * • Program Evaluation * **Choice: 4 among 16:** • Advanced Macroeconomics • Advanced Microeconomics • Industrial Organization ** • Economics of Human Development • Environmental & Resource Economics ** • Time series ** • Panel Data ** • Corporate finance ** • Market finance ** • Empirical Industrial Organization • Topics in food economics • Behaviorial and Experimental economics • Dynamic Optimization • Martingales theory and applications **** • Data Bases • ENGAGE
Non-Mandatory: • Introduction to SAS (for newcomers in the first year of master) • Math camp for M1 and M2 (End of August): Algebra/Probability/Static Optimization refresher***	**Mandatory**: Compulsory International internship or Master Thesis*

**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*
***** To attend the Martingales theory and applications course you need to have attended the Markov Chains course first*

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.

2. Master in Environmental and Natural Resource Economics – 2nd Year

SEMESTER 3	SEMESTER 4
Compulsory: • Fundamentals and policies for a greener economy • Valuing the Environment • Sustainable Development • Datanomics : regulation of data spreading and data protection **Choice among 2:** • Infrastructure and Development • Causal Inference with observational data	**Compulsory:** • Cost Benefit Analysis: Foundations and Practice **3 courses among 8:** • Energy Economics and Climate Policy**** • Ecosystem Management and Policies • Agriculture and Global Value Chains • Advanced Environmental Economics* • Structural Models and Policy Evaluation • Industrial Organization of the Food Industry***** • Topics in Environmental Economics • Randomized Controlled Trials and Policy Evaluation
Non-Mandatory: • Professional Development** • Algebra Refresher*** • Probability Refresher*** • Dynamic Optimization Refresher***	• Internship or dissertation

*Option choice must be approved by the ETE and ERNA Directors

** Students who followed the course " Professional Development" in M1 in 2021-2022 will be exempted.

*** Upgrade course in Mathematics, open to students in M1 and M2 of TSE.

**** 5 students of the EMO Master are authorized to take the Energy Economics course

*****5 students of the ERNA Master are authorized to take the IO of the Food Industry course

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 1st year, students have to apply to the Master in Applied Economics. For the 2nd 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 1st 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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