

Course Descriptions NonDegree 2021-2022

Course Title Time Series Econometrics
 Course Code EBC4008
 ECTS Credits 6,5
 Assessment Whole/Half Grades

| Period | Start | End | Mon | Tue | Wed | Thu | Fri |
|--------|------------|------------|-----|-----|-----|-----|-----|
| 2 | 25-10-2021 | 10-12-2021 | | X | X | | X |

Level Advanced

Coordinator Ines Wilms For more information: i.wilms@maastrichtuniversity.nl

Language of instruction English

Goals The objectives of this course are :
 - to provide students with an understanding/intuition of the concepts of modern time series methods that are used in econometrics.
 - introduce the student to fundamental methodological issues in dynamic econometric modelling (nonstationarity, nonstandard asymptotic theory).
 - to provide students with some experience in analyzing univariate and multivariate time series from economics or business.

Description The emphasis of this course will be on studying in depth methods and techniques for the analysis of (nonstationary) economic and financial time series. We will cover and discuss issues related to:
 - dynamic econometric modelling
 - modelling nonstationary processes
 - asymptotic theory for dependent and integrated processes
 - unit roots (representation, tests, properties), cointegration and VECMs.
 Empirical applications as well as simulation experiments will also be considered to provide students with practical experience in analyzing economic and business time series.

Literature The main textbook used in this course will be:
 - Hamilton, J.D. (1994), Time Series Analysis, Princeton University Press, Princeton.
 You might also want to consult the following book:
 - Davidson J. (2000), Econometric Theory, Blackwell Publishing, Oxford.
 The first book is mathematically very concise, while the second book is more narrative of nature.
 Students often perceive the two books as complementary.

Prerequisites - Econometric methods (EBC2111), Stochastic Processes (EBC4004).
 - Exchange students need to have a solid background in econometric methods, probability theory, mathematical statistics, and some knowledge in stochastic processes (some familiarity with Brownian Motion theory is important). Exchange students need to have obtained a Bachelor degree and an advanced level in mathematics and probability and statistics.
 An advanced level of English.

Teaching methods PBL / Presentation / Lecture / Groupwork

Assessment methods Final Paper / Participation / Written Exam

Evaluation in previous academic year For the complete evaluation of this course please click <http://iwio-sbe.maastrichtuniversity.nl/rapporten.asp?referrer=codeUM>

This course belongs to the following programme / specialisation

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| Master Business Research - No specialisation | Year 2 Free Elective(s) |
| Master Business Research - Operations Research | Year 1 Elective Course(s) |
| Master Business Research - Operations Research | Year 2 Elective Course(s) |
| Master Econometrics and Operations Research | Elective Course(s) |
| Master Economic and Financial Research - Econometrics | Year 1 Core Course(s) |
| Master Economic and Financial Research - Econometrics | Year 1 Elective Course(s) |
| Master Economic and Financial Research - No specialisation | Year 1 Elective Course(s) |
| Master Financial Economics - Asset Pricing | Elective Course(s) |
| Master Financial Economics - Banking | Elective Course(s) |
| Master Financial Economics - Financial Analysis | Elective Course(s) |
| Master Financial Economics - No specialisation | Elective Course(s) |
| SBE Exchange Master | Master Exchange Courses |
| SBE Non Degree Courses | Master Courses |