- Faculté des sciences économiques
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Empirical methods for Economists (5ER1022)

Filières concernées	Nombre d'heures	Validation	Crédits ECTS
Bachelor en sciences économiques, orientation comptabilité/finance	**Cours: 4 ph**	**écrit: 2 h**	6
Bachelor en sciences économiques, orientation économie politique	**Cours: 4 ph**	**écrit: 2 h**	6
Bachelor en sciences économiques, orientation management	**Cours: 4 ph**	**écrit: 2 h**	6
Bachelor en sciences économiques, orientation ressources humaines	**Cours: 4 ph**	**écrit: 2 h**	6
Bachelor en sciences économiques, orientation systèmes d'information	**Cours: 4 ph**	**écrit: 2 h**	6

ph=période hebdomadaire, pg=période globale, j=jour, dj=demi-jour, h=heure, min=minute

Période d'enseignement:

- Semestre Printemps

Equipe enseignante:

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Objectifs:

This course will cover the basics of applied research in social sciences in general and economics in particular. We will focus on applications of the methods that can be useful in a professional environment (such as consultancies and public administrations).

Students will learn to formulate a research question and identify a research design that can inform this question with empirical data, set up a dataset that can be used to provide empirical evidence about the issue of interest, and apply the relevant econometric methods to illuminate the problem. The main focus of the course will be the application of linear regression models (OLS, continuous and categorical regressors, interaction terms, polynomial specifications, ...) and interpretation of the results. By the end of the class, students will have basic skills to manipulate data in Excel (matching datasets, pivot tables) and use Stata to run different basic regression models, and will be able to critically understand empirical articles to inform concrete issues.

Important note: The language for the course is English. Doing so, the main objective is that students build up the relevant vocabulary to read and interpret the scientific literature (which is almost exclusively in English). The graded assignments and the exam can be done in French.

Contenu:

Each week we will hold one session in the classroom and one session in the computer lab. Sessions in the classroom will be useful to review conceptual issues about the application of statistical analysis and review a number of important methodological approaches to data analysis. Emphasis will be on methods that are often used in practice. We will also critically discuss a number of research articles across different policy area to understand how empirical results are presented and interpreted.

In the lab sessions, we will first learn how to use software packages in order to study a particular research question with a dataset. We will make use of Excel, which will be useful for the student's professional careers, as well as Stata, which is a popular and user-friendly software to run the most widely used econometric techniques.

Sessions in the classroom and in the lab are designed to be highly complementary, with the propose of giving students the required knowledge and tools to carry out and interpret applied research for their future professional activities.

Forme de l'évaluation:

The students' achievements will be graded according to the following scheme: (i) A 1-page research sketch laying out an empirical strategy to study a topic of interest, followed by a concise (5min) presentation during class (20% of the final grade); (ii) a 2-page report on an empirical paper followed by a 10 minute briefing to other students (20% of the final grade); (iii) Final written exam (duration: 2h) during the exam session (60%). The two in-class assignments will be designed in the spirit of a professional communication exercise rather than an academic exercise.

For the re-take exam, the results obtained from the exercise series are not taken into account: Final written exam during the exam session

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(duration: 2h) (100% fo the final grade).

Neither documents nor connected devices are permitted during the exams. Non programmable calculator is authorized. In case of violation of these rules, the students are in situation of fraud and the unauthorized items will be removed. The exam could be deemed as failed.

Documentation:

The course uses a variety of relevant sources that can be useful to the students' learning process, and all of them will be made available on Moodle.

We will make heavy use of the book by Angrist and Pischke (2014) for their non-technical coverage of empirical research in social sciences:

Joshua D. Angrist & Jörn-Steffen Pischke (2014) Mastering Metrics: The Path from Cause to Effect, Princeton University Press

For some parts of the class, we will use the basic econometric textbook by Wooldridge (2016):

Jeffrey Wooldridge (5th ed., 2016) Introductory Econometrics: A Modern Approach, Cengage Learning

Finally, for the more applied parts of the class, the book by Cameron and Trivedi (2010) will be an excellent resource for the application of econometric techniques with Stata:

A. Colin Cameron and Pravin K. Trivedi (2010) Microeconometrics Using Stata: Revised Edition, Stata Press

All three books can be consulted in the library, and a number of articles will be provided electronically.

Pré-requis:

There is no prerequisite for this class, although a basic understanding of statistics and calculus is certainly a plus. Students who do not feel comfortable with these are encouraged to set up a meeting with the professor to discuss possible adjustments.

Forme de l'enseignement:

Weekly 2-hour in-class lecture and 2-hour computer lab session. The course will combine standard lectures and sessions where students work on their own under supervision of the instructor (e.g. during lab sessions). Students will also have the opportunity to work in groups and participate in informal class discussions to initiate the learning process.