## Module title
Advanced Computational Economics

## Abbreviation
12-M-NGM-182-m01

## Module coordinator
unknown

## Module offered by
Faculty of Business Management and Economics

## ECTS
5

## Method of grading
numerical grade

## Only after succ. compl. of module(s)
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## Duration
1 semester

## Module level
unknown

## Other prerequisites
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## Contents

**Description:**
This course will mostly be concerned with the analysis of public policy (in areas such as taxation, social security etc.). Providing students with state-of-the-art techniques for quantitative macroeconomic research in this very field and familiarising them with the relevant literature, this course will teach students how such policies redistribute between different generations and also within generations, how they may improve risk sharing when markets are incomplete and how they can trigger distortions and therefore hurt the aggregate economy.

**Outline of syllabus:**
1. Programming with FORTRAN and application of numerical methods
2. Solution techniques for dynamic programming problems
3. The overlapping generations model (OLG) with uninsurable income risk
4. Policy analysis in the stochastic OLG model

**Reading:**
Lecture notes will be provided.

**Intended learning outcomes:**
After completing the course "Computational Economics - Advanced Level" students will be able to
(i) edit and solve stochastic economic problems using advanced numerical techniques;
(ii) implement small scale economic models on the computer;
(iii) simulate tax and social security policy reforms and interpret the quantitative results in economic term.

## Courses
(V (2) + Ü (2))

Module taught in: English

## Method of assessment
(a) written examination (approx. 60 minutes) or (b) term paper (approx. 15 pages)

Language of assessment: English

## Allocation of places
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## Additional information
Research track module in Master's programme IEP

Referred to in LPO I (examination regulations for teaching-degree programmes)

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## Module appears in
Master's degree (1 major) Management (2018)
Master's degree (1 major) International Economic Policy (2018)
Master's degree (1 major) China Business and Economics (2019)
Master's degree (1 major) China Language and Economy (2019)