

COURSE DETAIL

DYNAMIC MODELLING AND DYNAMIC OPTIMIZATION

Country

Netherlands

Host Institution

Maastricht University - School of Business and Economics

Program(s)

Business and Economics, Maastricht

UCEAP Course Level

Upper Division

UCEAP Subject Area(s)

Economics

UCEAP Course Number

102

UCEAP Course Suffix**UCEAP Official Title**

DYNAMIC MODELLING AND DYNAMIC OPTIMIZATION

UCEAP Transcript Title

DYNMC MODEL&OPTMZTN

UCEAP Quarter Units

6.00

UCEAP Semester Units

4.00

Course Description

This course teaches the student to analyze stability properties of equilibria of dynamic systems in qualitative terms, to apply the maximum principle to optimal control problems, to draw phase diagrams with Mathematica, and to use these to analyze solutions of optimal control problems. Economic Theory frequently studies both static and dynamic models. These models exist in various fields such as macro- and microeconomics, public choice, game theory, and finance. This course explores dynamic models as systems of differential equations with respect to stability. The course also covers solving optimal control problems by means of the maximum principle of Pontryagin. The range of applications includes optimal investment, optimal fishing, and problems concerning environmental economics.

Language(s) of Instruction

English

Host Institution Course Number

EBC2116

Host Institution Course Title

DYNAMIC MODELLING AND DYNAMIC OPTIMIZATION

Host Institution Course Details

<http://code.unimaas.nl/Code/Display?intCalendarID=26&intBAMA=3&SearchString=EBC...>

Host Institution Campus

Maastricht University

Host Institution Faculty

School of Business and Economics

Host Institution Degree**Host Institution Department****Course Last Reviewed**

2020-2021

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