



**MINES ParisTech**

**Thesis charter**

## **SUMMARY**

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## PREAMBLE

The aim of this charter is to provide a formal definition within a single document of a range of recommendations for the benefit of the various partners involved in preparing a Ph.D. thesis, in accordance with the decree of 7 August 2006 relating to Ph.D. training and to the decree of 3 September 1998 relating to the thesis charter. The charter is intended for all Ph.D. students, research academics and researchers at Arts et Métiers ParisTech and MINES Paristech. The document is to have an adaptable dimension so as to take account of the specific nature of the various host teams and seeks to preserve the extensive diversity of circumstances affecting Ph.D. students in our schools.

The charter defines the roles and responsibilities of the various partners involved in Ph.D. studies, whether they are attached to MINES ParisTech or Arts et Métiers Paristech. In accordance with the decree of 7 August 2006, the charter must be signed on the occasion of the initial enrolment, by the Ph.D. student, the research supervisor(s), the director of the research unit and the director of the Doctoral School.

It is based on the specificities of doctoral studies in the institutions concerned:

- ***a high scientific standard:*** through a selective recruitment procedure giving priority to personal qualities, the Ph.D. student can benefit to the highest degree from the high-level scientists with whom he/she will be in contact in the range of laboratories and French and foreign academic environments and thereby acquire greater scientific knowledge;
- ***an open approach to applications in liaison with the economic and industrial environment:*** theses prepared at MINES Paristech and Arts et Métiers Paristech constitute a preliminary professional experience and are often based on scientific and technological problems facing companies; the thesis, as such, provides an opportunity for establishing a link between academic training and practical problems and may require recourse to several scientific disciplines;
- ***creation of activities:*** the Ph.D. student must not only learn to use the most advanced technologies but also contribute to producing those of the future;
- ***teamwork:*** the Ph.D. student is welcomed into a research unit (laboratory, research centre, department, etc.) and establishes relations with representatives of the economic and industrial world. He/she works within a national and international network;
- ***fostering a sense of responsibility and autonomy among Ph.D. students.***

The charter specifies the nature of information to which each of the parties has an equal right at the beginning of the thesis. Emphasis is placed on the need for the various partners to acquire an adequate awareness of their respective aims and reminds those involved of their rights and duties throughout the duration of the thesis.

## 1 - THE SELECTION OF PH.D. STUDENTS

Every spring each institution launches its campaign for applications through all appropriate means for enrolment in a Ph.D. programme in the following October.

Each research unit undertakes to select its future Ph.D. students according to its own methods within the framework of those defined by the institution. Nevertheless, it is necessary to ensure that the candidates should provide proof of:

- a sound standard of scientific culture;
- a sound command of at least one foreign language (usually English);
- a good capacity for analysis and synthesis;
- qualities of adaptability, creativity, a capacity for innovation, communication and pedagogical skills;
- motivation for research work;
- a coherent plan for a future career.

The enrolment file for each candidate selected by the research unit for preparing a Ph.D. comprises the following information: CV, thesis topic and supervisor, funding of the Ph.D. student, partnership, doctoral training and the Doctoral School to which the candidate will be attached, as well as a preliminary plan for a future career which may evolve as the thesis progresses. The director of the Doctoral School issues an opinion on each candidate. The definitive decision for enrolment of a Ph.D. student is taken by the research directorate of the institution in which he/she has enrolled.

## **2 - THESIS SUPERVISION**

The director of the research unit must ensure that the Ph.D. student is adequately welcomed and provided with good working conditions to ensure his/her satisfactory integration. He must ensure that the candidate's rights and duties are safeguarded. According to the resources of the research unit, the director may fund the student's access to complementary training courses required for the development of his/her research and the various assignments linked to presentation by the Ph.D. student of his/her research work on the occasion of scientific events related to his/her field of activity.

The director of the research unit shall inform each newly-enrolled Ph.D. student of:

- the overall organization of the research unit;
- rules governing regular attendance and current safety requirements in the research unit (the Ph.D. student must abide by the scholastic and internal regulations of the institution);
- the overall scientific focus of the research unit;
- the specific role of the project entrusted to the Ph.D. student within the overall focus of activity of the research unit;
- the funding of his/her thesis;
- general conditions in which theses are prepared and submitted;
- the professional prospects for Ph.D. students graduating from the research unit.

Furthermore, special attention must be given to how foreign students are welcomed and adequately informed. They must be provided with information on the various facilities of the institution and external bodies which may be of use to them during their stay in France.

Responsibility for supervising the thesis rests with the person in charge of the Ph.D. programme and the research supervisor. Supervision of a thesis may possibly be provided jointly by two research supervisors in order to promote the development of transdisciplinary subjects. The research supervisor may seek the assistance of other supervisory staff who may not yet be authorized to

supervise research, who will be referred to hereafter as “thesis masters” or co-supervisors. In general, two co-supervisors per Ph.D. student would seem to be a reasonable maximum. The supervisors must ensure the best possible supervision of each thesis, anticipate any difficulties that may arise and solve them jointly with the research student, and make him/her aware of their responsibilities when there is evidence that their work is falling behind schedule.

The task of guiding Ph.D. training may be shared between several people and the way it is organized in each of the approved institutions is described in its own internal regulations.

#### ***The person in charge of Ph.D. training***

The person in charge of Ph.D. training is responsible for the enrolment and monitoring of the Ph.D. student. A minimum of two interviews annually with the person in charge of the Ph.D. programme (preferably other than the research supervisor, although belonging to the higher educational institution in which the Ph.D. student has enrolled) is desirable in order to ensure overall, long-term follow-up. This person will have to define with the student, and in agreement with the research supervisor, what complementary or supplementary training courses and accompanying arrangements are required, such as language tuition, supplementary technical and financial training, placements abroad or in industry as soon as that is possible, a European diploma, etc.

#### ***The research supervisor***

The research supervisor is a person from the research unit who has the capacity to supervise theses in accordance with Article 17 of the decree of 7 August 2006. The research supervisor is chosen according to recognized expertise in the relevant research field as his/her task will be to help the student to bring to light innovation within the scientific context and to ensure its contemporary relevance; he/she must also ensure that the student displays a spirit of innovation. A second research supervisor may therefore belong to another research unit if conditions so require it (transdisciplinary nature of the topic, cooperation between research units). In the event of co-supervision, it is the first supervisor who is in charge of the student on behalf of the institution where enrolment has taken place. The research supervisor must not only help the student to devise his/her research project, but also ensure the regular monitoring of such research work. He/she must ensure that the student has ready access to all equipment and data of use for the satisfactory development of his/her research. The supervisor must also encourage the student to undertake any supplementary training that is indispensable for research purposes and future career prospects.

A frequency of two interviews per month on average with the research supervisor should serve as a reference in order to ensure adequate scientific follow-up of the thesis. For such follow-up to be efficient, it would not seem reasonable that a research supervisor should simultaneously supervise more than five Ph.D. students. At such meetings, opportunities should be sought to enable the student to publish, to present a paper at a conference and to become more familiar with research work at the school that is related to his/her own topic.

Whenever the topic of the thesis permits, the student will be associated in contract research in order to give him/her experience of applied research and relations with contractual partners.

#### ***The co-supervisor or thesis master: authentic, official complementary supervision***

Regular guidance for the student is obviously desirable. For that purpose, the research units are able to designate, alongside thesis supervisors, research academics who may be authorized or not to direct research but who have the vocation to do so subsequently, to provide regular support to the student. For certain fields, the use of extremely complex technique with regard to learning and/or use may require the participation of the relevant expert who has responsibility for it. He/she may intervene for certain technical aspects during the definition of the research project and for regular monitoring of the research work.

In order to achieve a more precise definition of the satisfactory conduct of the thesis, an indication will be given each year, at the time of enrolment, of the names of the persons in charge of follow-up, the modalities of defining and revising the work programme, the frequency of meetings, further guidance and possible presentations. The methods of guidance are indicated in the educational regulations of each institution.

### ***The Ph.D. student***

The Ph.D. student who undertakes to prepare a thesis has certain obligations in relation to his/her host institution:

- abidance by the school rules;
- confidentiality regarding his/her work vis-à-vis third parties;
- relinquishment of the ownership of the results and their possible valorization for the benefit of the institution where he/she is enrolled, or a third party defined by that institution, particularly in the case of external funding;
- acceptance of teaching and/or research tasks on any contracts with which he/she has been entrusted;
- acquisition of general or specific skills which the supervisory team may deem useful;
- information, during and after the thesis, on future career plans.

The student will be required to draw the attention of his/her supervisors to any experimental or theoretical difficulty encountered and will provide a regular account of progress achieved in his/her work to the person directly responsible.

Enrolment in the following year will depend on an annual assessment of the progress of the student's work with submission of a written dissertation and an oral viva before a board designated, if possible, by the person in charge of the doctoral training. The viva may be undertaken according to a procedure specific to each particular research unit.

All or part of the items referred to above may be defined in a thesis contract or other agreement (which may include the charter for the guidance of Ph.D. students in annex), devised in agreement with the research directorate of the student's institution. This document may also contain details as to the funding of the thesis and its duration.

In the event of inadequate results, breaches of discipline, or fraudulent behaviour on the part of the student, the director of the research unit, the person in charge of doctoral training or the research supervisor shall have the right to send a written warning to the student concerned with a copy to the research directorate of the relevant institution and to the director of the Doctoral School. If such a warning should prove ineffective or if its effects were considered inadequate by the research supervisor, the Research Directorate of the institution would then have to take any necessary measures after convening a meeting of an ad hoc committee.

The duration of the thesis is three years, except for a dispensation granted exceptionally by the director of the institution, on recommendation from the director of the Doctoral School and after consulting the research supervisor and the council of the Doctoral School, and on a motivated request from the Ph.D. student. The foreseeable deadline is set at the end of the 2nd year, where possible.

### **3 - MEDIATION PROCEDURE**

In the event of persistent conflict between the student and the supervisory team, each of the signatories to the charter may call upon a mediator who, without relieving anyone of their

responsibilities, would listen to the parties, offer a solution and ensure that it was accepted by all with a view to completion of the thesis. The mediator's task implies impartiality; he/she may be chosen from among the members of the governing committee of the host team or from the Doctoral School or from outside the institution.

In the event of failure in local mediation, the student or one of the other signatories of the charter may request the principal of the institution to appoint a mediator external to the institution. An ultimate recourse can also be submitted to the principal of the institution.

#### **4 - FUTURE CAREER PROSPECTS**

The MINES Paristech and Arts et Métiers Paristech doctoral college undertakes to provide all of its students with a sound basic knowledge that is indispensable for the smooth development of a future Ph.D. graduate's career, as in the case of:

- engineering for scientific and technical projects;
- foreign languages, particularly English;
- knowledge of industrial enterprises (aid in decision-making, accountancy, and the economics and management of projects);
- team leadership and communication.

With that aim in mind, research students are offered inter-doctoral courses in which they must choose to enrol with the consent of their supervisory team. Furthermore, they are encouraged to take advantage of any opportunity to visit or conduct internships in companies which could be an integral part of their research work, including abroad. For example:

- there is a "European Ph.D." label awarded according to rules defined by the Conference of University Presidents;
- provision is made under French legislation for joint thesis supervision agreements with a foreign institution (decree of 6 January 2005).

Ph.D. students shall undertake from the beginning of their thesis studies to attend all training programmes that are an integral part of their future career plans.

Once they have enrolled in the 1st year or, where appropriate, on the occasion of each re-enrolment, the Ph.D. student and his/her supervisory team and possibly the person in charge of the doctoral training will decide on the content of the supplementary "accompanying" courses. These supplementary courses include a foreign language. Comprehensive details will be provided of a student's participation in the life of the school and research centre (teaching: nature, content and cycle; research contracts: partners, object, funding; seminars: context, content, periodicity and participants).

Once the thesis has been completed, a certificate indicating the various courses attended will be issued to the new graduate, the volume of courses attended during the thesis period having to exceed 100 hours (excluding languages).

The viva procedure shall be conducted in accordance with the decree of 7 August 2006.

## 5 - POST-THESIS PERIOD

Once the thesis has been completed, the supervisory team shall have the responsibility to:

- *continue to enhance the results obtained*, by involving the young graduate as a co-author in publications, material chosen according to potential professional outlets, or patents, while encouraging him/her to make presentations and give lectures;
- *facilitate his/her professional incorporation* by ensuring that he/she continues to enjoy the logistic support of the research unit while seeking employment, by providing him/her with contacts in companies, by maintaining the placement networks on the basis of the “address book” of the scientific experts of the centre or department and/or relevant doctoral programme;
- *possibly help him/her when returning from a post-doctoral placement* where relevant, particularly when returning from abroad;
- encourage the creation and maintenance of an active network of relations between the laboratory and former Ph.D. graduates.

In practice, the Research Directorate of each School ensures that each Ph.D. graduate seeking employment has access to the facilities offered by the Alumni Association, where possible, and can enrol in the Association Bernard Grégory, either through the employment bureau specific to his/her institution where applicable, or through that of the nearest university.

In return, the Ph.D. graduate undertakes to respond to any career surveys whether they come from the School, the Alumni Association or researchers, or the Association Bernard Grégory. He/she accepts the moral obligation to respond, as far as possible, to inquiries from young Ph.D. students seeking advice or assistance.

### THE PH.D. STUDENT

Name – First name

Date:

Signature:

### THE RESEARCH SUPERVISOR

Name – First name

Date:

Signature:

### THE DIRECTOR OF THE RESEARCH UNIT

Name – First name

Date:

Signature:

### THE DIRECTOR OF THE DOCTORAL SCHOOL

Name – First name

Date:

Signature: