Student Handbook XXXIX cycle Ph.D. Program in Civil, Chemical and Environmental Engineering

October 31st, 2023 Changes: September 2024

Organization of the Ph.D. program

The Ph.D. program is run by the Ph.D. committee, whose members are listed on the web page of the Ph.D. program (PC), and is supervised by the coordinator, Prof. Roberta Massabò (roberta.massabo@unige.it).

The program is organized in the following four curricula, each of which has a curriculum coordinator (CC) and a curriculum committee.

- Curriculum in "Chemical, Materials and Process Engineering" (ICMP). Coordinator: Prof. Attilio Converti (converti@unige.it).
- Curriculum in "Fluid Dynamics and Environmental Engineering" (FIA). Coordinator: Prof. Bianca Federici (bianca.federici@unige.it).
- Curriculum in "Structural and Geotechnical Engineering, Mechanics and Materials" (SMG). Coordinator: Prof. Federica Tubino (federica.tubino@unige.it).
- Curriculum in "Wind Science and Engineering" (SIV). Coordinator: Prof. Giuseppe Piccardo (giuseppe.piccardo@unige.it).

The Ph.D. program consists of both courses and research training. The official language of the program is English.

Starting the program: formalities

During the first month of the program the new students should:

- Register on the UNIGE Website: https://registrazioneunigepass.unige.it/signup?_language=en
- Register on LoginMiur: https://loginmiur.cineca.it/front.php/login.html The registration procedure is in Italian, Foreign students may refer to his/her CC for help.



- 3. Attend and pass the online course "Formazione generale sulla sicurezza e salute sul lavoro" "General training on health and safety at work" (art.37 del D.Lgs 81/08). The course is offered in Aulaweb in Italian and in English. https://unige.it/lavoro/studenti/tirocini/corso-sicurezza.
- 4. Make an appointment with the DICCA information technology department to obtain access to the DICCA intranet (<u>Marco.Rinzivillo@unige.it</u>).

Once completed the four steps the new students should inform their curriculum coordinator. The certificate of the Training on health and safety at work must be sent to <u>dottorato.dicca@unige.it</u>.

Starting the program: choice of supervisor and research topic

At the beginning of the Ph.D. course the student will make an appointment with the CC, in order to discuss the choice of supervisor, which will be based on the scientific interests of the student.

The choice of supervisor is submitted to the Ph.D. committee for approval, by the end of the first month of the program.

By the end of the first month the student also chooses his/her research topic and submits a brief description by e-mail to the CC. The Ph.D. committee will examine the proposal and grant approval.

By the 15th of the second month of the Program the student submits a preliminary research project (see template in the intranet area of the Ph.D. program web page).

Ph.D. Credits

During the Ph.D. Program the students must earn a minimum number of credits.

Minimum number of annual and three-year credits:

- 60 annual credits
- 180 three-year credits

subdivided as specified below for all students but the Executive students:

- I year: 22 credits minimum in Learning Activities + 38 credits minimum in Research Work
- II year: 16 credits minimum in Learning Activities + 44 credits minimum in Research Work
- III year: 4 credits minimum in Learning Activities + 40 credits minimum in Research Work + 16 credits for the PhD thesis

Credits are accumulated through the following activities.



For the Executive PhD students, the subdivision of the credits is the following:

- I year: 16 credits minimum in Learning Activities + 44 credits minimum in Research Work
- II year: 10 credits minimum in Learning Activities + 50 credits minimum in Research Work
- III year: 4 credits minimum in Learning Activities + 40 credits minimum in Research Work + 16 credits for the PhD thesis

Learning activities:

PhD courses, LM courses, attending research seminars, PhD training schools, presentations at international conferences (with requirements) Details on how to acquire these credits are given below.

Research Activity:

During the Ph.D. program the student must earn 122-Credits credits performing PhD research under the guidance of the Ph.D supervisor: 38 by the end of the first year, 44 by the end of the second year and 40 by the end of the third year.

Ph.D. Thesis and Final exam

Upon approval of the PhD thesis by the PhD Committee and the external evaluators and admission to the PhD exam, the student will earn 16 credits for the PhD thesis.

Learning Activities

During the first and second years students attend courses, selected with the aim of completing their education in the research area of interest. The list of courses is chosen by each student in agreement with the supervisor. The list of courses the student wishes to attend will be submitted for approval to the CC by December 15th of each year.

All courses have mandatory attendance registration (remind the teacher in case he/she forgets).

During the Ph.D. program students must earn 42 credits: 22 by the end of the first year, 16 by the end of the second year and 4 by the end of the third year. These are necessary for admittance to the following year (II and III) and to the external evaluation. If, for serious and proven causes, the student is unable to obtain the required credits and intends to continue the Ph.D. program, he/she must inform the CC and the PC. A written report must be submitted to the CC and PC, detailing reasons for his/her failure to obtain the credits and a proposal for obtaining the missing credits in a timely manner.

L1. Ph.D. Courses

Information on the courses organized within the Ph.D. program and related credits is available on the Ph.D. program web-page. The corresponding credits will be assigned at the



annual meeting if the student passes the final exam and sends the relative certificate to the CC.

Other courses may be chosen freely, with the approval of the supervisor, by the student among those offered by other Ph.D. programs at UniGe or at other institutions. In this case, the number of credits will be assigned by the curriculum committee at the annual meeting when the student submits the list of chosen courses to the CC or, in case of courses not included in the original plan, upon request of the interested student. The student must submit the program of the course, the detailed schedule of the course and <u>a certification for the final examination.</u>

The student can also attend courses (maximum three courses or 18 credits) offered to Master degree students (*Laurea Magistrale*). These courses may be attended in order to improve fundamental knowledge required to perform the Ph.D. research program. They are typically offered in Italian. The credits obtained, after having passed the exam, are those assigned to master students (see the *Manifesto degli Studi*).

For the students of the curriculum SMG the following two courses are mandatory:

- Continuum Mechanics (Prof. Angelo Morro);
- Numerical methods for the solution of partial differential equations (Prof. Patrizia Bagnerini); this course is offered every other year.

For all students participation to the seminars offered by the Ph.D. program or by the DICCA department are mandatory

L2. Summer and training schools

A number of credits can also be assigned by the Ph.D. committee for attendance of summer/winter and training schools for postgraduate education (up to a maximum of 6 credits corresponding roughly to a 2 week summer school). In order to obtain credits for a summer school, it is necessary to send by e-mail the certificate of attendance to the CC and a detailed program of the activities.

L3. Research Seminars

Seminars are organized by the Ph.D. program and the DICCA Department. The seminars are research seminars held by experts in the field. The attendance to three seminars, either organized by the Ph.D. program or by other Ph.D. programs at UNIGE or at other Italian and foreign universities (only seminars for PhD students and if approved by the supervisor), followed by brief written reports (to be sent to the CC), will allow to obtain 1 credit. Research seminars offered by other institutions may be used to accumulate credits upon approval of the CC. Credits may be earned through seminars up to a maximum of 6 credits.

In addition, students are required to attend all research seminars organized by the DICCA department.



L4. Presentations at congresses

Credits can also be earned with oral presentations at international and national conferences (with a maximum of 8 credits).

Requirements:

- 4 credits maximum for each oral presentations at international conferences, • first author:
- 2 credits maximum for each oral presentations at Italian conferences or poster at international conferences, first author;
- 1 credit maximum for each oral presentation if not first author

Bonus Credits

In addition to the 180 credits, students may earn bonus credits as PhD courses, Mobility for Research, Journal publications, Awards, Doctor Europaeus and International PhD, Outreach and Third Mission activities (with requirements).

Details on how to acquire these credits are given below.

B1. International and National Mobility

Students may earn bonus credits through international and national mobility. Mobility for research periods in Italy - 5 Bonus Credits maximum (with requirements)

Mobility for research periods abroad - 10 (+ 10) Bonus Credits maximum (with requirements)

Requirements:

- 5 bonus credits maximum for more than 3 month mobility in Italy,
- 1 bonus credits maximum for less than 3 month mobility in Italy;
- 10 bonus credits maximum for more than 3 month mobility abroad;
- 2 bonus credits maximum for less than 3 month mobility abroad: •
- 10 bonus credits additional for Doctor Europeaus or International PhD

B2. Journal Publications and Awards

A maximum of 25 bonus credits may be earned through the publication of Journal papers and awards.

Publications – 5 bonus credits maximum for each Journal Publication (with requirements)

Requirements: publications on ISI journals, first author (credits assigned by the curriculum committee based on each specific publication)



Awards - 5 bonus credits maximum

B3. Teaching Activities

A maximum of 11 bonus credits may be earned through teaching activities.

Tutoring/teaching assistantship (with requirements):

- 3 bonus credits maximum for more than 20h;
- 2 bonus credits maximum for less than 20h;
- Bachelor and MS thesis co-supervision: 1 bonus credit maximum for bachelor thesis; 2 bonus credits maximum for MS thesis

Requirements: all activities must be formalized.

B4. Other Activities

A maximum of 4 bonus credits may be earned through other Outreach and third mission activities (with requirements).

Requirements: all activities must be formalized.

Libretto del dottorando (PhD Booklet)

At the end of each year, once the student has been admitted to the following year, he/she must fill up the Libretto with all activities approved by the curriculum committee and the final report approved by the committee. The student will indicate the credits approved by the committee. No other activities should be listed in the libretto.

(Note for the XXXIX cycle. Do not worry if you have already filled up your Libretto. You will be able to modify it, delete activities which are not relevant and add the exact number of credits after the admission meeting.

Midterm meetings and admission to the following year

Each student will meet the curriculum committee at least twice a year, for an informal presentation of the activities (usually in the spring semester) and at the end of the year.

At the end of each year, students are expected to:

1. write a report of the scientific activity of the year (the template of the report can be downloaded from the intranet area of the program web page);

2. compile (or update) the "Personal Page" describing the completed activities (the template of the Personal Page, as well as an example, are sent by the Coordinator at the



beginning of the Ph.D. Course and can also be downloaded from the intranet area of the program web page);

3. give a presentation to the curriculum committee concerning the research activities carried out during the year.

4. fill up the Student Questionnaire as prescribed by MUR and UniGe (instructions will be provided)

The Personal Page must filled up fully, providing detailed information on: external stayings (dates, location); conference attendances and/or participation as a speaker; publications (conference proceedings, journal papers, with DOI and/or Scopus IDs).

On the basis of the above points the curriculum committee will approve or deny admission to the following year or to the external evaluation and assign a mark (excellent, very good, good, fair, fail). The above documents must be sent to the CC by e-mail, before the deadline, which will be fixed each year.

10% Research funds

Each student of the Ph.D. Program will be awarded some discretionary research funds, approximately 1500 Euros per year, for research related expenses. The funds may be used to cover expenses for: participation to conferences, summer schools, mobility to other research institutions in Italy and abroad; personal computers, laptops, consumables; language courses; publications and bibliographical material.

Each expenditure must be approved by the supervisor and the Program Coordinator. Expenditures will be approved during the three years of the Program (within 36 months since the starting date).

The guidelines on the use of the 10% funds and all required forms are in the intranet area of the Ph.D. Program and the DICCA department.

Ph.D. dissertation

The final thesis is written in English.

At the end of the 3rd year the students admitted to the external evaluation will be assigned two external referees, who will write a report on the thesis and support the admission to the final exam or suggest, if necessary, a delay of maximum 6 months for the final defence. The student must submit the thesis to the referees by the deadline, which will be fixed at the beginning of 3rd year.

Upon request, to be made to the CC and to the PC during the course of the 3rd year, the student may apply for the European/International Ph.D. Label (see documentation in the intranet area of the program web page).



Upon approval of the PhD dissertation by the PhD Committee and the external evaluators and admission to the PhD exam, the student will earn 16 credits for the PhD dissertation.

General information

Further information on university regulations and ministerial decree concerning Italian Ph.D. programs, are available on the website of the university: http://www.studenti.unige.it/postlaurea/dottorati/#normativa

Further information on the Ph.D. program, the training and programs of the courses is available at the web page: http://dottorato.dicca.unige.it/eng/index.html

The "Segreteria didattica" of the Ph.D. program is located in Via Montallegro 1, Dott. Carola Montaldo, Tel: <u>+39 010 335 2959</u>. E-mail address: dottorato.dicca@unige.it.