

Program 2021/2022



AIMS AND SCOPE

Living species are now disappearing at an accelerating rate because of human action, and ecologists agree that the survival of human societies is intimately dependent on the survival of other species.

Countries and international organizations are taking action to address this problem:

- In France: new law on biodiversity, creation of the French Agency for Biodiversity...
- At the international level: the Intergovernmental Panel for Biodiversity and Ecosystem Services, the European Union's Biodiversity Strategy and the designation of 2011-2020 as the "Decade on Biodiversity".

In this context, Toulouse School of Economics, in partnership with the University Toulouse 3 Paul Sabatier, offers a new interdisciplinary specialization: the Master in "Economics and Ecology".

This master provides students with a unique set of skills aimed at measuring both the impact of human activities on biodiversity and ecosystem functioning, and at assessing, analyzing and recommending economic policies that influence human behavior and its consequences on biodiversity and ecosystems.

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

- Courses are taught in English
- The economics courses are taught by researchers from the Toulouse School of Economics, and the ecology courses by researchers from the Evolution and Biological Diversity lab and the Station d'Ecologie Théorique et Expérimentale of the Université Paul Sabatier.
- Some courses are offered in the Pyrenees, a unique place for experimental and theoretical ecological research on biodiversity.
- Group projects involving both economists and ecologists are carried out throughout the year, including a collective project with local actors.

COURSES

1. Master in Economics and Ecology – 1st Year

SEMESTER 1	SEMESTER 2
<p>Compulsory:</p> <ul style="list-style-type: none"> • Game Theory* • Theory of Incentives* • Macroeconomics* • Intermediate Econometrics* • Applied Econometrics* • R programming* • Professional Development • French as a Foreign Language <p>Choice: 2 among 9:</p> <ul style="list-style-type: none"> • 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 	<p>Compulsory:</p> <ul style="list-style-type: none"> • Public economics * • Applied Econometrics * • Program Evaluation * <p>Choice: 4 among 15:</p> <ul style="list-style-type: none"> • 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 • Behavioral and Experimental economics • Dynamic Optimization • Martingales theory and applications **** • Data Bases
<p>Non-Mandatory:</p> <ul style="list-style-type: none"> • 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*** 	<p>Mandatory:</p> <p>Compulsory International internship or Master Thesis*</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

**** 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 Economics and Ecology – 2nd year

SEMESTER 3	SEMESTER 4
<p>Compulsory:</p> <ul style="list-style-type: none"> Applied project in Ecology and Economics Biodiversity and Ecosystems Structures & Dynamics of Ecological Systems Population Demography & Life-history Theory Ecology – concepts and experiments Datanomics: regulation of data spreading and data protection <p>1 among 2:</p> <ul style="list-style-type: none"> Introduction to Economics for Biologists Introduction to Ecology for Economists 	<p>Compulsory:</p> <ul style="list-style-type: none"> Sustainable Management and Evaluation of Ecosystems Ecosystem Management and Policies Internship or Memoir <p>2 among 3:</p> <ul style="list-style-type: none"> Cost Benefit Analysis: Foundations and Practice Topics in Environmental Economics Structural Models and Policy Evaluation
<p>Non-Mandatory:</p> <ul style="list-style-type: none"> Introduction to Non-Market Valuation*Professional Development** Algebra Refresher*** Probability Refresher*** Dynamic Optimization Refresher*** 	

* It is strongly advised to take the course Introduction to Non-Market Valuation to take the "Cost Benefit Analysis: Foundations and Practice" course. Those who have already taken a course on the economic valuation of non-market goods may request a waiver for certain course sessions.

** Students who have completed the Professional Development course in M1 in 2020-2021 are exempted

*** Refresher course in Mathematics, open to M1 and M2 students of the School.

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 another French University master in Economics, 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, you have to apply to the Master in Applied Economics. For the 2nd year, you have to apply to the Master in Economics & Ecology.

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 requirement documents and application process, please visit TSE website and see the [Admission section](#).

CONTACT

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