



PhD Course: PHYSICS

in agreement with Istituto Nazionale di Fisica Nucleare – INFN

Department	FISICA E ASTRONOMIA "GALILEO GALILEI" - DFA		
Duration	3 years		
Number of positions	Scholarships funded by the University	n. 9	
	University Scholarships co-funded by the Department	n. 1	Co-funding Department: FISICA E ASTRONOMIA "GALILEO GALILEI" - DFA
	Scholarships funded by the partner Institution	n. 3	1 scholarship funded by INFN - Istituto Nazionale di Fisica Nucleare; 1 scholarship funded by INFN - Istituto Nazionale di Fisica Nucleare 1 scholarship funded by INFN - Istituto Nazionale di Fisica Nucleare - Laboratori Nazionali di Legnaro - Topic: Research in Nuclear Physics within the activities of the National Laboratories of Legnaro;
	Scholarships funded by external public/private Bodies or by Departments	n. 10	; 1 scholarship funded by Dipartimento di Fisica e Astronomia "Galileo Galilei" - DFA su fondi FIS 3 Progetto "Primordial Black Holes in the Gravitational Wave Era" (PRIMAVERA) - Topic: Gravitational waves from new physics: from the early universe to primordial black holes; 1 scholarship funded by Dipartimento di Fisica e Astronomia "Galileo Galilei" - DFA su fondi FIS3 "Topological calculus for quantum fields, strings and gravity" (TOPHOLOGR) - Topic: Topological calculus for quantum fields, strings and gravity; 1 scholarship funded by Dipartimento di Fisica e Astronomia "Galileo Galilei" - DFA su fondi Progetto Dipartimenti di Eccellenza "Frontiere Quantistiche" - Topic: Quantum Frontiers in Cosmology; 1 scholarship funded by Dipartimento di Fisica e Astronomia "Galileo Galilei" - DFA su fondi Progetto Dipartimenti di Eccellenza "Frontiere Quantistiche" - Topic: Quantum and quantum-inspired methods for many-body quantum physics; 1 scholarship funded by Dipartimento di Fisica e Astronomia "Galileo Galilei" - DFA su fondi Progetto Dipartimenti di Eccellenza "Frontiere Quantistiche" - Topic: Ultracryogenic quantum sensing for fundamental physics research; 1 scholarship funded by Dipartimento di Fisica e Astronomia "Galileo Galilei" - DFA su fondi Progetto Europeo CHAMP-ION - Topic: Design, optimization and prototyping of metasurface-

			enhanced optical architectures enabling advanced ion traps and integrated photonics quantum technologies; 1 scholarship funded by Dipartimento di Fisica e Astronomia "Galileo Galilei" - DFA su fondi del progetto ERC: GLAXES - X-ray-induced fluidization: a non-equilibrium pathway to reach glasses at the extremes of their stability range - Topic: Dynamical, thermodynamic and structural properties of glasses irradiated with x-ray radiation; 1 scholarship funded by Dipartimento di Fisica e Astronomia "Galileo Galilei" - DFA su fondi del progetto europeo CHAMP-ION - Topic: Design, simulation, testing and characterization of ion traps within the CHAMP-ion project, through numerical simulations and experimental laboratory activities; 1 scholarship funded by Dipartimento di Fisica e Astronomia "Galileo Galilei" - DFA su fondi del progetto europeo QEC4QEA - Topic: Design, optimization and prototyping of quantum and quantum-inspired algorithms for optimization problems and partial differential equations, with validation and testing through tensor-network emulation; 1 scholarship funded by Fondazione Bruno Kessler - Topic: Development of superconducting quantum circuits for quantum sensing in dark matter searches;
	Positions without scholarship	n. 1	
	Total number of positions	n. 24	
Selection criteria	PRESELECTION ON THE BASIS OF EVALUATION OF QUALIFICATIONS AND ORAL EXAMINATION		
Oral examination via remote interview:	Applicants who have requested it in the application form will take the oral exam via remote interview using the ZOOM videoconference tool.		
Evaluation criteria	Qualifications: points max 40 Oral examination: points max 60		
Documents to be submitted	Thesis:	Points: max 5	(Applicants waiting to be awarded the entrance qualification: those waiting to be awarded the entrance qualification by 30th September 2026 will submit a summary of the master thesis project (max. 4 pages) signed by the applicant and the supervisor)
	Curriculum:	Points: max 20	CV prepared using the template available at this link: https://www.dfa.unipd.it/didattica/dottorati-di-ricerca/phd-physics/
	Other documents:	Points: max 15	At least one and no more than two reference letters; one motivational letter (2 pages maximum) which clarifies the research interests of the

			applicant, explaining in particular how those fit the research lines present in the Department.
Preselection: First meeting of the Evaluating Commission	05 JUNE 2026 at 09:00		
Publication of the results of the evaluation of the preselection	Within 15 JUNE 2026 the evaluating Commission will publish the results of the evaluation of the qualifications in the following website: https://www.dfa.unipd.it/didattica/dottorati-di-ricerca/phd-physics/ In order to be admitted to the examination, the candidate must get a score of at least 7/10 in the preselection.		
Publication of the timetable of remote interviews and instructions on how to use the ZOOM video conferencing	By 15 JUNE 2026 the commission will publish on the course website https://www.dfa.unipd.it/didattica/dottorati-di-ricerca/phd-physics/ the timetable of the remote interviews and the instructions on how to use the ZOOM video conferencing for those applicants who have chosen in the application form to take the oral examination via remote interview and who have passed the preselection on the basis of the qualifications with a pass-mark of at least 7/10.		
Oral examination	17 JUNE 2026 at 09:00 - The exam may continue: 18/06/2026, 19/06/2026, 22/06/2026 and 23/06/2026 at 09:00 - Dipartimento di Fisica ed Astronomia, Via Marzolo, 8 - 35131 Padova		
Language/s	Foreign language/s assessment at the oral examination: At the oral examination the commission will assess the knowledge of the following language/s: English Admission exam: The admission exam will be taken in: Italian or English, at the candidate's choice		
Examination topics	Physics of fundamental interactions, Astrophysics and Astro-particle Physics, Cosmology, Nuclear Physics, Biophysics, Statistical Physics and Physics of Complex Systems, Physics of Matter and Applied Physics		
PhD Course Website:	https://www.dfa.unipd.it/didattica/dottorati-di-ricerca/phd-physics/		
Further information	Department: FISICA E ASTRONOMIA "GALILEO GALILEI" - DFA Address: Via Marzolo - N. 8, 35121 Padova (PD) Contact person: Puca Angela telephone: 0498277089 e-mail: angela.puca@unipd.it		

How to apply	The application must be submitted only via the online procedure available at: https://pica.cineca.it/unipd/dottorati42 The documents must be attached in pdf format. The application and the attached documents are submitted automatically by closing the online procedure. So no hard copy of the application and of the documents must be sent to the office.
Deadlines	Publication of the ranking lists and enrollment from 1 July 2026 Beginning of PhD courses 1 November 2026
The gross annual amount of the scholarship for this PhD Course is € 18,643.00, determined by the amount of €17,443.00, increased by an annual additional supplement of €1,200.00	