

Physics MSc - Modules Overview - FSPO 2019

Module#	Exam #	Module Name	Language	Cycle	CP
Compulsory Modules - Section A					
71053	11492	Advanced Physics Lab	en/ge	ws/ss	8
71054		Advanced Physics Seminar (M. Sc.)	en/ge	ws/ss	4
Specialisation Modules - Section B					
Biophysics and Soft Matter Physics					
71654		Biophysics: Fundamentals	en	ws	6
71502	12102, 12112 (V)	Biophotonics	en	ss	6
72233		Biophysics: Gene Expression	en	ss	6
72234		Biophysics: Molecular Motors	en	ss	6
73809		Biophysics: Cellular Biophysics	en	ss	6
74004	14004	Gene Expression	en	ss	3
74003	14003	Molecular Motors	en	ss	3
74005	14005	Cellular Biophysics	en	ss	3
75022	15022	Seminar How Physics brings Light into Biology	en	ws	3
75020	15020	Seminar Hearing and Seeing	en	irr	3
Condensed Matter Physics and Nanosciences					
71659	12369, 12370 (V)	Theory of Condensed Matter	en	ws/ss	6
72502	13685, 13686 (V)	Structure Physics	en	ss	6
70437	10222, 10223 (V)	Magnetism	en	ws	6
72557	13831, 13832 (V)	NMR Spectroscopy and Imaging Methods	en	ws	6
70461	10944	Compound Semiconductors	en	ss	6
72189	13077	Crystal Defects: Physical Effects and Mechanics (block course)	en	ws	3
75021	15021	Seminar Fourier Optics	en	ws	3
75019	15019	Seminar Physical Properties of Materials	en	ws	3
74609	14609	Wave and Particle Optics	en	irr	3
74269	14269	Wave and Particle Optics (Selected Topics in)	en	irr	2
Econophysics					
71447	11990, 11991 (V)	Econophysics: Fundamentals	en/ge	ws/irr	6
71778	12074, 12075 (V)	Econophysics: Non-Equilibrium Statistics	en/ge	ss/irr	6
71657	12365, 12366 (V)	Econophysics: Numerical Simulation Methods	en/ge	irr	6
73847	12481	Physics of Complex Systems	en/ge	ss/irr	3
Plasma Physics					
71063		Plasma Physics I: Fundamentals	en	ws	6
71064		Plasma Physics II: Applications	en	ss	6
74340		Future Energy Supply and Nuclear Fusion Research	en	ws/irr	3
74086		Plasma Physics Laboratory	en	ss	2
Quantum Information and Technologies					
72190	13078, 13079 (V)	Experimental Quantum Optics	en	ws	6
71766	12580, 12581 (V)	Open Quantum Systems (Coherence and Decoherence of..)	en	ws	6
71504	12104, 12114 (V)	Ultracold Quantum Gases	en	ss	6
71420	11959, 11975 (V)	Theoretical Quantum Optics	en	ss	6
71500	11665, 12118 (V)	Theory of Quantum Information	en	ws	6
75024	15024	Seminar Ultracold Quantum Gases	en	ws	3

Physics Electives Modules - Section C

72889	13898, 13899 (V)	Advanced Quantum Mechanics	en	ss/irr	6
73960	13824, 13825 (V)	Asymptotic Methods	en	ss/irr	6
76004	16004, 16504 (V)	Scattering Theory	en	irr	6
71164	12187, 12277 (V)	Physics of Soft Matter and Biophysics	en	ss	6
71767	12582, 12583 (V)	Theory of Condensed Matter - B	en	ws/ss	6
new		Relativistic Quantum Electrodynamics	en	ss/irr	6
74198	14198 (Introduction to..)	Quantum Electronics	en	ss	3
71422	11981	Near-Field Optics and Plasmonics	en	ws/irr	3
71419	11958	Strahlenmesstechnik (Radiation Metrology)	ge	ws	4
71588	12286	Kerntechnik (Nuclear Technology)	ge	ss	4
73066	13066, 13067 (V)	Kosmologie	ge	ss/irr	6
73096	13096, 13097 (V)	Astrophysik	ge	ws/irr	6
76005	16005, 16505 (V)	Allgemeine Relativitätstheorie	ge	ws/irr	6

"Master Electives" - Section D

Courses from the Specialization (Section B) or the Physics Electives (Section C).

Courses from other Master programmes are also allowed, please check the Module Handbook for reference.

Students are allowed to credit an Internship (10 CP) in this section - subject to approval.

75061	15061	Theory of Electrochemical Energy Storage	en	ss	3
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* Module compulsory for students with a Bachelor in Wirtschaftsphysik or Lehramt

72169	13053, 13054 (V)	Solid State Physics	ge	ss	6
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"General Study Offer" Modules - Section E

Courses from the Specialization (Section B), the Physics Electives (Section C) or the Master Electives (Section D).

ASQ Courses

International Students must complete at least one German course in this section.

* Module compulsory for students with a Bachelor in Wirtschaftsphysik or Lehramt

70372	10342, 10350	Project-based Laboratory Course	ge	ws	6
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Research Phase

71051	11494	Methodology and Project Planning I	en	ws/ss	15
71052	11495	Methodology and Project Planning II	en	ws/ss	15
80000		Master's Thesis	ge/en	ws/ss	30

ws: winter semester, ss: summer semester, irr: irregularly, en: English, ge: German

(V): students must first register for the precourse, after this is completed/approved, they can register for the exam.