

Module title		Abbreviation
Tissue Engineering / Functional Materials		03-98-MVTF-152-m01
Module coordinator		Module offered by
holder of the Chair of Tissue Engineering and Regenerative Medicine		Faculty of Medicine
ECTS	Method of grading	Only after succ. compl. of module(s)
5	numerical grade	--
Duration	Module level	Other prerequisites
1 semester	graduate	--
Contents		
<p>Cell culture technology, basics of tissue engineering, test systems as an alternative to animal experiments skin, intestine, lung, trachea, blood-brain barrier, tumors and other diseases. The development of cell-based transplants is discussed, as well as the regulatory basis for the approval of these and of medical devices and drugs. In detail, these are REACH (Registration, Evaluation, Restriction and Authorization of Chemicals), the Medical Devices and Drugs Act, GLP (Good Laboratory Practice), GMP (Good Manufacturing Practice) and GCP (Good Clinical Practice).</p>		
Intended learning outcomes		
<p>The student has expertise in tissue engineering, regenerative medicine, bioprocess engineering, test systems and basic relationships in the field of cell biology, metabolism, differentiation, adhesion to surfaces and mechanobiology. The student has methodological competence in quality management. The contents taught in the course lead to a deeper understanding of these competence fields and enable the application, which allows an independent assessment by analyzing publications or questions. For this purpose, the student should be able to understand a scientific publication in this field, to acquire additional background knowledge independently and, after analyzing the experimental results, to evaluate and discuss them critically.</p>		
Courses (type, number of weekly contact hours, language – if other than German)		
V (2) Module taught in: German/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)		
<p>a) written examination (30 to 60 minutes) or b) log (approx. 10 to 20 pages) or c) oral examination of one candidate each (30 to 60 minutes) or d) oral examination in groups of up to 3 candidates (approx. 30 to 60 minutes) or e) presentation (20 to 45 minutes). Students will be informed about the method, length and scope of the assessment prior to the course. Assessment offered: Once a year, winter semester Language of assessment: German or English</p>		
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) Biochemistry (2015)		

Master's degree (1 major) Biomedicine (2015)
Master's degree (1 major) Experimental medicine (2015)
Master's degree (1 major) Biochemistry (2017)
Supplementary course Translational Medicine (2018)
Master's degree (1 major) Biomedicine (2018)
Master's degree (1 major) Translational Medicine (2018)
Master's degree (1 major) Biochemistry (2019)