

Industrial Doctorates Plan

Introduction and context

The **Industrial Doctorates Plan** is an initiative of the Government of Catalonia in partnership with the Catalan university and research system. Its aims are:

1. To boost the **competitiveness** and **internationalisation** of Catalan industry.
2. To retain home-grown **talent** and attract international talent.
3. To give doctoral students the opportunity to work on **R&D&I projects with companies**.

This initiative is intended to address the challenges involved in transferring to the business world the advanced, world-beating technology developed by our university and research system in the last decade, thereby ensuring this technology and knowledge is used to further Catalonia's own economic and social development.

It is based on programmes developed in other countries, such as France's Conventions Industrielles de Formation par la REcherche (CIFRE) and Denmark's Industrial PhD Programme and is in line with other programmes created later on, such as the European Commission's European Industrial Doctorates (EID).

The parties involved are **companies** (the business sphere), **universities** and **research centres** (academic sphere), **future doctoral students** and the Government of Catalonia.

The potential benefits for each of these are:

The business sphere

1. The opportunity to attract personnel with high added-value knowledge and skills, who they will help to train to meet their needs and who may become future leaders in innovation and research.
2. Access to cutting-edge groups at universities and research centres and their equipment and infrastructure.
3. Financial assistance to develop their research projects that is compatible with other grants.
4. Tax deductions and rebates for R&D&I activities.

The academic sphere

1. Better mechanisms for transferring knowledge to the business sphere, access to know-how, a better understanding of the needs of today's businesses and the opportunity to contribute to Catalonia's economic development.
2. Establishment of solid, long-term relationships with organisations in all industrial sectors.
3. Boosting of the academic value of agreements between universities and businesses, including thesis guidance, articles, publications, conferences, patents, etc.
4. Access to additional funding that is compatible with other R&D&I grants.

Future doctoral students

1. The opportunity to participate in an R&D&I project in a company that is committed to research and innovation and is at the cutting edge of scientific knowledge.
2. Work on projects with highly qualified researchers and company staff.
3. Development of contacts and building relationships in order to share experiences and further their career prospects.
4. Access to a mobility fund to finance placements abroad and trips to international congresses and workshops.
5. Training in highly sought-after skills which are vital for a career in the business sphere.

What is an industrial doctorate project?

An **industrial doctorate project** is a strategic research project carried out by a company in partnership with a university or research centre and which will form the basis for a doctoral thesis, enabling future doctoral students to begin their research training and career in a dual business and academic environment.

Industrial doctorate projects are open to researchers in **all fields**, to companies of all sizes, from start-ups to major companies, and to future doctoral students of any nationality.

To encourage the development of such projects, the Government of Catalonia, via the Agency for Management of University and Research Grants (AGAUR), provides one of **two different types of financing**, depending on the nature of the project:

1. **Co-funding in Catalonia (DI-COF)**
2. **Specific funding (DI-AJUT ESP)**

The **common features** of both types of financing are:

- The research project and doctoral thesis are developed under a **collaboration agreement** between at least one representative of the academic sphere and one of the business sphere.
- The representative of the **academic sphere** will be a public or private university in Catalonia where the future doctoral student is enrolled in an official doctoral programme. Catalan research centres and hospital foundations may also participate.
- Each candidate will be supervised by a **thesis director** appointed from the academic sphere and a **project manager** from the business sphere.
- The candidate will be **selected** jointly by the signatories of the collaboration agreement. However, the candidate must be accepted and admitted to the doctoral programme of the corresponding university.
- The candidate must have an **average mark** of 6.50 or higher on his or her academic transcript, the calculation being based on the total number of credits from university studies that allow admission to an official doctoral programme.
- The thesis director must be part of an **active recognised research group (SGR)** of the Government of Catalonia or a researcher from the **ICREA** programme or be a recipient of **European Research Council (ERC) funding**.
- The **time** the industrial doctorate student spends working on the research project will be **divided** between the two spheres.
- Industrial Doctorate students will take part in **training programmes in cross-cutting business skills**, with a minimum duration of 60 hours, including a 30-hour common programme provided by the Government of Catalonia and 30 hours training provided by the university and the company on leadership and the coordination and management of R&D&I projects; valorisation and transfer of research results; the development of new companies and sources of funding; and intellectual and industrial property, among other relevant subjects.
- All industrial doctorate students will be given an **annual mobility fund** funded by the Government of Catalonia and accumulative for a maximum period of 3 years. Its purpose is to enable attendance at workshops and conferences related to the research project as well as stays at other company offices, universities or research centres outside Catalonia.
- All the projects carried out within the framework of the Industrial Doctorates Plan will receive recognition, along with the industrial doctorate students, project managers and thesis directors.
- Industrial doctorate project expenses which are financed by the business sphere (the industrial doctorate student's salary, consumable materials and other project expenses) may be eligible for **tax rebates and deductions**, in accordance with current legislation and the procedures established for that purpose.

What are the basic terms of the collaboration agreement?

For all types of financing, the collaboration agreement is the framework document governing the relationship between the academic and business spheres. In the terms and conditions of the call for proposals for funding, the Government of Catalonia sets out the **basic terms** which this agreement must contain. These include:

- a) **The specific conditions of the employment contract:** remuneration, length of contract, etc. If the project imposes any other contractual obligations on the industrial doctorate student, these must be stated in the collaboration agreement.
If the industrial doctorate student will be required to carry out any **teaching duties**, the terms and conditions of these duties must be stated so they can be approved by both the university and the company.
- b) **The distribution of working hours:** how the industrial doctorate student's time will be split between the premises of the academic and business spheres must be stated.
- c) **Intellectual and industrial property rights:** these must be allocated appropriately on the basis of the work, contributions and interests of all the parties involved in the project.
- d) **The persons responsible** for supervising the project in the academic and business spheres must be named.
- e) The specific **funding** of the project: the provision of consumable materials, equipment, etc., and training in cross-disciplinary business skills.
- f) The mechanisms for **monitoring the progress** of the projects and tasks carried out by the researcher in training.
- g) Conditions related to the rights of the industrial doctorate student to **publish his or her research results** during the training period or the development of the doctoral thesis.
- h) Terms referring to **mobility and attendance** at congresses, workshops and the like.
- i) Whether the enactment of the agreement is **dependent** on the attainment of co-funding or specific funding under the Industrial Doctorates Plan.
- j) The period covered by the agreement.
- k) If more than one entity is involved from the academic or business sphere, a **distribution agreement** between the parties regarding the call's funding.

The agreement must also include the following two annexes:

- Annex 1: brief description of the research project
- Annex 2: proposed work plan

These appendices must be approved by any of the following university staff: the rector or vice-rector for research, the director or head of the school supervising the doctorate, the director of the doctoral programme's academic committee.

The Plan's website contains a model collaboration agreement for each type of financing for funding that complies with the requirements established in the call for industrial doctorates.

Co-funding type of financing (DI-COF)

Definition of the business sphere

The business sphere entity's place of work must be located in Catalonia.

The following are eligible to apply for funding:

- Private companies and public corporations belonging to or linked to the public sector.
- Not-for-profit associations and foundations, local, regional or national public bodies, consortia in which the government has a majority share and town councils.

TECNIO centres with their own legal status; ministries, offices and regional services of the Government of Catalonia; research institutions and subsidiary companies thereof are not eligible.

Specific features

- The **length** of the collaboration agreement must be for **3 years**.
- The business is required to **employ** the industrial doctorate student, paying an average minimum annual gross salary of at least €22,000, plus the corresponding social security contributions.
The company must guarantee to pay a minimum gross salary of at least €66,000 over the 3 years, not including social security contributions, each year being paid in accordance with the company's remuneration policy.
- If the industrial doctorate student has spent **more than 12 months** in the company's employ as of the deadline for applications to participate in the Industrial Doctorates Plan, on accepting to take part in the industrial doctorate, **the company will become ineligible for the co-funding type of financing**.
- The industrial doctorate student **must work exclusively** on the research project.
- The **same thesis director cannot receive more than 14,400 euros of annual funding** within the framework of the Industrial Doctorates Plan (equivalent to two years of 'research group funding').
- The goal is that the thesis be completed **within 3 years**. Government of Catalonia funding will only be provided for three years, and will only be extended in cases where the contract is suspended for a period of time.

Public funding

The funding provided by the Government of Catalonia is as follows, and may be awarded in conjunction with other R&D&I grants:

Item	Amount maximum	Amount maximum	Beneficiary
Company supervision costs	€7,200	€21,600	Business sphere
Research group funding	€7,200	€21,600	Academic community
Research group funding overhead (18%)	€1,296	€3,888	
Subsidy for doctoral programme enrolment	€624	€1,872	Industrial doctorate student
Mobility fund	€2,200	€6,600	
GOVERNMENT OF CATALONIA FUNDING	€18,520	€55,560	

A maximum of €21,600 will be awarded over the 3 years to defray the **costs of the person appointed by the company to supervise the project**, provided the company can demonstrate that it has incurred an **expense of at least €33,300**, corresponding to grant funding of 65% of the total cost, in line with the eligible expenses defined in the terms of the call for proposals and in Annex I of this document.

Specific funding type of financing (DI-AJUT ESP)

Definition of the business sphere

The business sphere entity's place of work can be located in or outside Catalonia.

The following are eligible to apply for funding: private companies and public corporations belonging to or linked to the public sector, not-for-profit associations and foundations, local, regional or national public bodies, consortia whose majority shareholders are public bodies, town councils and TECNIO centres with their own legal status.

Ministries, offices and regional services of the Government of Catalonia and research institutions and subsidiary companies thereof are not eligible.

Specific features

The specific funding type of financing (DI-ESP) may be available in the following circumstances:

- a) The company **cannot directly employ the industrial doctorate student** and agrees to compensate the university, research centre or hospital foundation for the costs of employing the researcher.
- b) The industrial doctorate student cannot work full time on the project and will therefore be employed on a **part-time** basis and the research project and thus the agreement between the university, research centre or hospital foundation and the company will be for more than three years.
- c) A centre in the **TECNIO network with its own legal status** acts as a company, assuming the employment costs to hire the candidate.
- d) There are other cases of special interest that, duly justified, can be considered by the Selection Committee.

In all the cases listed above, the industrial doctorate student must be employed by either the business sphere or the academic sphere, which will pay an annual salary of at least €18,000 plus the corresponding social security contributions. The contracting entity must guarantee to pay a minimum remuneration of €54,000 over the three years covered by the funding.

Public funding

The Government of Catalonia will fund the following:

Item	Amount maximum	Amount maximum	Beneficiary
Subsidy for doctoral programme enrolment	€624	€1,872	Industrial doctorate student
Mobility fund	€2,200	€6,600	
GOVERNMENT OF CATALONIA FUNDING	€2,824	€8,472	

The expenses which are eligible for funding are defined in Annex I.

Future doctoral students

Participation requirements

The general requirements for future doctoral students to be assessed as candidates for funding are:

1. An **average mark of 6.50 or higher on his or her academic transcript** for university studies that allow admission to a doctoral programme.
2. To meet the **specific requirements** for the industrial doctorate project concerned.

Each project is designed to meet specific needs that may go beyond providing a particular academic course of training. The profile of the researcher required to carry out the project must therefore be carefully considered (previous professional experience, languages, other requirements).

3. The **general requirements for admission** to official doctoral studies in accordance with current legislation (Royal Decree 99/2011, of 28 January, *Spanish Official Gazette* (BOE) number 35 of 10 February 2011).

Having met all these requirements, the industrial doctorate student will be selected by the academic and business spheres using the selection techniques considered most appropriate (skills tests, group exercises, interviews, etc.).

Application process

The application process for the Industrial Doctorate Plan is streamlined, simple and with minimal documentation requirements in order to ensure applications are dealt with rapidly.

Academic and business spheres



Firstly, the academic and business spheres will present a **proposed industrial doctorate project**, including the following basic information:

- Identities of the parties involved (business and academic spheres).
- Brief description of the research project.
- Description of the required profile: Academic qualifications, professional experience, knowledge of languages, other relevant information for the project.

Next, this proposal is **published on the website of the Industrial Doctorates Plan**, in the 'Open call' section, so that candidates who are interested and meet the requirements described may submit their applications.

During the period that the post is open to applications, the academic and business spheres may negotiate and sign the collaboration agreement, in accordance with the basic terms set out on page 3 and those established in the terms of the call for proposals for industrial doctorates.

From seven days after the publication date of the project proposal, the parties may close the period in which applications will be received and proceed to select a candidate, or keep the offer open until they find the most suitable candidate.

Thirdly, once the researcher who will carry out the industrial doctorate project has been selected and the parties have signed a collaboration agreement, they may present their **application for funding under the current call for industrial doctorates** via the Government of Catalonia's Virtual Procedures Office (OVT). The following documentation must be presented:

- **Collaboration agreement** signed by all parties.
- **The minutes of the selection session** showing that all the candidates were properly assessed.
- **Admission documentation** for the corresponding official doctoral programme.
- Copy of the candidate's **academic certificates** allowing access to official doctorate studies.

Fourthly, the Government of Catalonia will assess the applications received in the time period indicated for guidance purposes in the terms of the call for industrial doctorates. In general, 4 interim awards are made in order to ensure that the applications received are processed quickly and the project can start as soon as possible.

Finally, once the application has been accepted, the academic and business spheres will have 60 calendar days to **accept the funding**, presenting the documentation stated in the terms, in particular: The selected employee's contract and the enrolment documentation for the corresponding doctoral programme.

Future doctoral students

When the academic and business spheres offer their industrial doctorate projects, these will be published in the 'Open call' section of the website of the Industrial Doctorates Plan. Interested candidates must **present their applications for the industrial doctorate project**, taking into account:

- a) The requirements set by the university and the company for carrying out the project.
- b) The general requirements for being admitted to the corresponding doctoral programme.
- c) The requirement for the candidate to have an average mark of 6.50 (on a scale of 0 to 10) or higher on his or her academic transcript, the calculation being based on the total number of credits from university studies that allow admission to an official doctoral programme. The Agency for Management of University and Research Grants (AGAUR) will be available to assist in the calculation of the average mark.

ANNEX I

Eligible costs

The industrial doctorate student's enrolment expenses

All the expenses involved in enrolling with the university, specifically: supervision, tutoring and continuous assessment of the doctoral thesis; the administration of the academic transcript; the reading and defence of the doctoral thesis; the issuing of the official doctorate qualification, including the European Diploma Supplement, fees and other expenses regulated under the Government of Catalonia's public pricing decree for academic services.

Research group funding

Funding is available to cover expenses related to the research carried out within the industrial doctorate project, specifically:

- a) The employment of pre-doctoral or post-doctoral staff to support the research in line with each research body's rules on contracting staff.
- b) The co-funding of pre-doctoral or post-doctoral or research support contracts.
- c) The purchase of equipment that can be inventoried or bibliographical items.
- d) The purchase of consumable materials.
- e) Other expenses not included in any of the previous sections, provided they are directly related to the purpose of the funding.
- f) The remuneration paid to permanent staff legally or contractually linked to the institutions applying for funding and any expenses which are not necessary or justified by the achievement of the aims of the research group are not eligible for funding.

Supervision of the thesis by the project manager appointed by the company

Funding to defray the total employment costs of the person appointed to supervise the project, in proportion to the time dedicated to the project, project execution expenses, the certification of projects (for tax purposes) and, in general, all expenses incurred by the company that are directly related to the research project. The total cost of employing the industrial doctorate student may also be eligible.

The industrial doctorate student's mobility expenses

This includes travel and accommodation expenses and, in general, all expenses related to attending workshops and congresses and placements in other offices of the company, universities or research centres outside Catalonia, provided these are directly related to the research project.