Panel Data

Course title – Intitulé du cours	Panel Data
Level / Semester – Niveau /semestre	M1/S2
School – Composante	Ecole d'Economie de Toulouse
Teacher – Enseignant responsable	Michel SIMIONI
Other teacher(s) – Autre(s) enseignant(s)	
Other teacher(s) – Autre(s) enseignant(s)	
Other teacher(s) – Autre(s) enseignant(s)	
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Other teacher(s) – Autre(s) enseignant(s)	
Lecture Hours – Volume Horaire CM	30
TA Hours – Volume horaire TD	
TP Hours – Volume horaire TP	
Course Language – Langue du cours	English
TA and/or TP Language – Langue des TD et/ou TP	

Teaching staff contacts – Coordonnées de l'équipe pédagogique :

Michel Simioni, michel.simioni@inra.fr, after the classes, or by email

Course Objectives – Objectifs du cours :

This course studies econometric methods to be applied when using panel data. It builds on Intermediate Econometrics and Applied Econometrics classes (M1). It presents standard panel data models and econometric methods to estimate parameters of those models, studies the main properties of the estimators and provides examples of application of those methods in economics. The models covered in the course are fixed and random effects models, dynamic panel data models and nonlinear models involving panel data.

At the end of the course, students should be able to apply the suitable methods depending on the context, should know their main properties and should know how to interpret the results in practice.

Prerequisites – Pré requis :

Prerequisites are Intermediate Econometrics (M1) and Applied Econometrics (M1). The students should be familiar with the following estimation methods: Ordinary (OLS) and Generalized Least Squares (GLS), Instrumental Variables (IV) Methods and Generalized Method of Moments (GMM), Maximum Likelihood Estimation (MLE). They should know in which context the methods should be used, the properties of the methods, how to interpret the results obtained and how to do hypothesis testing.

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

Attendance to lectures and lab sessions is essential. Material for the course will be posted on Moodle. Students are expected to check it regularly for updates and information.

Usage of laptops and tablets during classes is allowed, provided they are used for the class only.

Plagiarism and academic integrity: when writing homeworks and projects, students have to 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 piece. 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 corresponding exercise and the case will be sent to the disciplinary council of the University that may take disciplinary sanctions, like university exclusion.

Grading system – Modalités d'évaluation :

Homeworks/projects (40%)
A final exam (60%).

More details will be given in class

Exact copies or late submissions will not be considered for grading.

Bibliography/references – Bibliographie/références :

Lecture slides will be used and available to the students all along the class. No textbook is officially required. The following references may be useful to complement the content of the lecture slides:

Arellano, M., 2003, "Panel Data Econometrics", Advanced Texts in Econometrics, Oxford University Press.
Baltagi, B., 2013, "Econometric Analysis of Panel Data", 5th edition, Wiley.
Cameron, A., Trivedi, P., 2005, "Microeconometrics: Methods and Applications", Cambridge University Press.
Greene, W., 2011, "Econometric Analysis", 7th edition, Pearson Education.
Hsiao, C., 2014, "Analysis of Panel Data", 3rd edition, Econometric Society Monographs, Cambridge University Press.
Verbeek, M., 2012. "A Guide to Modern Econometrics". 4th edition, John Wiley and Sons.
Wooldridge, J., 2015, "Introductory Econometrics: A Modern Approach", 6th edition, Cengage Learning Custom Publishing.

Session planning – Planification des séances :

Chapter 0: Introduction
Chapter 1: Fixed Effects Model
Chapter 2: Random Effects Model
Chapter 3: Dynamic Linear Panel Data Models
Chapter 4: Nonlinear Panel Data Models

Distance learning – Enseignement à distance :

Distance learning can be provided when necessary by implementing, for example: / En cas de nécessité, un enseignement à distance sera assuré en mobilisant, par exemple :

- Interactive virtual classrooms / Classe en ligne interactive
- Recorded lectures (videos) / Vidéo enregistrée de la présentation du matériel pédagogique
- MCQ tests and other online exercises and assignments / QCM et exercices en ligne
- Remote (online) tutorials (classes) / TP/TD à distance
- Chatrooms / Forums