

Handbook of the PhD Program in Computer Science and Systems Engineering - DIBRIS, University of Genova

(November 2017)

The *PhD in Computer Science and Systems Engineering* is a research degree in which PhD students are expected to acquire broad foundations in the theory and practice of Computer Science and Systems Engineering combined with a deep understanding of a specific research area. The PhD program is regulated by the “Regolamento di Ateneo”:

https://unige.it/regolamenti/studenti/documents/all_a_regolamento Rettificato.pdf

Structure and organization

- PhD Program Coordinator (Coordinatore): coordinates activities of students and of the PhD program Board.
- Curriculum Coordinator (Referente per il curriculum): supports the PhD program Coordinator for the student activities for a specific curriculum.
- PhD Program Board (Collegio dei Docenti): evaluates activities, promotes the PhD program
- Tutor: assigned to each candidate by the PhD Program Board, supports the student in the selection of the advisor(s) and provides coaching throughout the duration of the PhD. The tutor must be either a faculty of the University of Genova or a member of the PhD Program Board
- Advisor(s): assigned to each candidate, provides scientific guidance to the student. Advisors must have an adequate scientific record. Advisors are responsible for the scientific and research training of the student and for providing the resources that are needed to carry on research activities (e.g. adequate working place, access to computing infrastructure when needed, ...)
- Evaluation Committee: committee appointed to monitor the progress of a student
- External reviewers: assigned to each candidate, experts who evaluate the final thesis.
- PhD Exam Committee: committee appointed to grant the title of “Dottore di Ricerca” for all candidates of a given exam session.

Communication

External Channels

PhD program Web site is available at the URL <http://phd.dibris.unige.it/csse/> (mission, research topics, application deadlines, alumni, etc.)

Internal Channels

Practical information for PhD students and PhD Board members are available in the Aulaweb module at the following URL's:

- General Information (templates, documents, deadline, mailing list, course modules, etc)

<https://dottorati.aulaweb.unige.it/course/view.php?id=164>

We use local mailing list and the aulaweb portal to send information and announcement.

Students have to apply for institutional email address as specified in the General Information page

- Course list and modules offered by the PhD Program (may vary from year to year):

<https://dottorati.aulaweb.unige.it/course/index.php?categoryid=29>

Finally, Dropbox folders are used to share documents (reports, papers, course certificates) between PhD students and PhD Board members/Coordinator. Phd students receives an invitation via email to share a Dropbox folder at the beginning of their program.

Organization

Starting from Cycle XXXII the PhD program lasts three years.

An evaluation committee, consisting of the tutor(s) plus two other members, preferably of the PhD Board, is appointed by the PhD Program Coordinator based on a proposal of the Curricula Coordinators and of the tutor(s). The evaluation committee monitors the progress of the PhD student along his/her entire PhD career, by scheduling at least two meetings per

year. Before the end of each year the evaluation committee provides a complete assessment of the research and training activity of the PhD student that will be the requirement for the PhD Board to decide the admission of the student to the next year.

Training Activities

Over the whole three-year duration of the program, PhD students are required to get at least 180 credits as follows:

- Research training activities (30 credits in 3 years)
- Management and organization activities (10 credits in 3 years)
- Research activities (120 credits in 3 years, i.e., 40 credits per year)
- Writing of the thesis proposal, the progress reports and the final thesis (20 credits)

Research training activities include

- 6 credits for basic knowledge in Computer Science acquired via teaching (support) activities
- 6-8 credits for research training activities organized by the tutor (they can be considered as specialized course)
- PhD courses, specifically offered by the PhD Program, other Institutes, or PhD Schools (e.g., Bertinoro Spring School for Computer Science):
 - 6 credits for a 20 hours course with final exam (exam certified by the instructor)
 - 2 credits for a 20 hours course without exam (attendance certified by the instructor). We admit at most 3 courses without exam.
 - for other cases the number of credits must be proposed by the student and validated by the PhD Program Coordinator and by the Curriculum Coordinators.
- Courses that are part of one Graduate (*Corso di Laurea Magistrale*) programs offered at the University of Genova. Undergraduate courses are admissible in specific cases with the special permission of the PhD Program Coordinator in agreement with the student's tutor. Credits must be proposed by the students and accepted by the PhD Board.

A student is required to take at least 30 credits in the above categories.

The other 10 credits will be obtained by taking courses proposed by the PhD Board on how to do research, management of research, by attending seminars and scientific conferences, and by participating to organization activities (organizing PhD seminars, poster sessions, schools, etc). Each student needs to take at least one course on topics concerning management of research and/or on how to do research.

The list of the courses offered may vary over the years.

In addition, other PhD programs might offer courses that can be proposed by the student in agreement with his/her tutor(s) and evaluated by the PhD Coordinator and by the two Curriculum Coordinators.

Tutoring and Teaching Assistance

PhD students, as an integral part of the training project, may carry out activities of tutoring for bachelor/master students and, within maximum sixty hours each academic year, activities of teaching assistance.

The previous activities must be previously authorized by the PhD Program Board and they will not entail any increase in the scholarship.

Timetable

At the beginning of the first year, the PhD students prepare a plan of the intended training activities under the supervision of their tutors. The plan needs to be approved by the PhD program Coordinator and by the two Curriculum Coordinators.

First Year: In the first year, a student is expected to take courses in order to complete his/her background in computer science and engineering and/or to deepen his/her knowledge in specific areas.

Intermediate Checkpoint

After 6 months from the beginning of the first year, students should submit (upload on Dropbox folder) a preliminary version of their activity report (research/training etc). A template of the activity report is available in the Aulaweb module.

Thesis proposal

At the end of the first year, a student should submit a thesis proposal and a detailed report on his/her first year activity, including training, publications, research visits to foreign institutions, etc. A template of the thesis proposal are available in the Aulaweb module.

Students are required to illustrate their thesis proposal to their committee and in a public presentation in front of the PhD Program Board.

The internal committee has to provide a report on the thesis proposal, on training, research activity and on publications to the PhD Program Board over the year. Based on this report, the PhD Program Board decides on the admission of the student to the second year.

Second Year: The second year is mainly devoted to research, publications and attendance to workshops, conferences, and schools and to attendance of courses that are specific to the research topics.

Intermediate Checkpoint

After 6 months from the beginning of the second year students should update (upload on Dropbox folder) their activity report.

Progress report

At the end of the second year, a students needs to submit a progress report that describes the results achieved in the first two years and suggest possible changes and adjustments to the activity and research plan defined in the first year. Moreover, he/she has to submit a detailed report on his/her second year activity including training, publications, research visits to foreign institutions, etc. Students are required to illustrate their research activity to their committee in a public presentation in front of the PhD Program Board.

The committee has to provide a report on the thesis proposal, on training, research activity and on publications to the PhD Program Board over the year. Based on this report, the PhD Program Board decides on the admission of the student to the third year.

Third Year: The third year is mainly devoted to finalize the research work and prepare the thesis.

Intermediate Checkpoint

After 6 months from the beginning of the second year students should update (upload on Dropbox folder) their activity report.

Thesis Submission

At the end of the last year the students, who acquired all necessary credits, must submit the final version of the activity report and the thesis (in English). The thesis will be sent to (two) external reviewers provided that four requirements listed below are satisfied:

1. The PhD thesis must be approved by the tutor(s).
2. The third year report have been approved by the PhD Program Board.

3. The credit requirements have all been all satisfied.
4. The PhD Student must be a (co)-author of at least one scientific paper in a peer-reviewed international journal (published or accepted for publication) or in a well-recognized international conference.

The two external reviewers will decide whether the thesis can be admitted to the final exam.

More precisely, they can either

- accept the thesis with minor revision
- accept the thesis with a major revision which requires 6 more months
- reject the thesis

The PhD Program Board on the basis of such assessment will grant the admission to the final exam.

Final Exam: The final exam will be a public thesis defense performed in front of a committee appointed by the University of Genova based on the recommendation of the PhD Program Board. The committee for the final exam will be composed of at least three professors and it can be extended with two additional experts from other institutions selected by the PhD Program Board.

International dimension

The PhD Program Board encourages visits of PhD students in foreign institutions as part of the PhD training. A stay abroad of a PhD student must be approved by the PhD Coordinator if its length is less than six months, otherwise it needs to be approved by the PhD Program Board. In total, a student cannot be abroad for more than 18 months.

Career opportunities

The natural professional and career outcomes of a PhD in Computer Science and Systems Engineering are in academic and/or research institutions, and in research and development departments in national and foreign industries. Additional career opportunities, not strictly related to research, but still playing the roles of 'innovators', include for instance: software and hardware companies and spin-off companies.

Information Sheet

Official denomination:

Dottorato di Ricerca in Informatica ed Ingegneria dei Sistemi
PhD in Computer Science and Systems Engineering

Department:

Dipartimento di Informatica, Bioingegneria, Robotica e Ingegneria dei Sistemi (DIBRIS)
Università di Genova
Genova (ITALY)

Coordinator:

Prof. Giorgio Delzanno
Tel: +39-010-3536603
E-mail: giorgio.delzanno@unige.it

Curricula Coordinators:

- **Computer Science**
Prof. Francesca Odone
Tel: +39-010-3536667
E-mail: francesca.odone@unige.it
- **Systems Engineering**
Prof. Simona Sacone
Tel: +39-010-3536551
E-mail: simona.sacone@unige.it

- **Secure and Reliable Systems (FBK)**
Prof. Marco Bozzano
E-mail: bozzano@fbk.eu