

Module title		Abbreviation
Computational Economics		12-CE-212-m01
Module coordinator		Module offered by
holder of the Chair of Public Finance		Faculty of Business Management and Economics
ECTS	Method of grading	Only after succ. compl. of module(s)
5	numerical grade	--
Duration	Module level	Other prerequisites
1 semester	undergraduate	--
Contents		
<p>This module introduces students to the numerical implementation of economic models. It consists of three main parts:</p> <ol style="list-style-type: none"> 1. The programming language FORTRAN 90 2. Numerical solution methods 3. Economic applications: <ul style="list-style-type: none"> - The static general equilibrium model - Topics in finance and risk management - Life cycle model - Overlapping generations model 		
Intended learning outcomes		
<p>After finishing this module students are able to</p> <ol style="list-style-type: none"> 1. implement simple economic models on the computer using Fortran 90 2. using MonteCarlo techniques to find optimal portfolio structures and option prices 3. quantify the risks of portfolios of banks and insurance companies 4. simulate simple reforms of the tax and transfer system 5. interpret the simulation results economically. 		
Courses (type, number of weekly contact hours, language – if other than German)		
P (2) Module taught in: German and/or English		
Method of assessment (type, scope, language – if other than German, examination offered – if not every semester, information on whether module is creditable for bonus)		
written examination (approx. 60 minutes) and exercises (approx. 10 pages), (weighted 1:1) Language of assessment: German and/or English		
Allocation of places		
20 places. (1) Should the number of applications exceed the number of available places, places will be allocated by lot among all applicants irrespective of their subjects. (2) Places on all courses of the module with a restricted number of places will be allocated in the same procedure. (3) A waiting list will be maintained and places re-allocated by lot as they become available.		
Additional information		
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Workload		
150 h		
Teaching cycle		
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Referred to in LPO I (examination regulations for teaching-degree programmes)		
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Module appears in		
Master's degree (1 major) China Business and Economics (2021)		

Bachelor' degree (1 major) Business Information Systems (2021)
Bachelor' degree (1 major) Economathematics (2021)
Bachelor' degree (1 major) Business Management and Economics (2021)
Bachelor's degree (1 major, 1 minor) Business Management and Economics (Minor, 2021)
Bachelor' degree (1 major) Economathematics (2022)
exchange program Business Management and Economics (2022)
Bachelor' degree (1 major) Business Information Systems (2023)
Bachelor' degree (1 major) Economathematics (2023)
Bachelor' degree (1 major) Business Management and Economics (2023)
Bachelor's degree (1 major, 1 minor) Business Management and Economics (Minor, 2023)