

Module description

Module title Physics (Standard Model) Module coordinator Managing Directors of the Institute of Applied Physics and Astronomy the Institute of Theoretical Physics and Astrophysics ECTS Method of grading Only after succ. compt. of module(s) 8			186,11		33 <i>9.</i> ~ 19		
Module coordinator Managing Directors of the Institute of Applied Physics and the Institute of Theoretical Physics and Astrophysics ECTS Method of grading Only after succ. compl. of module(s) I numerical grade	Module	e title	,		Abbreviation		
Faculty of Physics and Astronomy the Institute of Theoretical Physics and Astrophysics Faculty of Physics and Astronomy	Particle Physics (Standard Model) 11-TPS-152-mo1						
the Institute of Theoretical Physics and Astrophysics ECTS Method of grading Only after succ. compt. of module(s) 8	Module coordinator				Module offered by		
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Numerical grade			· · · · · · · · · · · · · · · · · · ·				
Duration Module level Other prerequisites 1 semester undergraduate Contents Theoretical description of the Standard Model Electroweak symmetry breaking through the Higgs mechanism parity Violation Bhabha scattering 2-Line Shape and forward / reverse asymmetry Higgs production and decay Experimental setup and results of key experiments to test the Standard Model and for determining its parameters Search for the Higgs boson Intended learning outcomes The students know the theoretical fundamental laws of the standard model of Particle Physics and the key experiments that have established and confirmed the standard model. They are able to interpret experimental or theoretical results in the framework of the standard model and know its validity and limits. Courses (type, number of weekly contact hours, language — if other than German) V (4) + R (2) Module taught in: German 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) 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 metho of assessment is changed, the lecturer must inform students about this by four weeks prior to the original exam nation date at the latest. Language of assessment: German and/or English Allocation of places Workload	8						
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Teaching cycle	240 h						
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 $\textbf{Referred to in LPO I} \ \ (\text{examination regulations for teaching-degree programmes})$

Module appears in



Module description

Bachelor' degree (1 major) Physics (2015)

Bachelor' degree (1 major) Mathematical Physics (2015)

Bachelor' degree (1 major) Mathematical Physics (2016)

Bachelor' degree (1 major) Physics (2020)

Bachelor' degree (1 major) Mathematical Physics (2020)

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

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