

- Faculté des sciences économiques
- [www.unine.ch/seco](http://www.unine.ch/seco)

### Econometrics (5ST2001)

Filières concernées	Nombre d'heures	Validation	Crédits ECTS
<b>Master en économie appliquée</b>	<b>Cours: 4 ph</b>	<b>Voir ci-dessous</b>	<b>6</b>
<b>Master en finance</b>	<b>Cours: 4 ph</b>	<b>Voir ci-dessous</b>	<b>6</b>

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

#### Période d'enseignement:

- Semestre Automne

#### Equipe enseignante

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#### Contenu

- I. INTRODUCTION AND REVIEW
  - 1. Review of Probability
  - 2. Review of Statistics
- II. FUNDAMENTALS OF REGRESSION ANALYSIS
  - 3. Linear Regression with One Regressor
  - 4. Linear Regression with Multiple Regressors
  - (5. Nonlinear Regression Functions)
- III. FURTHER TOPICS IN REGRESSION ANALYSIS
  - 6. Regression with Panel Data
  - (7. Regression with a Binary Dependent Variable)
  - (8. Instrumental Variables Regression)
- IV. REGRESSION ANALYSIS OF ECONOMIC TIME SERIES DATA
  - 12. Introduction to Time Series Regression and Forecasting

#### Forme de l'évaluation

E+EI

E: written exam during the exam session  
 EI: internal evaluation during the semester

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Reexamination session : written exam (100%).

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

#### Documentation

Stock and Watson, Introduction to Econometrics, Addison-Wesley.

#### Pré-requis

Familiarity with matrix algebra, calculus, introductory probability and statistics, programming.

#### Forme de l'enseignement

Interactive teaching (flipped classroom and accompanied projects): 4 hours per week

#### Objectifs d'apprentissage

Au terme de la formation l'étudiant-e doit être capable de :

- Define a linear model
- Discuss concepts related to linear modeling
- Explain how various linear models function
- Apply a linear model
- Estimate linear models
- Interpret linear models
- Test hypothesis using linear models
- Present an analysis based on a linear model
- Analyse data using linear models

#### Compétences transférables

- Design projects
- Develop hands-on, pro forma modelling skills using Excel
- Communicate results in writing
- Carry out critical and evidence-based analyses