Module Catalogue
for the Module studies (Bachelor)

Physics

Examination regulations version: 2019
Responsible: Faculty of Physics and Astronomy
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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-2020 (2020-39)
22-Jul-2020 (2020-57)
17-Dec-2020 (2020-110)
10-Mar-2021 (2021-17)
09-Jun-2021 (2021-58)
22-Dec-2021 (2021-85)
05-Jul-2022 (2022-52)

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

--
### Module title
Current Topics in Experimental Physics

### Abbreviation
11-BXE6-152-m01

### Module coordinator
Chairperson of examination committee

### Module offered by
Faculty of Physics and Astronomy

### ECTS
6

### Method of grading
Only after succ. compl. of module(s)

### Duration
1 semester

### Module level
Undergraduate

### Other prerequisites
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
(V (3) + R (1))

### Method of assessment
(type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

- Written examination (approx. 90 to 120 minutes) or oral examination of one candidate each (approx. 30 minutes)
- 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).

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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
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**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 is creditable for 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).

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Language of assessment: German and/or English

**Allocation of places**

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**Referred to in LPO I** (examination regulations for teaching-degree programmes)

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**Module coordinator**
chairperson of examination committee

**Module offered by**
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**
V (2) + R (2)

**Method of assessment**
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).

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Language of assessment: German and/or English

**Allocation of places**
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**Referred to in LPO I** (examination regulations for teaching-degree programmes)
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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
V (4) + R (2)

Method of assessment
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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**Module coordinator**  
chairperson of examination committee

**Module offered by**  
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 is creditable for bonus)
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Language of assessment: German and/or English

**Allocation of places**
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**Additional information**
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### Module coordinator
Chairperson of examination committee

### Module offered by
Faculty of Physics and Astronomy

### ECTS
6

### Method of grading
Numerical grade

### Only after succ. compl. of module(s)
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### Duration
1 semester

### Module level
Undergraduate

### Other prerequisites
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
(V (3) + R (1))

### Method of assessment
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).

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Language of assessment: German and/or English

### Allocation of places
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### Module coordinator
Chairperson of examination committee

### Module offered by
Faculty of Physics and Astronomy

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### 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 is creditable for 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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### 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

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### Method of assessment

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- Language of assessment: German and/or English

### Allocation of places

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### Additional information

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Winter Term 2019
(o ECTS credits)
### Module title
Current Topics in Experimental Physics

### Abbreviation
11-BXE5-152-m01

### Module coordinator
chairperson of examination committee

### Module offered by
Faculty of Physics and Astronomy

### ECTS
5

### Method of grading
Numerical grade

### Only after succ. compl. of module(s)
--

### Duration
1 semester

### Module level
Undergraduate

### Other prerequisites
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
(V (2) + R (2))

### Method of assessment
Language of assessment: German and/or English

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).

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### Allocation of places
--

### Additional information
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### Referred to in LPO I
(examination regulations for teaching-degree programmes)

--
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 is creditable for bonus)
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Language of assessment: German and/or English

Allocation of places
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Additional information
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**Module coordinator**

- Chairperson of examination committee

**Module offered by**

- Faculty of Physics and Astronomy

**ECTS**

- 8

**Method of grading**

- Only after succ. compl. of module(s)

**Duration**

- 1 semester

**Module level**

- Undergraduate

**Other prerequisites**

- 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**

- **V (4) + R (2)**

**Method of assessment**

- 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).

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- Language of assessment: German and/or English

**Allocation of places**

- --

**Additional information**

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**Referred to in LPO I**

- (examination regulations for teaching-degree programmes)

- --
Current Topics in Theoretical Physics

Module title: Current Topics in Theoretical Physics
Abbreviation: 11-BXT5-152-m01

Module coordinator: chairperson of examination committee
Module offered by: Faculty of Physics and Astronomy

ECTS: 5
Method of grading: numerical grade
Duration: 1 semester
Module level: undergraduate
Other prerequisites: 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:
V (2) + R (2)

Method of assessment:
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).
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Language of assessment: German and/or English

Allocation of places:
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Additional information:
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**Module coordinator**
- chairperson of examination committee

**Module offered by**
- 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 is creditable for bonus)
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  Language of assessment: German and/or English

**Allocation of places**
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**Additional information**
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### 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 is creditable for bonus)

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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 Catalogue for the Module studies (Bachelor)

### Physics

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### Module coordinator

chairperson of examination committee

### Module offered by

Faculty of Physics and Astronomy

### ECTS

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### 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 is creditable for bonus)

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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
Selected Topics in Solid State Physics

### Abbreviation
11-CSF6-152-m01

### Module coordinator
Chairperson of examination committee

### Module offered by
Faculty of Physics and Astronomy

### ECTS
6

### Method of grading
Numerical grade

### Only after succ. compl. of module(s)
--

### Duration
1 semester

### Module level
Undergraduate

### Other prerequisites
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 is creditable for bonus)

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Language of assessment: German and/or English

### Allocation of places
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### Additional information
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**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 is creditable for bonus)

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Language of assessment: German and/or English

**Allocation of places**

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**Additional information**

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**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 is creditable for bonus)

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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 coordinator**
chairperson of examination committee

**Module offered by**
Faculty of Physics and Astronomy

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**Duration**
1 semester

**Module level**
undergraduate

**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**
V (2) + R (2)

**Method of assessment**
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**
--

**Additional information**
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**Referred to in LPO I** (examination regulations for teaching-degree programmes)
--
## Current Topics in Experimental Physics

**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

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**Duration** | **Module level** |
---|---|
1 semester | undergraduate |

### 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
**V (3) + R (1)**

### Method of assessment
- written examination (approx. 90 to 120 minutes) or oral examination of one candidate each (approx. 30 minutes)
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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
Current Topics in Experimental Physics

## Abbreviation
11-BXE8-152-m01

### Module coordinator
chairperson of examination committee

### Module offered by
Faculty of Physics and Astronomy

### ECTS
8

### Method of grading
numerical grade

### Only after succ. compl. of module(s)
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### Duration
1 semester

### Module level
undergraduate

### Other prerequisites
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 is creditable for bonus)

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Language of assessment: German and/or English

## Allocation of places
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## Referred to in LPO I
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**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 is creditable for bonus)

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Language of assessment: German and/or English

**Allocation of places**

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**Additional information**

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**Intended learning outcomes**

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**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 is creditable for bonus)

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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 is creditable for bonus)
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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: Selected Topics in Astrophysics

Abbreviation: 11-CSA6-152-m01

Module coordinator: chairperson of examination committee

Module offered by: Faculty of Physics and Astronomy

ECTS: 6

Method of grading: numerical grade

Duration: 1 semester

Module level: undergraduate

Other prerequisites: 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:

V (3) + R (1)

Method of assessment:
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).

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Language of assessment: German and/or English

Allocation of places:

Additional information:

Referred to in LPO I (examination regulations for teaching-degree programmes):
Module title
Selected Topics in Solid State Physics

Abbreviation
11-CSF6-152-m01

Module coordinator
chairperson of examination committee

Module offered by
Faculty of Physics and Astronomy

ECTS
6

Method of grading
numerical grade

Only after succ. compl. of module(s)
--

Duration
1 semester

Module level
undergraduate

Other prerequisites
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 is creditable for bonus)
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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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Selected Topics in Particle Physics

Abbreviation: 11-CST6-152-m01

Module coordinator: chairperson of examination committee

Module offered by: Faculty of Physics and Astronomy

ECTS: 6
Method of grading: numerical grade

Duration: 1 semester
Module level: undergraduate

Other prerequisites: 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 is creditable for bonus)

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Language of assessment: German and/or English

Allocation of places: --

Additional information: --

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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 is creditable for bonus)

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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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Winter Term 2020
(0 ECTS credits)
Module title  | Abbreviation
---|---
Current Topics in Experimental Physics | 11-BXE5-152-m01

**Module coordinator**
chairperson of examination committee

**Module offered by**
Faculty of Physics and Astronomy

**ECTS** | **Method of grading** | **Other prerequisites**
---|---|---
5 | numerical grade | 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**
V (2) + R (2)

**Method of assessment**
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).

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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)
--
### Module title
Current Topics in Experimental Physics

### Abbreviation
11-BXE6-152-m01

### Module coordinator
Chairperson of examination committee

### Module offered by
Faculty of Physics and Astronomy

### ECTS
6

### Method of grading
Numerical grade

### Duration
1 semester

### Module level
Undergraduate

### Other prerequisites
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
**V (3) + R (1)**

### Method of assessment
- Written examination (approx. 90 to 120 minutes) or oral examination of one candidate each (approx. 30 minutes)
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**Language of assessment:** German and/or English

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## Module title
Current Topics in Theoretical Physics

## Abbreviation
11-BXT5-152-m01

### Module coordinator
Chairperson of examination committee

### Module offered by
Faculty of Physics and Astronomy

### ECTS
5

### Method of grading
Numerical grade

### Duration
1 semester

### Module level
Undergraduate

### Other prerequisites
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
- V (2) + R (2)

### Method of assessment
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Language of assessment: German and/or English

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**Module coordinator**  
chairperson of examination committee

**Module offered by**  
Faculty of Physics and Astronomy

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**Duration**  
1 semester

**Module level**  
undergraduate

**Other prerequisites**  
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

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### 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 is creditable for bonus)  
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Language of assessment: German and/or English

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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 is creditable for 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).

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Language of assessment: German and/or English

### Allocation of places

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### Additional information

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### 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 is creditable for bonus)

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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

**Selected Topics in Solid State Physics**

### Abbreviation

11-CSF6-152-m01

### Module coordinator

Chairperson of examination committee

### Module offered by

Faculty of Physics and Astronomy

### ECTS

6

### Method of grading

Numerical grade

### Only after succ. compl. of module(s)

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### Duration

1 semester

### Module level

Undergraduate

### Other prerequisites

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 is creditable for bonus)

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Language of assessment: German and/or English

### Allocation of places

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### Additional information

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**Module coordinator**

Chairperson of examination committee

**Module offered by**

Faculty of Physics and Astronomy

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**Duration**

1 semester

**Module level**

Undergraduate

**Other prerequisites**

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 is creditable for bonus)

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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

**Selected Topics in Theoretical Physics**

### Abbreviation

11-CSTh6-152-m01

### Module coordinator

Chairperson of examination committee

### Module offered by

Faculty of Physics and Astronomy

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### Duration

1 semester

### Module level

Undergraduate

### 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 is creditable for bonus)

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Language of assessment: German and/or English

### Allocation of places

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### Additional information

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**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 is creditable for bonus)

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Language of assessment: German and/or English

**Allocation of places**

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**Module coordinator**  
Chairperson of examination committee

**Module offered by**  
Faculty of Physics and Astronomy

**ECTS** | **Method of grading** | **Other prerequisites** |
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6         | numerical grade       | Approval from examination committee required. |

**Duration** | **Module level** |
1 semester   | undergraduate |

**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**  
V (3) + R (1)

**Method of assessment**  
(type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

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Language of assessment: German and/or English

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### 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

V (4) + R (2)

### Method of assessment

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Language of assessment: German and/or English

### Allocation of places

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**Intended learning outcomes**

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**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 is creditable for bonus)

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Language of assessment: German and/or English

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**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 special 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 is creditable for bonus)

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**Allocation of places**

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**Additional information**

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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 is creditable for bonus)

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### Allocation of places

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### Additional information

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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 is creditable for bonus)

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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
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Selected Topics in Solid State Physics | 11-CSF6-152-m01

Module coordinator  | Module offered by
chairperson of examination committee | Faculty of Physics and Astronomy

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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 is creditable for 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).

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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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**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 is creditable for bonus)

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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
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Selected Topics in Theoretical Physics | 11-CSTh6-152-m01

Module coordinator | Module offered by
chairperson of examination committee | Faculty of Physics and Astronomy

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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 is creditable for bonus)
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Language of assessment: German and/or English

Allocation of places
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Additional information
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**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 is creditable for bonus)

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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)

--
Module title: Current Topics in Experimental Physics
Abbreviation: 11-BXE6-152-m01

Module coordinator: chairperson of examination committee
Module offered by: Faculty of Physics and Astronomy

ECTS: 6
Method of grading: Only after succ. compl. of module(s)

Duration: 1 semester
Module level: undergraduate
Other prerequisites: 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:
V (3) + R (1)

Method of assessment:
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Language of assessment: German and/or English

Allocation of places:
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Additional information:
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**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**

V (4) + R (2)

**Method of assessment**

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Language of assessment: German and/or English

**Allocation of places**

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**Additional information**

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### 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 is creditable for bonus)

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Language of assessment: German and/or English

### Allocation of places

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### Additional information

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**Module coordinator**

chairperson of examination committee  

**Module offered by**

Faculty of Physics and Astronomy

**ECTS**  
6  

**Method of grading**  
numerical grade

**Only after succ. compl. of module(s)**  
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**Duration**  
1 semester

**Module level**  
undergraduate

**Other prerequisites**  
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**

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Language of assessment: German and/or English

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**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 is creditable for bonus)

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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

Selected Topics in Astrophysics

Abbreviation

11-CSA6-152-m01

Module coordinator

Chairperson of examination committee

Module offered by

Faculty of Physics and Astronomy

ECTS

Method of grading

Only after succ. compl. of module(s)

6

numeral grade

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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 is creditable for bonus)

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Language of assessment: German and/or English

Allocation of places

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**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 is creditable for bonus)

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Language of assessment: German and/or English

**Allocation of places**

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**Module coordinator**
chairperson of examination committee

**Module offered by**
Faculty of Physics and Astronomy

**ECTS** | **Method of grading** | **Only after succ. compl. of module(s)**
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6      | numerical grade       --

**Duration** | **Module level** | **Other prerequisites**
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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)
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Language of assessment: German and/or English

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**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)

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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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Summer Term 2022
(o ECTS credits)
Module title: Current Topics in Experimental Physics

Abbreviation: 11-BXE5-152-m01

Module coordinator: chairperson of examination committee

Module offered by: Faculty of Physics and Astronomy

ECTS: 5

Method of grading: numerical grade

Duration: 1 semester

Module level: undergraduate

Other prerequisites: 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:
V (2) + R (2)

Method of assessment:
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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<td>Current Topics in Experimental Physics</td>
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**Module coordinator**

chairperson of examination committee

**Module offered by**

Faculty of Physics and Astronomy

**ECTS**

- **Method of grading**
  - Only after succ. compl. of module(s)

- **Duration**
  - 1 semester

- **Module level**
  - undergraduate

- **Other prerequisites**
  - 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 is creditable for bonus)**
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**Allocation of places**

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**Additional information**

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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 is creditable for bonus)

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Language of assessment: German and/or English

**Allocation of places**

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### 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 is creditable for bonus)

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Language of assessment: German and/or English

### Allocation of places

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### Additional information

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**Module coordinator**  
chairperson of examination committee

**Module offered by**  
Faculty of Physics and Astronomy

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**Contents**

Current topics of Theoretical Physics. Accredited academic achievements, e.g. in case of change of university or study abroad.

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**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 is creditable for bonus)

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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: Current Topics in Theoretical Physics
Abbreviation: 11-BXT8-152-m01

Module coordinator: chairperson of examination committee
Module offered by: Faculty of Physics and Astronomy

ECTS: 8
Method of grading: numerical grade
Only after succ. compl. of module(s)

Duration: 1 semester
Module level: undergraduate
Other prerequisites: 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:
V (4) + R (2)

Method of assessment:
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Language of assessment: German and/or English

Allocation of places:
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Additional information:
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**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 is creditable for bonus)

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Language of assessment: German and/or English

**Allocation of places**

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**Additional information**

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**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 is creditable for 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).

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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

**Selected Topics in Particle Physics**

### Abbreviation

11-CST6-152-m01

### Module coordinator

Chairperson of examination committee

### Module offered by

Faculty of Physics and Astronomy

### ECTS

6

### Method of grading

Numerical grade

### Only after succ. compl. of module(s)

- 

### Duration

1 semester

### Module level

Undergraduate

### Other prerequisites

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 is creditable for 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).

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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
**Selected Topics in Theoretical Physics**

## Abbreviation
11-CSTh6-152-m01

## Module coordinator
Chairperson of examination committee

## Module offered by
Faculty of Physics and Astronomy

## ECTS
6

## Method of grading
Numerical grade

## Only after succ. compl. of module(s)
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## Duration
1 semester

## Module level
Undergraduate

## Other prerequisites
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 is creditable for 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).

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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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Winter Term 2022
(o ECTS credits)
Module title: Current Topics in Experimental Physics  
Abbreviation: 11-BXE5-152-m01

Module coordinator: chairperson of examination committee

Module offered by: Faculty of Physics and Astronomy

ECTS: 5

Method of grading: numerical grade

Duration: 1 semester

Module level: undergraduate

Other prerequisites: 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:
V (2) + R (2)

Method of assessment:
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).

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Language of assessment: German and/or English

Allocation of places:
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### Duration
- 1 semester

### Module level
- undergraduate

### 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
- **V (3) + R (1)**

### Method of assessment
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- Language of assessment: German and/or English

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Current topics of Experimental Physics. Accredited academic achievements, e.g. in case of change of university or study abroad.

### Intended learning outcomes

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### 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 is creditable for bonus)

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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)
Module title | Abbreviation
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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 is creditable for bonus)
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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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<th>Module title</th>
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<tbody>
<tr>
<td>Current Topics in Theoretical Physics</td>
<td>11-BXT6-152-m01</td>
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**Module coordinator**

chairperson of examination committee

**Module offered by**

Faculty of Physics and Astronomy

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</table>

**Duration**

1 semester

**Module level**

undergraduate

**Other prerequisites**

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 is creditable for bonus)

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Language of assessment: German and/or English

**Allocation of places**

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**Module coordinator**

chairperson of examination committee

**Module offered by**

Faculty of Physics and Astronomy

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**Duration**

1 semester

**Module level**

undergraduate

**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 is creditable for bonus)

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Language of assessment: German and/or English

**Allocation of places**

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**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 is creditable for bonus)

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Language of assessment: German and/or English

**Allocation of places**

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### 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 is creditable for bonus)

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Language of assessment: German and/or English

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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 is creditable for bonus)

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Language of assessment: German and/or English

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**Module coordinator**
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**Module offered by**
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**Duration**
1 semester

**Module level**
undergraduate

**Other prerequisites**
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)

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