

Module title		Abbreviation
Optimization for Machine Learning		10-M-OML-222-m01
Module coordinator		Module offered by
Dean of Studies Mathematik (Mathematics)		Institute of Mathematics
ECTS	Method of grading	Only after succ. compl. of module(s)
10	numerical grade	--
Duration	Module level	Other prerequisites
1 semester	undergraduate	--
Contents		
Linear programming, quadratic programming, convex optimization, first order methods, application to machine learning problems such as support vector machines.		
Intended learning outcomes		
The student is acquainted with the relevant methods in optimization and is able to apply these methods to practical machine learning problems, both theoretically and numerically.		
Courses (type, number of weekly contact hours, language — if other than German)		
V (4) + Ü (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)		
a) written examination (approx. 90 to 180 minutes, usually chosen) or b) oral examination of one candidate each (15 to 30 minutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate) Language of assessment: German and/or English Assessment offered: Only when announced in the semester in which the courses are offered and in the subsequent semester creditable for bonus		
Allocation of places		
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Additional information		
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Workload		
300 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		
Bachelor' degree (1 major) Economathematics (2022) Bachelor' degree (1 major) Mathematical Data Science (2022) Bachelor' degree (1 major) Artificial Intelligence and Data Science (2022) exchange program Mathematics (2023) Bachelor' degree (1 major) Artificial Intelligence and Data Science (2023) Bachelor' degree (1 major) Economathematics (2023)		