

## DOCTORAL SCHOOL IN PHYSICS

### GENERAL DESCRIPTION

SUBJECT AREAS COVERED BY THE SCHOOL:

- main area: FIS/01
- other areas: FIS/02, FIS/03, FIS/04, FIS/05, FIS/07

RESEARCH FIELDS:

1. Astrophysics
2. Condensed Matter Physics
3. Medical Physics
4. Subnuclear and Nuclear Physics
5. Theoretical Physics

ORGANIZING DEPARTMENT: Dip. di Fisica

OTHER PARTICIPATING INSTITUTIONS (Italian):

- INAF-Istituto Nazionale di Astrofisica
- Istituto Nazionale di Fisica Nucleare
- ICTP- The Abdus Salam International Centre for Theoretical Physics
- Sincrotrone Trieste S.C.p.A.
- Laboratorio Nazionale TASC –IOM CNR

DURATION: 3 years

MAXIMUM NUMBER OF MONTHS TO BE SPENT ABROAD: ..... 18

OFFICIAL LANGUAGE OF THE SCHOOL: Italian

### ADMISSION INFORMATION

NUMBER OF PLACES AVAILABLE: ..... 14

- SCHOLARSHIPS: ..... 11

- FUNDING BODY/IES:

- Università degli Studi di Trieste ..... 6
- Dip. di Fisica (INFN grants) earmarked for the Project "Theoretical and experimental physics subjects of INFN interest" ..... 2
- Dip. di Fisica (Sincrotrone Trieste ScpA grant) earmarked for the project "Experiments with Synchrotron radiation" ..... 1
- Dip. di Fisica (Sincrotrone Trieste ScpA grant) earmarked for the project "Development of novel free electron laser radiation sources" ..... 1
- Dip. di Fisica (INAF grants) earmarked for the project "Astrophysics research" ..... 1

NOTA: Expense claims for doctoral activities undertaken in and/or outside Italy will be reimbursed directly on the basis of the agreements with the funders.

Candidates who accept an earmarked scholarship are committed to the pre-assigned topic

NON-FUNDED PLACES:

- holders of a research grant (see Art. 1.1 - Requirements) ..... 2
- grant-holders funded by the Italian Ministry of Foreign Affairs sitting the entrance examination in the country of origin ..... 1
- non-EU citizens residing abroad with ministerial authorisation and permitted to sit the entrance examination in the country of origin ..... 1

ACADEMIC QUALIFICATION REQUIRED: see Announcement (art. 1.1 - Requirements)

DEADLINE FOR COMPLETION OF DEGREE: ..... 26.10.2010

ADMISSION REQUIREMENTS:

qualifications + written examination + oral interview.

FINAL SCORE: the final score is based on the sum total of marks obtained in the written examination and interview plus the points given for qualifications

and publications: ..... 120/120

MINIMUM FINAL SCORE REQUIRED: ..... 80/120

MAXIMUM NUMBER OF POINTS AWARDED FOR QUALIFICATIONS +

PUBLICATIONS: ..... 20

QUALIFICATIONS REQUIRED/RELATIVE WEIGHT:

Art. 11 Rules for Doctorates: all candidates are required to present the following documents, regardless of whether or not a score is assigned to them (see below):

- a. a detailed curriculum vitae et studiorum plus degree transcript (list of exams + exam scores + degree score): 8/20
  - b. a copy of the Master's degree thesis: 4/20
- For students with a degree awarded by a non-Italian university, an abstract of the thesis in English or Italian is sufficient.

as well as

1. 4/20:

1.1. Two letters of presentation from scholars/researchers acquainted with the candidate;

1.2. A letter of self-presentation where the candidate outlines his/her research activity;

2. Publications (if any): 4/20.

- Qualifications Evaluation Form (unless this form is presented, qualifications and publications CANNOT be assessed by the Examining Board)

MINIMUM SCORE REQUIRED FOR QUALIFICATIONS/PUBLICATIONS:..... 10/20

WRITTEN EXAMINATION MARK OUT OF: ..... 50/50

MINIMUM SCORE REQUIRED IN WRITTEN EXAMINATION: ..... 35/50

ORAL EXAMINATION MARK OUT OF: ..... 50/50

MINIMUM SCORE REQUIRED FOR INTERVIEW: ..... 35/50

ABSOLUTE DEADLINE FOR RECEIVING CERTIFICATES: 27.10.2010

ADDRESSES TO WHICH CERTIFICATES SHOULD BE SENT: to be handed in during the written test.

EXAMINATION SCHEDULE:

- WRITTEN EXAMINATION: 27.10.2010 at 09.00 a.m. "Aula A" del Dipartimento di Fisica, Via Valerio, 2 – TRIESTE

POSSIBLE ALTERNATIVE LANGUAGE TO ITALIAN FOR THE WRITTEN EXAMINATION: English

- INTERVIEW: 29.10.2010 at 09.00 a.m. "Aula A" del Dipartimento di Fisica, Via Valerio, 2 – TRIESTE

LANGUAGE/S OTHER THAN THE ITALIAN FOR THE ORAL INTERVIEW: English

#### CONTACT INFORMATION

DIRECTOR OF THE SCHOOL: Prof. Paolo Camerini - Dipartimento di Fisica - Università degli Studi di Trieste - tel.040/558.3379; fax 040/558.3350 e-mail [camerini@trieste.infn.it](mailto:camerini@trieste.infn.it)

VICE-DIRECTOR: Prof. Gaetano Senatore - Dipartimento di Fisica teorica - Università degli Studi di Trieste - tel. 040/2240278 fax 040/224601 e-mail [gaetano.senatore@ts.infn.it](mailto:gaetano.senatore@ts.infn.it)

WEB SITE: <http://physics.units.it/Ricerca/Dottorandi.php>

OVERVIEW: Graduate students in physics are actively engaged in research at the forefront of both fundamental and applied physics. The students can choose to work in Astrophysics, Condensed Matter Physics, Medical Physics, Sub-nuclear and Nuclear Physics, Theoretical physics. The goal of the Graduate School is to train flexible professionals who will easily find a job in different fields, including scientific research. Besides being individually trained in a specific research field, the students attend institutional curricular courses as well as courses focused on the topic of their doctoral theses for a total of at least 80 hours of lessons. They will also attend at least two national or international schools. Graduate students are encouraged as well to attend national and international conferences in order to present the results of their research. A list of available research topics is found at: <http://www-dft.ts.infn.it/phd/SdDF>. Some of the scholarships carry a title. The awardees of such scholarships are bound to perform research in a pre-assigned area/topic. Info on research topics and people to contact for further details are found at the above-mentioned web page.

#### CHANGES SUBSEQUENT TO 23.07.10

N.B: the original announcement may be subject to continuous modification. Any changes made subsequent to the original date of publication are listed below :

- 1st addition:

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#### IN PRESS

N.B: the following additions/changes have been requested by the organisers of the Doctorate and will be made official with an supplement to the:

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