



UNIVERSITÀ  
DEGLI STUDI DI TRIESTE

Area dei Servizi Istituzionali  
Settore Servizi agli studenti e alla didattica  
Ufficio Dottorati di ricerca

ATTACHMENT 4

LAST REVISED 18/05/2017

**PhD IN  
PHYSICS  
(under the agreement with the National Institute for Nuclear Physics)  
OVERVIEW**

<b>IN BRIEF</b>	
<b>Lines of research</b>	1 Nuclear and subnuclear physics 2 Astrophysics 3 Condensed matter physics 4 Theoretical physics 5 Medical physics and biophysics
<b>Administrative location</b>	University of Trieste
<b>Organizing Department</b>	Department of Physics
<b>Partner</b>	National Institute for Nuclear Physics
<b>Duration</b>	3 years
<b>Attendance abroad that entitles to a scholarship increase - min. max. of months for each PhD student (over 3 years)</b>	0 - 18
<b>Official language</b>	English Lectures, Seminars and Exams will be entirely in English
<b>Subject Area</b>	02 PHYSICS
<b>Macro Research Fields (in alphabetical code order)</b>	02/A PHYSICS OF FUNDAMENTAL INTERACTIONS 02/B PHYSICS OF MATTER 02/C ASTRONOMY, ASTROPHYSICS, EARTH AND PLANETARY PHYSICS 02/D APPLIED PHYSICS, PHYSICS TEACHING AND HISTORY OF PHYSICS
<b>Scientific Disciplinary Sectors (in alphabetical code order)</b>	FIS/01 EXPERIMENTAL PHYSICS FIS/02 THEORETICAL PHYSICS, MATHEMATICAL MODELS AND METHODS FIS/03 PHYSICS OF MATTER FIS/04 NUCLEAR AND SUBNUCLEAR PHYSICS FIS/05 ASTRONOMY AND ASTROPHYSICS FIS/07 APPLIED PHYSICS
<b>Domain European Research Council</b>	PE PHYSICAL SCIENCES AND ENGINEERING
<b>ERC Panels</b>	PE2 FUNDAMENTAL CONSTITUENTS OF MATTER: PARTICLE, NUCLEAR, PLASMA, ATOMIC, MOLECULAR, GAS, AND OPTICAL PHYSICS PE3 CONDENSED MATTER PHYSICS: STRUCTURE, ELECTRONIC PROPERTIES, FLUIDS, NANOSCIENCES

PE9 UNIVERSE SCIENCES: ASTRO-PHYSICS/CHEMISTRY/BIOLOGY;  
SOLAR SYSTEM; STELLAR, GALACTIC AND EXTRAGALACTIC  
ASTRONOMY, PLANETARY SYSTEMS, COSMOLOGY, SPACE  
SCIENCE, INSTRUMENTATION

### WHO'S WHO

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<b>Vice</b>	Prof. Francesco Longo - Department of Physics – University of Trieste - phone +39 040.558.3381 - +39 040.375.6222; email <a href="mailto:francesco.longo@ts.infn.it">francesco.longo@ts.infn.it</a>
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<b>Course description and objectives</b>	<p>Graduates will possess competency in basic principles of physics. Graduates will possess an advanced and deep knowledge of their own research area of specialization. Graduates will be highly skilled in using advanced scientific experimental/observational/computational/theoretical methods and/or tools appropriate to their area of specialization. The most important outcome of their PhD will be the ability to perform independent and innovative research, developing a critical thinking, the capability of working in an advanced and international research environment. They will be able to carry out an original scientific work at the leading edge of their field, producing a written dissertation. Graduates will be able to summarize the main issues in their field and communicate the results of scientific research at a professional level as well as to other students. The research fields of activity of the Graduate Course are: Nuclear and subnuclear physics, Astrophysics, Condensed matter physics, Theoretical physics, Medical physics and biophysics.</p>
<b>Job placement opportunities</b>	<p>Research activities in national and foreign universities, research centers and industry. Teaching in universities and secondary schools. Jobs which require high scientific expertise, both in the public and private sector. Employment data for our PhD show a very positive trend: for many years they have been monitored for at least 5 years after the PhD diploma. Obtaining good post-doc positions at Italian or foreign Institutions, Universities or Laboratories is considered an indirect, but effective quality indicator of the PhD School. Percentages in the latest 5 cycles: 14% employed at Italian universities, 38% at foreign universities, 28% employed at Italian or foreign research institutes, the remaining part being employed as teachers, as financial analysts, programmers, statistics experts in insurance companies, etc.</p>
<b>Main cooperating international Universities and Research Institutions</b>	<ol style="list-style-type: none"> <li>1 Centre Europeen de Recherche Nucleaire (CERN, Geneva, Switzerland)</li> <li>2 ESO GARCHING (Germany)</li> <li>3 University of Cologne (Germany)</li> <li>4 École Polytechnique Fédérale de Lausanne (Switzerland)</li> <li>5 Institute for Advanced Studies – Princeton (USA)</li> </ol>