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 Campus
Maastricht University

Host Institution Faculty
School of Business and Economics

Host Institution Degree

Host Institution Department

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