FSB (Subject-Specific Provisions) for the Physics International Master of Science Degree Programme (120 ECTS credits)

at Julius-Maximilians-Universität Würzburg

of 06.09.2023

While we have made every effort to ensure that all the information provided in this document is accurate and up to date, we do not warrant its accuracy, correctness or completeness. The English text in this document is intended solely as a convenience to non-German-reading students and staff members. Any discrepancies or differences that may arise in the translation of the official German version shall not be legally binding. In the event of a conflict between the information provided here and the information provided in the official publications of the University of Würzburg, the official publications shall prevail.

Article 13 Subarticle 1 Sentence 2 in conjunction with Article 58 Subarticle 1 and Article 61 Subarticle 2 Sentence 1 *Bayerisches Hochschulgesetz* (Bavarian Higher Education Act, BayHSchG) dated 23 May 2006 (*Bayerisches Gesetz- und Verordnungsblatt* (Bavarian Law and Ordinance Gazette, GVBI, p. 245, *Bayerische Rechtssammlung* (Collection of Bavarian Laws, BayRS) 2210-1-1-WFK) as amended from time to time forms the framework for the following subject-specific provisions decreed by Julius-Maximilians-Universität Würzburg.

Contents

Part 1: General Provisions	2
Section 1 Scope	
Section 2 Aims and Objectives of the Degree Programme, Learning Outcomes	2
Section 3 Start, Structure and Standard Length of Programme	2
Section 5 Minimum ECTS Score Requirement	5
Section 6 Examination Committee	6
Part 2: Assessments	6
Section 7 Other Subject-Specific Assessments	6
Section 8 Area of Degree Finalisation: Master's Thesis and Master's Defence	7
Section 9 Overall Grade, Grade in Degree Subject and Grades Awarded for Individual Areas	8
Part 3: Final Provisions	9
Section 10 Entry into Force	9
Appendix SFB	10

Part 1: General Provisions

Section 1 Scope

These subject-specific provisions (FSB) shall supplement the ASPO (General Academic and Examination Regulations) for the Bachelor's and Master's Degree Programmes Offered by the Julius-Maximilians-Universität Würzburg (JMU) dated 1 July 2015 as amended from time to time.

Section 2 Aims and Objectives of the Degree Programme, Learning Outcomes

- 1 The Physics International programme leading to the degree of Master of Science (MSc) is offered by the Faculty of Physics and Astronomy at JMU as a research-based course in the framework of a consecutive Bachelor's/Master's model. ²The degree of Master of Science is a postgraduate degree; it has a research focus and qualifies graduates to enter a profession. ³The objective of the degree programme is to give students an in-depth understanding of the mathematical and theoretical fundamentals of physics and of interdisciplinary contexts as well as to teach them sound knowledge of theoretical and experimental methods for gaining new insights, including the necessary capacity for abstract and analytical thinking, excellent problem-solving skills and the ability to structure complex contexts, so that they can work responsibly and successfully as physicists in interdisciplinary and in particular international and English-speaking teams of (natural) scientists and/or engineers in research, industry and business.
- (2) ¹The overall programme is designed as an English-taught course. ²Most of the modules are therefore held in English, taking into account the rules of Section 12 Subsection 3 and Section 19 Subsection 5 ASPO.

Section 3 Start, Structure and Standard Length of Programme

- (1) In accordance with Section 7 ASPO, the Physics International programme shall offer both winter and summer intake in any given academic year.
- (2) ¹The programme is structured as follows:

Area or sub-area	EC	TS credits	
Mandatory electives	60		
Sub-area "Physics"		Min. 55	
Advanced Laboratory Course			Min. 9
Advanced Seminar			Min. 5
Experimental Physics			Min. 10
Theoretical Physics			Min. 10
Sub-area "Non-Physics Minor Subject"		Max. 5	
Area of degree finalisation	60		
Total	120		

²Students shall thereby successfully complete modules with graded assessments on a scale of at least 40 ECTS credits in the sub-area "Physics".

(3) The standard length of programme for the Physics International programme leading to the degree of "Master of Science" shall be four semesters, in which students shall earn a total of 120 ECTS credits.

Section 4 Prerequisites for Admission to the Programme, Recommended Fundamental Knowledge and Skills

- (1) Admission to the Physics International programme shall be conditional on the following prerequisites (to be met cumulatively):
 - a) A Bachelor's degree (180 ECTS credits) completed at JMU or another higher education institution in Germany or abroad or an equivalent German or foreign qualification (e.g. State Examination) and
 - b) Proof of
 - aa) Competences on a scale totalling at least 24 ECTS credits from modules in the following sub-areas of experimental physics: Mechanics, electromagnetism, optics, thermodynamics, atomic und molecular physics, solid state physics, nuclear and elementary particle physics,
 - bb) Competences on a scale of at least 22 ECTS credits from modules in the following sub-areas of theoretical physics: Theoretical mechanics, quantum mechanics, theoretical electrodynamics, statistical mechanics, thermodynamics,
 - cc) Competences on a scale of at least 22 ECTS credits from modules in the following sub-areas of mathematics: Analysis, linear algebra, differential equations, complex analysis,
 - dd) Competences on a scale of at least 12 ECTS credits from physics laboratory courses in the following sub-areas: Mechanics, thermodynamics, electrics, atomic and nuclear physics, optics, computer systems and metrology,
 - ee) Competences on a scale of at least a further 30 ECTS credits from modules in the overall field of physics or minor subjects related to physics, and
 - ff) A thesis on a scale of at least 10 ECTS credits on a topic from a sub-area of physics or in the case of an interdisciplinary thesis on a topic in which physics methods are essentially applied,

according to the ECTS credits scheme used at JMU for the BSc in Physics or – in the case of programmes not modularised within the meaning of the ECTS – competences on the corresponding scale (as a rule acquired in the framework of the first degree indicated under Letter a)). The required competences are taught at JMU in particular in the framework of the BSc in Physics (180 ECTS credits); and

- c) Proof of English language proficiency to Level B2 of the Common European Framework of Reference for Languages (CEFR), for example:
 - aa) Test of English as a Foreign Language (TOEFL) with at least 72 internet-based TOEFL points or at least 550 paper-based TOEFL points, or
 - bb) International English Language Test System (IELTS) with a result of 6.0 or higher, or
 - cc) Cambridge First Certificate in English (FCE), or
 - dd) A grade in English of at least 'Satisfactory' (*befriedigend*; equivalent to at least 7 out of 15 points) as part of a German higher education entrance qualification or
 - A foreign higher education entrance qualification with proof of English language proficiency which is at least equivalent to the above-mentioned higher education entrance qualification, or

- ee) Proof that training (in particular in the framework of the first degree indicated under a)) has been or is being completed, in which English language skills on the level specified in aa) to dd) are taught.
- (2) ¹Applications for admission to the Physics International programme (MSc) for the respective following semester shall be submitted to the chairperson of the examination committee (cf. Subection 4) for the Physics International programme in the form and by the closing date specified, i.e. by 1 May (for the winter semester) or 1 November (for the summer semester); in particular, an electronic application procedure via the relevant JMU websites may be foreseen here. ²Should there be reasons beyond the applicant's control, the documents referred to in Subsection 3 No. 1 Letter a) may be submitted later and by 1 August at the latest (for the winter semester) or 1 January (for the summer semester) in order to be granted final admission to the Physics International programme. ³In the event that the applicant cannot meet this closing date (e.g. because the Bachelor's degree certificate has not yet been issued), the only remaining option shall be admission subject to a resolutive condition in accordance with Subsection 7.

(3) ¹Applications shall include:

- 1. Academic achievements from the first degree as specified in Subsection 1 Letter a)
 - a) Proof of a university degree or an equivalent qualification (in the case of applications for final admission to the Master's programme) or
 - b) Proof of 150 ECTS credits or in the case of programmes not modularised within the meaning of the ECTS academic achievements on a corresponding scale (in the case of applications for admission to the Master's programme subject to a resolutive condition).
- 2. Previous study and examination achievements
 - a) An overview of previous study and examination achievements (transcript of records) detailing the modules passed which are relevant to the Physics International programme and the examination achievements attributed to them, including the ECTS credits and grades awarded as well, if applicable, as accredited examination achievements or
 - b) In the case of applications for admission to the Master's programme subject to a resolutive condition, a provisional overview of previous study and examination achievements with the details referred to above.
- 3. In the case of applications for admission to the Master's programme subject to a resolutive condition, proof that a thesis is required for the successful completion of the undergraduate degree in accordance with Subsection 1.
- 4. Proof of English language skills as specified in Subsection 1 Letter c).
- ²At the request of the examination committee, further proof of the competences in accordance with Subsection 1 Letter b), e.g. module descriptions, shall be submitted if necessary.
- (4) ¹The examination committee for the Physics International programme shall decide whether the requirements set out in Subsection 1 Letter a) and the required minimum competences (Subsection 1 Letter b)) are met. ²The provisions of Section 14 ASPO shall apply mutatis mutandis. ³When deciding on the equivalence of first degrees with the above-mentioned reference qualification as well as for verifying the required minimum competences and their scale (in particular in the case of non-modularised programmes), the principle of reverse burden of proof and the obligation to establish equivalence shall apply in accordance with Article 63 *Bayerisches Hochschulgesetz* (Bavarian Higher Education Act, BayHSchG) or Article 86 *Bayerisches*

Hochschulinnovationsgesetz (Bavarian Higher Education Innovation Act, BayHIG) respectively, insofar as there are no significant differences with regard to the competences acquired (learning outcomes). ⁴Even if the requirements in accordance with Subsection 1 Letter a) and b) are met, the examination committee may recommend in individual cases that an applicant completes further modules at Bachelor level. ⁵Admission to the programme shall not depend on whether the applicant follows such a recommendation.

- (5) ¹In the case that the requirements set out in Subsection 1 Letter a) and/or b) are not met, admission to the Physics International programme shall not be possible, unless admission to the Master's programme is possible in accordance with Subsection 7. ²In the case of non-admission, applicants shall receive corresponding notification stating the reasons for the decision and instructions on the available legal remedies.
- (6) If the requirements set out in Subsection 1 Letter a) and b) are met, the applicant shall be admitted to the Physics International programme.
- (7) ¹In order to facilitate an uninterrupted transition from a Bachelor's degree to the Master's programme, applicants who are not yet able to produce corresponding proof of the degree required in accordance with Subsection 1 Letter a) at the time of application may be admitted to the Master's programme in the semester immediately following, subject to a resolutive condition as follows:
 - a) Proof at the time of application of at least 150 ECTS credits or in the case of programmes not modularised within the meaning of the ECTS academic achievements on a corresponding scale in the first degree required in accordance with Subsection 1 Letter a).
 - b) Proof of the competences indicated in Subsection 1 Letter b) Points aa) to ee) according to the ECTS credits scheme used at JMU for the BSc in Physics or in the case of programmes not modularised within the meaning of the ECTS competences on the corresponding scale (as a rule acquired in the framework of the first degree indicated under Letter a)). The required competences are taught at JMU in particular in the framework of the BSc in Physics (180 ECTS credits).
 - c) Proof in accordance with Subsection 3 Sentence 1 No. 3.
 - d) Proof of English language skills in accordance with Subsection 1 Letter c).

²In the event that the resolutive condition takes effect, i.e. that proof of the first degree specified in Subsection 1 Letter a) is not produced at the latest by the end of the re-enrolment period for the third subject semester of the Physics International programme leading to the degree of Master of Science, the applicant is to be disenrolled at the end of the second subject semester. ³In the event that the resolutive condition does not take effect, final admission to programme shall be possible.

(8) ¹It is recommended that applicants who have not obtained their higher education entrance qualification or a relevant first degree at a German-speaking institution acquire sufficient knowledge of the German language in the course of the first study year (e.g. Level B2 of the Common Framework of Reference for Languages (CEFR)). ²Proof of German language proficiency is not required for admission to the Physics International programme.

Section 5 Minimum ECTS Score Requirement

These FSB do not prescribe a minimum ECTS score requirement as described in Section 13 Subsection 5 ASPO.

Section 6 Examination Committee

- (1) ¹By way of derogation from Section 14 Subsection 1 Sentence 3 ASPO, the examination committee for the Physics International programme shall comprise seven members, of which five with voting rights and two in an advisory capacity. ²The examination committee shall include both a representative of the full-time academic staff or of the full-time teaching staff assigned to special tasks as well as a representative of the student body without voting rights as advisory members. ³The members of the examination committee shall be elected by the Faculty Board of the Faculty of Physics and Astronomy. ⁴Only the members with voting rights and not the advisory members shall take part in the election of the chairperson of the examination committee.
- (2) The examination committee shall include at least three full-time university professors from the Faculty of Physics and Astronomy as members with voting rights; the chairperson must be a full-time university professor at the Faculty of Physics and Astronomy.
- (3) The examination committee may bring in additional members for consultation and advice, including, but not limited to, course advisors; these members shall be non-voting.

Part 2: Assessments

Section 7 Other Subject-Specific Assessments

- (1) Supplementary to the other examinations indicated in Section 24 ASPO, the following other subject-specific assessments shall be foreseen for the Physics International programme:
 - Pre-experiment examinations, post-experiment examinations and assessment of laboratory work as well as logs from modules run by the Faculty of Chemistry and Pharmacy
 - Special rules for modules run by the Faculty of Physics and Astronomy.
- (2) ¹Pre-experiment examinations: Pre-experiment examinations shall be conducted immediately prior to the practical parts of the respective course. ²First, the examinee shall be given instructions and information on the forthcoming practical work. ³This may also be done by making reference to corresponding teaching materials. ⁴Instructions and information may also be made available to the examinee in electronic form only. ⁵After a reasonable period of time for preparation, a short oral examination shall take place. ⁶The purpose of this oral examination shall be to determine whether the examinee has understood the instructions and information and is able to commence the practical part of the course.
- (3) ¹Post-experiment examinations: Assessments in the shape of post-experiment examinations shall be conducted after the respective practical part of the course. ²A post-experiment examination shall comprise a written log of the practical work undertaken and a short oral examination. ³Examinees shall demonstrate through the log that they are capable of summarising and presenting the practical work undertaken in an appropriate form. ⁴Examinees shall demonstrate in the oral examination that they are capable of explaining their observations from the laboratory work as recorded in the log. ⁵Details of the type of examination achievements to be produced and the scale are specified in the SFB in the appendix. ⁶The number of examination parts to be completed shall depend on the number of experiments to be conducted and shall be announced by the respective module leader at the latest one week after the start of the laboratory course.
- (4) ¹Assessment of laboratory work: This shall be done by inspecting the examinee's laboratory work on the basis of random checks. ²The aim here shall be to determine whether the examinee has worked on the tasks assigned in the framework of the course under consideration of safety aspects, with the necessary care and attention and using scientific methods.

- (5) Logs in modules run by the Faculty of Chemistry and Pharmacy: Logs are written examination achievements intended to demonstrate that the examinee is capable of reproducing the contents of a course or activities undertaken in a laboratory course in a structured and appropriate way.
- (6) ¹Other subject-specific assessments are foreseen for laboratory courses for individual modules run by the Faculty of Physics and Astronomy.

²To gain a "Pass" in a laboratory course, the following must be successfully completed: Test preparation, successful test implementation, logging of the measurement results and, if applicable, evaluation, including error analysis, and presentation of the results in a report. ³Further details shall be governed by the SFB and the respective module description.

⁴The purpose of a project report shall be to verify that the examinee is capable of working on a clearly defined thematic task or a (research) project using scientific methods as well as of developing problem-solving approaches and concepts and of presenting these in written form.

Section 8 Area of Degree Finalisation: Master's Thesis and Master's Defence

- (1) ¹The Master's thesis shall be worth 30 ECTS credits. ²The time allowed for completion of the thesis shall be six months. ³Topics shall only be assigned to examinees once a total of at least 40 ECTS credits have been earned in the mandatory electives. ⁴In individual and justified cases, the examination committee may allow exceptions. ⁵It shall also be possible for the supervisor of the Master's thesis to make the assignment of the topic for that thesis dependent on proof of successful participation in specific modules relevant to the respective topic. ⁶In particular modules 11-FS-P-Int und 11-MP-P-Int, the purpose of which is to acquire the necessary specialist knowledge and professional practical skills in preparation for the Master's thesis, which is to be carried out as an independent research project, are to be aligned with the topic of the Master's thesis in terms of content; they shall therefore be completed before starting the Master's thesis. ¹The examinee shall provide the supervisor with proof of successful participation in these modules at the latest at the signing of the confirmation in accordance with Section 26 Subsection 3 Sentence 5 ASPO. ⁶Without such proof, the topic for the Master's thesis shall not be assigned to the examinee.
- (2) Upon written justification and application by the examinee and with the consent of the chairperson of the examination committee, the Master's thesis may be produced at an institution outside the Faculty of Physics and Astronomy. ²Such consent shall only be given if the examination committee has satisfied itself beforehand that sufficient supervision is guaranteed at that institution; in particular, the person at that institution responsible for the local supervision of the examinee shall at least hold a university degree in the subject concerned or a related subject. 3If the Master's thesis is produced at an institution outside the Faculty of Physics and Astronomy or is supervised by a person not employed full-time at the Faculty of Physics and Astronomy, the examination committee shall appoint as supervisor a full-time member of JMU who is entitled to administer examinations; in this case, a university professor shall as a rule be nominated, who generally shall be a member of the Faculty of Physics and Astronomy. ⁴The person supervising the work shall assist the JMU supervisor in their assessment of the work by commenting on it in the shape of a review. 5The Master's thesis shall be paginated and include a title page, a table of contents and a summary. ⁶The written version must be bound and submitted in duplicate. ⁷The Master's thesis shall additionally be submitted electronically in the form and format and by the means of transmission specified by the examination committee; examinees shall be informed of these specifications when registering their Master's thesis. 8Upon substantiated request, the examination committee shall permit a regulation deviating from the provisions of Sentence 7.
- (3) By way of derogation from Section 26 Subsection 9 Sentence 1 ASPO, the Master's thesis shall be presented in English.
- (4) At least one of the two reviewers must be a full-time university professor at the Faculty of Physics and Astronomy.

(5) There shall be no oral defence.

Section 9 Overall Grade, Grade in Degree Subject and Grades Awarded for Individual Areas

¹A student's overall grade shall be calculated in accordance with the provisions of Section 35 Subsection 1 ASPO. ²The grade for the degree subject (Physics International) shall be calculated in accordance with Section 35 Subsection 2 ASPO, the grades for the individual areas shall be calculated in accordance with Section 35 Subsection 3 to 5 ASPO.

³When calculating the grades for the individual areas, the "basket model" described in Section 35 Subsection 5 Sentence 7 and 8 ASPO shall apply. ⁴The grade for the mandatory electives shall be calculated from the respective best graded modules in the "Advanced Seminar", "Experimental Physics" and "Theoretical Physics" on a scale of 40 ECTS credits under consideration of the provisions of Section 35 Subsection 4 ASPO. ⁵The modules in the sub-area "Non-Physics Minor Subject" shall not count towards the grade for the degree subject.

⁶The grade for the area of degree finalisation shall be the grade awarded for the Master's thesis.

⁷When calculating the grade for the degree subject and the overall grade, the individual areas shall be assigned the following weight values:

				We	eight value	for
Area or sub-area		ECTS ci	redits	Area	Grade in degree subject	Overall grade
Mandatory electives	60					
Sub-area "Physics"						
Advanced Laboratory Course						
Advanced Seminar					60/120	
Experimental Physics						120/120
Theoretical Physics						
Sub-area "Non-Physical Minor Subject"						
Area of degree finalisation	60				60/120	
Total	120					

Part 3: Final Provisions

Section 10 Entry into Force

¹These FSB shall enter into force on the day following their announcement. ²They shall apply to all students enrolled in the Physics International programme that leads to the award of the degree of Master of Science (120 ECTS credits) who commence studies in that programme at JMU in the 2020/2021 winter semester or later and whose programmes are governed by the ASPO (General Academic and Examination Regulations) for the Bachelor's and Master's Degree Programmes Offered by Julius-Maximilians-Universität Würzburg dated 1 July 2015 as amended from time to time.

$A {\bf ppendix \ SFB}$



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: 2024

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:

ASP02015

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

o6-Sep-2023 (2023-70)

12-Jun-2024 (2024-75)

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

Every module will be described using the following form:

Abbreviation	Module title		1					
	ECTS		Duration	(in semesters)	Method of grading		Module level	
	Courses		To be sp	ecified in the form X	(y) with course type ?	X abbreviated as specified abo	ve and number of we	ekly contact hours y
	Method of as	ssessme	ent	-				
	Only after su completion o		l if applica	able				
	Other prereq	uisites	if applica	able				
	Participants on of places		ocati- if applica	able				
	Additional in	formati	on if applica	able				
	Referred to in	n LPO I	if applica	able (examination re	egulations for teachin	g-degree programmes)		

Electives Field (60	ECTS credits)											
Subfield Physics (5	5 ECTS credits)											
Advanced Laborato	ry Courses (9 E	CTS credi	ts)									
11-P-FM1-Int-201-	Advanced Laboratory Course Master Part 1											
mo1	ECTS 3 Duration		n	1 semester	Method of grading	(not) successfully comple	ted Modul level	graduate				
	Courses		P (3) Modu	P (3) Module taught in: English								
	Method of ass	sessment	Stude an ex perim modu	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 prerequi			ration and safety br	iefing.							
11-P-FM2-Int-201-	Advanced Lab	oratory Co	ourse N	Naster Part 2								
mo1	ECTS 3 Duration			1 semester	Method of grading	(not) successfully comple	ted Modul level	graduate				
	Courses		P (3) Modu	Module taught in: English								
	Method of ass	sessment	practical examination Students must successfully prepare, perform, document (lab notebook) and evaluate (in the form of a scientific publicatio an experiment to be considered to have successfully completed this experiment. Students must successfully complete two periments to be considered to have successfully completed this module. Detailed regulations are laid down in the respect module description. Language of assessment: English									
	other prerequi	isites	Prepa	ration and safety br	iefing.							
11-P-FM3-Int-201-	Advanced Lab	oratory Co	ourse N	Naster Part 3			,					
mo1	ECTS 3	Duratio		1 semester	Method of grading	(not) successfully comple	ted Modul level	graduate				
	Courses		P (3) Modu	le taught in: English	l							
	Method of ass		Stude an ex perim modu Langu	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 prerequi	isites	Prepa	ration and safety br	iefing.							

11-P-FM4-Int-201-	Advance	Advanced Laboratory Course Master Part 4										
mo1	ECTS	3	Duration	1	1 semester	Method of grading	(not) successfully completed	Modul level	graduate			
	Courses	6		P (3) Modu	lle taught in: Englis	h						
	Method	of ass	essment	Stude an ex perim modu	bractical examination students must successfully prepare, perform, document (lab notebook) and evaluate (in the form of a scientific publication) in experiment to be considered to have successfully completed this experiment. Students must successfully complete two exeriments to be considered to have successfully completed this module. Detailed regulations are laid down in the respective nodule description. anguage of assessment: English							
	other pr	rerequi	equisites Preparation and safety briefing.									
Advanced Seminar	(5 ECTS	credits)										
11-OSP-A-Int-201-	Advance	ed Sem	inar Phys	sics A								
mo1	ECTS	5	Duration		1 semester	Method of grading	numerical grade	Modul level	graduate			
	Courses	5		S (2) Modu	e) dule taught in: English							
	Method	of ass	essment		talk with discussion (30 to 45 minutes) Language of assessment: English							
11-OSP-B-Int-201-		ed Sem	Geminar Physics B									
mo1	ECTS	5	Duration		1 semester	Method of grading	numerical grade	Modul level	graduate			
	Courses			S (2) Module taught in: English								
	Method	of ass	essment	talk w Langı	vith discussion (30 uage of assessment	to 45 minutes) t: English						
Experimental Phys	ics (10 E(CTS cre	dits)									
11-BSV-Int-201-	Image a	and Sig	nal Proce	ssing	in Physics							
mo1	ECTS	6	Duration		1 semester	Method of grading	numerical grade	Modul level	graduate			
	Courses			Mòdu	+ Ü (2) ıle taught in: Englis							
	Method of assessment a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or all examination in groups (groups of 2, approx. 30 minutes) per candidate) or d) project report (approx. 8 to 10 per presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Assessment offered: In the semester in which the course is offered and in the subsequent semester Language of assessment: English					ort (approx. 8 to 10 pages) or e) sessment may instead take the aethod of assessment is changed, date at the latest.						

11-OHL-Int-201-	Organic Semiconductors												
mo1	ECTS	6	Duration	1	1 semester	Method of grading numerical grade	M	odul level	graduate				
	Course	S			V (3) + R (1) Module taught in: English								
				b) ora c) ora d) pro e) pro If a w form the le Asse Lang	written examination (approx. 90 to 120 minutes) or o) oral examination of one candidate each (approx. 30 minutes) or oral examination in groups (groups of 2, approx. 30 minutes per candidate) or of project report (approx. 8 to 10 pages) or operation/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. Assessment offered: In the semester in which the course is offered and in the subsequent semester anguage of assessment: English								
11-PMM-Int-201-	Physic	s of Adv	anced Ma	terial	s								
mo1	ECTS	6	Duration	1	1 semester	Method of grading numerical grade	M	odul level	graduate				
	Course	S			V (3) + R (1) Module taught in: English								
	Method of assessment			oral e prese If a w form the le Asse	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or d) project report (approx. 30 minutes) or d) project report (approx. 8 to 10 poresentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead or an oral examination of one candidate each or an oral examination in groups. If the method of assessment he lecturer must inform students about this by four weeks prior to the original examination date at the latest. Assessment offered: In the semester in which the course is offered and in the subsequent semester anguage of assessment: English								
11-SPI-Int-201-m01	Spintro	nics			,		,						
	ECTS	6	Duration		1 semester	Method of grading numerical grade	M	odul level	graduate				
	Course	S			+ R (1) ule taught in: Eng	lish							
	Method	d of ass	essment	oral e prese If a w form the le Asse	examination in grentation/talk (apported on the contraction of an oral examination of an oral examirecturer must infor	n (approx. 90 to 120 minutes) or b) oral examoups (groups of 2, approx. 30 minutes per caprox. 30 minutes). on was chosen as method of assessment, thin nation of one candidate each or an oral examom students about this by four weeks prior to the semester in which the course is offeredent: English	andidate) or d) is may be chan nination in grou o the original ex	project repo ged and ass ups. If the m xamination	sessment may instead take the ethod of assessment is changed, date at the latest.				

11-FK2-Int-201-m01	Solid S	tate Ph	ysics 2				·	·				
Ì	ECTS	8	Duration	n	1 semester	Method of grading numerical grade	Modul level	graduate				
	Course	S			+ R (2) Ile taught in: Engli	ish	•					
	Method	d of ass	essment	oral e prese If a w form the le	xamination in gro ntation/talk (apporiten examination							
	other p	rerequi	sites	Appro	oval from examina	tion committee required.						
11-FKS-Int-201-m01			ectrocopy	/								
	ECTS	6	Duration		1 semester	Method of grading numerical grade	Modul level	graduate				
	Course	S			V (3) + R (1) Module taught in: English							
	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate e oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and ass form of an oral examination of one candidate each or an oral examination in groups. If the method the lecturer must inform students about this by four weeks prior to the original examination of Assessment offered: In the semester in which the course is offered and in the subsequent se Language of assessment: English						ort (approx. 8 to 10 pages) or e) sessment may instead take the ethod of assessment is changed, date at the latest.					
11-MAG-Int-201-	Magne	tism										
mo1	ECTS	6	Duration	n	1 semester	Method of grading numerical grade	Modul level	graduate				
	Course	S		V (3) -	+ R (1) lle taught in: Engli	ish		-				
	Method	d of ass	essment	oral e prese If a w form the le Asses	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. Assessment offered: In the semester in which the course is offered and in the subsequent semester Language of assessment: English							

11-HNS-Int-201-	Optical	Propert	ies of Se	micon	ductor Nanostructur	es						
mo1	ECTS	6	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Courses	i			V (3) + R (1) Module taught in: English							
	Method	of asse	ssment	oral e prese If a wi form of the le Asses	xamination in group ntation/talk (approx ritten examination w of an oral examinatio cturer must inform s	s (groups of 2, approx. 30 minutes). vas chosen as methoon of one candidate of tudents about this be semester in which	ox. 30 minutes per cand d of assessment, this m	idate) or d) project reporated and assistion in groups. If the meanination				
11-HPH-Int-201-	Semicor	nductor	Physics	,				'				
mo1	ECTS	6	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Courses	i			(3) + R (1) odule taught in: English							
		a) written examination (approx. 90 to 120 minutes) or b) oral examination of one can oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) propresentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed form of an oral examination of one candidate each or an oral examination in groups. the lecturer must inform students about this by four weeks prior to the original exam Assessment offered: In the semester in which the course is offered and in the subsection and the subsection of the subsection o						idate) or d) project reporated and assistion in groups. If the meanination	ort (approx. 8 to 10 pages) or e) sessment may instead take the ethod of assessment is changed, date at the latest.			
11-QTR-Int-201-	Quantur	m Trans	port									
mo1	ECTS	6	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Courses	i		V (3) - Modu	+ R (1) le taught in: English							
Λ	Method	of asse	essment	oral e prese If a w form of the le Asses	xamination in group ntation/talk (approx ritten examination w of an oral examinatio cturer must inform s	is (groups of 2, approx. 30 minutes). It is chosen as methor on of one candidate of tudents about this be semester in which	ox. 30 minutes per cand d of assessment, this m	idate) or d) project repolay be changed and assition in groups. If the me original examination	each (approx. 30 minutes) or c) ort (approx. 8 to 10 pages) or e) sessment may instead take the ethod of assessment is changed, date at the latest.			

11-QIC-Int-201-m01	Advanc	ed The	ory of Qua	ntum	Computing and Qua	ntum Information		,			
	ECTS	6	Duration	n	1 semester	Method of grading numerical	al grade	Modul level	graduate		
	Course	S			+ R (1) ule taught in: English						
				oral e prese If a w form the le Asses) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) ral 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). The a written examination was chosen as method of assessment, this may be changed and assessment may instead take the porm 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. Assessment offered: In the semester in which the course is offered and in the subsequent semester anguage of assessment: English						
11-NOP-Int-201-	Nano-C	Optics									
mo1	ECTS	6	Duration	า	1 semester	Method of grading numerical	al grade	Modul level	graduate		
	Courses				3) + R (1) odule taught in: English						
		Method of assessment			examination in group entation/talk (approx ritten examination w of an oral examinati ecturer must inform s ssment offered: In th uage of assessment:	or d) project reports and assignment of the most of the most of the most of the most on the most of th					
11-PTS-Int-201-	Phenor	menolog	gy and Th	eory o	f Superconductivity						
mo1	ECTS	6	Duration		1 semester	Method of grading numerical	al grade	Modul level	graduate		
	Course	S			+ R (1) ule taught in: English	ı					
	Method	d of ass	essment	oral e prese If a w form the le Asses	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. Assessment offered: In the semester in which the course is offered and in the subsequent semester Language of assessment: English						

08-PCM4-161-m01	Ultrafa	Ultrafast spectroscopy and quantum-control													
	ECTS	5	Duration		1 semester	Method of grading	numerical grade	Modul level	graduate						
	Course	S			- Ü (1)										
				Module taught in: German or English											
	Method	d of ass	p	rox.) written examination (approx. 90 minutes) or b) oral examination of one candidate each (approx. 20 minutes) or c) ta rox. 30 minutes) anguage of assessment: German and/or English										
	other p	rerequi	sites P	Prior c	completion of modul	es o8-PCM1a and o8	3-PCM1b recommended.								
11-CSFM-Int-201-	Advanc	ed Top	ics in Solid :	State	Physics										
mo1	ECTS	6	Duration		1 semester	Method of grading	numerical grade	Modul level	graduate						
	Course	S			- R (1) le taught in: English										
			o p If fo th	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is character must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: English											
	other p			<u> </u>		n committee require	d.								
11-ASM-Int-201-			oservational	l Astr	onomy										
mo1	ECTS	6	Duration		1 semester	Method of grading	numerical grade	Modul level	graduate						
	Course	S			- R (1) le taught in: English										
	Method	d of ass	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 page presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead to form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Assessment offered: In the semester in which the course is offered and in the subsequent semester Language of assessment: English						ort (approx. 8 to 10 pages) or e) sessment may instead take the ethod of assessment is changed, date at the latest.						

11-TPE-Int-201-m01	Experir	nental F	Particle P	hysics							
	ECTS	6	Duratio		1 semester	Method of grading	numerical grade	Modul level	graduate		
	Course	S	•	V (3) - Modu	F R (1) le taught in: English						
	Method	d of asso	essment	oral e senta If a wi form o the le Asses	written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) ral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or pentation/talk (approx. 30 minutes). a written examination was chosen as method of assessment, this may be changed and assessment may instead take the rrm of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is change the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Seessment offered: In the semester in which the course is offered and in the subsequent semester and an assessment: English						
11-ASP-Int-201-			Space P		·				,		
mo1	ECTS	6	Duratio	,	1 semester	Method of grading	numerical grade	Modul level	graduate		
	Course	S			V (3) + R (1) Module taught in: English						
				oral e prese If a wi form o the le Asses Langu	xamination in group ntation/talk (approx itten examination w of an oral examinatio cturer must inform s	s (groups of 2, appro 3.30 minutes). as chosen as metho on of one candidate of tudents about this b e semester in which	x. 30 minutes per candidat d of assessment, this may b	te) or d) project repo be changed and ass n in groups. If the m iginal examination o			
11-MAS-Int-201-			gth Astro	nomy							
mo1	ECTS	6	Duratio		1 semester	Method of grading	numerical grade	Modul level	graduate		
	Course	S		V (3) - Modu	+ R (1) le taught in: English						
1	Method	d of asso	essment	oral e prese If a wi form o the le	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						

11-CSAM-Int-201-	Advance	d Topics in Ast	rophys	ics						
mo1	ECTS (6 Duratio	n	1 semester	Method of grading no	umerical grade	Modul level	graduate		
	Courses	,		+ R (1) ıle taught in: Englis	h					
	Method	of assessment	oral e prese If a w form the le	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) oresentation/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 pre	erequisites	Appro	oval from examinat	on committee required.					
11-MRI-Int-201-	Advance	d Magnetic Res	onanc	e Imaging						
mo1	ECTS (6 Duratio	n	1 semester	Method of grading n	umerical grade	Modul level	graduate		
	Courses			+ R (1) ıle taught in: Englis	h					
	Method	or assessment	oral e prese If a w form the le	examination in grou entation/talk (appro ritten examination of an oral examinat ecturer must inform	ps (groups of 2, approx. ox. 30 minutes). was chosen as method of ion of one candidate each students about this by fine semester in which the	30 minutes per candidate) f assessment, this may be	or d) project repo changed and ass groups. If the m nal examination			
11-SSC-Int-201-	Surface	Science								
mo1	ECTS (6 Duratio	n	1 semester	Method of grading In	umerical grade	Modul level	graduate		
	Courses	·	V (3) + R (1) Module taught in: English							
	Method	of assessment	oral e prese If a w form the le	examination in grou entation/talk (appro ritten examination of an oral examinat ecturer must inform	ps (groups of 2, approx. ox. 30 minutes). was chosen as method of ion of one candidate each students about this by fine semester in which the	30 minutes per candidate) f assessment, this may be	or d) project repo changed and ass groups. If the m nal examination			

11-BIC-Int-201-m01	Basic Imaging Concepts												
	ECTS	6	Duration	า	1 semester	Method of grading numerical grad	de	Modul level	graduate				
	Course	S		V (3) - Modu	+ R (1) le taught in: English								
	Method	d of ass	essment	oral e prese If a wi form of the le	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								
11-CAP-Int-201-			Astrophy										
mo1	ECTS	6	Duration		1 semester	Method of grading numerical grad	de	Modul level	graduate				
	Course	S		V (3) - Modu	+ R (1) le taught in: English	1							
				oral e prese If a wi form o the le Langu	xamination in group ntation/talk (approx ritten examination w of an oral examinatio	vas chosen as method of assessmer on of one candidate each or an oral students about this by four weeks pr	per candidate) o nt, this may be cl examination in §	r d) project repo hanged and ass groups. If the m	ort (approx. 8 to 10 pages) or e) sessment may instead take the ethod of assessment is changed,				
11-AAI-Int-201-m01	Advanc	ed Astr	o Imaging	3									
	ECTS	6	Duration		1 semester	Method of grading numerical grad	de	Modul level	graduate				
	Courses			V (3) - Modu	+ R (1) le taught in: English	1							
	Method	d of ass	essment	oral e prese If a wi form of the le	xamination in group ntation/talk (approx ritten examination w of an oral examinatio	vas chosen as method of assessmer on of one candidate each or an oral students about this by four weeks pr	per candidate) o nt, this may be cl examination in §	r d) project repo hanged and ass groups. If the m	ort (approx. 8 to 10 pages) or e) sessment may instead take the ethod of assessment is changed,				

11-CTA-Int-201-	Advanced Computer Tomography											
mo1	ECTS	6	Duration		1 semester	Method of grading	numerical grade	Modul level	graduate			
	Courses	5		V (3) + Modu	R (1) le taught in: Englis	h		,				
	Method of assessment			oral expressed of a writer of the leading of the le	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							
11-EIM-Int-201-	Electro	n and Io	n Microso	ору								
mo1	ECTS	6	Duration		1 semester	Method of grading	numerical grade	Modul level	graduate			
	Courses			V (3) + Modu	R (1) le taught in: Englis	h						
	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								
11-SPT-Int-201-	Scannir	ng Prob	e Technol									
mo1	ECTS	6	Duration		1 semester	Method of grading	numerical grade	Modul level	graduate			
	Courses			V (3) + Modu	R (1) le taught in: Englis	h						
	Method	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							
11-FPA-Int-201-m01	Visiting	g Research										
	ECTS	10	Duration			Method of grading	numerical grade	Modul level	graduate			
	Courses	5		R (o) Modu	le taught in: Englis	h						
	Method	l of asse	essment									
	other p	rerequis	sites	Approval from examination committee required.								

11-EXE5-Int-201-	Current Topics in Experimental Physics										
mo1	ECTS 5	Duratio	n 1 semester	Method of grading numerical grade	Modul level	graduate					
	Courses		V (2) + R (2) Module taught in: Eng	V (2) + R (2) Module taught in: English							
	Method of a	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 prere	quisites	Approval from examir	nation committee required.							
11-EXE6-Int-201-	Current Top	ics in Exper	imental Physics								
mo1	ECTS 6	Duratio	n 1 semester	Method of grading numerical grade	Modul level	graduate					
	Courses		V (3) + R (1) Module taught in: English								
	method of t		presentation/talk (ap If a written examination	oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is challed the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: English							
					original examination	date at the latest.					
	other prere	quisites	Language of assessm		original examination	date at the latest.					
11-EXE7-Int-201-		•	Language of assessm	ent: English	e original examination	date at the latest.					
11-EXE7-Int-201- m01		•	Language of assessm Approval from examir imental Physics n 1 semester	ent: English	e original examination Modul level	date at the latest. graduate					
•	Current Top	ics in Exper	Language of assessm Approval from examir imental Physics	ent: English nation committee required. Method of grading numerical grade							
•	Current Top	ics in Exper	Language of assessm Approval from examinimental Physics 1 semester V (3) + R (1) Module taught in: Enguinal examination oral examination in growitten examination form of an oral examination form of an oral examination oral examination form of an oral examination oral examinat	Method of grading numerical grade glish n (approx. 90 to 120 minutes) or b) oral examinat roups (groups of 2, approx. 30 minutes per candioprox. 30 minutes). on was chosen as method of assessment, this manation of one candidate each or an oral examinat rm students about this by four weeks prior to the	Modul level tion of one candidate of date) or d) project rep ay be changed and assistion in groups. If the m	graduate each (approx. 30 minutes) or c) ort (approx. 8 to 10 pages) or e) sessment may instead take the nethod of assessment is changed,					

11-EXE8-Int-201-	Current	t Topics	in Experi	menta	l Physics							
mo1	ECTS	8	Duration	n	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Course			Modu	V (4) + R (2) Module taught in: English							
	Method	d of ass	essment	oral e prese If a w form the le Lange	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 p					on committee require	d					
11-EXE6A-Int-201- m01		<u> </u>	in Experi			1		1				
		6	Duration		1 semester	Method of grading	numerical grade	Modul level	graduate			
	Course	S		V (3) + R (1) Module taught in: English								
	Method of assessment			oral e prese If a w form the le	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changuage of assessment: English							
	other p				oval from examinatio	on committee require	d.					
11-EXP6-Int-201-	Current	t Topics	in Physic	cs	_							
mo1	ECTS	6	Duration		1 semester	Method of grading	numerical grade	Modul level	graduate			
	Course			',,,	+ R (1)							
	Method	d of ass	essment	oral e prese If a w form the le	xamination in group ntation/talk (approxitten examination wo of an oral examinati	os (groups of 2, appro k. 30 minutes). vas chosen as method on of one candidate e students about this by	x. 30 minutes per candidate) of assessment, this may be c	or d) project repo hanged and ass groups. If the m	seach (approx. 30 minutes) or c) ort (approx. 8 to 10 pages) or e) sessment may instead take the ethod of assessment is changed, date at the latest.			
	other p	rerequi	sites	Appro	oval from examinatio	on committee require	d.					

Theoretical Physic	s (10 EC	TS cred	its)									
11-QM2-Int-201-	Quanti	um Med	hanics II									
mo1	ECTS	8	Duratio	n	1 semester	Method of grading numerical grade	Modul level	undergraduate				
	Course	es	,		+ R (2)	L		·				
					Module taught in: English							
•	Metho	d of ass	sessment	oral e prese If a w form the le Asses	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) oresentation/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. Assessment offered: In the semester in which the course is offered and in the subsequent semester Language of assessment: English							
11-TQO-Int-221-	Theore	etical Q	uantum O _l	otics			'					
mo1	ECTS	8	Duration		1 semester	Method of grading numerical grade	Modul level	graduate				
	Course	es			V (4) + R (2) Module taught in: English							
				amination/tallf a with form the leads	ation in groups (gro lk (approx. 30 minu ritten examination							
11-RTT-Int-201-m01	Theory	of Rela	ativity									
	ECTS	6	Duratio		1 semester	Method of grading numerical grade	Modul level	graduate				
	Course	es			+ R (1) lle taught in: Englis	h						
	Metho	d of ass	sessment	oral e prese If a w form the le Lange	xamination in grou ntation/talk (appro ritten examination of an oral examinat cturer must inform uage of assessmen	was chosen as method of assessment, this may be ion of one candidate each or an oral examination in students about this by four weeks prior to the origi	or d) project repo changed and ass n groups. If the m nal examination	ort (approx. 8 to 10 pages) or e) sessment may instead take the ethod of assessment is changed, date at the latest.				

11-RMFT-Int-201-	Renormaliza	tion Group	Metho	ds in Field Theory							
mo1	ECTS 8	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Courses			+ R (2) ıle taught in: English							
	Method of a		oral e prese If a w form the le Langu Asses	examination in group entation/talk (approx ritten examination w of an oral examinatio	s (groups of 2, approx. 30 minutes). as chosen as methoon of one candidate of tudents about this beinglish	ox. 30 minutes per cand d of assessment, this r each or an oral examin y four weeks prior to th	didate) or d) project repo	each (approx. 30 minutes) or c) ort (approx. 8 to 10 pages) or e) sessment may instead take the ethod of assessment is changed, date at the latest.			
11-PKS-Int-201-	Physics of C	omplex Sys	stems								
mo1	ECTS 6	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Courses			V (2) + R (2) Module taught in: English							
	Method of a	ssessment	oral e prese If a w form the le Lange	examination in group entation/talk (approx ritten examination w of an oral examination ecturer must inform s uage of assessment:	s (groups of 2, appro a. 30 minutes). as chosen as metho on of one candidate of tudents about this b English	ox. 30 minutes per cand d of assessment, this reach or an oral examin y four weeks prior to th	didate) or d) project repo				
11-QIC-Int-201-m01	Advanced Th	eory of Qu	antum	Computing and Qua	ntum Information		,				
	ECTS 6	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Courses			V (3) + R (1) Module taught in: English							
	Method of a	ssessment	oral e prese If a w form the le	examination in group entation/talk (approx ritten examination w of an oral examination ecturer must inform s	s (groups of 2, appro a. 30 minutes). as chosen as metho on of one candidate of tudents about this b e semester in which	ox. 30 minutes per cand d of assessment, this r each or an oral examin y four weeks prior to th	didate) or d) project repo				

11-TFK-Int-201-m01	Theore	tical So	lid State	Physic	 S						
	ECTS	8	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate		
	Course	S			+ R (2) lle taught in: English			,			
	Metho	d of ass	essment	oral e prese If a wi form of the le Asses	written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or cal examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or exesentation/talk (approx. 30 minutes). a written examination was chosen as method of assessment, this may be changed and assessment may instead take the orm of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changular letter must inform students about this by four weeks prior to the original examination date at the latest. Seessment offered: In the semester in which the course is offered and in the subsequent semester anguage of assessment: English						
11-TFK2-Int-201-	Theore	tical So	lid State	Physic	S 2						
m01	ECTS	8	Duratio		1 semester	Method of grading	numerical grade	Modul level	graduate		
	Course	!S			/ (4) + R (2) Module taught in: English						
	Wictio	a or ass	essment	oral e prese If a w form of the le Langu	xamination in group ntation/talk (approx ritten examination w of an oral examinatio cturer must inform s uage of assessment:	s (groups of 2, appro 3.30 minutes). as chosen as metho on of one candidate of tudents about this b English	ox. 30 minutes per can d of assessment, this each or an oral examir y four weeks prior to t	didate) or d) project repo			
11-TEFK-Int-201-	Topolo	gical Ef	fects in S	olid St	ate Physics						
mo1	ECTS	8	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate		
	Course	S		V (4) + R (2) Module taught in: English							
	Metho	d of ass	essment	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. Assessment offered: In the semester in which the course is offered and in the subsequent semester Language of assessment: English							

11-FFK-Int-201-m01	Field TI	heory in Solid St	ate Ph	ysics	-	,				
	ECTS	8 Duratio	n	1 semester	Method of grading numerical grade	Modul level	graduate			
	Course	S		+ R (2) ule taught in: English		•				
	Method	d of assessment	oral e prese If a w form the le	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) oresentation/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. Assessment offered: In the semester in which the course is offered and in the subsequent semester anguage of assessment: English						
11-AKTF-Int-201- m01	Selecte	ed Topics of The	retica	l Solid State Physics	•					
	ECTS	6 Duratio	n	1 semester	Method of grading numerical grade	Modul level	graduate			
	Course	S		(3) + R (1) Module taught in: English						
		d of assessment	prese If a w form the le Asse Lang	oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instrorm of an oral examination of one candidate each or an oral examination in groups. If the method of assessment the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Assessment offered: In the semester in which the course is offered and in the subsequent semester Language of assessment: English						
11-CMS-Int-201-	Compu	tational Materia	ls Scie	nce (DFT)						
mo1	ECTS	8 Duratio	n	1 semester	Method of grading numerical grade	Modul level	graduate			
	Course	S	V (4) + R (2) Module taught in: English							
	Method	d of assessment	oral oral oral oral oral oral oral oral	examination in group entation/talk (approx ritten examination w of an oral examinatio ecturer must inform s uage of assessment:	vas chosen as method of assessment, this on of one candidate each or an oral examir students about this by four weeks prior to t	ndidate) or d) project reposition and association in groups. If the magnetical hearing in all examination	sessment may instead take the ethod of assessment is changed, date at the latest.			

11-KFT-Int-201-m01	Confor	mal Fiel	d Theory					1				
	ECTS	6	Duration	1	1 semester	Method of grading num	erical grade	Modul level	graduate			
	Course	S			V (3) + R (1) Module taught in: English							
	Method of assessment			oral oral oral oral oral oral oral oral	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-	Confor	mal Fiel	d Theory	2								
mo1	ECTS 6 Duration			1	1 semester	Method of grading num	erical grade	Modul level	graduate			
	Courses				+ R (1) ule taught in: Eng	lish						
	method of dissessment			oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment 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					sessment may instead take the ethod of assessment is changed, date at the latest.			
11-GRTM-Int-201-	Group	<u>-</u>	1									
mo1	ECTS 6 Duration Courses			n 1 semester Method of grading numerical grade Modul level graduate 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			11330	Janichi oncicu.	if the semester in winer the co	Juise is officied and	a iii tile subsequelit se	illestel			

11-CRP-Int-201-	Renorma	alization	Group	and Cr	itical Phenomena							
mo1	ECTS	6 I	Duration	1	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Courses				V (3) + R (1) Module taught in: English							
11-BWW-Int-201-	Method			oral e prese If a wi form of the le Langu Asses	xamination in group ntation/talk (approx ritten examination w of an oral examinatio cturer must inform s lage of assessment: sment offered: In th	s (groups of 2, appro 3. 30 minutes). as chosen as metho on of one candidate of tudents about this b English	ox. 30 minutes per candi d of assessment, this m	idate) or d) project repo ay be changed and ass tion in groups. If the m e original examination o				
11-BWW-Int-201-		ation an	d Intera	ctions	in One Dimension							
mo1	ECTS	6 I	Duration		1 semester	Method of grading	numerical grade	Modul level	graduate			
	Courses				(3) + R (1) Module taught in: English							
	Method	Method of assessment			a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minute oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 page presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead to form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is 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-	Introduc	ction to G	Gauge/G	iravity	Duality			,				
mo1	ECTS	8 I	Duratior	1	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Courses			V (4) + R (2) Module taught in: English								
				oral e prese If a wiform of the le Langu	xamination in group ntation/talk (approx ritten examination w of an oral examinatio cturer must inform s lage of assessment:	s (groups of 2, appro 3.30 minutes). as chosen as metho on of one candidate of tudents about this b English	ox. 30 minutes per candi d of assessment, this m	idate) or d) project repo ay be changed and ass tion in groups. If the m e original examination o				

11-AKM-Int-201-	Cosmo	logy					1					
mo1	ECTS	6	Duratio	n	1 semester	Method of grading numerical grade	Modul level	graduate				
	Course	S			V (3) + R (1) Module taught in: English							
	Method	d of ass	sessment	oral oral oral oral oral oral oral oral	written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or							
11-AST-Int-201-	Theore	tical As	strophysic	S								
mo1	ECTS	6	Duratio	n	1 semester	Method of grading numerical grade	Modul level	graduate				
	Courses				(2) + R (2) Module taught in: English							
	Method	1 01 ass	sessment	oral oral oral oral oral oral oral oral	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may form of an oral examination of one candidate each or an oral examination in groups. If the method of asset the lecturer must inform students about this by four weeks prior to the original examination date at the later Language of assessment: English Assessment offered: In the semester in which the course is offered and in the subsequent semester							
11-EPP-Int-201-	Introdu	iction t	o Plasma	asma Physics								
mo1	ECTS	6	Duratio	n	1 semester	Method of grading numerical grade	Modul level	graduate				
	Course	S		V (2) + R (2) Module taught in: English								
	Method	d of ass	sessment	oral oral oral oral oral oral oral oral	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-APL-Int-201-	High-E	nergy A	strophysi	cs				,				
mo1	ECTS	6	Duratio	1	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Course	S			V (3) + R (1) Module taught in: English							
	Method	d of ass	essment	oral e prese If a w form the le Langu	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) oresentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the orm 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. anguage of assessment: English assessment offered: In the semester in which the course is offered and in the subsequent semester							
11-NMA-Int-201-	Compu	tationa	l Astrophy	sics								
mo1	ECTS	6	Duration	1	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Course	S			V (3) + R (1) Module taught in: English							
		Method of assessment			oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 page presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is 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-			Theory I			,						
m01	ECTS 8 Duration Courses			n 1 semester Method of grading numerical grade Modul level graduate 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 p	other prerequisites			oval from examinatio	on committee require	d.					

11-QFT2-Int-201-	Quantu	ım Field Theory I	Ī			,				
mo1	ECTS	8 Duratio	n	1 semester	Method of grading numerical grade	Modul level	graduate			
	Course	S		+ R (2) µle taught in: English	l					
			oral e prese If a w form the le Lang Asse	written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) ral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) resentation/talk (approx. 30 minutes). a written examination was chosen as method of assessment, this may be changed and assessment may instead take the orm of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed ne lecturer must inform students about this by four weeks prior to the original examination date at the latest. anguage of assessment: English ssessment offered: In the semester in which the course is offered and in the subsequent semester						
11-TEP-Int-201-m01	Theore	tical Elementary	Partic	le Physics						
	ECTS	8 Duratio	n	1 semester	Method of grading numerical grade	Modul level	graduate			
	Course	S		(4) + R (2) odule taught in: English						
	metnoc	d of assessment	oral oral oral oral oral oral oral oral	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may form of an oral examination of one candidate each or an oral examination in groups. If the method of assest the lecturer must inform students about this by four weeks prior to the original examination date at the latenguage of assessment: English Assessment offered: In the semester in which the course is offered and in the subsequent semester						
11-ATTP-Int-201-	Selecte	ed Topics of Theo	retica	l Elementary Particle	Physics					
mo1	ECTS	6 Duratio		1 semester	Method of grading numerical grade	Modul level	graduate			
	Course	S		V (3) + R (1) Module taught in: English						
	Method	d of assessment	oral oral oral oral oral oral oral oral	examination in group entation/talk (approx ritten examination w of an oral examinatio ecturer must inform s uage of assessment:	vas chosen as method of assessment, this m on of one candidate each or an oral examina students about this by four weeks prior to the	lidate) or d) project reponance or d) project reponance or d) assetion in groups. If the me original examination of	sessment may instead take the ethod of assessment is changed, date at the latest.			

11-BSM-Int-201-	Models	Beyon	nd the Sta	ndard	Model of Elementary	/ Particle Physics					
mo1	ECTS	6	Duratio	n	1 semester	Method of grading numerical grade	Modul level	graduate			
	Course	S			+ R (1) ule taught in: English	1					
	Method	d of ass	sessment	oral oral oral oral oral oral oral oral	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) oresentation/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, he 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-	String	Theory	1								
mo1	ECTS	8	Duratio	n	1 semester	Method of grading numerical grade	Modul level	graduate			
	Courses				(4) + R (2) lodule taught in: English						
	Method of assessment			oral oral oral oral oral oral oral oral	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment 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-	String	Theory	2				'				
mo1	ECTS	6	Duratio		1 semester	Method of grading numerical grade	Modul level	graduate			
	Courses			V (3) + R (1) Module taught in: English							
	Method of assessment			oral oral oral oral oral oral oral oral	examination in group entation/talk (approx ritten examination w of an oral examination ecturer must inform s uage of assessment:	vas chosen as method of assessment, this ma on of one candidate each or an oral examinati students about this by four weeks prior to the	late) or d) project rep y be changed and ass on in groups. If the m original examination	sessment may instead take the ethod of assessment is changed, date at the latest.			

11-RAI-Int-211-mo1	,												
	ECTS	6	Duration	1	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Course	!S		V (3) -	+ R (1) le taught in: Englis	h		•					
	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-	Black I	Holes	,			,		,					
mo1	ECTS	6	Duration)	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Courses			V (3) - Modu	+ R (1) le taught in: Englis	h							
	Method of assessment			c) orad) pro e) pro If a wifform of the le Langu Asses	l examination in gr ject report (approx sentation/talk (app ritten examination of an oral examinat cturer must inform lage of assessment sement offered: In t	oups (groups of 2, ap 1. 8 to 10 pages) or prox. 30 minutes). was chosen as metholion ion of one candidate students about this t: English	each or an oral examin by four weeks prior to t	candidate) or smay be changed and assessment may instead take to nation in groups. If the method of assessment is chathe original examination date at the latest. and in the following semester					
11-TPSM-Int-211-			s (Standa			T	T	1					
mo1	ECTS	8	Duration		1 semester	Method of grading	numerical grade	Modul level	graduate				
	Course	!S		V (4) + R (2) Module taught in: English									
			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 change 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						port (approx. 8 to 10 pages) or e) ssessment may instead take the method of assessment is changed, n date at the latest.				
	other p	rerequi	sites	Appro	val from examinati	ion committee requir	ed.						

11-FPA-Int-201-m01	Visiting	g Resea	arch	-							
	ECTS	10	Duration	n		Method of grading nur	nerical grade	Modul level	graduate		
	Course	·S	,	R (o) Modu	le taught in: Englis	h		•			
	Method	d of ass	sessment		project report (10 to 20 pages) Language of assessment: English						
	other p	rerequ	isites	Approval from examination committee required.							
11-EXT5-Int-201-	Curren	t Topics	s of Theore	etical P	hysics						
mo1	ECTS	5	Duration	n	1 semester	Method of grading nu	nerical grade	Modul level	graduate		
	Courses				V (2) + R (2) Module taught in: English						
	Metrio	u Oi ass	essment	oral expression of the lead	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) oresentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the orm of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, he lecturer must inform students about this by four weeks prior to the original examination date at the latest. anguage of assessment: English						
	other p	rerequ	isites	Approval from examination committee required.							
11-EXT6-Int-201-	Curren	t Topics	s of Theore	etical Physics							
mo1	ECTS	6	Duration	1	1 semester	Method of grading nur	nerical grade	Modul level	graduate		
	Course	:S		V (3) + Modu	- R (1) le taught in: Englis	h					
	Method	i i f			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 p	rerequ	isites	Appro	val from examinati	on committee required.					

11-EXT7-Int-201-	Current Topics of Theoretical Physics											
mo1	ECTS 7	Duratio	n 1 semester	Method of grading numerical grade	Modul level	graduate						
	Courses		V (3) + R (1) Module taught in: Eng	V (3) + R (1) Module taught in: English								
	Method of	assessment	oral examination in g presentation/talk (ap If a written examination form of an oral exami the lecturer must info	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) oresentation/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 prere	quisites	Approval from examir	nation committee required.								
11-EXT8-Int-201-	Current To	pics of Theor	etical Physics									
mo1	ECTS 8	Duratio	n 1 semester	Method of grading numerical grade	Modul level	graduate						
	Courses		V (4) + R (2) Module taught in: English									
			presentation/talk (ap If a written examination form of an oral exami	oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or 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 chan the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: English								
					original examination	date at the latest.						
	other prere	quisites	Language of assessm		original examination	date at the latest.						
11-EXT6A-Int-201-	Current To	•	Language of assessm	nent: English	original examination	date at the latest.						
11-EXT6A-Int-201- m01	•	•	Language of assessm Approval from examir etical Physics n 1 semester	nent: English	original examination Modul level	date at the latest. graduate						
	Current To	pics of Theor	Language of assessm Approval from examir retical Physics	nent: English nation committee required. Method of grading numerical grade								
	Current To ECTS 6 Courses	pics of Theor	Approval from examination or a written examination or a written examination form of an oral examination form of an oral examination form of an oral examination or an oral examination	Method of grading numerical grade glish In (approx. 90 to 120 minutes) or b) oral examination roups (groups of 2, approx. 30 minutes per candidate) or was chosen as method of assessment, this magnation of one candidate each or an oral examination mustudents about this by four weeks prior to the	ion of one candidate edate) or d) project repay be changed and assion in groups. If the m	graduate each (approx. 30 minutes) or c) ort (approx. 8 to 10 pages) or e) sessment may instead take the aethod of assessment is changed,						

11-EXP6A-Int-201-	Curren	t Topics	s in Physic	:S				1	-			
mo1	ECTS	6	Duration	ı	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Course	S			V (3) + R (1) Module taught in: English							
	Method	d of ass	sessment	oral e prese If a w form the le	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) oresentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the orm 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. anguage of assessment: English							
	other p	rerequ	isites	Appro	oval from examina	tion committee require	d.					
Subfield Non-Phys	ical Min	ors										
10-M-OML-222-	Optimi	zation	for Machir	ie Lea	rning							
mo1	ECTS	10	Duration	า	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Course	·S			V (4) + Ü (2) Module taught in: German and/or English							
				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: Only when announced in the semester in which the courses are offered and in the subsequent semester creditable for bonus								
10-M-VAN-222-	Advan		-	5								
mo1	ECTS	10	Duration		1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Course				+ Ü (2)							
	Metho	d of ass	sessment	b) ora c) ora Lang	al examination of o	one candidate each (15	to 15 minutes per cand					
10-M=AAA-	Applie	d Analy										
Nin-152-m01	ECTS	10	Duration		1 semester	Method of grading	numerical grade	Modul level	graduate			
	Course	S			+ Ü (2) ıle taught in: Engli	sh						
	Method of assessment			minu Asse: Lang	tes) or c) oral exan	nination in groups (gro the semester in which	ups of 2, 15 minutes pe		one candidate each (approx. 20			

10-M=ADG-	Differen	ntial Ge	ometry									
Min-152-m01	ECTS	10	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Courses	5			+ Ü (2) ıle taught in: English	1						
	Method	l of ass	essment	minu Asses Langu	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) Assessment offered: In the semester in which the course is offered and in the subsequent semester Language of assessment: English creditable for bonus							
10-M=AFT-	Comple	x Analy	/sis									
Hin-152-mo1	ECTS	10	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Courses				V (4) + Ü (2) Module taught in: English							
	Method	l of ass	essment	minu Asses Langu	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) Assessment offered: In the semester in which the course is offered and in the subsequent semester Language of assessment: English creditable for bonus							
10-M=AL-	Lie Theory											
THin-152-m01	ECTS	10	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Courses			V (4) + Ü (2) Module taught in: English								
	Method	l of ass	essment	minu Asses Langu	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) Assessment offered: In the semester in which the course is offered and in the subsequent semester Language of assessment: English creditable for bonus							
10-M=ATO-	Topolog	gy		,								
Pin-152-m01	ECTS	10	Duratio		1 semester	Method of grading	numerical grade	Modul level	graduate			
	Courses			V (4) + Ü (2) Module taught in: English								
	Method of assessment			minu Asses Langu	written examination (approx. 90 to 120 minutes, usually chosen) or b) oral examination of one candidate each (approx. 20 inutes) or c) oral examination in groups (groups of 2, 15 minutes per candidate) ssessment offered: In the semester in which the course is offered and in the subsequent semester anguage of assessment: English reditable for bonus							

10-M=AZTHin-152-	2- Number Theory										
mo1	ECTS	10	Duratio	1	1 semester	Method of grading	numerical grade	Modul level	graduate		
	Course	S	•		+ Ü (2) ıle taught in: English						
	Method	l of asse	essment	minu Asses Langu	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) Assessment offered: In the semester in which the course is offered and in the subsequent semester Language of assessment: English creditable for bonus						
10-M=VGD-	Groups	and the	eir Repres	sentati	ons						
Sin-152-m01	ECTS	10	Duratio	1	1 semester	Method of grading	numerical grade	Modul level	graduate		
	Courses				V (4) + Ü (2) Module taught in: English						
	Method of assessment			minu Asses Langu	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) Assessment offered: In the semester in which the course is offered and in the subsequent semester Language of assessment: English creditable for bonus						
10-M=VGE-	Geometrical Mechanics										
Min-152-m01	ECTS	10	Duratio	า	1 semester	Method of grading	numerical grade	Modul level	graduate		
	Courses			V (4) + Ü (2) Module taught in: English							
	Method	l of asse	essment	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) Assessment offered: In the semester in which the course is offered and in the subsequent semester Language of assessment: English creditable for bonus							
10-M=VN-	Numeri	c of Par	tial Diffeı	rential	Equations						
PEin-152-m01	ECTS	10	Duratio	1	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) Assessment offered: In the semester in which the course is offered and in the subsequent semester Language of assessment: English creditable for bonus							

10-M=VDI-	Discret	e Math	ematics					-			
Min-152-mo1	ECTS	5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate		
	Course	S			+ Ü (1) ıle taught in: Engli	sh	•				
	Method	l of asso	essment	minu Asse: Lang	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) Assessment offered: In the semester in which the course is offered and in the subsequent semester Language of assessment: English creditable for bonus						
10-M=VM-	Selecte	d Topic	s in Math	emati	cal Physics	,		,			
PHin-152-mo1	ECTS	10	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate		
	Courses				V (4) + Ü (2) Module taught in: English						
				minu Asse Lang credi	a) written examination (approx. 90 to 120 minutes, usually chosen) or b) oral examination of one candidate each (approx minutes) or c) oral examination in groups (groups of 2, 15 minutes per candidate) Assessment offered: In the semester in which the course is offered and in the subsequent semester Language of assessment: English creditable for bonus						
10-M=VPD-	Partial Differential Equations of Mathematical Physics										
Pin-152-m01	ECTS	10	Duratio		1 semester	Method of grading	numerical grade	Modul level	graduate		
	Course	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 minutes) or c) oral examination in groups (groups of 2, 15 minutes per candidate) Assessment offered: In the semester in which the course is offered and in the subsequent semester Language of assessment: English creditable for bonus							
10-M=V-	Pseudo	Riema	nnian and	Riem	annian Geometry						
PRGin-152-mo1	ECTS	10	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate		
	Course	S		V (4) + Ü (2) Module taught in: English							
,	Method of assessment			minu Asse Lang	tes) or c) oral exan	nination in groups (gro the semester in which	utes, usually chosen) or rups of 2, 15 minutes per the course is offered an	r candidate)	f one candidate each (approx. 20 emester		

10-l=DB-161-m01	Databa	ses				-					
	ECTS	5	Duratio	1	1 semester	Method of grading numerical grade	Modul level	graduate			
	Course			V (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						
	Additio	nal Info	ormation	Focus	es available for stu	dents of the Master's programme Informatik (Comp	outer Science, 120	o ECTS credits): SE, IS, HCI, GE.			
10-l=QC-221-m01	Quantu	m Com	municatio	ns							
	ECTS	5	Duration		1 semester	Method of grading numerical grade	Modul level	graduate			
	Course	S		V (2) - Modu	+ V (2) le taught in: Englisl	1					
	Method	d of ass	essment	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 examin of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per cadate). Language of assessment: English creditable for bonus							
	Additio	nal Info	ormation	Focuses available for students of the Master's programme Informatik (Computer Science, 120 ECTS credits): LR							
10-I-RAK-152-m01		ter Arcl	hitecture								
	ECTS	5	Duration		1 semester	Method of grading numerical grade	Modul level	undergraduate			
	Course			V (2)							
				If ann of one date). Langu	ounced by the lecture candidate each (a	prox. 60 to 120 minutes). For are the beginning of the course, the written exar pprox. 20 minutes) or an oral examination in group : German and/or English					
	Referre	d to in	LPO I		l Nr. 3 b) Nr. 1 c): Rechnerar	chitektur					

10-I-APR-172-m01	Advanced	Advanced Programming											
	ECTS 5	Duratio	n	1 semester	Method of grading numerical grade	Modul level	undergraduate						
	Courses		V (2)	+ Ü (2)									
	Method o	of assessment			rox. 60 to 120 minutes).								
			If ann	announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination fone candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candi-									
			date).		oprox. 20 minutes) or an oral examination in §	groups of 2 candidates	s (approx. 15 minutes per candi-						
					German and/or English								
			credit	creditable for bonus									
10-I-BS-191-m01	Operating	g Systems											
	ECTS 5	Duratio	,	1 semester	Method of grading numerical grade	Modul level	undergraduate						
	Courses			+ Ü (2) ıle taught in: English	1								
	Method o	of assessment	writte	n examination (app	rox. 60 to 120 minutes).								
			If ann	announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination									
			of one		oprox. 20 minutes) or an oral examination in §	groups of 2 candidates	s (approx. 15 minutes per candi-						
					German and/or English								
				able for bonus	3								
10-l=Kl1-212-m01	Artificial	Intelligence 1				'							
	ECTS 5	Duratio		1 semester	Method of grading numerical grade	Modul level	graduate						
	Courses			+ Ü (2)									
	Method o	of assessment			rox. 60 to 120 minutes).								
					rer at the beginning of the course, the written oprox. 20 minutes) or an oral examination in s								
			date).		oprox. 20 illinutes) of all oral examination in §	groups of 2 calluluates	s (approx. 15 illillutes per callui-						
			credit	able for bonus									
					German and/or English								
					dents of the Master's programme Informatik (Computer Science, 120	o ECTS credits): AT,SE,KI,HCI						
08-FU-SAM-161-		nd Actor Mate	ials - F	unctional Ceramics	and Magnetic Particles		_						
mo1	ECTS 5	Duratio		1 semester	Method of grading numerical grade	Modul level	graduate						
	Courses			+ P (2)									
	Method o	of assessment	ment a) written examination (approx. 90 minutes) or b) oral examination of one candidate each (approx. 20 minutes) or c) oral ex										
			amination in groups (groups of 2, approx. 30 minutes per candidate) Assessment offered: Once a year, summer semester										
				Language of assessment: German and/or English									
				ditable for bonus									

08-FU-EEW-222-	Electrochemical Energy Storage and Conversion												
mo1	ECTS 5 Duration		n 1 semester		Method of grading numerical grade		Modul level	undergraduate					
	Course	S		V (2) + S (2) Module taught in: German or English									
	Method	d of ass	essment	a) written examination (approx. 90 minutes) or oral examination of one candidate each (approx. 30 minutes) and b) talk (approx. 30 minutes); (weighted 65:35) Language of assessment: German and/or English Assessment offered: Once a year, summer semester									
08-FU-MW-222-	Structure-Properties Correlations of Light Materials - Experiments and Numerical Simulations												
mo1	ECTS 5 Duration			n	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Courses			V (2) + S (2) Module taught in: German or English									
	Method	d of ass	essment	a) written examination (approx. 90 minutes) or oral examination of one candidate each (approx. 30 minutes) and b) talk (approx. 30 minutes); (weighted 60:40) Language of assessment: German and/or English Assessment offered: Once a year, summer semester									
11-EXNP6-Int-201-	Nonphysical Minor Subject												
mo1	ECTS 6 Duration			n	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Course	S		V (3) + R (1) Module taught in: English									
	Method	d of ass	essment	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.									
Master Project Mod	dules (60	o ECTS	credits)										
11-FS-P-Int-201-	Profess	sional S	pecializa	tion Physics International									
m01	ECTS 15 Duratio		n	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- m01	Scientific Methods and Project Management Physics International											
	ECTS	15 Duration		1	1 semester	Method of grading	(not) successfully completed	Modul level	graduate			
				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	Master Thesis Physics International											
	ECTS	ECTS 30 Duration		1	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Courses											
				Master's thesis (750 to 900 hours total) Language of assessment: English								
	Additional Information			Time to complete: 6 months								