

Subdivided Module Catalogue for the Module studies (Bachelor)

Physics

Examination regulations version: 2019
Responsible: Faculty of Physics and Astronomy

Abbreviations used

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

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

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

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

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

Conventions

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:

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

15-May-2019 (2019-36)

27-Jun-2019 (2019-41)

14-Nov-2019 (2019-52)

22-Jan-2020 (2020-13)

06-May-2019 (2020-39)

22-Jul-2020 (2020-57)

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		Method of grading	page
Summer Term 2019				
In the area of mandatory electives, students must achieve no less than 12 ECTS credits in graded modules. In the area of mandatory electives, students must complete modules worth a total of no less than 21 ECTS credits.				
11-BXE5-152-m01	Current Topics in Experimental Physics	5	NUM	7
11-BXE6-152-m01	Current Topics in Experimental Physics	6	NUM	8
11-BXE8-152-m01	Current Topics in Experimental Physics	8	NUM	9
11-BXT5-152-m01	Current Topics in Theoretical Physics	5	NUM	10
11-BXT6-152-m01	Current Topics in Theoretical Physics	6	NUM	11
11-BXT8-152-m01	Current Topics in Theoretical Physics	8	NUM	12
11-CSA6-152-m01	Selected Topics in Astrophysics	6	NUM	13
11-CSF6-152-m01	Selected Topics in Solid State Physics	6	NUM	6
11-CST6-152-m01	Selected Topics in Particle Physics	6	NUM	14
11-CSTh6-152-m01	Selected Topics in Theoretical Physics	6	NUM	15
Winter Term 2019				
In the area of mandatory electives, students must achieve no less than 12 ECTS credits in graded modules. In the area of mandatory electives, students must complete modules worth a total of no less than 21 ECTS credits.				
11-BXE5-152-m01	Current Topics in Experimental Physics	5	NUM	7
11-BXE6-152-m01	Current Topics in Experimental Physics	6	NUM	8
11-BXE8-152-m01	Current Topics in Experimental Physics	8	NUM	9
11-BXT5-152-m01	Current Topics in Theoretical Physics	5	NUM	10
11-BXT6-152-m01	Current Topics in Theoretical Physics	6	NUM	11
11-BXT8-152-m01	Current Topics in Theoretical Physics	8	NUM	12
11-CSA6-152-m01	Selected Topics in Astrophysics	6	NUM	13
11-CSF6-152-m01	Selected Topics in Solid State Physics	6	NUM	6
11-CST6-152-m01	Selected Topics in Particle Physics	6	NUM	14
11-CSTh6-152-m01	Selected Topics in Theoretical Physics	6	NUM	15
Summer Term 2020				
In the area of mandatory electives, students must achieve no less than 12 ECTS credits in graded modules. In the area of mandatory electives, students must complete modules worth a total of no less than 21 ECTS credits.				
11-BXE5-152-m01	Current Topics in Experimental Physics	5	NUM	7
11-BXE6-152-m01	Current Topics in Experimental Physics	6	NUM	8
11-BXE8-152-m01	Current Topics in Experimental Physics	8	NUM	9
11-BXT5-152-m01	Current Topics in Theoretical Physics	5	NUM	10
11-BXT6-152-m01	Current Topics in Theoretical Physics	6	NUM	11
11-BXT8-152-m01	Current Topics in Theoretical Physics	8	NUM	12
11-CSA6-152-m01	Selected Topics in Astrophysics	6	NUM	13
11-CSF6-152-m01	Selected Topics in Solid State Physics	6	NUM	6
11-CST6-152-m01	Selected Topics in Particle Physics	6	NUM	14
11-CSTh6-152-m01	Selected Topics in Theoretical Physics	6	NUM	15
Winter Term 2020				
In the area of mandatory electives, students must achieve no less than 12 ECTS credits in graded modules. In the area of mandatory electives, students must complete modules worth a total of no less than 21 ECTS credits.				
11-BXE5-152-m01	Current Topics in Experimental Physics	5	NUM	7
11-BXE6-152-m01	Current Topics in Experimental Physics	6	NUM	8
11-BXE8-152-m01	Current Topics in Experimental Physics	8	NUM	9

11-BXT5-152-m01	Current Topics in Theoretical Physics	5	NUM	10
11-BXT6-152-m01	Current Topics in Theoretical Physics	6	NUM	11
11-BXT8-152-m01	Current Topics in Theoretical Physics	8	NUM	12
11-CSA6-152-m01	Selected Topics in Astrophysics	6	NUM	13
11-CSF6-152-m01	Selected Topics in Solid State Physics	6	NUM	6
11-CST6-152-m01	Selected Topics in Particle Physics	6	NUM	14
11-CSTh6-152-m01	Selected Topics in Theoretical Physics	6	NUM	15

Module title		Abbreviation
Selected Topics in Solid State Physics		11-CSF6-152-m01
Module coordinator		Module offered by
chairperson of examination committee		Faculty of Physics and Astronomy
ECTS	Method of grading	Only after succ. compl. of module(s)
6	numerical grade	--
Duration	Module level	Other prerequisites
1 semester	undergraduate	Approval from examination committee required.
Contents		
Selected topics of Solid-State Physics.		
Intended learning outcomes		
The students have basic knowledge of a specialist field of Solid-State Physics and understand the measuring and evaluation methods necessary to acquire this knowledge. They are able to classify the subject-specific contexts and know the application areas.		
Courses (type, number of weekly contact hours, language — if other than German)		
V (3) + R (1)		
Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus)		
written examination (approx. 90 to 120 minutes) or oral examination of one candidate each (approx. 30 minutes) or oral examination in groups (groups of 2, approx. 30 minutes per candidate) or project report (approx. 8 to 10 pages) or presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: German and/or English		
Allocation of places		
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Additional information		
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Referred to in LPO I (examination regulations for teaching-degree programmes)		
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Module title		Abbreviation
Current Topics in Experimental Physics		11-BXE5-152-m01
Module coordinator		Module offered by
chairperson of examination committee		Faculty of Physics and Astronomy
ECTS	Method of grading	Only after succ. compl. of module(s)
5	numerical grade	--
Duration	Module level	Other prerequisites
1 semester	undergraduate	Approval from examination committee required.
Contents		
Current topics of Experimental Physics. Accredited academic achievements, e.g. in case of change of university or study abroad.		
Intended learning outcomes		
The students have advanced competencies corresponding to the requirements of a module of Experimental Physics of the Bachelor's programme. They have knowledge of a current subdiscipline of Experimental Physics and understand the measuring and/or evaluation methods necessary to acquire this knowledge. They are able to classify the subject-specific contexts and know the application areas.		
Courses (type, number of weekly contact hours, language — if other than German)		
V (2) + R (2)		
Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus)		
written examination (approx. 90 to 120 minutes) or oral examination of one candidate each (approx. 30 minutes) or oral examination in groups (groups of 2, approx. 30 minutes per candidate) or project report (approx. 8 to 10 pages) or presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: German and/or English		
Allocation of places		
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Additional information		
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Referred to in LPO I (examination regulations for teaching-degree programmes)		
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Module title		Abbreviation
Current Topics in Experimental Physics		11-BXE6-152-m01
Module coordinator		Module offered by
chairperson of examination committee		Faculty of Physics and Astronomy
ECTS	Method of grading	Only after succ. compl. of module(s)
6	numerical grade	--
Duration	Module level	Other prerequisites
1 semester	undergraduate	Approval from examination committee required.
Contents		
Current topics of Experimental Physics. Accredited academic achievements, e.g. in case of change of university or study abroad.		
Intended learning outcomes		
The students have advanced competencies corresponding to the requirements of a module of Experimental Physics of the Bachelor's programme. They have knowledge of a current subdiscipline of Experimental Physics and understand the measuring and/or evaluation methods necessary to acquire this knowledge. They are able to classify the subject-specific contexts and know the application areas.		
Courses (type, number of weekly contact hours, language — if other than German)		
V (3) + R (1)		
Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus)		
written examination (approx. 90 to 120 minutes) or oral examination of one candidate each (approx. 30 minutes) or oral examination in groups (groups of 2, approx. 30 minutes per candidate) or project report (approx. 8 to 10 pages) or presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: German and/or English		
Allocation of places		
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Additional information		
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Referred to in LPO I (examination regulations for teaching-degree programmes)		
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Module title		Abbreviation
Current Topics in Experimental Physics		11-BXE8-152-m01
Module coordinator		Module offered by
chairperson of examination committee		Faculty of Physics and Astronomy
ECTS	Method of grading	Only after succ. compl. of module(s)
8	numerical grade	--
Duration	Module level	Other prerequisites
1 semester	undergraduate	Approval from examination committee required.
Contents		
Current topics of Experimental Physics. Accredited academic achievements, e.g. in case of change of university or study abroad.		
Intended learning outcomes		
The students have advanced competencies corresponding to the requirements of a module of Experimental Physics of the Bachelor's programme. They have knowledge of a current subdiscipline of Experimental Physics and understand the measuring and/or evaluation methods necessary to acquire this knowledge. They are able to classify the subject-specific contexts and know the application areas.		
Courses (type, number of weekly contact hours, language — if other than German)		
V (4) + R (2)		
Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus)		
written examination (approx. 90 to 120 minutes) or oral examination of one candidate each (approx. 30 minutes) or oral examination in groups (groups of 2, approx. 30 minutes per candidate) or project report (approx. 8 to 10 pages) or presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: German and/or English		
Allocation of places		
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Additional information		
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Referred to in LPO I (examination regulations for teaching-degree programmes)		
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Module title		Abbreviation
Current Topics in Theoretical Physics		11-BXT5-152-m01
Module coordinator		Module offered by
chairperson of examination committee		Faculty of Physics and Astronomy
ECTS	Method of grading	Only after succ. compl. of module(s)
5	numerical grade	--
Duration	Module level	Other prerequisites
1 semester	undergraduate	Approval from examination committee required.
Contents		
Current topics of Theoretical Physics. Accredited academic achievements, e.g. in case of change of university or study abroad.		
Intended learning outcomes		
The students have advanced competencies corresponding to the requirements of a module of Theoretical Physics of the Bachelor's programme. They have advanced specialist knowledge of a subdiscipline of Theoretical Physics and have mastered the required methods. They are able to apply the acquired methods to current problems of Theoretical Physics.		
Courses (type, number of weekly contact hours, language — if other than German)		
V (2) + R (2)		
Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus)		
written examination (approx. 90 to 120 minutes) or oral examination of one candidate each (approx. 30 minutes) or oral examination in groups (groups of 2, approx. 30 minutes per candidate) or project report (approx. 8 to 10 pages) or presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: German and/or English		
Allocation of places		
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Additional information		
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Referred to in LPO I (examination regulations for teaching-degree programmes)		
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Module title		Abbreviation
Current Topics in Theoretical Physics		11-BXT6-152-m01
Module coordinator		Module offered by
chairperson of examination committee		Faculty of Physics and Astronomy
ECTS	Method of grading	Only after succ. compl. of module(s)
6	numerical grade	--
Duration	Module level	Other prerequisites
1 semester	undergraduate	Approval from examination committee required.
Contents		
Current topics of Theoretical Physics. Accredited academic achievements, e.g. in case of change of university or study abroad.		
Intended learning outcomes		
The students have advanced competencies corresponding to the requirements of a module of Theoretical Physics of the Bachelor's programme. They have advanced specialist knowledge of a subdiscipline of Theoretical Physics and have mastered the required methods. They are able to apply the acquired methods to current problems of Theoretical Physics.		
Courses (type, number of weekly contact hours, language — if other than German)		
V (3) + R (1)		
Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus)		
written examination (approx. 90 to 120 minutes) or oral examination of one candidate each (approx. 30 minutes) or oral examination in groups (groups of 2, approx. 30 minutes per candidate) or project report (approx. 8 to 10 pages) or presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: German and/or English		
Allocation of places		
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Additional information		
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Referred to in LPO I (examination regulations for teaching-degree programmes)		
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Module title		Abbreviation
Current Topics in Theoretical Physics		11-BXT8-152-m01
Module coordinator		Module offered by
chairperson of examination committee		Faculty of Physics and Astronomy
ECTS	Method of grading	Only after succ. compl. of module(s)
8	numerical grade	--
Duration	Module level	Other prerequisites
1 semester	undergraduate	Approval from examination committee required.
Contents		
Current topics of Theoretical Physics. Accredited academic achievements, e.g. in case of change of university or study abroad.		
Intended learning outcomes		
The students have advanced competencies corresponding to the requirements of a module of Theoretical Physics of the Bachelor's programme. They have advanced specialist knowledge of a subdiscipline of Theoretical Physics and have mastered the required methods. They are able to apply the acquired methods to current problems of Theoretical Physics.		
Courses (type, number of weekly contact hours, language — if other than German)		
V (4) + R (2)		
Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus)		
written examination (approx. 90 to 120 minutes) or oral examination of one candidate each (approx. 30 minutes) or oral examination in groups (groups of 2, approx. 30 minutes per candidate) or project report (approx. 8 to 10 pages) or presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: German and/or English		
Allocation of places		
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Additional information		
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Referred to in LPO I (examination regulations for teaching-degree programmes)		
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Module title		Abbreviation
Selected Topics in Astrophysics		11-CSA6-152-m01
Module coordinator		Module offered by
chairperson of examination committee		Faculty of Physics and Astronomy
ECTS	Method of grading	Only after succ. compl. of module(s)
6	numerical grade	--
Duration	Module level	Other prerequisites
1 semester	undergraduate	Approval from examination committee required.
Contents		
Selected topics of Astrophysics.		
Intended learning outcomes		
The students have basic knowledge of a current field of Astrophysics and understand the measuring and evaluation methods necessary to acquire this knowledge. They are able to classify the subject-specific contexts and know the application areas.		
Courses (type, number of weekly contact hours, language — if other than German)		
V (3) + R (1)		
Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus)		
written examination (approx. 90 to 120 minutes) or oral examination of one candidate each (approx. 30 minutes) or oral examination in groups (groups of 2, approx. 30 minutes per candidate) or project report (approx. 8 to 10 pages) or presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: German and/or English		
Allocation of places		
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Additional information		
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Referred to in LPO I (examination regulations for teaching-degree programmes)		
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Module title		Abbreviation
Selected Topics in Particle Physics		11-CST6-152-m01
Module coordinator		Module offered by
chairperson of examination committee		Faculty of Physics and Astronomy
ECTS	Method of grading	Only after succ. compl. of module(s)
6	numerical grade	--
Duration	Module level	Other prerequisites
1 semester	undergraduate	Approval from examination committee required.
Contents		
Selected topics of Particle Physics.		
Intended learning outcomes		
The students have basic knowledge of a special field of Elementary Particle Physics and of the experimental or theoretical methods necessary to acquire this knowledge. They are able to classify the subject-specific contexts and know the application areas.		
Courses (type, number of weekly contact hours, language — if other than German)		
V (3) + R (1)		
Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus)		
written examination (approx. 90 to 120 minutes) or oral examination of one candidate each (approx. 30 minutes) or oral examination in groups (groups of 2, approx. 30 minutes per candidate) or project report (approx. 8 to 10 pages) or presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: German and/or English		
Allocation of places		
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Additional information		
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Referred to in LPO I (examination regulations for teaching-degree programmes)		
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Module title		Abbreviation
Selected Topics in Theoretical Physics		11-CSTh6-152-m01
Module coordinator		Module offered by
chairperson of examination committee		Faculty of Physics and Astronomy
ECTS	Method of grading	Only after succ. compl. of module(s)
6	numerical grade	--
Duration	Module level	Other prerequisites
1 semester	undergraduate	Approval from examination committee required.
Contents		
Selected topics of Theoretical Physics.		
Intended learning outcomes		
The students have basic knowledge of a special field of Theoretical Physics and have mastered the necessary mathematical methods. They are able to apply the acquired methods to current problems of Theoretical Physics.		
Courses (type, number of weekly contact hours, language — if other than German)		
V (3) + R (1)		
Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus)		
written examination (approx. 90 to 120 minutes) or oral examination of one candidate each (approx. 30 minutes) or oral examination in groups (groups of 2, approx. 30 minutes per candidate) or project report (approx. 8 to 10 pages) or presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: German and/or English		
Allocation of places		
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Additional information		
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Referred to in LPO I (examination regulations for teaching-degree programmes)		
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