

### Program 2020/2021

Toulouse School of Economics offers **two-year Masters programs** in Economics that integrate different options in the first year that prepare to the specializations offered in the second year. Within the international track in economics, a broad choice of application fields is offered (see below). All courses are taught in English and students benefit from specific courses and services to help them learn, grow and build skills in a challenging international job market.

- **1st year: Master in Economics**

#### Objective

In the 1st year, Students attend a rigorous academic program in the different economics disciplines. 100% of courses of this program are taught in English. The common core courses allow them to build upon their basic knowledge and the elective courses allow students to build up their careers projects, taking into account the specializations in the second year of the master's programs.

## Courses

| SEMESTER 1   | SEMESTER 2  |
|--|---|
| <p><b>Compulsory:</b></p> <ul style="list-style-type: none"> <li>• Game Theory*</li> <li>• Theory of Incentives*</li> <li>• Macroeconomics *</li> <li>• Intermediate Econometrics *</li> <li>• Applied 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>• Evolution of economic behavior</li> <li>• Understanding Real World Organizations</li> <li>• Markov Chains and applications****</li> <li>• Probability Modeling</li> <li>• Project Management</li> <li>• Experimental economics</li> </ul> | <p><b>Compulsory:</b></p> <ul style="list-style-type: none"> <li>• Applied Econometrics *</li> <li>• Program Evaluation *</li> <li>• Public economics *</li> </ul> <p><b>4 electives (at least one course **):</b></p> <ul style="list-style-type: none"> <li>• Industrial Organization **</li> <li>• Advanced Macroeconomics</li> <li>• Advanced Microeconomics</li> <li>• Economics of Human development**</li> <li>• Environmental &amp; Resource Economics**</li> <li>• Time series**</li> <li>• Panel Data**</li> <li>• Corporate finance**</li> <li>• Market finance**</li> <li>• Empirical IO</li> <li>• Topics in food economics</li> <li>• Behavioral and Experimental economics</li> <li>• Dynamic Optimization</li> <li>• Martingales theory and applications****</li> <li>• Data Bases</li> </ul> |
| <p><b>Optional courses</b></p> <p>Introduction to SAS (for newcomers in the first year of master)</p> <p>Math camp for M1 and M2 (End of August): Algebra/Probability/Static Optimization refresher***</p>   | <p>Compulsory International internship or dissertation*</p>   |

\* Minimum average of 10 out of 20 for Teaching Unit "UE1, 2 & 5"

\*\* Highly recommended by M2 directors:

- Industrial Organization: M2 EMO
- Environmental & Resource Economics: M2 ERNA
- Economics of Human Development: M2 PP&D
- Corporate Finance and Market Finance: M2 Finance
- Panel data or time series: M2 EEE
- Advanced Micro and Advanced Macro: M2 ETE

\*\*\* Maths Refresher courses (open to TSE M1 and M2 students)

\*\*\*\* Student must have followed the course "Markov chains" to follow the Martingales Theory and applications course

## • 2nd year: Master programs

### 1. Master in Public Policy and Development

| SEMESTER 3  | SEMESTER 4  |
|---|---|
| <b>4 among 6 electives:</b> <ul style="list-style-type: none"> <li>Political Economy and Development</li> <li>Economic Effects of Political institutions</li> <li>Infrastructures and Development</li> <li>Randomized Control Trials and Policy Evaluation</li> <li>Governance, Industrial Organization and Development</li> <li>Topics in Applied Econometrics</li> </ul> <b>Non-Mandatory :</b> <ul style="list-style-type: none"> <li>Datanomics : regulation of data spreading and data protection</li> <li><b>Math refresher courses***:</b> Algebra Refresher, Probability Refresher, Dynamic Optimization refresher</li> <li>Professional Development**</li> </ul> | <b>4 among 8 electives:</b> <ul style="list-style-type: none"> <li>Foreign Aid, Organization and Effectiveness</li> <li>International Trade and Development</li> <li>Structural Methods and Policy Evaluation</li> <li>Micro-Finance, Land and Labor</li> <li>North-South Economic relation****</li> <li>Economic Analysis of Infrastructure and Network Industries (30 students max.)</li> <li>Historical perspective on development</li> <li>Development Microeconomics*</li> </ul> |
|   | Internship or Master Thesis   |

\* Choice of this option must be validated by the ETE Master Director as well as the PP&D Master Director

\*\* Students followed the course " Professional Development" in M1 in 2019-2020 will be exempted.

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

\*\*\*\* Students who have already attended the "North-South Economic Relation" course in 2019-2020 cannot choose this elective

### 2. Master in Econometrics and Empirical Economics

| SEMESTER 3   | SEMESTER 4  |
|--|---|
| <b>Compulsory courses:</b> <ul style="list-style-type: none"> <li>Econometric Methods for Empirical Economics</li> <li>Panel Data</li> <li>Nonparametric Econometric Methods</li> <li>Machine learning for economics</li> <li>Time Series and Economic Forecasting</li> <li>Database Management System</li> <li>Programming in Python</li> </ul> | <b>Choose 2 electives:</b> <ul style="list-style-type: none"> <li>Empirical Industrial Organization</li> <li>Financial econometrics</li> <li>Structural Methods and Policy Evaluation</li> </ul>  |
| <b>Non-Mandatory:</b> <ul style="list-style-type: none"> <li>Professional Development *</li> <li>Algebra Refresher **</li> <li>Probability Refresher **</li> <li>Dynamic Refresher **</li> <li>Datanomics: regulation of data spreading and data protection</li> </ul>   | <b>Equivalent of 8 credits among:</b> <ul style="list-style-type: none"> <li>Data Analytics (2)</li> <li>Econometric Approach to Efficiency Analysis (2)</li> <li>Experimental Economics (2)</li> <li>Health Econometrics (2)</li> <li>High-dimensional models</li> <li>Empirical Industrial Organization (4)</li> <li>Financial econometrics (4)</li> <li>Structural methods and policy evaluation (4)</li> <li>Empirical project (4)</li> </ul> |
|  | Internship or Master Thesis   |

\* Students who followed the course " Professional Development" in M1 in 2019-2020 will be exempted.

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

### 3. Master in Economics of Markets and Organizations

| SEMESTER 3   | SEMESTER 4  |
|--|---|
| <b>Compulsory:</b> <ul style="list-style-type: none"> <li>- Business Economics</li> <li>- Advanced Industrial Organization</li> <li>- Empirical analysis of firm behavior</li> </ul> <b>One courses among:</b> <ul style="list-style-type: none"> <li>- Business Economics</li> <li>- Advanced Industrial Organization</li> <li>- Empirical analysis of firm behavior</li> </ul> | <b>Four courses among:</b> <ul style="list-style-type: none"> <li>- Incentives and Regulation</li> <li>- Digital Economics</li> <li>- Topics in Applied Industrial Organization</li> <li>- Industrial Organization of The Food Industry*****</li> <li>- Air Transport Economics (20 students max.)</li> <li>- Economic Analysis of Infrastructure and Network Industries (30 students max.)</li> <li>- Energy Economics and Climate Policy****</li> <li>- Industrial Organization*</li> </ul> |
| Non-Mandatory<br>Professional Development **<br>Algebra Refresher ***<br>Probability Refresher ***<br>Dynamic Refresher ***<br>Datanomics : regulation of data spreading and data protection   |   |

\* course will be allocated by the Director

\*\* Students who followed the course "Professional Development" in M1 in 2019-2020 will be exempted.

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

\*\*\*\* 5 student of the M2 EMO are authorized to take the Energy Economics and Climate Policy course (on the 1st come/1st served basis)

\*\*\*\*\*5 students of the M2 ERNA are authorized to take the IO of the food Industry course (on the 1st come/1st served basis)

### 4. Master in Environmental and Natural Resources Economics

#### A- Environmental policy and Energy Economics path

| SEMESTER 3  | SEMESTER 4   |
|---|--|
| <b>Compulsory:</b> <ul style="list-style-type: none"> <li>• Policies and Business Strategies for a green economy</li> <li>• Valuing the Environment</li> <li>• Sustainable Development</li> </ul> <b>Choice among 2:</b> <ul style="list-style-type: none"> <li>• Randomized Controlled Trials and Policy Evaluation</li> <li>• Topics in Applied Econometrics</li> </ul> | <b>Four courses among:</b> <ul style="list-style-type: none"> <li>• Energy Economics and Climate Policy****</li> <li>• Ecosystem Management and Policies</li> <li>• Sustainable Management and Valuation of Ecosystems</li> <li>• Micro-Finance, Land and Labor</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> </ul> |
| <b>Non-compulsory courses :</b><br>Professional Development *<br>Algebra Refresher **<br>Probability Refresher **<br>Dynamic optimization Refresher **<br>Datanomics : regulation of data spreading and data protection   | Internship or Master Thesis  |

\*Students who followed the course "Professional Development" in M1 in 2019-2020 will be exempted.

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

\*\*\* Elective choice must be approved by the ETE and ERNA Directors

\*\*\*\* 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 the IO of the Food Industry course

## B- Ecology and Economics path

| SEMESTER 3   | SEMESTER 4  |
|--|---|
| <b>One course among :</b><br>Introduction to Economics for Biologists (1)<br>Introduction to Ecology for Economists (2)***   | <b>Compulsory:</b><br>Sustainable Management and Valuation of Ecosystems<br>Ecosystem Management and Policies<br>Cost Benefit Analysis: Foundations and Practice<br>Topics in environmental Economics |
| <b>Compulsory:</b><br>Population demography and evolutionary ecology<br>Biodiversity and Ecosystems<br>Structure and Dynamics of Ecological Systems  |   |
| Professional Development *<br>Introduction to non-market Valuation (1)<br>Algebra Refresher **<br>Probability Refresher **<br>Dynamic Optimization Refresher **<br>Datanomics : regulating to data spreading and data protection | <b>Internship or Master Thesis</b><br><br>End of Master Day: a full day of presentations by guests from the private and the public sector, researchers, and students                                  |

(1) Compulsory course for students with M1 in Economics

(2) Compulsory course for students with M1 in Biology/Ecology

\* Students followed the course " Professional Development" in M1 in 2019-2020 will be exempted.

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

\*\*\* This course will be given at the end of August

## 5. Master in Economic Theory and Econometrics (Doctoral path)

| SEMESTER 3  | SEMESTER 4   |
|---|--|
| <b>Compulsory:</b> <ul style="list-style-type: none"> <li>• Microeconomics 1</li> <li>• Macroeconomics 1</li> <li>• Econometrics 1</li> </ul> | <b>Compulsory:</b> <ul style="list-style-type: none"> <li>• Microeconomics 2</li> <li>• Macroeconomics 2</li> <li>• Econometrics 2</li> </ul>  |
| <b>Choose 1 elective:</b> <ul style="list-style-type: none"> <li>• Optimization</li> <li>• Game Theory</li> </ul>                             | <b>2 among 12 :</b> <ul style="list-style-type: none"> <li>• Asset pricing and financial market</li> <li>• Corporate finance and financial intermediation</li> <li>• Public economics of the environment</li> <li>• Development microeconomics</li> <li>• Public economics</li> <li>• Economic theory</li> <li>• Stochastic optimal control in economics</li> <li>• Topics in econometrics and empirical economics</li> <li>• Industrial Organization</li> <li>• Quantitative techniques in economics</li> <li>• Advanced Behavioral and Experimental Economics</li> </ul> |
|   | <b>Master thesis</b>   |

## Acceptance criteria and enrollment

- Students with an undergraduate degree who majored in Economics or Economics and Mathematics at the Toulouse School of Economics TSE and able to justify a good English level (TOEFL, IELTS or Cambridge English Advanced Certificate C1 level required) are eligible to enroll in the M1 Economics or Econometrics and Statistics programs international track (entirely taught in English)
- Or by application review:
  - Students with an undergraduate degree in an economic or mathematics field;
  - French or foreign students with a degree and credits considered equivalent, and able to justify a good English (TOEFL, IELTS or Cambridge English Advanced Certificate C1 level required) and Mathematics Level (GRE required for foreign students).

## Application Process

Applications are considered in November for Eiffel scholarships applicants, in January for other foreign degree holders and in May for French degree holders : [www.tse-fr.eu/admissions](http://www.tse-fr.eu/admissions)

## Information

### • Administration:

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Website: [www.tse-fr.eu](http://www.tse-fr.eu)

Email: [scoltsem1@ut-capitole.fr](mailto:scoltsem1@ut-capitole.fr) or [scoltsem2@ut-capitole.fr](mailto:scoltsem2@ut-capitole.fr)

Admission Office: [TSE-studentsrecruitment@ut-capitole.fr](mailto:TSE-studentsrecruitment@ut-capitole.fr)

### • Programs:

Master 1 in Economics: Bertrand Gobillard – [bertrand.gobillard@tse-fr.eu](mailto:bertrand.gobillard@tse-fr.eu) and

Elodie Alet – [elodie.alet@tse-fr.eu](mailto:elodie.alet@tse-fr.eu)

Master 2 Directors:

- PP&D: Mohamed Saleh – [mohamed.saleh@tse-fr.eu](mailto:mohamed.saleh@tse-fr.eu)
- ERNA: Henrik Andersson – [henrik.andesson@tse-fr.eu](mailto:henrik.andesson@tse-fr.eu)
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