UNIVERSITÀ
DEGLI STUDI DI TRIESTE

Rettorato e Direzione Generale
Sezione Ricerca e Dottorati
Ripartizione Dottorati

LAST REVISED 26/07/2012

DOCTORAL COURSE IN ENVIRONMENTAL BIOLOGY

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/dottorati/ >> Admission Announcement.

Deadline for online application	**31 August 2012 h.11:30 a.m. CET**

GENERAL DESCRIPTION

SUBJECT AREAS COVERED BY THE COURSE:
- main area: BIO/07
- other areas: BIO/01; BIO/02; BIO/03; BIO/04; BIO/05; BIO/06; BIO/09; BIO/10; BIO/11; BIO/18; BIO/19; CHIM/01; CHIM/12

RESEARCH FIELDS:
1. Environmental Biomonitoring
2. Nature Conservation
3. Ecophysiology and ecotoxicology
4. Ecosystem functioning
5. Environmental Genomics
6. Production activities and resource sustainability

Location: Trieste

ORGANIZING DEPARTMENT: Dip. di Scienze della Vita

DURATION: 3 years

MAXIMUM NUMBER OF MONTHS TO BE SPENT ABROAD: 6

OFFICIAL LANGUAGE OF THE SCHOOL: Italian

ADMISSION INFORMATION

NUMBER OF PLACES AVAILABLE: **10**
- SCHOLARSHIPS: 5
  FUNDING BODY/IES (preceded by the scholarship code) :
  - [cod MD/1] Università degli Studi di Trieste+ Dip. di Scienze della Vita funded by Cementizillo S.p.a. (Project title "*Lichens as environmental biomonitors of heavy metals and Pahs"*).....1
  - [cod MD/2] Università degli Studi di Trieste+ Dip. di Scienze della Vita funded by Cementizillo S.p.a. (Project title "*emission and absortion of organic compounds in vegetable matrices"*) 1
  - [cod MD/3] Università degli Studi di Trieste+ Dip. di Scienze della Vita funded by Harpo S.p.a. (Project title "*Optimization of green roof systems in urban*

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environments in the Mediterranean area") 1
- [cod MD/4] Università degli Studi di Trieste+ Dip. di Scienze della Vita funded by Conisma (Project title "*Effects of predation on marine prokaryotic biodiversity"*.....1
- [cod D/5] Dip. di Scienze della Vita funded by Istituto Nazionale di Oceanografia e Geofisica Sperimentale-OSG (Project title "*Ecological and biogeochemical modelling of marine systems"*) 1

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

EXTRA PLACES WITHOUT SCHOLARSHIP:
- [cod S/1] research grant holders ("assegnisti di ricerca"), carrying out their activities in the Departments involved in the Doctoral course **2**
- [cod S/3/1] grant-holders funded by the Italian Ministry of Foreign Affairs sitting the entrance examination in the country of origin.....**1**
- [cod S/2] non-EU citizens residing abroad **1**

ACADEMIC QUALIFICATIONS REQUIRED: See Announcement (Art. 1.1 - Requirements)
DEADLINE FOR COMPLETION OF DEGREE: **12.10.2012**
ASSESSMENT CRITERIA: Qualifications + Interview
- MAXIMUM FINAL SCORE (the final score is based on the total of marks obtained in the interview plus the points given for qualifications: 100/100
  MINIMUM FINAL SCORE REQUIRED:.....63/100
- MAXIMUM NUMBER OF POINTS AWARDED FOR QUALIFICATIONS + PUBLICATIONS: 40/40
  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: 8/40
    b. a copy of the Master's degree thesis: 10/40
       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. Degree score: max 12/40
    2. research publications: max 4/40
    3. Post-lauream courses: max 3/40
    4. Working activities in the Doctoral field: max 3/40
  - Qualifications List (unless this form is presented, qualifications and publications CANNOT be assessed by the Examining Board)

  MINIMUM SCORE REQUIRED FOR THE QUALIFICATIONS:.....21/40
- MXIMIM ORAL INTERVIEW SCORE:.....60/60
  MINIMUM SCORE REQUIRED FOR THE ORAL INTERVIEW: 42/60
  DEADLINE FOR RECEIVING QUALIFICATIONS:.....**12.10.2012**
  ADDRESS TO WHICH QUALIFICATIONS SHOULD BE SENT: Thesis and publications, if any, on a digital media along with a paper abstract should be delivered in person or by mail to the Dipartimento di Scienze della vita, Via Licio

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Giorgieri 5, 34127 – Trieste - Building Q, Reception (portineria).The envelope must Envelope must bear the words: "Prove di ammissione dottorato in Biologia Ambientale XXVIII ciclo" to the kind att. of Dr. Piero Giulianini

EXAMINATION SCHEDULE:

- INTERVIEW: **29.10.2012 at 10.00 a.m.**, at Università degli Studi di Trieste – Emiciclo - Building Q – Via L. Giorgieri, 5 – TRIESTE

ALTERNATIVE LANGUAGE TO ITALIAN FOR THE INTERVIEW: English, French, German

CEFR LEVEL: --

CONTACT INFORMATION

CHAIR: Prof. Alberto PALLAVICINI - Dipartimento di Scienze della Vita - Via Giorgieri, 5 ed.Q - Università degli Studi di Trieste – phone +39 040 558.8736 fax 040.810860 email pallavic@units.it

WEB SITE: http://www2.units.it/~biomonitor/

EDUCATIONAL AIMS AND RESEARCH TOPICS: This Ph.D. course, resulting from the transformation of the former PhD course in the "Methodology of bio-monitoring of environmental alteration", which has kept the Council of teachers, aims at training highly qualified personnel capable of managing critically the implementation of national or EU guidelines, regarding the environmental analysis, deepen the methodological aspects of such issues, and plan and carry out research independently of environmental monitoring by means of organisms , in the framework of a multidisciplinary view of issues. It is structured to progressively focus the scientific preparation of doctoral candidates from general and theoretical to the experimental ones. An attendance of theoretical courses, journal clubs and seminars, is foreseen for a total of 16 credits of educational activity in the first year, 8 credits 4 credits in the second and third, to put the graduate students in the position to understand the issues environmental biology in all its many aspects by integrating data from different sources. Simultaneously, there are plans to conduct a research activity, according to an individual plan discussed and agreed with the Council of teachers. During the first year the PhD student defines the topic of research, in the second year he/she steps into the experimental aspect and in the third year he/she will complete its original research, completing the thesis. These training activities have as their ultimate goal the establishment of a figure with high professional skills suitable to be taken by institutions devoted to environmental control and protection (eg, Regional Environmental Agencies), and / or to be inserted into programs research of various Italian and foreign research institutes in various capacities that deal with both land and marine environment. For example, candidates may undertake research on these topics, both terrestrial and marine environments:

1) the effects of major stressors, abiotic and biotic, on humans, animals, plants and their interactions at the cellular level of organisms and ecosystems;

2) morphological changes, physiological, genetic or induced by environmental stressors in terms of organism, population and community,
3) changes at the community level and structure of the landscape due to fragmentation of ecosystems, resource constraints and environmental changes;
4) biogeochemical cycles and their perturbations,
5) concentrations of pollutants in the atmosphere, hydrosphere, pedosphere and their variability in time and space;
6) bioaccumulation and biomagnification of pollutants in different components of ecosystems;
7) network structure and their trophic efficiency,
8) effects of past and future climate change on organisms, communities and ecosystems;
9) data processing and information through innovative techniques (meta data analysis, data mining, fuzzy set analysis, neural networks, cellular automata, remote sensing).

Pre-requisite of research projects submitted by graduate students is, however, the presence of an innovative technology component in one of many possible areas of Environmental Biology.

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