Course Descriptions None 2022-2023

Course Title	Technology and Productivity Growth
Course Code	EBC4143
ECTS Credits	6,5
Assessment	Whole/Half Grades

Period

Period	Start	End	Mon	Tue	Wed	Thu	Fri
1	5-9-2022	21-10-2022	C				

Level	Advanced
Coordinator	Mark Sanders For more information:m.sanders@maastrichtuniversity.nl
Language of instruction	English
Goals	The purpose of this course is to gain a thorough understanding of the various models of endogenous growth, specifically with respect to the role of technology and innovation in these models
Description	PLEASE NOTE THAT THE INFORMATION ABOUT THE TEACHING AND ASSESSMENT METHOD(S) USED IN THIS COURSE IS WITH RESERVATION. A RE-EMERGENCE OF THE CORONAVIRUS AND NEW COUNTERMEASURES BY THE DUTCH GOVERNMENT MIGHT FORCE COORDINATORS TO CHANGE THE TEACHING AND ASSESSMENT METHODS USED. THE MOST UP-TO-DATE INFORMATION ABOUT THE TEACHING/ASSESSMENT METHOD(S) WILL BE AVAILABLE IN THE COURSE SYLLABUS. The purpose of this course is to look into the economics of productivity growth, and particularly how technology and the decisions underlying changes in technology, contribute to such growth according to the theoretical insights brought forward in the framework of so-called new growth theory. That theory will be studied using capita selecta from the textbook by Barro and Sala-i-Martin, as well as some seminal growth papers by Lucas, Romer, Aghion and Howitt, and Jones.
Literature	The literature we will be concerned with consists of some capita selecta from the book by Barro and Sala-i-Martin and some selected papers covering the main story-lines in modern growth theory. During the course, I will provide additional clarifying notes. The capita selecta/papers are: * Aghion, P. and P. Howitt, 1998, Endogenous Growth Theory, MIT press, chapter 2. * Barro, R.J. and X. Sala-i-Martin, 2004, Economic Growth, Mc-Graw-Hill, New York, Chapters 1,2,5,6,7, Appendix A. * Brunner, M. and H. Strulik, 2002, ‘Solution of perfect foresight saddlepoint problems: a simple method and applications', Journal of Economic Dynamics and Control, 26, pp. 737-753. * Dorfman, R., 1969, ‘An Economic Interpretation of Optimal Control Theory', American Economic Review, 59, pp. 817-830. * Jones, C.I., 1995, 'R&D-Based Models of Economic Growth', Journal of Political Economy, 103, pp. 759-784. * Lucas, R.E., 1988, 'On the Mechanics of Economic Development', Journal of Monetary Economics, 22, pp. 3-27 (excluding pages 24 and 25 dealing with the transitional dynamics of the model, and excluding parts 5-7). * Romer, P., 1990, 'Endogenous Technological Change', Journal of Political Economy, 98, pp. S71-S102. * Acs, Z. and M. Sanders (2013), ‘Knowledge Spillover Entrepreneurship in an Endogenous Growth Model', in: Small Business Economics Journal, 41(4): 775-795, ISSN: 0921-898X.
Prerequisites	Minimum requirements are second year macro-economics and micro-economics as well as mathematics. It is absolutely necessary that students have a feeling for mathematical abstractions, and the way in which these are used in formal economic models. In addition, students must be prepared to work hard, as for most of them the actual computer implementation of an economic model will be a totally new experience. This holds a fortiori for handling the modelling software.
Teaching methods	Assignment / Research / Skills
Assessment methods	Oral 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

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 Economic and Financial Research - Econometrics	Year 2 Elective Course(s)
Master Economic and Financial Research - No specialisation	Year 2 Elective Course(s)