Università degli Studi di Ferrara

Physics	
Integrated with Rectoral Decree Rep.n. 995/2024 prot. N. 129225 of 27/05/2024	
Cycle	40th
Director	Prof.ssa Eleonora Luppi (eleonora.luppi@unife.it) Department of Physics and Earth Science
Duration	3 years
Course Type	PhD in association with INFN - National Institute for Nuclear Physics - INFN Joint PhD Programme in Physics with H. Niewodniczański Institute of Nuclear Physics Polish Academy of Sciences (IFJ PAN), Kraków, Poland
Curriculum	No
Research Topics	https://www.unife.it/studenti/dottorato/it/corsi/riforma/physics
Qualification required for admission	Italian degree known as "Laurea specialistica/magistrale" or a degree awarded prior to approval of Ministerial Decree D.M. n. 509 of 3 November 1999, updated with D.M. n. 270 of 22 October 2004, n. 270; Master's (second level) degree, or an equivalent foreign academic qualification awarded abroad.

Assessment Criteria		
Evaluation of qualification: maximum score **20** points. Minimum score required to be admitted to the interview **12/20** points **Interview**: maximum score **60** points (including the foreign language examination) **Minimum final score required: 60/80**		
Language of the interview:		English
List of assessable credentials		
Academic curriculum/ Curriculum vitae	**Mandatory documents:** Complete academic career information, a list of examinations and grades and final mark, for Bachelor and Masters degrees. Thesis abstract (max length 1 page), with the following structure: motivation, research methodology, obtained or expected results and bibliography. Only for undergraduate students the abstract must be signed by the supervisor.	Up to 12 points
Research project	Maximum 2,000-character project, spaces included, written in English, on an original research topic, structured as follows: introduction of the topic within the international scientific context, relevance of the problem, method proposed to address the problem, expected results. *The mentioned project is not binding regarding the subsequent choice of the doctoral thesis, except for the positions with defined themes.* ***If applying for scholarships with a specific theme, the coherence of the research project with the theme is a requirement for evaluation. Therefore, the research project must necessarily relate to the topic of interest, or else the application will be excluded.*** ***If admitted to the doctoral program, the candidate will pursue research training and the thesis consistently with the reported theme.***	Up to 3 points
Scientific publications	**Mandatory documents:** *In extenso* copy of the publications, including abstracts and/or papers presented in national or international congresses and meetings;	Up to 1 point

	OR File containing the full list of the publications with relevant link	
Reference letter	Maximum 1 letter, supporting the application, written and signed by teachers, experts, researchers or professionals, qualified on the course topics.	Up to 2 points
Other academic or professional qualifications	Certified working experiences in the field. Others academic qualifications	Up to 2 points

Interview agenda/program
The oral examination entails a discussion of the presented project and the candidate's previous activities, as well as an assessment of their language proficiency. Its purpose is to evaluate the candidate's aptitude for scientific research and their general preparation on topics related to the research themes of the doctoral program.
Examination Timetable
Evaluation of qualifications and interview will take place within the July 5th 2024. Evaluations' results, the beginning date for consulting the evaluations' results and the interview schedule will be available within the present call deadline at the following page: https://www.unife.it/studenti/dottorato/it/concorsi/bandi-40/bando-40-anticipato/date-e-luoghi-per-il-colloquio-dates-and-locations-for-the-interview

AVAILABLE POSITIONS	**14**
With scholarship	**10**
Positions with scholarship reserved for candidates holding a university degree obtained in a foreign Institution	**2**
Positions reserved for foreign scholarship holders and/or scholarship holders of specific international mobility programs	**2**

scholarships		
N°	***Funding institution***	***Research topic or area (if applicable)***
2	Università degli Studi di Ferrara	
2	The National Institute for Nuclear Physics (INFN)	
1	The National Institute for Nuclear Physics (INFN) - Legnaro	Physics and nuclear technologies
1	Co-funded by National Institute for Nuclear Physics (INFN) - Ferrara and Università di Ferrara	Analysis of BESIII data with innovative micro pattern gas detector
1	Co-funded by National Institute for Nuclear Physics (INFN) - Ferrara and Università di Ferrara	Fast strategies for monitoring 137Cs fallout via airborne gamma ray spectroscopy
1	Co-funded by National Institute for Nuclear Physics (INFN) - Ferrara and Università di Ferrara	*Nucleon spin structure investigation by polarized deep-inelastic scattering*
1	Regione Emilia-Romagna – PR FSE+ 2021/2027	*Development and characterization of functional hybrid materials: an innovative combination of nanostructured ferromagnetic films and organic and inorganic semiconductors for environmental gas sensing*

1	Co-funded by Department of Physics and Earth Sciences and Università di Ferrara	Development of An Innovative Gamma-Ray Source Through the Interaction of Ultrarelativistic Charged Particles with Solid-State Targets
1	Funded by University of Chieti – Pescara	Theory and observations of high-energy transients (e.g., gamma-ray bursts), including experimental activities for high-energy astrophysics missions.
1	Funded by University of Chieti – Pescara	Gravitational lensing applications in the James Webb Space Telescope era, including constraints on dark matter from galactic dynamics.
1		