

# Course Descriptions Master 2020-2021

Course Title Econometric Methods for Cross-sectional and Panel Data  
 Course Code EBC4006  
 ECTS Credits 6,5  
 Assessment Whole/Half Grades

Period	Start	End	Mon	Tue	Wed	Thu	Fri
4	1-2-2021	26-3-2021	X		X		X

Level Advanced

Coordinator Alain Hecq, Martin Schumann For more information: a.hecq@maastrichtuniversity.nl; m.schumann@maastrichtuniversity.nl

Language of instruction English

Goals Thorough understanding of the most frequently used econometric models and methods for the analysis of panel data, categorical choice and limited dependent variables.  
 Some practice in the application of the methods, the interpretation of the models, and the evaluation of inferences.  
 The experience of conducting a theoretical, experimental and/or empirical investigation of the methods.

Description PLEASE NOTE THAT THE INFORMATION ABOUT THE TEACHING AND ASSESSMENT METHOD(S) USED IN THIS COURSE IS WITH RESERVATION. THE INFORMATION PROVIDED HERE IS BASED ON THE COURSE SETUP PRIOR TO THE CORONAVIRUS CRISIS. AS A CONSEQUENCE OF THE CRISIS, COURSE COORDINATORS MAY BE FORCED TO CHANGE THE TEACHING AND ASSESSMENT METHOD(S) WILL BE AVAILABLE IN THE COURSE SYLLABUS. The main topics of the course are (1) unobserved effects models for panel data, (2) probit and logit models for discrete choice, (3) tobit and related censored regression models, (4) models dealing with sample selectivity, and (5) the estimation of average treatment effects (a.k.a. policy impact evaluation). Dynamic extensions of the models are considered when feasible. Estimation and testing methods are applied in a number of empirical assignments and their properties are investigated.

Literature Cameron, A.C. and P.K. Trivedi (2005): Microeconometrics, Methods and Applications, Cambridge University Press 2005. ISBN 978-0521-84805-3.

Wooldridge, J.M. (2010): Econometric Analysis of Cross Section and Panel Data, Second Edition. MIT Press, Cambridge, MA, 2010, 2nd ed., ISBN 0-978-0-262-23258-6.

Prerequisites These references will be supplemented with a reading list of journal articles and book chapters.

- Calculus, matrix algebra, probability, mathematical statistics, asymptotic theory, linear statistical models.
- Familiarity with statistical software like Stata and Gauss, Matlab, or R.
- Econometric methods at the level of Greene (2008) or Davidson & MacKinnon (2004), ideally as in courses Econometric Methods I (EBC2111) and Econometric Methods II (EBC2120).

The course is intended for students in the Econometrics Master programme as well as others with a comparable background and motivation. FLUENCY IN MATRIX ALGEBRA AND IN ASYMPTOTIC THEORY is necessary.

An advanced level of English.

Teaching methods Presentation / Lecture / Assignment / Papers / Groupwork / Research / Skills

Assessment methods Final Paper / Participation / Written Exam / Presentation

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

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