

**DOCTORAL COURSE IN  
GEOFISICA DELLA LITOSFERA E GEODINAMICA**

**GENERAL DESCRIPTION**

**SUBJECT AREAS:**

- main area: GEO/10
- other areas: GEO/03, GEO/06, GEO/07, GEO/08

**FIELDS OF RESEARCH:**

1. Seismology, volcanology, natural hazards and physical and chemical properties of the lithosphere-asthenosphere system
2. Gravitational processes and crustal movements in seismic and volcanic areas
3. Evolution of the crust-mantle system: mineralogy, petrology and geochemistry
4. Structural geology and stratigraphy

**ORGANIZING DEPARTMENT:**

Dip. di Scienze della Terra

**OTHER DEPARTMENTS:**

Dip. di Scienze Geologiche, Ambientali e Marine

**PROGRAMME LENGTH IN YEARS:** 3

**MAXIMUM PERIOD OF STUDY ABROAD IN MONTHS:** 6

**OFFICIAL LANGUAGE OF THE SCHOOL:** Italian

**ADMISSION INFORMATION AND REQUIREMENTS**

**PLACES AVAILABLE:** ..... 4

**SCHOLARSHIPS:** ..... 2

**FUNDING BODIES:**

Dip. di Scienze della Terra – borsa RAF (finalizzata al Progetto “*Stima del moto del suolo nell’area del contatto Alpi-Dinaridi*”)..... 1

- Dip. di Scienze della Terra – borsa ASI (finalizzata al Progetto “*Scenari neo-deterministici di pericolosità sismica*”)..... 1

Conditional scholarships (“borse di studio finalizzate”) require students to do their research on pre-assigned topics.

**NON-FUNDED PLACES**

- research grant-holders: ..... 1

- non-EU citizens resident abroad ..... 1

**ACADEMIC QUALIFICATION REQUIRED:** see Announcement (art. 1-Requirements)

**DEADLINE FOR COMPLETION OF DEGREE BEFORE APPLICATION:**..... 20.11.2009

**ADMISSION REQUIREMENTS:**

qualifications + oral interview.

**FINAL SCORE:** the final score is obtained by combining the scores of oral part of the examination and of the score attributed to the qualifications: ..... 120/120

**FINAL SCORE (MINIMUM REQUIRED):** ..... 72/120

**SCORE ATTRIBUTED TO THE QUALIFICATIONS:** ..... 60/60

**QUALIFICATIONS REQUIRED (RELATIVE WEIGHT):**

Art. 11 University Rules for Doctorates:

a. a detailed curriculum vitae et studiorum: 20/60

b. a copy of the master’s degree thesis or an abstract in English or in Italian: 20/60

A detailed research proposal may be required.

as well as

1. Degree score: 20/60

**MINIMUM SCORE REQUIRED FOR THE QUALIFICATIONS:** ..... 30/60

**ORAL INTERVIEW SCORE (EXPRESSED AS A PERCENTAGE):** ..... 60/60

**MINIMUM SCORE REQUIRED FOR THE ORAL INTERVIEW:** ..... 42/60

**DEADLINE FOR RECEIVING CERTIFICATES / PUBLICATIONS:** 23.11.2009

**ADDRESS TO WHICH CERTIFICATES / PUBLICATIONS SHOULD BE SENT:** Dip. Scienze della Terra, Via Weiss, 1 – 34127 Trieste.

**EXAMINATION SCHEDULE:**

- ORAL INTERVIEW: 30.11.2009 at 9.00 a.m. Dip. di Scienze della Terra dell’Università degli Studi di Trieste, Via Weiss, 1 – TRIESTE

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

**CONTACT INFORMATION**

**CHAIR:**

Prof. Peter SUHADOLC - Dipartimento di Scienze della Terra - Università degli Studi di Trieste - tel. 040/558.2122 fax 040/558.2111 e-mail [suhadolc@dst.univ.trieste.it](mailto:suhadolc@dst.univ.trieste.it)

**WEB SITE:** : <http://www2.units.it/~dst/dottorato/>

**OVERVIEW:**

The PhD curriculum in “Geofisica della Litosfera e Geodinamica” deals with research on the physical, chemical and petrological properties of the asthenosphere-lithosphere system, including its geodynamic characterization, elemental fluxes and phase equilibria. The experimental and field

research cover topics in geophysics, geochemistry, mineral chemistry, petrography and structural geology. Applied research involves also natural hazard mitigations, including seismic and volcanic risk, through data acquisition, reduction and modeling, and to evaluate the effects on the balance of ecosystems. Many important aspects of geophysics are addressed, like the realistic modeling of seismic waves in the near- and far-field for the assessment of seismic and volcanic hazard; characterization of seismic sources; identification of earthquake-prone lineaments and premonitory seismicity patterns; estimation of strong ground motion; modeling of gravity data. These topics are tackled both from the side of interpretation - inversion and forward modeling - of relevant data (seismic waveforms, gravity field, heat flow, rheology, etc.) and by means of the development of theoretical and experimental tools. The study of the physical-chemical properties of magmas, in order to investigate mechanisms of ascent, storage and eruption dynamics, is another broad field of research. The contamination of the earth's ecosystems by potentially toxic metals with respect to the natural background and baselines is included in the risk mitigation.

The PhD students are requested to participate to several research projects on these topics.

**CHANGES AFTER 27 JULY 2009 (if any).**

The text above is constantly updated. The major changes to the original announcement (if any) are listed below:

- First supplementary announcement: an extra non-funded ordinary place is available