

# **GRADUATE SCHOOL**

# **GM1008** Financial Econometrics, 7.5 credits

Financial Econometrics, 7,5 högskolepoäng Second Cycle

### Confirmation

This course syllabus was confirmed by School of Business, Economics and Law on 2009-12-22 and was last revised on 2017-11-29 by Graduate School to be valid from 2018-01-15, spring semester of 2018.

Field of education: Social Sciences 100%

Department: Graduate School

## Position in the educational system

The course Financial Econometrics is a course within the Master of Science programmes at the Graduate School, School of Business, Economics and Law, University of Gothenburg.

Main field of studies Specialization

Finance A1N, Second cycle, has only first-cycle

course/s as entry requirements

## **Entry requirements**

To be eligible for the course Financial Econometrics the participant must fulfil the entrance qualifications for the Master of Science programmes in Economics or the Master of Science in Finance. For programme specific entrance requirements, see programme syllabus.

## Learning outcomes

After completion of the course, the student shall be able to:

- 1. understand some of the most commonly used econometric techniques within the field of financial economics.
- 2. select the technique that is most appropriate for the specific problem and data at hand.
- 3. formulate and test relevant economic hypotheses, and to draw appropriate conclusions thereof,
- 4. generalize the knowledge obtained to financial and econometric problems that have not been addressed during the course,
- 5. understand relevant econometric and financial research.

#### **Course content**

Financial markets generate vast amounts of data, most of which are collected with some regularity over time. Take for example stock prices, where prices are typically recorded daily, and sometimes even more frequently. The fact that time series data of this kind have a natural ordering means that they are inherently dependent, a feature that requires special attention when doing econometric analysis. In fact, as indicated by the 2003 Nobel Prize awarded to the two time series econometricians Robert Engle and Clive Granger, it is not until recently that researchers have become aware of all the particularities of time series data.

In this course we study econometric time series techniques, as well as other relevant econometric methods, and their application to financial markets. Some of the questions that we will consider are: Are financial markets efficient? How can we model and analyze long-term relationships between for example prices and exhange rates? How can we explore the dependence of time series data when trying to forecast asset returns, and how can we model the risk of these returns?

The goal of the course is to provide the basic econometric tools needed to conduct an empirically oriented thesis, and to understand and criticize empirical research in finance. Most of the time will be devoted to formal presentation and discussion of commonly used econometric techniques.

### Form of teaching

Lectures, labs and tutorials.

Language of instruction: English

### **Assessment**

The learning outcomes will be assessed through a written exam, accounting for 92% of the grade, and lab reports accounting for 8% of the grade.

If a student, who has failed the same examined component twice, wishes to change examiner before the next examination, a written application shall be sent to the department responsible for the course and shall be granted unless there are special reasons to the contrary (Chapter 6, Section 22 of Higher Education Ordinance).

In cases where a course has been discontinued or has undergone major changes, the student shall normally be guaranteed at least three examination occasions (including the ordinary examination) during a period of at least one year from the last time the course was given.

The number of examinations is limited to five.

### **Grades**

The grading scale comprises: Pass with Distinction (VG), Pass (G) and Fail (U). For Pass on the course, 50% of the total of the points that are possible to achieve will be needed. For Pass with Distinction, 75% of the total of the points that are possible to achieve will be needed.

#### Course evaluation

The course will be evaluated upon completion.

The results of and possible changes to the course will be shared with students who participated in the evaluation and students who are starting the course.