ANNEX 1 to the Ph.D. Call for admission to the Doctoral Programmes
Cycle 32nd – Academic Year 2016/2017

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BIOMEDICAL AREA

DOCTORAL PROGRAMME IN DRUG RESEARCH AND INNOVATIVE TREATMENTS
Coordinator Prof. Elisabetta Teodori

Administrative office: Department of Neuroscience, Psychology, Drug Research and Child Health (NEUROFARBA)

Curricula:

1) Pharmaceutical Sciences
2) Pharmacology, Toxicology and Innovative Treatments

No. of Positions: 9

Scholarships: 7
5 University of Florence
1 University Hospital Meyer
1 School of Human Health Sciences dedicated to Barbara Bona’s Memory

Positions with no scholarship: 2

Evaluation of applicants:
applicants will be selected by written and oral examination (cfr. Article 12, paragraph 1, sub-paragraph a) of Doctoral Regulation n. 670 of July 4th 2013).
With regards to the written examination the applicants will be asked to discuss a particular theme choosing one of the texts proposed.

Themes for the examinations relating to the curriculum of the Pharmaceutical Sciences:
The written examination will be characterised by the completion of an essay on design and synthesis, or molecular modelling or analysis or pharmaceutical technology, of pharmacologically active molecules of natural or synthetic origin.
The oral examination will be centred on the discussion of the theme chosen by the applicant as well as the discussion of any research project that the applicant may present at the moment of the oral examination.

Themes for the examinations relating to the curriculum in Pharmacology, Toxicology and Innovative Treatments:
The written examination will be characterised by the completion of an essay on general pharmacology.
The oral examination will focus on the discussion of the theme chosen by the applicant, as well as the discussion of any research project that the applicant may present at the moment of the oral examination.

Foreign language in which the examinations can be done: English.

Documents to be attached to the application form:
- research project (optional).
**Tuscan Ph.D. in Neurosciences**
Coordinator Prof. Renato Corradetti

**Regione Toscana Pegaso Project** – Partner Universities: University of Florence, University of Pisa, University of Siena.

**Administrative office**: Department of Neuroscience, Psychology, Medicine and Child Health (NEUROFARBA)

**No. of Positions**: 13

**Scholarships**: 10
- 5 University of Florence
- 1 Department of Translational Medicine
- 4 *Regione Toscana Pegaso Scholarships 2016* - (Note: in accordance with art. 8 co.4 of the call, the scholarships funded by the Tuscany Region will be granted subject to the successful allocation of financial resources to the University of Florence and the signature of the agreement between the University and the Region)

**Positions with no scholarship**: 3

**Evaluation of applicants**:
Applicants will be selected by oral examination (cfr. Article 12, paragraph 1, sub-paragraph c) of Doctoral Regulation n. 670 of July 4th 2013). Selection of applicants will follow a two-step evaluation (see scheme below).

**Step 1) Preselection for admission to the oral examination**:

The Committee will evaluate:
1) CV (European format) with indication of qualifications (e.g. awards, certificates of research experience and/or attendance of courses relevant to Neuroscience) and all publications of the applicant.
2) Publications by the applicant attached to the application. Publications will contribute for a maximum of 3 (three) points. Technical reports and Specialization thesis are not evaluated and should not be uploaded.
3) Research project in English. In this phase the project will be evaluated for its coherence with the Doctorate in Neurosciences and for its feasibility, in general and within the Tuscan PhD in Neurosciences Program. (Note: the project presented will not necessarily be accepted as the thesis project for the applicant, should he/she be accepted in the PhD Program).

Applicants receiving a score of at least 30/40 will be admitted to the oral examination.

**Step 2) Oral examination**:

The oral examination will focus on a discussion of the research project presented.

*Good knowledge of spoken and written English is required.*

The examination can be taken in English or Italian.

For applicants who are not resident in Italy, it will be possible to take the oral examination by Skype, if required in the online application.

Applicants receiving a score of at least 50/80 in the oral examination will enter the final ranking list.
## Evaluation steps:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Maximal score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preselection:</td>
<td></td>
</tr>
<tr>
<td>Curriculum vitae, qualifications, publications, Research Project redaction</td>
<td>40/120</td>
</tr>
<tr>
<td><em>Applicants obtaining a score of at least 30/40 in the evaluation of CV, publications and redaction of the research project will be admitted to the oral examination</em></td>
<td></td>
</tr>
<tr>
<td>Oral examination: discussion of the research project to assess applicant's aptitude for research</td>
<td>80/120</td>
</tr>
</tbody>
</table>

*The oral examination is passed with a score of at least 50/80*

## Documents to be attached to the application:

- CV (European format) with indication of qualifications and all publications of the applicant.
- Publications by the applicant submitted for evaluation in step 1.
- Research project in English (six pages maximum including references).

*Filename of files to be uploaded should include the applicant's name and surname*
DOCTORAL PROGRAMME IN BIOMEDICAL SCIENCES
Coordinator: Prof. Massimo Stefani

Administrative office: Department of Experimental and Clinical Biomedical Sciences

Curricula:
1. Human Morphology and Morphogenesis
2. Functional Biology of Biomolecules and Biosystems
3. Physiological and Nutritional Sciences
4. Experimental Phatology
5. Endocrinological, Molecular and Regenerative Biotechnologies
6. Biomedical Sciences of Developmental Age

Number of positions: 9

Scholarships: 7
5 University of Florence
1 Department of Clinical and Experimental Medicine
1 School of Human Health Sciences dedicated to Barbara Bona’s Memory

Positions with no scholarship: 2

Evaluation of applicants:
applicants will be selected following oral examination and evaluation of curriculum vitae, publications and other qualification documents, as well as the research project, according to the following scheme (article 12, paragraph 1, sub-paragraph c) of Doctoral Regulation n. 670 of July 4th 2013).

Scoring criteria:

<table>
<thead>
<tr>
<th>parameter</th>
<th>minimum score</th>
<th>maximum score</th>
</tr>
</thead>
<tbody>
<tr>
<td>curriculum vitae, publications and other qualification documents (if any)</td>
<td>15/120</td>
<td>20/120</td>
</tr>
<tr>
<td>research project</td>
<td>25/120</td>
<td>40/120</td>
</tr>
<tr>
<td>oral examination: discussion of the project and publications (if any)</td>
<td>40/120</td>
<td>60/120</td>
</tr>
</tbody>
</table>

Eligibility is achieved with a minimum score of 80/120

Documents to be attached to the application form:
- curriculum vitae et studiorum;
- publications and other qualification documents (if any);
- research project, written in English and of maximum 12,000 characters including spaces, which must include summary, introduction, methodology, expected results and references. The project must refer specifically to one or more of the working themes listed below.

Themes to which the research projects of the applicants must be linked:

<table>
<thead>
<tr>
<th>Curriculum</th>
<th>Theme</th>
</tr>
</thead>
</table>
| Human Morphology and Morphogenesis | 1) Systematic and topographic anatomy  
2) Applied anatomy: diagnostic imaging and semeiotics  
3) Morpho-functional histology and cytology  
4) Embryology and organogenesis  
5) Histo-chemistry |
| Functional Biology of Biomolecules and Biosystems | 1) Protein biophysics  
2) Cell biology of amyloids  
3) Biophysics of lipid bilayers and biomembranes  
4) Yeast proteomics  
5) Anti-aggregation power of natural compounds |
| Physiological and Nutritional Sciences | 1) Muscle biophysics  
2) Neurophysiology  
3) Pathophysiology of nutrition  
4) Adaptation to muscle activity and sport |
| Experimental Pathology | 1) Mechanisms of cancer onset and progression  
2) Cancer invasion and metastasis  
3) Cancer stem cells: characterization and targeting  
4) Mechanisms of microbial pathogenicity  
5) Antimicrobial drugs: mechanisms of action and resistance  
6) Study of the molecular and cellular mechanisms in ageing and longevity |
| Endocrinological, Molecular and Regenerative Biotechnologies | 1) Physiopathology of the male reproductive system and accessory glands  
2) Genetic aspects of male infertility  
3) Control mechanisms of human spermatogenesis  
4) DNA fragmentation in human spermatozoa: biochemical mechanisms and clinical meaning and significance  
5) Adrenal physiopathology  
6) Physiopathology of fat tissue |
| Biomedical Sciences of Developmental Age | 1) Clinical biochemistry  
2) Pediatrics  
3) Hygiene and Public Health  
4) Orthodontics  
5) Preventive medicine |
**DOCTORAL PROGRAMME IN CLINICAL SCIENCES**
Coordinator Prof. Francesco Annunziato

**Administrative office:** Department of Experimental and Clinical Medicine

**Curricula:**

1) Clinical Pathophysiology and of Aging and Nursing Sciences  
2) Clinical and Experimental Medicine  
3) Pathology and Clinic of the Locomotor Apparatus and the Calcified Tissues  
4) Anaesthetic and Surgical Sciences  
5) Psychology and Pain Management

**Number of positions:** 11

**Scholarships:** 8  
- 6 University of Florence  
- 1 Tuscany Transplants Organization (OTT) - University Hospital Careggi- Theme: "Identification of strategies to implement education and research in transplantation and organ donation"  
- 1 School of Human Health Sciences dedicated to Barbara Bona’s Memory

**Positions with no scholarship:** 3

**Evaluation of applicants:**  
Applicants will be selected by written and oral examination with evaluation of their curriculum and any additional qualification documents (article 12, paragraph 1, sub-paragraph b) of Doctoral Regulation n. 670 of July 4th 2013).

The examinations may be taken in the following foreign language: **English**.

**Documents to be attached to the application form:**

- curriculum vitae et studiorum;  
- publications and other qualification documents (if any);  
- research project (if any), **written in English** and of maximum **12,000 characters** including spaces, summary, introduction, methodology, expected results and references. The project must refer specifically to the working themes of the curriculum chosen by the applicant and it will contribute to the evaluation of the attitude of the applicant towards research.
SCIENTIFIC AREA

DOCTORAL PROGRAMME IN PHYSICS AND ASTRONOMY
Coordinator Prof. Massimo Gurioli

Administrative office: Department of Physics and Astronomy

Curricula:
1) Physics
2) Astronomy

No. of Positions: 11

Scholarships: 9
6 University of Florence
2 National Institute for Nuclear Physics (INFN)
1 National Institute for Astrophysics (INAF) dedicated to Francesco Palla’s Memory

Positions with no scholarship: 2

Evaluation of applicants:
Applicants will be selected by written and oral examination with evaluation of their curriculum and any additional qualification documents (article 12, paragraph 1, sub-paragraph b) of Doctoral Regulation n. 670 of July 4th 2013).

The examinations may be taken in the following foreign language: English.

For applicants who are not resident in Italy, it will be possible to take the oral examination by Skype, if required in the online application.

Documents to be attached to the application form:
- curriculum vitae et studiorum;
- declaration in lieu of certification of the list of exams taken with grades and title of the Master thesis (or equivalent degree);
- list of publications;
- qualification documents.
INTERNATIONAL DOCTORATE IN ATOMIC AND MOLECULAR PHOTONICS
Coordinator Prof. Roberto Righini

Administrative office: Department of Physics and Astronomy

Partner Institutions: Universidad Complutense de Madrid, Imperial College of London

No. of Positions: 8

Scholarships: 6
1 University of Florence
5 European Laboratory for Non-linear Spectroscopy (LENS)

Positions with no scholarship: 2

Evaluation of applicants:
applicants will be selected by: a) oral examination, which will also include the discussion and evaluation of their research project; b) evaluation of their curriculum and of any other qualification document. The score system is specified below (article 12, paragraph 1, sub-paragraph c) of the Doctoral Regulation of July 4th 2013.
The oral examination will be carried out in English.

For applicants who are not resident in Italy, it will be possible to take the oral examination by Skype, if required in the online application.

Scoring of applicants:

<table>
<thead>
<tr>
<th>parameter</th>
<th>minimum score</th>
<th>maximum score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral examination</td>
<td>40/120</td>
<td>60/120</td>
</tr>
<tr>
<td>Research project</td>
<td>27/120</td>
<td>40/120</td>
</tr>
<tr>
<td>Curriculum vitae, qualification documents and publications (if any)</td>
<td>13/120</td>
<td>20/120</td>
</tr>
</tbody>
</table>

Eligibility is achieved with a minimum score of 80/120

Documents to be attached to the application form:
- research project, concerning a possible topic of research to be carried on in the doctorate period (two A4 pages);
- curriculum vitae;
- list of publications;
- any additional qualification document.

The research project, the curriculum vitae and the qualification documents must be written in English.

During their three year PhD course the selected applicants will have to spend at least three months in foreign laboratories.
INTERNATIONAL DOCTORATE IN STRUCTURAL BIOLOGY
Coordinator Prof. Claudio Luchinat

Administrative office: Magnetic Resonance Center (CERM)

No. of Positions: 5

Scholarships: 4
1 University of Florence
3 Interuniversity Consortium for Magnetic Resonance of Metallo Proteins (CIRMMP)

Positions with no scholarship: 1

Administrative office: Magnetic Resonance Center (CERM)

To the successful applicants without a scholarship, contracts of apprenticeship (“Apprendistato di Alta Formazione e Ricerca”) may be offered, whenever available, according to article 2, paragraph 10 of the PhD Call.

Evaluation of applicants: applicants will be selected by oral examination, evaluation of their curriculum, of any other qualification document, and of their research project, through a score system as specified below (article 12, paragraph 1, sub-paragraph c) of Doctoral Regulation n. 670 of July 4th 2013).

The evaluation will be held in English.

Scoring of applicants:

<table>
<thead>
<tr>
<th>parameter</th>
<th>Minimum score</th>
<th>maximum score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Curriculum vitae, any other qualification document, research project</td>
<td>40/120</td>
<td>60/120</td>
</tr>
<tr>
<td>Oral examination</td>
<td>40/120</td>
<td>60/120</td>
</tr>
</tbody>
</table>

Eligibility is achieved with a minimum score of 80/120

Documents to be attached to the application form:
- curriculum vitae;
- any additional qualification document and publications;
- research project.

All the documentation requested must be written in English (on pain of exclusion).

The research project will be discussed and evaluated during the oral examination. The project must describe a possible research activity to develop in the three years of the doctorate.

During their three year PhD course the selected applicants will have to spend at least three months in foreign Research Institutes.
DOCTORAL PROGRAMME IN MATHEMATICS, COMPUTER SCIENCE, STATISTICS
Coordinator Prof. Graziano Gentili

Administrative office: Department of Mathematics and Computer Science “U. Dini” (DIMAI)

Partner Institutions of the Consortium: University of Perugia, Istituto Nazionale di Alta Matematica“F. Severi” (INDAM)

Curricula:
1) Mathematics
2) Computer Science
3) Statistics

No. of Positions: 13

Scholarships: 11
   6 University of Florence
   3 University of Perugia
   2 Istituto Nazionale di Alta Matematica“F. Severi” (INDAM)

3 of which are reserved to applicants who have obtained in a foreign University the degree that is necessary to be admitted to the Ph.D. courses, according to art.1, paragraph 2, of Ph.D Call.

Positions with no scholarship: 2

Evaluation of applicants for standard positions:
Applicants will be selected through written and oral examinations, along with the evaluation of the curriculum, of possible qualification documents and of the research project (article 12, paragraph 1, subparagraph b) of Doctoral Regulation of July 4th 2013).

Reserved Positions according to art.1, paragraph 2, of Ph.D Call: evaluation of applicants.
Applicants will participate to a competition based on the evaluation of their own curriculum, scientific qualifications and research project. The Admission Board may also request an oral examination (which can be organized via Skype, if required in the online application) of the eligible applicants. Applicants for these reserved positions will be ranked separately. The reserved positions not allocated will be made available as standard positions.

Reserved Positions (art.1, paragraph 2, of Ph.D Call): scoring of applicants

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Maximum score</th>
<th>Minimum score for eligibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Curriculum vitae, qualification documents, research project</td>
<td>60/120</td>
<td>40/120</td>
</tr>
<tr>
<td>Oral examination (if requested by the Board)</td>
<td>60/120</td>
<td>40/120</td>
</tr>
</tbody>
</table>

Documents to be attached to the application form by all applicants:
- curriculum vitae;
- any additional qualification document;
- research project.

The research project, consisting of 5,000 characters maximum, will be discussed and evaluated during the oral examination, and will contribute to the evaluation of the aptness of the applicant for research.

Foreign language for the written examination: English.
DOCTORAL PROGRAMME IN CHEMICAL SCIENCES
Coordinator Prof. Piero Baglioni

Administrative office: Department of Chemistry “Ugo Schiff”

Curricula:
1) Chemistry
2) Science for the Conservation of Cultural Heritage

No. of Positions: 11

Scholarships: 8
6 University of Florence
1 University of Florence and Department of Chemistry “Ugo Schiff” – Theme: “Electrodeposition and characterization of thin films”

Positions with no scholarship: 3

Contracts of apprenticeship (“Apprendistato di Alta Formazione e Ricerca”), whenever available, may be offered to the successful applicants with no scholarship, according to Article 2, paragraph 10 of the PhD Call.

Evaluation of applicants:
applicants will be selected by evaluation of their curriculum, of qualification documents and of their research project and successive oral examination, through a score system as specified below (article 12, paragraph 1, sub-paragraph c) of Doctoral Regulation of July 4th 2013).

Scoring of applicants:

<table>
<thead>
<tr>
<th>parameter</th>
<th>minimum score</th>
<th>maximum score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Curriculum Vitae, student career, qualification documents and publications, research project</td>
<td>40/120</td>
<td>60/120</td>
</tr>
<tr>
<td>Applicants who obtain at least 40/120 marks in the evaluation of the above parameters will be admitted to the oral examination</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oral examination: discussion of the research project, the qualification documents presented and publications</td>
<td>40/120</td>
<td>60/120</td>
</tr>
</tbody>
</table>

The oral examination will be successful for applicants who obtain at least 40/120 marks

Applicants who obtain at least 80/120 overall marks and 40/120 marks in each evaluation will be eligible to enter the Doctorate course according to the final ranking.

Documents to be attached to the application form (candidate's surname must be cited in the files name):
- curriculum vitae;
- list of exams taken with the relative grades;
- list of any additional qualification document and scientific publications;
- a suitable research project written in English in no more than 12,000 characters including spaces, comprising abstract, introduction and references, in order to assess the applicant’s aptitude to research;
- title and short summary (maximum five A4 sheets) of the Master thesis.

The possession of these documents must be declared with a self-certification (D.P.R. n. 445/2000).
The oral examination may be given in **English**. If given in Italian, the oral examination will include an assessment of **English** language proficiency.

For applicants who are not resident in Italy, it will be possible to take the oral examination by Skype, if required in the online application.
SOCIAL SCIENCES AREA

DOCTORAL PROGRAMME IN LEGAL SCIENCES
Coordinator Prof. Leonardo Ferrara

Administrative office: Department of Legal Sciences (DSG)

Curricula:
1) Comparative Law
2) Public Law – Town Planning Law and Environmental Law
3) Criminal Law and Criminal Procedure
4) Private Law
5) International and European Union law
6) Theory and History of Law – Theory and History of Human Rights (International) – Authorities in agreement: University of Paraná (Curitiba, Brazil); University Federal of Paraiba (Joao Pessoa, Brazil).

No. of Positions: 9

Scholarships: 7 University of Florence

Concerning the international curriculum on Theory and History of Human Rights: to spend one year in one of the universities with whom the agreement has been made: Federal University of Paraná (Curitiba, Brasil) and Federal University of Paraiba (Joao Pessoa, Brasil) is required.

Positions with no scholarship: 2

Evaluation of candidates:
Candidates will be selected by a written test (in the form of an essay), by oral examination, by evaluation of their curriculum, their other qualification documents and their research project. The essay will cover the topics of each curriculum belonging to the PhD program. Only candidates with a score of 40/60 and above will be admitted to the oral part. At the end of each oral session the examining commission will publicize the results. [See Article 12, paragraph 1, sub-paragraph b) of Doctoral Regulation of 04 July 2013].

Scoring of candidates:

<table>
<thead>
<tr>
<th>parameter</th>
<th>minimum score</th>
<th>maximum score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral examination, including the assessment of the knowledge of the foreign language, chosen from English, French, German and Spanish</td>
<td>20/60</td>
<td>30/60</td>
</tr>
<tr>
<td>Research project and any additional qualification documents</td>
<td>15/60</td>
<td>20/60</td>
</tr>
<tr>
<td>Curriculum vitae</td>
<td>5/60</td>
<td>10/60</td>
</tr>
</tbody>
</table>

Eligibility is achieved with a minimum total score of 80/120

Documents to be attached to the application form:
- curriculum vitae;
- any additional qualification document and scientific publication;
- abstract of the JD dissertation;
- research project, of at most 5 pages, indicating with sufficient precision the subject, the objectives and the methodology, which will be discussed during the oral examination.
TECHNOLOGICAL AREA

DOCTORAL PROGRAMME IN ARCHITECTURE
Coordinator Prof.ssa Maria Teresa Bartoli

Administrative Office: Department of Architecture (DiDA)

Curricula:
1) Architectural and Urban Design
2) Architectural Technologies
3) History of Architecture and Cities
4) Design
5) Survey and Representation of Architecture and Environment
6) Structures and Conservation of Architecture and Cultural Heritage
7) Landscape Architecture
8) Urban and Regional Planning

No. of Positions: 12

Scholarships: 9 University of Florence

Positions with no scholarship: 3

Evaluation of applicants:
applicants will be selected following oral examination and evaluation of curriculum vitae, publications and other qualification documents, as well as the research project, according to the following scheme (article 12, paragraph 1, sub-paragraph c) of Doctoral Regulation n. 670 of July 4th 2013).

Scoring criteria:

<table>
<thead>
<tr>
<th>parameter</th>
<th>minimum score</th>
<th>maximum score</th>
</tr>
</thead>
<tbody>
<tr>
<td>curriculum vitae, publications and other qualification documents (if any)</td>
<td>10/120</td>
<td>20/120</td>
</tr>
<tr>
<td>research project</td>
<td>30/120</td>
<td>40/120</td>
</tr>
<tr>
<td>oral examination: discussion of the project and publications (if any)</td>
<td>40/120</td>
<td>60/120</td>
</tr>
</tbody>
</table>

Eligibility is achieved with a minimum score of 80/120

Documents to be attached to the application form:
- Research project;
- curriculum vitae, related to training activities and research carried out by the candidate, of maximum two folders, as well as an indication of the foreign language chosen for verification;
- Qualifications (if any)

The application must be accompanied by a research project, organized according to the points listed as follow:
- applicant’s name and surname,
- title of the research project; curriculum (indicate only one of the eight present curriculum);
- summary (identification of the research problem, main expected results, originality - max 500 characters, spaces included);
- Description of the research project (detailed description of the project with emphasis on the innovative aspects and scientific importance - min 9,000 / max 15,000 characters, including spaces);
The project description should include:
- Organization of the scientific problem and connected questions, with reference to the state of art;
- Objectives and expected results;
- Methodology (with an indication of the tools that you deem necessary for the performance, already owned or to be acquired);
- Cultural and social interest and impact;
- Bibliograph.

The request is made to evaluate the candidate's aptitude to propose a related search with the chosen curriculum for curriculum themes: [http://www.dida.unifi.it/vp-352-dottorato-di-architettura.html](http://www.dida.unifi.it/vp-352-dottorato-di-architettura.html)
The project can be written in Italian or English.
**DOCTORAL PROGRAMME IN SUSTAINABLE MANAGEMENT OF AGRICULTURAL RESOURCES, FORESTRY AND FOOD**
Coordinator Prof. Leonardo Casini

**Administrative office:** Department of Agricultural, Food and Forestry Systems (GESAAF)

**Curricula:**
1) Wine Economics and Rural Development (EVSR)
2) Economics, Forestry Planning and Wood Sciences (EPFSL)
3) Agro-Forest Engineering (IAF)
4) Science and Food Technology (STA)

**No. of Positions:** 7

**Scholarships:** 5  
4 University of Florence  
1 Davide Campari Milano S.p.a.

**Positions with no scholarship:** 2

**Evaluation of applicants:**
applicants will be selected by written examination and oral examination (article 12, paragraph 1, subparagraph a) of Doctoral Regulation n. 670 of July 4\textsuperscript{th} 2013).

English language examination intended to assess the knowledge of a foreign language.
DOCTORAL PROGRAMME IN AGRICULTURAL AND ENVIRONMENTAL SCIENCES
Coordinator Prof. Simone Orlandini

Administrative office: Department of Agrifood Production and Environmental Sciences (DISPAA)

No. of Positions: 8

Scholarships: 6 University of Florence

Positions with no scholarship: 2

Evaluation of applicants:
applicants will be selected by oral examination including the evaluation of CV and presented research project (article 12, paragraph 1, sub-paragraph c) of Doctoral Regulation n. 670 of July 4th 2013).

Scoring of applicants:

<table>
<thead>
<tr>
<th>parameter</th>
<th>minimum score</th>
<th>maximum score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Curriculum vitae, any additional qualification documents</td>
<td>10/120</td>
<td>15/120</td>
</tr>
<tr>
<td>Research project</td>
<td>30/120</td>
<td>40/120</td>
</tr>
<tr>
<td>Oral Examination: argumentation of the research project and any additional qualification documents</td>
<td>40/120</td>
<td>65/120</td>
</tr>
</tbody>
</table>

Eligibility is achieved with a minimum total score of 80/120

CV has to be presented in European format (Europass).
The research project should be attached to the application form and it should be made as the project pattern uploaded into the following departmental webpage (section “dottorato di ricerca”): http://www.dispaa.unifi.it/vp-26-dottorati.html. The research project should be focused on a possible research activity, which the applicant will be going to execute during the three-year doctoral program. English language examination intended to assess the knowledge of a foreign language.

For applicants who are not resident in Italy, it will be possible to take the oral examination by Skype, if required in the online application.

The admission examination can be taken in the following foreign language: English.

Documents to be attached to the application form:
- curriculum vitae;
- any additional qualification document and scientific publications;
- research project.

Research project
Research project has to be prepared in Italian or English in no more than 12 000 characters including spacing, and structured in introduction, state of the art, objectives, materials and methods with temporal distribution of the phases, expected results. For XXXI cycle, several priorities of interest have been selected. The project must relate, and should make specific reference, to one of them listed below. The violation of the above prescription causes the exclusion from the competition.
Themes
- Study of soil - rootstock interaction for the mitigation of water stress in viticulture.
- Partial inclusion of insect meal in feed for fish: effects on digestive functions, lipid metabolism and molecular interactions between fish and gut bacterial community
- Fruits from remediated sediments: physiological, qualitative, environmental and social aspects
- Tree diversity and forest functionality: an integrated analysis of national databases and field surveys.
- Algae cultures for the production of advanced biofuels and biofertilizers
- Development of diagnostic tools to detect plant quarantine pathogens
- Biotechnological innovative approaches for the safe and environmental-friendly control of plant diseases caused by Gram negative bacteria.
- Agriculture and climate change in vulnerable countries: the case of Nepal
**DOCTORAL PROGRAMME IN INFORMATION ENGINEERING**  
Coordinator Prof. Luigi Chisci

**Administrative office:** Department of Information Engineering (DINFO)

**Curricula:**
1) Control, Optimization and Complex Systems  
2) Electronics, Electromagnetism and Electrical Systems  
3) Computer Engineering  
4) Telecommunications and Telematics

**No. of Positions:** 10

**Scholarships:** 6 University of Florence  
**Positions with no scholarship:** 4

To the successful applicants without a scholarship, contracts of apprenticeship (“Apprendistato di Alta Formazione e Ricerca”) may be offered, whenever available, according to Article 2, paragraph 10 of the Call.

**Evaluation of applicants:**  
applicants will be selected following oral examination and evaluation of curriculum vitae, publications and other qualification documents, as well as the research proposal, according to the following scheme (article 12, paragraph 1, sub-paragraph c) of Doctoral Regulation n. 670 of July 4th 2013).

**Scoring of applicants:**

<table>
<thead>
<tr>
<th>parameter</th>
<th>minimum score</th>
<th>maximum score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Curriculum vitae, qualification documents and publications (if any)</td>
<td>27/120</td>
<td>40/120</td>
</tr>
<tr>
<td>Research proposal</td>
<td>27/120</td>
<td>40/120</td>
</tr>
<tr>
<td>Applicants who obtain at least 27/120 marks in the evaluation of the two above parameters will be admitted to the oral examination</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interview (including a discussion of the research proposal)</td>
<td>26/120</td>
<td>40/120</td>
</tr>
</tbody>
</table>

*Eligibility is achieved with a minimum score of 80/120*

For applicants who are not resident in Italy, it will be possible to take the oral examination by Skype, if required in the online application.

**Documents to be enclosed with the application form:**
- Curriculum vitae including a list of publications and of the other qualification documents (if any);  
- Title and grades of Bachelor and Master Thesis,  
- List of exams of Bachelor and Master Degrees with grades (documents should be either in Italian or in English);  
- Publications and qualification documents (if any);  
- Research proposal.

The proposal must be in .pdf format, written either in Italian or in English.  
The proposal should describe a three years project having a high potential for novel scientific contributions in the broad field of Information Engineering, but also in other fields provided that methodologies and/or technologies of Information Engineering are exploited.  
This proposal must include the specific reference to the curriculum and the chosen area of study, as specified in the table reported below:
<table>
<thead>
<tr>
<th>Curriculum</th>
<th>Areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control, Optimization and Complex</td>
<td>AREA 1 – CONTROL SYSTEMS: concerns the analysis, modelling and</td>
</tr>
<tr>
<td>Systems</td>
<td>synthesis of high-performance automatic control, supervision and</td>
</tr>
<tr>
<td></td>
<td>monitoring systems for processes that are only partially known and</td>
</tr>
<tr>
<td></td>
<td>possibly subject to constraints such as those encountered in industrial</td>
</tr>
<tr>
<td></td>
<td>applications, robotics, bio-engineering, aerospace, electrical systems,</td>
</tr>
<tr>
<td></td>
<td>etc.</td>
</tr>
<tr>
<td></td>
<td>AREA 2 – OPTIMIZATION: concerns the study of Operations Research</td>
</tr>
<tr>
<td></td>
<td>models and their applications, as well as the development and the</td>
</tr>
<tr>
<td></td>
<td>analysis of efficient optimization algorithms for the solution of</td>
</tr>
<tr>
<td></td>
<td>complex problems. The optimization applications are found both in the</td>
</tr>
<tr>
<td></td>
<td>field of automation systems as well as in the productive world, from</td>
</tr>
<tr>
<td></td>
<td>logistics to transportation, to the supply-chain, in the networks of</td>
</tr>
<tr>
<td></td>
<td>electrical energy management (“smart grids”) even in stochastic</td>
</tr>
<tr>
<td></td>
<td>contexts and multiple decision-makers (game theory).</td>
</tr>
<tr>
<td></td>
<td>AREA 3 – COMPLEX SYSTEMS: this research area is suitable for</td>
</tr>
<tr>
<td></td>
<td>applicants with a strong background in Physics, Chemistry,</td>
</tr>
<tr>
<td></td>
<td>Mathematics or Engineering who are willing to carry out research work</td>
</tr>
<tr>
<td></td>
<td>of cross-disciplinary type. Training aims to deepen the more formal</td>
</tr>
<tr>
<td></td>
<td>aspects of the analysis of complex systems. The research topic can</td>
</tr>
<tr>
<td></td>
<td>concern methodological aspects, from dynamical systems to stochastic</td>
</tr>
<tr>
<td></td>
<td>processes, including complex networks and their applications, from</td>
</tr>
<tr>
<td></td>
<td>computer engineering to life science.</td>
</tr>
<tr>
<td>Electronics, Electromagnetism and</td>
<td>AREA 1 – HIGH-FREQUENCY ELECTRONICS: concerns the analysis and design</td>
</tr>
<tr>
<td>Electrical Systems</td>
<td>of electronic devices and systems at high frequency (from radio</td>
</tr>
<tr>
<td></td>
<td>frequency to millimetre waves).</td>
</tr>
<tr>
<td></td>
<td>AREA 2 – DIGITAL ELECTRONIC SYSTEMS: concerns the analysis and design</td>
</tr>
<tr>
<td></td>
<td>of electronic systems based on advanced digital components, with</td>
</tr>
<tr>
<td></td>
<td>applications from biomedical to radar fields.</td>
</tr>
<tr>
<td></td>
<td>AREA 3 – ELECTROMAGNETISM: concerns the use and development of</td>
</tr>
<tr>
<td></td>
<td>numerical techniques for the analysis and design of radiant systems</td>
</tr>
<tr>
<td></td>
<td>and passive devices at high frequency, from some GHz up to optical</td>
</tr>
<tr>
<td></td>
<td>frequencies.</td>
</tr>
<tr>
<td></td>
<td>AREA 4 – ELECTRICAL SYSTEMS: concerns the critical and</td>
</tr>
<tr>
<td></td>
<td>comparative analysis of control techniques for electrical drives with</td>
</tr>
<tr>
<td></td>
<td>the development of innovative algorithms, the automation of power</td>
</tr>
<tr>
<td></td>
<td>systems, with particular reference to the “power quality” in</td>
</tr>
<tr>
<td></td>
<td>distribution networks, to the “smart-metering” and fault diagnosis in</td>
</tr>
<tr>
<td></td>
<td>electrical systems.</td>
</tr>
<tr>
<td>Computer Engineering</td>
<td>AREA 1 – METHODS AND TECHNOLOGIES OF SOFTWARE: concerns methods of</td>
</tr>
<tr>
<td></td>
<td>design, examination and evaluation of complex software systems, with</td>
</tr>
<tr>
<td></td>
<td>further details on formal methods and advanced SW architectures.</td>
</tr>
<tr>
<td></td>
<td>AREA 2 – PATTERN RECOGNITION AND COMPUTER VISION: concerns multimedia</td>
</tr>
<tr>
<td></td>
<td>processing, classification and media search from databases and Internet,</td>
</tr>
<tr>
<td></td>
<td>solutions for human-machine interaction, smart environments.</td>
</tr>
<tr>
<td></td>
<td>AREA 3 – ARTIFICIAL INTELLIGENCE AND BIOINFORMATICS: is mainly</td>
</tr>
<tr>
<td></td>
<td>focused on machine learning and its applications to bioinformatics.</td>
</tr>
<tr>
<td></td>
<td>AREA 4 – DISTRIBUTED SYSTEMS AND DATA ENGINEERING: it concerns the</td>
</tr>
<tr>
<td></td>
<td>study of distributed, parallel and complex processing systems wherein</td>
</tr>
<tr>
<td></td>
<td>distributed architecture, performance and data complexity issues are</td>
</tr>
<tr>
<td></td>
<td>integral part of the problem, such as for instance in applications for</td>
</tr>
<tr>
<td></td>
<td>big data, smart cities, smart clouds, internet-of-things, smart</td>
</tr>
<tr>
<td></td>
<td>manufacturing, etc.</td>
</tr>
<tr>
<td>Telecommunications and Telematics</td>
<td>AREA 1 – ALGORITHMS AND TECHNOLOGIES FOR SIGNAL PROCESSING: concerns</td>
</tr>
<tr>
<td></td>
<td>processing methods and techniques of mono/multidimensional signals for</td>
</tr>
<tr>
<td></td>
<td>the extraction of information and the efficiency of their representation in transmission and storage.</td>
</tr>
<tr>
<td></td>
<td>AREA 2 – TRANSMISSION SYSTEMS: concerns methods and techniques for efficient generation, transmission and disclosure of information through future terrestrial and satellite transmission channels.</td>
</tr>
<tr>
<td></td>
<td>AREA 3 – TELECOMMUNICATION NETWORKS: concerns methods and techniques for efficient transfer of information from source to destination through complex and advanced communication networks and related communication network applications.</td>
</tr>
<tr>
<td></td>
<td>AREA 4 – TELEMATICS AND INFORMATION SOCIETY: this cross-disciplinary area involves the applications of ICT technologies considered as key-enabling in different scientific and application domains. It requires a multi-disciplinary background in order to cope with the large variety of services and applications of telematics. The domains of interest include: telecommunications, communication, political and socio-economic sciences including all areas of the “Societal Challenges” of the European programme H2020.</td>
</tr>
</tbody>
</table>
DOCTORAL PROGRAMME IN INDUSTRIAL ENGINEERING
Coordinator Prof. Maurizio De Lucia

Administrative office: Department of Industrial Engineering Florence (DIEF)

Curricula:
1) Energy and Innovative Industrial & Environmental Technologies
2) Design and development of Industrial Products and Processes
3) Industrial Engineering and Reliability
4) Science and Engineering of Materials
5) Industrial Sciences

No. of Positions: 22

Scholarships: 17
5 University of Florence
4 Regione Toscana Pegaso Scholarships 2016 - (Note: in accordance with art. 8 co.4 of the call, the scholarships funded by the Tuscany Region will be granted subject to the successful allocation of financial resources to the University of Florence and the signature of the agreement between the University and the Region)
1 PIN S.c.r.l. Prato
1 Nuovo Pignone Tecnologie s.r.l. – Theme: “Development of numerical and/or experimental approaches for efficiency improvement and exhaust emission control in Internal Combustion Engines”
1 University Hospital Meyer
4 Department of Industrial Engineering Florence (DIEF)
1 Consorzio Interuniversitario Nazionale per la Scienza e Tecnologia dei Materiali (INSTM) and Department of Industrial Engineering Florence (DIEF) – Theme: “Nanostructured Magnetic Materials”.

Positions with no scholarship: 4

Evaluation of applicants:
applicants will be selected by oral examination, evaluation of their curriculum, of their other academic or professional qualifications and of their research project through a score system as specified below (article 12, paragraph 1, sub-paragraph c) of Doctoral Regulation n. 670 of July 4th 2013).

Scoring of applicants:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>minimum score</th>
<th>maximum score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evaluation of the curriculum vitae, evaluation of other academic or professional qualifications and publications (if any)</td>
<td>12/120</td>
<td>18/120</td>
</tr>
<tr>
<td>Evaluation of the research project</td>
<td>28/120</td>
<td>42/120</td>
</tr>
<tr>
<td>Oral examination: discussion of the project and publications (if any)</td>
<td>40/120</td>
<td>60/120</td>
</tr>
</tbody>
</table>

Eligibility is achieved with a minimum score of 80/120

The applicant will be excluded from the evaluation, if one of three minimum scores will not be obtained.

For applicants who are not resident in Italy, it will be possible to take the oral examination by Skype, if required in the online application.

Documents to be attached to the application form:
- curriculum vitae;
- any additional qualification documents and scientific publications;
- research project.
The research project must be written in Italian or English in NO MORE than 12,000 characters including spacing, abstract, introduction and references (otherwise the applicant will be excluded from the evaluation). The project must relate, and should make specific reference, to one of the working themes listed below. The violation of the above prescription causes the exclusion from the competition.

Themes of Doctoral Program:

- Study and development of innovative traction and braking on-board subsystems for railway vehicles CNT01_00176_166167
- Development and validation of innovative flexible multibody models for railway vehicles CNT01_00176_166167
- Development and validation of innovative adhesion models and odometry algorithms for railway applications CNT01_00176_166167
- Development of innovative vehicles navigation algorithms CNT01_00176_166167
- Development and design of innovative test-rigs of high-speed turbomachines
- Development and validation of innovative thermo-elastic-hydrodynamic models for tilting pad journal bearing
- Light Rail Transit: Grade of Automation Enhancement in Tramway Operations
- Development of an integrated maintenance approach in the Life Cycle of a gas supply network
- Health Care Systems Engineering
- Throughflow methods for multistage turbomachinery study
- Turbomachinery aeroelasticity analysis
- Numerical and experimental analysis of flow network for both pipeline and energy systems applications
- Numerical and experimental analysis of gas turbine or related components/phenomena (e.g. combustion, heat transfer, lubrication)
- SOLAR Concentrators: Development of components and integrated systems
- Numerical and experimental methodologies for reciprocating compressor development
- Development of numerical and/or experimental approaches for efficiency improvement and exhaust emission control in Internal Combustion Engines
- Complex interactions in the Turbomachinery components even using Innovative Fluids
- Ejector refrigeration: development of ejector chiller using water vapour as a working fluid, with special emphasis on condensation problems within the ejector. Thermodynamic, fluid-dynamic and experimental activity
- Nanostructured magnetic materials
- The use of cast irons austempered in the structural elements of railway vehicles
- Modeling and optimization of machining operations for thin-walled parts of machining processes
- E-call for motorcyclists: definition of system requirements and analysis of activation conditions
- Wireless Power Charging for Full and Plug-in Hybrid Electric Vehicles
- Development of Event Data Recorder systems (EDR) for accident reconstruction
- Development of design methodologies for pediatric biomedical devices
- Development of tools and methodologies for reverse engineering and additive manufacturing
- CNT01_00176_166167 “Tecniche e strumenti per incrementare la sostenibilità ambientale dei sistemi di trasporto ferroviari” (Tesys Rail) supported by MIUR - Progetti Cluster Nazionali.
DOCTORAL PROGRAMME IN SMART COMPUTING
Coordinator: Prof. Paolo Frasconi

Regione Toscana Pegaso Project — Partners: University of Florence, University of Pisa, University of Siena, Fondazione Bruno Kessler (FBK) - Trento.

Administrative office: Department of Information Engineering (DINFO)

No. of positions: 15

Scholarships: 12

5 University of Florence

4 Regione Toscana Pegaso Scholarships 2016 - (Note: in accordance with art. 8 co.4 of the call, the scholarships funded by the Tuscany Region will be granted subject to the successful allocation of financial resources to the University of Florence and the signature of the agreement between the University and the Region);

3 Fondazione Bruno Kessler (FBK) –Trento - (Note: in accordance with art. 8 co.4 of the call, the scholarships funded by the Fondazione Bruno Kessler will be granted subject to the successful allocation of financial resources to the University of Florence and the signature of the agreement between the University and Fondazione Bruno Kessler).

Positions with no scholarship: 3

Evaluation of applicants:
Applicants will be scored according to several parameters (evaluation of curriculum vitae, publications and other qualification documents, research project, interview), as detailed in the scheme below (article 12, paragraph 1, sub-paragraph c) of Doctoral Regulation n. 670 of July 4th 2013).

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Minimum score</th>
<th>Maximum score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Curriculum vitae; qualification documents</td>
<td>27/120</td>
<td>40/120</td>
</tr>
<tr>
<td>Research proposal</td>
<td>27/120</td>
<td>40/120</td>
</tr>
<tr>
<td>Applicants scoring at least 54/120 on the above parameters will be shortlisted for interview</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interview (including a discussion of the research proposal)</td>
<td>26/120</td>
<td>40/120</td>
</tr>
</tbody>
</table>

Candidates with an overall score below 80/120 cannot be admitted to the program

Documents to be enclosed with your application:
- Curriculum vitae (including a list of publications)
- Transcript of records of your MSc degree;
- Research proposal;
- List of names and email addresses of up to three scholars familiar with your academic work who have agreed to provide a reference to support your application.

Optional documents:
- PDF copy of your MSc thesis (if available);
- Any other qualification documents useful to support your application.

All documents (except the research proposal, see below) should be in Italian or in English.
The research proposal should describe a three years project having a high potential for a novel scientific contribution in all research areas of the broad field of Smart Computing, including but not limited to:

- Artificial Intelligence
- Computer Networking
- Computer Vision
- Computer Architectures
- Conversational Agents
- Data Analysis and Social Network Data Analysis
- Fog/Edge computing in IoT
- Embedded and Cyber-physical Systems
- Machine Learning
- Neuroinformatics
- Pervasive Sensing & Computing
- Quantitative evaluation and verification of concurrent systems
- Security and Privacy in Smart Systems
- Software architectures and engineering methods

The research proposal should be written in English and should be submitted as a PDF file. The length may not exceed 12,000 characters.

Foreign residents are allowed to use Skype for the interview. If you wish to take advantage of this opportunity, please check this option when completing the online application.
INTERNATIONAL DOCTORATE IN CIVIL AND ENVIRONMENTAL ENGINEERING
Coordinator Prof. Fabio Castelli

Pegaso Project Regione Toscana – Partner Institutions: University of Florence, University of Pisa

University in agreement: University of Perugia, Technical University of Braunschweig (Germany)

Administrative office: Department of Civil and Environmental Engineering (DICEA)

Curricula:
1) Solid, Fluid and Materials Mechanics
2) Construction Design, Verification and Control
3) Environment, Resources and Security

For further details on the international joint degrees and the description of the curricula and the co-financing grants view the Ph.D. programme website: http://www.ddicea.unifi.it/mdswitch.html

No. of Positions: 13

Scholarships: 10
4 University of Florence
3 University of Perugia

3 Regione Toscana Pegaso Scholarships 2016 - (Note: in accordance with art. 8 co.4 of the call, the scholarships funded by the Tuscany Region will be granted subject to the successful allocation of financial resources to the University of Florence and the signature of the agreement between the University and the Region);

Positions with no scholarship: 3

Evaluation of applicants:
Oral examination, evaluation of the curriculum, of any other qualification document and of the research project (article 12, paragraph 1, sub-paragraph c) of Regulation, Doctoral Regulation n. 670 of July 4th 2013). The research project submitted with the application will be discussed with the candidate during the oral examination. The candidate’s engineering background, necessary for the proposed research project, will be also verified during the oral examination.

Scoring of applicants:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>minimum score</th>
<th>maximum score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral examination</td>
<td>50/120</td>
<td>70/120</td>
</tr>
<tr>
<td>Curriculum vitae, qualification documents and publications</td>
<td>10/120</td>
<td>20/120</td>
</tr>
<tr>
<td>Research project</td>
<td>20/120</td>
<td>30/120</td>
</tr>
</tbody>
</table>

Eligibility is achieved with a minimum score of 80/120

For applicants who are not resident in Italy, it will be possible to take the oral examination by Skype, if required in the online application.

Documents to be attached to the application form:
- curriculum vitae;
- any additional qualification documents and scientific publications;
- research project, within the theme of the Ph.D., which must be written in English up to a maximum of three pages and will refer to at least one of curricula.
A good knowledge of spoken and written English is required.

**Minimum length of stay at a foreign institution:** a minimum of total 9 month period of stay for research activity is required, either at TU- Braunschweig or other foreign university with a co-tutelle agreement to be signed within the first year of the course.
HUMANITIES AREA

DOCTORAL PROGRAMME IN PHILOLOGY, ITALIAN LITERATURE, LINGUISTICS
Coordinator Prof. Donatella Coppini

Administrative office: Department of Humanities (DILEF)

Curricula:
1) Italian Studies (International) – Partner Institutions: Rheinische Friedrich-Wilhelms University, Bonn, Germany; University of Paris IV Sorbonne, France
2) Linguistics (International)
3) History and Critical Tradition of Medieval and Renaissance Texts

No. of Positions: 6

Scholarships: 4 University of Florence

Positions with no scholarship: 2

Evaluation of applicants:
applicants will be selected by written examination, oral examination, evaluation of their curriculum, of their other qualification documents and of their research project (article 12, paragraph 1, sub-paragraph b) of Doctoral Regulation n. 670 of July 4th 2013).

Documents to be attached to the application form:
- abstract of Master thesis (or equivalent degree) including professor name and evaluation;
- curriculum vitae;
- list of exams taken with the relative grades;
- any scientific qualification document which the applicant considers useful to discuss during the oral examination;
- research project which the applicant intends to carry out during the Ph.D.

The written examination consists of a detailed study on a topic chosen from among those proposed by the Commission, which will focus:
- on the interpretation and the commentary to a text or illustration of a fundamental theme of Italian Literature from its origins to the contemporary (Italian Studies);
- on a theme featuring one of the following areas: historical linguistics, theoretical linguistics, corpus linguistics, Italian linguistics and communication theory (Linguistics);
- on the illustration of themes, texts or palaeographic Medieval or Renaissance documents (History, and Critical Tradition of Medieval and Renaissance Texts).

The oral examination consists of a discussion of the research project proposed by the applicant, the scientific qualification documents presented and the assessment of the knowledge of a foreign language (Latin is obligatory for the curriculum in History and Critical Tradition of Medieval and Renaissance Texts).

For applicants who are not resident in Italy, it will be possible to take the oral examination by Skype, if required in the online application.

Foreign applicants (non EU citizen) with no scholarship will be selected by written and oral examinations like Italian and EU applicants. Foreign applicants (non EU citizen) with no scholarship must apply by the deadline and keep the procedures required in the Call for admissions. After their degree is recognized as equivalent to European degrees they will be called for an evaluation interview. During the interview they have to demonstrate an excellent knowledge of Italian language, and will be asked about their studies in the areas connected with the Doctoral Program and requested to introduce the research project they proposed.

As regards international curricula:
Stay abroad of doctoral candidates for research purposes: Minimum stay of three months.
DOCTORAL PROGRAMME IN PHILOSOPHY
Coordinator: Prof. Adriano Fabris

Pegaso Project Regione Toscana – Partner Institutions: University of Florence, University of Pisa

University in agreement: University of Pisa

Administrative office: Department of Literature and Philosophy (DILEF)

No. of Positions: 8

Scholarships: 6
1 University of Florence
2 University of Pisa - (Note: in accordance with art. 8 co.4 of the call, the scholarships funded by the University of Pisa will be granted subject to the successful allocation of financial resources to the University of Florence and the signature of the agreement between the University of Florence and the University of Pisa);
3 Regione Toscana Pegaso Scholarships 2016 - (Note: in accordance with art. 8 co.4 of the call, the scholarships funded by the Tuscany Region will be granted subject to the successful allocation of financial resources to the University of Florence and the signature of the agreement between the University and the Region);

Positions with no scholarship: 2

Evaluation of applicants:
applicants will be selected following oral examination and evaluation of *curriculum vitae et studiorum*, publications and other qualification documents, the research project, according to the following scheme (article 12, paragraph 1, sub-paragraph c) of Doctoral Regulation n. 670 of July 4th 2013).

Scoring criteria:

<table>
<thead>
<tr>
<th>parameter</th>
<th>Minimum score</th>
<th>maximum score</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Curriculum vitae et studiorum</em>, publications and other qualification documents (if any)</td>
<td>27/120</td>
<td>40/120</td>
</tr>
<tr>
<td>Research project</td>
<td>27/120</td>
<td>40/120</td>
</tr>
<tr>
<td>Applicants obtaining a score of at least 54/120 in the evaluation of the two above parameters will be admitted to the oral examination</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oral examination: discussion of the research project, publications and other qualification documents (if any)</td>
<td>26/120</td>
<td>40/120</td>
</tr>
</tbody>
</table>

*Eligibility is achieved with a minimum score of 80/120*

The oral examination will focus on a discussion of publications, additional qualification documents (if any), and the research project. The applicant’s philosophical and historico-philosophical skills, both in general and in relation to the research project, will also be evaluated.

The oral examination may be taken either in Italian or English. If taken in Italian, it will include an assessment of the applicant’s competence in the English language; if taken in English, it will include an
assessment of the applicant’s competence in the Italian language. Applicants may request that their competence in other languages be evaluated in addition.

For applicants who are not resident in Italy, it will be possible to take the oral examination by Skype, if requested in the online application.

Documents to be attached to the application form (either in Italian or in English):
- Curriculum vitae et studiorum, including certification of linguistic competences, list of publications, and other qualification documents. The CV will have to specify the names and e-mail addresses of two qualified scholars whom the examining committee may ask for a reference letter.
- Transcript of records of BA/BSc and MA/MSc degrees;
- Title and abstract of the MA/MSc thesis (maximum 5,000 characters including spaces);
- A chapter of the MA/MSc thesis or any other writing sample, either published or unpublished (maximum 45,000 characters including spaces);
- A research project (not binding in case of successful application) consistent with one of the curricula of the PhD programme and explicitly referring to it. The project (maximum 25,000 characters including spaces) will specify a research topic, make clear its originality, and concisely set out the current state of the art on the subject (with adequate bibliographical references) and the lines of inquiry which the candidate believes they could fruitfully pursue during the three years of PhD.
DOCTORAL PROGRAMME IN COMPARATIVE LANGUAGES, LITERATURE AND CULTURE
Coordinator Prof. Maria Rita Manzini

Administrative Office: Department of Languages, Literature and Intercultural Studies

Curricula:
1) German Studies Florence-Bonn (International) – Partner Institutions: Rheinische Friedrich-Wilhelms University, Bonn, Germany
2) Founding Myths of Europe in the Arts and Literature (International) – Partner Institutions: Rheinische Friedrich-Wilhelms University, Bonn, Germany; University of Paris IV, Sorbonne, France
3) Language, Literature and Philology: Intercultural perspectives
4) Linguistics and Oriental Studies

No. of Positions: 6

Scholarships: 4 University of Florence

Positions with no scholarship: 2

Evaluation of applicants:
applicants will be selected by written examination, oral examination, evaluation of their curriculum vitae, and of their research project (article 12, paragraph 1, sub-paragraph b) of Doctoral Regulation n. 670 of July 4th 2013).

The written examination will consist in the analysis of a literary text or the discussion of a subject related to the themes of the four curricula. There will be three texts or subjects proposed, from which the applicant must choose.

The admission examination may be taken in one of the following foreign languages: German, French, English, Spanish.

Each applicant shall demonstrate competence, besides from the language in the area of their specialisation, in one or two foreign languages to be chosen between German, French, English, Spanish.

Documents to be attached to the application form:
- curriculum vitae. The CV must include abstracts of the Degree theses defended (Bachelor degree, Master degree, or other of maximum one page per abstract), as well as an abstract of eventual publications (maximum 250 words per article), stressing the original aspects of the various works.
- research project, of maximum five pages, defining the discipline in which they intend to specialise and written in Italian or in one of the foreign languages: German, French, English and Spanish. The project and the curriculum will be discussed during the oral examination.

As regards international curricula:
Stay abroad of doctoral candidates for research purposes: Minimum stay of three months.

<table>
<thead>
<tr>
<th>Curriculum</th>
<th>Themes</th>
</tr>
</thead>
<tbody>
<tr>
<td>German Studies Florence-Bonn (International)</td>
<td>1) Classical-romantic culture and its reception</td>
</tr>
<tr>
<td>Partner Institution: Rheinische Friedrich-Wilhelms University, (Bonn)</td>
<td>2) 19th century German literature between Realism and Nihilism</td>
</tr>
<tr>
<td></td>
<td>3) Themes and currents of 20th century German Literature</td>
</tr>
<tr>
<td></td>
<td>4) Italo-German studies</td>
</tr>
<tr>
<td>Founding Myths of Europe in the Arts and Literature (International)</td>
<td></td>
</tr>
<tr>
<td>---------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td><strong>Partner Institution:</strong> University of Sorbonne Paris IV, Rheinische Friedrich-Wilhelms University, (Bonn)</td>
<td></td>
</tr>
</tbody>
</table>

| 1) Modernity and new myths |
| 2) Classical antiquity, Italian Renaissance and European culture |
| 3) Mythical figures of European culture |
| 4) Studies on 18th century Europe |
| 5) Literature and arts |
| 6) Aesthetics and poetics of modernity |
| 7) Classical-romantic culture and its reception |

| Language, Literature and Philology: Intercultural Perspectives |

Areas of research: Estonian, Germanic Philology, Romance Philology, Finnish, English, Comparative Literature, Portuguese, Romanian, Scandinavian, Spanish, Turkish, Hungarian. The Topic for the XXXII cycle, on which the written exam will focus, will be: “Authorship. Intercultural linguistic and literary authorial models”.

| Linguistics and Oriental Studies |

3. Philological and linguistic analysis of texts, with particular attention to oriental languages. Analysis and interpretation of documents and texts in modern and ancient languages. Textual genres.
DOCTORAL PROGRAMME IN EDUCATION SCIENCES AND PSYCHOLOGY
Coordinator Prof. Simonetta Ulivieri

Administrative Office: Department of Education and Psychology

Curricula:
- Theory and History of Educational Processes
- Quality of Knowledge and Knowledge of the Differences
- Research Methodologies for Educational Services

No. of Positions: 6

Scholarships: 4 University of Florence

Positions with no scholarship: 2

Evaluation of applicants:
written examination, oral examination with evaluation of the curriculum, of any other qualification document and of the research project (article 12, paragraph 1, sub-paragraph b) of Doctoral Regulation n. 670 of July 4th 2013).

The written examination may be taken in Italian or in English. If the written examination will be taken in Italian language, the written examination will include an assessment of English language; if the oral examination will be taken in English language, the written examination will include an assessment of Italian language.

Documents to be attached to the application form:
- CV with scientific qualifications (in Italian and in English);
- any additional educational and professional qualification document;
- publications (if any);
- research project with bibliographic equipment (max 5 pages in A4 format and fonts 12 or 14 pt) (in Italian and in English).

The research project will be discussed and valued during the oral examination; it will be necessary to the evaluation of applicant's disposition to the research in pedagogical and/or psychological fields.
DOCTORAL PROGRAMME IN HISTORY OF ART AND PERFORMING ARTS
Coordinator Prof. Andrea De Marchi

Regione Toscana Pegaso Project – Partner Universities: University of Florence, University of Pisa, University of Siena.


Curricula:
1) History of Arts
2) History of Performing Arts

No. of Positions: 12

Scholarships: 9
5 University of Florence
4 Regione Toscana Pegaso Scholarships 2016 - (Note: in accordance with art. 8 co.4 of the call, the scholarships funded by the Tuscany Region will be granted subject to the successful allocation of financial resources to the University of Florence and the signature of the agreement between the University and the Region);

Positions with no scholarship: 3

Description:
This Ph.D. programme is aimed at those who propose to carry out research in the field of History of Art and Performing Arts, with particular reference to the Tuscan region, its historical patrimony, as well as its development prospects and its relation to the wider international context. The History of Art curriculum is rooted in the established critical traditions and skills necessary for the identification of the contexts of production and reception essential for the understanding of artworks, studied as intellectual and material products and in the variety of their meanings, from the Middle Ages to the contemporary period. It avails itself of philological and historiographical research, and fosters a range of methodological approaches, from archival work up to the most recent methodological trends of the discipline. Privileged areas of study are: cultural transfers, extended to an international perspective; aspects of commissioning and collecting; organisation of museums and exhibitions; modes of reception in relation to art literature as well as to the history of criticism; modes of production and irradiation as part of the minor arts. The History of Performing Arts curriculum is based on a solid historical tradition which analyses the language of the arts (theatre, music, cinema and video, history of the actor) in accordance with the most innovative methodological trends in historical research and theoretical (even under the profile of reception). Privileged fields of research are the origins of the show (the birth of the opera, the creation of theatrical scenery, the notion of theatre the ‘Italian way’, the spreading of professional acting, the productive system, the socio-political fall-out); the study of archival (including multimedia) and book sources both of theatrical as well as of musical and audiovisual nature; the widespread dissemination of historical theatres; cinema in Tuscany; the network of theatrical, musical and cinematographic institutions; the study of actors and singers; video art, new media, the relation between cinema and art; the analysis of drama (even contemporary); the critical and historiographical tradition.
Evaluation of applicants:
applicants will be selected by written examination, oral examination, evaluation of their curriculum vitae and
of their other qualification documents and of their research project (article 12, paragraph 1, sub-paragraph b)

Themes of the examination:

Written examination:
subjects, topics and methodologies typical of the areas of research pertaining to the Ph.D programme. The
outlines proposed by the Committee will allow a development in line with the specific curriculum, history of
art or performing arts, chosen by each applicant.

Oral examination:
- Evaluation of the curriculum vitae;
- Interview aimed at verifying the applicant’s competence in the field, the contents, suitability, and
modalities of the proposed research project;
- Verification of the applicant’s knowledge of English and of a second language.

Documents to be attached to the application form:
- Copy of thesis (Master or equivalent degree) in .pdf format;
- Curriculum vitae (education and training, professional experience, qualification documents and
publications relating to the fields of the Ph.D. programme, skills and competences relevant to the
evaluation);
- Research proposal consistent with the themes of the Ph.D. programme. This research proposal,
presented in a text of 10,000 characters (including spacing), must specify the topic of research,
outline its place with respect to the state of art, clarify its originality and indicate how the research
will unfold throughout the three years of the Ph.D.

A good knowledge of spoken and written English is requested.
DOCTORAL PROGRAMME IN HISTORICAL STUDIES
Coordinator Prof. Andrea Zorzi

Regione Toscana Pegaso Project – Partner Universities: University of Florence, University of Siena.

Administrative office: Department of History, Archeology, Geography, Fine & Performing Arts (SAGAS)

Branch office University in agreement: University of Siena

Curricula:
1) History and Civilisation of the Ancient World and the Near East
2) Medieval History
3) Modern History
4) Contemporary History
5) Book Sciences, Institutions and Archives

No. of Positions: 9

Scholarships: 9

4 University of Florence
2 University of Siena - (Note: in accordance with art. 8 co.4 of the call, the scholarships funded by the University of Siena will be granted subject to the successful allocation of financial resources to the University of Florence and the signature of the agreement between the University of Florence and the University of Siena);
3 Regione Toscana Pegaso Scholarships 2016 - (Note: in accordance with art. 8 co.4 of the call, the scholarships funded by the Tuscany Region will be granted subject to the successful allocation of financial resources to the University of Florence and the signature of the agreement between the University and the Region);

Positions with no scholarship are not foreseen

Evaluation of applicants:
oral examination, evaluation of the curriculum, of any other qualification document and of the research project through a score system as specified below (article 12, paragraph 1, sub-paragraph c) of Doctoral Regulation n. 670 of July 4th 2013).

Scoring of applicants:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>minimum score</th>
<th>maximum score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Curriculum vitae, qualification documents and publications (if any)</td>
<td>5/120</td>
<td>20/120</td>
</tr>
<tr>
<td>Research project</td>
<td>35/120</td>
<td>40/120</td>
</tr>
<tr>
<td>Oral examination: discussion of the project in order to evaluate the applicant’s attitude towards the research</td>
<td>40/120</td>
<td>60/120</td>
</tr>
</tbody>
</table>

Eligibility is achieved with a minimum score of 80/120

All applicants, who obtain at least 40 points in the evaluation of the curriculum vitae, qualification documents and the preparation of the project, are admitted to the oral examination. The oral examination is passed with a minimum score of 40 points.
The research project will be discussed and evaluated during the oral examination.

During the oral examination the general and specific competence on the historical and historiographical period and on the themes of the research will also be examined.
During the oral examination an evaluation on the knowledge of English will be held for the applicants who have graduated in Italian Universities, and of the Italian language (Standard Level B2) for applicants graduated in non-Italian Universities.

Documents to be attached to the application form:
- degree certificate (Master or equivalent);
- list of exams taken with the relative grades;
- curriculum vitae (education and training, professional experience, qualification documents and publications relating to the areas of the Ph.D., skills and competences relevant to the evaluation) with a list of all the additional qualification documents and any other scientific publications;
- copy of the degree thesis;
- research project, consistent with the curriculum of the Ph.D., to which explicit reference to one (or more) must be made. This project must be at least 8 000 and not more than 10 000 characters (excluding spacing). The project must specify the topic of the research, clarify the characteristics of originality and systematically indicate the state of the art on the argument (with adequate bibliographical references) and the areas for investigation which are considered to be usefully developed throughout the three years of the Ph.D.

The presentation of the following documents is requested for applicants graduated in non-Italian Universities:
- university certificates in original language and translated into Italian or English;
- curriculum vitae in Italian or English;
- one recommendation letter in English by a qualified scholar;
- a copy of the thesis (or equivalent) with abstract in Italian or English;
- research project in Italian or English;
- certification of good knowledge of Italian (Level Standard B2);
- any certification of the award of a scholarship by a foreign State or within specific international mobility programmes.