

- 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>	Voir ci-dessous	6
<b>Master en finance</b>	<b>Cours: 4 ph</b>	Voir ci-dessous	6

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

2-hour final written exam (60% of the grade - the final exam might be supplemented by a midterm exam, in this case each exam will count for 30% of the grade), quizzes (10%), a final projects (30% of the grade).  
Reexamination session (August-September): 2h-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

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### **Econometrics (5ST2001)**

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
- Analyse data using linear models
- Interpret linear models
- Test hypothesis using linear models
- Present an analysis based on a linear model
- Estimate 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