

# **Annex SFB**

# Studienfachbeschreibung (subject description, SFB) for the subject Physics as Unterrichtsfach with the degree "Erste Staatsprüfung für das Lehramt an Grundschulen"

Responsible: Faculty of Physics and Astronomy

Examination regulations version: 2020

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

= lecture

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

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

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

= list of modules

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

Conventions for the modules in this SFB:

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

Information on assessment procedures:

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

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

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

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

# LASP02015

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

# 19-Feb-2020 (2020-19)

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

Every module will be described using the following form:

Abbreviation	Module title										
	ECTS		Duration	(in semesters)	Method of grading		Module level				
	Courses		To be spe	o be specified in the form X (y) with course type X abbreviated as specified above and number of weekly contact hours y							
	Method of as	ssessm	ent								
	Only after su completion of		ıl if applica	applicable							
	Other prereq	uisites	if applica	if applicable							
	Participants on of places		ocati- if applica	if applicable							
	Additional in	format	ion if applica	if applicable							
	Referred to in	n LPO I	if applica	if applicable (examination regulations for teaching-degree programmes)							

Scientific Disciplin	ne (54 ECTS credits)												
Compulsory Cours	ompulsory Courses (54 ECTS credits)												
Classical Physics	lassical Physics (23 ECTS credits)												
11-E-M-152-m01	mo1 Classical Physics 1 (Mechanics)												
	ECTS 8 Du	ıration	1 semester	Method of grading	numerical grade	Modul level	undergraduate						
	Courses		ı) + Ü (2) dule taught in: Ü: Gerr	nan or English									
	Method of assessr		written examination (approx. 120 minutes) Language of assessment: German and/or English										
	other prerequisites	suc	Admission prerequisite to assessment: completion of exercises (approx. 13 exercise sheets per semester). Students who successfully completed approx. 50% of exercises will qualify for admission to assessment. The lecturer will inform students about the respective details at the beginning of the semester.										
	Additional Informa	con ner the stu- for ses	sidered a declaration al academic and exam qualification for admi dents that meet the re an assessment or who	of will to seek admis ination regulations). ssion to assessment spective prerequisite se registration for an	sion to assessment pu If the module coordin they will put the stud s can successfully reg assessment was not	ursuant to Section 20 Sunators subsequently find lent's registration for assister for an assessment put into effect will not b	ion to assessment, this will be absection 3 Sentence 4 ASPO (gethat the student has obtained sessment into effect. Only those . Students who did not register e admitted to the respective asade achieved in this assessment						
	Referred to in LPO		§ 53   Nr. 1 a) § 77   Nr. 1 a)										

11-E-E-152-m01	Classical Physics 2 (Hea	at and Electromagnetisr	n)	"							
	ECTS 8 Duratio	n 1 semester	Method of grading numerical grade	Modul level	undergraduate						
	Courses	V (4) + Ü (2) Module taught in: Ü: G	$V(4) + \ddot{U}(2)$ Module taught in: $\ddot{U}$ : German or English								
	Method of assessment	written examination (approx. 120 minutes) Language of assessment: German and/or English									
	other prerequisites	successfully completed	Admission prerequisite to assessment: completion of exercises (approx. 13 exercise sheets per semester). Students who successfully completed approx. 50% of exercises will qualify for admission to assessment. The lecturer will inform students about the respective details at the beginning of the semester.								
	Additional Information	considered a declaration neral academic and exthe qualification for adstudents that meet the for an assessment or w	Registration: If a student registers for the exercises and obtains the qualification for admission to assessment, this will be considered a declaration of will to seek admission to assessment pursuant to Section 20 Subsection 3 Sentence 4 ASPO (general academic and examination regulations). If the module coordinators subsequently find that the student has obtained the qualification for admission to assessment, they will put the student's registration for assessment into effect. Only those students that meet the respective prerequisites can successfully register for an assessment. Students who did not register for an assessment or whose registration for an assessment was not put into effect will not be admitted to the respective assessment. If a student takes an assessment to which he/she has not been admitted, the grade achieved in this assessment will not be considered.								
	Referred to in LPO I	§ 53   Nr. 1 a) § 77   Nr. 1 a)									
11-L-OW-172-m01	Optics and Waves										
	ECTS 7 Duration		Method of grading   numerical grade	Modul level	undergraduate						
	Courses	V (4) + Ü (2) Module taught in: Ü: German or English									
	Method of assessment	Registration: If a stude sidered a declaration of academic and examinal lification for admission that meet the respectives sessment or whose regiff a student takes an acconsidered.  Language of assessme	written examination (approx. 120 minutes) Registration: If a student registers for the seminar and obtains the qualification for admission to assessment, this will be con sidered a declaration of will to seek admission to assessment pursuant to Section 20 Subsection 3 Sentence 4 ASPO (genera academic and examination regulations). If the module coordinators subsequently find that the student has obtained the qua lification for admission to assessment, they will put the student's registration for assessment into effect. Only those students that meet the respective prerequisites can successfully register for an assessment. Students who did not register for an assessment or whose registration for an assessment was not put into effect will not be admitted to the respective assessment. If a student takes an assessment to which he/she has not been admitted, the grade achieved in this assessment will not be considered.  Language of assessment: German and/or English								
	other prerequisites	Admission prerequisite to assessment: completion of exercises (approx. 13 exercise sheets per semester). Students who successfully completed approx. 50% of exercises will qualify for admission to assessment. The lecturer will inform students about the respective details at the beginning of the semester.									
	Referred to in LPO I	§ 53   Nr. 1 a) § 77   Nr. 1 a)									

Structure of materi	al (11 EC	TS cred	lits)									
11-L-M1-NV-172-	Modern	Physic	CS 1									
mo1	ECTS	6	Duration	1	1 semester Method of grading numerical grade Modul level undergraduate							
	Courses	5	<u>.</u>		(3) + Ü (2)							
				Modu	Module taught in: German or English							
	Method	l of ass	essment		written examination (approx. 120 minutes)							
				Langu	Language of assessment: German and/or English							
	Referre	d to in I	LPO I	§ 53 l	3 53   Nr. 1 b)							
11-L-M2-NV-172-	Modern Physics 2											
mo1	ECTS	5	Duration	n	2 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Courses	5		V (4) · Modu	+ Ü (1) lle taught in: Ü: Germ	nan or English						
	Method	l of ass	essment	b) ora	written examination (approx. 90 to 120 minutes) or oral examination of one candidate each (approx. 20 minutes) anguage of assessment: German and/or English							
	Referred to in LPO I § 53   Nr. 1 b)											
Computational Met	thods (6	ECTS c	redits)									
11-M-MR-202-m01	Mathen	natical	Methods	of Phy	sics							
		6	Duration	<u>·</u>	2 semester	Method of grading	(not) successfully completed	Modul level	undergraduate			
	Courses	5			+ Ü (2) + V (2) + Ü (2) lle taught in: Germar		, , ,					
	Method	l of ass	essment	a) Exercises (successful completion of approx. 50% of approx. 13 exercise sheets) or b) Talk (approx. 15 minutes)								
	Referre	d to in I	LPO I		§ 53   Nr. 1 a) § 77   Nr. 1 a)							
<b>Laboratory Course</b>	I (9 ECTS	credit	s)									
11-P-LA-152-m01	Laborat	ory Co	urse Phys	ics A(N	Mechanics, Heat, Ele	ctromagnetism)						
	ECTS	2	Duration	1	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate			
	Courses	5		P (2)	•			•				
				practical assignment with talk (approx. 30 minutes)  Preparing, performing and evaluating (record of readings or lab report) the experiments will be considered successfully completed if a Testat (exam) is passed. Exactly one experiment that was not successfully completed can be repeated once. After completion of all experiments, talk (with discussion; approx. 30 minutes) to test the candidate's understanding of the physics-related contents of the module. Talks that were not successfully completed can be repeated once. Both components of the assessment have to be successfully completed.								
	Referred to in LPO I			§ 53 l § 77 l	§ 53   Nr. 1 c) § 77   Nr. 1 d)							

11-P-FR1-152-m01	Data and Erro	r Analysis			,						
	ECTS 2	Duration		1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate			
	Courses			V (1) + Ü (1) Module taught in: Ü: German or English							
	Method of ass	sessment	written examination (approx. 120 minutes) Language of assessment: German and/or English								
	other prerequ	isites	Admission prerequisite to assessment: completion of exercises (approx. 13 exercise sheets per semester). Students who successfully completed approx. 50% of exercises will qualify for admission to assessment. The lecturer will inform students about the respective details at the beginning of the semester.								
	Additional Inf	ormation	Registration: If a student registers for the exercises and obtains the qualification for admission to assessment, this will be considered a declaration of will to seek admission to assessment pursuant to Section 20 Subsection 3 Sentence 4 ASPO (general academic and examination regulations). If the module coordinators subsequently find that the student has obtained the qualification for admission to assessment, they will put the student's registration for assessment into effect. Only those students that meet the respective prerequisites can successfully register for an assessment. Students who did not register for an assessment or whose registration for an assessment was not put into effect will not be admitted to the respective assessment. If a student takes an assessment to which he/she has not been admitted, the grade achieved in this assessment will not be considered.								
	Referred to in	LPO I		§ 53   Nr. 1 c) § 77   Nr. 1 d)							
11-P-LB-152-m01		ourse Phys	ics B (I	Electricity, Circuits,	, Atomic and Nuclear	Physics)					
	ECTS 5	Duration		2 semester Method of grading (not) successfully completed Modul level undergraduate							
	Courses		P(2)+	- P (2)							
	Method of ass	sessment	practical assignment with talk (approx. 30 minutes)  Preparing, performing and evaluating (record of readings or lab report) the experiments will be considered successfully completed if a Testat (exam) is passed. Exactly one experiment that was not successfully completed can be repeated once. After completion of all experiments, talk (with discussion; approx. 30 minutes) to test the candidate's understanding of the physics-related contents of the module. Talks that were not successfully completed can be repeated once. Both components of the assessment have to be successfully completed.								
	other prerequ	isites	Students are highly recommended to complete modules 11-P-LA and 11-P-FR1 prior to completing module 11-P-LB.								
	Referred to in	LPO I	§ 53   Nr. 1 b) (3 ECTS credits) and c) (2 ECTS credits) § 53   Nr. 1 c) § 77   Nr. 1 d)								
<b>Laboratory Course</b>	II (5 ECTS cred	its)									
11-P-DP1-172-m01	Demonstratio	n Laborato	ry Cou	irse 1							
	ECTS 5	Duration	1	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Courses		P (4)								
	Method of ass	sessment	a) oral examination of one candidate each (approx. 10 minutes) or b) oral examination in groups (groups of 2, approx. 10 minutes per candidate) Language of assessment: German and/or English								
	Referred to in	LPO I	§ 53   Nr. 1 c), § 77   Nr. 1 d)								

Teaching (12 ECTS	Teaching (12 ECTS credits)											
<b>Compulsory Cours</b>	es (12 EC	TS cred	lits)									
11-L-PD-172-m01	Physics	Teach	ing Conce	epts	pts							
	ECTS	5	Duratio	n	2 semester	Method of grading numerical grade	Modul level	undergraduate				
	Course	S		V (2)	$V(2) + V(2) + \ddot{U}(1)$							
	Method	d of ass	essment			approx. 60 minutes) or						
						ne candidate each (approx. 15 minutes) or roups (groups of 2, approx. 15 minutes per candid	lata) or					
					m paper (approx. 8		iate) oi					
						t: German and/or English						
	Referre	d to in I	_PO I	§ 36 l								
				§ 38 I § 53 I								
	§ 53   Nr. 2 § 77   Nr. 2											
11-L-PDS-NV-152-	Physics	Teach	ing Conce	epts Se	eminar							
mo1	ECTS 2 Duratio		Duratio	n	1 semester	Method of grading (not) successfully complet	ted Modul level	undergraduate				
	Course		_	S (2)	_							
	Method	d of ass	essment	a) written examination (approx. 45 minutes) or								
					b) oral examination of one candidate each (approx. 10 minutes) or c) oral examination in groups (groups of 2, approx. 10 minutes per candidate) or							
					d) term paper (approx. 8 pages)							
					Language of assessment: German and/or English							
	Referre			§ 53 l								
11-L-L3S-152-m01					se (Physics)	The state of the state of		T				
	ECTS	5	Duratio		1 semester	Method of grading   numerical grade	Modul level	undergraduate				
	Course			S (5)								
	Method	of ass	essment			approx. 45 minutes) or						
					b) oral examination of one candidate each (approx. 10 minutes) or c) oral examination in groups (groups of 2, approx. 10 minutes per candidate) or							
	Referred to in LPO I			d) term paper (approx. 8 pages) or								
				e) portfolio (10 to 15 hours total) Language of assessment: German and/or English								
				§ 53   Nr. 2								
	Kelene	u to III I		3 22 1	111. 4							

# Thesis (4 ECTS credits)

Students studying for a teaching degree Grundschule must complete a practical training in didactics and teaching methodology (studienbegleitendes fachdidaktisches Praktikum) which refers to one of the subjects they selected as vertieft studiertes Fach (subject studied with a focus on the scientific discipline) pursuant to Section 34 Subsection 1 No. 4 LPO I (examination regulations for teaching-degree programmes). The obligatory accompanying tutorial is offered by the respective subject. The ECTS

credits obtained are counted in the subject Erziehungswissenschaften pursuant to Section 10 Subsection 3 LASPO (general academic and examination regulations for teaching-degree programms).

11-L-SBPGS-152-	Physic	Physics: Practical Training and Theory of Classroom									
mo1	ECTS 4 Duration 1 semester Method of grading (not) successfully completed Modul level undergraduate								undergraduate		
	Course	es		P (o) +	- S (2)			•			
	Metho	d of ass		Conte for tea place	aching-degree progra ment school.	olacement as specifi	n in mandatory teaching praction		4 LPO I (examination regulations of all set tasks as specified by		
	Referre	ed to in I	LPO I	§ 34 I	1 Nr. 4						

### Extra Skills

Teaching degree students must take modules worth a total of 15 ECTS credits in the area Freier Bereich (general as well as subject-specific electives) (Section 9 LASPO (general academic and examination regulations for teaching-degree programmes)). To achieve the required number of ECTS credits, students may take any modules from the areas below.

Freier Bereich -- interdisciplinary: The interdisciplinary additional offer for a teaching degree can be found in the respective Annex "Ergänzende Bestimmungen für den "Freien Bereich" im Rahmen des Studiums für ein Lehramt".

## Physics

(Freier Bereich (general as well as subject-specific electives) -- subject specific)

(	(Teles Bereich (Beneius as Well as Sab)ect specific electives)												
11-L-EL1-152-m01	Teaching Semi	inar Funda	amenta	al Principles									
	ECTS 3	Duration	n	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate					
	Courses		S (2)										
	Method of asse		b) pre c) writ d) ora e) ora	a) term paper (approx. 8 pages) or b) presentation (approx. 45 minutes) or c) written examination (approx. 45 minutes) or d) oral examination of one candidate each (approx. 15 minutes) or e) oral examination in groups (groups of 2, approx. 15 minutes per candidate) Language of assessment: German and/or English									
	Referred to in L		§ 22 l	l Nr. 1 h) l Nr. 2 f) l Nr. 3 f)									

11-L-EL2-152-m01	Selecte	d Topic	s in Phys	ics Dic	lactics							
	ECTS	3	Duration	1	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate			
	Course			S (2)	· ·							
	Method	d of asse	essment	b) pre c) wri d) ora e) ora	) term paper (approx. 8 pages) or ) presentation (approx. 45 minutes) or ) written examination (approx. 45 minutes) or ) oral examination of one candidate each (approx. 15 minutes) or ) oral examination in groups (groups of 2, approx. 15 minutes per candidate) anguage of assessment: German and/or English							
	Referre	d to in L	PO I	§ 22 l	22    Nr. 1 h) 22    Nr. 2 f) 22    Nr. 3 f)							
11-P-VKM-202-m01	MINT Preparatory Course Mathematical Methods of Physics											
	ECTS 3 Duration			ı	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate			
	Courses				' (1) + Ü (2) Module taught in: German or English							
	Method of assessment			b) tal	a) exercises (successful completion of approx. 50% of approx. 6 exercise sheets) or b) talk (approx. 15 minutes) Assessment offered: Once a year, winter semester							
	Referred to in LPO I			§ 22 l	§ 22    Nr. 1 h) § 22    Nr. 2 f) § 22    Nr. 3 f)							
11-L-L3B-152-m01	Studen	t Lab Sı	pervisio	ı (Phy	sics)			,				
	ECTS	2	Duration	ı	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate			
	Course	S		P (2)								
	Method of assessment		b) ora	a) written examination (approx. 45 minutes) or b) oral examination of one candidate each (approx. 10 minutes) or c) oral examination in groups (groups of 2, approx. 10 minutes per candidate) or d) term paper (approx. 8 pages)								
	Additio	nal Info	rmation	This r	nodule is designe	d for students studying	at least one subject in the nat	ural sciences.				
				§ 22    Nr. 1 h) § 22    Nr. 2 f) § 22    Nr. 3 f)								

11-MIND-Ph1-152-	Low Cost - High Impact. Low-budget Experiments for Science Courses (Physics)											
mo1	ECTS	2	Duratio	1	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate			
	Course	:S		S (2)	•	•		•				
	Method	d of ass	essment		a) written examination (approx. 45 minutes) or							
					b) oral examination of one candidate each (approx. 10 minutes) or							
					c) oral examination in groups (groups of 2, approx. 20 minutes) or d) term paper (approx. 8 pages)							
	Additio	Additional Information			This module is designed for students studying at least one subject in the natural sciences.							
		d to in			Nr. 1 h)	Tor students studying	at least one subject in the nat	urat sciences.				
	Kelene	u to iii i			I Nr. 2 f)							
					§ 22 II Nr. 3 f)							
11-MIND-Ph2-152-	Teachi	ng Scie	nce with H	lands-	on-Exhibits (Physic	:s)						
m01	ECTS	2	Duratio		1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate			
	Course	S		S (2)								
	Method of assessment											
					b) oral examination of one candidate each (approx. 10 minutes) or c) oral examination in groups (groups of 2, approx. 20 minutes) or							
					m paper (approx. 8		order. 20 minutes) of					
	Additio	nal Info	ormation			· -	at least one subject in the nat	ural sciences.				
	Referre	Referred to in LPO I			I Nr. 1 h)	, ,	•					
					§ 22    Nr. 2 f)							
				§ 22 l	§ 22 II Nr. 3 f)							
11-AP-152-m01	Astrophysics											
	ECTS	6	Duratio		1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Course	·S			V (2) + R (2) Module taught in: German or English							
	^ ^ - + l											
	Method	a or 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) pro	oject report (approx	. 8 to 10 pages) or	,	,				
					esentation/talk (app		1.6					
				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: German and/or English								
	Referre	d to in	LPO I		l Nr. 1 h)							
					l Nr. 2 f)							
				§ 22 l	l Nr. 3 f)							

11-ENT-152-m01	Principles of E	nergy Tec	hnolo	gies							
	ECTS 6	Duratio	ก	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Courses			V (3) + R (1)							
	11 1 6			Module taught in: German or English  a) written examination (approx. 90 to 120 minutes) or							
	Method of asso	essment	b) oral examination (approx. 30 to 120 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes) 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: German and/or English Assessment offered: Once a year, winter semester								
	Referred to in I	LPO I	§ 22 l	3 22    Nr. 1 h) 3 22    Nr. 2 f) 3 22    Nr. 3 f)							
11-L-APD-152-m01											
	ECTS 3	Duratio	ก	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Courses		S (2) Module taught in: German or English								
	Method of ass	essment	b) ora c) ora d) ter	a) written examination (approx. 45 minutes) or b) oral examination of one candidate each (approx. 10 minutes) or c) oral examination in groups (groups of 2, approx. 10 minutes per candidate) or d) term paper (approx. 8 pages) or e) talk (30 to 45 minutes) with discussion							
	Referred to in LPO I		§ 22    Nr. 1 h) § 22    Nr. 2 f) § 22    Nr. 3 f)								
11-L-WPD-152-m01	Scientific World	k in Teach	ing Co	ncepts							
	ECTS 3	Duration	n	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate			
	Courses		S (2) Module taught in: German or English								
	Method of ass	essment	talk (	talk (30 to 45 minutes)							
	Referred to in I	LPO I	§ 22    Nr. 1 h) § 22    Nr. 2 f) § 22    Nr. 3 f)								

11-LX6-152-m01	Curren	t Topics	in Physic	:s							
	ECTS	6	Duration	1	1 semester	Method of grading numerical grade	Modul level	undergraduate			
	Course	S		V (3) ·	+ R (1)						
	Method	d of ass		b) ora c) ora d) pro e) pre If a wi form o	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.						
				Langu	uage of assessme	ent: German and/or English					
		rerequi				ation committee required.					
	Referred to in LPO I			§ 22 l	§ 22    Nr. 1 h) § 22    Nr. 2 f) § 22    Nr. 3 f)						
11-LCS6-152-m01	Selecte	ed Topic	cs of Phys	ics							
	ECTS	4	Duration	<u> </u>	1 semester	undergraduate					
	Course	S		V (2) ·	+ R (1)						
	Method of assessment			b) ora c) ora d) pro e) pre 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: German and/or English						
	other p	rerequi	sites	Approval from examination committee required.							
	Referre	ed to in I	-	§ 22    Nr. 1 h) § 22    Nr. 2 f) § 22    Nr. 3 f)							

11-L-NEGS-152-	Experiments for science courses in primary schools											
mo1	ECTS	2	Duration		1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate			
	Course	!S		S (2)								
	Metho	d of asso	essment	a) written examination (approx. 45 minutes) or b) oral examination of one candidate each (approx. 10 minutes) or c) oral examination in groups (groups of 2, approx. 10 minutes per candidate) or d) term paper (approx. 8 pages)								
		Participants and allocation of places			20 places. Should the number of applications exceed the number of available places, places will be allocated as follows: Option 1: (1) Places will be allocated by lot. (2) A waiting list will be maintained and places re-allocated as they become available. Option 2: (1) Places will be allocated according to the number of subject semesters. (2) A waiting list will be maintained and places re-allocated as they become available.							
	Referre	ed to in L	PO I	§ 22 II Nr. 1 h)								

### Thesis (10 ECTS credits)

Preparation of a written Hausarbeit (thesis) in accordance with the provisions of Section 29 LPO I (examination regulations for teaching-degree programmes) is a prerequisite for teaching degree students to be admitted to the Erste Staatsprüfung (First State Examination). In accordance with the provisions of Section 29 LPO I, students studying for a teaching degree Grundschule may write this thesis in the subject Didaktik der Grundschule (Didactics of Grundschule), in the subject they selected as Unterrichtsfach (subject studied with a focus on the scientific discipline) or in the subject Erziehungswissenschaften (Educational Science). Pursuant to Section 29 Subsection 1 Sentence 2 LPO I, students may also choose to write an interdisciplinary thesis.

11-L-HA-GS-UF-152-	Thesis	in Physi	ics Prima	nary General School							
mo1	ECTS	10	Duration			Method of grading	numerical grade	Modul level	undergraduate		
	Course	S		No courses assigned to module							
	Method	d of asse		Hausarbeit (thesis) pursuant to Section 29 LPO I (examination regulations for teaching-degree programmes) (approx. 40 pages)							
	Language of assessment: German; exceptions pursuant to Section 29 Subsection 4 LPO I (examing ching-degree programmes)								amination regulations for tea-		
	Referre	d to in L	PO I	§ 29							