

Annex SFB

Studienfachbeschreibung (subject description, SFB) for the subject Technology of Functional Materials as a Master's with 1 major with the degree "Master of Science" (120 ECTS credits)

Responsible: Faculty of Chemistry and Pharmacy

Examination regulations version: 2010

Abbreviations used: Course types: **E** = field trip, **K** = colloquium, **O** = conversatorium, **P** = placement/lab course, **R** = project, **S** = seminar, **T** = tutorial, **Ü** = exercise, **V** = lecture

Term: **SS** = summer semester, **WS** = winter semester

Methods of grading: **NUM** = numerical grade, **B/NB** = (not) successfully completed

Regulations: **(L)ASPO** = general academic and examination regulations (for teaching-degree programmes), **FSB** = subject-specific provisions, **SFB** = list of modules

Other: **A** = thesis, **LV** = course(s), **PL** = assessment(s), **TN** = participants, **VL** = prerequisite(s)

Conventions for the modules in this SFB: Unless otherwise stated, courses and assessments will be held in German, assessments will be offered every semester and modules are not creditable for bonus.

Information on assessment procedures: Should there be the option to choose between several methods of assessment, the lecturer will agree with the module coordinator on the method of assessment to be used in the current semester by two weeks after the start of the course at the latest and will communicate this in the customary manner.

Should a module comprise more than one graded assessment, all assessments will be equally weighted, unless otherwise stated below.

Should the assessment comprise several individual assessments, successful completion of the module will require successful completion of all individual assessments.

In accordance with the general regulations governing the degree subject described in this module catalogue:

ASPO2007

associated official publications (FSB (subject-specific provisions)/SFB (list of modules)):

29-Apr-2010 (2010-23)

This module handbook seeks to render, as accurately as possible, the data that is of statutory relevance according to the examination regulations of the degree subject. However, only the FSB (subject-specific provisions) and SFB (list of modules) in their officially published versions shall be legally binding. In the case of doubt, the provisions on, in particular, module assessments specified in the FSB/SFB shall prevail.

Every module will be described using the following form:

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|--------------|---------------------------------------|--|--|----------------|-------------------|--|--------------|
| Abbreviation | Module title | | | | | | |
| | ECTS | | Duration | (in semesters) | Method of grading | | Module level |
| | Courses | | To be specified in the form X (y) with course type X abbreviated as specified above and number of weekly contact hours y | | | | |
| | Method of assessment | | | | | | |
| | Only after successful completion of | | if applicable | | | | |
| | Other prerequisites | | if applicable | | | | |
| | Participants and allocation of places | | if applicable | | | | |
| | Additional information | | if applicable | | | | |
| | Referred to in LPO I | | if applicable (examination regulations for teaching-degree programmes) | | | | |

| Compulsory Courses (35 ECTS credits) | | | | | | | |
|--------------------------------------|--|---|----------|------------|-------------------|-----------------|----------------------|
| 11-E5T-092-m01 | Mechanical and Thermal Material Properties | | | | | | |
| | ECTS | 5 | Duration | 1 semester | Method of grading | numerical grade | Modul level graduate |
| | Courses | V + Ü (no information on SWS (weekly contact hours) and course language available) | | | | | |
| | Method of assessment | a) written examination (approx. 90 minutes) or b) oral examination of one candidate each or oral examination in groups (approx. 30 minutes per candidate) or c) project report (approx. 10 pages, time to complete: 1 to 4 weeks) or d) presentation/seminar presentation (approx. 30 minutes) | | | | | |
| | other prerequisites | Admission prerequisite to assessment: successful completion of approx. 50% of exercises. Certain prerequisites must be met to qualify for admission to assessment. The lecturer will inform students about the respective details at the beginning of the course. Registration for the course will be considered a declaration of will to seek admission to assessment. If students have obtained the qualification for admission to assessment over the course of the semester, the lecturer will put their registration for assessment into effect. Students who meet all prerequisites will be admitted to assessment in the current or in the subsequent semester. For assessment at a later date, students will have to obtain the qualification for admission to assessment anew. | | | | | |
| 11-MOE-092-m01 | Opto-electronic Material Properties | | | | | | |
| | ECTS | 5 | Duration | 1 semester | Method of grading | numerical grade | Modul level graduate |
| | Courses | V + Ü (no information on SWS (weekly contact hours) and course language available) | | | | | |
| | Method of assessment | a) written examination (approx. 90 minutes) or b) oral examination of one candidate each or oral examination in groups (approx. 30 minutes per candidate, for modules with less than 4 ECTS credits approx. 20 minutes) or c) project report (approx. 10 pages, time to complete: 1 to 4 weeks) or d) presentation/seminar presentation (approx. 30 minutes) | | | | | |
| | other prerequisites | Admission prerequisite to assessment: successful completion of approx. 50% of exercises. Certain prerequisites must be met to qualify for admission to assessment. The lecturer will inform students about the respective details at the beginning of the course. Registration for the course will be considered a declaration of will to seek admission to assessment. If students have obtained the qualification for admission to assessment over the course of the semester, the lecturer will put their registration for assessment into effect. Students who meet all prerequisites will be admitted to assessment in the current or in the subsequent semester. For assessment at a later date, students will have to obtain the qualification for admission to assessment anew. | | | | | |
| 08-PCM4-092-m01 | Nanoscale Materials | | | | | | |
| | ECTS | 5 | Duration | 1 semester | Method of grading | numerical grade | Modul level graduate |
| | Courses | V + Ü (no information on SWS (weekly contact hours) and course language available) | | | | | |
| | Method of assessment | a) written examination (approx. 90 minutes) or b) oral examination (approx. 20 minutes) or c) talk (approx. 40 minutes) | | | | | |
| 08-SAM-092-m01 | Technology of Sensor and Actor Materials including Smart Fluids | | | | | | |
| | ECTS | 5 | Duration | 1 semester | Method of grading | numerical grade | Modul level graduate |
| | Courses | V + P (no information on SWS (weekly contact hours) and course language available) | | | | | |
| | Method of assessment | written examination (90 minutes) | | | | | |

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| o8-PR-092-m01 | Research project | | | | | | | |
| | ECTS | 10 | Duration | 1 semester | Method of grading | numerical grade | Modul level | graduate |
| | Courses | R (no information on SWS (weekly contact hours) and course language available) | | | | | | |
| | Method of assessment | report (approx. 10 to 15 pages) Language of assessment: German or English | | | | | | |
| o8-MKoll-TF-092-m01 | Master Thesis' Colloquium | | | | | | | |
| | ECTS | 5 | Duration | 1 semester | Method of grading | numerical grade | Modul level | graduate |
| | Courses | K (no information on SWS (weekly contact hours) and course language available) | | | | | | |
| | Method of assessment | final colloquium (approx. 90 minutes) | | | | | | |
| Compulsory Electives (60 ECTS credits) | | | | | | | | |
| General Compulsory Electives (30 ECTS credits) | | | | | | | | |
| 11-A3-072-m01 | Laboratory and Measurement Technology | | | | | | | |
| | ECTS | 6 | Duration | 1 semester | Method of grading | numerical grade | Modul level | undergraduate |
| | Courses | V + Ü (no information on SWS (weekly contact hours) and course language available) | | | | | | |
| | Method of assessment | written examination (approx. 120 minutes) | | | | | | |
| | other prerequisites | Admission prerequisite to assessment: successful completion of approx. 50% of exercises. Certain prerequisites must be met to qualify for admission to assessment. The lecturer will inform students about the respective details at the beginning of the course. Registration for the course will be considered a declaration of will to seek admission to assessment. If students have obtained the qualification for admission to assessment over the course of the semester, the lecturer will put their registration for assessment into effect. Students who meet all prerequisites will be admitted to assessment in the current or in the subsequent semester. For assessment at a later date, students will have to obtain the qualification for admission to assessment anew. | | | | | | |
| | Participants and allocation of places | Only as part of pool of general key skills (ASQ): 15 places. Places will be allocated by lot. | | | | | | |
| 11-NM-WP-072-m01 | Nanomatrix insulation systems and photovoltaics | | | | | | | |
| | ECTS | 6 | Duration | 1 semester | Method of grading | numerical grade | Modul level | undergraduate |
| | Courses | V + R (no information on SWS (weekly contact hours) and course language available) | | | | | | |
| | Method of assessment | a) written examination (approx. 90 minutes) or b) talk (approx. 30 minutes) or c) oral examination of one candidate each or oral examination in groups (approx. 30 minutes) or d) project report (approx. 10 pages) | | | | | | |
| 11-NM-HM-072-m01 | Nanomatrix semiconductor materials | | | | | | | |
| | ECTS | 6 | Duration | 1 semester | Method of grading | numerical grade | Modul level | undergraduate |
| | Courses | V + R (no information on SWS (weekly contact hours) and course language available) | | | | | | |
| | Method of assessment | a) written examination (approx. 90 minutes) or b) talk (approx. 30 minutes) or c) oral examination of one candidate each or oral examination in groups (approx. 30 minutes) or d) project report (approx. 10 pages) | | | | | | |

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| 11-NM-HP-072-m01 | Nanomatrix Semiconductor Processing | | | | | | | |
| | ECTS | 6 | Duration | 1 semester | Method of grading | numerical grade | Modul level | undergraduate |
| | Courses | V + R (no information on SWS (weekly contact hours) and course language available) | | | | | | |
| | Method of assessment | a) written examination (approx. 90 minutes) or b) talk (approx. 30 minutes) or c) oral examination of one candidate each or oral examination in groups (approx. 30 minutes) or d) project report (approx. 10 pages) | | | | | | |
| 11-NM-BV-072-m01 | Nanomatrix Biophysical Analyzing Systems and Processes | | | | | | | |
| | ECTS | 6 | Duration | 1 semester | Method of grading | numerical grade | Modul level | undergraduate |
| | Courses | V + R (no information on SWS (weekly contact hours) and course language available) | | | | | | |
| | Method of assessment | a) written examination (approx. 90 minutes) or b) talk (approx. 30 minutes) or c) oral examination of one candidate each or oral examination in groups (approx. 30 minutes) or d) project report (approx. 10 pages) | | | | | | |
| 10-M-ODE-082-m01 | Ordinary Differential Equations | | | | | | | |
| | ECTS | 5 | Duration | 1 semester | Method of grading | numerical grade | Modul level | undergraduate |
| | Courses | V + Ü (no information on SWS (weekly contact hours) and course language available) | | | | | | |
| | Method of assessment | written examination (approx. 90 minutes); if announced by the lecturer, the written examination can be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups (groups of 2, approx. 30 minutes) Language of assessment: German, English if agreed upon with the examiner | | | | | | |
| | other prerequisites | Certain prerequisites must be met to qualify for admission to assessment. The lecturer will inform students about the respective details at the beginning of the course. Registration for the course will be considered a declaration of will to seek admission to assessment. If students have obtained the qualification for admission to assessment over the course of the semester, the lecturer will put their registration for assessment into effect. Students who meet all prerequisites will be admitted to assessment in the current or in the subsequent semester. For assessment at a later date, students will have to obtain the qualification for admission to assessment anew. | | | | | | |
| 08-PS3-092-m01 | Applied Spectroscopy 3 | | | | | | | |
| | ECTS | 5 | Duration | 1 semester | Method of grading | numerical grade | Modul level | undergraduate |
| | Courses | V (no information on SWS (weekly contact hours) and course language available) | | | | | | |
| | Method of assessment | 1 written examination (approx. 90 minutes) or 2 written examinations (approx. 60 or 90 minutes each) or 3 written examinations (approx. 60 minutes each) or oral examination of one candidate each (approx. 20 minutes) or oral examination in groups (groups of 2, approx. 30 minutes) | | | | | | |
| 08-IOC4-092-m01 | Organic Chemistry for students of engineering | | | | | | | |
| | ECTS | 5 | Duration | 1 semester | Method of grading | numerical grade | Modul level | undergraduate |
| | Courses | V + Ü (no information on SWS (weekly contact hours) and course language available) | | | | | | |
| | Method of assessment | written examination (90 minutes) | | | | | | |
| | other prerequisites | Registration for assessment: Yes, as specified. | | | | | | |

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| 11-OHL-092-m01 | Organic Semiconductor | | | | | | | |
| | ECTS | 5 | Duration | 1 semester | Method of grading | numerical grade | Modul level | graduate |
| | Courses | V + Ü (no information on SWS (weekly contact hours) and course language available) | | | | | | |
| | Method of assessment | a) written examination (approx. 90 minutes) or b) oral examination of one candidate each or oral examination in groups (approx. 30 minutes per candidate, for modules with less than 4 ECTS credits approx. 20 minutes) or c) project report (approx. 10 pages, time to complete: 1 to 4 weeks) or d) presentation/seminar presentation (approx. 30 minutes) | | | | | | |
| other prerequisites | Admission prerequisite to assessment: successful completion of approx. 50% of exercises. Certain prerequisites must be met to qualify for admission to assessment. The lecturer will inform students about the respective details at the beginning of the course. Registration for the course will be considered a declaration of will to seek admission to assessment. If students have obtained the qualification for admission to assessment over the course of the semester, the lecturer will put their registration for assessment into effect. Students who meet all prerequisites will be admitted to assessment in the current or in the subsequent semester. For assessment at a later date, students will have to obtain the qualification for admission to assessment anew. | | | | | | | |
| o8-PW1-092-m01 | Polymeric Materials 1: Technology of Modifying Polymers | | | | | | | |
| | ECTS | 5 | Duration | 1 semester | Method of grading | numerical grade | Modul level | graduate |
| | Courses | V + P (no information on SWS (weekly contact hours) and course language available) | | | | | | |
| Method of assessment | written examination (90 minutes) | | | | | | | |
| o8-PW2-092-m01 | Polymeric Materials 2: Technology of Modifying Fillers for Polymers | | | | | | | |
| | ECTS | 5 | Duration | 1 semester | Method of grading | numerical grade | Modul level | graduate |
| | Courses | V + P (no information on SWS (weekly contact hours) and course language available) | | | | | | |
| Method of assessment | written examination (90 minutes) | | | | | | | |
| 10-I-DB2-092-m01 | Data bases 2 | | | | | | | |
| | ECTS | 5 | Duration | 1 semester | Method of grading | numerical grade | Modul level | undergraduate |
| | Courses | V + Ü (no information on SWS (weekly contact hours) and course language available) | | | | | | |
| Method of assessment | written examination (50 minutes) or oral examination (one candidate each: 15 minutes, groups of 2: 20 minutes, groups of 3: 25 minutes) | | | | | | | |
| 10-I-EL-092-m01 | E-Learning | | | | | | | |
| | ECTS | 5 | Duration | 1 semester | Method of grading | numerical grade | Modul level | undergraduate |
| | Courses | V + Ü (no information on SWS (weekly contact hours) and course language available) | | | | | | |
| Method of assessment | written examination (50 minutes) or oral examination (one candidate each: 15 minutes, groups of 2: 20 minutes, groups of 3: 25 minutes) | | | | | | | |
| 10-I-IR-092-m01 | Information Retrieval | | | | | | | |
| | ECTS | 5 | Duration | 1 semester | Method of grading | numerical grade | Modul level | undergraduate |
| | Courses | V + Ü (no information on SWS (weekly contact hours) and course language available) | | | | | | |
| Method of assessment | a) written examination (approx. 50 minutes) or b) oral examination (one candidate each: approx. 15 minutes, groups of 2: approx. 20 minutes, groups of 3: approx. 25 minutes) | | | | | | | |

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| 99-HIS-092-m01 | Materials for high voltage insulation and high voltage systems | | | | | | | |
| | ECTS | 5 | Duration | 1 semester | Method of grading | numerical grade | Modul level | unknown |
| | Courses | V + Ü + P (no information on SWS (weekly contact hours) and course language available) | | | | | | |
| | Method of assessment | written examination (approx. 90 minutes) | | | | | | |
| 99-MSTS-092-m01 | Modelling and simulation for technology systems | | | | | | | |
| | ECTS | 5 | Duration | 1 semester | Method of grading | numerical grade | Modul level | unknown |
| | Courses | V + Ü (no information on SWS (weekly contact hours) and course language available) | | | | | | |
| | Method of assessment | written examination (approx. 90 minutes) or modelling assignment in the form of a project (expenditure of time for modelling assignment to be specified at the beginning of the course) | | | | | | |
| 08-FS5-101-m01 | Chemical Nanotechnology: Analytics and Applications | | | | | | | |
| | ECTS | 5 | Duration | 1 semester | Method of grading | numerical grade | Modul level | graduate |
| | Courses | This module comprises 2 module components. Information on courses will be listed separately for each module component. <ul style="list-style-type: none"> o8-FS5-1-101: V (no information on SWS (weekly contact hours) and course language available) o8-FS5-2-101: V (no information on SWS (weekly contact hours) and course language available) | | | | | | |
| | Method of assessment | Assessment in this module comprises the assessments in the individual module components as specified below. Unless stated otherwise, successful completion of the module will require successful completion of all individual assessments. <p>Assessment in module component o8-FS5-1-101: Sol-Gel Chemistry 2</p> <ul style="list-style-type: none"> 2 ECTS, Method of grading: numerical grade a) oral examination (approx. 15 minutes) or b) written examination (approx. 45 minutes) <p>Assessment in module component o8-FS5-2-101: Application oriented Characterization of colloidal and polymeric systems</p> <ul style="list-style-type: none"> 3 ECTS, Method of grading: numerical grade a) oral examination (approx. 20 minutes) or b) written examination (approx. 45 minutes) | | | | | | |
| | Participants and allocation of places | Number of places: 20. Should the number of applications exceed the number of available places, places will be allocated in a standardised procedure among all applicants irrespective of their subjects according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in the respective degree subject; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% of places): number of subject semesters of the respective applicant; among applicants with the same number of subject semesters, places will be allocated by lot. Quota 3 (25% of places): allocation by lot. In this procedure, applicants who already have successfully completed at least one module component of the respective module will be given preferential consideration. A waiting list will be maintained and places re-allocated as they become available. | | | | | | |
| | Additional Information | The course is offered as a block course at the end of the semester. | | | | | | |
| 08-FS6-101-m01 | Coating Technology based on Vapour Deposition | | | | | | | |
| | ECTS | 5 | Duration | 1 semester | Method of grading | numerical grade | Modul level | graduate |
| | Courses | V + Ü (no information on SWS (weekly contact hours) and course language available) | | | | | | |
| | Method of assessment | a) written examination (approx. 90 minutes) or b) oral examination (approx. 30 minutes) | | | | | | |

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| 03-SP1A1-101-m01 | Basic principles of cell biology and tissue regeneration | | | | | | | |
| | ECTS | 5 | Duration | 1 semester | Method of grading | numerical grade | Modul level | graduate |
| | Courses | V + Ü + P (no information on SWS (weekly contact hours) and course language available) | | | | | | |
| | Method of assessment | placement report / fieldwork report / report on practical training / report on practical course / project report / report on technical course (approx. 10 pages) and a) written examination (approx. 90 minutes) or b) presentation (approx. 30 minutes) | | | | | | |
| 03-SP1A2-101-m01 | Fundamentals of Tissue Engineering and Quality Management | | | | | | | |
| | ECTS | 5 | Duration | 1 semester | Method of grading | numerical grade | Modul level | graduate |
| | Courses | V + Ü + P (no information on SWS (weekly contact hours) and course language available) | | | | | | |
| | Method of assessment | placement report / fieldwork report / report on practical training / report on practical course / project report / report on technical course (approx. 10 pages) and a) written examination (approx. 90 minutes) or b) presentation (approx. 30 minutes) | | | | | | |
| 03-SP2A1-101-m01 | Materials used for surgical implants | | | | | | | |
| | ECTS | 5 | Duration | 1 semester | Method of grading | numerical grade | Modul level | graduate |
| | Courses | V + Ü + P (no information on SWS (weekly contact hours) and course language available) | | | | | | |
| | Method of assessment | placement report / fieldwork report / report on practical training / report on practical course / project report / report on technical course (approx. 10 pages) and a) written examination (approx. 90 minutes) or b) presentation (approx. 30 minutes) | | | | | | |
| 03-SP2A2-101-m01 | Materials for biosensors, tissue engineering and tissue regeneration | | | | | | | |
| | ECTS | 5 | Duration | 1 semester | Method of grading | numerical grade | Modul level | graduate |
| | Courses | V + Ü + P (no information on SWS (weekly contact hours) and course language available) | | | | | | |
| | Method of assessment | placement report / fieldwork report / report on practical training / report on practical course / project report / report on technical course (approx. 10 pages) and a) written examination (approx. 90 minutes) or b) presentation (approx. 30 minutes) | | | | | | |
| 03-SP3A1-101-m01 | Carrier materials and devices for therapeutic compounds | | | | | | | |
| | ECTS | 5 | Duration | 1 semester | Method of grading | numerical grade | Modul level | graduate |
| | Courses | V + Ü + P (no information on SWS (weekly contact hours) and course language available) | | | | | | |
| | Method of assessment | placement report / fieldwork report / report on practical training / report on practical course / project report / report on technical course (approx. 10 pages) and a) written examination (approx. 90 minutes) or b) presentation (approx. 30 minutes) | | | | | | |
| 03-SP3A2-101-m01 | Microsystems for biological and medicinal Applications | | | | | | | |
| | ECTS | 5 | Duration | 1 semester | Method of grading | numerical grade | Modul level | graduate |
| | Courses | V + Ü + P (no information on SWS (weekly contact hours) and course language available) | | | | | | |
| | Method of assessment | placement report / fieldwork report / report on practical training / report on practical course / project report / report on technical course (approx. 10 pages) and a) written examination (approx. 90 minutes) or b) presentation (approx. 30 minutes) | | | | | | |
| o8-EEW-101-m01 | Electrochemical Energy Storage and Conversion | | | | | | | |
| | ECTS | 5 | Duration | 1 semester | Method of grading | numerical grade | Modul level | graduate |
| | Courses | V + P + E (no information on SWS (weekly contact hours) and course language available) | | | | | | |
| | Method of assessment | written examination (90 minutes) and lab report (approx. 5 pages) | | | | | | |

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| o8-MW-101-m01 | Structure and Properties of Modern Materials: Experiments and Simulations | | | | | | | |
| | ECTS | 5 | Duration | 1 semester | Method of grading | numerical grade | Modul level | graduate |
| | Courses | V + S (no information on SWS (weekly contact hours) and course language available) | | | | | | |
| | Method of assessment | talk (approx. 45 minutes) | | | | | | |
| o8-OCM-FM-101-m01 | Organic Functional Materials | | | | | | | |
| | ECTS | 5 | Duration | 1 semester | Method of grading | numerical grade | Modul level | graduate |
| | Courses | V (no information on SWS (weekly contact hours) and course language available) | | | | | | |
| | Method of assessment | a) 1 to 3 written examinations (1 written examination: 90 minutes; 2 written examinations: 60 or 90 minutes each; 3 written examinations: 60 minutes each) or b) oral examination in groups (groups of 2, approx. 30 minutes) | | | | | | |
| 10-M-FAN-072-m01 | Introduction to Functional Analysis | | | | | | | |
| | ECTS | 5 | Duration | 1 semester | Method of grading | numerical grade | Modul level | undergraduate |
| | Courses | V + Ü (no information on SWS (weekly contact hours) and course language available) | | | | | | |
| | Method of assessment | written examination (approx. 90 minutes); if announced by the lecturer, the written examination can be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups (groups of 2, approx. 30 minutes) Language of assessment: German, English if agreed upon with the examiner | | | | | | |
| | other prerequisites | Certain prerequisites must be met to qualify for admission to assessment. The lecturer will inform students about the respective details at the beginning of the course. Registration for the course will be considered a declaration of will to seek admission to assessment. If students have obtained the qualification for admission to assessment over the course of the semester, the lecturer will put their registration for assessment into effect. Students who meet all prerequisites will be admitted to assessment in the current or in the subsequent semester. For assessment at a later date, students will have to obtain the qualification for admission to assessment anew. | | | | | | |
| | Referred to in LPO I | § 73 (1) 1. Mathematik Analysis | | | | | | |
| 10-M-NM1-o82-m01 | Numerical Mathematics 1 | | | | | | | |
| | ECTS | 8 | Duration | 1 semester | Method of grading | numerical grade | Modul level | undergraduate |
| | Courses | V + Ü (no information on SWS (weekly contact hours) and course language available) | | | | | | |
| | Method of assessment | written examination (approx. 90 minutes); if announced by the lecturer, the written examination can be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups (groups of 2, approx. 30 minutes) Language of assessment: German, English if agreed upon with the examiner | | | | | | |
| | other prerequisites | Certain prerequisites must be met to qualify for admission to assessment. The lecturer will inform students about the respective details at the beginning of the course. Registration for the course will be considered a declaration of will to seek admission to assessment. If students have obtained the qualification for admission to assessment over the course of the semester, the lecturer will put their registration for assessment into effect. Students who meet all prerequisites will be admitted to assessment in the current or in the subsequent semester. For assessment at a later date, students will have to obtain the qualification for admission to assessment anew. | | | | | | |
| | Referred to in LPO I | § 73 (1) 5. Mathematik Angewandte Mathematik | | | | | | |

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| 10-M-NM2-082-mo1 | Numerical Mathematics 2 | | | | | | | |
| | ECTS | 5 | Duration | 1 semester | Method of grading | numerical grade | Modul level | undergraduate |
| | Courses | V + Ü (no information on SWS (weekly contact hours) and course language available) | | | | | | |
| | Method of assessment | written examination (approx. 90 minutes); if announced by the lecturer, the written examination can be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups (groups of 2, approx. 30 minutes) Language of assessment: German, English if agreed upon with the examiner | | | | | | |
| | other prerequisites | Certain prerequisites must be met to qualify for admission to assessment. The lecturer will inform students about the respective details at the beginning of the course. Registration for the course will be considered a declaration of will to seek admission to assessment. If students have obtained the qualification for admission to assessment over the course of the semester, the lecturer will put their registration for assessment into effect. Students who meet all prerequisites will be admitted to assessment in the current or in the subsequent semester. For assessment at a later date, students will have to obtain the qualification for admission to assessment anew. | | | | | | |
| Referred to in LPO I | § 73 (1) 5. Mathematik Angewandte Mathematik | | | | | | | |
| 10-M-PRG-082-mo1 | Programming course for students of Mathematics and other subjects | | | | | | | |
| | ECTS | 3 | Duration | 1 semester | Method of grading | (not) successfully completed | Modul level | undergraduate |
| | Courses | P (no information on SWS (weekly contact hours) and course language available) | | | | | | |
| | Method of assessment | project in the form of programming exercises (as specified at the beginning of the course) Language of assessment: German, English if agreed upon with the examiner | | | | | | |
| | other prerequisites | Admission prerequisite to assessment: regular attendance (attendance monitored, a maximum of one incident of unexcused absence). | | | | | | |
| Referred to in LPO I | § 73 (1) 5. Mathematik Angewandte Mathematik | | | | | | | |
| 10-M-COM-082-mo1 | Computeroriented Mathematics | | | | | | | |
| | ECTS | 3 | Duration | 1 semester | Method of grading | (not) successfully completed | Modul level | undergraduate |
| | Courses | V + Ü (no information on SWS (weekly contact hours) and course language available) | | | | | | |
| | Method of assessment | project in the form of programming exercises (as specified at the beginning of the course) Assessment offered: once a year, summer semester Language of assessment: German, English if agreed upon with the examiner | | | | | | |
| | other prerequisites | Admission prerequisite to assessment: regular attendance of exercises (attendance monitored, a maximum of one incident of unexcused absence). | | | | | | |
| Referred to in LPO I | § 73 (1) 5. Mathematik Angewandte Mathematik | | | | | | | |
| o8-PCM5-102-mo1 | Physical chemistry of supramolecular assemblies | | | | | | | |
| | ECTS | 5 | Duration | 1 semester | Method of grading | numerical grade | Modul level | graduate |
| | Courses | S + Ü (no information on SWS (weekly contact hours) and course language available) | | | | | | |
| Method of assessment | written examination (90 minutes) and/or oral examination of one candidate each (20 minutes) and/or talk (30 minutes) Language of assessment: German or English | | | | | | | |

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| 11-HNS-092-m01 | Semiconductor Nanostructures | | | | | | | |
| | ECTS | 6 | Duration | 1 semester | Method of grading | numerical grade | Modul level | graduate |
| | Courses | R + V (no information on SWS (weekly contact hours) and course language available) | | | | | | |
| | Method of assessment | <p>a) written examination (approx. 90 minutes) or b) oral examination of one candidate each or oral examination in groups (approx. 30 minutes per candidate, for modules with less than 4 ECTS credits approx. 20 minutes) or c) project report (approx. 8 to 10 pages, time to complete: 1 to 4 weeks) or d) presentation/seminar presentation (approx. 30 minutes)</p> <p>Assessment offered: When and how often assessment will be offered depends on the method of assessment and will be announced in due form under observance of Section 32 Subsection 3 ASPO (general academic and examination regulations) 2009.</p> <p>Language of assessment: German, English</p> | | | | | | |
| other prerequisites | <p>Certain prerequisites must be met to qualify for admission to assessment. The lecturer will inform students about the respective details at the beginning of the course. Registration for the course will be considered a declaration of will to seek admission to assessment. If students have obtained the qualification for admission to assessment over the course of the semester, the lecturer will put their registration for assessment into effect. Students who meet all prerequisites will be admitted to assessment in the current or in the subsequent semester. For assessment at a later date, students will have to obtain the qualification for admission to assessment anew.</p> | | | | | | | |
| 11-QTH-102-m01 | Quantum Transport in Semiconductor Nanostructures | | | | | | | |
| | ECTS | 6 | Duration | 1 semester | Method of grading | numerical grade | Modul level | graduate |
| | Courses | V + R (no information on SWS (weekly contact hours) and course language available) | | | | | | |
| | Method of assessment | <p>a) written examination (approx. 90 minutes) or b) oral examination of one candidate each or oral examination in groups (approx. 30 minutes per candidate, for modules with less than 4 ECTS credits approx. 20 minutes) or c) project report (approx. 8 to 10 pages, time to complete: 1 to 4 weeks) or d) presentation/seminar presentation (approx. 30 minutes)</p> <p>Assessment offered: When and how often assessment will be offered depends on the method of assessment and will be announced in due form under observance of Section 32 Subsection 3 ASPO (general academic and examination regulations) 2009.</p> <p>Language of assessment: German, English</p> | | | | | | |
| other prerequisites | <p>Certain prerequisites must be met to qualify for admission to assessment. The lecturer will inform students about the respective details at the beginning of the course. Registration for the course will be considered a declaration of will to seek admission to assessment. If students have obtained the qualification for admission to assessment over the course of the semester, the lecturer will put their registration for assessment into effect. Students who meet all prerequisites will be admitted to assessment in the current or in the subsequent semester. For assessment at a later date, students will have to obtain the qualification for admission to assessment anew.</p> | | | | | | | |
| 03-PM2-122-m01 | Polymers II | | | | | | | |
| | ECTS | 5 | Duration | 1 semester | Method of grading | numerical grade | Modul level | graduate |
| | Courses | S + Ü (no information on SWS (weekly contact hours) and course language available) | | | | | | |
| Method of assessment | <p>a) written examination (approx. 90 minutes) or b) oral examination of one candidate each (20 minutes) or c) talk (30 minutes)</p> <p>Language of assessment: German or English</p> | | | | | | | |

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| o8-NT-122-m01 | Chemically and bio-inspired Nanotechnology for Material Synthesis | | | | | | | |
| | ECTS | 5 | Duration | 1 semester | Method of grading | numerical grade | Modul level | graduate |
| | Courses | This module comprises 2 module components. Information on courses will be listed separately for each module component. <ul style="list-style-type: none"> o8-NT-1-122: V (no information on SWS (weekly contact hours) and course language available) o8-NT-2-122: V (no information on SWS (weekly contact hours) and course language available) | | | | | | |
| Method of assessment | Assessment in this module comprises the assessments in the individual module components as specified below. Unless stated otherwise, successful completion of the module will require successful completion of all individual assessments. <p>Assessment in module component o8-NT-1-122: Sol-Gel Chemistry 1: Fundamentals</p> <ul style="list-style-type: none"> 2 ECTS, Method of grading: numerical grade a) written examination (approx. 45 minutes) or b) oral examination of one candidate each (approx. 20 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes) <p>Assessment in module component o8-NT-2-122: From Biomineralisation to biologically inspired Materials Synthesis</p> <ul style="list-style-type: none"> 3 ECTS, Method of grading: numerical grade a) written examination (approx. 45 minutes) or b) oral examination of one candidate each (approx. 20 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes) | | | | | | | |
| Focus (30 ECTS credits) | | | | | | | | |
| All modules that are taken must come from the same focus subject (either A or B). | | | | | | | | |
| Focus Subject A: Biocompatible materials (30 ECTS credits) | | | | | | | | |
| 03-SP1A1-101-m01 | Basic principles of cell biology and tissue regeneration | | | | | | | |
| | ECTS | 5 | Duration | 1 semester | Method of grading | numerical grade | Modul level | graduate |
| | Courses | V + Ü + P (no information on SWS (weekly contact hours) and course language available) | | | | | | |
| Method of assessment | placement report / fieldwork report / report on practical training / report on practical course / project report / report on technical course (approx. 10 pages) and a) written examination (approx. 90 minutes) or b) presentation (approx. 30 minutes) | | | | | | | |
| 03-SP1A2-101-m01 | Fundamentals of Tissue Engineering and Quality Management | | | | | | | |
| | ECTS | 5 | Duration | 1 semester | Method of grading | numerical grade | Modul level | graduate |
| | Courses | V + Ü + P (no information on SWS (weekly contact hours) and course language available) | | | | | | |
| Method of assessment | placement report / fieldwork report / report on practical training / report on practical course / project report / report on technical course (approx. 10 pages) and a) written examination (approx. 90 minutes) or b) presentation (approx. 30 minutes) | | | | | | | |
| 03-SP2A1-101-m01 | Materials used for surgical implants | | | | | | | |
| | ECTS | 5 | Duration | 1 semester | Method of grading | numerical grade | Modul level | graduate |
| | Courses | V + Ü + P (no information on SWS (weekly contact hours) and course language available) | | | | | | |
| Method of assessment | placement report / fieldwork report / report on practical training / report on practical course / project report / report on technical course (approx. 10 pages) and a) written examination (approx. 90 minutes) or b) presentation (approx. 30 minutes) | | | | | | | |
| 03-SP2A2-101-m01 | Materials for biosensors, tissue engineering and tissue regeneration | | | | | | | |
| | ECTS | 5 | Duration | 1 semester | Method of grading | numerical grade | Modul level | graduate |
| | Courses | V + Ü + P (no information on SWS (weekly contact hours) and course language available) | | | | | | |
| Method of assessment | placement report / fieldwork report / report on practical training / report on practical course / project report / report on technical course (approx. 10 pages) and a) written examination (approx. 90 minutes) or b) presentation (approx. 30 minutes) | | | | | | | |

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| 03-SP3A1-101-m01 | Carrier materials and devices for therapeutic compounds | | | | | | | |
| | ECTS | 5 | Duration | 1 semester | Method of grading | numerical grade | Modul level | graduate |
| | Courses | V + Ü + P (no information on SWS (weekly contact hours) and course language available) | | | | | | |
| | Method of assessment | placement report / fieldwork report / report on practical training / report on practical course / project report / report on technical course (approx. 10 pages) and a) written examination (approx. 90 minutes) or b) presentation (approx. 30 minutes) | | | | | | |
| 03-SP3A2-101-m01 | Microsystems for biological and medicinal Applications | | | | | | | |
| | ECTS | 5 | Duration | 1 semester | Method of grading | numerical grade | Modul level | graduate |
| | Courses | V + Ü + P (no information on SWS (weekly contact hours) and course language available) | | | | | | |
| | Method of assessment | placement report / fieldwork report / report on practical training / report on practical course / project report / report on technical course (approx. 10 pages) and a) written examination (approx. 90 minutes) or b) presentation (approx. 30 minutes) | | | | | | |
| Focus Subject B: Technical functional materials (30 ECTS credits) | | | | | | | | |
| 11-NM-WP-072-m01 | Nanomatrix insulation systems and photovoltaics | | | | | | | |
| | ECTS | 6 | Duration | 1 semester | Method of grading | numerical grade | Modul level | undergraduate |
| | Courses | V + R (no information on SWS (weekly contact hours) and course language available) | | | | | | |
| | Method of assessment | a) written examination (approx. 90 minutes) or b) talk (approx. 30 minutes) or c) oral examination of one candidate each or oral examination in groups (approx. 30 minutes) or d) project report (approx. 10 pages) | | | | | | |
| 11-NM-HM-072-m01 | Nanomatrix semiconductor materials | | | | | | | |
| | ECTS | 6 | Duration | 1 semester | Method of grading | numerical grade | Modul level | undergraduate |
| | Courses | V + R (no information on SWS (weekly contact hours) and course language available) | | | | | | |
| | Method of assessment | a) written examination (approx. 90 minutes) or b) talk (approx. 30 minutes) or c) oral examination of one candidate each or oral examination in groups (approx. 30 minutes) or d) project report (approx. 10 pages) | | | | | | |
| 08-IOC4-092-m01 | Organic Chemistry for students of engineering | | | | | | | |
| | ECTS | 5 | Duration | 1 semester | Method of grading | numerical grade | Modul level | undergraduate |
| | Courses | V + Ü (no information on SWS (weekly contact hours) and course language available) | | | | | | |
| | Method of assessment | written examination (90 minutes) | | | | | | |
| | other prerequisites | Registration for assessment: Yes, as specified. | | | | | | |

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| 11-OHL-092-m01 | Organic Semiconductor | | | | | | | |
| | ECTS | 5 | Duration | 1 semester | Method of grading | numerical grade | Modul level | graduate |
| | Courses | V + Ü (no information on SWS (weekly contact hours) and course language available) | | | | | | |
| | Method of assessment | a) written examination (approx. 90 minutes) or b) oral examination of one candidate each or oral examination in groups (approx. 30 minutes per candidate, for modules with less than 4 ECTS credits approx. 20 minutes) or c) project report (approx. 10 pages, time to complete: 1 to 4 weeks) or d) presentation/seminar presentation (approx. 30 minutes) | | | | | | |
| other prerequisites | Admission prerequisite to assessment: successful completion of approx. 50% of exercises. Certain prerequisites must be met to qualify for admission to assessment. The lecturer will inform students about the respective details at the beginning of the course. Registration for the course will be considered a declaration of will to seek admission to assessment. If students have obtained the qualification for admission to assessment over the course of the semester, the lecturer will put their registration for assessment into effect. Students who meet all prerequisites will be admitted to assessment in the current or in the subsequent semester. For assessment at a later date, students will have to obtain the qualification for admission to assessment anew. | | | | | | | |
| o8-PW1-092-m01 | Polymeric Materials 1: Technology of Modifying Polymers | | | | | | | |
| | ECTS | 5 | Duration | 1 semester | Method of grading | numerical grade | Modul level | graduate |
| | Courses | V + P (no information on SWS (weekly contact hours) and course language available) | | | | | | |
| | Method of assessment | written examination (90 minutes) | | | | | | |
| o8-PW2-092-m01 | Polymeric Materials 2: Technology of Modifying Fillers for Polymers | | | | | | | |
| | ECTS | 5 | Duration | 1 semester | Method of grading | numerical grade | Modul level | graduate |
| | Courses | V + P (no information on SWS (weekly contact hours) and course language available) | | | | | | |
| | Method of assessment | written examination (90 minutes) | | | | | | |
| o8-EEW-101-m01 | Electrochemical Energy Storage and Conversion | | | | | | | |
| | ECTS | 5 | Duration | 1 semester | Method of grading | numerical grade | Modul level | graduate |
| | Courses | V + P + E (no information on SWS (weekly contact hours) and course language available) | | | | | | |
| | Method of assessment | written examination (90 minutes) and lab report (approx. 5 pages) | | | | | | |
| o8-MW-101-m01 | Structure and Properties of Modern Materials: Experiments and Simulations | | | | | | | |
| | ECTS | 5 | Duration | 1 semester | Method of grading | numerical grade | Modul level | graduate |
| | Courses | V + S (no information on SWS (weekly contact hours) and course language available) | | | | | | |
| | Method of assessment | talk (approx. 45 minutes) | | | | | | |
| o8-OCM-FM-101-m01 | Organic Functional Materials | | | | | | | |
| | ECTS | 5 | Duration | 1 semester | Method of grading | numerical grade | Modul level | graduate |
| | Courses | V (no information on SWS (weekly contact hours) and course language available) | | | | | | |
| | Method of assessment | a) 1 to 3 written examinations (1 written examination: 90 minutes; 2 written examinations: 60 or 90 minutes each; 3 written examinations: 60 minutes each) or b) oral examination in groups (groups of 2, approx. 30 minutes) | | | | | | |

| Thesis (25 ECTS credits) | | | | | | | | |
|--------------------------|----------------------|---|----------|------------|-------------------|-----------------|-------------|----------|
| o8-MT-TF-092-m01 | Master-Thesis | | | | | | | |
| | ECTS | 25 | Duration | 1 semester | Method of grading | numerical grade | Modul level | graduate |
| | Courses | no courses assigned | | | | | | |
| | Method of assessment | written thesis Language of assessment: German, English | | | | | | |
| | other prerequisites | Registration for assessment on a continuous basis as agreed upon with supervisor. | | | | | | |