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)