

## Annex SFB

### Studienfachbeschreibung (subject description, SFB) for the subject Didactics in Physics (Primary School) as Didaktikfach with the degree "Erste Staatsprüfung für das Lehramt an Grundschulen"

Responsible: Faculty of Physics and Astronomy

Examination regulations version: 2015

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:

**LASPO2015**

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

**20-Oct-2015 (2015-217)**

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

Every module will be described using the following form:

Abbreviation	Module title						
	ECTS		Duration	(in semesters)	Method of grading		Module level
	Courses		To be specified in the form X (y) with course type X abbreviated as specified above and number of weekly contact hours y				
	Method of assessment						
	Only after successful completion of		if applicable				
	Other prerequisites		if applicable				
	Participants and allocation of places		if applicable				
	Additional information		if applicable				
	Referred to in LPO I		if applicable (examination regulations for teaching-degree programmes)				

**Compulsory Courses (10 ECTS credits)**

Successful completion of modules worth no less than 10 ECTS credits in each subject selected as Didaktikfach (subject studied with a focus on teaching methodology) (mandatory courses) is a prerequisite for admission to the Erste Staatsprüfung (First State Examination) in the subject Didaktik der Grundschule (Didactics for Grundschule). In addition, modules worth another 5 ECTS credits must be successfully completed in one of the subjects selected as Didaktikfach (mandatory electives).

11-L-PD1-152-m01	Physics Teaching Concepts 1							
	ECTS	2	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses	V (2)						
	Method of assessment	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) Language of assessment: German and/or English						
	Referred to in LPO I	§ 36 I Nr. 7 § 38 I Nr. 1 § 53 I Nr. 2 § 77 I Nr. 2						
11-L-PD2-152-m01	Physics Teaching Concepts 2							
	ECTS	3	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses	V (2) + Ü (1)						
	Method of assessment	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						
	Referred to in LPO I	§ 36 I Nr. 7 § 38 I Nr. 1 § 53 I Nr. 2 § 77 I Nr. 2						
11-L-SP1-152-m01	Physics 1 for Primary and Secondary General School							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses	V (3) + Ü (1)						
	Method of assessment	a) written examination (approx. 90 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) Language of assessment: German and/or English						
	Referred to in LPO I	§ 36 I Nr. 7 § 38 I Nr. 1						

Compulsory Electives (5 ECTS credits)							
11-L-SP2-152-m01	Physics 2 for Primary and Secondary General School						
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level undergraduate
	Courses	V (3) + Ü (1)					
	Method of assessment	a) written examination (approx. 90 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) Language of assessment: German and/or English					
	Referred to in LPO I	§ 36 I Nr. 7 § 38 I Nr. 1					
11-L-SP3-152-m01	Physics 3 for Primary and Secondary General School						
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level undergraduate
	Courses	V (3) + Ü (1)					
	Method of assessment	a) written examination (approx. 90 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) Language of assessment: German and/or English					
	Referred to in LPO I	§ 36 I Nr. 7 § 38 I Nr. 1					
<b>Freier Bereich (general as well as subject-specific electives)</b> 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".							
<b>Extra Skills Teaching Physics at the German Grundschule</b> (Freier Bereich (general as well as subject-specific electives) -- subject specific)							
11-L-EL1-152-m01	Teaching Seminar Fundamental Principles						
	ECTS	3	Duration	1 semester	Method of grading	(not) successfully completed	Modul level undergraduate
	Courses	S (2)					
	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 I	§ 22 II Nr. 1 h) § 22 II Nr. 2 f) § 22 II Nr. 3 f)					

11-L-EL2-152-m01	Selected Topics in Physics Didactics							
	ECTS	3	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses	S (2)						
	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 I	§ 22 II Nr. 1 h) § 22 II Nr. 2 f) § 22 II Nr. 3 f)						
11-P-VKM-152-m01	Preparatory Course Mathematics							
	ECTS	2	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses	T (2)						
	Method of assessment	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 II Nr. 1 h) § 22 II Nr. 2 f) § 22 II Nr. 3 f)						
11-L-L3B-152-m01	Student Lab Supervision (Physics)							
	ECTS	2	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses	P (2)						
	Method of assessment	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)						
	Additional Information	This module is designed for students studying at least one subject in the natural sciences.						
	Referred to in LPO I	§ 22 II Nr. 1 h) § 22 II Nr. 2 f) § 22 II Nr. 3 f)						

11-MIND-Ph1-152-m01	Low Cost - High Impact. Low-budget Experiments for Science Courses (Physics)							
	ECTS	2	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses	S (2)						
	Method of assessment	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)						
	Additional Information	This module is designed for students studying at least one subject in the natural sciences.						
	Referred to in LPO I	§ 22 II Nr. 1 h) § 22 II Nr. 2 f) § 22 II Nr. 3 f)						
11-MIND-Ph2-152-m01	Teaching Science with Hands-on-Exhibits (Physics)							
	ECTS	2	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses	S (2)						
	Method of assessment	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)						
	Additional Information	This module is designed for students studying at least one subject in the natural sciences.						
	Referred to in LPO I	§ 22 II Nr. 1 h) § 22 II Nr. 2 f) § 22 II Nr. 3 f)						
11-AP-152-m01	Astrophysics							
	ECTS	6	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses	V (2) + R (2) Module taught in: German or 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: German and/or English						
	Referred to in LPO I	§ 22 II Nr. 1 h) § 22 II Nr. 2 f) § 22 II Nr. 3 f)						

11-ENT-152-m01	<b>Principles of Energy Technologies</b>							
	ECTS	6	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses		V (3) + R (1) Module taught in: German or 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: German and/or English 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-APD-152-m01	<b>Current Topics of Teaching Concepts in Physics</b>							
	ECTS	3	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		S (2) Module taught in: German or English					
	Method of assessment		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 II Nr. 1 h) § 22 II Nr. 2 f) § 22 II Nr. 3 f)					
11-L-WPD-152-m01	<b>Scientific Work in Teaching Concepts</b>							
	ECTS	3	Duration	1 semester	Method of grading	(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 II Nr. 1 h) § 22 II Nr. 2 f) § 22 II Nr. 3 f)					

11-LX6-152-m01	Current Topics in Physics							
	ECTS	6	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (3) + R (1)					
	Method of assessment		a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: German and/or English					
	other prerequisites		Approval from examination committee required.					
	Referred to in LPO I		§ 22 II Nr. 1 h) § 22 II Nr. 2 f) § 22 II Nr. 3 f)					
11-LCS6-152-m01	Selected Topics of Physics							
	ECTS	4	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + R (1)					
	Method of assessment		a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: German and/or English					
	other prerequisites		Approval from examination committee required.					
	Referred to in LPO I		§ 22 II Nr. 1 h) § 22 II Nr. 2 f) § 22 II Nr. 3 f)					



11-L-NEGS-152-m01	Experiments for science courses in primary schools							
	ECTS	2	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses	S (2)						
	Method of assessment	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.						
	Referred to in LPO 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-DF-152-m01	Thesis in Physics Primary General School							
	ECTS	10	Duration		Method of grading	numerical grade	Modul level	undergraduate
	Courses	No courses assigned to module						
	Method of assessment	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 (examination regulations for teaching-degree programmes)						
	Referred to in LPO I	§ 29						