

**Department of Computer Architecture**

**Regulations for the  
Doctoral Programme in Computer Architecture**

**November 2017**

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## 1. Admission

Admission to the doctoral programme in Computer Architecture is governed by the Academic regulations for doctoral studies at the UPC. Information on access requirements and the admission procedure can be found at [http://doctorat.upc.edu/new-students/access-requeriments?set\\_language=en](http://doctorat.upc.edu/new-students/access-requeriments?set_language=en).

Applications for admission must be submitted online at [https://preinscripcio.upc.edu/home\\_candidat.php?idioma=3](https://preinscripcio.upc.edu/home_candidat.php?idioma=3). Candidates will be asked to provide the information and supporting documentation required by law, which include degree certificates, academic transcripts and curricula, duly legalised and translated, if necessary.

### 1.1 Information required

The candidate must upload copies of the supporting documentation at the time the application for admission is submitted. If admitted, the candidate must complete the enrolment process and provide originals copies of all the supporting documentation indicated in the Academic regulations for doctoral studies at the UPC, as shown in the figure below (<http://doctorat.upc.edu/new-students/admission>).

**Admission** Share    

Students wishing to enrol for doctoral studies at the UPC must complete the admission process as outlined below.

1. Check the [admission requirements](#) and the [admission and enrolment periods](#).
2. Request admission to the academic committee for the doctoral programme:
  - a. You will have to register in the [online admissions application](#) for doctoral studies and fill in the information required (identification document, CV, qualifications, transcripts, etc.).
  - b. You will be asked to provide documents such as the following:
    - The degree or degrees that qualify you to apply for admission to a doctoral programme.
    - Syllabuses or curriculum of the degree or degrees you studied.
    - Academic transcripts for the degree or degrees.

**N.B.:** These documents should have been legalised and translated, if necessary (see the section on the [legalisation of documents and qualifications](#)).

    - A letter from the relevant body at the home university of origin stating that the qualification or qualifications you are submitting entitles you to apply for admission to a doctoral degree in that country, translated, if necessary.
    - A CV that includes any research you have carried out and related publications.
    - Proof of any grants, scholarships or financial aid obtained.
    - Other merits.
  - c. The coordinator of the doctoral programme issues the letter of admission.

If the original copies are not available at the time of enrolment, the candidate must sign and submit the form *Commitment to submit documents*. Candidates will not be permitted to proceed to the thesis deposit until they have submitted all of the supporting documentation stated in the Academic regulations for doctoral studies.

### 1.2 Admission procedure

Applications for admission are considered by the academic committee for the doctoral programme on the basis of the candidate's academic record and any additional information provided. The admission procedure sets two levels of requisites, split into both a formal and a conceptual evaluation, as follows:

Formal Analysis (FA): Includes the set of administrative requisites put together by the current

program regulation to be met by any student willing to get engaged into a PhD program. These requirements are mainly focused on granting the proper level of studies and required credits. Failing this set of requirements means a non-acceptance in the PhD program.

Conceptual Analysis (CA): Includes all aspects related to the candidate's knowledge, background and expertise, and also considers the potential interest from a research group linked to the PhD program to lead the candidate's work. Main requisites are:

- DE: Degree in an engineering field related to the program areas, specially in Computer Science or Telecommunications
- DI: There is a professor linked to the PhD program willing to serve as the thesis director
- BA: Background in the thematic area, for example from a previous work in the Master studies, collaboration with a research group, etc.
- EN: Solid knowledge in English, showing proficiency in writing and speaking, granted through tests widely accepted (TOEFL, etc.)
- FU: Potential funding for the student, be it from the research group she/he would be engaged or from a local source.

As a consequence, the admission will be handled according to the expression below:

$$\text{Admission: } FA * (0,1 * DE + 0,4 * DI + 0,1 * BA + 0,2 * EN + 0,2 * FU)$$

Candidates may be admitted, rejected, or provisionally admitted subject to the completion of bridging courses with a total value of up to 36 ECTS credits. The bridging courses will be research oriented subjects from master's degrees taught at the Department of Computer Architecture, chosen in agreement with the academic committee for the doctoral programme.

## 2. Evaluation of the research plan

In accordance with the provisions made in Royal Decree 99/2011, on doctoral studies, the assessment procedure for doctoral studies must include the annual evaluation of the candidate's research plan. The first of these annual evaluations is conducted in a public session before an examination panel.

### 2.1 Evaluation of the research plan for the first year of doctoral studies

The examination panel will be formed by two members of the teaching staff assigned to the doctoral programme and one external to the programme, appointed by the academic committee.

The candidate must carry out the defence of the initial research plan during the first year of the doctoral programme, either in the February examination session (autumn semester enrolment) or the July examination session (spring semester enrolment).

Candidates must submit a preliminary report and make a public presentation of the research plan. There are no formal requirements governing the content or length of the report, but candidates should ensure that it contains at least the following sections:

- Justification for the research plan and definition of the research context
- State of the art
- Anticipated contribution to the field
- Methodology
- Potential collaborations with other research groups or institutions working in the same area

- Plan for the dissemination of results (publications, patents, transfer agreements)
- Timeline and anticipated results

The report must be approved by the thesis supervisor and sent by e-mail to the doctoral programme administrator at least ten days before the date of the preliminary reading and defence.

For the public presentation, the candidate will have a maximum of 15 minutes in which to explain the following aspects of the plan:

- Research justification and brief description of the state of the art
- Work plan
- Methodology
- Anticipated results
- Timeline
- Potential collaborations with other research groups or institutions

At the end of the presentation, the panel will have 15 minutes in which to ask any questions it deems necessary.

A mark of “Pass” or “Fail” will be awarded. Candidates who are awarded a mark of “Fail” will be given six months in which to submit a revised research plan that incorporates the suggestions made by the examination panel. The revised plan will be evaluated by the academic committee for the doctoral programme. If the candidate is again awarded a mark of “Fail”, he/she will be required to withdraw from the doctoral programme in Computer Architecture.

In both cases, candidates must submit the supporting documentation stipulated in the Academic regulations for doctoral studies at the UPC.

## 2.2 Evaluation of the research plan for subsequent years

The research plan for subsequent years will be evaluated by the academic committee for the doctoral programme according to the standard procedure, as described below. As part of the evaluation, the candidate must submit a preliminary report to the doctoral programme administrator within one year of the previous evaluation. This report must provide updated information for each of the sections in the initial research plan, indicated above.

Evaluation Process: The evaluation is supported by:

- Analysis of the report to be provided by the Thesis director (positive/negative)
- Analysis of the student progress according to the data included in the updated version of the research plan submitted for evaluation, in terms of scientific contributions, patents, mobility actions, attendance to courses/seminars or active project participation. Each parameter is binary evaluated and the Academic Report will issue a positive report if one of the parameters showing progress is met.

The Academic Committee report will be justified so the student may benefit from it.

Whenever a negative evaluation comes up (“Fail”), the student is asked to submit an updated and justified report including the complete set of actions done during the period as well as the roadmap for the next year. This report is discussed in a meeting with the thesis director, where the Academic Committee will take the final decision. If a positive evaluation is issued (“Pass”), the previous “Fail” does not affect any future decision. If a “Fail” is issued again, the student will be given three months to submit, along with the thesis director, a new report. This report is again evaluated by the Academic Committee, turning into the final decision. Whether this decision is negative the student will not be able to continue in the program.

## 2.3 Setting the Committee for the Research Plan evaluation

The Research Plan is evaluated in two annual calls (February and July), being the first one the only one requiring a public presentation. The Committee for the first evaluation requires a Committee with three members belonging to the PhD program. The procedure used to set the members building the committee is as follows:

- 1) The Academic Committee of the doctoral program decides the number of committees according to the Research Plans presented to be evaluated and ensuring that no more than 6 proposals are evaluated per Committee.
- 2) The Academic Committee of the doctoral program selects three members, according to the history of participation of the different professors in the PhD program.
- 3) Should a selected member cannot participate in the committee, she/he is the one responsible for looking for a substitute and communicate the name of the professor to the program coordinator and the administrative team no later than 1 week
- 4) Once the Committee is set the administrative team at the department will issue all paperwork

Committees are called earlier each semester, so the procedure for setting the defense dates will start as soon as the committees are fixed.

## 3. Requests for extension of doctoral studies

In accordance with the Academic regulations for doctoral studies at the UPC, the maximum length of full-time doctoral programmes is three years from the time of admission. Candidates may request an extension of up to one year, which must be authorised by the academic committee for the doctoral programme. Requests for an additional extension of one year may also be submitted, but must be authorised by the rector of the UPC.

## 4. Preliminary reading and defence

The preliminary reading and defence of the doctoral thesis is an assessment procedure followed by the Department to comply with the pre-assessment requirement established in the Academic regulations for doctoral studies at the UPC. Authorisation for the preliminary reading and defence must be obtained from the academic committee for the doctoral programme, represented for this purpose by the programme coordinator. The thesis supervisor must submit a formal pre-assessment request by e-mail to the doctoral programme coordinator, at least 20 days before the estimated date of the preliminary reading and defence. The request must include the following details:

- Name of candidate
- Name of thesis supervisor
- Title of thesis
- Proposed members of the examination panel
- Proposed date and time
- Room reserved for the preliminary reading and defence

There are no specific conditions governing the affiliation of panel members, although examiners should preferably be members of the teaching and research staff of the Department of Computer Architecture or another UPC department. In addition, none of the panel members should be co-authors of an article directly related to the thesis or with a potential bearing on its evaluation.

Once authorisation has been given by the programme coordinator, the candidate must provide copies of the following documents for each member of the examination panel. This can be done

directly or by submitting three copies to the administration of the Department of Computer Architecture.

- Thesis
- Thesis summary, of no more than 1,000 words
- List of published articles

The candidate must ensure that all of the pre-assessment documentation has been sent to the members of the examination panel at least 15 days before the date of the preliminary reading and defence.

Once authorisation has been received from the programme coordinator, the administration of the Department of Computer Architecture will generate the formal pre-assessment documentation and give official notice of the preliminary reading and defence.

The preliminary reading and defence is a public session in which the candidate is given 45 minutes to present the thesis to the examination panel. The examiners may then ask any questions they deem necessary.

## 5. External reviewers

Once the pre-assessment has been successfully completed, the candidate may send copies of the thesis to two external reviewers.

The reviewers will be chosen by the thesis supervisor and must not be directly involved in the doctoral programme. The candidate and the thesis supervisor are responsible for ensuring that copies of the thesis and the review template are sent to the external reviewers, together with full instructions for the review process. The thesis supervisor must ensure that the original copies of the reviewers' reports are available on the date of the thesis defence.

Candidates who wish to receive the European Mention must ensure that the external reviewers' reports are submitted on the headed paper of the issuing institution.

If either one or two of the external reviewers' reports indicates that changes to the thesis are required, the supervisor must provide a supplementary report confirming that the final thesis submitted for deposit will incorporate the necessary amendments or providing clear justification for overlooking the reviewer's comments.

## 6. Selection of the examination panel

As stipulated in the Academic regulations for doctoral studies governed by Royal Decree 99/2011, the composition of the examination panel is subject to the following conditions:

- All examiners must be PhD holders and recognised experts in their fields. If they are members of the UPC community, they must have accredited research experience, as established in chapter I.1 of the academic regulations.
- Most of the examiners must not belong to UPC. In a thesis with two directors from different institutions, only one member in the committee may belong to any of the two institutions.

As stated in the regulations, accredited research experience is defined in the manner outlined below.

Lecturers and researchers will be considered to have the necessary research capacity and experience if they meet any of the following requirements:

- Supervision of a doctoral thesis during the last five years.
- Direction of a current research area (approved during the last seven years).
- Researcher or principal investigator of a project receiving competitive funding from another public institution within the last five years.

## 7. Thesis deposit

The thesis deposit is the final stage in the formal academic procedure leading to the thesis defence. Candidates must allow for at least 40 calendar days between the thesis deposit and the thesis defence. The administration of the Department of Computer Architecture complies fully with the legal provisions on the length of the thesis deposit period and the public availability of documentation during this period. As such, it will not accept any request that does not observe the minimum period required by law. The thesis supervisor is responsible for ensuring that this minimum period is observed.

The thesis deposit is an official academic act and is therefore governed by a formal procedure. In order to proceed to the thesis deposit, the candidate and the thesis supervisor must submit the following documentation:

- Acceptance of examination panel members (AM form).
- Proposal for the appointment of the examination panel (T form).
- Report on the quality of the thesis and authorisation by the academic committee for the programme for its submission (ADU form).
- Reports received from the two external reviewers (IE form).
- Request for thesis registration and deposit, signed by the candidate and the thesis supervisor.
- Two copies of the final version of the thesis, one of which should be bound and submitted together with the thesis assessment report or doctoral programme assessment report.
- Thesis summary, in Catalan or Spanish and in English, of no more than 4,000 characters (thesis summary form). Signed originals of all documents are required. The UNESCO codes for the thesis summary form can be found in the document [Cod. UNESCO - pdf].
- CD containing:
  - the complete thesis (PDF);
  - electronic copies (PDF and DOC/ODT) of the two thesis summaries, in Catalan or Spanish and in English;
  - electronic copies (PDF) of brief CVs (max. 200 words) for each of the proposed examiners from outside the UPC, and any additional information requested (one file per examiner).
- Authorisation by the thesis supervisor for the submission of the defence proposal (ADT form).
- Doctoral student activity report (DAD), signed by the thesis supervisor.
- Two copies of the statement of commitment between the doctoral student and the thesis supervisor (CDDT form), signed by the candidate and the thesis supervisor.
- TDX contract (TDX form), signed by the candidate.
- Request for the international doctorate certification, where appropriate.

The candidate must provide the doctoral programme administrator with the original copies of all the above documents to be eligible to proceed to the thesis deposit (electronic copies of the two external reviewers' reports may be submitted for the purposes of the thesis deposit, but the original copies must be made available to examiners on the day of the thesis defence).



The candidate must also provide the doctoral programme administrator with two copies of the thesis document, to be archived (these copies are not returned to the candidate after the thesis defence).

### **7.1 Acceptance of examination panel members**

The thesis director is responsible for ensuring that the acceptance form is received from each of the appointed examiners. As stated in the Academic regulations for doctoral studies at the UPC, members of the examination panel cannot be co-authors of any article directly related to the thesis and published by the candidate during the period of doctoral studies.

In addition, as provided for in the regulations, the Department of Computer Architecture appoints examination panels composed of three members and two substitutes, as a result of which the majority of the panel should not be UPC staff.

### **7.2 Appointment of the examination panel**

The candidate or thesis supervisor must send the doctoral programme coordinator the T form listing the proposed members of the examination panel, which must include all of the required information about each member.

Once this information has been verified, the coordinator signs the document and sends it to the administration of the Department of Computer Architecture.

### **7.3 Request for the report on the quality of the thesis**

To be eligible to receive the report on the quality of the thesis, candidates must have received positive reports from the two external reviewers and have been awarded a mark of “Pass” for the pre-assessment of the doctoral thesis.

The candidate or thesis supervisor must send an e-mail to the doctoral programme coordinator to request the report. Requests are processed in a period of approximately one week. The following documents must be attached:

- Copy of the external reviewers’ reports (IE form).
- Signed declaration by the thesis supervisor confirming that none of the panel members are co-authors of an article directly related to the thesis and published in conjunction with the candidate.
- Signed declaration by the thesis supervisor to the effect that those doctors from the UPC who form part of the examination panel (if any) meet the legal conditions for membership.
- Signed declaration by the thesis supervisor confirming that the candidate has received a positive tutorial report for the preceding year.
- List of published work deriving from the thesis.
- List of research projects in which the candidate has participated.
- Funding received by the candidate, indicating the details of the corresponding contract or grant.
- Research group in which the thesis has been carried out.
- Written confirmation from the thesis supervisor to the effect that the copy submitted for deposit incorporates the necessary changes in response to observations made in the external reviewers’ reports, if applicable.

The coordinator will not issue the report on the quality of the thesis until all of the previous steps have been completed.

## 7.4 Request for the international doctorate certification

Candidates who wish to request the international doctorate certification must complete the application form (form MI) and submit it together with the rest of the documentation required. Candidates must submit: a letter of certification confirming that the candidate has completed a research placement of at least three months at a research centre or university outside Spain, signed by a designated representative and the thesis supervisor (the placement must have been carried out during the period of the doctoral programme, and the designated representative cannot be a member of the examination panel); external reviewer reports from two PhD holders based at institutions outside Spain who are recognised experts in the field in question; and authorisation to carry out the placement for the purposes of obtaining the international doctorate certification, signed by the thesis supervisor.

## 7.5 Deposit as a collection of articles

The whole process for depositing a thesis as a collection of articles is described in the document “Normativa per a presentar la tesi doctoral com a compendi de publicacions”, found at program website (<http://www.ac.upc.edu/es/docencia/doctorado/programa-de-doctorado-arquitectura-de-computadores>).

## 8. Thesis defence

As stated above, the candidate is responsible for sending electronic or paper copies of the thesis (without the thesis assessment report) to the three members of the examination panel (copies may also be sent to the substitutes) allowing sufficient time for the thesis to be read (at least 20 days before the scheduled date of the thesis defence).

A complete description of the thesis defence procedure and the conditions that apply can be found in the Academic regulations for doctoral studies at the UPC.