

## Annex SFB

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

Responsible: Faculty of Physics and Astronomy

Examination regulations version: 2020

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:

**ASPO2015**

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

**06-Feb-2020 (2020-16)**

**09-Jun-2021 (2021-63)**

**06-Sep-2022 (2022-55)**

**12-Jun-2024 (2024-75)**

**14-Nov-2024 (2024-97)**

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	<b>Module title</b>						
	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)				

Electives Field (60 ECTS credits)							
Subfield Physics (55 ECTS credits)							
Advanced Laboratory Courses (9 ECTS credits)							
11-P-FM1-Int-201-m01	<b>Advanced Laboratory Course Master Part 1</b>						
	ECTS	3	Duration	1 semester	Method of grading	(not) successfully completed	Modul level   graduate
	Courses	P (3) Module taught in: English					
	Method of assessment	practical examination Students must successfully prepare, perform, document (lab notebook) and evaluate (in the form of a scientific publication) an experiment to be considered to have successfully completed this experiment. Students must successfully complete two experiments to be considered to have successfully completed this module. Detailed regulations are laid down in the respective module description. Language of assessment: English					
	other prerequisites	Preparation and safety briefing.					
11-P-FM2-Int-201-m01	<b>Advanced Laboratory Course Master Part 2</b>						
	ECTS	3	Duration	1 semester	Method of grading	(not) successfully completed	Modul level   graduate
	Courses	P (3) Module taught in: English					
	Method of assessment	practical examination Students must successfully prepare, perform, document (lab notebook) and evaluate (in the form of a scientific publication) an experiment to be considered to have successfully completed this experiment. Students must successfully complete two experiments to be considered to have successfully completed this module. Detailed regulations are laid down in the respective module description. Language of assessment: English					
	other prerequisites	Preparation and safety briefing.					
11-P-FM3-Int-201-m01	<b>Advanced Laboratory Course Master Part 3</b>						
	ECTS	3	Duration	1 semester	Method of grading	(not) successfully completed	Modul level   graduate
	Courses	P (3) Module taught in: English					
	Method of assessment	practical examination Students must successfully prepare, perform, document (lab notebook) and evaluate (in the form of a scientific publication) an experiment to be considered to have successfully completed this experiment. Students must successfully complete two experiments to be considered to have successfully completed this module. Detailed regulations are laid down in the respective module description. Language of assessment: English					
	other prerequisites	Preparation and safety briefing.					

11-P-FM4-Int-201-mo1	<b>Advanced Laboratory Course Master Part 4</b>							
	ECTS	3	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	graduate
	Courses	P (3) Module taught in: English						
	Method of assessment	practical examination Students must successfully prepare, perform, document (lab notebook) and evaluate (in the form of a scientific publication) an experiment to be considered to have successfully completed this experiment. Students must successfully complete two experiments to be considered to have successfully completed this module. Detailed regulations are laid down in the respective module description. Language of assessment: English						
other prerequisites	Preparation and safety briefing.							
<b>Advanced Seminar (5 ECTS credits)</b>								
11-OSP-A-Int-201-mo1	<b>Advanced Seminar Physics A</b>							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	S (2) Module taught in: English						
	Method of assessment	talk with discussion (30 to 45 minutes) Language of assessment: English						
11-OSP-B-Int-201-mo1	<b>Advanced Seminar Physics B</b>							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	S (2) Module taught in: English						
	Method of assessment	talk with discussion (30 to 45 minutes) Language of assessment: English						
<b>Experimental Physics (10 ECTS credits)</b>								
11-BSV-Int-201-mo1	<b>Image and Signal Processing in Physics</b>							
	ECTS	6	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (2) + Ü (2) Module taught in: English						
	Method of assessment	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: English Assessment offered: In the semester in which the course is offered and in the subsequent semester						

11-OHL-Int-201-mo1	<b>Organic Semiconductors</b>							
	ECTS	6	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (3) + R (1) Module taught in: English						
Method of assessment	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes) If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: English Assessment offered: In the semester in which the course is offered and in the subsequent semester							
11-PMM-Int-201-mo1	<b>Physics of Advanced Materials</b>							
	ECTS	6	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (3) + R (1) Module taught in: English						
Method of assessment	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: English Assessment offered: In the semester in which the course is offered and in the subsequent semester							
11-SPI-Int-201-mo1	<b>Spintronics</b>							
	ECTS	6	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (3) + R (1) Module taught in: English						
Method of assessment	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: English Assessment offered: In the semester in which the course is offered and in the subsequent semester							

11-FK2-Int-201-m01	<b>Solid State Physics 2</b>							
	ECTS	8	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (4) + R (2) Module taught in: English						
	Method of assessment	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: English Assessment offered: In the semester in which the course is offered and in the subsequent semester						
	other prerequisites	Approval from examination committee required.						
11-FKS-Int-201-m01	<b>Solid State Spectroscopy</b>							
	ECTS	6	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (3) + R (1) Module taught in: English						
	Method of assessment	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: English Assessment offered: In the semester in which the course is offered and in the subsequent semester						
	other prerequisites							

11-MAG-Int-201-mo1	<b>Magnetism</b>							
	ECTS	6	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (3) + R (1) Module taught in: English						
	Method of assessment	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: English Assessment offered: In the semester in which the course is offered and in the subsequent semester						
11-HNS-Int-201-mo1	<b>Optical Properties of Semiconductor Nanostructures</b>							
	ECTS	6	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (3) + R (1) Module taught in: English						
	Method of assessment	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: English Assessment offered: In the semester in which the course is offered and in the subsequent semester						
11-HPH-Int-201-mo1	<b>Semiconductor Physics</b>							
	ECTS	6	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (3) + R (1) Module taught in: English						
	Method of assessment	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: English Assessment offered: In the semester in which the course is offered and in the subsequent semester						

11-QTR-Int-201-m01	<b>Quantum Transport</b>							
	ECTS	6	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (3) + R (1) Module taught in: English						
	Method of assessment	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: English Assessment offered: In the semester in which the course is offered and in the subsequent semester						
11-QIC-Int-201-m01	<b>Advanced Theory of Quantum Computing and Quantum Information</b>							
	ECTS	6	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (3) + R (1) Module taught in: English						
	Method of assessment	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: English Assessment offered: In the semester in which the course is offered and in the subsequent semester						
11-NOP-Int-201-m01	<b>Nano-Optics</b>							
	ECTS	6	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (3) + R (1) Module taught in: English						
	Method of assessment	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: English Assessment offered: In the semester in which the course is offered and in the subsequent semester						



11-PTS-Int-201-mo1	<b>Phenomenology and Theory of Superconductivity</b>							
	ECTS	6	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (3) + R (1) Module taught in: English						
	Method of assessment	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: English Assessment offered: In the semester in which the course is offered and in the subsequent semester						
o8-PCM4-161-mo1	<b>Ultrafast spectroscopy and quantum-control</b>							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	S (2) + Ü (1) Module taught in: German or English						
	Method of assessment	a) written examination (approx. 90 minutes) or b) oral examination of one candidate each (approx. 20 minutes) or c) talk (approx. 30 minutes) Language of assessment: German and/or English						
	other prerequisites	Prior completion of modules o8-PCM1a and o8-PCM1b recommended.						
11-CSFM-Int-201-mo1	<b>Advanced Topics in Solid State Physics</b>							
	ECTS	6	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (3) + R (1) Module taught in: English						
	Method of assessment	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: English						
	other prerequisites	Approval from examination committee required.						

11-ASM-Int-201-m01	<b>Methods of Observational Astronomy</b>							
	ECTS	6	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (3) + R (1) Module taught in: English						
	Method of assessment	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: English Assessment offered: In the semester in which the course is offered and in the subsequent semester						
11-TPE-Int-201-m01	<b>Experimental Particle Physics</b>							
	ECTS	6	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (3) + R (1) Module taught in: English						
	Method of assessment	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: English Assessment offered: In the semester in which the course is offered and in the subsequent semester						
11-ASP-Int-201-m01	<b>Introduction to Space Physics</b>							
	ECTS	6	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (3) + R (1) Module taught in: English						
	Method of assessment	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: English Assessment offered: In the semester in which the course is offered and in the subsequent semester						

11-MAS-Int-201-mo1	<b>Multi-wavelength Astronomy</b>							
	ECTS	6	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (3) + R (1) Module taught in: English						
	Method of assessment	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes) If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: English Assessment offered: In the semester in which the course is offered and in the subsequent semester						
11-CSAM-Int-201-mo1	<b>Advanced Topics in Astrophysics</b>							
	ECTS	6	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (3) + R (1) Module taught in: English						
	Method of assessment	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: English						
	other prerequisites	Approval from examination committee required.						
11-MRI-Int-201-mo1	<b>Advanced Magnetic Resonance Imaging</b>							
	ECTS	6	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (3) + R (1) Module taught in: English						
	Method of assessment	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: English Assessment offered: In the semester in which the course is offered and in the subsequent semester						

11-SSC-Int-201-m01	<b>Surface Science</b>							
	ECTS	6	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (3) + R (1) Module taught in: English						
	Method of assessment	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: English Assessment offered: In the semester in which the course is offered and in the subsequent semester						
11-BIC-Int-201-m01	<b>Basic Imaging Concepts</b>							
	ECTS	6	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (3) + R (1) Module taught in: English						
	Method of assessment	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: English Assessment offered: In the semester in which the course is offered and in the subsequent semester						
11-IRP-Int-201-m01	<b>Basic Imaging Reconstruction and Processing</b>							
	ECTS	6	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (3) + R (1) Module taught in: English						
	Method of assessment	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: English Assessment offered: In the semester in which the course is offered and in the subsequent semester						

11-CAP-Int-201-mo1	<b>Contemporary Astrophysics</b>							
	ECTS	6	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (3) + R (1) Module taught in: English						
	Method of assessment	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: English Assessment offered: In the semester in which the course is offered and in the subsequent semester						
11-AAI-Int-201-mo1	<b>Advanced Astro Imaging</b>							
	ECTS	6	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (3) + R (1) Module taught in: English						
	Method of assessment	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: English Assessment offered: In the semester in which the course is offered and in the subsequent semester						
11-CTA-Int-201-mo1	<b>Advanced Computer Tomography</b>							
	ECTS	6	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (3) + R (1) Module taught in: English						
	Method of assessment	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: English Assessment offered: In the semester in which the course is offered and in the subsequent semester						

11-EIM-Int-201-m01	<b>Electron and Ion Microscopy</b>							
	ECTS	6	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (3) + R (1) Module taught in: English						
	Method of assessment	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes) If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: English Assessment offered: In the semester in which the course is offered and in the subsequent semester						
11-SPT-Int-201-m01	<b>Scanning Probe Technologies</b>							
	ECTS	6	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (3) + R (1) Module taught in: English						
	Method of assessment	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: English Assessment offered: In the semester in which the course is offered and in the subsequent semester						
11-FPA-Int-201-m01	<b>Visiting Research</b>							
	ECTS	10	Duration		Method of grading	numerical grade	Modul level	graduate
	Courses	R (0) Module taught in: English						
	Method of assessment	project report (approx. 10 to 20 pages) Language of assessment: English						
	other prerequisites	Approval from examination committee required.						

11-EXE5-Int-201-m01	<b>Current Topics in Experimental Physics</b>							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (2) + R (2) Module taught in: English						
	Method of assessment	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: English						
	other prerequisites	Approval from examination committee required.						
11-EXE6-Int-201-m01	<b>Current Topics in Experimental Physics</b>							
	ECTS	6	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (3) + R (1) Module taught in: English						
	Method of assessment	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: English						
	other prerequisites	Approval from examination committee required.						
11-EXE7-Int-201-m01	<b>Current Topics in Experimental Physics</b>							
	ECTS	7	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (3) + R (1) Module taught in: English						
	Method of assessment	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: English						
	other prerequisites	Approval from examination committee required.						

11-EXE8-Int-201-mo1	<b>Current Topics in Experimental Physics</b>							
	ECTS	8	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (4) + R (2) Module taught in: English						
	Method of assessment	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: English						
	other prerequisites	Approval from examination committee required.						
11-EXE6A-Int-201-mo1	<b>Current Topics in Experimental Physics</b>							
	ECTS	6	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (3) + R (1) Module taught in: English						
	Method of assessment	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: English						
	other prerequisites	Approval from examination committee required.						
11-EXP6-Int-201-mo1	<b>Current Topics in Physics</b>							
	ECTS	6	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (3) + R (1)						
	Method of assessment	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: English						
	other prerequisites	Approval from examination committee required.						



Theoretical Physics (10 ECTS credits)							
11-QM2-Int-201-m01	<b>Quantum Mechanics II</b>						
	ECTS	8	Duration	1 semester	Method of grading	numerical grade	Modul level   undergraduate
	Courses	V (4) + R (2) Module taught in: English					
	Method of assessment	<p>a) written examination (approx. 90 to 120 minutes) or  b) oral examination of one candidate each (approx. 30 minutes) or  c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or  d) project report (approx. 8 to 10 pages) or  e) presentation/talk (approx. 30 minutes).</p> <p>If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest.</p> <p>Language of assessment: English  Assessment offered: In the semester in which the course is offered and in the subsequent semester</p>					
11-TQO-Int-221-m01	<b>Theoretical Quantum Optics</b>						
	ECTS	8	Duration	1 semester	Method of grading	numerical grade	Modul level   graduate
	Courses	V (4) + R (2) Module taught in: English					
	Method of assessment	<p>a) written examination (approx. 90 to 120 minutes) or  b) oral examination of one candidate each (approx. 30 minutes) or  c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or  d) project report (approx. 8 to 10 pages) or  e) presentation/talk (approx. 30 minutes).</p> <p>If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest.</p> <p>Language of assessment: English  Assessment offered: In the semester in which the course is offered and in the subsequent semester</p>					

11-RTT-Int-201-mo1	<b>Theory of Relativity</b>							
	ECTS	6	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (3) + R (1) Module taught in: English						
	Method of assessment	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: English Assessment offered: In the semester in which the course is offered and in the subsequent semester						
11-RMFT-Int-201-mo1	<b>Renormalization Group Methods in Field Theory</b>							
	ECTS	8	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (4) + R (2) Module taught in: English						
	Method of assessment	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: English Assessment offered: Once a year as announced						
11-PKS-Int-201-mo1	<b>Physics of Complex Systems</b>							
	ECTS	6	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (2) + R (2) Module taught in: English						
	Method of assessment	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: English Assessment offered: In the semester in which the course is offered and in the subsequent semester						

11-QIC-Int-201-mo1	<b>Advanced Theory of Quantum Computing and Quantum Information</b>							
	ECTS	6	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (3) + R (1) Module taught in: English						
	Method of assessment	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: English Assessment offered: In the semester in which the course is offered and in the subsequent semester						
11-TFK-Int-201-mo1	<b>Theoretical Solid State Physics</b>							
	ECTS	8	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (4) + R (2) Module taught in: English						
	Method of assessment	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: English Assessment offered: In the semester in which the course is offered and in the subsequent semester						
11-TFK2-Int-201-mo1	<b>Theoretical Solid State Physics 2</b>							
	ECTS	8	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (4) + R (2) Module taught in: English						
	Method of assessment	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: English Assessment offered: In the semester in which the course is offered and in the subsequent semester						

11-TEFK-Int-201-mo1	<b>Topological Effects in Solid State Physics</b>							
	ECTS	8	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (4) + R (2) Module taught in: English						
	Method of assessment	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: English Assessment offered: In the semester in which the course is offered and in the subsequent semester						
11-FFK-Int-201-mo1	<b>Field Theory in Solid State Physics</b>							
	ECTS	8	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (4) + R (2) Module taught in: English						
	Method of assessment	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: English Assessment offered: In the semester in which the course is offered and in the subsequent semester						
11-AKTF-Int-201-mo1	<b>Selected Topics of Theoretical Solid State Physics</b>							
	ECTS	6	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (3) + R (1) Module taught in: English						
	Method of assessment	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: English Assessment offered: In the semester in which the course is offered and in the subsequent semester						

11-CMS-Int-201-mo1	<b>Computational Materials Science (DFT)</b>							
	ECTS	8	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (4) + R (2) Module taught in: English						
Method of assessment	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: English Assessment offered: In the semester in which the course is offered and in the subsequent semester							
11-KFT-Int-201-mo1	<b>Conformal Field Theory</b>							
	ECTS	6	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (3) + R (1) Module taught in: English						
Method of assessment	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: English Assessment offered: In the semester in which the course is offered and in the subsequent semester							
11-KFT2-Int-201-mo1	<b>Conformal Field Theory 2</b>							
	ECTS	6	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (3) + R (1) Module taught in: English						
Method of assessment	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: English Assessment offered: In the semester in which the course is offered and in the subsequent semester							

11-GRTM-Int-201-mo1	<b>Group Theory</b>							
	ECTS	6	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (3) + R (1) Module taught in: English						
	Method of assessment	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: English Assessment offered: In the semester in which the course is offered and in the subsequent semester						
	other prerequisites	Approval from examination committee required.						
11-TPSM-Int-201-mo1	<b>Particle Physics (Standard Model)</b>							
	ECTS	6	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (3) + R (1) Module taught in: English						
	Method of assessment	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: English Assessment offered: In the semester in which the course is offered and in the subsequent semester						
	other prerequisites	Approval from examination committee required.						

11-CRP-Int-201-mo1	<b>Renormalization Group and Critical Phenomena</b>							
	ECTS	6	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (3) + R (1) Module taught in: English						
	Method of assessment	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: English Assessment offered: In the semester in which the course is offered and in the subsequent semester						
11-BWW-Int-201-mo1	<b>Bosonisation and Interactions in One Dimension</b>							
	ECTS	6	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (3) + R (1) Module taught in: English						
	Method of assessment	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: English Assessment offered: In the semester in which the course is offered and in the subsequent semester						
11-GGD-Int-201-mo1	<b>Introduction to Gauge/Gravity Duality</b>							
	ECTS	8	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (4) + R (2) Module taught in: English						
	Method of assessment	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: English Assessment offered: In the semester in which the course is offered and in the subsequent semester						

11-AKM-Int-201-m01	<b>Cosmology</b>							
	ECTS	6	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (3) + R (1) Module taught in: English						
	Method of assessment	<p>a) written examination (approx. 90 to 120 minutes) or  b) oral examination of one candidate each (approx. 30 minutes) or  c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or  d) project report (approx. 8 to 10 pages) or  e) presentation/talk (approx. 30 minutes).</p> <p>If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest.</p> <p>Language of assessment: English  Assessment offered: In the semester in which the course is offered and in the subsequent semester</p>						
11-AST-Int-201-m01	<b>Theoretical Astrophysics</b>							
	ECTS	6	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (2) + R (2) Module taught in: English						
	Method of assessment	<p>a) written examination (approx. 90 to 120 minutes) or  b) oral examination of one candidate each (approx. 30 minutes) or  c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or  d) project report (approx. 8 to 10 pages) or  e) presentation/talk (approx. 30 minutes).</p> <p>If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest.</p> <p>Language of assessment: English  Assessment offered: In the semester in which the course is offered and in the subsequent semester</p>						
11-EPP-Int-201-m01	<b>Introduction to Plasma Physics</b>							
	ECTS	6	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (2) + R (2) Module taught in: English						
	Method of assessment	<p>a) written examination (approx. 90 to 120 minutes) or  b) oral examination of one candidate each (approx. 30 minutes) or  c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or  d) project report (approx. 8 to 10 pages) or  e) presentation/talk (approx. 30 minutes).</p> <p>If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest.</p> <p>Language of assessment: English  Assessment offered: In the semester in which the course is offered and in the subsequent semester</p>						



11-APL-Int-201-m01	<b>High-Energy Astrophysics</b>							
	ECTS	6	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (3) + R (1) Module taught in: English						
Method of assessment	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: English Assessment offered: In the semester in which the course is offered and in the subsequent semester							
11-NMA-Int-201-m01	<b>Computational Astrophysics</b>							
	ECTS	6	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (3) + R (1) Module taught in: English						
Method of assessment	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: English Assessment offered: In the semester in which the course is offered and in the subsequent semester							

11-QFT1-Int-201-mo1	<b>Quantum Field Theory I</b>							
	ECTS	8	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (4) + R (2) Module taught in: English						
	Method of assessment	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: English Assessment offered: In the semester in which the course is offered and in the subsequent semester						
other prerequisites		Approval from examination committee required.						
11-QFT2-Int-201-mo1	<b>Quantum Field Theory II</b>							
	ECTS	8	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (4) + R (2) Module taught in: English						
	Method of assessment	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: English Assessment offered: In the semester in which the course is offered and in the subsequent semester						

11-TEP-Int-201-m01	<b>Theoretical Elementary Particle Physics</b>							
	ECTS	8	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (4) + R (2) Module taught in: English						
	Method of assessment	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: English Assessment offered: In the semester in which the course is offered and in the subsequent semester						
11-ATTP-Int-201-m01	<b>Selected Topics of Theoretical Elementary Particle Physics</b>							
	ECTS	6	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (3) + R (1) Module taught in: English						
	Method of assessment	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: English Assessment offered: In the semester in which the course is offered and in the subsequent semester						
11-BSM-Int-201-m01	<b>Models Beyond the Standard Model of Elementary Particle Physics</b>							
	ECTS	6	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (3) + R (1) Module taught in: English						
	Method of assessment	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: English Assessment offered: In the semester in which the course is offered and in the subsequent semester						

11-STRG1-Int-201-mo1	<b>String Theory 1</b>							
	ECTS	8	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (4) + R (2) Module taught in: English						
Method of assessment	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: English Assessment offered: In the semester in which the course is offered and in the subsequent semester							
11-STRG2-Int-201-mo1	<b>String Theory 2</b>							
	ECTS	6	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (3) + R (1) Module taught in: English						
Method of assessment	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: English Assessment offered: In the semester in which the course is offered and in the subsequent semester							
11-RAI-Int-211-mo1	<b>Radio Astronomical Interferometry</b>							
	ECTS	6	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (3) + R (1) Module taught in: English						
Method of assessment	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: English Assessment offered: In the semester in which the course is offered and in the subsequent semester							

11-SLQ-Int-241-mo1	<b>Black Holes</b>							
	ECTS	6	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (3) + R (1) Module taught in: English						
	Method of assessment	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: English Assessment offered: In the semester in which the course is offered and in the subsequent semester						
11-TPSM-Int-211-mo1	<b>Particle Physics (Standard Model)</b>							
	ECTS	8	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (4) + R (2) Module taught in: English						
	Method of assessment	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: English Assessment offered: In the semester in which the course is offered and in the subsequent semester						
	other prerequisites	Approval from examination committee required.						
11-FPA-Int-201-mo1	<b>Visiting Research</b>							
	ECTS	10	Duration		Method of grading	numerical grade	Modul level	graduate
	Courses	R (0) Module taught in: English						
	Method of assessment	project report (approx. 10 to 20 pages) Language of assessment: English						
	other prerequisites	Approval from examination committee required.						

11-EXT5-Int-201-mo1	<b>Current Topics of Theoretical Physics</b>							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (2) + R (2) Module taught in: English						
	Method of assessment	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: English						
	other prerequisites	Approval from examination committee required.						
11-EXT6-Int-201-mo1	<b>Current Topics of Theoretical Physics</b>							
	ECTS	6	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (3) + R (1) Module taught in: English						
	Method of assessment	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: English						
	other prerequisites	Approval from examination committee required.						
11-EXT7-Int-201-mo1	<b>Current Topics of Theoretical Physics</b>							
	ECTS	7	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (3) + R (1) Module taught in: English						
	Method of assessment	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: English						
	other prerequisites	Approval from examination committee required.						

11-EXT8-Int-201-mo1	<b>Current Topics of Theoretical Physics</b>							
	ECTS	8	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (4) + R (2) Module taught in: English						
	Method of assessment	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: English						
	other prerequisites	Approval from examination committee required.						
11-EXT6A-Int-201-mo1	<b>Current Topics of Theoretical Physics</b>							
	ECTS	6	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (3) + R (1) Module taught in: English						
	Method of assessment	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: English						
	other prerequisites	Approval from examination committee required.						
11-EXP6A-Int-201-mo1	<b>Current Topics in Physics</b>							
	ECTS	6	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (3) + R (1) Module taught in: English						
	Method of assessment	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: English						
	other prerequisites	Approval from examination committee required.						

11-APM-Int-241-mo1	<b>Astrophysics</b>							
	ECTS	6	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (2) + R (2) Module taught in: English						
	Method of assessment	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: English Assessment offered: In the semester in which the course is offered and in the subsequent semester						
11-ATP-Int-241-mo1	<b>Atmospheric Physics</b>							
	ECTS	6	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (2) + R (2) Module taught in: English						
	Method of assessment	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: English Assessment offered: In the semester in which the course is offered and in the subsequent semester						
11-OQS-Int-241-mo1	<b>Open Quantum Systems</b>							
	ECTS	6	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (3) + R (1) Module taught in: English						
	Method of assessment	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: English Assessment offered: In the semester in which the course is offered and in the subsequent semester						



Subfield Non-Physical Minors							
10-M-OR-Saf-152-m01	<b>Operations Research for students of other subjects</b>						
	ECTS	10	Duration	1 semester	Method of grading	numerical grade	Modul level   undergraduate
	Courses	V (4) + Ü (2)					
	Method of assessment	a) written examination (approx. 90 to 180 minutes, usually chosen) or b) oral examination of one candidate each (15 to 30 minutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate) Language of assessment: German and/or English Assessment offered: In the semester in which the course is offered and in the subsequent semester creditable for bonus					
10-M-VAN-152-m01	<b>Advanced Analysis</b>						
	ECTS	7	Duration	1 semester	Method of grading	numerical grade	Modul level   undergraduate
	Courses	V (4) + Ü (2)					
	Method of assessment	a) written examination (approx. 90 to 180 minutes, usually chosen) or b) oral examination of one candidate each (15 to 30 minutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate) Language of assessment: German and/or English creditable for bonus					
10-M=AAA-Nin-152-m01	<b>Applied Analysis</b>						
	ECTS	10	Duration	1 semester	Method of grading	numerical grade	Modul level   graduate
	Courses	V (4) + Ü (2) Module taught in: English					
	Method of assessment	a) written examination (approx. 90 to 120 minutes, usually chosen) or b) oral examination of one candidate each (approx. 20 minutes) or c) oral examination in groups (groups of 2, 15 minutes per candidate) Language of assessment: English Assessment offered: In the semester in which the course is offered and in the subsequent semester creditable for bonus					
10-M=ADG-Min-152-m01	<b>Differential Geometry</b>						
	ECTS	10	Duration	1 semester	Method of grading	numerical grade	Modul level   graduate
	Courses	V (4) + Ü (2) Module taught in: English					
	Method of assessment	a) written examination (approx. 90 to 120 minutes, usually chosen) or b) oral examination of one candidate each (approx. 20 minutes) or c) oral examination in groups (groups of 2, 15 minutes per candidate) Language of assessment: English Assessment offered: In the semester in which the course is offered and in the subsequent semester creditable for bonus					

10-M=AFT-Hin-152-m01	<b>Complex Analysis</b>							
	ECTS	10	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (4) + Ü (2) Module taught in: English						
	Method of assessment	a) written examination (approx. 90 to 120 minutes, usually chosen) or b) oral examination of one candidate each (approx. 20 minutes) or c) oral examination in groups (groups of 2, 15 minutes per candidate) Language of assessment: English Assessment offered: In the semester in which the course is offered and in the subsequent semester creditable for bonus						
10-M=AL-THin-152-m01	<b>Lie Theory</b>							
	ECTS	10	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (4) + Ü (2) Module taught in: English						
	Method of assessment	a) written examination (approx. 90 to 120 minutes, usually chosen) or b) oral examination of one candidate each (approx. 20 minutes) or c) oral examination in groups (groups of 2, 15 minutes per candidate) Language of assessment: English Assessment offered: In the semester in which the course is offered and in the subsequent semester creditable for bonus						
10-M=ATO-Pin-152-m01	<b>Topology</b>							
	ECTS	10	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (4) + Ü (2) Module taught in: English						
	Method of assessment	a) written examination (approx. 90 to 120 minutes, usually chosen) or b) oral examination of one candidate each (approx. 20 minutes) or c) oral examination in groups (groups of 2, 15 minutes per candidate) Language of assessment: English Assessment offered: In the semester in which the course is offered and in the subsequent semester creditable for bonus						
10-M=AZTHin-152-m01	<b>Number Theory</b>							
	ECTS	10	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (4) + Ü (2) Module taught in: English						
	Method of assessment	a) written examination (approx. 90 to 120 minutes, usually chosen) or b) oral examination of one candidate each (approx. 20 minutes) or c) oral examination in groups (groups of 2, 15 minutes per candidate) Language of assessment: English Assessment offered: In the semester in which the course is offered and in the subsequent semester creditable for bonus						

10-M=VGD-Sin-152-m01	<b>Groups and their Representations</b>							
	ECTS	10	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (4) + Ü (2) Module taught in: English						
	Method of assessment	a) written examination (approx. 90 to 120 minutes, usually chosen) or b) oral examination of one candidate each (approx. 20 minutes) or c) oral examination in groups (groups of 2, 15 minutes per candidate) Language of assessment: English Assessment offered: In the semester in which the course is offered and in the subsequent semester creditable for bonus						
10-M=VGE-Min-152-m01	<b>Geometrical Mechanics</b>							
	ECTS	10	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (4) + Ü (2) Module taught in: English						
	Method of assessment	a) written examination (approx. 90 to 120 minutes, usually chosen) or b) oral examination of one candidate each (approx. 20 minutes) or c) oral examination in groups (groups of 2, 15 minutes per candidate) Language of assessment: English Assessment offered: In the semester in which the course is offered and in the subsequent semester creditable for bonus						
10-M=VN-PEin-152-m01	<b>Numeric of Partial Differential Equations</b>							
	ECTS	10	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (4) + Ü (2) Module taught in: English						
	Method of assessment	a) written examination (approx. 90 to 120 minutes, usually chosen) or b) oral examination of one candidate each (approx. 20 minutes) or c) oral examination in groups (groups of 2, 15 minutes per candidate) Language of assessment: English Assessment offered: In the semester in which the course is offered and in the subsequent semester creditable for bonus						
10-M=VDI-Min-152-m01	<b>Discrete Mathematics</b>							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (3) + Ü (1) Module taught in: English						
	Method of assessment	a) written examination (approx. 60 to 90 minutes, usually chosen) or b) oral examination of one candidate each (approx. 15 minutes) or c) oral examination in groups (groups of 2, approx. 10 minutes per candidate) Language of assessment: English Assessment offered: In the semester in which the course is offered and in the subsequent semester creditable for bonus						

10-M=VM- PHin-152-m01	<b>Selected Topics in Mathematical Physics</b>							
	ECTS	10	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (4) + Ü (2) Module taught in: English						
	Method of assessment	a) written examination (approx. 90 to 120 minutes, usually chosen) or b) oral examination of one candidate each (approx. 20 minutes) or c) oral examination in groups (groups of 2, 15 minutes per candidate) Language of assessment: English Assessment offered: In the semester in which the course is offered and in the subsequent semester creditable for bonus						
10-M=VPD- Pin-152-m01	<b>Partial Differential Equations of Mathematical Physics</b>							
	ECTS	10	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (4) + Ü (2) Module taught in: English						
	Method of assessment	a) written examination (approx. 90 to 120 minutes, usually chosen) or b) oral examination of one candidate each (approx. 20 minutes) or c) oral examination in groups (groups of 2, 15 minutes per candidate) Language of assessment: English Assessment offered: In the semester in which the course is offered and in the subsequent semester creditable for bonus						
10-M=V- PRGin-152-m01	<b>Pseudo Riemannian and Riemannian Geometry</b>							
	ECTS	10	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (4) + Ü (2) Module taught in: English						
	Method of assessment	a) written examination (approx. 90 to 120 minutes, usually chosen) or b) oral examination of one candidate each (approx. 20 minutes) or c) oral examination in groups (groups of 2, 15 minutes per candidate) Language of assessment: English Assessment offered: In the semester in which the course is offered and in the subsequent semester creditable for bonus						
10-I=DB-161-m01	<b>Databases</b>							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (2) + Ü (2)						
	Method of assessment	written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate). Separate written examination for Master's students. Language of assessment: German and/or English creditable for bonus						
	Additional Information	Focuses available for students of the Master's programme Informatik (Computer Science, 120 ECTS credits): SE, IS, HCI, GE.						

10-I-PA-161-m01	<b>Analysis and Design of Programs</b>							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (2) + Ü (2)						
	Method of assessment	written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate). Language of assessment: German and/or English creditable for bonus						
	Additional Information	Focuses available for students of the Master's programme Informatik (Computer Science, 120 ECTS credits): SE,IS,ES,GE						
10-I-RAK-152-m01	<b>Computer Architecture</b>							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses	V (2) + Ü (2)						
	Method of assessment	written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate). Language of assessment: German and/or English creditable for bonus						
	Referred to in LPO I	§ 22 II Nr. 3 b) § 69 I Nr. 1 c): Rechnerarchitektur						
10-I-APR-172-m01	<b>Advanced Programming</b>							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses	V (2) + Ü (2)						
	Method of assessment	written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate). Language of assessment: German and/or English creditable for bonus						
	Referred to in LPO I	§ 22 II Nr. 3 b)						

10-I-BS-191-m01	<b>Operating Systems</b>							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses	V (2) + Ü (2) Module taught in: English						
	Method of assessment	written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate). Language of assessment: German and/or English creditable for bonus						
10-I=Kl1-161-m01	<b>Artificial Intelligence 1</b>							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (2) + Ü (2)						
	Method of assessment	written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate). Language of assessment: German and/or English creditable for bonus						
	Additional Information	Focuses available for students of the Master's programme Informatik (Computer Science, 120 ECTS credits): AT,SE,IS,HCI						
o8-FU-SAM-161-m01	<b>Sensor and Actor Materials - Functional Ceramics and Magnetic Particles</b>							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (2) + P (2)						
	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, approx. 30 minutes per candidate) Language of assessment: German and/or English Assessment offered: Once a year, summer semester P: creditable for bonus						
o8-FU-EEW-152-m01	<b>Electrochemical Energy Storage and Conversion</b>							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses	V (2) + P (1) + E (1)						
	Method of assessment	a) assessment and b) Vortestate/Nachtestate (pre and post-experiment examination talks approx. 15 minutes each, log approx. 5 to 10 pages each) and assessment of practical assignments (2 to 4 random examinations), weighted 7:3 Language of assessment: German and/or English Assessment offered: Once a year, summer semester						

o8-FU-MW-161-mo1	<b>Structure and Properties of Modern Materials: Experiments vs. Simulations</b>							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (2) + S (1)						
	Method of assessment	a) talk (approx. 30 minutes) or b) oral examination of one candidate each (approx. 20 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes total) Language of assessment: German and/or English Assessment offered: Once a year, winter semester						
11-EXNP6-Int-201-mo1	<b>Nonphysical Minor Subject</b>							
	ECTS	6	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (3) + R (1) Module taught in: English						
	Method of assessment	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: English						
	other prerequisites	Approval from examination committee required.						
<b>Master Project Modules (60 ECTS credits)</b>								
11-FS-P-Int-201-mo1	<b>Professional Specialization Physics International</b>							
	ECTS	15	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	graduate
	Courses	S (4) Module taught in: English						
	Method of assessment	talk with discussion (30 to 45 minutes) Language of assessment: English						
11-MP-P-Int-201-mo1	<b>Scientific Methods and Project Management Physics International</b>							
	ECTS	15	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	graduate
	Courses	R (4) Module taught in: English						
	Method of assessment	talk with discussion (30 to 45 minutes) Language of assessment: English						

11-MA-P-Int-201- m01	<b>Master Thesis Physics International</b>							
	ECTS	30	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses							
	Method of assessment		Master's thesis (750 to 900 hours total) Language of assessment: English					
	Additional Information		Time to complete: 6 months					