

Module title		Abbreviation
Structure-Properties Correlations of Light Materials - Experiments and Numerical Simulations		o8-FU-MW-222-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: Structure-property relationships through experiments and simulation.		
Intended learning outcomes		
The students gain fundamental knowledge about the properties of modern materials: aviation aluminum alloys and high performance ceramics. Analytical methods and predictions through numerical simulations will be presented. The relationship of mikro- and nanoscopic structure of materials and the resulting properties are emphasized.		
Courses (type, number of weekly contact hours, language – if other than German)		
V (2) + S (2) Module taught in: German 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 minutes) or oral examination of one candidate each (approx. 30 minutes) and b) talk (approx. 30 minutes); (weighted 60:40) Language of assessment: German and/or English Assessment offered: Once a year, summer semester		
Allocation of places		
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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) Functional Materials (2022) Master's degree (1 major) Quantum Engineering (2024) Master's degree (1 major) Physics International (2024)		