Econometrics 2

Course title – Intitulé du cours	Econometrics 2
Level / Semester – Niveau /semestre	Master 2, S2
School – Composante	Ecole d'Economie de Toulouse
Teacher – Enseignant responsable	Stéphane Gregoir Nour Meddahi Koen Jochmans
Other teacher(s) – Autre(s) enseignant(s)	Young Kim
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Other teacher(s) – Autre(s) enseignant(s)	
Lecture Hours – Volume Horaire CM	36
TA Hours – Volume horaire TD	15
TP Hours – Volume horaire TP	
Course Language – Langue du cours	English
TA and/or TP Language – Langue des TD et/ou TP	English

<u>Teaching staff contacts – Coordonnées de l'équipe pédagogique :</u>

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<u>Course Objectives – Objectifs du cours :</u>

Introduce the student to univariate and multivariate time series and panel data models.

Contents:

1) Strict stationarity, ergodicity and mixing
2) Linear modeling of time series I
3) Linear modeling of time series II
4) CLT and inference for time series
5) Kalman filter and estimation and inference for AR, MA and ARMA models
6) Estimation of dynamic models (M-estimator and Z-estimator (GMM))
7) Nonstationary time series I: unit root process, unit root test, cointegration
8) Nonstationary time series II: trends, seasonality, structural breaks
9) Vector autoregression (VAR): reduced form VAR and structural VAR
10) Vector error correction model (VECM)
11) Volatility models: ARCH and GARCH

12) Panel data models: fixed effect and random effect

Prerequisites – Pré requis :

Econometrics I

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

Grading system – Modalités d'évaluation : TBA

Bibliography/references – Bibliographie/références :

Session planning – Planification des séances

First Six weeks : Stephane Gregoir
Next four weeks : Nour Meddahi
Last two weeks: Koen Jochmans