

## Applied Econometrics

Course title – Intitulé du cours	Applied Econometrics
Level / Semester – Niveau / semestre	M1 / Semester 1 + 2
School – Composante	Toulouse School of Economics
Teacher – Enseignant responsable	François Poinas
Other teacher(s) – Autre(s) enseignant(s)	Angie Acquatella
Other teacher(s) – Autre(s) enseignant(s)	Olivier De Groote
Other teacher(s) – Autre(s) enseignant(s)	Jean-François Fournel
Other teacher(s) – Autre(s) enseignant(s)	Stéphane Gregoir
Other teacher(s) – Autre(s) enseignant(s)	Anouch Missirian
Other teacher(s) – Autre(s) enseignant(s)	Ahmed Mohamed
Other teacher(s) – Autre(s) enseignant(s)	Maximilian Müller
Other teacher(s) – Autre(s) enseignant(s)	Augustin Tapsoba
Other teacher(s) – Autre(s) enseignant(s)	Anne Vanhems
Lecture Hours – Volume Horaire CM	15
TA Hours – Volume horaire TD	0
TP Hours – Volume horaire TP	15
Course Language – Langue du cours	English
TA and/or TP Language – Langue des TD et/ou TP	English

### Teaching staff contacts – Coordonnées de l'équipe pédagogique :

#### *Teachers and advisors:*

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#### *Teaching Assistants (TAs):*

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Office hours with lecturers will be planned in the first semester around the time of teaching. Office hours with advisors and TAs will be planned throughout the year (mostly in the second semester) around specific weeks. The schedule will be communicated during the first lecture.

### **Course Objectives – Objectifs du cours :**

The objective of the course is to make students able to undertake empirical work in economics. It builds on the Intermediate Econometrics course (M1) and is a prerequisite for applied courses in later year. At the end of the class, students should be able to:

- (i) define a precise economic question and motivate it using stylized facts, arguments taken from economic theory and/or public policy considerations,
- (ii) write a synthetic review of the academic literature related to a given question,
- (iii) choose, collect and treat a dataset,
- (iv) select and apply the appropriate econometric methods to answer an economic question,
- (v) interpret the empirical results obtained from an econometric analysis,
- (vi) identify the strengths and weaknesses of an econometric analysis,
- (vii) present orally an empirical analysis,
- (viii) write a paper.

The course is articulated around lectures, tutorial sessions and an empirical project.

#### *Lectures (all lectures are taught in the first semester):*

The first semester has 10 lectures. In these lectures, students are introduced to the course, learn about the different fields of economics and how to do empirical research. These lectures are crucial for students to understand what is expected from them when working on their research project. We will not cover again the basics of econometrics, but rather show how econometric tools can be applied in different contexts, using different identification strategies. Moreover, students will learn how to write a good paper, evaluate a research question and document their code.

#### *Tutorial sessions (all tutorial sessions are taught in the second semester):*

Tutorial sessions alternate between presentation sessions and lab sessions. During presentation sessions, students present the advancement of their empirical project and receive feedback from their TA and other students in the class. During computer lab sessions, students analyze data on empirical questions using Stata.

#### *Empirical project (the empirical project is carried out from November to March):*

Students have to conduct an empirical project in small groups. The empirical project consists in defining a precise economic question, motivating it, collecting data and performing an econometric

analysis to answer the question. At the end of the first semester, students submit a research proposal. In the beginning of March, they present their work and at the end of March they submit their paper.

### **Prerequisites – Pré requis :**

Econometrics concepts covered in the Intermediate Econometrics course, taught in the first semester of Master 1. Concepts needed to attend the lectures of Applied Econometrics in the first term are covered beforehand in the Intermediate Econometrics course.

### **Practical information about the sessions – Modalités pratiques de gestion du cours :**

Students receive guidance from various sources to help them in conducting their empirical project. First, the lectures provide essential information for students to know how to do research, while the tutorial session help them to implement econometric techniques. Second, students will regularly meet with an advisor to get feedback on their specific research project. They will also get feedback from TAs after presentations during tutorial sessions.

Attendance to lectures is essential. The meetings with advisors are not meant to cover again what is covered during the lectures, they should instead be used to get feedback that builds on the lectures and is specific to the project. Attendance to tutorials is mandatory.

Material for the course is displayed on Moodle. Students are expected to check it regularly for updates and information. Instructions and advices for the empirical project are sent regularly via the course webpage.

Students have to follow strictly instructions concerning group formation, deadlines and format of the documents to be submitted. Non-compliance with instructions is penalized by deductions of points from the project grade.

Plagiarism and academic integrity: in the paper submitted at the end of the term, students must be very careful about citing the source of all ideas that are not their own ones. Anything without citation is understood as being created by the students who wrote the paper. Failing to cite the source of an idea expressed by someone else is a case of plagiarism. Plagiarism will be penalized by a grade of 0 for the empirical project and the case will be sent to the disciplinary council of the School that may take disciplinary sanctions, like exclusion.

### **Grading system – Modalités d'évaluation :**

The final grade is made of different components, all related to the empirical project:

- Empirical project proposal,
- Participation in meetings,
- Presentation of the advancement of the project done during tutorial sessions,
- Final oral presentation,

- Final paper.

Detailed information on the weight of each component in the final grade and the criteria used for grading will be available on the course webpage (moodle) at the beginning of the course.

**Bibliography/references – Bibliographie/références :**

Some reading material is handed out all along the lectures and tutorial sessions as needed.

**Session planning – Planification des séances :**

The schedule of the lectures (first semester), tutorials and meetings with TAs (second semester) and the meetings with advisors (both semesters), as well as the deadlines for the empirical project will be available on Moodle.

**Distance learning – Enseignement à distance :**

Distance learning will not be implemented unless necessary.