

Annex SFB

Studienfachbeschreibung (subject description, SFB) for the subject Physics as a Bachelor's with 1 major with the degree "Bachelor of Science" (180 ECTS credits)

Responsible: Faculty of Physics and Astronomy

Examination regulations version: 2008

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)):

3-Sep-2009 (2009-29)

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:

| 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 (140 ECTS credits) | | | | | | | | |
|--|--|--|----------|------------|-------------------|-----------------|-------------|---------------|
| Experimental Physics (46 ECTS credits) | | | | | | | | |
| 11-E1-072-m01 | Experimental Physics 1 (Mechanics, Thermodynamics, Waves and Oscillations) | | | | | | | |
| | 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. 120 minutes) | | | | | | |
| 11-E2-072-m01 | Experimental Physics 2 (Electrics and Magnetism) | | | | | | | |
| | 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. 120 minutes) | | | | | | |
| 11-E3-072-m01 | Experimental Physics 3 (Optics, Quantum Phenomena, Introduction Atomic Physics) | | | | | | | |
| | 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. 120 minutes) | | | | | | |
| 11-E6-072-m01 | Nuclear and Elementary Particle Physics | | | | | | | |
| | ECTS | 4 | 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) | | | | | | |
| 11-E7-072-m01 | Experimental Physics 7 (Solid State Phenomena [Semiconductor, Superconductivity, Magnetism]) | | | | | | | |
| | ECTS | 4 | 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) | | | | | | |
| 11-E5-082-m01 | Experimental Physics 5 (Introduction to Solid State Physics) | | | | | | | |
| | 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. 120 minutes) | | | | | | |
| 11-E4-082-m01 | Experimental Physics 4 (Physics of Atoms and Molecules) | | | | | | | |
| | 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) | | | | | | |
| Theoretical Physics (32 ECTS credits) | | | | | | | | |
| 11-T1-072-m01 | Theoretical Physics 1 (Theoretical Mechanics) | | | | | | | |
| | 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. 120 minutes) | | | | | | |

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|----------------|---|---|--|------------|-------------------|-----------------|-------------|---------------|
| 11-T2-072-m01 | Theoretical Physics 2 (Theoretical Electrostatics and Elektrodynamics) | | | | | | | |
| | 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. 120 minutes) | | | | | |
| 11-T3-072-m01 | Theoretical Physics 3 (Theoretical Quantum Mechanics) | | | | | | | |
| | 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. 120 minutes) | | | | | |
| 11-T3F-072-m01 | Theoretical Physics 3 FOKUS (Theoretical Quantum Mechanics) | | | | | | | |
| | 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. 120 minutes) | | | | | |
| 11-T4-072-m01 | Theoretical Physics 4 (Theoretical Thermodynamics and Statistics) | | | | | | | |
| | 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. 120 minutes) | | | | | |

| Lab Course Physics (16 ECTS credits) | | | | | | | | |
|--------------------------------------|---|---|----------|------------|-------------------|------------------------------|-------------|---------------|
| 11-PGA-PGR-072-m01 | Basic Practical Course B for Students of Physics (Bachelor of Science and Teaching Degree) | | | | | | | |
| | ECTS | 6 | Duration | 1 semester | Method of grading | (not) successfully completed | Modul level | undergraduate |
| | Courses | Beispiele aus Mechanik, Wärmelehre und Elektrizität (Examples from Mechanics, Thermodynamics and Electricity, BAM): P (2 weekly contact hours) Klassische Physik (Classical Physics, KLP): P (2 weekly contact hours) Elektrizitätslehre und Schaltungen (Electricity and Circuits, ELS): P (2 weekly contact hours) | | | | | | |
| | Method of assessment | This module has the following assessment components 1. Lab course in part 1: a) Preparing, performing and evaluating the experiments will be considered successfully completed if a Testat (exam) is passed. b) Talk (with discussion) to test the students' understanding of the physics-related contents of the course (approx. 30 minutes). 2. Lab course in part 2: a) Preparing, performing and evaluating the experiments will be considered successfully completed if a Testat (exam) is passed. b) Talk (with discussion) to test the students' understanding of the physics-related contents of the course (approx. 30 minutes). 3. Lab course in part 3: a) Preparing, performing and evaluating the experiments will be considered successfully completed if a Testat (exam) is passed. b) Talk (with discussion) to test the students' understanding of the physics-related contents of the course (approx. 30 minutes). Students must register for assessment components 1 through 3 online (registration deadline to be announced). Students will be offered one opportunity to retake element a) and/or element b). To pass an assessment component, they must pass both elements a) and b). To pass this module, students must successfully complete each of the three courses. To pass this module, students must pass each of the assessment components 1 through 3. To pass this module, students must successfully complete two out of the three courses. | | | | | | |
| | other prerequisites | Recommended: 11-PFR | | | | | | |

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|--------------------|--|---|----------|------------|-------------------|------------------------------|-------------|---------------|
| 11-PGB-PGN-072-m01 | Advanced Undergraduate Laboratory (Atomic Physics, Nuclear Physics, Basic Semiconductor Circuits) | | | | | | | |
| | ECTS | 4 | Duration | 1 semester | Method of grading | (not) successfully completed | Modul level | undergraduate |
| | Courses | Wellenoptik (Physical Optics, WOP): P (2 weekly contact hours) Atom- und Kernphysik (Atomic and Nuclear Physics, AKP): P (2 weekly contact hours) Computer und Messtechnik (Computers and Measurement Technology, CMT): P (2 weekly contact hours) | | | | | | |
| | Method of assessment | This module has the following assessment components 1. Lab course in part 1: a) Preparing, performing and evaluating the experiments will be considered successfully completed if a Testat (exam) is passed. b) Talk (with discussion) to test the students' understanding of the physics-related contents of the course (approx. 30 minutes). 2. Lab course in part 2: a) Preparing, performing and evaluating the experiments will be considered successfully completed if a Testat (exam) is passed. b) Talk (with discussion) to test the students' understanding of the physics-related contents of the course (approx. 30 minutes). Students must register for assessment components 1 and 2 online (registration deadline to be announced). Students will be offered one opportunity to retake element a) and/or element b). To pass an assessment component, they must pass both elements a) and b). To pass this module, students must successfully complete two out of the three courses. To pass this module, students must pass both assessment component 1 and assessment component 2. | | | | | | |
| | Modules successfully completed | 11-PFR | | | | | | |
| | other prerequisites | Recommended: 11-PGA-PGR | | | | | | |
| 11-PFB-072-m01 | Advanced Practical Course Bachelor | | | | | | | |
| | ECTS | 4 | Duration | 1 semester | Method of grading | (not) successfully completed | Modul level | undergraduate |
| | Courses | Fortgeschrittenen-Praktikum Bachelor Theorie (Advanced Practical Course Bachelor Theory): S (1 weekly contact hour) Fortgeschrittenen-Praktikum Bachelor Praxis (Advanced Practical Course Bachelor Practice): P (3 weekly contact hours) | | | | | | |
| | Method of assessment | This module has the following assessment components 1. Seminar: talk (with discussion) demonstrating the students' understanding of the physics-related aspects of the experiments to be prepared (approx. 30 minutes) 2. Lab course: Preparing, performing and evaluating the experiments will be considered successfully completed if a Testat (exam) is passed. Students must prepare an experiment log (8 to 10 pages). Students must register for assessment components 1 and 2 online (details to be announced). To pass this module, students must pass both assessment component 1 and assessment component 2. | | | | | | |
| | Modules successfully completed | 11-E1, 11-E2 | | | | | | |
| | other prerequisites | 11-A3 | | | | | | |
| 11-PHS-072-m01 | Main Seminar Experimental / Theoretical Physics | | | | | | | |
| | ECTS | 2 | Duration | 1 semester | Method of grading | numerical grade | Modul level | undergraduate |
| | Courses | S (no information on SWS (weekly contact hours) and course language available) | | | | | | |
| | Method of assessment | talk (approx. 30 to 45 minutes) with discussion | | | | | | |

| Mathematics (34 ECTS credits) | | | | | | | | |
|--|---|---|----------|------------|-------------------|-----------------|-------------|---------------|
| 11-MPI3-062-m01 | Mathematics 3 for students of Physics and Engineering | | | | | | | |
| | 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. 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. | | | | | | |
| 10-M-PHY1-072-m01 | Mathematics for Physicists 1 | | | | | | | |
| | ECTS | 10 | 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) | | | | | | |
| 10-M-PHY2-072-m01 | Mathematics for Physicists 2 | | | | | | | |
| | 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 (90 minutes) | | | | | | |
| 11-MPI4-062-m01 | Mathematics 4 for Students of Physics and Engineering | | | | | | | |
| | 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. 120 minutes) | | | | | | |
| Module Comprehensive Tests (12 ECTS credits) | | | | | | | | |
| 11-PREP-072-m01 | Oral Exam Experimental Physics (Physicists) | | | | | | | |
| | ECTS | 6 | Duration | 1 semester | Method of grading | numerical grade | Modul level | undergraduate |
| | Courses | A (no information on SWS (weekly contact hours) and course language available) | | | | | | |
| | Method of assessment | oral examination of one candidate each (approx. 30 minutes) | | | | | | |
| 11-PRT-072-m01 | Oral Exam Theoretical Physics | | | | | | | |
| | ECTS | 6 | Duration | 1 semester | Method of grading | numerical grade | Modul level | undergraduate |
| | Courses | A (no information on SWS (weekly contact hours) and course language available) | | | | | | |
| | Method of assessment | oral examination of one candidate each (approx. 30 minutes) | | | | | | |

| Compulsory Electives (10 ECTS credits) | | | | | | | | |
|--|--|---|---|------------|-------------------|-----------------|-------------|---------------|
| Chemistry (10 ECTS credits) | | | | | | | | |
| o8-CP1-072-m01 | General Chemistry for Physics and Engineers | | | | | | | |
| | ECTS | 10 | Duration | 1 semester | Method of grading | numerical grade | Modul level | undergraduate |
| | Courses | | This module comprises 3 module components. Information on courses will be listed separately for each module component. <ul style="list-style-type: none">o8-IOC-1-072: V (no information on SWS (weekly contact hours) and course language available)o8-CP1-1-072: V (no information on SWS (weekly contact hours) and course language available)o8-CP1-3-072: P (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. Assessment in module component o8-IOC-1-072: Organic Chemistry for students of medicine, biomedicine, dental medicine, engineering and natural science <ul style="list-style-type: none">3 ECTS, Method of grading: numerical gradewritten examination (approx. 60 minutes) Assessment in module component o8-CP1-1-072: Basics of General an Inorganic Chemistry <ul style="list-style-type: none">5 ECTS, Method of grading: numerical gradewritten examination (60 minutes) Assessment in module component o8-CP1-3-072: General and Analytical Chemistry (lab) <ul style="list-style-type: none">2 ECTS, Method of grading: (not) successfully completedfor each experiment: Vortestate (pre-experiment exams, approx. 10 minutes each), assessment of practical performance (log, 2 to 5 pages), Nachtestate (post-experiment exams, approx. 10 minutes each)Assessment offered: once a year, summer semesterOnly after successful completion of module components: Successful completion of module component o8-CP1-1 is a prerequisite for participation in module component o8-CP1-3. | | | | | |
| Computer Science (10 ECTS credits) | | | | | | | | |
| 10-I-EIN-072-m01 | Introduction to Computer Science for Students of all Faculties | | | | | | | |
| | ECTS | 10 | Duration | 1 semester | Method of grading | numerical grade | Modul level | undergraduate |
| | Courses | | V + Ü + 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 (approx. 20 minutes) or c) oral examination in groups (groups of 2: 30 minutes, groups of 3: 40 minutes) | | | | | |
| other prerequisites | | Admission prerequisite to assessment: academic requirements to be met in exercises as specified at the beginning of the course. | | | | | | |

| Numerical Mathematics (10 ECTS credits) | | | | | | | | |
|---|---------------------------------|--|----------|------------|-------------------|-----------------|-------------|---------------|
| 10-M-ODE-o82-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. | | | | | | |
| 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 | | | | | | |
| 10-M-NM2-o82-m01 | 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 | | | | | | |

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|---|---|--|----------|------------|-------------------|------------------------------|-------------|---------------|
| 10-M-PRG-o82-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-o82-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 | | | | | | |
| Thesis (10 ECTS credits) | | | | | | | | |
| 11-BA-P-072-mo1 | Bachelor Thesis Physics | | | | | | | |
| | ECTS | 10 | Duration | 1 semester | Method of grading | numerical grade | Modul level | undergraduate |
| | Courses | no courses assigned | | | | | | |
| | Method of assessment | written thesis (approx. 25 pages) Language of assessment: German or English | | | | | | |
| Subject-specific Key Skills (14 ECTS credits) | | | | | | | | |
| 11-PFR-072-mo1 | Measurements and Data Analysis | | | | | | | |
| | ECTS | 2 | 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) | | | | | | |
| 11-A1-072-mo1 | Computational Physics | | | | | | | |
| | 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) | | | | | | |

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|----------------|--|---|----------|------------|-------------------|------------------------------|-------------|---------------|
| 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-A4-072-m01 | Astrophysics | | | | | | | |
| | ECTS | 6 | Duration | 1 semester | Method of grading | numerical grade | Modul level | undergraduate |
| | Courses | V + S (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-N1-072-m01 | Basics of NanostructureTechnology | | | | | | | |
| | ECTS | 6 | Duration | 1 semester | Method of grading | numerical grade | Modul level | undergraduate |
| | Courses | V + S (no information on SWS (weekly contact hours) and course language available) | | | | | | |
| | Method of assessment | written examination (approx. 90 minutes) | | | | | | |
| 11-A2-081-m01 | Electronics | | | | | | | |
| | 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. 90 minutes) | | | | | | |
| 11-MKS-082-m01 | Introduction Course Mathematics | | | | | | | |
| | ECTS | 3 | Duration | 1 semester | Method of grading | (not) successfully completed | Modul level | undergraduate |
| | Courses | V (no information on SWS (weekly contact hours) and course language available) | | | | | | |
| | Method of assessment | written examination (approx. 120 minutes) | | | | | | |