Econometrics 2

Course title – Intitulé du cours	Econometrics 2
Level / Semester – Niveau /semestre	M2 / S2
School – Composante	Ecole d'Economie de Toulouse
Teacher – Enseignant responsable	Meddahi Nour - Kim Jihyun
Other teacher(s) – Autre(s) enseignant(s)	
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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	0
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 :

Jihyun Kim: jihyun.kim@tse-fr.eu and MF 427
Nour Meddahi: nour.meddahi@tse-fr.eu and MF 417
Office hours: By appointment Preferred means of interaction: After classes and during office hours

Course Objectives – Objectifs du cours :

Contents:

1) Stationary and non-stationary processes; filters; smoothers; Wold decomposition, basic definitions
2) ARMA processes: Properties; estimation and inference; diagnostics; forecasting
3) State-Space Models: Properties; Kalman Filter
4) Non-stationary and Unit-root: definitions; testing; estimation
5) Volatility: GARCH, SV and Markov switching; basic properties; QMLE for GARCH
6) VARMA, co-integration and SVAR
7) Forecasting with many predictors
8) Panel Data

Prerequisites – Pré requis :

No prerequisities for ETE students

Grading system – Modalités d'évaluation :

Assessment: 3 homeworks (10% each), Mid-term exam (25%) and final exam (45%)

Bibliography/references – Bibliographie/références :

Time Series: Brockwell, P. and R. Davis: Introduction to Time Series and Forecasting, Springer. Diebold, F.: Elements of Forecasting, Thomson, South-Western. Hamilton, J. D.: Time Series Analysis, Princeton University Press. Kilian, L. and H. Lutkehpol: Structural Vector Autoregressive Analysis, Cambridge University Press. Pesaran, H.: Time Series and Panel Data Econometrics, Oxford University Press. Stock, J. and M. Watson: Introduction to Econometrics, Addison Wesley. Panel Data: Arellano, M.: Panel Data Econometrics, Oxford University Press. Wooldridge, J.: Econometric Analysis of Cross Section and Panel Data, MIT Press.