

DOTTORATO DI RICERCA IN DESIGN
POLITECNICO DI MILANO, DIPARTIMENTO DI DESIGN



POLITECNICO
MILANO 1863

welcome kit
XXXII cycle

welcome kit

Ph.D. programme in Design

XXXII cycle

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The Politecnico di Milano was among the first universities in Italy to start a Ph.D. programme in the field of design in 1990. Based on this tradition, the Ph.D. programme in Design was established in 2008, as the result of a process of substantial re-thinking the way design was taught at Ph.D. level.

The programme is run by the Department of Design together with the Department of Mechanics and the Department of Chemistry, Materials and Chemical Engineering "Giulio Natta".

In its current configuration the Ph.D. programme in Design aims at developing professional competence to carry out high quality research in terms of design as a complete scientific field. In this respect, its main topics are: to reflect on the nature of design, with its aesthetic, formal, performance and meaning values, as well as its capability of being an agent of social change towards more sustainable systems; to strengthen the disciplinary core of design; to develop and share a common body of knowledge and methodologies, as well as a complete set of tools able to distinguish the designer from other researcher/professional figures involved in design activity.

The Ph.D. programme in Design is structured into various **research fields**, which correspond to specific research teams within the Department of Design.

In order to coordinate research activity over a wide range of topics, teams cluster around three Sections, which are:

- ★ Design and Cultures
- ★ Products, Strategies and Services
- ★ Design for Environments, Landscape and Mobility

The research teams - "Methods and Tools for Product Design" and "Materials and Design" are active respectively in the two other Departments involved in the programme (Department of Mechanics and Department of Chemistry, Materials and Chemical Engineering).

Research teams also contribute to the teaching activities undertaken by the School of Design.

The Ph.D. programme in Design carries out research on specific topics emerging from the research initiatives of all Departments.

introduction

_ _ programme

The programme aims at educating researcher-designers who will contribute original knowledge to the field of design by tackling the problems and identifying the potential of contemporary society.

Their contribution may be brought to bear in:

- ★ creating designs, visions, and proposals (research through design)
- ★ developing tools and methods for putting these into practice (research for design)
- ★ critical analysis of design and its application domain (research on design)

The Programme develops project and analytical abilities, it proposes different methodologies of research, promotes the attitude to collaborate and offers professional opportunities in universities and research centres, design enterprises and public corporate bodies.

_ _ mission and goals

The courses offered aim at training the candidates for the skills needed to carry out high quality research for companies, universities, research centres and other institutions.

The scientific field is Design. Other fields partially covered are Science and Philosophy, Language Theory, Sociology of Cultural Processes and Communication, History of Art, Science and Technology of Materials, Industrial Engineering, Operations Research, Computer Science.

The programme offers the doctoral candidates the following **opportunities**:

- ★ to develop an original theme of research, becoming an effective member of a research team
- ★ to attend courses and seminars on design, on design research and on research in general, developing competences concerning the discipline of the design, and the profession of the researcher

- ★ to attend courses and seminars reported to a specific field of research, developing high-level specialist competences and acquiring knowledge and tools for the development of their own theme of research
- ★ to be an active part in a didactic programme and, in this way, to understand the relationship between research and didactics, and to develop the ability to clearly and effectively present the contents of their own work
- ★ to have an experience in an international research centre to verify the hypotheses, the methodologies and the results of their own work and to consolidate the network of international relationships within which it is situated

_ _ objectives

The achievement of the Ph.D. title in Design requires a study and research activity of at least three years equivalent of full time study, research and development of Ph.D. thesis. During this period both educational and research activities are provided.

The programme develops design skills and analytical abilities, proposes various research methodologies and promotes a collaborative disposition.

At the beginning of the programme candidates become effective members of a **research team**, within which they develop an original research topic (Ph.D. thesis); this activity is the fundamental core of the learning process.

Parallel to this main activity, candidates are involved in several other educational processes, divided into training and specialist activities.

Training activities are those such as courses and seminars related to the discipline of design and research methodologies and practices, considered in their entirety. Specifically: common activities are proposed to consolidate the cultural and operational background, which is common to all areas of design research.

Specialist activities are those educational activities specifically regarding the areas of research in which the Ph.D. programme as well as the Departments are articulated.

Moreover, the activities of the Ph.D. in Design include participation in projects taking place within the research team; participation in conferences (as listeners or speakers); writing of scientific papers; participation, as tutors, in teaching activities, in the perspective of an on-going synergy between teaching and research activities.

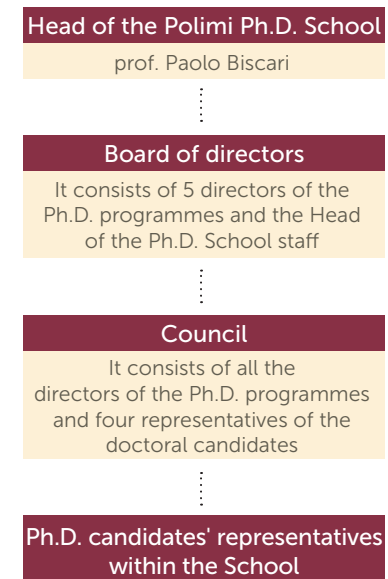
the school system

_ _ the Polimi Ph.D. School

The Politecnico di Milano was one of the first universities in Italy to establish a School of Doctoral Programmes in 2001 with a view to coordinating, assessing and monitoring the single doctorate programmes. The School offers courses to develop complementary abilities, such as seminars of epistemology, research policy and management, elements of scientific communication, and so on, whereas the single doctorate provides subjects and infrastructures for research, specific education and tutoring.

The Ph.D. degree is the highest level of university education, aimed at developing abilities of Ph.D. candidates through training and research, as well as promoting new entrepreneurial skills. This results in a research thesis with original contributions, enabling them to take up research activities in industrial settings, in the public and private sectors, in public administration, in research centres and in universities. Politecnico di Milano offers Doctoral Programmes in all fields of Architecture, Engineering and Design.

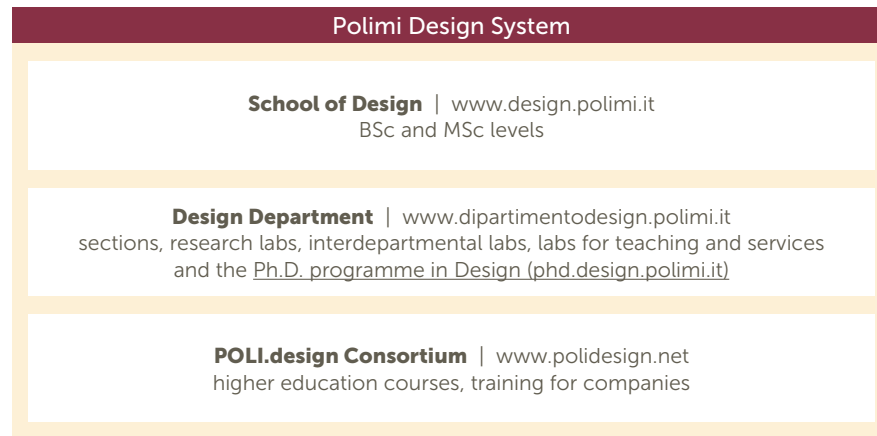
The Polimi Ph.D. School organizational chart



__ the Polimi Design System

The Design Department forms part of the Politecnico di Milano Design System, together with the School of Design, the Ph.D. programme in Design, the Laboratories and the POLI.design Consortium.

Together, they represent one of the most important university bodies in the field of design in existence today at the international level. The Department fosters the process that has established design in an academic context by constantly developing relations and collaborations with other players operating within the Design System, in Milan and Lombardy as well as at the national and international level.



The Ph.D. programme in Design organizational chart



research development and general framework

The **main aim** of all Politecnico di Milano Ph.D. programmes is the development in the candidates of a research-oriented mind-set, with expertise and skills in a specific research topic. To this end, candidates develop a problem-solving capability in complex contexts, including the capacity of performing deep problem analysis, identifying original solutions, and evaluating their applicability in practical contexts. These skills provide the Ph.D. candidates with major opportunities of development in their research both in the academic field, and in public and private organisations.

Ph.D. candidates are requested to develop **an original research contribution**. The Ph.D. thesis must thus contribute to increase the knowledge in the candidate's research field. Besides, it has to be coherent with the research topics developed in the Department where the Ph.D. programme is carried out.

The original research results are collected in the Ph.D. thesis, where the candidate's contribution is put in perspective with respect to the research state of the art in the specific research field.

The Ph.D. programmes and the Ph.D. School activate **teaching forms of different kind and credit value**, including courses, seminars, project workshops, laboratories. Teaching activities both cover the basic research issues (problems, theories, methods), which represent the founding element of the Ph.D. programme and identify clearly its cultural position, and deepening in a specialist way some research issues connected with the problems developed in the theses.

Lessons are usually held in English, except when indicated otherwise.

Structured training activities allow to earn ECTS credits.

Other activities, typically specialised and for which it is difficult to evaluate the learning and its quantification, fall within the scientific activities which the Board of Professors takes into account in the overall evaluation, but they do not allow to earn ECTS.

career contents

_ _ course plan

The Design Ph.D. curriculum calls for candidates to accumulate a total of **75 academic credits**.

- ↘ For the admission to the final exam acquisition of at least 75 credits is mandatory.

These 75 credits must be acquired via the **characterising courses, the interdoctoral courses (research training) and the specialist activities** provided by the educational programme:

- ★ from 40 to 45 through course attendance
- ★ from 25 to 30 through other academic activities, e.g. participating in the Research Team activity, teaching and tutoring activity, etc.

- ↘ For admission to the second and the third year, the acquisition of **at least 20 credits (per year)** is mandatory.

- ↘ The third year should be entirely devoted to the development of the thesis.

The table in the next page illustrates the **curriculum** that each Ph.D. candidate must complete, in terms of the attribution of academic credit. At the same time, the candidate will be required to carry out research under the guidance of his/her supervisor and the Design Board of professors.

Presentation of the study plan

During the first semester of enrolment, the candidate has to submit a study plan, which may be revised periodically (approximately every three months), in order to adequate them to possible changes in the course list, or to needs motivated by the development of his/her Ph.D. career.

- ↘ This is to be done through the dedicated Politecnico di Milano online procedure (Online Services) at www.polimi.it/servizionline.

a. Ph.D. THESIS WORK

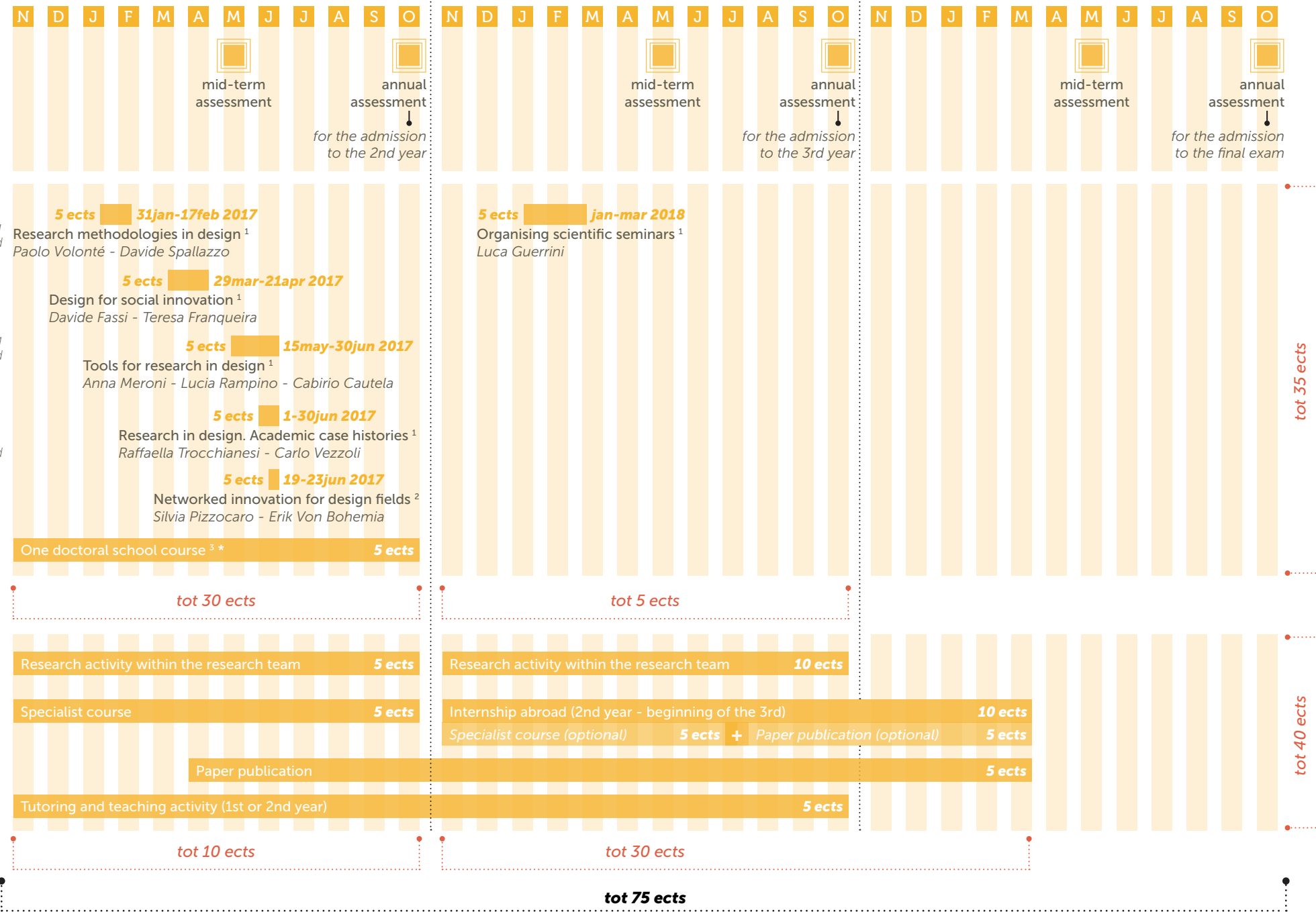
b. RESEARCH TRAINING

c. SPECIALIST ACTIVITIES

1st year

2nd year

3rd year



* Recommended interdoctoral course: Scientific and Scholarly Writing, Ken Friedman - Luca Guerrini | 16-27 jan 2017 | 5 ects - (other suggested courses > p.25)

a. Ph.D. THESIS WORK

_ _ mid-term assessment (May)

Each year, at the end of the first semester, candidates submit their work on the Ph.D. thesis to a commission composed by members of the Department Section of affiliation and to representatives of the Board, in order to assess the progress of the thesis.

The Ph.D. candidate is required to prepare

- ★ a slide presentation (following the format that will be provided)
- ★ a provisional index of the thesis
- ★ an abstract of the research topic

The assessment is structured as follows

- ★ the Ph.D. candidate submits his/her work to the commission through a slide presentation (following the format that will be provided)
- ★ the presentation lasts **15 minutes** for candidates of the 1st year and **20 minutes** for candidates of the 2nd and 3rd year

Steps of the presentation

↳ 1st year

- ★ provisional index
- ★ structure of the thesis and sections of contents
- ★ theoretical requirements: critical and theoretical assumptions and scientific/design context
- ★ research field, design setting and focus
- ★ general and specific objectives
- ★ methodology (phases, interpretative models adopted, ...)
- ★ future actions
- ★ bibliography
- ★ list of the candidate's activities and titles (participation to conferences, as both attendee and speaker, or research projects, seminars, workshops, etc.)
- ★ candidate scientific production (publications)

↳ 2nd year (highlight what has not been provided in the previous assessment)

- ★ provisional index
- ★ structure of the thesis and sections of contents
- ★ theoretical requirements: critical and theoretical assumptions and scientific/design context
- ★ research field, design setting and focus
- ★ general and specific objectives
- ★ methodology (phases, interpretative models adopted, ...)
- ★ *focus of the project*
- ★ *outcomes achieved*
- ★ future actions
- ★ bibliography
- ★ list of the candidate's activities and titles (participation to conferences, as both attendee and speaker, or research projects, seminars, workshops, etc.)
- ★ candidate scientific production (publications)

↳ 3rd year (highlight what has not been provided in the previous assessment)

- ★ provisional index
- ★ structure of the thesis and sections of contents
- ★ theoretical requirements: critical and theoretical assumptions and scientific/design context
- ★ research field, design setting and focus
- ★ general and specific objectives
- ★ methodology (phases, interpretative models adopted, ...)
- ★ focus of the project
- ★ *outcomes achieved*
- ★ *factors of innovation and originality of the research*
- ★ future actions
- ★ *criticalities*
- ★ bibliography
- ★ list of the candidate's activities and titles (participation to conferences, as both attendee and speaker, or research projects, seminars, workshops, etc.)
- ★ candidate scientific production (publications)

a. Ph.D. THESIS WORK

__ annual assessment (October)

At the end of each year candidates submit their research activity with their supervisor to a committee of the Ph.D. board.

The Ph.D. candidate is required to prepare a dossier (following the format that will be provided), which purpose is to illustrate in a structured way the research progress.

The dossier is structured as follows

- a. a provisional index of the thesis
- b. core of the dossier (approximately 10 pages) with an in-depth description of the structure of the thesis, critical and theoretical assumptions and scientific/design context, research field, design setting and focus, general and specific objectives, methodology and future actions (following the format that will be provided)
- c. bibliography
- d. list of the candidate's activities and titles (participation to conferences, as both attendee and speaker, or research projects, seminars, workshops, etc.)
- e. a list of the scientific production (publications)
- g. a copy of the scientific publications listed, both published or in press, (essays, papers, articles) and titles (i.e. participation in conferences or research projects).

The assessment is structured as follows

- ★ **each Ph.D. supervisor** is asked to show up together with his/her own candidate. The supervisor will briefly comment the research activity and the global effort of the candidate within his/her research group
- ★ **the committee** will evaluate the candidate productivity on the basis of:
 - ↳ Courses attendance and marks
 - ↳ Scientific publication, participation in conferences and research projects
 - ↳ The supervisor's evaluation on the candidate's global activity within the research team s/he belongs to.
 - ↳ The supervisor's evaluation on the progress in the candidate's Ph.D. thesis.

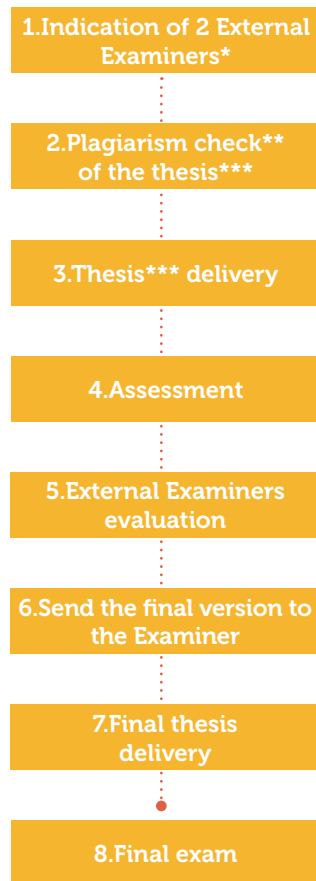
Evaluation

As a result of each successful annual evaluation, the candidates receive an evaluation (A/B/C/D). Candidates who do not pass the exam will be qualified as "Repeating candidate" (Er) or "not able to carry on with the Ph.D." (Ei).

a. Ph.D. THESIS WORK

__ 3rd year: steps

The process will be illustrated more specifically at the beginning of the 3rd year.



* Selected by the Ph.D. candidate together with his/her supervisor

** Through the Turnitin software provided by the Ph.D. School

*** Version of the thesis as close as possible to the final one

b. RESEARCH TRAINING

__ the courses

The list (programmes and general information) of the courses offered every academic year are listed online:

dottorato.polimi.it > "during your Ph.D." section > "Ph.D. level courses" section

The characterizing courses

In the Ph.D. programme in Design, Characterising Courses provide 30 of the 40 credits related to structured teaching activities. Candidates are required to take courses; assessment procedures will be specified by the professors in charge of the courses.

The Interdoctoral Courses

The Ph.D. School organises general and Interdoctoral courses every year.

The suggested Interdoctoral courses for the A.Y. 2016/17 are:

- * Scientific and Scholarly Writing, *Ken Friedman - Luca Guerrini*
| 16-27 jan 2017
- * Interactive virtual prototyping. Methods and tools, *Monica Bordegoni*
| 10-14 jul 2017
- * Collaborative research methodologies, *Abraham B. Shani, David Coghlan*
| 16 jan-22 mar 2017

The acquisition of at least 5 credits is mandatory.

Specialist Courses

5 of the mandatory credits can be obtained by choosing from Interdoctoral courses organised by the Ph.D. School, or among other courses provided by other Ph.D. programmes of the Politecnico and/or external entities. In choosing these courses, prior approval of the supervisor and of the Ph.D. Director is mandatory.

The attendance of specialist courses, workshops, schools, seminars cycles is strongly encouraged and (if these seminars, workshops are certified and evaluated) may permit to acquire credits according the modalities established by the Board of professors and previous approval of the study plan submitted by the candidate. *The acquisition of at least 5 credits is mandatory.*

c. SPECIALIST ACTIVITIES

__ research activity within the research team

The Ph.D. candidates are required to participate in their research team activities, such as collaboration in research projects, organization of seminars, events and other educational/research activities.

- ↘ The candidate's participation has to be **validated by the supervisor** and is recommended to be accomplished during the first year (5 ects) and the second one (10 ects).

__ tutoring or teaching activities in a course or a design studio

Participating in teaching activities as a teaching assistant or research fellow is part of the ongoing synergy between teaching and research.

Ph.D. candidates are required to participate to 1 course or design studio as tutor during the 1st or the 2nd year.

Fundamental information

- ★ to get the position of tutor within a course or design studio, it is necessary to apply the **official call for tutoring and teaching activity** (www.polimi.it Home > Ateneo > Albo Ufficiale d'Ateneo)
- ★ Ph.D. candidates can accomplish a maximum of 40 hours per year
- ★ the tutoring activity has to be **validated by the supervisor**.

c. SPECIALIST ACTIVITIES

__ paper publication

The production of scientific publications is an important opportunity to further the understanding of the research in progress and to be part of an international exchange of ideas.

The scientific production of an university is a fundamental element to spread the scientific knowledge and research topics developed in each department.

For Ph.D. candidates

- ★ **1 scientific publication (in English, single author)** is required (5 ects)
and
- ★ another scientific publication (in English) is an optional activity (see "educational framework", p.18-19) and can be multi-author
- ★ **the publication of 3 scientific papers is recommended over the three years** (including at least one in English, single author) to support and further the research in progress
- ★ the publication of scientific papers has to be **validated by the supervisor**

The IRIS-Re.Public@Polimi online platform

Every year, the Polimi staff (professors, research assistants, Ph.D. candidates, post-doc fellows, study grant fellows, technical & administrative staff) is asked to upload their publications on the IRIS online platform (Institutional Research Information System), which is linked to the Ministry of Education, Universities, and Research (MIUR).

Re.Public@Polimi is the institutional repository where research publications produced by scholars and researchers at the Politecnico di Milano are collected and maintained. It is based on IRIS, the new IT platform that makes it easy to collect and manage data on research activities and outputs.

>>>

c. SPECIALIST ACTIVITIES

- ↳ The **annual deadline** to upload the publications on the IRIS catalogue is communicated by the Department.
- ↳ **Fundamentals**
 - ★ only products that show an **explicit statement of the author's affiliation with Politecnico di Milano** can be uploaded on the IRIS catalogue
 - ★ only products that have actually been **published** can be uploaded on the IRIS catalogue
 - ★ conference papers have to consist of more than **6000** char. spaces included
 - ★ book contributions have to consist of more than **17000** char. spaces included
 - ★ complete information about the publication must be provided
the uploaded file (PDF, max 10Mb) must be composed by **cover + back cover + colophon + whole contribution + the scientific committee**
- ↳ The complete **guidelines** on the evaluation procedure for scientific credentials are provided on the **Polimi Intranet** (www.polimi.it > intranet or www.intranet.polimi.it > Come fare per > Ricerca > Pubblicazioni > Catalogo prodotti della ricerca).
- ↳ The procedure to upload the publications on the IRIS online catalogue is accessible through the **Online Services** (www.polimi.it).

Contact office for the IRIS-Re.Public@Polimi online platform

Research Support Office
 produzionescientifica-design@polimi.it

c. SPECIALIST ACTIVITIES

_ _ internship abroad

The Ph.D. programme favours the candidates' research interactions with other groups in their research field, preferably abroad. Research visits of at least three months are strongly encouraged, as through them the candidates may acquire further skills to develop their research work and thesis.

During the Ph.D. programme in Design all candidates are **strongly** recommended to engage in this activity, which is compulsory for those who are supported with a scholarship (**specific cases** to be discussed with the Director of the Ph.D. programme in Design). Candidates **not** supported with a scholarship who, for good reasons, cannot go abroad, are permitted to substitute the internship abroad with an additional specialist course and an additional paper publication (see "educational framework", p.18-19).

Fundamental information

- ★ complete period abroad: 6 months (10 ects)
- ★ minimum period abroad: 3 months (5 ects)
- ★ it is allowed to stay abroad more than 6 months (up to 18 months); the number of ects will not increase
- ★ for periods abroad of more than 3 months, the authorization of the Board is necessary and should be asked through the secretariat
- ★ to activate the exchange is necessary a signed invitation letter from the university/research centre, specifying the period dates and a short description of the activity that will be accomplished by the Ph.D. candidate. An invitation letter is necessary for each period abroad
- ★ the internship can be done in more than 1 institution
- ★ it is important to make a request for a Mission Assignment Form on the Online Services before leaving

Ph.D. candidates with scholarship granted by the Politecnico di Milano

- ★ the internship is compulsory
- ★ for the periods spent abroad (lasting a minimum of ten days and a maximum of 6 months) the scholarship is increased of 50%. To get the increase of the scholarship, candidates have to download the form (www.dottorato.polimi.it > During your Ph.D. > Periods abroad and stages > Periods abroad)
- ★ the scholarship increases of 50% for a maximum of 6 months

The Ph.D. research is developed under the guidance of a supervisor, who supports the candidate in the setting-out and in the everyday activities related to the thesis development. The supervisor supports the candidates over all their training career.

The supervisor

- * assists the candidates in the choice of courses to be included in a study plan, which must finally be approved by the Director of the Ph.D. programme in Design
- * assists the candidate during the **mid-term assessment (May)**
- * is asked to show up together with his/her own candidate during the **annual assessment (October)** and to briefly comment the research activity and the global effort of the candidate within his/her research group.
- * is asked to **validate**
 - ↳ the annual assessment dossier
 - ↳ the research activity within the research team
 - ↳ the publication of scientific papers
 - ↳ tutoring or teaching activities in a course or a design studio
- * assists the **plagiarism check** of the final version of the thesis through an Internet-based plagiarism-prevention service provided by the School

supervisor

For Ph.D. candidates admitted with and without scholarship

(with the exception of the Ph.D. candidates admitted through CSC-Cina, VIED-Vietnam, agreement and co-tutorship)

According to newly adopted regulations, from the 2nd year Ph.D. candidates are allowed to access to the endowment of € 2,740.00 (€ 1,370.00 per year) at their disposal.

The access in advance during the first year is possible prior request to the Director of the Ph.D. programme in Design.

The doctorate administration will refund expenses related to activities that support the Ph.D. research in Italy or abroad, to the extent of the amount presented above.

endowment

contacts and websites

Ph.D. programme in Design

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20158 - Milano

Director of the Ph.D. programme in Design

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segreteria dottorato.design@polimi.it

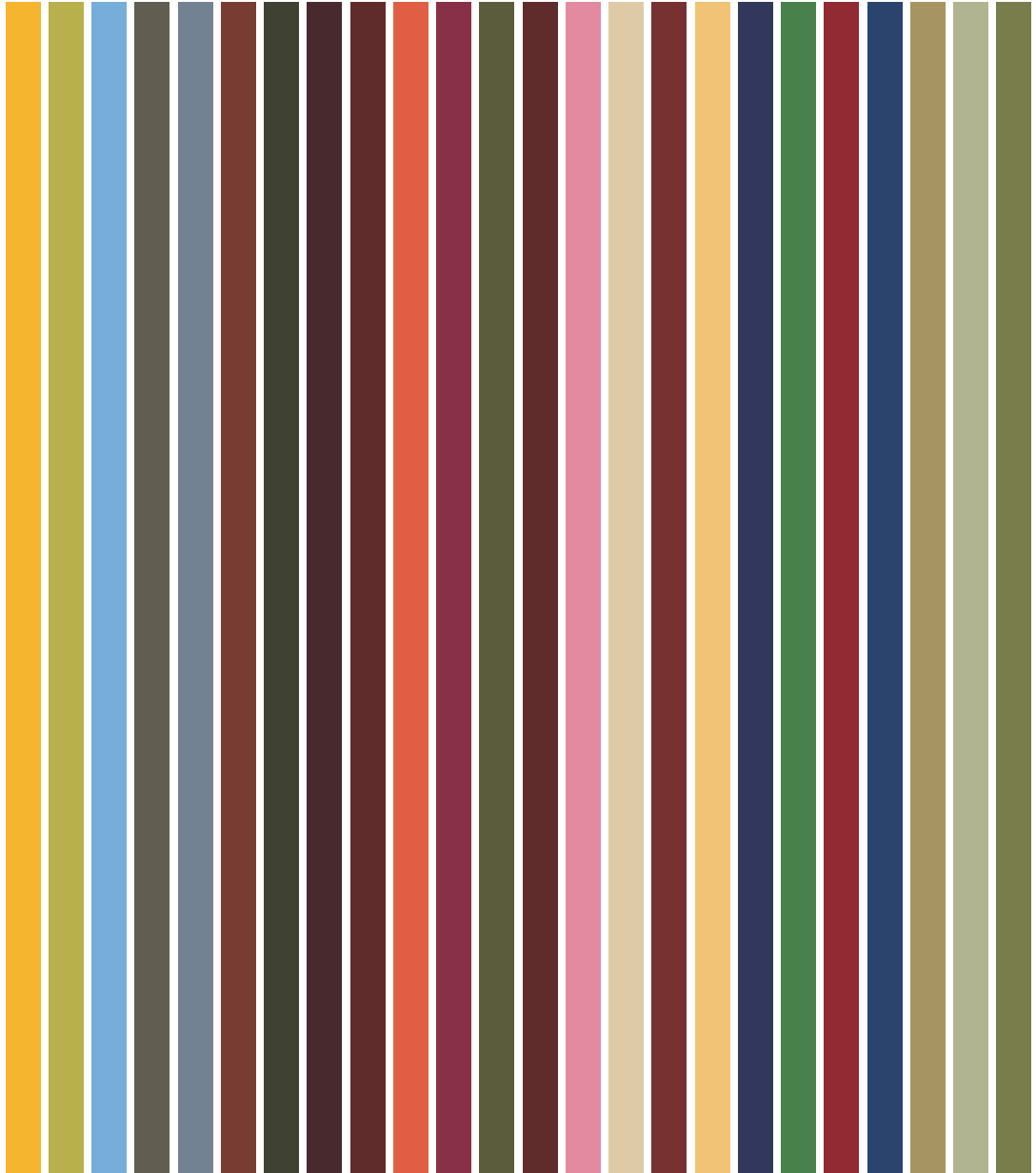
Ph.D. candidates' representative within the Design Department

Annalinda De Rosa
annalinda.derosa@polimi.it

Welcome kit by

Raffella Trocchianesi and Annalinda De Rosa

Websites
Politecnico di Milano www.polimi.it
Polimi Ph.D. School www.dottorato.polimi.it
Department of Design www.dipartimentodesign.polimi.it
Ph.D. programme in Design phd.design.polimi.it



DOTTORATO DI RICERCA IN DESIGN
POLITECNICO DI MILANO, DIPARTIMENTO DI DESIGN



POLITECNICO
MILANO 1863

welcome kit
XXXII cycle