



# UNIVERSITÀ DEGLI STUDI DI TRIESTE

Rettorato e Direzione Generale  
Sezione Ricerca e Dottorati  
Ripartizione Dottorati

LAST REVISED 31 ottobre 2014

## PhD IN PHYSICS

**NOTE:** Candidates who apply for [R/1] places (cf ATTACHMENT 4 R1–Physics) cannot apply here

**NOTE:** This attachment provides only partial information. Exhaustive information, including how to register for the selection, is published in the Admission Announcement posted in the web page <http://www2.units.it/dott/en/> >> Admission Announcement.

<b>Deadline for online application</b>	<b>21 August 2014 11:30 a.m. (ITALIAN TIME)</b>
<b>Deadline for paying the exam registration (application) fee</b>	<b>21 August 2014</b>
<b>Deadline for submitting qualifications and publications plus the form <i>Integration to the Application</i></b>	<b>15 September 2014 11:30 a.m. (ITALIAN TIME)</b>
<b>Deadline for completion of the degree required for admission</b>	<b>31 October 2014</b>
<b>Written examination</b>	<b>22 September 2014 09:00 a.m. (ITALIAN TIME)</b>
<b>Oral examination/interview</b>	<b>24 September 2014 09:00 a.m. (ITALIAN TIME)</b>
<b>Documents required</b> <i>(for further details see below "Weighting of the qualifications")</i>	<ol style="list-style-type: none"><li>1. Form "Integration to the application"</li><li>2. The following documents:<ol style="list-style-type: none"><li>a. detailed curriculum vitae et studiorum, with a special focus on pre-PhD activities, including a list of exams taken and marks obtained</li><li>b. overview of the research work (for the degree thesis or post thesis)</li><li>c. (i) 2 letters of reference emailed directly by professors/researchers who know the candidate's work to <a href="mailto:dottorato.fisica@units.it">dottorato.fisica@units.it</a> subject:"Letter of reference concerning NAME SURNAME" (ii) letter of intent (self presentation) where the candidate his/her preferred research area</li><li>d. Publications (if any)</li></ol></li></ol>

Legge 241/1990 - Responsabile del procedimento: Elena Ferraro

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IN BRIEF		
<i>Lines of research</i>		1 Nuclear and subnuclear physics
		2 Astrophysics
		3 Condensed matter physics
		4 Theoretical physics
		5 Medical physics and biophysics
<i>Administrative location</i>		University of Trieste
<i>Organizing Department</i>		Department of Physics
<i>Duration</i>		3 years
<i>Maximum number of months to be spent abroad by each PhD student</i>		maximum 18
<i>Official language</i>		English
<i>Language (alternative to Italian) partially used in PhD activities</i>		--
<i>Subject Area</i>	<i>main</i>	02
	<i>others</i>	
<i>Macro Research Fields</i>	<i>main</i>	02/A
	<i>others</i>	02/B; 02/C
<i>Scientific Disciplinary Sector</i>	<i>main</i>	FIS/01
	<i>others</i>	FIS/02, FIS/03, FIS/05, FIS/07
<i>Domain European Research Council</i>		PE
<i>ERC Panels</i>	<i>main</i>	PE2
	<i>others</i>	PE3, PE9
<i>Erasmus Subject Area Codes</i>	<i>main</i>	13.2
	<i>others</i>	13.5, 13.7
Information on the codes can be found online at: <a href="http://www2.units.it/dott/en/?file=DottBandi.inc">http://www2.units.it/dott/en/?file=DottBandi.inc</a> >> Admission Announcement and relative attachments (...) >> "Labelling" (file.xls)		

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PLACES, SCHOLARSHIPS, RESEARCH GRANTS AVAILABLE			
Total number of places available (excluding R/2 R/3 – see below)		<b>12</b>	
<b>NB:</b> the above number includes the “Reserved places” as per ATTACHMENT 4 R1 – Physics			
without scholarship		<b>2</b>	
with scholarship		<b>10</b>	<b>N.B.:</b> Candidates who accept an earmarked scholarship are committed to the pre-assigned topic.
Scholarships/Research grants available with indication of the code, total number and funding body <b>NB:</b> Candidates have to list which scholarships they apply for by specifying the corresponding codes in the “Integration to the Application”. <b>(*) NB:</b> These scholarships are available for this selection only if they have not been allocated for the selection as per ATTACHMENT 4R1 – Physics. For this reason they cannot be indicated in the “Integration to the application” form. The outcome of the selection will be posted as soon as possible, and it will mention whether they are available or not.	M/1-4	4	University of Trieste
	D/5	1	Department of Physics funded by INFN (Project title “Theoretical and experimental physics subject of INFN interest”)
	D/6 (*)	1	Department of Physics funded by INFN (Project title “Theoretical and experimental physics subject of INFN interest”)
	D/7 (*)	1	Department of Physics funded by ELETTRA – SOCIETA’ SINCROTRONE TRIESTE S.C.p.a. di Interesse Nazionale ai sensi Legge 370 dd. 19/10/1999 (Project title “Experiments with synchrotron radiation”)
	D/8 (*)	1	Department of Physics funded by ELETTRA – SOCIETA’ SINCROTRONE TRIESTE S.C.p.a. di Interesse Nazionale ai sensi Legge 370 dd. 19/10/1999 (Project title “Development of novel free electron laser radiation sources”)
	D/9 (*)	1	Department of Physics funded by INAF – OSSERVATORIO Astronomico di Trieste (Project title “Galaxy formation and evolution with the square kilometer array”)
	D/10 (*)	1	Department of Physics funded by INAF – OSSERVATORIO Astronomico di Trieste (Project title “Detection and orbital architecture characterization of planetary systems around coolstars”)
Reserved places with scholarships/research grants available for graduates at universities abroad [R/1] with indication of the code, total number and funding body	[R/1]	5	Please refer to the attachment 4 R1
Reserved places with no PhD scholarship provided	R/2	<b>0</b>	Scholarships funded by foreign Countries
	R/3	<b>1</b>	Scholarships funded by international mobility programmes <b>LAST UPDATED ON 31.10.2014:</b> 1 place available
PhD students from foreign universities may be admitted with a joint supervision of their thesis			Yes
Erasmus Mundus PhD students from foreign universities may be admitted on a joint supervision of their thesis			Yes
Erasmus Mundus PhD students from foreign universities may be admitted on international			Yes

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mobility programmes		
THE SELECTION PROCEDURE		
<i>Academic qualification required: see Announcement: see Announcement (art. 2 - Requirements)</i>	<p>Italian Master's Degree "Laurea Specialistica/Magistrale" or 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, (or a qualification corresponding to a Master's -second level- degree)</p> <p>An equivalent foreign academic qualification awarded abroad</p> <p>An academic qualification awarded abroad which is considered to be equivalent to the Italian degree that allows the holder to undertake PhD studies for duration, level and area of study</p>	
<i>Deadline for completion of the Degree required for admission</i>	<b>31 October 2014 (deadline)</b>	
<i>Assessment criteria</i>	qualifications + written examination + oral examination/interview	
<i>Maximum final score (the final score is based on the sum total of marks obtained in the interview plus the points given for qualifications and publications)</i>	120/120	
<i>Minimum final score required for eligibility</i>	80/120	
<i>Maximum score awarded for qualifications+publications</i>	20/20	
<i>Minimum score required for qualifications+publications</i>	0/20	
<i>Weighting of the qualifications</i> <b>Unless the form "Integration to application" is presented, qualifications and publications cannot be assessed by the Examining Board. The form is available at:</b> <a href="http://www2.units.it/dott/en/?file=DottBandi.inc&amp;cod=1010">http://www2.units.it/dott/en/?file=DottBandi.inc&amp;cod=1010</a>	a detailed curriculum vitae et studiorum, with a special focus on pre-PhD activities, including a list of exams taken and marks obtained	max 9/20
	b overview of the research work (for the degree thesis or post thesis)	max 3/20
	c (i) 2 letters of reference emailed directly by professors/researchers who know the candidate's work to dottorato.fisica@units.it subject:"Letter of reference concerning NAME SURNAME" (ii) letter of intent (self presentation) where the candidate his/her preferred research area	max 4/20
	d publications (if any)	max 4/20
<i>Written examination score out of – maximum score</i>	50/50	
<i>Written examination score out of – minimum score</i>	35/50	
<i>Oral examination/interview score out of – maximum score</i>	50/50	
<i>Oral examination/interview score out of – minimum score</i>	35/50	

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<i>Deadline for submitting qualifications and publications</i>		<b>15 September 2014</b>
<i>Qualifications and publications shall be submitted: (art. 5.1.4 of the PhD Announcement)</i>		<b>as an attachment to the online admission application (upload), deadline 11:30 a.m. Italian time</b>
		only for publications that are voluminous or not available in electronic format, as long as they are listed in the form "Integration to application" (digital format preferable): e-mail (scan documents file zip maximum 10 MB) to <a href="mailto:dottorato.fisica@units.it">dottorato.fisica@units.it</a> deadline 12:00 p.m. (ITALIAN TIME)
<i>Examination schedule</i>	<i>Written examination</i>	<b>22 September 2014 at 09:00 am (ITALIAN TIME)</b> at University of Trieste – Classroom A – Department of Physics, Via Valerio, 2 – TRIESTE
	<i>Oral examination/interview</i>	<b>24 September 2014 at 09:00 am (ITALIAN TIME)</b> at University of Trieste – room 131, 1. floor - Department of Physics, Via Valerio, 2 – TRIESTE
	<i>Language(s) of the interview</i>	Italian/English
	<i>Language(s) tested in the oral examination/interview</i>	English
	<i>CEFR (Common European Framework of Reference for Languages)</i>	B2
<i>Videoconference interview</i>	No	

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WHO'S WHO	
<i>Chair</i>	Prof. Paolo Camerini – Department of Physics – University of Trieste - phone N. 040/558.3379; fax 040/558.3350 e-mail <a href="mailto:camerini@trieste.infn.it">camerini@trieste.infn.it</a>
<i>Vice</i>	Prof. Marisa Girardi - Department of Physics – University of Trieste – phone N. 040/3199 147 fax 040 3199 123 e-mail <a href="mailto:girardi@oats.inaf.it">girardi@oats.inaf.it</a>
<i>Web site</i>	<a href="http://df.units.it/?q=it/node/2897">http://df.units.it/?q=it/node/2897</a>
<i>Learning outcomes</i>	<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 about 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>
<i>Job placement opportunities</i>	<p>The data on the employment of graduates are extremely positive, with high employment rates relative to the degree obtained. The Graduate Program in Physics has been monitoring the employment status of its graduates for 5 years after obtaining the title. As an indication of the opportunities provided we indicate the statistics about the employment of students that graduated between 2008 and 2012: 22% employed in Italian universities, 29% in foreign universities, 29% employed in private or public research bodies in Italy or abroad; additionally there are secondary school teachers, financial analysts, LtD. Ceo, programmers, analysts in statistical offices of insurance companies, etc ...</p>
<i>Main cooperating international Universities and Research Institutions</i>	<ol style="list-style-type: none"><li>1 Laboratorio CERN (Ginevra, CH); ambito: fisica nucleare e subnucleare</li><li>2 ESO Garching (Monaco, Germania), ambito: astrofisica</li><li>3 UC Davis, University of California, Davis Calif. (USA): ambito: fisica teorica</li><li>4 Paul Scherrer Institute, Villigen (CH): ambito: fisica medica</li><li>5 DIPIC, San Sebastian (Spagna); ambito: fisica della materia</li></ol>

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