



Universidad
Politécnica
de Cartagena

**GUIDE TO GOOD PRACTICE FOR THE COMPLETION
OF A DOCTORAL THESIS AT THE POLYTECHNIC
UNIVERSITY OF CARTAGENA**

APPROVED BY THE GOVERNING COUNCIL ON 4 JULY 2013



INDEX

- 1.- PREAMBLE.
- 2.- OBJECT.
- 3.- SCOPE OF APPLICATION.
- 4.- ACCESS TO THE DOCTORAL PROGRAMME.
- 5.- TRAINING COMPLEMENTS.
- 6.- TENURE REGULATIONS. FULL-TIME OR PART-TIME DOCTORAL STUDENTS.
- 7.- RESEARCHER IN TRAINING OR DOCTORAL STUDENT
- 8.- TUTOR.
- 9.- DIRECTOR. CO-DIRECTORS.
- 10.- COMMITMENT TO THE COMPLETION OF THE DOCTORAL THESIS.
- 11.- RESEARCH PLAN.
- 12.- ACTIVITIES DOCUMENT.
- 13.- MONITORING OF THE RESEARCH WORK IN THE DOCTORAL THESIS.
- 14.- MOBILITY AND STAYS DURING THE THESIS.
- 15.- THE DOCTORAL THESIS. DEPOSIT AND DEFENCE.
- 16.- DOCTORAL THESES SUBJECT TO CONFIDENTIALITY PROCESSES.

PREAMBLE

Article 9.8 of Royal Decree 99/2011, of 28 January, which regulates official doctoral studies, states that: "*All members of a Doctoral School must sign a commitment to comply with the code of good practice adopted by the School*". In addition, Annex I "Report for the verification of doctoral programmes referred to in Article 10.2 of this Royal Decree" indicates in section 5.1, "Organisation of the programme. Thesis supervision", the existence of a good practice guide for thesis supervision. It seems, therefore, that it is not only convenient, but necessary to have such a guide in a doctoral programme.

Several lines of action are clearly defined through the implementation of the Royal Decree:

- Establishment of curricular requirements for the supervisor, in terms of postdoctoral experience, prestigious publications and work on research projects or contracts. Establishment of limits for supervising several theses at the same time.
- Monitoring of the supervision plan and the obligations and rights of the supervisor and the PhD student. Choice of alternative reviewers to monitor and evaluate the research work and record the activities of each student. Possibility of co-directing theses.
- Encouragement of the research autonomy of doctoral students.
- Possibility of carrying out co-supervised theses at prestigious foreign centres, which take the form of a stay at the alternative institution.

Although the purpose of the guide is to instruct the principal, it also covers aspects related to the work and obligations of students in their relationship with the principal.

The Universidad Politécnica de Cartagena (hereinafter UPCT), through its Vice-Rectorate for Research and Innovation, has defined the present Guide, which serves as a common reference for all its Doctoral Programmes, whether they are its own or inter-university programmes, and provided that, in the latter, the collaboration agreement between the different universities/research centres is faithfully respected. This is without prejudice to the fact that some of these programmes may define their own guidelines, extending or expanding this document, according to the particular characteristics or needs of each doctoral programme.

This Good Practice Guide should be considered a complementary instrument and not a substitute for existing legal regulations. This document does not replace any of them, and in case of discrepancy, the provisions of these regulations must prevail, especially the Regulations of the UPCT's Official University Master's and Doctoral Studies. The UPCT Governing Council will approve this Good Practice Guide for the completion of doctoral theses, which is assumed by its researchers, both doctoral students and their tutors, directors and co-directors.

NOTE: References to persons which, in this Guide, appear in the masculine grammatical gender as a form appropriate to the linguistic norm, should be understood, according to their context, as equally valid for both sexes, without any discrimination whatsoever being derived from them.

1.- Purpose: The purpose of this Guide is to provide suggestions to professors and doctoral students on how to approach the preparation and supervision of a doctoral thesis, guiding them through the different stages of the development of a doctoral thesis, starting with the acceptance of the doctoral student or research in training and ending with the future career of the doctoral student.

2.- Scope of application: This Guide will be applicable to all UPCT Doctoral Programmes, whether they are UPCT-specific or inter-university, and provided that, in the latter, the collaboration agreement between the different universities/research centres is faithfully respected. This is without prejudice to the fact that some of these programmes may define their own guidelines, extending or expanding this document, according to the particular characteristics or needs of each doctoral programme.

3.- Definitions

Doctorate: Third cycle of official university studies, leading to the acquisition of competences and skills related to quality scientific research.

Doctoral thesis: Original research work related to the scientific, technical, humanistic or artistic field of the training programme followed by the doctoral student, which represents a novel contribution to some field of knowledge.

Doctoral Programme: A set of activities leading to the acquisition of the competences and skills necessary to obtain a doctoral degree. These activities include the organisation and development of the different training aspects of the doctoral student and will establish the procedures and lines of research for the development of doctoral theses.

Researcher in training or doctoral student: A person who, having accredited the requirements established by law, has been admitted to a doctoral programme and is enrolled in it.

Tutor: Doctor with accredited research experience, linked to the doctoral programme or to the centre organising the programme, who will be responsible for ensuring the interaction of the doctoral student with the Academic Committee of the doctoral programme.

Doctoral thesis supervisor: The supervisor will be responsible for the coherence and suitability of the training activities, the impact and novelty in the field and subject matter of the doctoral thesis and for guiding the planning and its adaptation, where appropriate, to that of other projects and activities in which the doctoral student is enrolled. This assignment may be awarded to any Spanish or foreign doctor, with accredited research experience, regardless of the University, Centre or Institution in which he or she provides his or her services.



Thesis co-directors: A thesis may be co-directed by other doctors when there are academic reasons, such as thematic interdisciplinarity or programmes developed in national or international collaboration, with the prior authorisation of the Academic Committee of the doctoral programme.

Activities Document: Individualised record of control of the research activities, materialised in the corresponding support, which will be regularly reviewed by the tutor and the thesis supervisor, and evaluated by the Academic Committee responsible for the doctoral programme.

Doctoral Academic Committee: Responsible for the definition, updating, quality and coordination, as well as the progress of the research and training of each doctoral student on the programme.

Research Plan: This consists of a forecast of the different activities to be carried out during the research process. The doctoral student can carry them out at the University or in institutions linked to the University through agreements or concerts. These activities must be planned to be carried out in a specific logical sequence and in accordance with the stages of the scientific research process.

Branches of Knowledge: All studies are grouped, according to Royal Decree 1393/2007, of 29 October, amended by Royal Decree 861/2010, of 2 July, into five branches of knowledge (Arts and Humanities, Sciences, Health Sciences, Social and Legal Sciences, and Engineering and Architecture) which are large areas of knowledge, whose hallmark is a set of subjects that are the essence of each branch. Each branch of knowledge can be subdivided into different fields of knowledge.

4.- Access to the Doctoral Programme - Before beginning doctoral studies it is important that the student selects the Doctoral Programme that he/she is going to do. In this regard, it is important to consult the existing documentation on the Doctoral Programmes offered by the UPCT, accessible through <http://www.upct.es>. At this address you can consult the list of Doctoral Programmes offered, and more specifically:

- a) Structure and objectives of Doctoral Programmes.
- b) Access and admission requirements. Enrolment process.
- c) Information on scholarships and grants.
- d) Doctoral regulations.
- e) Information on the process of reading and defending the thesis.

From the perspective of the trainee researcher, it is very important to try to identify a line of work included in one of the programmes, appropriate to his/her professional and research interests. In this sense, it is very interesting to try to gather information on the research teams associated with that line, consulting the web pages relating to their projects, publications, research staff, etc. The admission requirements will include the *recommended entry profile*, which will consist of a brief description of the skills, previous knowledge, types of qualifications, languages to be used in the training process and the level required in these that, in general, are considered appropriate for those who are going to begin their doctoral studies on the programme. Likewise, the access requirements of a doctoral programme may include the requirement of specific training complements.



Once a PhD programme has been selected, it is necessary to enrol in it. To do so, it is essential to meet the entry requirements stipulated on its website. In case of doubt, it is very important to consult the coordinator of the Doctoral Programme or the International Graduate Centre and Doctoral School, who will be able to clarify any doubts you may have.

The specific process of access to the UPCT Doctoral Programmes is described in the Regulations of the Official University Master's and Doctoral Studies of the UPCT, which is available at:

http://www.upct.es/contenido/estudios_postgrado/documentos/Reglamento_M+D_Modified_Council_Government_11-7-2012.pdf.

5.- Complementary training: Doctoral programmes may include among their entry requirements the demand for *specific complementary training*. In this case, each programme will describe the profile of the students who will have to take them according to their previous training and the different entry profiles that have been defined.

These complements will be compulsory for those students who access the programme only holding a graduate degree of 300 ECTS or more, which does not include research credits in their syllabus, as established in article 6.2, b) of Royal Decree 99/2011, of 28 January, which regulates Official Doctoral Studies. For the rest of the students it will not be necessary to complete these complements.

As a general rule, doctoral students who need to take these specific complements must complete them before the end of the first year of the programme, unless the admission requirements of a doctoral programme explicitly state that they must be taken before enrolment.

6.- Tenure rules - Full-time and part-time doctorates.

As established in article 3 of Royal Decree 99/2011 on doctoral studies, the duration of doctoral studies will be a maximum of three years, on a full-time basis, from the admission of the PhD student to the programme until the submission of the doctoral thesis. If the application for submission of the thesis has not been submitted by the end of the aforementioned three-year period, the programme committee may authorise the extension of this period for a further year, which may exceptionally be extended for an additional year, under the conditions established in the corresponding doctoral programme. In this case, such studies may have a maximum duration of five years from admission to the programme until the submission of the doctoral thesis.

Once admitted, the PhD student must enrol annually in the PhD programme until the thesis is defended. A PhD student may withdraw from the programme if he/she fails to pay the registration fees or fails to pass the partial evaluations as described in section 14 of this document.



With the prior authorisation of the Academic Committee responsible for the programme, part-time doctoral studies may be undertaken. In this case, such studies may have a maximum duration of five years from admission to the programme until the submission of the doctoral thesis. For this type of studies, the extension may be authorised for a further two years, which may also, exceptionally, be extended for an additional year. In this case, such studies may have a maximum duration of eight years from admission to the programme until the submission of the doctoral thesis.

Doctoral programmes may accept both full-time and part-time doctoral students. As a general rule, part-time doctoral students are understood to be those who carry out a paid job or activity that prevents them from devoting more than 60% of their time to the doctoral programme. To apply for part-time admission to a Doctoral Programme, the candidate must accredit this situation, which must be evaluated and authorised by the Academic Committee of the Doctoral Programme. Each doctoral programme will include on its website, together with the rest of the information detailing the conditions of access, the maximum percentage of part-time doctoral students that it is able to admit.

The PhD student may also request a temporary leave of absence from the programme for a maximum period of one year, which may be extended for a further year. This request must be addressed and justified to the Academic Committee responsible for the programme, which will decide whether the student's request can be granted.

7.- Researcher in training or doctoral student: Doctoral students admitted to a doctoral programme must receive detailed information on their responsibilities and rights during the period of training and defence of the doctoral thesis, which will necessarily include the deadlines to be met throughout the training process.

The PhD student is obliged to enrol every academic year until the thesis is defended and graded. Once enrolled, the programme's Academic Committee will assign a tutor, a doctor with accredited research experience, to ensure the student's interaction with the programme's Academic Committee. A doctoral thesis supervisor, a doctor with accredited research experience, will also be appointed by the UPCT Doctoral Committee, after hearing the doctoral student's request. According to the characteristics of the research work and under the conditions established in article 27.3 of the UPCT Official University Regulations for Master's and Doctoral Studies: "*A thesis may be co-directed by other doctors (with a maximum of three and up to two from the same institution) when there are reasons of an academic nature, such as thematic interdisciplinarity or programmes developed in national or international collaboration, with prior authorisation from the Academic Committee*".

Doctoral students are obliged to present a Research Plan within six months of their first enrolment.

The integration of doctoral students in research groups and networks will be promoted, favouring their research career and national and international mobility with other universities, research centres and other similar public and private organisations, both Spanish and international.

foreigners, to facilitate research stays related to the subject of their doctoral studies. Doctoral students will be protected in the exercise of the other rights recognised by current legislation in general and, specifically, by the University Student Statute and the UPCT's own regulations.

Doctoral students are entitled to regular monitoring and supervision of their research. They must maintain a commitment to mutual collaboration with the supervisor, tutor and, where appropriate, co-supervisor, in order to achieve, firstly, the presentation of the Research Plan, the preparation and, finally, the defence of the doctoral thesis, in accordance with the procedures and deadlines established in the applicable regulations.

The PhD student is obliged to register for all academic years until the thesis is defended and graded.

Doctoral students are obliged to present a Research Plan within six months of their first enrolment, which includes a forecast of the different activities to be carried out during the research process, to be carried out in a specific logical sequence and in accordance with the stages of the scientific research process. This Research Plan will be evaluated every academic year by the Programme's Academic Committee, so the PhD student is obliged to submit a renewal of this Research Plan every academic year until the defence and qualification of the thesis.

Doctoral students must comply with the duties inherent to their status as students and members of the UPCT university community and with any other duties assigned to them by current legislation, the Statutes and internal regulations of the university.

It must observe the rules and procedures established by the UPCT for the correct processing of the doctoral thesis.

The PhD student is obliged to act in accordance with the principles of scientific integrity, avoiding or disclosing any possible conflict of interest in which he/she may find him/herself.

It must act diligently in all matters concerning its research and responsibly with regard to the private or shared use of human and material resources made available to it by the University or by other public or private institutions.

Students must be involved in their studies and research with the necessary intensity and dedication, attending the calls and meetings indicated by their tutor, supervisor or, where appropriate, thesis co-supervisor, and carrying out the activities set out in the Research Plan within the deadlines indicated for this purpose.

They must also undergo regular assessment by their tutor, supervisor and, where appropriate, co-supervisor.

Must maintain a work rhythm adapted to the full-time or part-time regime.

The partial programme in which he/she is enrolled. Any change in the agreed deadlines must be approved by the thesis supervisor and approved by the Academic Committee of the doctoral programme.

Doctoral students must respect the functions and competences of their thesis supervisor, tutor and, where appropriate, co-supervisor, and may not receive instructions from other persons without the express authorisation of the person who has taken on the supervision of the thesis.

The PhD student must undertake to make fair use of the information, data and samples provided by the thesis supervisor, tutor and, where appropriate, co-supervisor, and to respect the authorship and ownership of both.

8.- Tutor: Royal Decree 99/2011 introduces the obligation to assign a tutor to the PhD student, a doctor with accredited research experience. Supervision must be a collective effort that involves not only the tutor, but also the thesis supervisor, the Academic Committee, the PhD student, the research group and the institution (doctoral school, centre, university, etc.).

Therefore, once enrolment has been completed, the Academic Committee of the PhD programme will assign a tutor, who will be the person who will guide the PhD student throughout the entire period of doctoral training. The tutor must be a doctor with accredited research experience, linked to the doctoral programme or to the Centre that organises the programme, who will be responsible for ensuring the interaction of the doctoral student with the Academic Committee of the doctoral programme.

The tutor, apart from introducing the PhD student to all the initial procedures to be carried out, will help him/her to identify a possible thesis supervisor. The Academic Committee of the Doctoral Programme must propose a supervisor to the UPCT Doctoral Committee within the first six months.

The Academic Committees of the Doctoral Programmes will be in charge of assigning tutors. The procedure that will normally be followed is as follows:

1) In the event that the student suggests a supervisor for his/her thesis at the time of enrolment in the programme, and that supervisor agrees, the Committee will assign that person as tutor and supervisor of the PhD student.

2) If the student suggests a director external to the Doctoral Programme and a tutor from the programme, and both agree, the Commission will proceed to appoint and propose him/her simultaneously.

3) Otherwise, the Academic Committee will choose as tutor the lecturer from the Doctoral Programme whose research line is the most appropriate for tutoring the PhD student, and who meets the requirements as tutor.

The tutor must maintain mutual collaboration with the doctoral student, the thesis supervisor and, where appropriate, the co-supervisor, in order to achieve, firstly, the presentation of the doctoral project and, secondly, the presentation of the thesis.

doctoral thesis, the preparation and, finally, the defence of the student's doctoral thesis, in accordance with the procedures and deadlines established in the applicable regulations.

9.- Doctoral thesis supervisor. Co-directors: Article 12.1 of Royal Decree 99/2011 establishes that: *"The university will assign a supervisor for the preparation of the doctoral thesis who will be responsible for the coherence and suitability of the training activities, the impact and novelty of the subject matter of the doctoral thesis in his/her field, and for guiding the planning and its adaptation, where appropriate, to that of other projects and activities in which the doctoral student is enrolled"*.

Article 27.2 of the UPCT's Regulations for Official University Master's and Doctoral Studies establishes that the supervisor of a doctoral thesis must be a Spanish or foreign doctor with accredited research experience. The appointment of the supervisor will be made by the UPCT Doctoral Committee, at the proposal of the Academic Committee of the doctoral programme and after hearing the doctoral student.

Doctors will take on the supervision of doctoral theses with criteria of responsibility and scientific accuracy, accepting a reasonable number of projects for which they can guarantee quality supervision and monitoring, taking into account the human and material resources available in each case.

The supervision of a doctoral thesis is a responsibility inherent to the status of doctoral lecturer and must be exercised as such. The thesis supervisor must act to safeguard the academic interests of the doctoral student and promote the best possible training. To this end, he/she must draw up a realistic work plan, adapted to the student's timetable, in order to achieve, firstly, the presentation of the Research Plan, the preparation and, finally, the defence of the student's doctoral thesis, in accordance with the procedures and deadlines established in the applicable regulations.

The thesis supervisor will participate in the procedures established by the UPCT for the control and evaluation of the PhD student's research activity and, where appropriate, participate in the conflict resolution mechanisms. The supervisor must guide and, where appropriate, facilitate, in collaboration with the institutions participating in the doctoral programme, the national and international mobility of the PhD student and the carrying out of complementary activities. Must comply with the other duties inherent to their status as UPCT teaching staff, as well as the others established in general, regional and internal UPCT legislation. During the final period, where the research report is written, the director must guide the student in its writing, reading at least a first draft of it. In this case it is important to bear in mind that the director must guide and advise the student. Unfortunately, it is a common evil in this day and age that students, despite being great scientists, do not know how to express their ideas well.

The University shall guarantee thesis supervisors the necessary conditions for them to carry out their duties with quality criteria and shall protect their professional activity against attitudes or events that may harm their reputation and the results of their supervisory work. In particular, the work carried out will be protected against any attempt to change the supervisor that is not justified and/or agreed by the supervisor himself/herself.



The work of supervising theses will be recognised as part of the teaching and research dedication of the teaching staff, through the teaching load document.

Co-director: Article 27.3 of the UPCT's Regulations for Official University Master's and Doctoral Studies establishes that: "*A thesis may be co-directed by other doctors, with the following requirements:*

a) When there are reasons of an academic nature, such as thematic interdisciplinarity or programmes developed in national or international collaboration, with the prior authorisation of the Academic Committee. This authorisation may be subsequently revoked if, in the opinion of the Academic Committee, co-direction does not benefit the development of the thesis.

b) The Academic Committee of each doctoral programme may establish requirements for the suitability of co-directors for their specific programme.

c) No more than three PhDs may be involved in the direction/co-direction of a doctoral thesis, and up to two from the same institution".

According to the UPCT's PhD strategy, co-direction is particularly interesting in the following cases:

1. When the thesis raises an interdisciplinary subject that requires the participation of directors from different areas or branches.
2. When there is a new supervisor who, not meeting the requirement of accredited research established in the regulations, given the subject matter of the doctoral thesis, requires an experienced supervisor.
3. To promote internationalisation, through co-direction by international researchers whenever possible and beneficial for the PhD student.
4. Co-direction by researchers from companies or research institutes is also recommended, with the aim of strengthening the relationship with the productive and industrial fabric.

No more than three PhDs may be involved in the direction/co-direction of a doctoral thesis, and no more than two from the same institution.

At any time during the process of writing the thesis, the PhD student may request, if there are justified and motivated reasons, a change of both the supervisor and the title of the thesis. The request must be made by the PhD student to the coordinator of the corresponding PhD Programme, who will transfer it to the Academic Committee for consideration.

10.- Commitment to the preparation of the doctoral thesis: As soon as the student has a tutor and supervisor, a *Documentary Commitment to Supervision* will be signed. This document seals the commitment between all the parties and establishes, among other things, the



rights and duties of tutors, supervisors and doctoral students, conflict resolution procedures, aspects relating to intellectual or industrial property rights that may be generated by the thesis, and the criteria that will be used to evaluate the doctoral student. The model form is the DT-12. This document can be consulted and downloaded from the website:

http://www.upct.es/contenido/doctorado/impresos_56.php

11.- Research Plan: The thesis supervisor is, together with the doctoral student, responsible for the success of a doctoral thesis project. For this reason, it is necessary that doctoral students and thesis supervisors work together.

In particular, before offering a thesis topic, the supervisor should ensure that he/she has sufficient knowledge of the topic and that the candidate will have the necessary means to carry out the research. When offering a thesis topic, the supervisor should clearly inform the candidate of what knowledge he/she needs to have in order to be able to carry out the research and how he/she can obtain the knowledge he/she lacks.

The doctoral candidate must make a realistic assessment of his or her abilities, of the knowledge he or she possesses and of his or her possibilities for acquiring the knowledge he or she lacks. In addition, they must have a genuine, even passionate, interest in the proposed research topic.

At the beginning of a doctoral thesis project, the thesis supervisor should guide the student about the nature of the research and what the work will consist of. The supervisor should also guide the student in the planning of the research, ensuring that the work can be done in the time foreseen (three years full time). The supervisor should guide the PhD student in the sources of information (scientific journals, conferences, etc.) and other techniques (experiments, simulations, etc.) that he/she may need in his/her research. A good research plan should challenge both the student and the supervisor. Although it is desirable that it is the PhD student who decides what the subject of the thesis will be, the supervisor should help the student to narrow it down, avoiding both overly ambitious proposals and mere applications of existing knowledge. A THESIS MUST MAKE AN ORIGINAL CONTRIBUTION TO KNOWLEDGE.

In working with the student to formulate the research plan, the supervisor should be able to identify the difficulties that may arise and how to deal with them, so that the result motivates and inspires the student. Personal contact between the PhD student and supervisor is particularly important during the first year of a research plan. Therefore, while the most convenient frequency of meetings may vary, a weekly meeting may be appropriate. In any case, at the end of a meeting, the date of the next meeting should be set.

Before the end of the first year, all doctoral students must prepare a *Research Plan*, which must be approved by their tutor and thesis supervisor and approved by the programme's Academic Committee. The format and specific contents of the Research Plan vary from one branch of knowledge and research area to another, and will be established by each PhD programme, but it must include at least the following sections:

- 1.- Title and description of the Research Plan.
- 2.- The objectives to be achieved in the research project. The methodology.



- 4.- The competences to be developed
- 5.- Necessary means and estimated time schedule for the development of the work.
- 6.- A *Thesis Project*.

The *Thesis Project* is a document that allows to evaluate whether or not the student has a concrete work plan for the completion of the thesis. The project is carried out under the supervision of the thesis supervisor and must contain, at least, the following contents:

- a) The definition of a clear research problem to be addressed by the thesis work, or a question to be solved.
- b) A hypothesis or objective contribution that is put forward to try to solve the problem.
- c) A brief survey of the state of the art in the subject of the thesis demonstrating sufficient knowledge of the relevant literature to begin work on the thesis.
- d) A work plan and timeline to try to address the research successfully, together with a plan for dissemination of the results (publications, conferences, etc.).
- e) A list of expected outcomes after completion of the thesis, including both scientific and academic outcomes (e.g. competences developed).

The Research Plan must be approved by the Academic Committee of the Doctoral Programme, which will incorporate it into the student's Activities Document.

The UPCT will ensure that the title and content of the doctoral research plan is not assigned to any other doctoral student. Likewise, the UPCT's internal regulations regarding doctoral studies will apply to the procedures for modifying the title and content of the doctoral thesis.

12.- Activities document: The activities document will include the individualised control register defined in article 2.5 of R.D. 90/2011 and in article 27.5 of the UPCT doctoral regulations for each doctoral student. All activities of interest for the development and evaluation of the doctoral student will be recorded in this document.

The records made by the PhD student will be authorised and certified by the tutor and the thesis supervisor. The annual reports made by the tutor and the thesis supervisor, as well as the annual evaluations made by the Academic Committee, will also be recorded.

13.- Monitoring of the research work in the doctoral thesis.

The director should initiate the doctoral student in the tasks of disseminating scientific knowledge, starting with the presentation of research work at seminars in the department itself and continuing with attendance at external conferences, and it is very positive that he/she makes an effort to present his/her own work, whether in the form of posters, short articles or even full papers at related conferences. In these

It is very important that the director encourages and helps the student to lose the fear of expressing himself/herself in public.

If the research is carried out within a funded project and in collaboration with other researchers, the set of tasks to be performed by the PhD student, the resources to be used by the project or the institution, and the terms of ownership and use of the research results must be documented and disseminated among the entities involved. If necessary, an agreement must be signed between the parties.

Constructive criticism is essential in the role of the director. Shunning criticism does not solve the problems of a doctoral student who is not making adequate progress. Maintaining an open dialogue with the doctoral student from the beginning of the research prevents the emergence of further problems. When the supervisor feels that the student's progress is repeatedly inadequate, he/she should let the student know in writing.

A doctoral student concerned about his or her lack of progress should discuss this issue with his or her Director in the first instance. In the event that the problem cannot be resolved in this setting, or if there is a complete lack of understanding, then he/she should refer the matter to the Academic Committee of the doctoral programme. Its President (coordinator), after hearing the parties, will propose to the Committee the solution that he/she considers most appropriate.

The Academic Committee of the doctoral programme will evaluate at least the following aspects, based on the activity document of each doctoral student, as well as the reports to be issued by the tutor and the thesis supervisor for this purpose:

- Progress of the thesis with respect to the proposed Research Plan Scientific
- production to date (results, publications, etc.).
- Stays carried out, visits to other centres, attendance at congresses, meetings, etc.
- Carrying out training activities and complements.
- Any other activity or topic considered relevant. Overall
- assessment.

A positive annual assessment by the Academic Committee will be a prerequisite for continuing on the programme. In the event of a negative evaluation, which will be duly justified, the PhD student must be re-evaluated within the following six months. In the event of a second negative assessment, the Academic Committee will agree that the PhD student will be permanently withdrawn from the programme. A complaint may be lodged against this decision with the UPCT Doctoral Committee within 10 days of personal notification to the PhD student.

The mission of the Academic Committee of the doctoral programme, in addition to judging the progress of the doctoral student and the development of the research plan, will be to make recommendations and suggestions to improve the thesis work and the development of the doctoral student.

The Academic Committee will draw up a report on the individual assessment of each doctoral student, which will be recorded in the Doctoral Activities Report.



14.- Mobility and stays during the thesis: National and international stays by the doctoral student must be strictly directed towards the completion of the doctoral thesis. The authorisation of the supervisor must be obtained for these stays. The evaluation of the specific results of the stay will be carried out by the supervisor and will be reflected in the student's activity document.

Mobility and placements for doctoral students in international universities and research centres form part of the UPCT's doctoral training strategy. For this reason, all doctoral programmes must encourage and promote these mobility actions, and in particular those aimed at achieving theses with an international doctoral degree, or those that are carried out on a co-supervision basis.

The UPCT has a set of annual grants for stays of varying lengths in foreign centres, precisely to encourage this type of action. It also participates and collaborates with various institutions and organisations for the promotion of mobility and internationalisation: AUIP, Universia, etc. Finally, the UPCT offers a series of grants to attend conferences and seminars, with the aim of encouraging and promoting this type of activity among UPCT doctoral students.

The UPCT PhD website will keep updated information on the different calls for applications. Likewise, the Doctoral Programmes can obtain and offer different types of grants for mobility, stays or attendance at conferences, based on the agreements they may have signed with their collaborating entities or with other Universities in the case of inter-university Doctoral Programmes.

15.- The doctoral thesis. Deposit and defence: The thesis supervisor should try to ensure that the PhD student completes the thesis within the recommended time frame (three years full-time). When the thesis is nearing completion, the student and the supervisor should agree on a timetable for completion. These dates should take into account the time needed for the reading and revision of drafts and the possible dates for the defence of the thesis.

The thesis is the result of the student's work, and the student is responsible for its success or failure. At this stage the supervisor must advise, constructively criticise, suggest solutions and encourage the student.

Generally the text of a thesis has the following parts:

State of the art: This section should focus on collecting and critically analysing relevant publications in the thesis area.

Results: The results obtained by the PhD student must be clearly presented. The sources of information and the methodology used must be described with sufficient precision to allow a third party to repeat the work carried out.

Analysis: A full understanding of the methodology used must be demonstrated. If new methods have been used, the reader should be able to estimate the reliability and validity of the results.

Discussion: The results analysed should be critically evaluated in this section. An effective discussion should be balanced, avoiding extravagant claims but highlighting the importance of any significant results.

Conclusion: This should contain a brief summary of the main original contributions of the thesis and ideas for future lines of research.

The thesis should be written in such a way that the members of the examining board, who are knowledgeable in the field but not always experts in the subject of the thesis, can understand it. Technical terms should be used, but slang should be avoided. All abbreviations used should be explained when first used.

When writing their thesis, doctoral students should ensure that information and data are presented in an understandable way, whether in text, graphs, tables or diagrams. Illustrations can be a very effective way of presenting information and the appropriate use of graphs and tables makes a favourable impression on the reader. The importance of a good writing style is enormous. The text of the thesis should be as concise as possible without omitting important parts and without being cryptic.

When the final draft is completed, the PhD student should reread it carefully to ensure that any spelling mistakes, grammatical errors, inconsistencies or factual errors have been removed.

Doctoral students who, for whatever reason, cannot finish their thesis within the established period (three years) must request an extension (one year+1). If a PhD student refuses to finish his/her thesis, he/she must inform the Academic Committee of the PhD Programme as soon as possible.

Each Doctoral Programme will establish the minimum quality criteria for a doctoral thesis to be deposited and defended. These criteria will be public and accessible from the programme's website, and will respect the minimums established by article 32 of the UPCT Doctoral Regulations.

Deposit: The authorisation to deposit the thesis with the Doctoral Commission, as well as the deposit of the thesis at the Doctoral Department of the UPCT, will be carried out in accordance with the provisions of article 31 of the aforementioned Doctoral Regulations of the UPCT.

Proposing the panel is a competence of the Academic Committee of the PhD Programme, but the Director is responsible for suggesting potential members of the panel, as well as all the necessary details to enable their appointment. This should be done well in advance of the scheduled reading date (about three months). The PhD student should know as far in advance as possible the identity of these potential members.

The appointment of the examining board that will judge the doctoral thesis, its composition and characteristics is regulated in article 34 of the UPCT Doctoral Regulations.

The defence and evaluation will be carried out by the PhD student in full compliance with articles 35 and 36 of the above-mentioned Regulations.

16.- Doctoral theses subject to confidentiality processes - The UPCT has a specific procedure for the authorisation, reading and publication of doctoral theses carried out at this University, which are subject to confidentiality processes.



Universidad
Politécnica
de Cartagena