

Module title		Abbreviation
Structure and Properties of Modern Materials: Experiments vs. Simulations		o8-FU-MW-161-m01
Module coordinator		Module offered by
degree programme coordinator Funktionswerkstoffe (Functional Materials)		Chair of Chemical Technology of Material Synthesis
ECTS	Method of grading	Only after succ. compl. of module(s)
5	numerical grade	--
Duration	Module level	Other prerequisites
1 semester	graduate	--
Contents		
Material properties of metals and ceramics: correlation of structure/property relations through experiments and simulations.		
Intended learning outcomes		
Students gain an insight into the properties of modern materials: aerospace aluminium alloys and high-performance ceramics. They are introduced to measuring methods and calculation methods using numerical simulation. A special focus is on the relation between the micro/nanoscope structure of materials and the resulting properties.		
Courses (type, number of weekly contact hours, language – if other than German)		
V (2) + S (1)		
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) talk (approx. 30 minutes) or b) oral examination of one candidate each (approx. 20 minutes) or c) oral examination in groups of 2 (approx. 30 minutes total) Assessment offered: Once a year, winter semester Language of assessment: German and/or English		
Allocation of places		
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Additional information		
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Workload		
150 h		
Referred to in LPO I (examination regulations for teaching-degree programmes)		
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Module appears in		
Master's degree (1 major) Physics (2016) Master's degree (1 major) Nanostructure Technology (2016) Master's degree (1 major) Functional Materials (2016) Master's degree (1 major) Nanostructure Technology (2020) Master's degree (1 major) Physics (2020) Master's degree (1 major) Physics International (2020) Master's degree (1 major) Quantum Engineering (2020) Master's degree (1 major) Quantum Technology (2021)		
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