

Toulouse School of Economics

## International Graduate Program



Common good



# Economics for the common good

Here at TSE, we offer a high-level and demanding training that aims at making you the best and most competent economists able to address today's challenges faced by companies and institutions. Our Faculty members, recognized as international leaders in their fields will introduce to you sophisticated analysis tools that will allow you to deal with real world economic issues.

Thanks to TSE's close ties with public and private decision makers, you are offered a number of opportunities to prepare you enter into your professional life: regular talks with practitioners, an annual job fair (Business Networking Day), one to one coaching sessions, overseas internships and gap year placements.

Our programs bring together students from far and wide, with many different origins and academic backgrounds, fostering mutual, diversified learning and creating a thriving international environment.

TSE students involvement in campus life has built a true community spirit and our international alumni network has opened privileged access for our graduates to the global job market.

In all, TSE is an exciting place to be right now. Join us to make a difference!

#### Jean Tirole

TSE Honorary Chairman - 2014 Nobel laureate

# + Research+ Teaching

TSE courses benefit from the latest developments of its research department, ranked among the world's top 10 in economics, statistics and econometrics.

Faculty members use their research work to illustrate their courses with concrete examples and to provide students with an enhanced learning experience.

Students benefit from the insights of worldwide economics experts and practicioners with key contributions in the economic fields.

Many companies and international organizations already use ideas from TSE research work in their decision processes, such as:

- Two-sided market: Visa International
- Competition Economics and Digital economics: European Commission
- Rights to pollute: COP 21
- Energy market: EDF, ENGIE

All of this represents a real competitive advantage on the job market for our graduates.

150 faculty members

400 graduate students

**87** nationalities



# Graduate Program

### International masters

TSE's core focus is economics but our courses are multidisciplinary and concentrate on the role that data and quantitative techniques play in decision-making in firms, institutions or states. Mathematical modelling helps economists to develop rigorous reasoning in complex situations, and statistical and quantitative methods help to assess the impact of strategy

changes and policy reforms.

TSE's research-inspired courses train our students to use and adapt recent theories and techniques to solve the real-world challenges of their future employers.

- Large choice of specializations offered in the second year
- Project Management courses and other practical courses
- Welcome pack: airport pick-up, housing orientation, administrative formalities, etc.
- Careers service
- French language classes
- Math camp

Toulouse School of Economics offers two-year Master's programs in Economics organized in four different topics:

- Economics,
- Applied Economics
- Econometrics and Statistics
- Applied Mathematics, Statistics

#### **Master in Economics**

#### 1st year — Master in Economics

In the 1st year, students attend a rigorous academic program in the different economics disciplines. 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 include: Intermediate econometrics, Applied econometrics, Macroeconomics, Game theory, Program evaluation, Public economics, ...

#### 2<sup>nd</sup> year — Master in Economics

In the second year, students can choose between several master's degrees specializing in various fields:

#### **Econometrics and Empirical Economics**

- Courses include: Econometric Methods for Empirical Economics, Panel Data, Nonparametric Econometric, Machine Learning for Economics, Methods, Time Series and Economic Forecasting, Database Management System, Programming in Python, ...
- *Skills acquired:* Econometric methods in various fields such as industrial organization, Finance, Insurance or public policy evaluation programs.
- Career opportunities: Consultant, Analyst, Economist for large companies in the industrial sector, Banking, Insurance, Government departments, etc...

#### **Economics of Global Risks**

- Courses include: Understanding Global Risks, Macroeconomics of Risks, Finance and Quantitative Risk Analysis, Economics of Decisions and Enterprise Risk Management, Econometric Methods for Empirical Economics, Time Series and Economic Forecasting, Understanding Global Risks, Long-Term Asset Pricing, Cost-Benefit-Analysis, Financial Econometrics, Scoring, Extreme Value Analysis.
- Skills acquired: Anticipating risks, Assessing risk exposures, Mitigating and preventing threats, Guiding executive management response when shocks occur.
- Career opportunities: economists, analysts, consultants in various sectors: insurance, reinsurance, banks and asset managers, companies in energy, infrastructure and logistics, manufacturers and suppliers of essential goods such as food, mobility services and network, consulting firms in strategy and in economics analysis, public bodies like central banks, regulators, public health authorities, multinational organizations in finance and economics development, companies in security, information technology and public health, and non-profit organizations.

#### **Economics of Markets and Organizations**

- Courses include: Business Economics, Advanced Industrial Organization, Empirical Analysis of Firm Behavior, Quantitative Analysis for Competition and Regulation Policy, Digital Economics, ...
- Skills acquired: Strategic and statistical analysis of how markets work, Diagnosis of the state of competition in a market.
- Career opportunities: Business economist, Strategy consultant, Survey supervisor in regulatory agencies.

30% international teaching staff

4//o foreign master students

#### **Master in Applied Economics**

#### 1<sup>st</sup> year — Master in Applied Economics

The 1st year of the Master in Applied Economics provides rigorous traning in the major fields of economics. The objectives is to enhance the students' general economics culture and to help prepare the second year.

• Courses include: Intermediate Econometrics, Applied Econometrics, Macroeconomics, Game Theory, R Programming, ...

#### 2<sup>nd</sup> year — Master in Applied Economics

In the second year, students can choose between several master's degrees specializing in various fields:

#### **Environmental Economics and Policy**

- Courses include: Fundamentals and Policies for a greener economy, Valuing the Environment, Sustainable Development, Cost Benefit Analysis: Foundations and Practice or Ecosystem Management and Policies, Ecology and Ecosystems for Economists, Global risks for a living Planet (climate, biodiversity, pandemics), Introduction to environmental and biodiversity law, Sustainable management and valuation of ecosystems. Different options of courses depending on the specific track chosen (Environmental Policy and Energy Economics or Economics & Ecology).
- Skills acquired: Experts capable of addressing environmental challenges in a socially efficient and equitable manner. Ability to consider the ecological dimension by assessing the issues, analyzing the impact of human activity on the environment and biodiversity, and proposing greener economic policies.

• Career opportunities: Economist, Consultant, Analyst or Researcher specialized in environmental issues in large companies, Public sector (ministries, national and local government agencies, international organizations), NGOs, Think tanks and Research centers.

#### **Public Policy and Development**

- Courses include: Economic Effects of Political Institutions, Infrastructures and Development, Randomized Control Trials and Policy Evaluation, Governance, Industrial Organization and Development, Topics in Applied Econometrics, International Trade and Development, Historical Perspectives on Development.
- *Skills acquired:* Ability to understand, analyze and evaluate macro or microeconomic public policies and apply them to problems in the global economy as well as the economy of emerging or developing countries.
- Career opportunities: Expert in economic policy, International economics and development economics of businesses, Public authorities, International institutions and NGOs.





### +Economics +Mathematics

#### **Master in Econometrics, Statistics**

#### 1st year — Master in Data Science for Social Sciences

the first year of this master offers a solid culture in economics and statistics, as well as in various related fields of applied mathematics.

• Courses include: Mathematical Statistics, Statistical Software for Data Scientist, Econometrics, Program Evaluation, Finance, Data Bases, Optimization, Big Data, ...

#### 2<sup>nd</sup> year — Master in Data Science for Social Sciences

The second year of this master emphasizes advanced and applied techniques in data science, statistics and econometrics.

- Courses include: Mathematics of Machine and Deep Learning Algorithms, Data Mining, Big Data, Regulation of Data Spreading and Data Protection, as well as specialized courses in different fields of application of statistics to social sciences (Spatial Statistics and Econometrics, Graph Theory and Graph Analytics, Geomarketing,...) and higher level courses of Statistical Software (R, Python and SAS, and of massive databases management).
- *Skills acquired:* Processing of complex data (panel, survey, survival, graph, spatial) with modern parametric, non-parametric, and learning statistical methods.
- Career opportunities: Data scientists, Data analysts, Project Managers, Engineers and/or Consultants in statistics with backgrounds in economics and econometrics.

#### **Master in Applied Mathematics, Statistics**

#### 1st year — Master in Mathematics and Economic Decisions

The first year is dedicated to acquiring a broad and rigorous knowledge in mathematics and statistics and their applications to economics.

• Courses include: Mathematical Statistics, Intermediate Econometrics, Strategic Optimization, Games and Equilibria, Program Evaluation, ...

#### 2<sup>nd</sup> year — Master in Mathematics and Economic Decisions

The second year of this program is targeted to students interested in research-based training in Applied Mathematics and Statistics. It can be regarded as a first year of a Ph.D. program in the north American system. Successful students who would be interested in a PhD in Applied Mathematics and Statistics can apply for scholarships with the support of the program faculty to complete their PhD in Toulouse or outside of Toulouse.

This program also targets students interested in research-based learning but who would prefer a professional integration directly after the Master, for example as a mathematical engineer with a strong background in economics.

- Courses include: Optimization, Mathematics of Machine and Deep learning Algorithms, Game Theory, Microeconomics, Econometrics, Asymptotic statistics and modeling, Non-parametric models, Big Data, ...
- Skills acquired: Solid background in applied mathematics, statistics, and economics.
- Career opportunities: PhD, Researcher, Mathematical or research and development engineer, Economist, Data Scientist, ...

### +Advanced training +Research

#### **Doctoral School**

The "Doctoral track" Master (Economic Theory and Econometrics) allows students to acquire a thorough and advanced general training in economic theory before choosing a specific area of research.

During this one-year master, students are also given training in research techniques and work one-on-one with a faculty advisor to complete a master's thesis that will be assessed by a board of professors. You can apply to this 2<sup>nd</sup> year master directly or to one of the 1<sup>st</sup> year master (in Economics, Applied Economics or Econometrics, statistics).

#### 2<sup>nd</sup> year - Master in Economic Theory and Econometrics

- Courses include: Microeconomics, Macroeconomics, Econometrics, ...
- Skills acquired: Advanced modeling capability in economic theory and econometrics.
- Career opportunities: University professor, Researcher in public or private research centers.

Students are admitted into the 2<sup>nd</sup> year of their doctoral program on the basis of their 1<sup>st</sup> year results (courses and research work) and embark on a final year of advanced, specialized courses (MRes in Economics). The two or three following years are devoted to full-time research and to writing the dissertation. TSE offers an ideal environment of research to mature and develop their economist's intuition and techniques.



# +Promising +Future

A wide range of career options are open to TSE graduates: most of them enter the professional world, occupying managerial positions in industries such as banking, insurance, consultancy, international institutions and market regulators, where they work as economists, analysts, statistical research managers, consultants, and more. Many also, quite naturally, pursue careers in research.

TSE offers a full careers service to help guide students through the careers maze, via professional development classes, job fairs, access to the TSE alumni portal, internship and job vacancies, one to one appointments, online resources, and much more!

#### **Key employers**

Airbus, AlixPartners, Analysis Group, AXA France, BNP Paribas, BVA Mystery Shopping, Caisse D'epargne Midi-Pyrénées, Compass Lexecon, Crédit Agricole Toulouse 31, Deloitte, EDF, EPSILON, FTI France, Groupe La Poste, KPMG, LCL Le Crédit Lyonnais, L'olivier Assurance, MAPP KPMG, The NPD Group, SCOR, Syngenta France, The NPD Group, ...

# +Students +Alumni +Experience

As an economic Analyst, I provide economic support on cases, on mergers, antitrust and state aid, so I analyse the data and I give my advice to the case teams. It is important for European consumers to make sure there is a fair competition in the market and to contribute to that is very meaningful to me.

**Egle Skliaustyte** – *Analyste économique, Commission européenne* Master in Economics of Markets and Organizations (2017)

What I like most is to have an impact on the public policies implemented in emerging and developing countries.

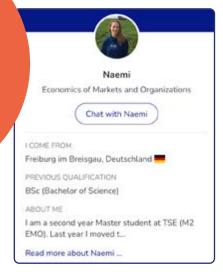
Nordine Abidi – Economist – International Monetary Fund PhD in Economics (2016)

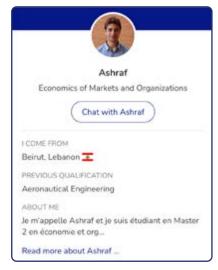
What I like most about my job is the direct application of all the methods and theories I learned at TSE. In particular, I use microeconomic theory, especially industrial organization theory, as well as quantitative analysis methods on data processing software.

**Eva Lugassy -** *Economist - Deloitte Economic Advisory* Master in Economics and competition Law (2018)

To help you in your choice of Master's programs and your application, or simply to know more about student life on campus and in Toulouse, we recommend you chat with our student ambassadors!

#### www.tse-fr.eu/chat-our-students







94% of our graduates found a job 3 to 6 months after graduation

69% signed their employment contract before graduation

41% found a job in a different country from their origin

were hired in a permanent position

hold an executive position

feel that their positions match their Master specialty

Results of a poll conducted 6 months after graduation on our graduate's employment. (March 2024)

# +Practical +Information

#### **Applications**

Online applications are open for a month in November for Eiffel scholarship candidates and in January-February for all international students. French degree holders applications for the first year of Master's also take place in January-February, but in May for the second year.

Please visit the website for more information: www.tse-fr.eu/admissions

- GRE and TOEFL are required
- Contact: admissions@tse-fr.eu

#### Student profiles

Aimed at English-speaking students.

• 1<sup>st</sup> Year Master's program:

Students should hold a BA or BSc in Economics or in Applied Mathematics, or any recognized curriculum consideredas consistent with the program and approved by the TSE selection committee.

• 2<sup>nd</sup> Year Master's program:

Applicants from the French higher education system must have validated TSE's 1st year of Master's in Economics or Applied Economics or another 1st year of Master's in Applied Mathematics and/or in Economics in a university or an institution offering an equivalent 4-year degree (e.g., engineering school,...). For foreign degree holders, the required degrees are either a BA or BSc, M.A., or MSc, within a recognized curriculum regarded as consistent with the program and approved by the TSE selection committee.

#### Fees and funding

#### Master's international track

- Tuition fees: €5,500/year may be paid in three installments + Registration fees: €243 and student life contribution, the "Contribution Vie Etudiante" (CVEC): €95 Other master's programs in partnership with another university or school have specific fee policies (see website).
- Financial assistance: Some Master's scholarships and fee waivers will be awarded to Master's students according to academic, geographical or individual criteria. This policy concerns all master's programs and particularly the master in Economic Theory and Econometrics.

#### **Term dates**

Classes from September to April

Internship from April:

- 1st year: 2 to 4 months
- 2<sup>nd</sup> year: 4 to 6 months



# +Dynamic +Campus +City

In a privileged geographical location, close to the Mediterranean Sea, the Atlantic Ocean and the Pyrenees, Toulouse is a lively city, a hub of excellence for the aerospace industry (Airbus, ATR, Alcatel Alenia Space, etc.) and home to many innovative firms (Pierre Fabre, Sanofi-Aventis, Ciba-Vision, Continental, Motorola, etc.).

In the heart of Toulouse, TSE campus (former tobacco factory) is located between the Garonne River and the Canal de Brienne, close to the historic center.



















