

Module title		Abbreviation
Additive Manufacturing		03-ADFER-222-m01
Module coordinator		Module offered by
holder of the Chair of Functional Materials in Medicine and Dentistry		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	--	--
Contents		
The course will cover the basics of additive manufacturing (AM) focusing on the techniques and materials used in AM. All aspects of the 3D printing chain, starting from the CAD design followed by slicing, printer selection and preparation to post processing, will be discussed. Participants will get the possibility to have hand-on experience with different printing methods during practical sessions. Based on current examples, options to transfer the process from prototyping to manufacturing and concepts to implements sustainability into additive manufacturing will be highlighted. The course will also focus on biomedical applications and options how 3D printing can be used in Biofabrication.		
Intended learning outcomes		
The student has advanced knowledge of the synthesis, modification and characterization of polymers.		
Courses (type, number of weekly contact hours, language — if other than German)		
V (2) + Ü (1) + P (1) Module taught in: V, Ü: 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 b) oral examination of one candidate each (20 to 30 minutes) or c) talk (approx. 30 minutes) Language of assessment: English		
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) Functional Materials (2025)		