## Module title

**Laboratory Course Physics for Students of other Disciplines**

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### Abbreviation

11-PFNF-152-m01

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### Module coordinator

Managing Director of the Institute of Applied Physics

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### Module offered by

Faculty of Physics and Astronomy

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### ECTS

3

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### (not) successfully completed

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### Duration

1 semester

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### Module level

undergraduate

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### Other prerequisites

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### Contents

Simple experiments in the fields of mechanics, vibration theory, thermodynamics, optics, X-rays, nuclear magnetic resonance, Atomic and Nuclear Physics, imaging methods.

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### Intended learning outcomes

The students have detected and understood physical contexts on the basis of the implementation of own experiments. They have a basic understanding of physical phenomena and know the basic ideas and ways of functioning of different measuring and imaging methods as well as their applications, especially in the field of Biomedicine.

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### Courses (type, number of weekly contact hours, language — if other than German)

P (4)

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

a) practical assignment with oral test (approx. 15 minutes, during experiments) and b) written examination (90 minutes).

Each experiment comprises preparation, performance and evaluation. Test as well as performance of experiments can each be repeated once.

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### Allocation of places

Only as part of pool of general transferable skills (ASQ): 10 places (lottery)

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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 appears in

- Bachelor' degree (1 major) Biochemistry (2013)
- Bachelor' degree (1 major) Biology (2011)
- Bachelor' degree (1 major) Biology (2013)
- Bachelor' degree (1 major) Chemistry (2010)
- Bachelor' degree (1 major) Chemistry (2009)
- Bachelor' degree (1 major) Geography (2010)
- Bachelor' degree (1 major) Computer Science (2014)
- Bachelor' degree (1 major) Computer Science (2010)
- Bachelor' degree (1 major) Food Chemistry (2009)
- Bachelor' degree (1 major) Mathematics (2014)
- Bachelor' degree (1 major) Mathematics (2012)
- Bachelor' degree (1 major) Mathematics (2013)
- Bachelor' degree (1 major) Musicology (2011)
- Bachelor' degree (1 major) Physics (2012)
- Bachelor' degree (1 major) Psychology (2010)
- Bachelor' degree (1 major) Business Management and Economics (2013)
Bachelor's degree (2 majors) Pedagogy (2013)
Bachelor's degree (2 majors) Protestant Theology (2009)
Bachelor's degree (2 majors) History of Medieval and Modern Art (2013)
Bachelor's degree (2 majors) Musicology (2011)
Bachelor's degree (2 majors) Philosophy (2010)
Bachelor's degree (2 majors) Philosophy (2013)
Bachelor's degree (2 majors) Comparative Indo-European Linguistics (2012)
Bachelor's degree (2 majors) Special Education (2009)
Bachelor's degree (2 majors) Pre- and Protohistoric Archaeology (2012)
Bachelor's degree (2 majors) Latin Philology (2009)
Bachelor's degree (2 majors) Science of Music Education (2011)
Bachelor's degree (2 majors) Philosophy and Religion (2013)
Bachelor's degree (2 majors) Philosophy and Religion (2014)
Bachelor's degree (2 majors) Philosophy and Religion (2010)
Bachelor's degree (2 majors) Digital Humanities (2012)
Bachelor's degree (2 majors) Digital Humanities (2009)
Bachelor's degree (2 majors) Political and Social Studies (2011)
Bachelor's degree (2 majors) Russian Language and Culture (2012)
Bachelor's degree (2 majors) Greek Philology (2009)
Bachelor's degree (2 majors) European Ethnology (2013)
Magister Theologiae Catholic Theology (2009)
Magister Theologiae Catholic Theology (2013)
First state examination for the teaching degree Gymnasium English (2009)
First state examination for the teaching degree Gymnasium Biology (2009)
First state examination for the teaching degree Gymnasium Chemistry (2009)
First state examination for the teaching degree Gymnasium Geography (2009)
First state examination for the teaching degree Gymnasium French Studies (2009)
First state examination for the teaching degree Gymnasium German (2009)
First state examination for the teaching degree Gymnasium History (2009)
First state examination for the teaching degree Gymnasium Greek Philology (2009)
First state examination for the teaching degree Gymnasium Computer Science (2009)
First state examination for the teaching degree Gymnasium Italian Studies (2009)
First state examination for the teaching degree Gymnasium Catholic Theology (2009)
First state examination for the teaching degree Gymnasium Latin Philology (2009)
First state examination for the teaching degree Gymnasium Mathematics (2012)
First state examination for the teaching degree Gymnasium Music (2009)
First state examination for the teaching degree Gymnasium Physics (2009)
First state examination for the teaching degree Gymnasium Russian (2009)
First state examination for the teaching degree Gymnasium Social Science (2009)
First state examination for the teaching degree Gymnasium Spanish Studies (2009)
First state examination for the teaching degree Gymnasium Science of Sport (2009)
First state examination for the teaching degree Gymnasium Music Education, Advanced Studies (2009)
Bachelor's degree (2 majors) Geography (2010)
Bachelor's degree (2 majors) French Studies (2013)
Bachelor's degree (2 majors) History (2009)
Bachelor's degree (2 majors) Italian Studies (2013)
Bachelor's degree (2 majors) Spanish Studies (2013)
Bachelor's degree (2 majors) Spanish Studies (2009)
Bachelor's degree (2 majors) Sport Science (Focus on health and Pedagogics in Movement) (2013)
Bachelor's degree (2 majors) English and American Studies (2009)
Bachelor's degree (2 majors) Gallo-Roman philology (2009)
Bachelor's degree (2 majors) German Language and Literature (2013)
| Bachelor's degree (2 majors) German Language and Literature (2009) |
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| Bachelor's degree (2 majors) Italian Studies (2009) |
| Bachelor's degree (1 major) Biochemistry (2015) |
| Bachelor's degree (1 major) Biology (2015) |
| Bachelor's degree (1 major) Chemistry (2015) |
| Bachelor's degree (1 major) Geography (2015) |
| Bachelor's degree (1 major) Computer Science (2015) |
| Bachelor's degree (1 major) Food Chemistry (2015) |
| Bachelor's degree (1 major) Mathematics (2015) |
| Bachelor's degree (1 major) Musicology (2015) |
| Bachelor's degree (1 major) Physics (2015) |
| Bachelor's degree (1 major) Psychology (2015) |
| Bachelor's degree (1 major) Business Management and Economics (2015) |
| Bachelor's degree (1 major) Nanostructure Technology (2015) |
| Bachelor's degree (1 major) Economathematics (2015) |
| Bachelor's degree (1 major) Business Information Systems (2015) |
| Bachelor's degree (1 major) Biomedicine (2015) |
| Bachelor's degree (1 major) Mathematical Physics (2015) |
| Bachelor's degree (1 major) Human-Computer Systems (2015) |
| Bachelor's degree (1 major) Modern China (2015) |
| Bachelor's degree (1 major) Science of Music Education (2015) |
| Bachelor's degree (1 major) Computational Mathematics (2015) |
| Bachelor's degree (1 major) Aerospace Computer Science (2015) |
| Bachelor's degree (1 major) Media Communication (2015) |
| Bachelor's degree (1 major) Political and Social Studies (2015) |
| Bachelor's degree (1 major) Romanic Languages (French/Italian) (2015) |
| Bachelor's degree (1 major) Romanic Languages (French/Spanish) (2015) |
| Bachelor's degree (1 major) Romanic Languages (Spanish/Italian) (2015) |
| Bachelor's degree (1 major) Functional Materials (2015) |
| Bachelor's degree (1 major) Academic Speech Therapy (2015) |
| Bachelor's degree (1 major) Indology/South Asian Studies (2015) |
| Bachelor's degree (1 major, 1 minor) Egyptology (2015) |
| Bachelor's degree (1 major, 1 minor) Classical Archaeology (2015) |
| Bachelor's degree (1 major, 1 minor) Pedagogy (2015) |
| Bachelor's degree (1 major, 1 minor) French Studies (2015) |
| Bachelor's degree (1 major, 1 minor) History (2015) |
| Bachelor's degree (1 major, 1 minor) Italian Studies (2015) |
| Bachelor's degree (1 major, 1 minor) History of Medieval and Modern Art (2015) |
| Bachelor's degree (1 major, 1 minor) Musicology (2015) |
| Bachelor's degree (1 major, 1 minor) Philosophy (2015) |
| Bachelor's degree (1 major, 1 minor) Spanish Studies (2015) |
| Bachelor's degree (1 major, 1 minor) Pre- and Protohistoric Archaeology (2015) |
| Bachelor's degree (1 major, 1 minor) Ancient World (2015) |
| Bachelor's degree (1 major, 1 minor) Science of Music Education (2015) |
| Bachelor's degree (1 major, 1 minor) Philosophy and Religion (2015) |
| Bachelor's degree (1 major, 1 minor) Geography (Focus Physical Geography) (2015) |
| Bachelor's degree (1 major, 1 minor) Theological Studies (2015) |
| Bachelor's degree (1 major, 1 minor) Geography (Focus Human Geography) (2015) |
| Bachelor's degree (1 major, 1 minor) Political and Social Studies (2015) |
| Bachelor's degree (1 major, 1 minor) Museology and material culture (2015) |
| Bachelor's degree (1 major, 1 minor) English and American Studies (2015) |
| Bachelor's degree (1 major, 1 minor) Russian Language and Culture (2015) |
| Bachelor's degree (1 major, 1 minor) German Language and Literature (2015) |
Bachelor's degree (1 major, 1 minor) Indology/South Asian Studies (2015)
Bachelor's degree (2 majors) Egyptology (2015)
Bachelor's degree (2 majors) Classical Archaeology (2015)
Bachelor's degree (2 majors) Pedagogy (2015)
Bachelor's degree (2 majors) Protestant Theology (2015)
Bachelor's degree (2 majors) History of Medieval and Modern Art (2015)
Bachelor's degree (2 majors) Musicology (2015)
Bachelor's degree (2 majors) Philosophy (2015)
Bachelor's degree (2 majors) Comparative Indo-European Linguistics (2015)
Bachelor's degree (2 majors) Special Education (2015)
Bachelor's degree (2 majors) Pre- and Protohistoric Archaeology (2015)
Bachelor's degree (2 majors) Latin Philology (2015)
Bachelor's degree (2 majors) Science of Music Education (2015)
Bachelor's degree (2 majors) Philosophy and Religion (2015)
Bachelor's degree (2 majors) Theological Studies (2015)
Bachelor's degree (2 majors) Digital Humanities (2015)
Bachelor's degree (2 majors) Political and Social Studies (2015)
Bachelor's degree (2 majors) Russian Language and Culture (2015)
Bachelor's degree (2 majors) Greek Philology (2015)
Bachelor's degree (2 majors) European Ethnology (2015)
Bachelor's degree (2 majors) Indology/South Asian Studies (2015)
Bachelor's degree (2 majors) Ancient Near Eastern Studies (2015)
First state examination for the teaching degree Gymnasium English (2015)
First state examination for the teaching degree Gymnasium Biology (2015)
First state examination for the teaching degree Gymnasium Chemistry (2015)
First state examination for the teaching degree Gymnasium Geography (2015)
First state examination for the teaching degree Gymnasium French Studies (2015)
First state examination for the teaching degree Gymnasium German (2015)
First state examination for the teaching degree Gymnasium History (2015)
First state examination for the teaching degree Gymnasium Greek Philology (2015)
First state examination for the teaching degree Gymnasium Computer Science (2015)
First state examination for the teaching degree Gymnasium Italian Studies (2015)
First state examination for the teaching degree Gymnasium Catholic Theology (2015)
First state examination for the teaching degree Gymnasium Latin Philology (2015)
First state examination for the teaching degree Gymnasium Mathematics (2015)
First state examination for the teaching degree Gymnasium Physics (2015)
First state examination for the teaching degree Gymnasium Russian (2015)
First state examination for the teaching degree Gymnasium Social Science (2015)
First state examination for the teaching degree Gymnasium Spanish Studies (2015)
First state examination for the teaching degree Gymnasium Educational Science (2015)
Bachelor's degree (2 majors) Geography (2015)
Bachelor's degree (2 majors) History (2015)
Bachelor's degree (2 majors) Italian Studies (2015)
Bachelor's degree (2 majors) Spanish Studies (2015)
Bachelor's degree (2 majors) Sport Science (Focus on health and Pedagogics in Movement) (2015)
Bachelor's degree (2 majors) English and American Studies (2015)
Bachelor's degree (2 majors) German Language and Literature (2015)
Bachelor's degree (1 major) Mathematical Physics (2016)
Bachelor's degree (1 major) Human-Computer Systems (2016)
Bachelor's degree (1 major, 1 minor) Theological Studies (2011)
Bachelor's degree (2 majors) Theological Studies (2011)
First state examination for the teaching degree Gymnasium Music (2015)
Bachelor's degree (1 major, 1 minor) French Studies (2016)
Bachelor's degree (2 majors) French Studies (2016)
Bachelor's degree (1 major, 1 minor) Italian Studies (2016)
Bachelor's degree (2 majors) Italian Studies (2016)
Bachelor's degree (1 major, 1 minor) Spanish Studies (2016)
Bachelor's degree (2 majors) Spanish Studies (2016)
Bachelor' degree (1 major) Romanic Languages (French/Italian) (2016)
Bachelor' degree (1 major) Romanic Languages (French/Spanish) (2016)
Bachelor' degree (1 major) Romanic Languages (Spanish/Italian) (2016)
Bachelor' degree (1 major) Business Information Systems (2016)
First state examination for the teaching degree Gymnasium French Studies (2016)
First state examination for the teaching degree Gymnasium Italian Studies (2016)
First state examination for the teaching degree Gymnasium Spanish Studies (2016)
Bachelor' degree (1 major) Games Engineering (2016)
Bachelor's degree (1 major, 1 minor) English and American Studies (2016)
Bachelor's degree (2 majors) English and American Studies (2016)
First state examination for the teaching degree Gymnasium English (2016)
Bachelor' degree (1 major) Media Communication (2016)
Bachelor' degree (1 major) Food Chemistry (2016)
Bachelor's degree (1 major, 1 minor) Digital Humanities (2016)
Bachelor' degree (1 major) Biology (2017)
Bachelor's degree (1 major, 1 minor) Geography (2017)
Bachelor's degree (1 major, 1 minor) History of Medieval and Modern Art (2017)
Bachelor's degree (2 majors) History of Medieval and Modern Art (2017)
Bachelor's degree (2 majors) Comparative Indo-European Linguistics (2017)
Bachelor' degree (1 major) Aerospace Computer Science (2017)
Bachelor' degree (1 major) Modern China (2017)
Bachelor' degree (1 major) Biochemistry (2017)
Bachelor' degree (1 major) Chemistry (2017)
Bachelor's degree (1 major, 1 minor) Museology and material culture (2017)
Bachelor' degree (1 major) Economathematics (2017)
Bachelor' degree (1 major) Games Engineering (2017)
Bachelor' degree (1 major) Computer Science (2017)
First state examination for the teaching degree Gymnasium Greek Philology (2018)
Bachelor' degree (1 major) Media Communication (2018)
Bachelor' degree (1 major) Biomedicine (2018)
Bachelor' degree (1 major) Human-Computer Systems (2018)
Bachelor's degree (2 majors) Classical Archaeology (2018)
Bachelor's degree (1 major, 1 minor) Classical Archaeology (2018)
Bachelor's degree (1 major, 1 minor) Digital Humanities (2018)
Bachelor's degree (2 majors) Digital Humanities (2018)
First state examination for the teaching degree Gymnasium Physics (2018)
Bachelor' degree (1 major) Computer Science (2019)
First state examination for the teaching degree Gymnasium Mathematics (2019)
Bachelor's degree (1 major, 1 minor) English and American Studies (2019)
Bachelor's degree (1 major, 1 minor) Indology/South Asian Studies (2019)
Bachelor' degree (1 major) Indology/South Asian Studies (2019)
Bachelor' degree (1 major) Business Information Systems (2019)
Bachelor's degree (2 majors) Indology/South Asian Studies (2019)
Bachelor' degree (1 major) Business Management and Economics (2019)
Bachelor' degree (1 major) Modern China (2019)
Bachelor' degree (1 major) Food Chemistry (2019)