

Module title		Abbreviation
Physical Phenomena		11-PPH-201-m01
Module coordinator		Module offered by
Managing Director of the Institute of Applied Physics and Managing Director of the Institute of Theoretical Physics and Astrophysics		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	--
Contents		
Physical Phenomena and effects, especially in atomic and molecular physics, electrics and electromagnetism, semiconductor physics, mechanics, optics, photography, physiology and thermodynamics.		
Intended learning outcomes		
The students have knowledge of the most important phenomena and effects of physics.		
Courses (type, number of weekly contact hours, language — if other than German)		
V (3) + R (1) Module taught in: German and/or English		
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) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) 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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Workload		
180 h		
Teaching cycle		
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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) Biology (2011) Bachelor' degree (1 major) Chemistry (2010) Bachelor' degree (1 major) Physics (2012) Bachelor' degree (1 major) Psychology (2010) Bachelor' degree (1 major) Economathematics (2012) Bachelor' degree (1 major) Romanic Languages (French/Spanish) (2013) Bachelor's degree (1 major, 1 minor) Pedagogy (2011) Bachelor's degree (1 major, 1 minor) Pedagogy (2013)		

Bachelor's degree (1 major, 1 minor) French Studies (2013)
 Bachelor's degree (1 major, 1 minor) History (2010)
 Bachelor's degree (1 major, 1 minor) Pre- and Protohistoric Archaeology (2012)
 Bachelor's degree (1 major, 1 minor) Spanish Studies (2010)
 Bachelor's degree (1 major, 1 minor) Political and Social Studies (2013)
 Bachelor's degree (1 major, 1 minor) English and American Studies (2010)
 Bachelor's degree (1 major, 1 minor) Russian Language and Culture (2008)
 Bachelor's degree (1 major, 1 minor) Gallo-Roman philology (2010)
 Bachelor's degree (1 major, 1 minor) German Language and Literature (2013)
 Bachelor's degree (1 major, 1 minor) German Language and Literature (2010)
 Bachelor's degree (1 major, 1 minor) Italian Studies (2010)
 Bachelor's degree (2 majors) Classical Archaeology (2013)
 Bachelor's degree (2 majors) Pedagogy (2013)
 Bachelor's degree (2 majors) Philosophy (2013)
 Bachelor's degree (2 majors) Special Education (2009)
 Bachelor's degree (2 majors) Digital Humanities (2012)
 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) European Ethnology (2013)
 Magister Theologiae Catholic Theology (2013)
 Bachelor's degree (2 majors) English and American Studies (2009)
 Bachelor's degree (2 majors) German Language and Literature (2013)
 Bachelor' degree (1 major) Chemistry (2015)
 Bachelor' degree (1 major) Geography (2015)
 Bachelor' degree (1 major) Mathematics (2015)
 Bachelor' degree (1 major) Musicology (2015)
 Bachelor' degree (1 major) Physics (2015)
 Bachelor' degree (1 major) Psychology (2015)
 Bachelor' degree (1 major) Business Management and Economics (2015)
 Bachelor' degree (1 major) Nanostructure Technology (2015)
 Bachelor' degree (1 major) Biomedicine (2015)
 Bachelor' degree (1 major) Music Education (2015)
 Bachelor' degree (1 major) Computational Mathematics (2015)
 Bachelor' degree (1 major) Political and Social Studies (2015)
 Bachelor' degree (1 major) Functional Materials (2015)
 Bachelor' degree (1 major) Academic Speech Therapy (2015)
 Bachelor' degree (1 major) Indology/South Asian Studies (2015)
 Bachelor's degree (1 major, 1 minor) Egyptology (2015)
 Bachelor's degree (1 major, 1 minor) Pedagogy (2015)
 Bachelor's degree (1 major, 1 minor) History (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) Pre- and Protohistoric Archaeology (2015)
 Bachelor's degree (1 major, 1 minor) Ancient World (2015)
 Bachelor's degree (1 major, 1 minor) Music Education (2015)
 Bachelor's degree (1 major, 1 minor) Philosophy and Religion (2015)
 Bachelor's degree (1 major, 1 minor) Theological Studies (2015)
 Bachelor's degree (1 major, 1 minor) Political and Social 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 (2 majors) Egyptology (2015)
 Bachelor's degree (2 majors) Pedagogy (2015)
 Bachelor's degree (2 majors) Protestant Theology (2015)

Bachelor's degree (2 majors) Musicology (2015)
 Bachelor's degree (2 majors) Philosophy (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) 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)
 Bachelor's degree (2 majors) Geography (2015)
 Bachelor's degree (2 majors) French Studies (2015)
 Bachelor's degree (2 majors) History (2015)
 Bachelor's degree (2 majors) Sport Science (Focus on health and Pedagogics in Movement) (2015)
 Bachelor's degree (2 majors) German Language and Literature (2015)
 Bachelor' degree (1 major) Mathematical Physics (2016)
 Bachelor's degree (2 majors) Theological Studies (2011)
 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 (Italian/Spanish) (2016)
 Bachelor' degree (1 major) Business Information Systems (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)
 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)
 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)
 Bachelor' degree (1 major) Computer Science (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)
 Module studies (Bachelor) Orientierungsstudien (2020)
 Bachelor' degree (1 major) Biomedicine (2020)
 Bachelor' degree (1 major) Pedagogy (2020)
 Bachelor' degree (1 major) Political and Social Studies (2020)
 Bachelor' degree (1 major) Business Information Systems (2020)
 Bachelor's degree (1 major, 1 minor) Political and Social Studies (2020)
 Bachelor's degree (2 majors) European Ethnology (2020)
 Bachelor's degree (2 majors) Political and Social Studies (2020)
 Bachelor's degree (2 majors) Special Education (2020)
 Bachelor' degree (1 major) Physics (2020)
 Bachelor' degree (1 major) Nanostructure Technology (2020)
 Bachelor' degree (1 major) Mathematical Physics (2020)
 Bachelor' degree (1 major) Aerospace Computer Science (2020)
 Bachelor's degree (1 major, 1 minor) Museology and material culture (2020)
 Bachelor's degree (1 major, 1 minor) Pedagogy (2020)
 Bachelor's degree (2 majors) Pedagogy (2020)
 Bachelor' degree (1 major) Psychology (2020)
 Bachelor' degree (1 major) Biology (2021)
 Magister Theologiae Catholic Theology (2021)
 Bachelor's degree (2 majors) History (2021)
 Bachelor's degree (1 major, 1 minor) History (2021)
 Bachelor' degree (1 major) Media Communication (2021)
 Bachelor's degree (2 majors) Theological Studies (2021)
 Bachelor's degree (1 major, 1 minor) Theological Studies (2021)
 Bachelor's degree (1 major, 1 minor) English and American Studies (2021)
 Bachelor's degree (2 majors) English and American Studies (2021)
 Bachelor' degree (1 major) Functional Materials (2021)
 Bachelor' degree (1 major) Computer Science und Sustainability (2021)
 Bachelor's degree (2 majors) Comparative Indo-European Linguistics (2021)
 Bachelor' degree (1 major) Food Chemistry (2021)
 Bachelor' degree (1 major) Quantum Technology (2021)
 Bachelor's degree (2 majors) Special Education (2021)
 Bachelor' degree (1 major) Business Information Systems (2021)
 Bachelor' degree (1 major) Econometrics (2021)
 Bachelor' degree (1 major) Business Management and Economics (2021)
 Bachelor' degree (1 major) Human-Computer Systems (2022)
 Bachelor's degree (1 major, 1 minor) Museology and material culture (2022)
 Bachelor' degree (1 major) Biochemistry (2022)
 Bachelor' degree (1 major) Biology (2022)

Bachelor' degree (1 major) Economathematics (2022)
 Bachelor' degree (1 major) Mathematical Data Science (2022)
 Bachelor' degree (1 major) Artificial Intelligence and Data Science (2022)
 Bachelor's degree (2 majors) Ancient Near Eastern Archaeology (2022)
 Bachelor's degree (1 major, 1 minor) Ancient World (2022)
 Bachelor's degree (2 majors) Ancient Near Eastern Studies (2022)
 Bachelor' degree (1 major) Franco-German studies: language, culture, digital competence (2022)
 Bachelor' degree (1 major) Midwifery (2022)
 Bachelor' degree (1 major) European Law (2023)
 Bachelor's degree (1 major, 1 minor) English and American Studies (2023)
 Bachelor's degree (2 majors) English and American Studies (2023)
 Bachelor' degree (1 major) Artificial Intelligence and Data Science (2023)
 Bachelor' degree (1 major) Mathematics (2023)
 Bachelor' degree (1 major) Business Information Systems (2023)
 Bachelor' degree (1 major) Economathematics (2023)
 Bachelor's degree (1 major, 1 minor) History of Medieval and Modern Art (2023)
 Bachelor's degree (2 majors) History of Medieval and Modern Art (2023)
 Bachelor's degree (2 majors) Special Education (2023)
 Bachelor' degree (1 major) Business Management and Economics (2023)
 Bachelor' degree (1 major) Geography (2023)
 Bachelor's degree (2 majors) Geography (2023)
 Bachelor's degree (1 major, 1 minor) Geography (2023)
 Bachelor's degree (2 majors) European Ethnology/Empiric Cultural Studies (2023)
 exchange program Physics (2023)
 Bachelor' degree (1 major) Mathematical Physics (2024)
 Bachelor's degree (2 majors) German Language and Literature (2024)
 Bachelor's degree (1 major, 1 minor) German Language and Literature (2024)
 Bachelor' degree (1 major) Music Education (2024)
 Bachelor's degree (2 majors) Music Education (2024)
 Bachelor's degree (1 major, 1 minor) Music Education (2024)
 Bachelor' degree (1 major) Indology/South Asian Studies (2024)
 Bachelor's degree (2 majors) Indology/South Asian Studies (2024)
 Bachelor's degree (1 major, 1 minor) Indology/South Asian Studies (2024)
 Bachelor's degree (1 major, 1 minor) Ancient World (2024)
 Bachelor's degree (2 majors) Digital Humanities (2024)
 Bachelor's degree (1 major, 1 minor) Digital Humanities (2024)
 Bachelor' degree (1 major) Midwifery (2024)
 Bachelor's degree (2 majors) Greek Philology (2024)
 Bachelor's degree (2 majors) Latin Philology (2024)
 Bachelor' degree (1 major) Business Information Systems (2024)
 Bachelor' degree (1 major) Economathematics (2024)
 Bachelor' degree (1 major) Business Management and Economics (2024)
 Bachelor' degree (1 major) Artificial Intelligence and Data Science (2024)
 Bachelor' degree (1 major) Human-Computer-Interaction (2024)