

- 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

Catalin Starica  
Professeur  
Institut du management de l'information  
A.-L. Breguet 2, 2000 Neuchâtel,  
Tel: 032 718 14 52  
Email: [catalin.starica@unine.ch](mailto:catalin.starica@unine.ch)

Pierluigi Giosi  
Assistant-doctorant  
Institut du management de l'information  
A.-L. Breguet 2, 2000 Neuchâtel  
Tél : 032 718 1978  
Email: [pierluigi.giosi@unine.ch](mailto:pierluigi.giosi@unine.ch)

Laurent Ott  
Assistant doctorant  
Tel. +41 32 718 1941  
Email : [laurent.ott@unine.ch](mailto:laurent.ott@unine.ch)  
Tél. +41 32 718 1941

#### Objectifs

To expose the students to relevant statistical methods that apply to problems in economics and finance.  
To train the students to perform data analysis using the modern R software package.

#### 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 during the last week of the semester (60% of the grade - the final exam might be supplemented by a midterm exam, in

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

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 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**

Lectures: 4 hours per week