BIOENGINEERING

Section “Positions and scholarships” revised on 10/09/2013

Coordinator
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Website

Duration
3 years

Academic year
2013/2014

Programme start date
01/01/2014

Programme held in
Italian

Main Department
Department of Electrical, Electronic and Information Engineering «Guglielmo Marconi»

Associated Unibo Departments
Department of Industrial Engineering
Department of Experimental, Diagnostic and Specialty Medicine

Partner Institutions
Università degli Studi di Sassari
Istituto Ortopedico Rizzoli, Bologna
Gambro/Dasco Spa, Medolla, Modena

Research topics
- Bioengineering of physiological systems
- Biomechanics
- Rehabilitation engineering
- Prosthetics and artificial organs
- Biomedical imaging and biomedical data and signal processing
- Biomedical instrumentation and medical informatics and telemedicine
- Molecular, cellular and tissue engineering

Requirements and admission procedures

Requirements
An Italian university degree (laurea specialistica/ magistrale - 3+2 years) or pre-reform degree (vecchio ordinamento - 4 or 5 years) or an equivalent degree obtained abroad. Also applicants whose degree is scheduled to be awarded no later than December 31, 2013 can participate in the selection procedures.

Admission procedures
Evaluation of academic qualifications and research project
Oral exam

Notes on admission
Applicants residing abroad and willing to take the oral exam by videoconferencing over Skype or similar tool (through webcam) must specify the choice of this procedure for the oral examination and provide their own registered contact/name (e.g. skype name), when applying for the call.

Such requests must be approved by the Admission Board, that will ensure that the interview is carried out correctly (including verification of the applicant’s identity). Applicants are expected to contact the Admission Board at the email address luca.cristofolini@unibo.it at least one week before the oral examination, in order to fix an appointment for the interview on the days specified for the oral examination. The applicant must be available for 2 hours, starting from the time agreed. If the applicant will not be available for 3 attempts to establish a contact during this timeframe, he/she will be excluded from the oral examination.

Mandatory documents to be enclosed with the online application (failure to comply with such requirements will result in the exclusion from the competition)
1. Curriculum Vitae
2. Copy of Bachelor’s and Master’s degree, list of exams taken with grades and final mark (in Italian or English)
3. For those who do not hold a Master’s degree when submitting the application: copy of the exams taken with grades

For documents listed at points 2. and 3., please note that:
- for degrees obtained in Italian Universities: upload a SIGNED self-declaration;
- for degrees obtained in non-EU Countries: upload the degree certificate issued by the relevant University;
- for degrees obtained in EU countries (except Italy): you can either upload a SIGNED self-declaration or the degree certificate issued by the relevant University, translated in Italian or in English;
- all documents must contain the following information: personal data, name of the University, degree name, final score, transcript (see art. 2 of the call).
4. Research project related to the field of the PhD Programme (maximum 1.000 words either in Italian or English); this project is not binding for the activities to be performed within the PhD Programme. Applicants are encouraged to contact members of the Academic Board of the Programme in order to discuss in advance possible research activities.
5. Summary of the graduation thesis (max 300 words either in Italian or English); for graduands, summary of the draft of the graduation thesis approved by the Supervisor.

Other documents to be enclosed, if available
- Publications
- Recommendation letters (max 2) (to be sent through the procedure available at this URL http://studenti.unibo.it)
- Any other relevant document (past grants, awards, honours, attendance of courses, participation to Erasmus or other exchange programs, etc.)
Agenda

<table>
<thead>
<tr>
<th>Description</th>
<th>When</th>
<th>Where</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evaluation of academic qualifications and research project</td>
<td>25/10/2013</td>
<td>Department of Electrical, Electronic and Information Engineering «Guglielmo Marconi», Viale Risorgimento 2, 40136 Bologna (applicant presence not requested)</td>
<td>10 a.m.</td>
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<tr>
<td>Oral exam</td>
<td>08/11/2013</td>
<td>Sala del Consiglio, Scuola di Ingegneria e Architettura, Viale Risorgimento 2, 40136 Bologna or videoconferencing (see Notes on admission)</td>
<td>10 a.m.</td>
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Assessment criteria

Total score: 100/100

1. Evaluation of academic qualifications and research project

- minimum score required for the admission to the oral exam: 30
- maximum score: 50

Score is assigned as follows:
- evaluation of the degree mark (for applicants who have a university degree at the time of submission of the application) or evaluation of the university exams taken with grades (for applicants who still do not have a university degree at the time of submission of the application) (max 20 points)
- graduation thesis work (max 5 points)
- research project (max 10 points)
- publications (max 5 points)
- other qualifications (recommendation letters, past grants, awards, honours, attendance of courses, participation to Erasmus or other exchange programs, etc.) (max 10 points)

The list of the applicants selected for the oral examination will be posted on the bulletin board of the Department of Electrical, Electronic and Information Engineering «Guglielmo Marconi» and will be published on the website [http://studenti.unibo.it](http://studenti.unibo.it), accessible through username and password of the University of Bologna provided at first registration (by selecting: sintesi delle richieste in corso → vedi dettaglio → risultati prova).

2. Oral exam

- minimum score required in order to be listed in the final ranking: 30
- maximum score: 50

The oral examination will focus on the explanation and discussion of the applicant’s research project. The oral examination will assess the candidate’s aptitude for scientific research, as well as her/his general knowledge about one of the following topics: biomedical imaging; biomedical data and signal processing; biomedical instrumentation and artificial organs; biomechanics and movement analysis; bioengineering of physiological systems; rehabilitation engineering and prosthesis; molecular and cellular engineering; tissue engineering and biomaterials; medical informatics and telemedicine.

The results of the oral exam will be made public by posting them on the bulletin board of the Department and on the site [http://studenti.unibo.it](http://studenti.unibo.it) (by selecting: sintesi delle richieste in corso → vedi dettaglio → risultati prova2).

The final ranking will be published on the website [http://studenti.unibo.it](http://studenti.unibo.it), accessible through username and password of the University of Bologna provided at first registration. Any information regarding the publication of the final ranking will be available on [www.unibo.it/Dottorati/Bandi29](http://www.unibo.it/Dottorati/Bandi29).

Applicants will not be informed about the outcome of the selection procedures other than through the webpage above. It is the responsibility of the applicants to be informed on the outcome (see art. 6 of the call).

Language requirements

During the oral examination the applicant’s skills with the English language will be assessed.

The oral examination will be held either in English or Italian, depending on the applicant’s choice.

For foreign applicants the knowledge of Italian is not required.

Positions and scholarships

Total number of positions: 10, of which:
- 3 positions with scholarship granted by the University of Bologna
- 1 position with scholarship “Fondo Giovani 2012”, granted by MIUR, devoted to the Scope of Investigation 9 "ICT and electronic components"
- 1 position with scholarship granted by private institutions (Gambro Dasco S.p.A.), devoted to research activity in the field of artificial organs and biomedical instrumentation, and more specifically, in the field of haemodialysis.
- 5 positions without scholarship

Extra-quota positions: 2