Master's degree programme
M.Sc. Physics

TECHNISCHE UNIVERSITÄT DARMSTADT

Part-time study and examination plan (8 semesters) from 1.10.2022

Key		Examination components						Course				Semester							
Assessment system:	St = standard (graded); bnb = passed/not passed											Examinations are assigned to semesters for guidance only.							
Form of examination:	A = submission, B = report, E = essay, H = homework assignment, HÜ = homework, worksheets, K = written exam, Kq = colloquium, M = oral examination as specified in module description, mP = oral examination, M/S = oral/written examination as specified in module description, P = minutes, Pt = presentation, R = paper, S = written examination as specified in module description, SF = special form, Th = thesis																		
Status:	o = obligatory; f = facultative																		
Form of teaching:	VL = lecture; S = seminar; Ü = exercise																		
CPs:	Credit points																		
TUCaN number and assignment of CPs to module elements are informative in nature. The CPs are credited once the module is completed.		Technical examination	Study examination	Form of examination	Duration (min.)	Weighting for module grade	Weighting for overall grade	Contact hours per week (SWS)	Status	Form of teaching	Total CPs	Study load per semester (CPs)							
												1.	2.	3.	4.	5.	6.	7.	8.
Study Area: Advanced Theoretical Physics								**5**	**o**		**7**								
05-22-1422	Advanced Quantum Mechanics	St		mP/K	30/120	100%	100%	5	o		7	7							
05-21-1422-vl	Advanced Quantum Mechanics							3	o	VL		x							
05-23-1422-ue	Advanced Quantum Mechanics							2	o	Ü		x							
Study Area: Seminars								**4**	**o**		**10**								
Catalogue	1 Seminar Theoretical Physics		St	Pt	30	100%	100%	2	o		5	5							
Catalogue	1 Seminar Experimental Physics		St	Pt	30	100%	100%	2	o		5		5						
Study Area: Specialisation (1 out of 3) (Type § 30 para. 4 Specialisation - Focus)								**20**	**o**		**28**			10	18				
Specialisation: Nuclear Physics and Nuclear Astrophysics									**f**										
05-21-1357	Focus Nuclear Physics and Nuclear Astrophysics	St		mP	60	100%	100%	8	o		13				13				
05-21-3282-vl	Theoretical Nuclear Physics							3	o	VL				x					
05-23-3282-ue	Theoretical Nuclear Physics							1	o	Ü				x					
05-21-3421-vl	Experimental Nuclear Physics							3	o	VL					x				
05-23-3421-ue	Experimental Nuclear Physics							1	o	Ü					x				
	Compulsory Electives from Physics 2 Elective Physics courses from the following catalogues (Type § 30 para. 6 with unrestricted change of module)		bnb	M/K	30/-	100%	0%	8	o		10			5	5				
Catalogue	K: Courses without In-depth Lectures								f	VL/Ü									
Catalogue	F: Physics of Condensed Matter								f	VL/Ü									
Catalogue	H: High Energy Density in Matter								f	VL/Ü									
Catalogue	O: Modern Optics								f	VL/Ü									
Catalogue	B: Courses without In-depth Lectures								f	VL/Ü									
	Elective Physics Course, 1 Elective Physics course from the following catalogues (Type § 30 para. 6 with unrestricted change of module)		bnb	M/K	30/-	100%	0%	4	o		5			5					
Catalogue	B: Courses without In-depth Lectures								f	VL/Ü									
Catalogue	F: Physics of Condensed Matter								f	VL/Ü									
Catalogue	H: High Energy Density in Matter								f	VL/Ü									
Catalogue	O: Modern Optics								f	VL/Ü									
Specialisation: High Energy Density in Matter									**f**										
05-21-1355	Focus High Energy Density in Matter	St		mP	60	100%	100%	8	o		13				13				
05-21-2071-vl	Intense Laser Beams							3	o	VL					x				
05-23-2071-ue	Intense Laser Beams							1	o	Ü					x				
05-21-3212-vl	Atoms and Ions in Plasma							3	o	VL				x					
05-23-3212-ue	Atoms and Ions in Plasma							1	o	Ü				x					
	Compulsory Electives from Physics: 2 Elective Physics courses from the following catalogues (Type § 30 para. 6 with unrestricted change of module)		bnb	M/K	30/-	100%	0	8	o		10			5	5				
Catalogue	H: Courses without In-depth Lectures								f	VL/Ü									
Catalogue	B: Physics and Technology of Accelerators								f	VL/Ü									
Catalogue	F: Physics of Condensed Matter								f	VL/Ü									
Catalogue	O: Modern Optics								f	VL/Ü									
Catalogue	K: Nuclear Physics and Nuclear Astrophysics								f	VL/Ü									
	Elective Physics Course, 1 Elective Physics course from the following catalogues (Type § 30 para. 6 with unrestricted change of module)		bnb	M/K	30/-	100%	0%	4	o		5			5					
Catalogue	B: Physics and Technology of Accelerators								f	VL/Ü									
Catalogue	F: Physics of Condensed Matter								f	VL/Ü									
Catalogue	O: Modern Optics								f	VL/Ü									
Catalogue	K: Nuclear Physics and Nuclear Astrophysics								f	VL/Ü									
Individual Specialisation: (Authorised Examination Plan necessary)									**f**										
05-29-0002	Individual Focus / Specialisation	St		mP	60	100%	100%	8	o		13				13				
	Lectures Experimental Physics (Courses)							4	o	VL/Ü									
	Lectures Theoretical Physics (Courses)							4	o	VL/Ü									
	2 Compulsory Electives from Physics and 1 Elective Physics course from the following catalogues (Type § 30 para. 6 with unrestricted change of module)		bnb	M/K	30/-		0%	11	o		15			10	5				
Catalogue	B: Physics and Technology of Accelerators								f	VL/Ü									
Catalogue	F: Physics of Condensed Matter								f	VL/Ü									
Catalogue	H: High Energy Density in Matter								f	VL/Ü									
Catalogue	O: Modern Optics								f	VL/Ü									
Catalogue	K: Nuclear Physics and Nuclear Astrophysics								f	VL/Ü									
Interdisciplinary Compulsory Elective Area (Type § 30 para. 6 with unrestricted change of module)									**o**		**15**								
Studium Generale (general studies)							0%		**f**		Between 10 and 15								
	General catalogue of the TU Darmstadt (except General Catalogue Physics) or catalogues provided for Studium Generale.								o			3	10	2					
Elective Area Physics			bnb	M/K	30/-		0%	4	**f**		0-5								
Catalogue	B: Physics and Technology of Accelerators: Courses without In-depth Lectures								f	VL/Ü									
Catalogue	F: Physics of Condensed Matter: Courses without In-depth Lectures								f	VL/Ü									
Catalogue	H: High Energy Density in Matter: Courses without In-depth Lectures								f	VL/Ü									
Catalogue	O: Modern Optics: Courses without In-depth Lectures								f	VL/Ü									
Catalogue	K: Nuclear Physics and Nuclear Astrophysics: Courses without In-depth Lectures								f	VL/Ü									

Research Area								**o**		**60**										
05-25-5005	Practical Introduction to Scientific Research	St		S/Pt		100%	50%		o		30						30		30	
05-00-5020	Master Thesis Physics *	St		Th		100%	100%		o		27									27
05-10-5005	Oral Presentation of Master Thesis	St		Pt	30	100%	100%		o		3									3
							Sum				**120**	15	15	12	18	15	15	15	15	

* For registering the Master's Thesis, the module 05-25-5005 Practical Introduction to Scientific Research must be completed

v4.0

Status: 12 April 2022