

## **Annex SFB**

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

Responsible: Faculty of Physics and Astronomy

Examination regulations version: 2013

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:

#### LASP02009

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

## 25-Sep-2014 (2014-52)

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 sp	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 as	sessm	ent								
	Only after su completion o		ıl if applic	if applicable							
	Other prereq	uisites	if applic	if applicable							
	Participants and allocation of places		ocati- if applic	if applicable							
	Additional information		ion if applic	if applicable							
	Referred to in	า LPO I	if applic	able (examination re	gulations for teachin	g-degree programmes)					

#### Compulsory Courses (20 ECTS credits)

Successful completion of modules worth 20 ECTS credits in each subject selected as Didaktikfach (subject studied with a focus on teaching methodology) is a prerequisite for admission to the Erste Staatsprüfung (First State Examination) in the subject Didaktiken einer Fächergruppe der Mittelschule (Didactics of a Group of Subjects of Mittelschule).

schule).													
11-P-SP1-092-m01	Physics 1 for Primary and Secondary General School												
	ECTS 5 Duration									undergraduate			
	Courses			V + Ü (no information on SWS (weekly contact hours) and course language available)									
	Method	d of asse	ssment	a) written examination (approx. 90 minutes) or b) oral examination of one candidate each (approx. 15 minutes) or oral examination in groups (groups of 2, approx. 30 minutes) Assessment offered: When and how often assessment will be offered depends on the method of assessment and will be announced in due form under observance of Section 32 Subsection 3 ASPO (general academic and examination regulations) 2009.									
	other prerequisites			Certain prerequisites must be met to qualify for admission to assessment. The lecturer will inform students about the respective details at the beginning of the course. Registration for the course will be considered a declaration of will to seek admission to assessment. If students have obtained the qualification for admission to assessment over the course of the semester, the lecturer will put their registration for assessment into effect. Students who meet all prerequisites will be admitted to assessment in the current or in the subsequent semester. For assessment at a later date, students will have to obtain the qualification for admission to assessment anew.									
	Referred to in LPO I			§ 36 (1) 7. Didaktik der Grundschule Physik § 38 (1) 1. Didaktik der Hauptschule Physik § 38 (1) 1. Didaktik der Mittelschule Physik									
11-P-SP2-092-m01	Physics 2 for Primary and Secondary General School												
	ECTS	5	Duration	1	1 semester	Method of gra	ding numerical grade		Modul level	undergraduate			
	Course	 !S		V + Ü	(no information	on SWS (weekly co	ntact hours) and course la	anguage av	ailable)				
	Method of assessment			a) written examination (approx. 90 minutes) or b) oral examination of one candidate each (approx. 15 minutes) or oral examination in groups (groups of 2, approx. 30 minutes)  Assessment offered: When and how often assessment will be offered depends on the method of assessment and will be announced in due form under observance of Section 32 Subsection 3 ASPO (general academic and examination regulations)  2009.									
	other prerequisites			Certain prerequisites must be met to qualify for admission to assessment. The lecturer will inform students about the respective details at the beginning of the course. Registration for the course will be considered a declaration of will to seek admission to assessment. If students have obtained the qualification for admission to assessment over the course of the semester, the lecturer will put their registration for assessment into effect. Students who meet all prerequisites will be admitted to assessment in the current or in the subsequent semester. For assessment at a later date, students will have to obtain the qualification for admission to assessment anew.									
				§ 36 (1) 7. Didaktik der Grundschule Physik § 38 (1) 1. Didaktik der Hauptschule Physik § 38 (1) 1. Didaktik der Mittelschule Physik									

Physics 3 for Primary and Secondary General School												
ECTS	5	Duration	ı	1 semester	Met	hod of grading	numerical	grade	Modul level	undergraduate		
Courses	5		V + Ü (no information on SWS (weekly contact hours) and course language available)									
Method	l of asse	essment	a) written examination (approx. 90 minutes) or b) oral examination of one candidate each (approx. 15 minutes) or oral examination in groups (groups of 2, approx. 30 minutes)  Assessment offered: When and how often assessment will be offered depends on the method of assessment and will be announced in due form under observance of Section 32 Subsection 3 ASPO (general academic and examination regulations)  2009.									
other pr	rerequis	sites	Certain prerequisites must be met to qualify for admission to assessment. The lecturer will inform students about the respective details at the beginning of the course. Registration for the course will be considered a declaration of will to seek admission to assessment. If students have obtained the qualification for admission to assessment over the course of the semester, the lecturer will put their registration for assessment into effect. Students who meet all prerequisites will be admitted to assessment in the current or in the subsequent semester. For assessment at a later date, students will have to obtain the qualification for admission to assessment anew.									
Referred	d to in L		§ 36 (1) 7. Didaktik der Grundschule Physik § 38 (1) 1. Didaktik der Hauptschule Physik § 38 (1) 1. Didaktik der Mittelschule Physik									
Teaching Physics in Primary and Secondary General School												
ECTS	5	Duration							Modul level	undergraduate		
Courses			Einführung Fachdidaktik 2 (Introduction to Didactics 2): V (1 weekly contact hour) + Ü (1 weekly contact hour), once a year (summer semester) Fächerübergreifender Unterricht (Teaching Interdisciplinary Contents): S (2 weekly contact hours), once a year (summer semester)									
Method of assessment			<ol> <li>Topics covered in lectures and exercises (Einführung Fachdidaktik 2 (Introduction to Didactics 2)): written examination (approx. 45 minutes) or term paper (approx. 8 pages) or presentation (approx. 30 minutes) or oral examination of one candidate each (approx. 10 minutes) or oral examination in groups (approx. 20 minutes, groups of 2 candidates).</li> <li>Seminar (Fächerübergreifender Unterricht (Teaching Interdisciplinary Contents)): term paper (approx. 8 pages) or presentation (approx. 45 minutes) or log of a class (approx. 6 pages) or written examination (approx. 45 minutes) or oral examination of one candidate each (approx. 15 minutes) or oral examination in groups (approx. 30 minutes).</li> <li>Students must register for assessment components 1 and 2 online (details to be announced).</li> </ol>									
Referred to in LPO I			§ 36 (1) 7. Didaktik der Grundschule Physik § 38 (1) 1. Didaktik der Hauptschule Physik § 38 (1) 1. Didaktik der Mittelschule Physik § 53 (1) 2. Physik Fachdidaktik § 77 (1) 2. Physik Fachdidaktik									
	Courses Method  Teachir ECTS Courses  Method  Other p  Other p  Referre	Courses  Method of assortion to the prerequise  Referred to in the total series of the prerequise of the prerequise of the prerequise referred to in the pre	ECTS 5 Duration  Courses  Method of assessment  other prerequisites  Referred to in LPO I  Teaching Physics in Prine ECTS 5 Duration Courses  Method of assessment  other prerequisites  Referred to in LPO I	ECTS 5 Duration  Courses V+Ü (  Method of assessment a) writ nation Assess nounce 2009.  other prerequisites Certain tive de on to a the led sessm ficatio  Referred to in LPO I § 36 (a § 38	ECTS 5 Duration 1 semester  Courses V + Ü (no information a) written examination nation in groups (ground Assessment offered: Nounced in due form 2009.  Other prerequisites Certain prerequisites tive details at the begon to assessment. If such the lecturer will put the sessment in the curre fication for admission for admission.  Referred to in LPO I § 36 (1) 7. Didaktik de § 38 (1) 1. Didaktik de § 38 (1) 2. Seminar (Fächerüberster)  Method of assessment This module has the function (approx. 45 minutes) of the each (approx. 10 2. Seminar (Fächerüberster) tion (approx. 45 minutes) of the each (approx. 10 2. Seminar (Fächerüberster) tion (approx. 45 minutes) of the each (approx. 10 2. Seminar (Fächerüberster) tion (approx. 45 minutes) of the each (approx. 10 2. Seminar (Fächerüberster) tion (approx. 45 minutes) of the each (approx. 10 2. Seminar (Fächerüberster) tion (approx. 45 minutes) of the each (approx. 10 2. Seminar (Fächerüberster) tion (approx. 45 minutes) of the each (approx. 10 2. Seminar (Fächerüberster) tion (approx. 45 minutes) of the each (approx. 10 2. Seminar (Fächerüberster) tion (approx. 45 minutes) of the each (approx. 10 2. Seminar (Fächerüberster) tion (approx. 45 minutes) of the each (approx. 10 2. Seminar (Fächerüberster) tion (approx. 45 minutes) of the each (approx. 45 minutes) of the each (approx. 10 2. 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Seminar (Fächerüberster) tion (approx. 45 minutes) of t	ECTS 5 Duration 1 semester Met  Courses V + Ü (no information on SWS of the prerequisites	ECTS   5   Duration   1 semester   Method of grading   Courses   V + Ü (no information on SWS (weekly contact   Method of assessment   a) written examination (approx. 90 minutes)   nation in groups (groups of 2, approx. 30 min   Assessment offered: When and how often as nounced in due form under observance of Secoogs.  Other prerequisites   Certain prerequisites must be met to qualify   tive details at the beginning of the course. Re on to assessment. If students have obtained   the lecturer will put their registration for assessment in the current or in the subsequent   fication for admission to assessment anew.   Referred to in LPO I   § 36 (1) 7. Didaktik der Grundschule Physik   § 38 (1) 1. Didaktik der Hauptschule Physik   § 38 (1) 1. Didaktik der Mittelschule Physik   Sammer semester)   Fächerübergreifender Unterricht (Teaching In ster)    Method of assessment   Method of assessment   This module has the following assessment con   1. Topics covered in lectures and exercises (prox. 45 minutes) or term paper (approx. 8 te each (approx. 10 minutes) or oral exami   2. Seminar (Fächerübergreifender Unterricht   1. Topics covered in lectures and exercises (prox. 45 minutes) or log of a class on of one candidate each (approx. 15 minutes)   3. Students must register for assessment comp   3. Topics covered in lectures and exercises (prox. 45 minutes) or log of a class on of one candidate each (approx. 15 minutes)   3. Students must register for assessment comp   3. Students must register for assessment comp   3. Topics covered in lectures and exercises (prox. 45 minutes)   3. Didaktik der Grundschule Physik   3. Students must register for assessment comp   3. Topics covered in lectures and exercises (prox. 45 minutes)   3. Didaktik der Grundschule Physik   3. Students must register for assessment comp   3. Didaktik der Grundschule Physik   3. Students must register for assess	ECTS 5 Duration 1 semester Method of grading numerical Courses V + Ü (no information on SWS (weekly contact hours) and Method of assessment all written examination (approx. 90 minutes) or b) oral examination in groups (groups of 2, approx. 30 minutes) Assessment offered: When and how often assessment with nounced in due form under observance of Section 32 Sub 2009.  Other prerequisites Certain prerequisites must be met to qualify for admission on to assessment. If students have obtained the qualificate lecturer will put their registration for assessment into sessment in the current or in the subsequent semester. Fification for admission to assessment anew.  Referred to in LPO I § 36 (1) 7. Didaktik der Grundschule Physik § 38 (1) 1. Didaktik der Hauptschule Physik § 38 (1) 1. Didaktik der Mittelschule Physik § 38 (1) 1. Didaktik der Grundschule Physik § 38 (1) 1. Didaktik der Grundschule Physik § 38 (1) 1. Didaktik der Hauptschule Physik § 38 (1) 1. Didaktik der Hauptschule Physik § 38 (1) 1. Didaktik der Mittelschule Physik § 38 (1) 1. Didaktik der Hauptschule Physik § 38 (1) 2. Physik Fachdidaktik § 77 (1) 2. Physik Fachdidaktik	ECTS   5   Duration   1 semester   Method of grading   numerical grade    Courses   V + Ü (no information on SWS (weekly contact hours) and course language a    Method of assessment   a) written examination (approx. 90 minutes) or b) oral examination of one contains in groups (groups of 2, approx. 30 minutes)    Assessment offered: When and how often assessment will be offered depen nounced in due form under observance of Section 32 Subsection 3 ASPO (gr 2009).  Other prerequisites   Certain prerequisites must be met to qualify for admission to assessment. If students have obtained the qualification for damission the lecturer will put their registration for assessment into effect. Students wis sessment in the current or in the subsequent semester. For assessment at a fication for admission to assessment anew.  Referred to in LPO   § 36 (i) 7. Didaktik der Grundschule Physik § 38 (i) 1. Didaktik der Hauptschule Physik § 38 (i) 1. Didaktik der Mittelschule Physik § 38 (i) 1. Didaktik der Mittelschule Physik § 38 (i) 1. Didaktik der Mittelschule Physik § 5   Duration   1 semester   Method of grading   numerical grade    ECTS   Duration   1 semester   Method of grading   numerical grade    Ectiführung Fachdidaktik 2 (Introduction to Didactics 2): V (1 weekly contact (summer semester)   Fächerübergreifender Unterricht (Teaching Interdisciplinary Contents): S (2 v ster)    Method of assessment   This module has the following assessment components   1. Topics covered in lectures and exercises (Einführung Fachdidaktik 2 (Introduction to Gaprox. 45 minutes) or term paper (approx. 8 pages) or presentation (approx te each (approx. 45 minutes) or log of a class (approx. 6 pages) or written exa on of one candidate each (approx. 15 minutes) or oral examination in group Students must register for assessment components 1 and 2 online (details to To pass this module, students must pass both assessment component 1 and other prerequisites   Prior completion of module 11-P-E recommended.   Physik § 38 (i) 1. Didaktik der Mittelsch	ECTS   5   Duration   1 semester   Method of grading   numerical grade   Modul level		

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". 11-P-FB-LLL-121-**Student Lab Supervision (Physics)** mo1 Method of grading (not) successfully completed Modul level ECTS 2 Duration 1 semester undergraduate S (no information on SWS (weekly contact hours) and course language available) Courses Method of assessment | a) written examination (approx. 45 minutes) or b) term paper (approx. 8 pages, time to complete: 1 to 4 weeks) or c) examination of one candidate each (approx. 10 minutes) or d) examination in groups (approx. 20 minutes, groups of 2) other prerequisites This module can be chosen by students studying at least one subject in the natural sciences. 11-MIND-Ph1-121-Low Cost - High Impact, Low-Budget Experiments for Science Courses (Physics) Method of grading (not) successfully completed ECTS Duration 1 semester Modul level undergraduate S (no information on SWS (weekly contact hours) and course language available) Courses Method of assessment | a) written examination (approx. 45 minutes) or b) term paper (approx. 8 pages, time to complete: 1 to 4 weeks) or c) examination of one candidate each (approx. 10 minutes) or d) examination in groups (approx. 20 minutes, groups of 2) other prerequisites This module can be chosen by students studying at least one subject in the natural sciences. 11-MIND-Ph2-121-**Teaching Science with Hands-on-Exhibits (Physics)** mo1 Method of grading (not) successfully completed Modul level ECTS 12 Duration 1 semester undergraduate S (no information on SWS (weekly contact hours) and course language available) Courses Method of assessment | a) written examination (approx. 45 minutes) or b) term paper (approx. 8 pages, time to complete: 1 to 4 weeks) or c) examination of one candidate each (approx. 10 minutes) or d) examination in groups (approx. 20 minutes, groups of 2) This module can be chosen by students studying at least one subject in the natural sciences. other prerequisites 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 Mittelschule may write this thesis in the subject Didaktik einer Fächergruppe der Mittelschule (Didactics of a Group of Subjects of Mittelschule), 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-P-HS-DF-Thesis in Physics Secondary General School HA-092-m01 **ECTS** 10 Duration Method of grading | numerical grade Modul level undergraduate 1 semester Courses no courses assigned Method of assessment written thesis (approx. 40 pages) Language of assessment: German, exceptions in accordance with Section 29 Subsection 4 LPO I (examination regulations for teaching degree programmes) Modules successfully Where applicable, specific modules/module components as specified by supervisor. completed Additional Information Additional information on module duration: 1 to 2 semesters.