- Faculté des sciences économiques
- www.unine.ch/seco

Econometrics (5ST2001)

Filières concernées	Nombre d'heures	Validation	Crédits ECTS
Master en finance	**Cours: 4 ph**	**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 ordinaire
Institut du management de l'information
A.-L. Breguet 2, 2000 Neuchâtel,
Tél.+41 32 718 14 52
Email: catalin.starica@unine.ch

Michael Palma Mendes
Assistant-doctorant
Institut du management de l'information
A.-L.Breguet 2, 2000 Neuchâtel
032 718 19 78
Email : michael.palma@unine.ch

Contenu

The general goal is to provide students with a toolbox of economic and statistical methods they can then apply to analyze and draw conclusions from economic data. Different methods of regression are presented. The students apply these methods to real datasets using the software R. A special emphasis is put on the best practices for analysis via statistical methods, that is, how to properly build a model, test a model, and avoid common pitfalls.

If time allows, we will cover the following topics:

1. Introduction to Econometrics
2. Simple Linear Regression
3. Multiple Linear Regression
4. Regression with Binary, Categorical, and Counts Dependent Variables (if time allows)
5. Non-linear Regression (if time allows)
6. Regression with Panel Data
7. Prediction with Many Regressors, Model Selection, and Big Data (if time allows)
8. Time Series Regression and Forecasting

This course is taught in English.

Forme de l'évaluation

E+EI

E: Two-hour written examination during the exam session
EI: internal evaluation during the semester

The exact rules regarding the tools permitted during the exam will be communicated in class.

This course is included in the elective offerings of the UniNE Master of Science in Finance. Students enrolled in other Master programs who wish to take this course, but whose elective lists do not include it, are required to contact their program coordinators in due time to verify the possibility of accrediting it towards their curriculum.

Modalités de rattrapage

Two-hour written examination (100% of the final grade) during the exam session.

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Documentation

Main reference book (required):
Stock, J. and Watson, M. (2019). Introduction to Econometrics, 4th edition.

Other references:
Kutner, M., Nachtstein, C. J., Neter, J. (2004). Applied Linear Regression Models, 4th edition.
James, G., Witten, D., Hastie, T., and Tibshirani, R. (2021). An Introduction to Statistical Learning with Applications in R. Springer, New York, 2nd edition.

Pré-requis

Basic knowledge of probability, statistics, matrix computations, and programming assumed.

Forme de l'enseignement

Lectures and exercises: 4 hours per week

Objectifs d'apprentissage

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

- Apply the methods presented in the class material
- Calculate statistics and estimates
- Carry out a complete statistical analysis
- Interpret the results of an analysis
- Summarize the findings of a statistical analysis
- Choose a method appropriate for a given dataset and task
- Compare methods
- Produce a report
- Predict values
- Analyse a dataset

Compétences transférables

- Produce a report
- Communicate the results of an analysis