

PROCEDURES FOR MONITORING DOCTORAL THESES AT THE UNIVERSITY OF GIRONA

(Modified by the Management Committee of the School of Doctoral Studies in session 6/2023, 8 November, according to Royal Decree 576/2023)

One of the most important aspects of Royal Decree 99/2011, of 28 January, governing official doctoral studies in Spain, refers to required university monitoring or evaluation of doctoral theses developed by doctoral researchers. In accordance with article 11.7 of this Royal Decree, this annual monitoring is obligatory, although the specific procedures are established by each university. Recent changes introduced by Royal Decree 576/2023 of 4 July are reflected in this modification of the procedure for monitoring doctoral theses.

This document presents the procedure for monitoring doctoral theses at the University of Girona (UdG). It was approved by the Management Committee of the School of Doctoral Studies in session 1/2011, on 9 September, and modified in session 2/2020 on 29 April, session 4/2021 on 28 June, and session 6/2023 on 8 November.

The annual monitoring and evaluation is done by the academic committee of each doctoral programme in two sessions: one at the beginning of the academic year and another at the end of the year, adhering to the academic calendar published every year. To carry out this individualised monitoring, the committee will consider the following documents: the research plan and personal training plan, the doctoral student activity document (DAD), the report of the doctoral researcher and the report of the supervisor(s).

Research plan and personal training plan

According to article 11.6 of Royal Decree 99/2011, before the end of the first year, doctoral researchers must submit a document including a research plan and a personal training plan. The research plan should include the methodology they will use and the objectives they want to achieve, as well as the means and timeframe for achieving them (Annex 1). The personal training plan should contain a preview of the different training activities they will engage in during the doctoral thesis (courses, mobility actions and other activities) (Annex 1). This document may be modified with further details during the development of the doctoral thesis.

The research plan and the personal training plan should be included in a single document and follow the model provided for each of them in Annex 1. Doctoral researchers must submit it online, using the School of Doctoral Studies' online procedures page. Once submitted, it must be approved by the tutor and the supervisor(s) of the doctoral thesis.

Doctoral student activity document (DAD)

In accordance with article 2.7 of Royal Decree 99/2011, the School of Doctoral Studies must keep an individualised record of the activities of doctoral researchers during the development of their doctoral thesis. This record will be automatically updated using data from the information system available to the UdG (currently, the GREC; in the future, whatever system is used). In this system, doctoral researchers register their activities related to the research plan and the personal training plan. The data to be included in the doctoral student activity document (DAD) are detailed in Annex 2 of this document.

Report of the doctoral researcher

Doctoral researchers are required to write a confidential report, following the model presented in Annex 3, and to submit it online using the School of Doctoral Studies' online procedures page. This report is submitted and evaluated from the second year onwards. It does not need to be submitted in the first year, when only the document containing the research plan and the personal training plan are evaluated.

Report of the supervisor(s)

In the second year, once doctoral researchers have submitted their report, thesis supervisors are required to write a confidential report for each of the doctoral researchers under their charge, following the model detailed in Annex 4, and to submit it online, with the approval of the tutor and the other co-supervisors, where applicable. This report assesses achievement of the competences listed in Annex 5. It does not need to be submitted in the first year, in which only the research plan and the personal training plan are evaluated.

Monitoring and evaluation by the academic committee

The academic committee of the doctoral programme evaluates the research plan and the personal training plan submitted by the doctoral researchers in the first year. From the second year onwards, the committee completes a follow-up evaluation based on the reports of the doctoral researcher and of the supervisor as well as on the doctoral student activity document.

Regarding the **research plan**, the academic committee analyses the following:

1. Is the proposal innovative or relevant?
2. Is the approach clearly formulated?
3. Are the hypotheses or study proposals clear, verifiable and feasible?
4. Are the objectives clear and attainable?
5. Are the methods adequate?

6. Is the thesis proposal sufficiently comprehensive, or does it cover too broad a subject?

Regarding the **personal training plan**, the committee considers both transversal and specific training activities and their suitability for acquiring the competences listed in Annex 5 and for carrying out the research plan.

In terms of **monitoring**, the academic committee of the doctoral programme assesses whether each thesis is being developed at the expected pace and the suitability of the activities carried out for the achievement of the research and personal training plans. If considered appropriate, the committee may request to interview the doctoral researcher, the supervisor or co-supervisors, or the tutor to obtain a better idea of the development of the thesis. Finally, it will issue a report.

Activities such as the following will be taken into account:

1. Conference attendance.

Doctoral researcher attendance at national or international conferences at which they present research and defend it in a paper or poster will be evaluated positively. Contact with less and more experienced researchers in the same field of specialization can be very beneficial and should be promoted.

2. National or international research group stays.

Stays in internationally recognised national or international research groups have a very positive impact on doctoral researchers' learning. In addition, these stays allow them to acquire advanced techniques and knowledge and to compare research carried out within their fields. They also allow groups from the University of Girona to initiate or strengthen contacts with leading national or international groups in the same fields of research. Stays of three months or more are particularly recommended.

3. Courses and other training activities.

It is advised, especially during the first two years of doctoral study, that doctoral researchers attend courses to improve their knowledge (for example, language courses, School of Doctoral Studies courses, summer courses in their fields and entrepreneurship courses).

4. Group seminars.

Regularly presenting one's own research to fellow doctoral researchers is an important way to learn communication skills that may be important in the future for professional development.

5. Periodic meetings with supervisors.

Thesis supervisors should meet regularly with doctoral researchers to ensure good monitoring of the doctoral theses.

6. Research output.

One of the principal signs of the success of a doctoral thesis is a series of research outputs that demonstrate research capacity and autonomy. It is expected that doctoral researchers, while developing their theses, will publish at least one book chapter or an article in a national or international journal of recognised prestige, or have an equivalent scientific production. It should be noted, however, that in certain fields, the publication of articles before the thesis defence is inconsistent with the supposed originality of the defended thesis. In these cases, the lack of publications should not be evaluated negatively. The same may true for a thesis whose contents are affected by a confidentiality agreement or the possibility of obtaining a patent.

7. Publishing scientific articles.

Although each research group has its own publication mechanisms, it is advisable, if appropriate, that doctoral researchers be actively involved in publishing articles about their research or in contributing to collective publication efforts.

8. Open science training.

Royal Decree 576/2023 adds to the competences to be acquired by doctoral researchers the ability to promote open science, in accordance with Article 12 of Organic Law 2/2023 of 22 March, as a way of contributing to the consideration of scientific knowledge as a common good.

Open science involves practices that, when viewed holistically, change the way research is conducted. It aims to make the entire scientific information cycle more transparent, collaborative and open to society. Therefore, although the thesis is an individual work, doctoral researchers need to be trained in areas such as collaborative and networked work, the management and sharing of results and open data, and open publication and training so that the results reach society more quickly.

9. Data management plan.

A **Data Management Plan** (DMP) is a formal document, presented at the beginning of a research project, with the aim of establishing the data management policy that doctoral researchers will follow with respect to the data generated during the project. The DMP incorporates a description of the data and describes what will be done with the information during and after the research is completed. This DMP can be modified as the research progresses. It is therefore recommended that doctoral researchers plan for the management of the data generated during the course of their research project.

The description of the thesis data management plan is an optional section of the research plan. However, given the current relevance of all aspects related to open science, having a data management plan may be necessary, especially for those doctoral researchers working in collaborative or networked projects.

More information on how to develop a data management plan can be found on the library's website (Data Management Plan).

10. Citizen science activities.

Royal Decree 576/2023 also adds to the competences to be acquired by doctoral researchers the ability to promote citizen science, in accordance with article 12 of Organic Law 2/2023 of 22 March, as a way of contributing to the consideration of scientific knowledge as a common good.

Citizen science consists of the active participation of citizens in the different stages of research: the collection or processing of data, its interpretation, the definition of problems, challenges, objectives, data collection, or the design of the research itself. This participation brings benefits both to society and to research institutions and researchers. Collaboration between scientists and citizens allows them to work towards common goals and often enables scientists to carry out tasks that would otherwise require large investments in time or money.

In the research carried out with this citizen participation, brief information should be given about the activities planned for personal training and those that must be done to carry out the research plan.

This section may also include actions planned to bring the results of the research closer to the public. The UdG promotes and encourages, through different activities, bringing research closer to society. Within this context, doctoral researchers will participate in these and other initiatives as part of their personal training for citizen science capacity building.

11. Languages.

It is particularly important to know other languages, especially English (or the one most appropriate for each field of research) as the *lingua franca* of international scientific communication.

12. Imparting training.

An important part of doctoral training is the ability to communicate and disseminate the results of research work. Examples of activities such as participation in congresses or seminars within the research group have already been noted. However, doctoral researchers may also participate in other activities that contribute to this communicative part of their training, including teaching in university studies (compulsory or optional for holders of some pre-doctoral contracts), giving lectures in research workshops or organising and teaching courses or seminars in summer schools or similar activities.

13. Other aspects that the committee considers appropriate.

Obviously, the committee will bear in mind that part-time doctoral researchers have rather limited possibilities to attend conferences or to spend time abroad. Similarly, first-year doctoral researchers cannot be assessed on the same parameters as those in their final years. The different academic committees will use field- or area-specific criteria to assess the development of the doctoral researchers' theses.

As stated in Royal Decree 99/2011 (article 11.7), a favourable evaluation is required to continue in the programme. In addition, in the case of doctoral researchers with a UdG grant, a favourable report will be required for the annual renewal of the grant. In some cases, despite the favourable evaluation, the committee may make a list of minor problems, in the hope that doctoral researchers and thesis supervisors and tutors will make every effort to resolve them before the next evaluation.

In the case of an unfavourable, or negative, evaluation, doctoral researchers will be re-evaluated within six months, during which time they must develop a new research plan and/or a new personal training plan or, from the second year onwards, a new doctoral student report. They must also satisfactorily meet the requirements imposed in the report by the committee, whose reasons for the decision must be made clear. If the second evaluation is also unfavourable, doctoral researchers will be suspended from the programme.

In the event of serious conflicts, normally associated with a negative evaluation, the procedures established by the UdG for the resolution of doctoral study conflicts will be followed.

Timeline

First year

Doctoral researchers need to submit only the research plan and the personal training plan, in a single document.

First evaluation: January or the first half of February of the academic year in which the doctoral researcher is enrolled, adhering to the academic calendar approved each year. The evaluation is focused mainly on research and personal training plans. The evaluation results will be available before the end of March.

Second evaluation, in case of a negative first evaluation or failure to present the document with the research plan and the personal training plan at the first evaluation: before the end of June of the same year, adhering to the academic calendar. The evaluation results will be available before the end of July. If favourable, doctoral researchers will be allowed to register for the following year; if not, they will be suspended from the programme and not allowed to register.

From the second year onwards

The reports of the doctoral researcher and of the supervisor report must be submitted.

First evaluation: January or the first half of February of the academic year in which the doctoral researcher is enrolled, adhering to the academic calendar approved each year. The evaluation results will be available before the end of March. If favourable, doctoral researchers may register for the following year; if not, they may request a second evaluation.

Second evaluation, in the case of a negative first evaluation or of doctoral researchers who were not evaluated in January/February: June of the same year, adhering to the academic calendar. The evaluation results will be available before the end of July. If favourable, doctoral researchers may register for the following year; if not, they are not allowed to register.

Annex 1. Research plan and personal training plan

The research plan and the personal training plan for the preparation of the thesis shall be presented in a single document. This document will therefore consist of two parts:

Research plan

1. Title of the doctoral thesis, name(s) of the supervisor(s) and indication of the line of research.

The title should be chosen carefully. It should be as short as possible but contain all the relevant information.

2. Abstract with a summary of the intended study and how it is to be conducted (max. 1/2 page).

It should briefly state what is to be studied, why it is to be studied, with what methods it is to be done and what the expected results are.

3. Theoretical basis and background of the thesis topic; originality and novelty of the proposal (max. 2 pages).

The theoretical basis should serve to contextualise the planned work within existing scientific knowledge. It should explain theories and studies in general that are related to and support the topic under investigation. The theoretical basis must be properly referenced.

The research background is all previous research work that is directly related to the topic of the doctoral thesis. It must be properly referenced.

4. Hypothesis and objectives (max. 1/2 page).

Description of the hypothesis to be tested. The hypothesis should provide a possible explanation for the phenomenon under study, based on the observation and analysis of previous information. The validity of the hypothesis will be verified during the research process. It should be clear, precise and logical. It is important to write it explicitly. The hypothesis can also be stated in the form of a research question or questions.

A concise and clear summary of the academic and non-academic objectives to be achieved during the doctoral thesis should be included.

5. Methodology (max. 2 pages).

The methodology should include and detail the methods proposed to achieve the objectives, relating each of the methods to a stated objective or objectives. It is necessary to describe the specific techniques to be used in the research, not just the general approach. This includes the types of resources to be consulted, the methods to collect and analyse data (reproducibility), specific techniques (for example,

qualitative methods, statistical analysis and sampling), the measurement instruments and (brief) reasons for adopting these methods. Methods should be properly referenced.

6. Risks, if anticipated, and contingency plan (optional, max. 1/2 page).

Doctoral researchers should describe the difficulties they may encounter in achieving the stated objectives. Possible solutions should be noted.

7. Data management plan (optional, max. 1/2 page).

On 23 May 2021, the Governing Council of the UdG approved the "UdG Institutional Open Access Mandate". This mandate requires that all data generated by UdG researchers be open access and FAIR (findable, accessible, interoperable and reusable). If data are collected in the thesis, doctoral researchers must explain how the data will be made available in open access after completion of the thesis (which repositories will be used, etc.).

8. Relation of the thesis to the Sustainable Development Goals (max. 1/2 page).

The UN's 2030 Agenda lists 17 Sustainable Development Goals (SDGs, <http://www.globalgoals.org/>), which aim to make human rights a reality for all and achieve gender equality and empowerment for all women and girls. They are integrated and indivisible and balance the three dimensions of sustainable development: economic, social and environmental. This section should reflect how the doctoral thesis will help, directly or indirectly, to achieve any of the SDGs.

9. Work plan with timeline (max. 2 pages).

The work plan should specify the tasks to be carried out to achieve the stated objectives.

The timeline is a schedule (preferably in the form of a Gantt chart) - for a maximum of 4 years if the thesis is full-time or a maximum of 7 years if it is part-time - indicating the sequence of phases of the research and the time that will probably be needed in each phase. It should include the tasks related to the research work of the doctoral thesis and the writing, submission for review, deposit and defence. In the case of students with a disability equal to or greater than 33%, these maximum durations will be six years full-time and nine years part-time.

10. Bibliography.

List of the most relevant published works for the proposed doctoral thesis, correctly cited in the previous sections.

Personal training plan

The training plan will include a list of training activities with a brief justification of their contribution to the personal training of doctoral researchers and their suitability for the achievement of the competences established in Royal Decree 99/2011 (Annex 5). It should include the following sections and be no more than two pages in length:

1. Transversal and specific training courses.

Students on the UdG's own doctoral programmes and interuniversity programmes coordinated by the UdG must register for and pass two credits of training courses during their doctoral studies before submitting their doctoral thesis. All the information about the courses offered by the School of Doctoral Studies of the UdG, how to enrol and how they are evaluated can be consulted on the website of the School of Doctoral Studies.

2. Mobility actions and stays.

To be eligible for an International Mention, doctoral researchers must have completed, during the period of training required to obtain the doctoral degree, one or more stays of at least three months outside Spain in one or more prestigious higher education institutions or research centres. If several stays are completed, at least one of them must have a minimum duration of one month.

3. Participation **as an auditor** in seminars, project meetings, workshops, congresses, conferences, doctoral researcher lectures, courses outside the training offered by the UdG School of Doctoral Studies or similar events.

This section can be subdivided into as many different activities as necessary. This may include working group seminars, project meetings, workshops, conferences, expert lectures, doctoral researcher seminars, courses outside the training offered by the School of Doctoral Studies or similar events. Some doctoral programmes require or recommend attendance at a minimum number of conferences and/or the completion of a minimum number of hours of seminars, conferences, doctoral researcher workshops or similar events.

4. Participation **as a speaker** at seminars, project meetings, workshops, conferences, lectures, doctoral researcher conferences or similar events.

This section can be subdivided into as many different activities as necessary. This can include working group seminars, project meetings, workshops, conferences, lectures, doctoral researcher workshops or similar events. Some doctoral programmes require or recommend a minimum number of oral communications (depending on the programme, a poster presentation may be included in this or previous sections) at national or international conferences.

5. Participation in activities related to open science and citizen science.

Royal Decree 576/2023 adds to the competences to be acquired by doctoral researchers the ability to promote open science and citizen science. Doctoral researchers must develop their doctoral theses in line with open science practices. If

the research proposed involves specific citizen science actions, they must indicate whether specific training is planned for this. Participation in research communication and dissemination activities (science week/night, research fairs, activities with schools, etc.) is also a way of achieving this competence.

6. Elaboration and publication of scientific articles, books and/or book chapters.

Publication of research results is necessary to ensure the recognition and quality of research. These publications can be in journals, books, externally refereed publications resulting from conferences or similar documents. Some doctoral programmes require or recommend that a minimum number of scientific articles be published in peer-reviewed journals. It is also possible to submit the thesis as a compendium of publications. The requirements for submitting the thesis in this format vary depending on the programme.

7. Training planning.

A timeline of the training activities foreseen in this training plan should be included. The transversal and specific training courses will preferably take place in the first two years. The rest of the activities can be planned throughout the period of thesis writing. The planning of the different training activities will be included in the timeline mentioned in the research plan.

The document with the research plan and the personal training plan is written by the doctoral researcher under the supervision of the supervisor(s) and the tutor.

Annex 2. Doctoral student activity document (DAD)

Data extracted from the UdG information system to serve as an annual report for each doctoral researcher:

1. Journal publications and books or book chapters.
2. Other publications (for example, dossiers, booklets, notes).
3. Research centre stays.
4. Participation in R&D projects.
5. Participation in conferences.
6. Organisation of R&D activities (for example, conferences, meetings, seminars).
7. Lectures, colloquia, and workshops.
8. Patents and utility models.
9. Transversal and/or specific training courses.
10. Other activities, merits or clarifications (training in open science and citizen science, other courses outside the School of Doctoral Studies training offer, etc.)

Annex 3. Report of the doctoral researcher

All doctoral researchers will have to write a confidential report in response to the items below:

1. Regarding the development of the thesis, a brief description of the activities carried out during the current year in accordance with the research plan. An approximate indication of the percentage of the research plan completed. The identification of any significant shifts or changes in the direction of the research. An estimation of the time needed to finish the doctoral thesis. (Max. 1 page.)
2. A brief description of the personal training plan activities undertaken during the current academic year (transversal and/or specific training courses, mobility actions and/or research stays, seminar presentations, other activities), indicating how they have contributed to the doctoral training and reflecting changes or improvements with respect to the original personal training plan. (Max. 2 pages.)
3. A description of the monitoring activities carried out by the thesis supervisor(s) (regular meetings, group seminars, etc.). (Max. 1/2 page.)
4. Additional comments (problems developing the project or personal problems with the supervisor(s) or colleagues in the research group...). (Max. 1 page.)

The report should consist of a single PDF file.

Annex 4. Report of the supervisor(s)

1. The evaluation of the activities related to both the research plan and the personal training plan that the doctoral researcher has carried out in the last year and their progress during the development of the thesis is:

Very positive

Positive

Negative

Very negative

2. Indicate to what extent the doctoral researcher has achieved the competences appropriate to the research conducted, based on the list in Annex 5.

Excellent

Good

Sufficient

Insufficient

3. Additional comments (problems developing the project, etc.). If the evaluation is negative, this section should contain the specific reasons and indicate what the doctoral researcher should revise in the research and personal training plans to obtain a positive evaluation in the second session.

Annex 5. Competences to be achieved

This list of personal competences, abilities and skills is established in article 5 of Royal Decree 99/2011, of 28 January, governing official doctoral studies in Spain. It also considers the UdG Code of Ethics approved by the UdG Governing Council (4/2023 of 20 April):

- a. Systematic understanding of a field of study and mastery of research skills and methods used in that field.
- b. Conceiving, designing or creating, implementing and adopting a substantial research or creative process.
- c. Contributing to the expansion of the frontiers of knowledge through original research.
- d. Critically analysing, evaluating and synthesising new and complex ideas.
- e. Communicating with the academic and scientific community and with society in general about one's own field of knowledge, in the forms and languages commonly used in the international scientific community.
- f. Promoting, in academic and professional contexts, scientific, technological, social, artistic or cultural progress in a knowledge-based society.
- g. Managing contexts where there is little specific information.
- h. Finding the key questions to answer to solve a complex problem.
- i. Designing, creating, developing and undertaking novel and innovative projects in one's own field of knowledge.
- j. Working, both in a team and autonomously, in an international or multidisciplinary context.
- k. Integrating knowledge, dealing with complexity and making judgements with limited information.
- l. Providing intellectual critique and defence of solutions.
- m. Promoting open science and citizen science.
- n. Conducting research activities according to ethical criteria.