

Subdivided Module Catalogue for the Subject

Mathematics

as Unterrichtsfach with the degree "Erste Staatsprüfung für das Lehramt an Grundschulen"

> Examination regulations version: 2015 Responsible: Faculty of Mathematics and Computer Science Responsible: Institute of Mathematics

JMU Würzburg • generated 18-Apr-2025 • exam. reg. data record L1|105|-|-|H|2015

Abbreviations used

Course types: \mathbf{E} = field trip, \mathbf{K} = colloquium, \mathbf{O} = conversatorium, \mathbf{P} = placement/lab course, \mathbf{R} = project, \mathbf{S} = seminar, \mathbf{T} = tutorial, $\ddot{\mathbf{U}}$ = exercise, \mathbf{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

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

Notes

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 the 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)):

05-Oct-2015 (2015-187)

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.

The subject is divided into

Abbreviation	Module title	ECTS credits	Method of grading	page
Scientific Discipline (54 E	CTS credits)			
Cumpulsory Courses (54	ECTS credits)			
10-M-ELZT-152-m01	Elementary Number Theory	6	NUM	16
10-M-ELGE-152-m01	Elementary Geometry	6	NUM	14
10-M-ELST-152-m01	Elementary Stochastics	5	NUM	15
10-M-GRLA-152-m01	Basic Linear Analysis	9	NUM	21
10-M-GRAN-152-m01	Basic Analysis	12	NUM	19
10-M-ANGE-152-m01	10-M-ANGE-152-mo1 Analytic Geometry			
10-M-GRDG-152-m01	Basic Differential Equations	5	NUM	5 20
10-M-M3GMR-152-m01	Review Course Mathematics (German Grundschule/Mittelschu-	5	B/NB	23
	le/Realschule)	,	,	
Teaching (12 ECTS credits				
Compulsory Courses (12				
10-M-DGGS1-152-m01	Didactics of Mathematics - Geometry (German Grundschule)	5	NUM	8
10-M-DGGS2-152-m01	Didactics of Mathematics - Arithmetics and Application of Ma-	7	NUM	9
Paper (4 ECTS credits)	thematics (German Grundschule)	,		Ĺ
regulations for teaching-degr ECTS credits obtained are cou	ocus on the scientific discipline) pursuant to Section 34 Subsect ee programmes). The obligatory accompanying tutorial is offered inted in the subject Erziehungswissenschaften pursuant to Secti ion regulations for teaching-degree programms).	l by the res	spective subjective su	t. The
	Practical Training in Classroom Teaching including Theory (Ger-		5 (1) 5	
10-M-SFDPGS-152-m01	man Grundschule)	4	B/NB	28
Freier Bereich (general as we Teaching degree students mu ject-specific electives) (Sectic To achieve the required numb Freier Bereich interdisciplin		r Bereich (eaching-de as below. an be four	general as wel egree programr	l as sul nes)).
Freier Bereich (general as we Teaching degree students mu ject-specific electives) (Section To achieve the required numb Freier Bereich interdisciplin nex "Ergänzende Bestimmung Mathematics	man Grundschule) Il as subject-specific electives) Ist take modules worth a total of 15 ECTS credits in the area Freie on 9 LASPO (general academic and examination regulations for to ber of ECTS credits, students may take any modules from the area ary: The interdisciplinary additional offer for a teaching degree of gen für den "Freien Bereich" im Rahmen des Studiums für ein Lei	r Bereich (eaching-de as below. an be four	general as wel egree programr	l as sul nes)).
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LA Grundschulen Mathematics (2015)	JMU Würzburg • generated 18-Apr-2025 • exam. reg. data re- cord Lehramt Grundschulen (Unterrichtsfach) Mathematik - 2015	page 3 / 48	
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Julius-Maximilians- UNIVERSITÄT WÜRZBURG	Subdivided Module Catalogue for the Sub Mathema LA Grundschu	tics

	Basics of Mathematics für German Grundschule 1: Arithmetics			
10-M-VHBAuG-152-m01	and Orders of Magnitude (virtual course)	2	B/NB	31
	Basics of Mathematics für German Grundschule 2: Geometry	2	D /ND	
10-M-VHBGuS-152-m01	and Stochastics (virtual course)	2	B/NB	40
10-M-GBM-152-m01	Basic Notions and Methods of Mathematical Reasoning	2	B/NB	17
10-M-VHBDG-152-m01	Didactics of Geometry (virtual course)	2	B/NB	34
10-M-VHBDA-152-m01	Didactics of Algebra (virtual course)	2	B/NB	32
10-M-VHBEx-152-m01	Exam Tutorial Didactics of Mathematics (virtual course)	2	B/NB	36
10-M-VHBMa1-152-m01	Mathematics 1 (virtual course)	2	B/NB	43
10-M-VHBMa2-152-m01	Mathematics 2 (virtual course)	2	B/NB	45
10-M-MMMG1-152-m01	Methods and Media in Teaching Mathematics 1 (German	3	B/NB	24
10-11-11-11-11-11-11-11-11-11-11-11-11-1	Grundschule)	2	D/ND	24
10-M-MMMG2-152-m01	Methods and Media in Teaching Mathematics 2 (German	3	B/NB	25
10 10 10 10 10 10 10 10 10 10 10 10 10 1	Grundschule)	5	סאוןט	² 5
10-M-SCH-152-m01	School Mathematics from a Higher Perspective	5	B/NB	26

Paper (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.

10-M-HMGS-152-m01	Thesis in Mathematics (German Grundschule)	10	NUM	22	
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Module title Abbreviation					Abbreviation			
	ic Geon	-			10-M-ANGE-152-m01			
	e coord			Module offered by				
	f Studie	es Mathematik (Mathema	atics)	Institute of Mathem	atics			
ECTS		od of grading	Only after succ. con	npl. of module(s)				
6	·	rical grade						
Duratio		Module level	Other prerequisites					
1 seme	ster	undergraduate						
Conter	Its							
	Applications of linear algebra to analytic geometry: quadrics, characterisation of affine maps and isometries, dis cussion of Euclidean spaces (scalar products, arcs, orthonormal bases).							
Intended learning outcomes								
try. He, presen of linea	/She is t them ar algeb	able to comprehend the	central proof method . He/She can analyse to solve them.	ls, can perform easy e basic mathematica	ear algebra and analytic geome- mathematical arguments and l problems and employ methods n)			
V (4) +	Ü (2)							
ster, in written If anno examir prox. 1	formati examin unced nation o 5 minut	on on whether module canation (approx. 60 to 90 r by the lecturer at the beg f one candidate each (ap es per candidate).	an be chosen to earn minutes) inning of the course,	a bonus) the written examinat	tion offered — if not every seme- tion may be replaced by an oral in groups of 2 candidates (ap-			
	ble for							
Allocat	ion of p	olaces						
Additio	onal info	ormation						
Worklo	ad							
180 h								
	ng cycl	9						
	<u> </u>	-						
Referre	ed to in	LPOI (examination regu	lations for teaching-o	degree programmes)				
§ 51 N	lr. 2							
Modul	e appea	rs in						
First st First st First st 2015))	ate exa ate exa ate exa	mination for the teaching mination for the teaching mination for the teaching mination for the teaching gram Mathematics (2023)	g degree Realschule A g degree Mittelschule g degree Mittelschule	Mathematics (2015) Mathematics (2015)				

	<u>e title</u>				Abbreviation
Selecte	ed Topi	cs in Didactics of Mathe	matics 1 (German Gru	ndschule)	10-M-DAGS1-152-m01
Modul	e coord	inator		Module offered by	/
Dean o	f Studi	es Mathematik (Mathem	atics)	Institute of Mathe	matics
ECTS	Meth	od of grading	Only after succ. com	npl. of module(s)	
2	(not)	successfully completed			
Duratio	on	Module level	Other prerequisites		
1 seme	ster	undergraduate			
Conten	Its				
on of te schule	eaching , select	g materials for mathemat ed topics and research r	ics in Grundschule, u esults in modern matl	sing computers for hematics didactics	spects (e.g. dyscalculia, evaluati teaching mathematics in Grund- , theoretical foundations of math stantial learning environments).
Intend	ed lear	ning outcomes			
plannir	ng and				natics, knows important aspects for teaching and learning und ca
Course	s (type	, number of weekly conta	act hours, language —	- if other than Germ	ian)
S (2)					
		sessment (type, scope, la ion on whether module c			ation offered — if not every seme
		x. 45 minutes) or			
c) proje	ect (10	(5 to 10 pages) or to 15 pages) ffered: Every two years, v	vinter semester		
c) proje	ect (10 ment o	to 15 pages) ffered: Every two years, v	vinter semester		
c) proje Assess	ect (10 ment o	to 15 pages) ffered: Every two years, v	vinter semester		
c) proje Assess Allocat 	ect (10 ment o t ion of J	to 15 pages) ffered: Every two years, v	vinter semester		
c) proje Assess Allocat 	ect (10 ment o t ion of J	to 15 pages) ffered: Every two years, v places	vinter semester		
c) proje Assess Allocat 	ect (10 ment o ion of p	to 15 pages) ffered: Every two years, v places	vinter semester		
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c) proje Assess Allocat Additic Worklo 60 h Teachin Referre	ect (10 iment o ion of p onal inf pad ng cycl	to 15 pages) ffered: Every two years, v places ormation		degree programme	5)
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c) proje Assess Allocat Additic Worklo 60 h Teachin § 22 II Modulo	ect (10 iment o ion of p onal inf pad ng cycl ed to in Nr. 1 h) e appea	to 15 pages) ffered: Every two years, v places ormation e LPO I (examination regu	llations for teaching-c		
c) proje Assess Allocat Additic Worklo 60 h Teachin Referre § 22 II Module First sta	ect (10 ment o ion of p onal inf onal inf oad ng cycl ed to in Nr. 1 h) e appea ate exa	to 15 pages) ffered: Every two years, v places ormation e LPO I (examination regu ars in mination for the teaching	ulations for teaching-c	e Mathematics (201	
c) proje Assess Allocat Additic Worklo 60 h Teachin § 22 II Module First sta First sta First sta	ect (10 iment o ion of p onal inf pad ed to in Nr. 1 h) e appea ate exa ate exa	to 15 pages) ffered: Every two years, v places ormation e LPO I (examination regu ars in mination for the teaching mination for the teaching	ulations for teaching-c g degree Grundschule g degree Grundschule	e Mathematics (201 e Didactics in Math	5)
c) proje Assess Allocat Additic Worklo 60 h Teachin § 22 II Modulo First sta First sta First sta (2015)	ect (10 iment o ion of p onal inf onal inf oad ng cycl ed to in Nr. 1 h) e appea ate exa ate exa ate exa	to 15 pages) ffered: Every two years, v places ormation e LPO I (examination regu ars in mination for the teaching mination for the teaching mination for the teaching	Ilations for teaching-c g degree Grundschule g degree Grundschule g degree Sonderpäda	e Mathematics (201 e Didactics in Math gogik Didactics in 1	5) ematics (Primary School) (2015) Mathematics (Primary School)
c) proje Assess Allocat Additic Worklo 60 h Teachi Teachi § 22 II Module First sta First sta (2015) First sta	ect (10 iment o ion of p onal inf onal inf oad ng cycl ed to in Nr. 1 h) e appea ate exa ate exa ate exa	to 15 pages) ffered: Every two years, v places ormation e LPO I (examination regu ars in mination for the teaching mination for the teaching mination for the teaching	Ilations for teaching-o g degree Grundschule g degree Grundschule g degree Sonderpäda g degree Sonderpäda	e Mathematics (201 e Didactics in Math gogik Didactics in 1	5) ematics (Primary School) (2015)

Module	e title				Abbreviation
Selecto	ed Topi	cs in Didactics of Mathe	matics 2 (German Gru	ndschule)	10-M-DAGS2-152-m01
Modul	e coord	inator		Module offered by	
Dean o	f Studi	es Mathematik (Mathem	atics)	Institute of Mathen	natics
ECTS	Meth	od of grading	Only after succ. com	pl. of module(s)	
2	(not)	successfully completed			
Duratio	on	Module level	Other prerequisites		
1 seme	ster	undergraduate			
Conten	ts				
on of te schule	eaching , select	g materials for mathemat ed topics and research r	ics in Grundschule, us esults in modern math	sing computers for t nematics didactics,	pects (e.g. dyscalculia, evaluati- eaching mathematics in Grund- theoretical foundations of mathe antial learning environments).
Intend	ed lear	ning outcomes			
planniı	ng and				atics, knows important aspects o or teaching and learning und can
Course	s (type	, number of weekly conta	act hours, language —	if other than Germa	an)
S (2)					
		s essment (type, scope, la ion on whether module c			ation offered — if not every seme
b) term c) proje	i paper ect (10	x. 45 minutes) or (5 to 10 pages) or to 15 pages) ffered: Every two years, s	summer semester		
Allocat	ion of _l	places			
Additio	nal inf	ormation			
Worklo	ad				
60 h					
Toochi	ng cycl	e			
reacin					
	ed to in	LPOI (examination regu	lations for teaching-d	legree programmes	
 Referre		LPOI (examination regu	llations for teaching-d	legree programmes)	
 Referre § 22	Nr. 1 h)		llations for teaching-d	egree programmes))
 Referre § 22 Module	Nr. 1 h) e appea	ars in			
First st First st	Nr. 1 h) e appea ate exa ate exa	ars in mination for the teachin mination for the teachin	g degree Grundschule g degree Grundschule	Mathematics (2015 Didactics in Mathe	
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Module title Abbreviation					Abbreviation	
Didacti	ics of N	lathematics - Geometry (German Grundschule	2)	10-M-DGGS1-152-m01	
Module	e coord	inator		Module offered by	• 	
Dean of Studies Mathematik (Mathematics) Institute of Mathematics			natics			
			Only after succ. com	pl. of module(s)		
5	nume	rical grade				
Duratio						
1 seme	ster	undergraduate				
Conten	ts					
of geor Possibi techno	netry, s ilities o logies.	patial visualisation abilit f implementation in the c	y, planar figures, syn	nmetries, 3-dimensi	ctic aspects into account (aims onal solids, geometric drawing). and media, including modern	
		ning outcomes	C. 11		nool, basics in developmental	
psycho ant mo She/he	ology ar dels, p e knows	nd didactics of mathemat resentations and media v	ics, fundamentals in vhich can be employe ies and problems of p	elementary school r ed in elementary sch oupils in the acquisi	nathematics, as well as import- nool teaching of mathematics. tion of mathematical skills, and	
Course	s (type	, number of weekly conta	ct hours, language —	if other than Germa	an)	
V (2) +	Ü (2)					
		sessment (type, scope, la ion on whether module ca			ation offered — if not every seme-	
lf anno examin	unced ation c 5 minut	of one candidate each (ap tes per candidate).	inning of the course,		ation may be replaced by an oral n in groups of 2 candidates (ap-	
Allocat	ion of j	olaces				
Additio	onal inf	ormation				
Worklo	ad					
150 h						
Teachi		e				
	-5 cycl	•				
Referre	d to in	LPO I (examination regu	lations for teaching.	legree programmes		
§ 51 N						
Module		ars in				
		mination for the teaching	degree Grundschule	Mathematics (2015)	
		gram Mathematics (2023)		mainematics (2015		
exeriuli	10 PIU		,			

Module title Abbreviation					Abbreviation	
		athematics - Arithmetics	and Application of N	Mathematics (Ger-	10-M-DGGS2-152-m01	
man Gr		•				
Module				Module offered by		
		es Mathematik (Mathema		Institute of Mathem	natics	
ECTS	î	od of grading	Only after succ. com	pl. of module(s)		
7	<u> </u>	rical grade				
Duration		Module level undergraduate	Other prerequisites			
Conten		undergraduate				
king die notatio aims of aching cal diff	In-depth discussion of topics in teaching arithmetics and application-oriented mathematics in Grundschule, ta- king didactic aspects into account (aims of teaching arithmetics, didactic principles, sets, numbers, positional notations, arithmetic models, elementary arithmetic, mental calculation, half-written and written calculations, aims of teaching applications of mathematics, treatment of quantities, representation of data, possibilities of te aching application-oriented mathematics, heuristic principles, strategies and tools, modelling, mappings, typi- cal difficulties in solving text problems, possibilities of promoting competences in applied calculation). Possibi- lities of implementation in the classroom and employment of materials and media, including modern technolo-					
Intende	ed learr	ning outcomes				
ant mo She/he	dels, pi e knows	resentations and media v	which can be employe ies and problems of p	ed in elementary sch oupils in the acquisi	nathematics, as well as import- nool teaching of mathematics. tion of mathematical skills, and es.	
Course	s (type,	, number of weekly conta	ct hours, language —	if other than Germa	an)	
V (2) +	Ü (1) +	V (2) + Ü (2)				
		essment (type, scope, la on on whether module ca			tion offered — if not every seme-	
b) oral	examin	ation of one candidate e ation in groups (groups o nination (approx. 60 to 1	of 2, approx. 15 minut		r	
Allocat	ion of p	olaces				
Additio	nal info	ormation				
Worklo	ad					
210 h						
Teachi	ng cycl	9				
Referre	d to in	LPOI (examination regu	lations for teaching-d	legree programmes)		
§ 51 N	r. 4					
Module	e appea	rs in				
		mination for the teaching gram Mathematics (2023)	-	Mathematics (2015)	

	e title				Abbreviation
Methodology of Teaching in Mathematics 1 (German Grundschule) 10-M-DMGS1-152-m01					10-M-DMGS1-152-m01
Module	e coord	inator		Module offered by	•
Dean o	f Studi	es Mathematik (Mathema	atics)	Institute of Mathen	natics
ECTS		od of grading	Only after succ. com	pl. of module(s)	
3	(not) s	successfully completed			
Duratio	on	Module level	Other prerequisites		
1 seme	ster	undergraduate			
Conten	Its				
ly weał stantia	< or par	ticularly strong in mathe ng environments as well	matics, dealing with h	neterogeneity in the	t for pupils who are particular- classroom, organisation of sub- classroom, also including mo-
Intend	ed lear	ning outcomes			
in teac	hing m		it aspects in planning	and analysing the t	ür assessing media and their use teaching of mathematics. He/She s them.
Course	s (type	, number of weekly conta	act hours, language —	if other than Germa	an)
S (2)					
		s essment (type, scope, la ion on whether module c			ation offered — if not every seme
b) term c) proje	n paper ect (10 t	x. 45 minutes) or (5 to 10 pages) or to 15 pages) ffered: Every two years, v	vinter semester		
Allocat	ion of j	1			
Allocal		places			
		places			
		ormation			
	onal inf				
 Additic Worklo	onal inf				
 Additic Worklo 90 h	onal inf	ormation			
 Additic Worklo 90 h	onal inf oad	ormation			
 Additic Worklo 90 h Teachi	onal inf oad ng cycl	ormation e	llations for teaching-c	legree programmes)
 Additic Worklo 90 h Teachi	onal inf oad ng cycl ed to in	ormation e LPOI (examination regu	lations for teaching-c	legree programmes)
 Additio Worklo 90 h Teachin Referre § 22 II	onal inf oad ng cycl ed to in	ormation e LPOI (examination regu	llations for teaching-c	legree programmes))
 Additic 90 h Teachin Referre § 22 II Module	onal inf oad ng cycl ed to in Nr. 1 h) e appea	ormation e LPOI (examination regu			
 Additio Worklo 90 h Teachi Referre § 22 II Modulo First sta	onal inf oad ng cycl ed to in Nr. 1 h) e appea ate exa ate exa	e LPOI (examination regu ars in mination for the teaching mination for the teaching	g degree Grundschule g degree Grundschule	e Mathematics (2015 Didactics in Mathe	

Modul	e title				Abbreviation
Metho	dology	of Teaching in Mathema	tics 2 (German Grund	schule)	10-M-DMGS2-152-m01
Modul	e coord	inator		Module offered by	
Dean c	of Studi	es Mathematik (Mathem	atics)	Institute of Mathe	matics
ECTS	Meth	od of grading	Only after succ. com	pl. of module(s)	
3	(not)	successfully completed			
Duratio	on	Module level	Other prerequisites		
1 seme	ester	undergraduate			
Conter	nts				
ly weal stantia	k or par	ticularly strong in mathe ng environments as well	matics, dealing with h	eterogeneity in the	rt for pupils who are particular- e classroom, organisation of sub- e classroom, also including mo-
Intend	ed lear	ning outcomes			
in teac is acqu	hing m uainted	athematics and importar with learning and teachi	nt aspects in planning ng strategies and can	and analysing the employ and asses	
Course	es (type	, number of weekly conta	act hours, language —	if other than Germ	ian)
S (2)					
		sessment (type, scope, la ion on whether module c			ation offered — if not every seme
b) term c) proje	n paper ect (10	x. 45 minutes) or (5 to 10 pages) or to 15 pages) ffered: Every two years, s	summer semester		
Allocat	tion of	places			
Additio	onal inf	ormation			
Worklo	bad				
90 h					
	ng cycl	e			
Teachi					
Teachi 					
	ed to in	LPOI (examination regu	llations for teaching-d	legree programme	5)
 Referre	ed to in Nr. 1 h)	LPOI (examination regu	llations for teaching-d	legree programme	s)
 Referre § 22			Ilations for teaching-d	egree programme:	5)
 Referre § 22 Module	Nr. 1 h) e appe a				
 Referre § 22 II Modul First st First st	Nr. 1 h) e appea ate exa ate exa	ars in mination for the teachin mination for the teachin	g degree Grundschule g degree Grundschule	Mathematics (201 Didactics in Mathe	

Module titl	e			Abbreviation	
E-Learning	and Blended Learning in	Mathematical Teaching	g (virtual Course)	10-M-DVHB-152-m0	1
Module cod	ordinator		Module offered by		
	· · · · · · · · · · · · · · · · · · ·	matical	Institute of Mathematics		
	udies Mathematik (Mather			latics	
	thod of grading ot) successfully completed	Only after succ. con	ipt. of module(s)		
	· · · ·	+			
Duration	Module level	Other prerequisites			
1 semester	undergraduate				
Contents					
	offered by Virtuelle Hochs in e-learning and blended			acquainted with and	reflects on
Intended le	earning outcomes				
	t is acquainted with basic ir potentials and limitatior		and blended learnin	ng in teaching methe	matics, as
Courses (ty	pe, number of weekly con	tact hours, language –	- if other than Germa	ın)	
Ü (2)					
• •	e: eLearning, mostly Virtue	elle Hochschule Bayern	(vhb)		
	assessment (type, scope, nation on whether module			ition offered — if not	every seme-
project (we	b-based, 15 to 20 hours)				
	it offered: Once a year, wi	nter semester			
Allocation	of places				
	•				
Additional	information				
Workload					
90 h					
Teaching c	ycle				
Referred to	in LPO I (examination re	gulations for teaching-o	degree programmes)	I	
§ 22 Nr. 1		<u></u>			
§ 22 Nr. 2 § 22 Nr. 3	2 f)				
Module ap					
	examination for the teachi	ng degree Grundschule	Mathematics (2015)	
					ool) (2015)
First state examination for the teaching degree Grundschule Didactics in Mathematics (Primary School) (2015) First state examination for the teaching degree Realschule Mathematics (2015)					
First state examination for the teaching degree Gymnasium Mathematics (2015)					
First state examination for the teaching degree Sonderpädagogik Didactics in Mathematics (Primary School)					
(2015)					
First state examination for the teaching degree Sonderpädagogik Didactics in Mathematics (Middle School)					
(2015) First state examination for the teaching degree Mittelschule Mathematics (2015)					
					(2045)
	examination for the teachi examination for the teachi				50 (2015)
	examination for the teachi		-		version
2015))		הב שכבוכב אווננכוסנוועופ	mathematics (2020	i i i ui ui gool ui ui go	
A Grundschulen	Mathematics (2015)		enerated 18-Apr-2025 • exam	-	page 12 / 48
		cord Lenramt Grund	schulen (Unterrichtsfach) Ma	unematik - 2015	

First state examination for the teaching degree Mittelschule Didactics in Mathematics (Middle School) (2020 (Prüfungsordnungsversion 2015))

First state examination for the teaching degree Sonderpädagogik Didactics in Mathematics (Middle School) (2020 (Prüfungsordnungsversion 2015))

First state examination for the teaching degree Sonderpädagogik Didactics in Mathematics (Primary School) (2020 (Prüfungsordnungsversion 2015))

First state examination for the teaching degree Gymnasium Mathematics (2023)

Module title Elementary Geometry Module coordinator	Abbreviation 10-M-ELGE-152-m01				
Module coordinator					
Module coordinator					
Deen of Studies Mathematik (Mathematics)	Module offered by Institute of Mathematics				
Dean of Studies Mathematik (Mathematics)ECTSMethod of gradingOnly aft	er succ. compl. of module(s)				
6 numerical grade					
	erequisites				
1 semester undergraduate					
Contents					
	n geometry: axiomatic foundations of Euclidean geometry, con- geometry, basics in analytic geometry in R^3, introduction to ba-				
Intended learning outcomes					
	d working in mathematics, as well as the fundamental mathe- these skills to basic problems in Euclidean geometry.				
Courses (type, number of weekly contact hours,	language — if other than German)				
V (4) + Ü (2)					
Method of assessment (type, scope, language - ster, information on whether module can be cho	- if other than German, examination offered — if not every seme- sen to earn a bonus)				
oral examination of one candidate each (approx	the course, the written examination may be replaced by an . 20 minutes) or an oral examination in groups of 2 candidates exercises (approx. 12 exercise sheets, approx. 3 exercises per				
Allocation of places					
Additional information					
Workload					
180 h					
Teaching cycle					
Referred to in LPO I (examination regulations for teaching-degree programmes)					
§ 51 Nr. 3					
Module appears in					
First state examination for the teaching degree (_				
First state examination for the teaching degree I	-				
First state examination for the teaching degree <i>I</i> First state examination for the teaching degree <i>I</i> 2015))	Aittelschule Mathematics (2015) Aittelschule Mathematics (2020 (Prüfungsordnungsversion				
exchange program Mathematics (2023)					

Module title					Abbreviation
Elementary Stochastics					10-M-ELST-152-m01
Module coordinator				Module offered by	
Dean of Studies Mathematik (Mathematics)			atics)	Institute of Mathem	atics
ECTS		od of grading	Only after succ. com	pl. of module(s)	
5	nume	rical grade			
Duratio	n	Module level	Other prerequisites		
1 semes	ster	undergraduate			
Contents					
		topics in elementary stoc tochastic modelling, intro			theory, combinatorics, inferenti- es.
Intende	ed learı	ning outcomes			
		nows the basic ways of th methods. He/She is able			vell as the fundamental mathe- n stochastics.
Courses	s (type	, number of weekly conta	ct hours, language —	· if other than Germa	n)
V (3) + ĺ	Ü (1)				
Method of assessment (type, scope, language — if other than German, examination offered — if not every seme- ster, information on whether module can be chosen to earn a bonus) written examination (approx. 60 to 90 minutes) If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate) and written exercises (approx. 12 exercise sheets, approx. 3 exercises per sheet).					
Allocati	ion of p	olaces			
Additio	nal inf	ormation			
Worklo	ad				
150 h					
Teaching cycle					
Referred to in LPO I (examination regulations for teaching-degree programmes)					
§ 51 Nr. 3					
Module	appea	irs in			
First sta First sta	ate exa ate exa	mination for the teaching mination for the teaching mination for the teaching mination for the teaching	g degree Realschule A g degree Mittelschule	Aathematics (2015) Mathematics (2015)	

ach to the number as a basic theme in mathema- of the number system.					
titute of Mathematics of module(s) ach to the number as a basic theme in mathema-					
of module(s) ach to the number as a basic theme in mathema-					
ach to the number as a basic theme in mathema-					
athematics, as well as the fundamental mathe- asic problems in the fields of number theory and					
ther than German)					
erman, examination offered — if not every seme- onus)					
written examination may be replaced by an an oral examination in groups of 2 candidates x. 12 exercise sheets, approx. 3 exercises per					
Referred to in LPO I (examination regulations for teaching-degree programmes)					
§ 51 Nr. 3					
thematics (2015) ematics (2015) hematics (2015) hematics (2020 (Prüfungsordnungsversion					

Module title				Abbreviation	
Basic Notions and Methods of Mathematical Reasoning				10-M-GBM-152-mo:	L
Module coo	dinator		Module offered by		
			Institute of Mathem		
	hod of grading	Only after succ. con		Idlics	
) successfully completed	· _ ·			
Duration	Module level	Other prerequisites			
1 semester	undergraduate				
Contents					
	to the basis notions and	d proof to chaiguag in m	athomatics, approa	ch to coto formal los	ric and mans
	to the basic notions and	<u>i proor techniques in n</u>			gic and maps.
	Irning outcomes				
	gets acquainted with the r's degree study program		lues which are prere	quisites for the furth	er courses in
Courses (typ	e, number of weekly cor	ntact hours, language –	- if other than Germa	n)	
V (1) + Ü (1)					
	ssessment (type, scope, ation on whether module			ition offered — if not	every seme-
project (10 t					
	assessment: German ar	nd/or English			
Allocation o	fplaces				
Additional in	nformation				
Additional in	nformation on module du	uration: block taught pr	ior to the beginning	of the lecture period	
Workload					
60 h					
Teaching cy	cle				
Referred to	n LPO I (examination re	gulations for teaching-	degree programmes)		
Referred to in LPO I (examination regulations for teaching-degree programmes) § 22 II Nr. 1 h) § 22 II Nr. 2 f)					
Module app	ears in				
	egree (1 major) Mathem	atics (2015)			
	egree (1 major) Econom	-			
Bachelor's degree (1 major) Mathematical Physics (2015)					
Bachelor's degree (1 major) Computational Mathematics (2015)					
First state examination for the teaching degree Grundschule Mathematics (2015)					
First state examination for the teaching degree Realschule Mathematics (2015)					
First state examination for the teaching degree Mittelschule Mathematics (2015)					
Bachelor's degree (1 major) Mathematical Physics (2016) Bachelor's degree (1 major) Economethematics (2017)					
Bachelor's degree (1 major) Economathematics (2017) First state examination for the teaching degree Mittelschule Mathematics (2020 (Prüfungsordnungsversion 2015))					
2015)) Bachelor's degree (1 major) Mathematical Physics (2020)					
	legree (1 major) Econom	•			
	legree (1 major) Econom				
	legree (1 major) Mathem		22)		
exchange pr	ogram Mathematics (20	23)			
LA Grundschulen I	Nathematics (2015)		enerated 18-Apr-2025 • exam	-	page 17 / 48
		cord Lehramt Grund	schulen (Unterrichtsfach) Ma	thematik - 2015	

Julius-Maximilians-UNIVERSITÄT WÜRZBURG

Bachelor's degree (1 major) Mathematics (2023) Bachelor's degree (1 major) Economathematics (2023) Bachelor's degree (1 major) Mathematical Physics (2024) Bachelor's degree (1 major) Economathematics (2024) Bachelor's degree (1 major) Economathematics (2025)

Module	title				Abbreviation
Basic A	-				10-M-GRAN-152-m01
Module	coord	inator		Module offered by	
Dean of Studies Mathematik (Mathematics)			atics)	Institute of Mathem	atics
ECTS Method of grading Only after succ. co			Only after succ. com	pl. of module(s)	
12	nume	rical grade			
Duratio	n	Module level	Other prerequisites		
2 seme	ster	undergraduate			
Conten	ts				
mann ir tiability	ntegral) v, invers), Taylor approximation a	nd power series, func heorem, curves in R^	tions in several vari n, curve integrals, in	ferentiation and integration (Rie- ables, total and partial differen- itegration theorems in higher di-
Intende	ed learn	ning outcomes			
compre	hend t e/She	he central proof methods can analyse basic mathe	, can perform easy m	athematical argume	eral variables. He/She is able to ents and present them in written f analysis in one and several va-
Courses	s (type,	, number of weekly conta	ct hours, language —	if other than Germa	n)
V (4) + l	Ü (2) +	V (2) + Ü (2)			
ster, inf written If annou examin	formati examir unced l ation o 5 minut	on on whether module canation (approx. 60 to 120 by the lecturer at the beg of one candidate each (appression)	an be chosen to earn minutes). inning of the course,	a bonus) the written examina	tion offered — if not every seme- tion may be replaced by an oral in groups of 2 candidates (ap-
Allocati					
	<u></u>				
Additio	nal inf	ormation			
Additio	inat init				
Worklo	ad				
	au				
360 h					
Teaching cycle					
Referred to in LPO I (examination regulations for teaching-degree programmes)					
§ 51 Nr. 1					
Module					
First sta First sta First sta 2015))	ate exa ate exa ate exa	mination for the teaching mination for the teaching mination for the teaching mination for the teaching gram Mathematics (2023)	g degree Realschule M g degree Mittelschule g degree Mittelschule	Aathematics (2015) Mathematics (2015)	

Basic Differential Equations 10-M-GRDG-152-m01 Module correlator Module offered by Dear of Studies Mathematik (Mathematics) Institute of Mathematics ECTS Method of grading Only after succ. compl. of module(s) 5 numerical grade Outation: Module level Other prerequisites Interface of ordinary differential equations, existence and uniqueness theorems (Pi card-Lindelof, Peano), systems of linear differential equations, applications and examples. Intended learning outcomes The student is aquainted with methods and concepts of ordinary differential equations. He/She is able to con prehend the central proof methods, can perform easy mathematical arguments and present them in written for Pic/She is able to consprehend the central proof methods, can perform easy mathematical arguments and present them in written for (yeg), number of weekly contact hours, language — if other than German, examination offered — if not every sen ster, information on whether module can be chosen to earn a bonus) written examination (approx. 6o to 90 minutes) If announced by the lecturer at the beginning of the course, the written examination may be replaced by an or examination of one candidate each (approx. 20 minutes) or an oral examination may be replaced by an or examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 30 minutes) or an oral examination in groups of 2 candidates (approx. 30 minutes) or an oral examination in groups of	 i-				
Dean of Studies Mathematik (Mathematics) Institute of Mathematics ECTS Method of grading Only after succ. compl. of module(s) 5 numerical grade Duration Module level Other prerequisites 1 semester undergraduate Contents Examples and natural appearances of ordinary differential equations, existence and uniqueness theorems (Picard-Lindelöf, Peano), systems of linear differential equations, applications and examples. Intended learning outcomes The student is aquainted with methods and concepts of ordinary differential equations. He/She is able to con prehend the central proof methods, can perform easy mathematical arguments and present them in written for He/She can analyse basic mathematical problems and employ methods of differential equations to solve the Courses (type, number of weekly contact hours, language — if other than German) V (3) + Ü (2) Method of assessment (type, scope, language — if other than German, examination offered — if not every sen ster, information (approx. 6o to 90 minutes) If announced by the lecturer at the beginning of the course, the written examination in groups of 2 candidates (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 20 minutes) or an oral examination in groups of 2 candidates	 i-				
ECTS Method of grading Only after succ. compl. of module(s) 5 numerical grade Duration Module level Other prerequisites 1 semester undergraduate Contents Examples and natural appearances of ordinary differential equations, existence and uniqueness theorems (Picard-Lindelöf, Peano), systems of linear differential equations, applications and examples. Intended learning outcomes The student is aquainted with methods and concepts of ordinary differential equations. He/She is able to conprehend the central proof methods, can perform easy mathematical arguments and present them in written for He/She can analyse basic mathematical problems and employ methods of differential equations to solve the Courses (type, number of weekly contact hours, language — if other than German) V (3) + Ü (2) Method of assessment (type, scope, language — if other than German, examination offered — if not every sen ster, information on whether module can be chosen to earn a bonus) written examination (approx. 60 to 90 minutes) If announced by the lecturer at the beginning of the course, the written examination may be replaced by an or examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate). creditable for bonus Allocation of places Workload </td <td> i-</td>	 i-				
5 numerical grade Duration Module level Other prerequisites 1 semester undergraduate Contents Examples and natural appearances of ordinary differential equations, existence and uniqueness theorems (Pl card-Lindelöf, Peano), systems of linear differential equations, applications and examples. Intended learning outcomes Intended learning outcomes The student is aquainted with methods and concepts of ordinary differential equations. He/She is able to con prehend the central proof methods, can perform easy mathematical arguments and present them in written fe He/She can analyse basic mathematical problems and employ methods of differential equations to solve the Courses (type, number of weekly contact hours, language — if other than German) V (3) + Ü (2) Method of assessment (type, scope, language — if other than German, examination offered — if not every sen ster, information on whether module can be chosen to earn a bonus) written examination (approx. 6o to 90 minutes) If announced by the lecturer at the beginning of the course, the written examination may be replaced by an or examination of places Allocation of places Morkload 150 h	 i-				
Duration Module level Other prerequisites 1 semester undergraduate Contents Examples and natural appearances of ordinary differential equations, existence and uniqueness theorems (Picard-Lindelöf, Peano), systems of linear differential equations, applications and examples. Intended learning outcomes The student is aquainted with methods and concepts of ordinary differential equations. He/She is able to comprehend the central proof methods, can perform easy mathematical arguments and present them in written for He/She can analyse basic mathematical problems and employ methods of differential equations to solve the Courses (type, number of weekly contact hours, language — if other than German) V (3) + Ü (2) Method of assessment (type, scope, language — if other than German, examination offered — if not every senster, information on whether module can be chosen to earn a bonus) written examination (approx. 60 to 90 minutes) If announced by the lecturer at the beginning of the course, the written examination may be replaced by an or examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate). creditable for bonus Alditional information	 i-				
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Contents Examples and natural appearances of ordinary differential equations, existence and uniqueness theorems (Pi card-Lindelöf, Peano), systems of linear differential equations, applications and examples. Intended learning outcomes The student is aquainted with methods and concepts of ordinary differential equations. He/She is able to con prehend the central proof methods, can perform easy mathematical arguments and present them in written for He/She can analyse basic mathematical problems and employ methods of differential equations to solve the Courses (type, number of weekly contact hours, language — if other than German) V (3) + Ü (2) Method of assessment (type, scope, language — if other than German, examination offered — if not every sen ster, information on whether module can be chosen to earn a bonus) written examination (approx. 6o to 90 minutes) If announced by the lecturer at the beginning of the course, the written examination may be replaced by an or examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate). Adlication of places Morkload 150 h	i-				
Examples and natural appearances of ordinary differential equations, existence and uniqueness theorems (Picard-Lindelöf, Peano), systems of linear differential equations, applications and examples. Intended learning outcomes The student is aquainted with methods and concepts of ordinary differential equations. He/She is able to comprehend the central proof methods, can perform easy mathematical arguments and present them in written for He/She can analyse basic mathematical problems and employ methods of differential equations to solve the Courses (type, number of weekly contact hours, language — if other than German) V (3) + Ü (2) Method of assessment (type, scope, language — if other than German, examination offered — if not every sensester, information on whether module can be chosen to earn a bonus) written examination (approx. 60 to 90 minutes) If announced by the lecturer at the beginning of the course, the written examination may be replaced by an or examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate). creditable for bonus Allocation of places Morkload Workload	i-				
card-Lindelöf, Peano), systems of linear differential equations, applications and examples. Intended learning outcomes The student is aquainted with methods and concepts of ordinary differential equations. He/She is able to com prehend the central proof methods, can perform easy mathematical arguments and present them in written for He/She can analyse basic mathematical problems and employ methods of differential equations to solve the Courses (type, number of weekly contact hours, language — if other than German) V (3) + Ü (2) Method of assessment (type, scope, language — if other than German, examination offered — if not every sen ster, information on whether module can be chosen to earn a bonus) written examination (approx. 6o to 90 minutes) If announced by the lecturer at the beginning of the course, the written examination may be replaced by an or examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (ap prox. 15 minutes per candidate). creditable for bonus Allocation of places Morkload Workload 150 h	i-				
The student is aquainted with methods and concepts of ordinary differential equations. He/She is able to comprehend the central proof methods, can perform easy mathematical arguments and present them in written for He/She can analyse basic mathematical problems and employ methods of differential equations to solve the Courses (type, number of weekly contact hours, language — if other than German) V (3) + Ü (2) Method of assessment (type, scope, language — if other than German, examination offered — if not every senser, information on whether module can be chosen to earn a bonus) written examination (approx. 60 to 90 minutes) If announced by the lecturer at the beginning of the course, the written examination may be replaced by an or examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate). creditable for bonus Allocation of places Additional information Workload 150 h					
prehend the central proof methods, can perform easy mathematical arguments and present them in written for He/She can analyse basic mathematical problems and employ methods of differential equations to solve the Courses (type, number of weekly contact hours, language — if other than German) V (3) + Ü (2) Method of assessment (type, scope, language — if other than German, examination offered — if not every senses ster, information on whether module can be chosen to earn a bonus) written examination (approx. 60 to 90 minutes) If announced by the lecturer at the beginning of the course, the written examination may be replaced by an or examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate). creditable for bonus Allocation of places Additional information Workload 150 h					
V (3) + Ü (2) Method of assessment (type, scope, language — if other than German, examination offered — if not every sense ster, information on whether module can be chosen to earn a bonus) written examination (approx. 60 to 90 minutes) If announced by the lecturer at the beginning of the course, the written examination may be replaced by an ore examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate). creditable for bonus Allocation of places Workload 150 h	orm.				
Method of assessment (type, scope, language — if other than German, examination offered — if not every sense, ster, information on whether module can be chosen to earn a bonus) written examination (approx. 60 to 90 minutes) If announced by the lecturer at the beginning of the course, the written examination may be replaced by an or examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate). creditable for bonus Allocation of places Workload 150 h					
ster, information on whether module can be chosen to earn a bonus) written examination (approx. 60 to 90 minutes) If announced by the lecturer at the beginning of the course, the written examination may be replaced by an or examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (ap prox. 15 minutes per candidate). creditable for bonus Allocation of places Additional information Workload 150 h					
If announced by the lecturer at the beginning of the course, the written examination may be replaced by an or examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (ap prox. 15 minutes per candidate). creditable for bonus Allocation of places Additional information Workload 150 h	ne-				
Additional information Workload 150 h					
 Workload 150 h					
 Workload 150 h					
150 h					
150 h					
Teaching cycle					
Referred to in LPO I (examination regulations for teaching-degree programmes)					
§ 51 Nr. 1					
Module appears in					
First state examination for the teaching degree Grundschule Mathematics (2015) First state examination for the teaching degree Realschule Mathematics (2015) First state examination for the teaching degree Mittelschule Mathematics (2015) First state examination for the teaching degree Mittelschule Mathematics (2020 (Prüfungsordnungsversion 2015)) exchange program Mathematics (2023)					

Module title					Abbreviation	
Basic Li	inear A	nalysis			10-M-GRLA-152-m01	
Module	coord	inator		Module offered by		
Dean of Studies Mathematik (Mathematics)			itics)	Institute of Mathem	atics	
ECTS		od of grading	Only after succ. compl. of module(s)			
9		rical grade				
	Duration Module level Other prerequisites					
1 semes		undergraduate				
Contents						
		ar algebra: groups, rings, naps, examples and appl		ear equations, vecto	r spaces, matrices and determi-	
		ning outcomes				
			methods and conce	pts of linear algebra	. He/She is able to comprehend	
the cen	tral pro		easy mathematical a	arguments and prese	ent them in written form. He/She	
Courses	s (type,	, number of weekly conta	ct hours, language —	if other than Germa	n)	
V (4) + l	Ü (2)					
		e ssment (type, scope, la on on whether module ca			tion offered — if not every seme-	
lf annou examin	unced l ation o 5 minut	f one candidate each (ap es per candidate).	inning of the course,		tion may be replaced by an oral in groups of 2 candidates (ap-	
Allocati	ion of p	olaces				
Additio	nal info	ormation				
Worklo	ad					
270 h						
Teachir	ng cycl	e				
Referred to in LPO I (examination regulations for teaching-degree programmes)						
§ 51 Nr. 2						
Module appears in						
First sta First sta First sta 2015))	ate exa ate exa ate exa	-	degree Realschule M degree Mittelschule degree Mittelschule	Aathematics (2015) Mathematics (2015)		
exchan	exchange program Mathematics (2023)					

Module title Abbreviation					Abbreviation	
Thesis	in Mat	hematics (German Grun	dschule)		10-M-HMGS-152-m01	
Module coordinator				Module offered by	1	
Dean of Studies Mathematik (Mathematics)			natics)	Institute of Mathem	natics	
ECTS	Meth	od of grading	Only after succ. con	npl. of module(s)		
10	nume	rical grade				
Durati	on	Module level	Other prerequisites	i		
		undergraduate				
Conter	nts					
		y researching and writing upervisor.	g on a topic in mather	natics or mathemation	cs didactics selected in consulta-	
Intend	ed lear	ning outcomes				
tained	during		eaching degree progra	mme. He/She can w	oply the skills and methods ob- rite down the result of his/her	
Course	es (type	, number of weekly cont	act hours, language –	- if other than Germa	ın)	
Νο cou	irses as	signed to module				
		sessment (type, scope, l ion on whether module o			tion offered — if not every seme-	
	rbeit (tł hours)	nesis) pursuant to Sectio	on 29 LPO I (examinati	on regulations for te	aching-degree programmes) (250	
Allocat	tion of _l	olaces				
Additio	onal inf	ormation				
Worklo	bad					
300 h						
Teaching cycle						
Referred to in LPO I (examination regulations for teaching-degree programmes)						
§ 29						
	e appea	ars in				

	e title				Abbreviation
Reviev	v Cours	e Mathematics (German	Grundschule/Mittelscl	nule/Realschule)	10-M-M3GMR-152-m01
Modul	e coord	linator	1	Nodule offered by	<u></u>
Dean o	Dean of Studies Mathematik (Mathematics)			nstitute of Mathen	natics
ECTS	Meth	od of grading	Only after succ. compl. of module(s)		
5	(not)	successfully completed	-		
			Other prerequisites		
1 semester undergraduate					
Conter	nts				
		consolidation of the topic completing exercises and			ons, linear algebra and analytic
Intend	ed lear	ning outcomes			
					regulations for teaching degree
		, §51 (2) 1, 2, and is able			
	es (type	, number of weekly conta	ict nours, language — l	r other than Germa	in)
Ü (4)					
					ition offered — if not every seme
		ion on whether module c	an de chosen lo eann a	Dollus)	
		x. 45 minutes) or to 15 pages)			
Alloca	tion of	places			
A .] .]***	1 * 4				
Additio	onal Ini	ormation			
		ormation			
 Workle		ormation			
 Workle		ormation			
 Workle 150 h					
 Workle 150 h	oad				
 Workle 150 h Teachi 	oad ing cycl		lations for teaching-de	gree programmes)	
 Workle 150 h Teachi Referre	oad ing cycl ed to in	e		gree programmes)	
 Worklo 150 h Teachi Referro § 51 sp	oad ing cycl ed to in	e LPO I (examination regu ranch of science without		gree programmes)	
 Worklo 150 h Teachi Referro § 51 sp Modul	oad ing cycl ed to in becial b e appe	e LPO I (examination regu ranch of science without	assignment		
 Workle 150 h Teachi <u>Referre</u> § 51 sp <u>Modul</u> First st	oad ing cycl ed to in becial b e appea cate exa	LPO I (examination regunder and the second	assignment g degree Grundschule I	Mathematics (2015	
 Worklo 150 h Teachi § 51 sp Modul First st First st	ed to in becial b eate exa tate exa	LPO I (examination regunants of science without ars in and for the teaching	assignment g degree Grundschule I g degree Realschule Ma	Mathematics (2015 athematics (2015))

	<u>e title</u>				Abbreviation
Metho	ds and	Media in Teaching Math	ematics 1 (German Gr	undschule)	10-M-MMMG1-152-m01
Module coordinator				Module offered	by
Dean of Studies Mathematik (Mathematics)			atics)	Institute of Math	nematics
ECTS	Metho	od of grading	Only after succ. com	pl. of module(s)	
3	(not) s	successfully completed			
Duratio	on	Module level	Other prerequisites		
1 semester undergraduate					
Conten	ts				
cularly enviror	weak i ments	n mathematics, dealing v	with heterogeneity in t the classroom (e.g. r	he classroom, or	who are particularly strong or part rganisation of substantial learning use of computers) are discussed
Intend	ed lear	ning outcomes			
		nows the possibilities, li eaching mathematics.	mitations, advantages	and disadvanta	ges of methods and media for em
		, number of weekly conta	act hours. language —	if other than Ge	rman)
S (2)	- () PC	,			···,
,		ion on whether module c			
b) term c) proje	paper ect (10 f ment o	x. 45 minutes) or (5 to 10 pages) or to 15 pages) ffered: Every two years, v blaces			
b) term c) proje Assess	paper ect (10 f ment o	(5 to 10 pages) or to 15 pages) ffered: Every two years, v			
b) term c) proje Assess Allocat	paper ect (10 f ment o ion of p	(5 to 10 pages) or to 15 pages) ffered: Every two years, v			
b) term c) proje Assess Allocat	paper ect (10 f ment o ion of p	(5 to 10 pages) or to 15 pages) ffered: Every two years, v places			
b) term c) proje Assess Allocat	paper ect (10 f ment o ion of p	(5 to 10 pages) or to 15 pages) ffered: Every two years, v places			
b) term c) proje Assess Allocat Additic	paper ect (10 f ment o ion of p	(5 to 10 pages) or to 15 pages) ffered: Every two years, v places			
b) term c) proje Assess Allocat Additic Worklo	paper ect (10 f ment o ion of p mal info	(5 to 10 pages) or to 15 pages) ffered: Every two years, v blaces ormation			
b) term c) proje Assess Allocat Additic Worklo 90 h	paper ect (10 f ment o ion of p mal info	(5 to 10 pages) or to 15 pages) ffered: Every two years, v blaces ormation			
b) term c) proje Assess Allocat Additic Worklo 90 h Teachin	paper ect (10 f ment o ion of p onal info ad	(5 to 10 pages) or to 15 pages) ffered: Every two years, v blaces ormation	vinter semester		es)
b) term c) proje Assess Allocat Additic Worklo 90 h Teachin	paper ect (10 f ment o ion of p mal inf ad	(5 to 10 pages) or to 15 pages) ffered: Every two years, v olaces ormation	vinter semester		es)
b) term c) proje Assess Allocat Additio Worklo 90 h Teachin Referre	paper ect (10 f ment o ion of p mal info ad ed to in Nr. 1 h)	(5 to 10 pages) or to 15 pages) ffered: Every two years, v places ormation e LPO I (examination regu	vinter semester		es)

Module	e title				Abbreviation	
Metho	ds and	Media in Teaching Math	ematics 2 (German Gru	Indschule)	10-M-MMMG2-152-m01	
Modul	e coord	linator	1	Module offered	by	
Dean of Studies Mathematik (Mathematics)			atics) I	nstitute of Math	nematics	
ECTS	Meth	od of grading	Only after succ. compl. of module(s)			
3	(not)	successfully completed				
Duration Module level Other prerequisites						
1 seme	ster	undergraduate				
Conten	nts					
				e. g. learning ma	aterials, in-depth employment of me	
		ssroom) are discussed ar	nd tested in practice.			
		ning outcomes	_			
		nows the possibilities, li ployment in teaching ma		and disadvanta	ges of comprehensive methods and	
		, number of weekly conta		f other than Ger	man)	
S (2)						
a) talk b) term c) proje	(appro 1 paper ect (10 5 ment c	ion on whether module c x. 45 minutes) or (5 to 10 pages) or to 15 pages) offered: Every two years, s places		bonus)		
Additio	onal inf	ormation				
Worklo	ad					
90 h						
Teachi	ng cycl	le				
Referre	ed to in	LPOI (examination regu	ulations for teaching-de	egree programm	es)	
§ 22	Nr. 1 h)					
Module	e appe	ars in				
		mination for the teachin			-	
					hematics (Primary School) (2015)	
First st (2015)	ate exa	mination for the teachin	g degree Sonderpädag	ogik Didactics ir	n Mathematics (Primary School)	
First st (2020	(Prüfur	gsordnungsversion 2015	5))	ogik Didactics ir	n Mathematics (Primary School)	
exchan	ige nro	gram Mathematics (2023	રો			

	title				Abbreviation	
School Mathematics from a Higher Perspective			rspective		10-M-SCH-152-m01	
Module coordinator				Module offered by		
Dean of Studies Mathematik (Mathematics)			atics)	Institute of Mathem	natics	
r		d of grading	r - '	er succ. compl. of module(s)		
		uccessfully completed		,		
Duratio	n	Module level	Other prerequisites			
1 semes	ster	undergraduate				
Content	ts					
		selected topics in schoo mplementation at both			ation into wider theories and	
Intende	d learn	ing outcomes				
	/anced	mathematical theories.			between school mathematics athematical, didactical and me-	
Courses	s (type,	number of weekly conta	act hours, language —	· if other than Germa	in)	
V (2) + Ü	Ü (2)					
		essment (type, scope, la on on whether module c			tion offered — if not every seme	
Assessr Allocati		fered: In the semester in laces	n which the course is	offered and in the su	ubsequent semester	
 • • • • • • • • • •		ormation				
Additio	nat info	ormation				
 Workloa						
WORKIO	au					
1roh	150 h					
	or ovel					
150 h Teachin	ig cycle	9				
Teachin 			lations for to his			
Teachin Referred	d to in	e L PO I (examination regu	llations for teaching-c	legree programmes)		
Teachin Referreo § 22 N § 22 N	d to in Ir. 1 h) Ir. 2 f)		lations for teaching-c	legree programmes)		
Teachin Referred § 22 N § 22 N § 22 N	d to in Ir. 1 h) Ir. 2 f) Ir. 3 f)	L PO I (examination regu	lations for teaching-c	legree programmes)		
Teachin § 22 N § 22 N § 22 N § 22 N Module	d to in Nr. 1 h) Nr. 2 f) Nr. 3 f) appea	L PO I (examination regu		legree programmes)		
Teachin <u>Referred</u> § 22 II N § 22 II N § 22 II N <u>§ 22 II N</u> Module Bachelo	d to in Ir. 1 h) Ir. 2 f) Ir. 3 f) appea or's deg	L PO I (examination regu	ics (2015)	legree programmes)		
Teachin Referred § 22 II N § 22 II N § 22 II N Module Bachelo Bachelo Bachelo	d to in I Ir. 1 h) Ir. 2 f) Ir. 3 f) appea or's deg or's deg or's deg	L PO I (examination regu r s in gree (1 major) Mathemat gree (1 major) Mathemat gree (1 major) Computati	ics (2015) ical Physics (2015) ional Mathematics (20	015)		
Teachin Referred § 22 II N § 22 II N § 22 II N B 22 II N Module Bachelo Bachelo Bachelo First sta	d to in l Ir. 1 h) Ir. 2 f) Ir. 3 f) appea or's deg or's deg or's deg	L PO I (examination regu rs in gree (1 major) Mathemat gree (1 major) Mathemat gree (1 major) Computati nination for the teaching	ics (2015) ical Physics (2015) onal Mathematics (20 g degree Grundschule	015) 9 Mathematics (2015		
Teachin Referred § 22 II N § 22 II N § 22 II N Module Bachelo Bachelo Bachelo First sta First sta	d to in Ir. 1 h) Ir. 2 f) Ir. 3 f) appea or's deg or's deg or's deg or's deg the exar	L PO I (examination regu rs in gree (1 major) Mathemat gree (1 major) Mathemat gree (1 major) Computati nination for the teaching nination for the teaching	ics (2015) ical Physics (2015) onal Mathematics (20 g degree Grundschule g degree Realschule N	015) 9 Mathematics (2015 Mathematics (2015))	
Teachin Referred § 22 II N § 22 II N § 22 II N Module Bachelo Bachelo Bachelo First sta First sta First sta	d to in l Ir. 1 h) Ir. 2 f) Ir. 3 f) appea or's deg or's deg or's deg or's deg or's deg te exar ite exar ite exar	L PO I (examination regu rs in gree (1 major) Mathemat gree (1 major) Mathemat gree (1 major) Computati nination for the teaching nination for the teaching nination for the teaching	ics (2015) ical Physics (2015) onal Mathematics (20 g degree Grundschule g degree Realschule A g degree Gymnasium	015) 9 Mathematics (2015 Mathematics (2015) Mathematics (2015))	
Teachin Referred § 22 II N § 22 II N § 22 II N Module Bachelo Bachelo Bachelo First sta First sta First sta First sta	d to in l Ir. 1 h) Ir. 2 f) Ir. 3 f) appea or's deg or's deg or's deg or's deg te exar ite exar ite exar ite exar	L PO I (examination regu rs in gree (1 major) Mathemat gree (1 major) Mathemat gree (1 major) Computati nination for the teaching nination for the teaching	ics (2015) ical Physics (2015) onal Mathematics (20 g degree Grundschule g degree Realschule M g degree Gymnasium g degree Mittelschule	015) 9 Mathematics (2015 Mathematics (2015) Mathematics (2015))	



First state examination for the teaching degree Mittelschule Mathematics (2020 (Prüfungsordnungsversion 2015))

Bachelor's degree (1 major) Mathematical Physics (2020) Bachelor's degree (1 major) Mathematical Data Science (2022) exchange program Mathematics (2023) First state examination for the teaching degree Gymnasium Mathematics (2023) Bachelor's degree (1 major) Mathematics (2023)

Bachelor's degree (1 major) Mathematical Physics (2024)

focus on the scientific discipline) or Didaktikfach (subject studied with a focus on teaching methodology). specific teaching models, examples and projects in different grades, the module introduces the student to ject-specific techniques. In the university course accompanying the placement, the student reflects and str res what he/she has learned during his/her teaching placement and explores additional subject-specific a dactic aspects. In this context, the course discusses selected practical aspects of teaching mathematics in cordance with applicable guidelines and curricula. The course focuses on recent developments in classroor practice, also taking into account aspects of school pedagogy and learning psychology that can support th cessful practical implementation of subject-specific conceptual designs. Intended learning outcomes The student is acquainted with the most important components of planning and organising teaching. He/S able to teach the relevant topics for different forms, and can critically reflect the recent developments in th cational system. He/She is able to connect ideas from school pedagogy and learning psychology with dida cognisance and incorporate them in the mise-en-scène of his/her teaching. Courses (type, number of weekly contact hours, language — if other than German) P (o) + S (2) Method of assessment (type, scope, language — if other than German, examination offered — if not every ster, information on whether module can be chosen to earn a bonus) a) presentation (30 to 45 minutes) with position paper (1 to 2 pages) or b) term paper (10 to 15 pages) Contents and duration of placement as specified in Section 34 Subsection 1 Sentence 1 No. 4 LPO I (exami	Module	Module title Abbreviation				
Module coordinator Module coordinator Module coordinator Module coordinator Contexts Institute of Mathematics ECTS Method of grading Only after succ. compl. of module(s) 4 (not) successfully completed Ontertain Module levet Other prerequisites Instruction of Module levet Other prerequisites Instruction Module, examples and projects in different grades, the module introduces the student to is classroom practice of his/her Unterrichtsfach (subject studied with factors on teaching methodiog), becific teaching mathematics in cordance with applicable guidelines and curricula. The course focuses on recent developments in classroor practice, also taking into account aspect of school pedagogy and learning psychology that can support th cessful practical implementation of subject-specific conceptual designs. Intertact implementation of subject struction for module grad organising teaching. He/S able to teach the relevant top			ing in Classroom Teachi	ng including Theory	(German Grund-	
Deam of Studies Mathematik (Mathematics) Institute of Mathematics ECTS Method of grading Only after succ. compl. of module(s) 4 (not) successfully completed Duration Module level Other prerequisites 1 semester undergraduate Contents The module introduces the student to the classroom practice of his/her Unterrichtsfach (subject studied with a focus on teaching methodology), specific teaching models, examples and projects in different grades, the module introduces the student to ject-specific techniques. In the university course accompanying the placement and explores additional subject-specific additional subject-specific conceptual designs. Interded learning outcomes The student is acquainted with the most important components of planning and organising teaching. He/S able to teach the relevant topics for different forms, and can critically reflect the recent developments in th datognisance and incorporate them in the mise-en-schee of his/her teaching. Courses (type, number of weekly contact hours, language — if other than German) P (-) + S (2) Method of assessment (type, scope, language — if other than German, examination offered — if not every ster, information of placement as specified in Section 34 Subsection 1 Sentence 1 No. 4 LPO I (examineguations for teaching redgree programmes); participation in mandatory teaching practice, completion of tasks as specified by placement as specified in Section 34		schule)				
ECTS Method of grading Only after succ. compl. of module(s) 4 (not) successfully completed Duration Module level Other prerequisites 1 semester undergraduate Contents The module introduces the student to the classroom practice of his/her Unterrichtsfach (subject studied with a focus on teaching methodology). Specific teaching models, examples and projects in different grades, the module introduces the student to ject-specific techniques. In the university course accompanying the placement, the student reflects and stires what he/she has learned during his/her teaching placement and explores additional subject-specific adarts aspects. In this context, the course discusses selected practical aspects of teaching mathematics in cordance with applicable guidelines and curricula. The course focuses on recent developments in classroo practice, also taking into account aspects of school pedagogy and learning psychology that can support the calonal syntext set of school pedagogy and learning psychology with dida cognisance and incorporate them in the mise-en-scène of his/her teaching. Courses (type, number of weekly contact hours, language – if other than German) P (o) + S (2) Method of assessment (type, scope, language – if other than German, examination offered – if not every ster, information on whether module can be chosen to eam a bonus) a) presentation (so to 45 minutes) with position paper (t to 2 pages) or b) tem paper (to to 15 pages)	Module	Module coordinator			Module offered by	
4 (not) successfully completed Duration Module level Other prerequisites 1 semester undergraduate Contents The module introduces the student to the classroom practice of his/her Unterrichtsfach (subject studied with ofocus on the scientific discipline) or Didaktifkach (subject studied with a focus on teaching methodology), specific teaching models, examples and projects in different grades, the module introduces the student to teaching students on the scientific discipline) or Didaktifkach (subject studied with a focus on teaching methodology), specific teaching indels, examples and projects in different grades, the module introduces the student to teaching students in classroot practice, also taking into account aspects of school pedagogy and learning psychology that can support th cessful practical implementation of subject-specific conceptual designs. Intended learning outcomes	Dean of	fStudie	es Mathematik (Mathema	atics)	Institute of Mathematics	
Duration Module levet Other prerequisites 1 semester undergraduate Contents The module introduces the student to the classroom practice of his/her Unterrichtsfach (subject studied with a focus on teaching methodology), specific teaching models, examples and projects in different grades, the module introduces the student to ject-specific teaching models, examples and projects in different grades, the module introduces the student to iset sheat het'she has learned during his/her teaching placement and explores additional subject-specific adactic aspects. In this context, the course discusses selected practical aspects of teaching mathematics in cordance with applicable guidelines and curricula. The course focuses on recent developments in classroc practice, also taking into account aspects of school pedagogy and learning psychology that can support th cessful practical implementation of subject-specific conceptual designs. Intended learning outcomes	ECTS	CTS Method of grading Only after succ. con			pl. of module(s)	
1 semester undergraduate	4 (not) successfully completed					
Contents The module introduces the student to the classroom practice of his/her Unterrichtsfach (subject studied with a focus on teaching methodology). specific teaching models, examples and projects in different grades, the module introduces the student to ject-specific teaching material subject specific teaching models, examples and projects in different grades, the module introduces the student reflects and sti res what he/she has learned during his/her teaching placement and explores additional subject-specific additic aspects. In this context, the course discusses selected practical aspects of teaching mathematics in cordance with applicable guidelines and curricula. The course focuses on recent developments in classroo practice, also taking into account aspects of school pedagogy and learning psychology that can support th cessful practical implementation of subject-specific conceptual designs. Intended learning outcomes Intended learning outcomes The student is acquainted with the most important components of planning and organising teaching. He/S able to teach the relevant topics for different forms, and can critically reflect the recent developments in the cational system. He/She is able to connect ideas from school pedagogy and learning psychology with dida cognisance and incorporate them in the mise-en-sche of his/her teaching. Courses (type, number of weekly contact hours, language — if other than German, examination offered — if not every ster, information on whether module can be chosen to earn a bonus) a) presentation (30 to 45 minutes) with position paper (1 to 2 pages) or b) term paper (10 to 15 pages) Counters and duration of placement aschool. All				Other prerequisites		
The module introduces the student to the classroom practice of his/her Unterrichtsfach (subject studied wi focus on the scientific discipline) or Didaktikfach (subject studied with a focus on teaching methodology), specific teaching models, examples and projects in different grades, the module introduces the student to ject-specific techniques. In the university course accompanying the placement, the student reflects and st res what he/she has learned during his/her teaching placement and explores additional subject-specific dactic aspects. In this context, the course discusses selected practical aspects of teaching mathematics in cordance with applicable guidelines and curricula. The course focuses on recent developments in classroo practice, also taking into account aspects of school pedagogy and learning psychology that can support th cessful practical implementation of subject-specific conceptual designs. Intended learning outcomes The student is acquainted with the most important components of planning and organising teaching. He/S able to teach the relevant topics for different forms, and can critically reflect the recent developments in th cational system. He/She is able to connect ideas from school pedagogy and learning psychology with dida cognisance and incorporate them in the mise-en-scène of his/her teaching. Courses (type, number of weekly contact hours, language — if other than German, examination offered — if not every ster, information on whether module can be chosen to earn a bonus) a) presentation (30 to 45 minutes) with position paper (1 to 2 pages) or b) term paper (10 to 15 pages) Contents and duration of placement as specified in Section 34 Subsection 1 Sentence 1 No. 4 LPO I (exami regulations for teaching-degree programmes); participation in mandatory teaching practice, completion of tasks as specified by placement school. Allocation of places - Contents and duration = - - - Contents and duration = - - - Contents and duration = - - - Contents and use thore teach the relevant school. A	1 seme	ster	undergraduate			
focus on the scientific discipline) or Didaktikfach (subject studied with a focus on teaching methodology). specific teaching models, examples and projects in different grades, the module introduces the student to ject-specific techniques. In the university course accompanying the placement, the student reflects and st res what he/she has learned during his/her teaching placement and explores additional subject-specific dactic aspects. In this context, the course discusses selected practical aspects of teaching mathematics in cordance with applicable guidelines and curricula. The course focuses on recent developments in classroo practice, also taking into account aspects of school pedagogy and learning psychology that can support the cessful practical implementation of subject-specific conceptual designs. Intended learning outcomes The student is acquainted with the most important components of planning and organising teaching. He/S able to teach the relevant topics for different forms, and can critically reflect the recent developments in th cational system. He/She is able to connect ideas from school pedagogy and learning psychology with dida cognisance and incorporate them in the mise-en-scène of his/her teaching. Courses (type, number of weekly contact hours, language — if other than German) P (o) + S (2) Method of assessment (type, scope, language — if other than German, examination offered — if not every ster, information on whether module can be chosen to earn a bonus) a) presentation (30 to 45 minutes) with position paper (1 to 2 pages) or b) term paper (to to 15 pages) Contents and duration of placement as specified in Section 34 Subsection 1 Sentence 1 No. 4 LPO I (exami regulations for teaching-degree programmes); participation in mandatory teaching practice, completion of tasks as specified by placement school. Allocation of places Referred to in LPO I (examination regulations for teaching-degree programmes) § 34 l 1 Nr. 4	Conten	ts				
Courses (type, number of weekly contact hours, language — if other than German) P (o) + S (2) Method of assessment (type, scope, language — if other than German, examination offered — if not every ster, information on whether module can be chosen to earn a bonus) a) presentation (30 to 45 minutes) with position paper (1 to 2 pages) or b) term paper (10 to 15 pages) Contents and duration of placement as specified in Section 34 Subsection 1 Sentence 1 No. 4 LPO I (examinegulations for teaching-degree programmes); participation in mandatory teaching practice, completion of tasks as specified by placement school. Allocation of places Workload 120 h Teaching cycle Referred to in LPO I (examination regulations for teaching-degree programmes) § 34 1 Nr. 4	Intended learning outcomes The student is acquainted with the most important components of planning and organising teaching. He/She is					on teaching methodology). Using e introduces the student to sub- the student reflects and structu- dditional subject-specific and di- of teaching mathematics in ac- t developments in classroom chology that can support the suc-
Method of assessment (type, scope, language — if other than German, examination offered — if not every ster, information on whether module can be chosen to earn a bonus) a) presentation (30 to 45 minutes) with position paper (1 to 2 pages) or b) term paper (10 to 15 pages) Contents and duration of placement as specified in Section 34 Subsection 1 Sentence 1 No. 4 LPO I (examinegulations for teaching-degree programmes); participation in mandatory teaching practice, completion of tasks as specified by placement school. Allocation of places Workload 120 h Teaching cycle Referred to in LPO I (examination regulations for teaching-degree programmes) § 34 1 Nr. 4	cognisa	ance an	id incorporate them in th	e mise-en-scène of h	is/her teaching.	
ster, information on whether module can be chosen to earn a bonus) a) presentation (30 to 45 minutes) with position paper (1 to 2 pages) or b) term paper (10 to 15 pages) Contents and duration of placement as specified in Section 34 Subsection 1 Sentence 1 No. 4 LPO I (examin regulations for teaching-degree programmes); participation in mandatory teaching practice, completion of tasks as specified by placement school. Allocation of places Additional information Workload 120 h Teaching cycle Referred to in LPO I (examination regulations for teaching-degree programmes) § 34 1 Nr. 4	P (o) + 3	S (2)				
b) term paper (10 to 15 pages) Contents and duration of placement as specified in Section 34 Subsection 1 Sentence 1 No. 4 LPO I (examin regulations for teaching-degree programmes); participation in mandatory teaching practice, completion of tasks as specified by placement school. Allocation of places Additional information Workload 120 h Teaching cycle Referred to in LPO I (examination regulations for teaching-degree programmes) § 34 I 1 Nr. 4						tion offered — if not every seme-
Additional information Workload 120 h Teaching cycle Referred to in LPO I (examination regulations for teaching-degree programmes) § 34 l 1 Nr. 4	b) term Conten regulati	a) presentation (30 to 45 minutes) with position paper (1 to 2 pages) or b) term paper (10 to 15 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				
 Workload 120 h Teaching cycle Referred to in LPO I (examination regulations for teaching-degree programmes) § 34 l 1 Nr. 4	Allocat	ion of p	olaces			
 Workload 120 h Teaching cycle Referred to in LPO I (examination regulations for teaching-degree programmes) § 34 l 1 Nr. 4						
120 h Teaching cycle Referred to in LPO I (examination regulations for teaching-degree programmes) § 34 l 1 Nr. 4	Additio	nal info	ormation			
120 h Teaching cycle Referred to in LPO I (examination regulations for teaching-degree programmes) § 34 I 1 Nr. 4						
Teaching cycle Referred to in LPO I (examination regulations for teaching-degree programmes) § 34 1 Nr. 4	Worklo	Workload				
 Referred to in LPO I (examination regulations for teaching-degree programmes) § 34 I 1 Nr. 4	120 h					
 Referred to in LPO I (examination regulations for teaching-degree programmes) § 34 I 1 Nr. 4	Teachir	Teaching cycle				
§ 34 1 Nr. 4						
§ 34 1 Nr. 4	Referre	Referred to in LPO I (examination regulations for teaching-degree programmes)				
First state examination for the teaching degree Grundschule Educational Science (2015)						

Module	e title				Abbreviation	
Basics in Arithmetics (virtual course)					10-M-VHBAri-152-m01	
Module coordinator				Module offered by		
		es Mathematik (Mathema	atics)	ř		
ECTS	1	od of grading	-	after succ. compl. of module(s)		
2		successfully completed		•		
Duratio	on	Module level	Other prerequisites			
1 seme	ster	undergraduate				
Conten	Its					
Basic t	opics o	n teaching arithmetics in	school, e. g. divisab	ility theory, prime nu	umbers, set theory.	
		ning outcomes			· · · · · · · · · · · · · · · · · · ·	
			eaching of arithmetic	s and the related m	athematical backgrounds and	
					ching arithmetic in school.	
		, number of weekly conta			-	
Ü (2)	. 71	· · · , · · · · ·				
• • •	type: e	Learning, mostly Virtuell	e Hochschule Bayern	(vhb)		
Metho	d of ass	essment (type, scope, la	nguage — if other tha	an German, examina	ition offered — if not every seme	
ster, in	formati	on on whether module c	an be chosen to earn	a bonus)		
		ased, 15 to 20 hours)				
Assess	ment o	ffered: Once a year, wint	er semester			
Allocat	ion of _l	olaces				
Additio	onal inf	ormation				
Worklo	ad					
60 h						
Teachi	ng cycl	e				
Referre	ed to in	LPOI (examination regu	lations for teaching-	legree programmes)		
§ 22						
§ 22						
§ 22	-					
Module	e appea	ars in				
First st	ate exa	mination for the teaching	g degree Grundschule	Mathematics (2015)	
First sta	ate exa	mination for the teaching	g degree Grundschule	Didactics in Mather	matics (Primary School) (2015)	
		mination for the teaching				
		mination for the teaching				
(2015)					athematics (Primary School)	
(2015)					athematics (Middle School)	
		mination for the teachinន្				
					natics (Middle School) (2015)	
		mination for the teaching				
First sta 2015))	ate exa	mination for the teaching	g degree Mittelschule	Mathematics (2020	(Prüfungsordnungsversion	



First state examination for the teaching degree Mittelschule Didactics in Mathematics (Middle School) (2020 (Prüfungsordnungsversion 2015))

First state examination for the teaching degree Sonderpädagogik Didactics in Mathematics (Middle School) (2020 (Prüfungsordnungsversion 2015))

First state examination for the teaching degree Sonderpädagogik Didactics in Mathematics (Primary School) (2020 (Prüfungsordnungsversion 2015))

exchange program Mathematics (2023)

First state examination for the teaching degree Gymnasium Mathematics (2023)

Module title Abbreviation					
	Basics of Mathematics für German Grundschule 1: Arithmetics and Orders of 10-M-VHBAuG-152-mo1				
Magnitude (virtual course)					
Module coordinator Module offered by					
Dean of	Studies Mathematik (Mather	natics)	Institute of Mathen	natics	
ECTS					
2	(not) successfully completed				
Duration	Module level	Other prerequisites			
1 semest	ter undergraduate				
Contents	5				
arithmet				ation, elementary arithmetics, nathematics on the quantities co-	
Intended	l learning outcomes				
mathem They kno They are	atics related to quantities, a ow strategies for developmer able to assess and value the ction. They know various fiel	nd are able to structure t of understanding of t importance of digital	the notions and me he central notions o technology with res	contents in application-oriented ethods within a conceptual map. If arithmetic in elementary school. pect to todays and future design nd are able to perform modelling	
Courses	(type, number of weekly con	tact hours, language –	- if other than Germa	an)	
Ü (2) Course ty	ype: eLearning, mostly Virtue	lle Hochschule Bayern	(vhb)		
	of assessment (type, scope, prmation on whether module			ation offered — if not every seme-	
	web-based, 15 to 20 hours) nent offered: Once a year, win	ter semester			
Allocatio	on of places				
Addition	al information				
Workloa	d				
60 h					
Teaching	g cycle				
Referred	to in LPO I (examination reg	ulations for teaching-	degree programmes)		
§ 22 Nr. 1 h)					
Module appears in					
First state examination for the teaching degree Grundschule Mathematics (2015) First state examination for the teaching degree Grundschule Didactics in Mathematics (Primary School) (2015) First state examination for the teaching degree Sonderpädagogik Didactics in Mathematics (Primary School) (2015) First state examination for the teaching degree Sonderpädagogik Didactics in Mathematics (Primary School) (2020 (Prüfungsordnungsversion 2015))					
	e program Mathematics (202	-			

LA Grundschulen	Mathematics	(2015)
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Module title					Abbreviation		
Didactics of Algebra (virtual course) 10-M-VHBDA-152-m01							
Module coordinator				Module offered by			
Dean of Studies Mathematik (Mathematics) Institute of			Institute of Mathem	athematics			
ECTS		od of grading	Only after succ. compl. of module(s)				
2	(not) s	successfully completed					
Duratio	n	Module level	Other prerequisites				
1 seme	ster	undergraduate					
Conten							
		tics is about learning and algebra: extensions of n			n the central and important to- lations and functions.		
Intende	ed lear	ning outcomes					
notions ment o justify l able to tion. Th	and m f under earnin assess iey kno	nethods within a concept standing of the central co g units and learning seques and value the importan	ual map. They know s oncepts of algebra in uences for the import ce of digital technolo cation of algebraic co	strategies of short, m teaching mathemati ant topics in school a gy with respect to too	a, and are able to structure the hiddle and long term develop- ics. They are able to develop and algebra independently. They are days and future design of instruc- to perform modelling (in the		
Course	s (type	, number of weekly conta	ict hours, language –	- if other than Germa	n)		
Ü (2) Course	type: e	Learning, mostly Virtuell	e Hochschule Bayern	(vhb)			
		sessment (type, scope, la on on whether module c			tion offered — if not every seme-		
		oased, 15 to 20 hours) ffered: Once a year, wint	er semester				
Allocat	ion of j	olaces					
Additio	nal inf	ormation					
Worklo	ad						
	uu						
60 h							
Teachi	ng cycl	е					
Referre	d to in	LPOI (examination regu	lations for teaching-o	degree programmes)			
§ 22 § 22		, § 22 Nr. 2 f)					
Module	appea	ars in					
First state examination for the teaching degree Grundschule Mathematics (2015)							
First state examination for the teaching degree Grundschule Didactics in Mathematics (Primary School) (2015)							
First state examination for the teaching degree Realschule Mathematics (2015)							
First state examination for the teaching degree Gymnasium Mathematics (2015)							
First sta (2015)	First state examination for the teaching degree Sonderpädagogik Didactics in Mathematics (Primary School) (2015)						
First state examination for the teaching degree Sonderpädagogik Didactics in Mathematics (Middle School)							
_	(2015)						
	First state examination for the teaching degree Mittelschule Mathematics (2015) First state examination for the teaching degree Mittelschule Didactics in Mathematics (Middle School) (2015)						
		thematics (2015)		enerated 18-Apr-2025 • exam			
				schulen (Unterrichtsfach) Mat			



First state examination for the teaching degree Mittelschule Mathematics (2020 (Prüfungsordnungsversion 2015))

First state examination for the teaching degree Mittelschule Didactics in Mathematics (Middle School) (2020 (Prüfungsordnungsversion 2015))

First state examination for the teaching degree Sonderpädagogik Didactics in Mathematics (Middle School) (2020 (Prüfungsordnungsversion 2015))

First state examination for the teaching degree Sonderpädagogik Didactics in Mathematics (Primary School) (2020 (Prüfungsordnungsversion 2015))

Module	title			Abbreviation	
Didactio	cs of Geometry (virtual course			10-M-VHBDG-152-m	101
Module coordinator			Module offered by		
		antina)		atiac	
i i i	Studies Mathematik (Mather Method of grading				
	(not) successfully completed	Only after succ. compl. of module(s)			
Duration		Other prerequisites			
1 semester undergraduate					
Content	·				
importa which a chapter	ry didactics is about learning nt for all of geometry and mat re usually discussed only bric s on space geometry, trigono d learning outcomes	hematics, namely prov fly or not at all in univ	ving and problem so ersity lectures and ir	lving. It also address	ses topics
	dents are acquainted with the		unto of only only one way		
and just They are of instru (in the s Courses Ü (2) Course t Method ster, inf	understanding of the central tify learning units and learnin e able to assess and value the action. They know various fiel- sense of modelling cycles) inc s (type, number of weekly con type: eLearning, mostly Virtue of assessment (type, scope, ormation on whether module	g sequences for the im importance of digital ds of application of ge ependently. tact hours, language – lle Hochschule Bayern language – if other th	portant topics in sch technology with resp ometric concepts, ar - if other than Germa n (vhb) an German, examina	nool geometry indep bect to todays and fund and are able to perform	endently. Iture design n modelling
Assess	(web-based, 15 to 20 hours) nent offered: Once a year, sur on of places	nmer semester			
	•				
Additio	nal information				
Workloa	ad				
60 h					
Teachin					
reactini					
Poforro	d to in IPOL (ovamination roo	ulations for toaching	dogroo programmoc)		
§ 22 N § 22 N § 22 N § 22 N	Ir. 2 f)	עומנוטווז וטר נפמכחוחg-(uegree programmes)		
Module	appears in				
First sta First sta First sta	te examination for the teaching te examination for the teaching	ng degree Grundschule ng degree Realschule I ng degree Gymnasium	e Didactics in Mather Mathematics (2015) Mathematics (2015)	matics (Primary Scho	_
LA Grundsch	nulen Mathematics (2015)		enerated 18-Apr-2025 • exam schulen (Unterrichtsfach) Ma	-	page 34 / 48

First state examination for the teaching degree Sonderpädagogik Didactics in Mathematics (Middle School) (2015)

First state examination for the teaching degree Mittelschule Mathematics (2015)

First state examination for the teaching degree Mittelschule Didactics in Mathematics (Middle School) (2015) First state examination for the teaching degree Mittelschule Mathematics (2020 (Prüfungsordnungsversion 2015))

First state examination for the teaching degree Mittelschule Didactics in Mathematics (Middle School) (2020 (Prüfungsordnungsversion 2015))

First state examination for the teaching degree Sonderpädagogik Didactics in Mathematics (Middle School) (2020 (Prüfungsordnungsversion 2015))

First state examination for the teaching degree Sonderpädagogik Didactics in Mathematics (Primary School) (2020 (Prüfungsordnungsversion 2015))

Modul	e title				Abbreviation	
Exam Tutorial Didactics of Mathematics (virtual course) 10-M-VHBEX-1					10-M-VHBEx-152-m01	
Module coordinator Module offered by						
		es Mathematik (Mathema	aticc)	Institute of Mathematics		
ECTS		od of grading	<u> </u>	cc. compl. of module(s)		
2		successfully completed				
Duratio		Module level	Other prerequisites	lisites		
1 seme	ster	undergraduate				
Conten	Its					
the Ers as basi	tes Sta ic guide	atsexamen für Lehramt G elines for answering exan	ymnasium (first state	e examination for tea	g of theorems) in preparation for aching at a Gymnasium) as well state examination in Bavaria).	
		ning outcomes				
					s for solving the exam problems.	
	s (type	, number of weekly conta	ct hours, language —	· if other than Germa	an)	
Ü (2) Course	type: e	Learning, mostly Virtuell	e Hochschule Bayern	(vhb)		
		sessment (type, scope, la on on whether module ca			ation offered — if not every seme	
		based, 15 to 20 hours)				
		ffered: Once a year, winte	er semester			
Allocat	ion of	olaces				
Additio	onal inf	ormation				
Worklo	ad					
60 h						
Teachi	ng cycl	e				
Referre	ed to in	LPOI (examination regu	lations for teaching-o	legree programmes)		
§ 22 § 22 § 22						
Module	_	urs in				
First st First st	ate exa ate exa	mination for the teaching mination for the teaching	g degree Grundschule	Didactics in Mathe	.) matics (Primary School) (2015)	
First state examination for the teaching degree Realschule Mathematics (2015)						
First state examination for the teaching degree Gymnasium Mathematics (2015) First state examination for the teaching degree Sonderpädagogik Didactics in Mathematics (Primary School)						
(2015)						
First st (2015)	ate exa	mination for the teaching	g degree Sonderpäda	gogik Didactics in M	athematics (Middle School)	
First st		mination for the teaching				
					natics (Middle School) (2015)) (Prüfungsordnungsversion	

First state examination for the teaching degree Sonderpädagogik Didactics in Mathematics (Middle School) (2020 (Prüfungsordnungsversion 2015))

First state examination for the teaching degree Sonderpädagogik Didactics in Mathematics (Primary School) (2020 (Prüfungsordnungsversion 2015))

Module	e title				Abbreviation
Basics	in Sch	ool Geometry (virtual cou	ırse)		10-M-VHBGeo-152-mo1
Module	e coord	inator		Module offered by	
		es Mathematik (Mathema	atics)	Institute of Mathem	natics
ECTS		od of grading	Only after succ. com		
2		successfully completed			
Duratio		Module level	Other prerequisites		
1 seme		undergraduate			
Conten	its		<u> </u>		
					nat are prerequisites for the sub- Hauptschule, Realschule) in geo
Intend	ed lear	ning outcomes			
		as basic knowledge of so acquainted with the em			of mathematics and its didac- g geometry in school.
Course	s (type	, number of weekly conta	ict hours, language –	· if other than Germa	in)
Ü (2) Course	type: e	Learning, mostly Virtuell	e Hochschule Bayern	(vhb)	
		sessment (type, scope, la on on whether module c			tion offered — if not every seme
		based, 15 to 20 hours) ffered: Once a year, sum	mer semester		
Allocat	ion of	olaces			
Additio	onal inf	ormation			
Worklo	ad				
60 h					
Teachi	ng cycl	•			
	is cycl	6			
Roforro	d to in	LPO I (examination regu	lations for teaching.	legree programmes)	
§ 22	-				
§ 22 § 22	,				
§ 22					
Module	e appea	ars in			
First st	ate exa	mination for the teaching	g degree Grundschule	Mathematics (2015)
					matics (Primary School) (2015)
		mination for the teaching			
		mination for the teaching mination for the teaching			athematics (Primary School)
(2015)	- 4				
	ate exa	mination for the teaching	g degree Sonderpäda	gogik Didactics in M	athematics (Middle School)
(2015)		mination for the teaching mination for the teaching			

LA Grundschulen Mathematics (2015)	JMU Würzburg • generated 18-Apr-2025 • exam. reg. data re-	page 38 / 48
	cord Lehramt Grundschulen (Unterrichtsfach) Mathematik - 2015	



First state examination for the teaching degree Mittelschule Mathematics (2020 (Prüfungsordnungsversion 2015))

First state examination for the teaching degree Mittelschule Didactics in Mathematics (Middle School) (2020 (Prüfungsordnungsversion 2015))

First state examination for the teaching degree Sonderpädagogik Didactics in Mathematics (Middle School) (2020 (Prüfungsordnungsversion 2015))

First state examination for the teaching degree Sonderpädagogik Didactics in Mathematics (Primary School) (2020 (Prüfungsordnungsversion 2015))

exchange program Mathematics (2023)

Module	title				Abbreviation		
	Basics of Mathematics für German Grundschule 2: Geometry and Stochastics						
(virtual				,	10-m-vribdu3-152-moi		
Module	coord	inator		Module offered by	<u> </u>		
Dean o	fStudie	es Mathematik (Mathema	atics)	Institute of Mathem	natics		
ECTS	Metho	od of grading	Only after succ. com	pl. of module(s)			
2	(not) s	successfully completed					
Duratio	n	Module level	Other prerequisites				
1 seme	ster	undergraduate					
Conten	ts						
		topics in teaching geome natics (statistics, probabi		-	d symmetry) and application-ori-		
Intende	ed learr	ning outcomes					
mathen thods v geomet portanc	natics r vithin a rry and ce of dig tion of	related to statistics, prob conceptual map. They k application-oriented ma gital technology with res	ability and combinate now strategies for de thematics in element pect to todays and fur	orics, and are able to velopment of unders ary school. They are ture design of instru	ontents in application-oriented o structure the notions and me- standing of the central notions of able to assess and value the im- ction. They know various fields of re able to perform modelling in-		
		, number of weekly conta	ct hours, language —	· if other than Germa	in)		
Ü (2) Course	type: e	Learning, mostly Virtuell	e Hochschule Bayern	(vhb)			
		s essment (type, scope, la on on whether module ca			tion offered — if not every seme-		
		oased, 15 to 20 hours) ffered: Once a year, sum	mer semester				
Allocat	ion of p	olaces					
Additio	nal info	ormation					
Worklo	ad						
60 h							
Teachir	ng cycl	e					
Referre	d to in	LPOI (examination regu	lations for teaching-o	legree programmes)			
§ 22							
Module		irs in					
First sta First sta (2015) First sta	ate exa ate exa ate exa	mination for the teaching	g degree Grundschule g degree Sonderpäda g degree Sonderpäda	Didactics in Mather gogik Didactics in M) matics (Primary School) (2015) athematics (Primary School) athematics (Primary School)		
		gram Mathematics (2023)					

LA Grundschulen Mathematics (2015)	
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Lartation Module level Other prerequisites .semester undergraduate Contents Sasic topics on teaching mathematics in tenth grade in Hauptschule, Realschule and Gymnasium, Intended learning outcomes The student learns basic topics in the teaching of mathematics in tenth form. Environment of the teaching mathematics in tenth form. Courses (type, number of weekly contact hours, language — if other than German) (2) (2) Courses (type, number of weekly contact hours, language — if other than German) (2) Courses (type, number of weekly contact hours, language — if other than German) (2) Courses (type, number of weekly contact hours, language — if other than German) (2) Course type: eLearning, mostly Virtuelle Hochschule Bayern (vhb) Wethod of assessment (type, scope, language — if other than German, examination offered — if not every semeter, information on whether module can be chosen to earn a bonus) soriest (web-based, 15 to 20 hours) Ssessessment offered: Once a year, summer semester Nulccation of places	Module	title			Abbreviation	
Beam of Studies Mathematik (Mathematics) Institute of Mathematics CTS Method of grading Only after succ. compl. of module(s) :: (not) successfully completed	Mather	natics in grade 10 (virtual co	urse)		10-M-VHBM10-152-	m01
Beam of Studies Mathematik (Mathematics) Institute of Mathematics CTS Method of grading Only after succ. compl. of module(s) :: (not) successfully completed	Module	coordinator		Module offered by		
CTS Method of grading Only after succ. compl. of module(s) in (not) successfully completed Duration Module level Other prerequisites semester undergraduate Contents Data in the dearning outcomes He student learns basic topics in the teaching of mathematics in tenth form at German Mittelschule and Real- chule, as well as the related mathematical backgrounds and proofs. He/She is acquainted with the employmer of new technologies for teaching mathematics in tenth form. Courses (type, number of weekly contact hours, language – if other than German) 0 (2) 0 course type: eLearning, mostly Virtuelle Hochschule Bayern (vhb) Vethod of assessment (type, scope, language – if other than German, examination offered – if not every seme- ter, information on whether module can be chosen to earn a bonus) Vorkload Validtional information Validtional information			matica	*		
Image: Image: Imag					latics	
Module level Other prerequisites .semester undergraduate - .contents - - Sagist topics on teaching mathematics in tenth grade in Hauptschule, Realschule and Gymnasium. - Intended learning outcomes - - The student learns basic topics in the teaching of mathematics in tenth form at German Mittelschule and Real- icchule, as well as the related mathematical backgrounds and proofs. He/She is acquainted with the employmer of new technologies for teaching mathematics in tenth form. Courses type, number of weekly contact hours, language — if other than German, - Ourse type: elearning, mostly Virtuelle Hochschule Bayern (vhb) - Atendo of assessment (type, scope, language — if other than German, examination offered — if not every seme- ter, information on whether module can be chosen to earn a bonus) Topic (twp-based, 15 to 2 hours) - Vassessment offered: Once a year, summer semester - Validional information - - - - Variation of places - - - - Variation of place - - - - Variational information - -	2			npl. of module(s)		
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2015)First state examination for the teaching degree Mittelschule Mathematics (2015)First state examination for the teaching degree Mittelschule Didactics in Mathematics (Middle School) (2015)First state examination for the teaching degree Gymnasium Mathematics (2019)First state examination for the teaching degree Mittelschule Mathematics (2020 (Prüfungsordnungsversion 2015))A Grundschulen Mathematics (2015)JMU Würzburg • generated 18-Apr-2025 • exam. reg. data re-page 41 / 48			,		athematics (Primary	School)
First state examination for the teaching degree Mittelschule Didactics in Mathematics (Middle School) (2015) First state examination for the teaching degree Gymnasium Mathematics (2019) First state examination for the teaching degree Mittelschule Mathematics (2020 (Prüfungsordnungsversion 2015)) A Grundschulen Mathematics (2015) JMU Würzburg • generated 18-Apr-2025 • exam. reg. data re-	(2015)					School)
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First state examination for the teaching degree Mittelschule Mathematics (2020 (Prüfungsordnungsversion 2015)) A Grundschulen Mathematics (2015) JMU Würzburg • generated 18-Apr-2025 • exam. reg. data re- page 41 / 48						ol) (2015)
2015)) A Grundschulen Mathematics (2015) JMU Würzburg • generated 18-Apr-2025 • exam. reg. data re- page 41 / 48			,	-		vorcion
	First sta 2015))	ale examination for the teach	ing degree Mittelschule	e mathematics (2020	(Prurungsordnungs)	version
	A Grundsc	hulen Mathematics (2015)			-	page 41 / 48



First state examination for the teaching degree Sonderpädagogik Didactics in Mathematics (Middle School) (2020 (Prüfungsordnungsversion 2015))

First state examination for the teaching degree Sonderpädagogik Didactics in Mathematics (Primary School) (2020 (Prüfungsordnungsversion 2015))

exchange program Mathematics (2023)

Module	e title			Abbreviation	
Mathe	matics 1 (virtual course)			10-M-VHBMa1-152-	m01
Modula	e coordinator		Modulo offered by		
			Module offered by		
	f Studies Mathematik (Mathe	<u> </u>	Institute of Mathem	atics	
ECTS	Method of grading	Only after succ. cor	npl. of module(s)		
2	(not) successfully complete				
Duratio		Other prerequisites	i		
1 seme					
Conten	its				
	sion of basic topics on teach nentals concerning the organ		mnasium, in particu	lar verbal and subje	ct-specific
Intende	ed learning outcomes				
	Ident is able to discuss selectering both subject-related ar		is on teaching mathe	matics at German G	ymnasium,
	s (type, number of weekly co	·	- if other than Germa	n)	
Ü (2)	type: eLearning, mostly Virtu				
Metho	d of assessment (type, scope formation on whether modul	, language — if other th	an German, examina	tion offered — if not	every seme-
	(web-based, 15 to 20 hours) ment offered: Every two year	s, winter semester			
Allocat	tion of places				
Additio	onal information				
Auditio					
Worklo	ad				
60 h					
Teachi	ng cycle				
Deferre	d to in IDO L (avamination r	aulations for toaching	dagraa pragrammac)		
	ed to in LPO I (examination r		degree programmes)		
§ 22 § 22 § 22	Nr. 2 f)				
	e appears in				
	ate examination for the teach	ing degree Grundschule	e Mathematics (2015)	
	ate examination for the teach		-		ool) (2015)
	ate examination for the teach			. , .	
First sta	ate examination for the teach	ing degree Gymnasium	Mathematics (2015)		
First sta (2015)	ate examination for the teach	ing degree Sonderpäda	ngogik Didactics in M	athematics (Primary	School)
(2015)	ate examination for the teach				School)
	ate examination for the teach				
	ate examination for the teach				ol) (2015)
	ate examination for the teach		-		
First sta 2015))	ate examination for the teach	ung aegree Mittelschule	e mathematics (2020	(Prutungsordnungs	version
LA Grundso	chulen Mathematics (2015)		enerated 18-Apr-2025 • exam Ischulen (Unterrichtsfach) Ma		page 43 / 48



First state examination for the teaching degree Sonderpädagogik Didactics in Mathematics (Middle School) (2020 (Prüfungsordnungsversion 2015))

First state examination for the teaching degree Sonderpädagogik Didactics in Mathematics (Primary School) (2020 (Prüfungsordnungsversion 2015))

exchange program Mathematics (2023)

Module	e title			Abbreviation	
Mather	matics 2 (virtual course)		-	10-M-VHBMa2-152-	m01
	e coordinator		Module offered by		
Dean o	f Studies Mathematik (Mather	natics)	Institute of Mathem	natics	
ECTS	Method of grading	Only after succ. con	npl. of module(s)		
2	(not) successfully completed				
Duratio	on Module level	Other prerequisites	i		
1 seme	ster undergraduate				
Conten	its				
	sion of central topics on teach of implementation in the clas		Gymnasium, in partic	ular didactic analyse	es and possi-
Intende	ed learning outcomes				
	Ident is able to discuss and ar	alvse selected tonics	and questions on tea	ching mathematics	at German
	sium from a didactical point o	,			at German
	s (type, number of weekly con		- if other than Germa	n)	
Ü (2)	e type, number of weekly con			,	
• •	type: eLearning, mostly Virtue	elle Hochschule Baverr	ı (vhb)		
	d of assessment (type, scope,			tion offered — if not	avary como-
	formation on whether module				every serile-
	(web-based, 15 to 20 hours)		,		
	ment offered: Every two years	. summer semester			
	ion of places	,			
Allocat					
	1.6 0				
Additio	onal information				
 Worklo					
60 h					
Teachi	ng cycle				
Referre	ed to in LPO I (examination reg	gulations for teaching-	degree programmes)		
§ 22	Nr. 1 h)				
§ 22					
§ 22					
Module	e appears in				
	ate examination for the teachi				
	ate examination for the teachi			natics (Primary Scho	ool) (2015)
	ate examination for the teachi				
	ate examination for the teachi	,			
	ate examination for the teachi	ng degree Sonderpäda	gogik Didactics in M	athematics (Primary	School)
(2015) First st:	ate examination for the teachi	ng degree Sondornäda	gogik Didactics in M	athematics (Middle	School
(2015)	ate examination for the teach	ng degree Sonderpada	Sogik Diudelies III M		501000
-	ate examination for the teachi	ng degree Mittelschule	Mathematics (2015))	
	ate examination for the teachi				ol) (2015)
	ate examination for the teachi				
	ate examination for the teachi		-		version
2015))				- 0	
	shulan Mathamatics ()		energial (C. Arris	von data	
LA Grundso	chulen Mathematics (2015)		enerated 18-Apr-2025 • exam schulen (Unterrichtsfach) Ma	-	page 45 / 48
				-	



First state examination for the teaching degree Sonderpädagogik Didactics in Mathematics (Middle School) (2020 (Prüfungsordnungsversion 2015))

First state examination for the teaching degree Sonderpädagogik Didactics in Mathematics (Primary School) (2020 (Prüfungsordnungsversion 2015))

exchange program Mathematics (2023)

	e title			Abbreviation	
Stocha	astics in Sekundarstufe I (virtu	al course)		10-M-VHBSto-152-m	101
Modul	e coordinator		Module offered by		
Dean c	of Studies Mathematik (Mathe	matics)	Institute of Mathem	atics	
ECTS	Method of grading	Only after succ. cor			
2	(not) successfully completed				
Durati	· · · ·	Other prerequisites			
1 seme			•		
Conter		1			
	on and consolidation of the fu		chastics that are pro	roquisitos for tho su	bioct-spaci-
	I didactic courses in stochastic				
Intend	ed learning outcomes				
	udent has basic knowledge of e/She is acquainted with the e				
Course	es (type, number of weekly con	tact hours, language -	– if other than Germa	n)	
Ü (2)					
• •	e type: eLearning, mostly Virtue	elle Hochschule Baver	ו (vhb)		
Metho	d of assessment (type, scope,	language — if other th	an German, examina	tion offered — if not	every seme-
	formation on whether module	can be chosen to earr	i a bonus)		
	t (web-based, 15 to 20 hours)				
	sment offered: Once a year, wi	nter semester			
Alloca	tion of places				
Additio	onal information				
Worklo	oad				
60 h					
Teachi	ing cycle				
Deferre	ad to in IDO L (avamination to				
	ed to in LPO I (examination rep	gulations for teaching-	degree programmes)		
§ 22	Nr. 1 h) Nr. 2 f)				
	Nr. 3 f)				
Modul	e appears in				
Modul First st	e appears in tate examination for the teachi				
Modul First st First st	e appears in tate examination for the teachi tate examination for the teachi	ng degree Grundschul	e Didactics in Mather		ool) (2015)
Modul First st First st First st	e appears in tate examination for the teachi tate examination for the teachi tate examination for the teachi	ng degree Grundschul ng degree Realschule	e Didactics in Mather Mathematics (2015)		ool) (2015)
Modul First st First st First st First st	e appears in tate examination for the teachi tate examination for the teachi tate examination for the teachi tate examination for the teachi	ng degree Grundschul ng degree Realschule ng degree Gymnasium	e Didactics in Mather Mathematics (2015) Mathematics (2015)	natics (Primary Scho	-
Modul First st First st First st First st First st	e appears in tate examination for the teaching tate examination for the teaching tate examination for the teaching tate examination for the teaching tate examination for the teaching	ng degree Grundschul ng degree Realschule ng degree Gymnasium	e Didactics in Mather Mathematics (2015) Mathematics (2015)	natics (Primary Scho	_
Modul First st First st First st First st (2015) First st	e appears in tate examination for the teaching tate examination for the teaching tate examination for the teaching tate examination for the teaching tate examination for the teaching	ng degree Grundschul ng degree Realschule ng degree Gymnasium ng degree Sonderpäda	e Didactics in Mather Mathematics (2015) Mathematics (2015) agogik Didactics in M	natics (Primary Scho athematics (Primary	School)
Modul First st First st First st First st (2015) First st (2015)	e appears in tate examination for the teaching tate examination for the teaching	ng degree Grundschul ng degree Realschule ng degree Gymnasium ng degree Sonderpäda ng degree Sonderpäda	e Didactics in Mather Mathematics (2015) Mathematics (2015) agogik Didactics in M agogik Didactics in M	natics (Primary Scho athematics (Primary athematics (Middle	School)
Modul First st First st First st First st (2015) First st (2015) First st	e appears in tate examination for the teaching tate examination for the teaching	ng degree Grundschul ng degree Realschule ng degree Gymnasium ng degree Sonderpäda ng degree Sonderpäda ng degree Mittelschule	e Didactics in Mather Mathematics (2015) Mathematics (2015) agogik Didactics in M agogik Didactics in M	natics (Primary Scho athematics (Primary athematics (Middle	School) School)
Modul First st First st First st First st (2015) First st (2015) First st First st	e appears in tate examination for the teaching tate examination for the teaching	ng degree Grundschul ng degree Realschule ng degree Gymnasium ng degree Sonderpäda ng degree Sonderpäda ng degree Mittelschule ng degree Mittelschule	e Didactics in Mather Mathematics (2015) Mathematics (2015) agogik Didactics in M agogik Didactics in M e Mathematics (2015) e Didactics in Mathen	natics (Primary Scho athematics (Primary athematics (Middle	School) School)
Modul First st First st First st First st (2015) First st (2015) First st First st First st	e appears in tate examination for the teaching tate examination for the teaching	ng degree Grundschul ng degree Realschule ng degree Gymnasium ng degree Sonderpäda ng degree Sonderpäda ng degree Mittelschule ng degree Mittelschule ng degree Gymnasium	e Didactics in Mather Mathematics (2015) Mathematics (2015) agogik Didactics in M agogik Didactics in M e Mathematics (2015) e Didactics in Mathen Mathematics (2019)	natics (Primary Scho athematics (Primary athematics (Middle natics (Middle Schoo	School) School) ol) (2015)
Modul First st First st First st First st (2015) First st (2015) First st First st First st	e appears in tate examination for the teaching tate examination for the teaching	ng degree Grundschul ng degree Realschule ng degree Gymnasium ng degree Sonderpäda ng degree Sonderpäda ng degree Mittelschule ng degree Mittelschule ng degree Gymnasium	e Didactics in Mather Mathematics (2015) Mathematics (2015) agogik Didactics in M agogik Didactics in M e Mathematics (2015) e Didactics in Mathen Mathematics (2019)	natics (Primary Scho athematics (Primary athematics (Middle natics (Middle Schoo	School) School) ol) (2015)
Modul First st First st First st First st (2015) First st (2015) First st First st First st First st First st 2015))	e appears in tate examination for the teaching tate examination for the teaching	ng degree Grundschul ng degree Realschule ng degree Gymnasium ng degree Sonderpäda ng degree Sonderpäda ng degree Mittelschule ng degree Mittelschule ng degree Gymnasium ng degree Mittelschule	e Didactics in Mather Mathematics (2015) Mathematics (2015) agogik Didactics in M agogik Didactics in M e Mathematics (2015) e Didactics in Mathen Mathematics (2019)	natics (Primary Scho athematics (Primary athematics (Middle natics (Middle Schoo (Prüfungsordnungsv	School) School) ol) (2015)



First state examination for the teaching degree Sonderpädagogik Didactics in Mathematics (Middle School) (2020 (Prüfungsordnungsversion 2015))

First state examination for the teaching degree Sonderpädagogik Didactics in Mathematics (Primary School) (2020 (Prüfungsordnungsversion 2015))

exchange program Mathematics (2023)