

Annex SFB

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

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 (2020-22)

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 information		ion if applica	if applicable							
	Referred to in	n LPO I	if applica	if applicable (examination regulations for teaching-degree programmes)							

Scientific Discipline (60 ECTS credits) **Compulsory Courses (60 ECTS credits)** Classical Physics (23 ECTS credits) Classical Physics 1 (Mechanics) 11-E-M-152-mo1 **ECTS** 8 Duration Modul level 1 semester Method of grading | numerical grade undergraduate Courses $V(4) + \ddot{U}(2)$ Module taught in: Ü: German or English Method of assessment written examination (approx. 120 minutes) Language of assessment: German and/or English Admission prerequisite to assessment: completion of exercises (approx. 13 exercise sheets per semester). Students who other prerequisites 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. Registration: If a student registers for the exercises and obtains the qualification for admission to assessment, this will be Additional Information 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-E-E-152-m01	Classical Physics 2 (Heat and Electromagnetism)											
	ECTS 8 Duration	n 1 semester Method of grading numerical grade Modul level undergraduate										
	Courses	V (4) + Ü (2) Module taught in: Ü: German or English										
	Method of assessment	written examination (approx. 120 minutes) 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.										
	Additional Information	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.										
		§ 53 Nr. 1 a)										
11-L-OW-172-m01	Optics and Waves											
	ECTS 7 Duration											
	Courses	V (4) + Ü (2) Module taught in: Ü: German or English										
	Method of assessment	written examination (approx. 120 minutes) Registration: If a student registers for the seminar 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. 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 (17 EC	TS cred	lits)									
11-L-M1-NV-172-	Modern	Physic	CS 1									
mo1	ECTS	6	Duratio	1	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Courses	5			V (3) + Ü (2) Module taught in: German or English							
	Method	of ass	essment		written examination (approx. 120 minutes) Language of assessment: German and/or English							
	Referred to in LPO I			§ 53 l	§ 53 Nr. 1 b)							
11-L-M2-NV-172-	Modern	Physic	CS 2									
mo1	ECTS	5	Duratio	1	2 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Courses	5		V (4) - Modu	+ Ü (1) le taught in: Ü: Geri	man or English						
	Method	Method of assessment a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 20 minutes) Language of assessment: German and/or English										
	Referred	d to in I	LPO I	§ 53 l	Nr. 1 b)							
11-L-MP-	Modern Physics in Nature and Technology											
NT-152-m01	ECTS	6	Duratio	1	2 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Courses			S (2) + S (2) Module taught in: Ü: German or English								
	Method	of ass	essment	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 20 minutes) Language of assessment: German and/or English								
	Referred	d to in I	LPO I	§ 53 l	Nr. 1 b)			,				
Computational Me	thods (6	ECTS c	redits)									
11-M-MR-202-m01	Mathem	natical	Methods	of Phy	sics							
	ECTS	6	Duratio	n -	2 semester	Method of grading	(not) successfully completed	Modul level	undergraduate			
	Courses				$V(2) + \ddot{U}(2) + V(2) + \ddot{U}(2)$ Module taught in: German or English							
	Method	of ass	essment	a) Exe b) Tal	a) Exercises (successful completion of approx. 50% of approx. 13 exercise sheets) or b) Talk (approx. 15 minutes)							
	Referred to in LPO I			§ 53 Nr. 1 a) § 77 Nr. 1 a)								

Laboratory Course	1 (9 ECT	S credit	s)									
11-P-LA-152-m01	Labora	tory Co	urse Phys	ics A(N	Mechanics, Heat, Ele	ectromagnetism)						
	ECTS	2	Duration	า	1 semester	Method of grading	(not) successfully comple	eted	Modul level	undergraduate		
	Course	es		P (2)	'(2)							
	Metho	d of ass	essment	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			§ 77 I	§ 53 Nr. 1 c) § 77 Nr. 1 d)							
11-P-FR1-152-m01	Data a	nd Error	Analysis									
	ECTS 2 Duratio				1 semester	Method of grading	(not) successfully comple	eted	Modul level	undergraduate		
	Course	Courses			V (1) + Ü (1) Module taught in: Ü: German or English							
	Metho	Method of assessment			written examination (approx. 120 minutes) Language of assessment: German and/or English							
	other p	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.							
	Additional Information			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.								
	Referre	ed to in	LPO I		Nr. 1 c) Nr. 1 d)							

11-P-LB-152-m01	Labora	tory Co	urse Phys	ics B ((Electricity, Circuits	s, Atomic and Nuclear Physics)						
	ECTS	5	Duratio	n	2 semester	Method of grading (not) successfully completed	Modul level	undergraduate				
	Course	S	•	P (2)	+ P (2)	·	•					
	Method	d of ass	essment	Prepa plete comp sics-	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 p	rerequi	sites		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	§ 53 Nr. 1 b) (3 ECTS credits) and c) (2 ECTS credits) § 53 Nr. 1 c) § 77 Nr. 1 d)							
Computational Me	thods (5	ECTS c	redits)									
11-P-DP1-172-m01	Demon	stratio	n Laborate	ory Co	urse 1							
	ECTS	5	Duratio	n	1 semester	Method of grading numerical grade	Modul level	undergraduate				
	Course	S		P (4)	•	·						
				b) or	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	§ 53 Nr. 1 c), § 77 Nr. 1 d)							
Teaching (12 ECTS	credits)											
Compulsory Cours	es (12 EC	TS cred	lits)									
11-L-PD-172-m01	Physics	s Teach	ing Conce	epts								
	ECTS	5	Duratio	n	2 semester	Method of grading numerical grade	Modul level	undergraduate				
	Course				V (2) + V (2) + Ü (1)							
	Method	d of ass	essment	b) ora c) ora d) tei	a) written examination (approx. 60 minutes) or b) oral examination of one candidate each (approx. 15 minutes) or c) oral examination in groups (groups of 2, approx. 15 minutes per candidate) or d) term paper (approx. 8 pages) Language of assessment: German and/or English							
	Referred to in LPO I			§ 36 Nr. 7 § 38 Nr. 1 § 53 Nr. 2 § 77 Nr. 2								

11-L-PDS-NV-152-	Physic	s Teach	ing Conce	epts Se	minar							
mo1	ECTS	2	Duratio	n	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate			
	Courses			S (2)	5 (2)							
	Method of assessment			b) ora c) ora d) ter	n) written examination (approx. 45 minutes) or o) 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) anguage of assessment: German and/or English							
	Referre	ed to in I	PO I	§ 53 l	§ 53 Nr. 2							
11-L-L3S-152-m01	Student Lab Preparation Course (Physics)											
	ECTS 5 Duratio		n	1 semester	Method of grading	numerical grade	Modul level	undergraduate				
	Courses			S (5)	S (5)							
	Method	d of ass	essment	b) ora c) ora d) ten e) por	written examination (approx. 45 minutes) or o) 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) portfolio (10 to 15 hours total) anguage of assessment: German and/or English							
	Referre	ed to in l	PO I	§ 53 l Nr. 2								

(4 ECTS credits)

Students studying for a teaching degree Realschule 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-SBPRS-152-	11-L-SBPRS-152- Physics: Practical Training and Theory of Classroom										
mo1	ECTS	4	Duration	า	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate		
	Courses	5		P (o) +	- S (2)						
	Method	l of asse		term paper (15 to 20 pages) Contents and duration of placement as specified in Section 34 Subsection 1 Sentence 1 No. 4 LPO I (examination regulations for teaching-degree programmes); participation in mandatory teaching practice, completion of all set tasks as specified by placement school. Language of assessment: German and/or English							
	Referre	d to in L	PO 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) **Teaching Seminar Fundamental Principles** 11-L-EL1-152-m01 ECTS 3 Duration Method of grading (not) successfully completed Modul level undergraduate 1 semester S (2) Courses Method of assessment 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 § 22 II Nr. 1 h) Referred to in LPO I § 22 II Nr. 2 f) § 22 II Nr. 3 f) **Selected Topics in Physics Didactics** 11-L-EL2-152-m01 ECTS Method of grading (not) successfully completed ۱3 Duration 1 semester Modul level undergraduate S (2) Courses Method of assessment | 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 LPO L § 22 II Nr. 1 h) § 22 II Nr. 2 f) § 22 II Nr. 3 f) 11-P-VKM-202-m01 MINT Preparatory Course Mathematical Methods of Physics **ECTS** Method of grading (not) successfully completed Duration 1 semester Modul level undergraduate V (1) + Ü (2) Courses Module taught in: German or English a) exercises (successful completion of approx. 50% of approx. 6 exercise sheets) or Method of assessment b) talk (approx. 15 minutes) Assessment offered: Once a year, winter semester Referred to in LPO I § 22 II Nr. 1 h) § 22 II Nr. 2 f) § 22 II Nr. 3 f)

11-L-L3B-152-m01	Studen	t Lab S	upervisio	ı (Phy	sics)							
	ECTS	2	Duration		1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate			
	Course	·S		P (2)	(2)							
	Method	d of ass	essment	b) ora	n) written examination (approx. 45 minutes) or n) oral examination of one candidate each (approx. 10 minutes) or noral examination in groups (groups of 2, approx. 10 minutes per candidate) or note the paper (approx. 8 pages)							
	Additio	nal Info	rmation	This r	module is designed	l for students studying	at least one subject in the natu	ıral sciences.				
	Referre	d to in I	LPO I	§ 22	22 Nr. 1 h) 22 Nr. 2 f) 22 Nr. 3 f)							
11-MIND-Ph1-152-	Low Co	st - Hig	h Impact.	Low-b	udget Experiments	for Science Courses (Physics)					
mo1	ECTS	2	Duration	ı	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate			
	Courses			S (2)	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. 20 minutes) or d) term paper (approx. 8 pages)							
	Additio	Additional Information			module is designed	l for students studying	at least one subject in the nati	ural sciences.				
	Referred to in LPO I			§ 22 Nr. 1 h) § 22 Nr. 2 f) § 22 Nr. 3 f)								
11-MIND-Ph2-152-	Teachi	ng Scie	nce with H	lands-	on-Exhibits (Physi	cs)						
mo1	ECTS	2	Duration	1	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate			
	Course	·S		S (2)								
	Method	d of ass	essment	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. 20 minutes) or d) term paper (approx. 8 pages)							
	Additio	nal Info	rmation	This r	module is designed	for students studying	at least one subject in the natu	ural sciences.				
	Referre	d to in I	LPO I	§ 22 l	II Nr. 1 h) II Nr. 2 f) II Nr. 3 f)							

11-AP-152-m01	Astrophysics											
	ECTS	6	Duration	1	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Course	S	`		+ R (2) ıle taught in: Germ	an or English						
	Method	d of ass	essment	b) ora c) ora d) pro e) pro 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) 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							
	Referred to in LPO I			§ 22 Nr. 1 h) § 22 Nr. 2 f) § 22 Nr. 3 f)								
11-ENT-152-mo1	Principles of Energy Technologies											
	ECTS 6 Duration			n	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Course	S		V (3) + R (1) Module taught in: German or 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: German and/or English Assessment offered: Once a year, winter semester								
	Referre	d to in	LPO I	§ 22 Nr. 1 h) § 22 Nr. 2 f) § 22 Nr. 3 f)								

11-L-APD-152-m01	Current	t Topics	of Teach	ing Co	ncepts in Physics	i						
	ECTS	3	Duratio	1	1 semester	Method of grading n	umerical grade	Modul level	undergraduate			
	Course	S		S (2) Modu	ıle taught in: Gerr	man or English		-				
	Method	d 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							
	Referre			§ 22 § 22 § 22	§ 22 Nr. 1 h) § 22 Nr. 2 f) § 22 Nr. 3 f)							
11-L-WPD-152-m01	Scienti	fic Wor	k in Teach	ing Co	ncepts							
	ECTS	3	Duratio		1 semester	Method of grading (r	not) successfully completed	Modul level	undergraduate			
	Courses				S (2) Module taught in: German or English							
	Method of assessment			talk (30 to 45 minutes)							
	Referred to in LPO I			§ 22 Nr. 1 h) § 22 Nr. 2 f) § 22 Nr. 3 f)								
11-LX6-152-m01	Current Topics in Physics											
	ECTS	6	Duratio	n	1 semester	Method of grading n	umerical grade	Modul level	undergraduate			
	Course	S		V (3)	V (3) + R (1)							
	Method of assessment other prerequisites			b) ora c) ora d) pro e) pro If a w form the le Lange	al examination of al examination in oject report (appr esentation/talk (a ritten examinatio of an oral examin ecturer must infor uage of assessme	ox. 8 to 10 pages) or pprox. 30 minutes) n was chosen as method o ation of one candidate ea	ox. 30 minutes) or ox. 30 minutes per candidate of assessment, this may be control or an oral examination in sour weeks prior to the original	hanged and ass groups. If the m	sessment may instead take the ethod of assessment is changed, date at the latest.			
	Referred to in LPO I			§ 22 Nr. 1 h) § 22 Nr. 2 f) § 22 Nr. 3 f)								

11-LCS6-152-m01	Select	ed Topic	s of Phys	ics									
	ECTS	4	Duration	1	1 semester Method of grading numerical grade Modul level undergraduate								
	Course	es		V (2) +	(2) + R (1)								
	Metho	d of asso		b) ora c) ora d) pro e) pre If a wr form o the led Langu	l examination of one l examination in grou ject report (approx. sentation/talk (approxitten examination word an oral examination cturer must inform sage of assessment:	ups (groups of 2, app 8 to 10 pages) or ox. 30 minutes) as chosen as method on of one candidate of tudents about this b German and/or Engl	prox. 30 minutes) or prox. 30 minutes per candidate of assessment, this may be ceach or an oral examination in y four weeks prior to the originish	changed and ass groups. If the m	essment may instead take the ethod of assessment is changed, date at the latest.				
	other prerequisites			er prerequisites Approval from examination committee required.									
	Referre	ed to in L	PO I	§ 22 II	Nr. 1 h) Nr. 2 f) Nr. 3 f)								

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 Realschule may write this thesis in one of the subjects 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-HARS-152-	Thesis in Physics Intermediate School											
mo1	ECTS	10	Duration	1		Method of grading	numerical grade	Modul level	undergraduate			
	Course	S		No co	courses assigned to module							
	Method	d of asse		OI (examination regulations for pursuant to Section 29 Subsec		e programmes) (approx. 40 pa- amination regulations for tea-						
	Referred to in LPO I § 29											