**Module title**  
Tissue Engineering / Functional Materials  

**Abbreviation**  
03-98-MVTF-152-m01

<table>
<thead>
<tr>
<th>ECTS</th>
<th>Method of grading</th>
<th>Only after succ. compl. of module(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>numerical grade</td>
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<table>
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<tr>
<th>Duration</th>
<th>Module level</th>
<th>Other prerequisites</th>
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<tbody>
<tr>
<td>1 semester</td>
<td>graduate</td>
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**Contents**

Cell culture techniques, fundamentals of tissue engineering, test systems as an alternative to animal experiments in skin, intestine, lung, trachea, kidney, blood-brain barrier, tumours and other diseases, development of cell-based transplants, regulatory fundamentals for approval of medical products and drugs. These are REACH (registration, evaluation, restriction and approval of drugs), medicine products law, GLP (good lab practice), GMP (good manufacturing practice), GCP (good clinical practice).

**Intended learning outcomes**

Students have developed a knowledge of cell biology, metabolism, differentiation, adhesion to surfaces, mechanobiology. They are familiar with the fundamental principles of tissue engineering and quality management.

**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)

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

**Allocation of places**

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**Additional information**

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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)