

Faculté des sciences économiques

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## **Applied Econometrics (5ER2020)**

Filières concernées	Nombre d'heures	Validation	Crédits ECTS
Master en finance	Cours: 2 ph TP: 2 ph	cont. continu	6
Master en sciences économiques, orientation politique économique	Cours: 2 ph TP: 2 ph	cont. continu	6
Master en statistique (avant 2015)	Cours: 2 ph TP: 2 ph	cont. continu	6

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

### Période d'enseignement:

• Semestre Printemps

#### Equipe enseignante:

Prof. Milad Zarin, Institute of Economic Research, A.-L. Breguet 2, CH-2000 NEUCHATEL +41 32 718 1355 - milad.zarin@unine.ch Sandra Klinke, teaching assistant and PhD candidate, Institute of Economic Research, A.-L. Breguet 2, CH-2000 NEUCHATEL +41 32 718 1458 - sandra.gogniat@unine.ch

#### **Objectifs:**

The objective of this course is to introduce students to the use of econometric methodology and tools for analyzing various economic policy-related issues.

The lectures aim at teaching students how to carry out sound empirical research by going through a number of interesting case studies that make use of state-of-the-art econometric techniques.

During the exercise sessions, students get hands-on training in econometric modeling by conducting their own empirical research using real-world data and professional software.

#### Contenu:

The lectures are interactive and draw heavily on prior readings by the students. The readings are selected both for their econometric relevance and interest from an economic policy standpoint. The econometric methods and topics reviewed include ordinary and generalized least squares, heteroscedasticity, serial correlation, seemingly unrelated regression, lagged dependent variables, distributed lag functions, instrumental variables, simultaneous equations, discrete-choice models, panel data, Granger causality, unit roots, co-integration, error-correction models, etc.

#### Forme de l'évaluation:

Continuous evaluation based on active participation in class (20%), individual projects (40%) and a final 2-hour written exam during the last lecture of the semester (40%). By active participation is meant regular attendance during the lectures and exercise sessions, careful reading of prescribed texts and voluntary participation in class discussions.

Retake (August-September): 2-hour written exam (100%).

#### **Documentation:**

There is no specific textbook for the course. We rely on original sources such as scientific journal articles, book extracts and technical reports. Readings will be made available on Claroline prior to their discussion in class. The students are however advised to use at least one econometrics manual as reference for econometric techniques and their properties.

### Pré-requis:

Requirement: having completed at least one econometrics course at the bachelor level.

N.B. Students who take this course as an elective have to make sure they possess the required minimal knowledge in economics and quantitative methods. No distinction will be made between MScECON students and others in terms of evaluation criteria.

#### Forme de l'enseignement:

2 hours lecture and 2 hours exercise session per week.



# DESCRIPTIFS DES COURS 2014-2015

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The exercise sessions are complementary to the lectures and provide the students the opportunity to apply econometric techniques to selected policy-related topics using real data, and report the results in their research papers. In the process, they learn to master specialized econometric software and get familiarized with national and international databases.