# Course Descriptions None 2014-2015

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| Course Title | Technology and Productivity Growth |
| Course Code | EBC4143 |
| ECTS Credits | 6,5 |
| Assessment | None |

Period

| Period | Start | End | Mon | Tue | Wed | Thu | Fri |
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| 1 | 1-9-2014 | 24-10-2014 | C | | | | |

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| Level | Advanced |
| Coordinator | Bart Verspagen For more information:b.verspagen@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 | Growth in income per head arises out of the accumulation of productive resources per head and/or productivity increases in the transformation of these resources into output and corresponding income. These productivity increases can be the result of ‘quality' improvements in the resources themselves, as for example in the case of human capital accumulation. But they may also be the result of a ‘better' Organisation of the production process at large, where the knowledge accumulation process as such enables different firms to concentrate more completely on their respective comparative advantage activities, thus making the ‘ensemble' of firms more productive. Whatever the type of productivity increase may be, knowledge accumulation is typically at the heart of the process of productivity growth. New growth theory studies the situations and motivations underlying the accumulation of knowledge, and how decisions regarding the direction and the rate of knowledge accumulation influence the growth performance of the economy at large. An important part of the theory deals with the distinction between growth as it arises out of accumulation decisions taken by private individuals, and socially optimum decisions as they would be taken by a benevolent planner. Differences between privately and socially optimal decisions may then call for particular types of policy interventions that can mitigate the negative growth effects of socially sub-optimal private decisions. The purpose of this course is to look into the sources of productivity growth, and particularly how technology and the decisions underlying changes in technology, contributes 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 a textbook like Barro and Sala-i-Martin, as well as some seminal growth papers by Lucas, Romer, Aghion and Howitt, and Jones. |
| Literature | Assorted papers and a medium/high level growth textbook. |
| 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 | PBL / Assignment |
| Assessment methods | 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 | Free Electives |
| Master Business Research Track OR | Free Electives |
| Master Economic and Financial Research Track Econometrics | Technology, Innovation & Industrial Dynamics |
| Master Economic and Financial Research | Technology, Innovation & Industrial Dynamics |