



TRAINING KIT

For supporting the continuous professional development of
staff involved in Quality Assurance of Cycle 3 (doctoral)
programmes in Higher Education



*Produced as part of Workpackage 1 of the EU-funded Erasmus+ programme
“Promoting internationalization of research through establishment and
operationalization of Cycle 3 Quality Assurance System in line with the European
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Project Executive Management Team (EMT) address

This Training Kit is has been developed in the framework of Erasmus+ programme “Promoting internationalization of research through establishment and operationalization of Cycle 3 Quality Assurance System in line with the European Integration” (C3QA) project. It has been derived from the activities conducted under Workpackage 1, Capacity Building and the training sessions and workshop delivered using a blended learning approach during its implementation in the course of 2017.

The three parts constituting the Training Kit are devoted to the presentation of Spanish, French and Polish practices of Quality Assurance of doctoral programmes.

The Training Kit targets higher education institutions, quality assurance bodies and authorities in charge of higher education regulation and gives these stakeholders the opportunity to analyze, discuss and derive inspiration from the processes and arrangements in place with a focus on quality assurance/enhancement and internationalization of Cycle 3 (doctoral) programmes.

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Part I - Spanish Case Study: National Higher Education, Research and QA context (focus on Doctorate level)

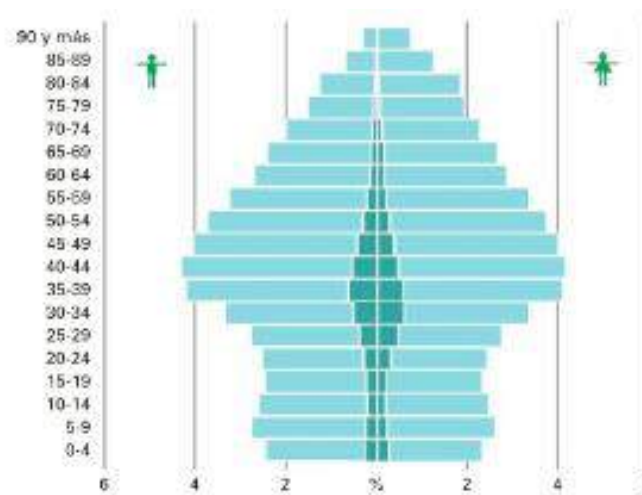
Chapter 1: Overall landscape - National Higher Education (HE), research and QA context

1.1 Brief presentation of the HE and research system

General relevant information about Spain HE studies

Spain is one of the current 28 countries composing the European Union. Its area is 505.944 km². The current population (data¹ for 2016) is 46,5 million. Madrid, the capital of Spain, is located in the center of the country. The PIB per capita for the 2016 was 23970 €. The total number of active enterprises is 3,24 million with a 55,4% of them without any employee.

The current population pyramid for Spain is the following. Dark blue section represents the ratio of foreigners.



The percentage of people over 65 constitutes 18,7% of the population (8,7 mln.).

There are 84 Universities; out of which 50 are public, in Spain. In total there are 343 (274 public) higher studies campus/venues.

The number of students enrolled in undergraduate studies is 8,1 mln. The ratio of

¹ http://www.ine.es/prodyser/espa_cifras/2017/index.html

students who leave school before completion is 19%. This ratio is higher as compared to other EU countries. The total number of HE students for 2015-2016 academic year was 1,3 mln. out of which 54,5% were women. The net rate of schooling in HEIs is 31.1%.

There are 1.81 universities per million inhabitants and considering the 18-24 year-old population the number is 26.47 per million inhabitants.

The table below shows the percentage of student enrollment in different study fields for 2015-16 academic year:

Branch of Teaching	Number of students	% Women
Social Sciences and Law	618.851	59.7%
Engineering and Architecture	254.244	25.5%
Arts and Humanities	133.710	61.1%
Health Sciences	240.812	69.3%
Sciences	81.492	51.0%
Total	1.329.109	54.5%

There is a total offering of 2.699 official university studies, with only 23 inter-university degrees. There is a total of 303.779 places for studying bachelor, out of which 246.642 are on-site and other 57.137 online studies.

In 2014-2015 academic year the number of students who have been awarded Bachelors’/Master’s degrees were 231.961.

The rate of employment among the alumni is around 75,6%. About 7,8% of graduates went abroad in search for employment.

The enrollment in master’s and doctoral studies has increased in the last years.

Currently, the total number of students enrolled in master’s is about 140.000, while that of the third cycle of education constitutes 28.546 students.

1.2 National regulations concerning Spanish HE studies

The current organization of Spanish Universities and HE studies was established by the National Organic Law [BOE-LOU, 2001], later revised by the Organic Law 4/2007 of April 12, 2007 [BOE-LO, 2007]. As a whole, these laws propose an innovative, open and flexible framework, to provide universities with the most appropriate regulatory

solutions to meet their needs, with the aim of improving the excellence and quality of the university activities. The HEIs have the following responsibilities:

- Realization of the public service of higher education through research, teaching and study.
- Creation, development, transmission and critique of science, technique and culture.
- Preparation for the exercise of professional activities that require the application of scientific knowledge and methods for artistic creation.
- Development of science and technology, as well as dissemination, valuing and transfer of knowledge to the service of culture, quality of life and economic development.
- Dissemination of knowledge and culture through university extension and lifelong learning.

Together with the basic research, the university should encourage the transfer of research results to the sector of production in coordination and with joint efforts of other agents in the field of science and technology.

Today's society, industry and government (at a national and regional levels) do require universities to assume new responsibilities in the fields of research, training and culture. To this end, several mechanisms were established to promote research, and university-society link.

These regulations aim to achieve the following objectives:

- To improve the teaching, research and management quality of universities.
- To encourage the mobility of students and teachers for the benefit of a greater number of participants.
- To deepen the creation and transmission of knowledge as the axis of economic activity.
- To respond to the challenges derived from universities operating online through new information and communication technologies.
- To respond to the challenges of training throughout life.
- Integrate competitively with the best schools in the new European Higher Education Area.

On the one hand, universities are given new competencies related to hiring, reintegration of their professors, creation of centers and structures of distance learning, establishment of admission procedures for their students, etc. On the other hand,

regional governments have the competences to regulate the legal regime and remuneration of employed teachers, the capacity to establish additional remuneration for the latter, the approval of funded study programs and the evaluation of the quality of universities in their area.

1.2.1 HEI Governing Bodies

One of the objectives of the law is to facilitate a more agile and effective management of HEIs. For this reason, a clear differentiation is established between the management bodies and the bodies of representation and supervision of universities, as shown below:

- **Governing Council:** The highest governing body of the university will be responsible for the approval of the university's strategic and programmatic lines in terms of human resources, research, organization of teaching, economic resources and elaboration of the budgets. The Rector (who will chair the council), the manager and the Secretary General will be the members of the Council. The selection of other members is embedded in Article 15 of the corresponding law and Point 13 of the reform of 2007.
- **Rector:** The figure of the Rector is reinforced. They have redesigned their competencies and those of their government team. The Rector will be elected by the university community through universal suffrage; free and secret, ensuring the representation of different sectors.
- **Social Council:** The new law on universities reinforces the competences and functions of the Social Council to improve the fulfillment of the tasks of supervision and accountability of the university. These competencies include: supervision of economic activities; approval of the budget and multiannual programme; compliance with the Rector's proposal as far as the appointment of the manager is concerned, agreement on remuneration supplements for teachers, monitoring the development and implementation of the budgets, and approval for establishing foundations and other legal entities. The reform of 2007 also establishes that social councils are entitled to get appropriate information and advice from evaluation bodies of Autonomous Communities (Regional Government) and the National Agency for Quality (ANECA).
- **Cloister:** It is the organ of representation of the university community and will be chaired by the Rector. It shall include, among other functions, the

elaboration of the statutes and the election of 40% of the Governing Council. In addition, it will have the power to convene elections to the Rector, on the initiative of one third of its members. The approval of such an initiative would lead to the dissolution of the cloister and the cessation of the Rector. The cloister composition includes 51% of doctorate professors (51%), leaving the remaining 49% as determined by each university in its statutes.

1.2.2 HEIs Quality assessment

Different quality aspects of HEIs are evaluated. This evaluation has among its objectives at least the following ones: evaluation of the public service rendered by the university, comparison and transparency among universities, improvement of the quality of teaching staff. Additionally, these quality results will serve as a point of information for public administrations in decision-making procedures and will promote mobility and excellence of teachers and students.

The objectives set out in the preceding paragraph are fulfilled through the evaluation, certification and accreditation of:

- Studies aimed at obtaining national or international certificates of validity, including that of a Doctor and the qualifications awarded by universities and higher education centers;
- Teaching, research and teacher-management activities, as well as higher education centers;
- Other activities and programs that may be carried out as a result of promotion of the quality of teaching and research by public administrations.

The process of evaluation, certification and accreditation of studies, are within the responsibility of the National Agency for Quality Assessment and Accreditation (ANECA) and the evaluation bodies that the regional governments might determine.

ANECA is a state foundation created by the Ministry of Education, Culture and Sports, in compliance with the provisions of article 32 of the Law of Universities (Organic Law 6/2001, of 21 December). Its activity falls within the next general objectives:

- Hiring teachers in the most competitive way,
- Promoting the integration of universities into the HEIs,
- Evaluating the quality through an independent agency,
- Encouraging transparency, comparison, cooperation and competitiveness of

- universities to improve the quality level,
- Encouraging the continuous improvement of teaching, research and management activities of universities,
 - Providing qualified and comparable information to public administrations for decision making in its field of competences,
 - Informing students, their families and society as a whole about the quality of university programs and services.

These objectives are carried out by means of global evaluation reports, for example, the university quality report [ANECA, 2015], or reports of particular institutions or curricula studies, leading to certification and accreditation processes.

1.2.3 Categories of HEI teaching staff

The national regulation establishes that there should be a greater number of permanent staff professors than hired ones. Additionally, each professor should have a proper balance of teaching and research functions. Recruitment procedure is open, competitive and transparent, to guarantee merit and professionalism. The candidates are required to be first accredited in order to be able to undertake university teaching duties.

The current teaching figures are the following:

- **Assistant Professor:** hired for a maximum of five years among those who had already completed their PhD credits, whose main purpose will be to complete their scientific training. They will also be able to collaborate in teaching tasks up to a maximum of 60 hours per year.
- **PhD Assistant Professor:** hired for a maximum of five years. The law establishes that to access this category it is necessary to have a positive external evaluation and preferably not to have been linked with the contracting university in the previous two years.
- **Associate Professor:** he/she will develop teaching and research tasks, or primarily research. This figure is reserved for doctors who have completed at least three years of post-doctoral teaching and research activity, or priority research and have received a positive external evaluation.
- **External Teacher:** temporarily engaged, and with part-time dedication. They will be professionals of recognized prestige who carry out their professional activity outside the university.
- **Honorific Professor:** temporarily contracted among retired university

professors who have provided recognized services to the university.

- **Visiting Professor:** temporarily hired among recognized professors or researchers from other universities or research centers.

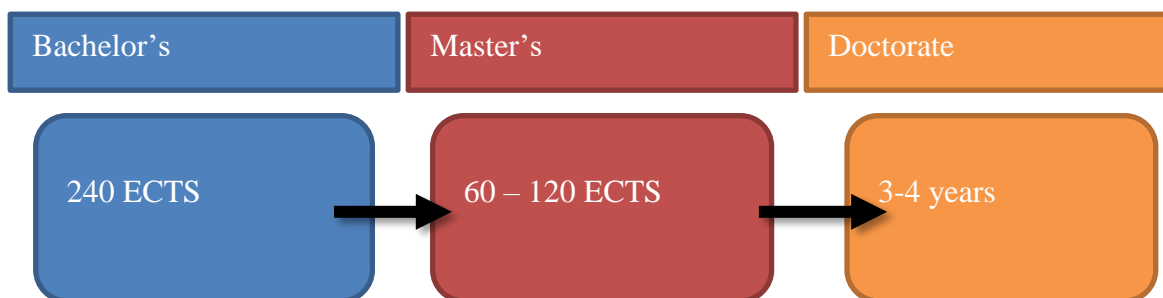
1.3 Articulation between Master's and Doctorate level, statistics per level of study and field of study, student-graduate statistics

In Spain there are 3 levels at higher studies. The first cycle (Bachelor- undergraduate) of the university studies has a duration of 4 years. The teaching is comprised of basic and general training, together with other specialization disciplines related to professional character.

The second cycle of university studies, Postgraduate, will lead to master's degree, with a duration that ranges from 1 to 2 years. Teaching sessions are focused on advanced training and are aimed at academic or professional specialization, or encouragement of research.

Finally, the third cycle of the university studies is the doctorate level, whose objective is the advanced training of students in research tasks. The duration of the third cycles of studies is around 3 years.

Below is the organigram of university level studies:



Therefore, a full-time student with an adequate performance, who enters the university at the age of 18 years, would be awarded the undergraduate degree at the age of 22, that of master's degree between 23-24, and the doctorate at the age of 26-27.

All higher-level studies leading to bachelor's, master's and doctoral degrees shall undergo periodic evaluations, reviewing the fulfillment of the study objectives proposed by the university initially. The institution that complies with the evaluation criteria is accredited by the competent quality agency. In addition, public administrations will be able to use the results of this assessment to establish specific support and funding

programs.

1.3.1 Undergraduate degrees

They are organized into large branches of knowledge and all of them must adapt to the guidelines that the Government establishes in order to obtain such official studies. In the case of regulated professions (Directive 2005/36/EC of the European Parliament), these guidelines will be specific for corresponding studies. The knowledge classification is shown below:

- Arts and Humanities,
- Sciences,
- Health Sciences,
- Social and legal sciences,
- Engineering and architecture.

In order to be awarded the degree, the student needs to accumulate **240 ECTS Credits**. The degree ends with the elaboration and defence of a work or end-of-degree project by the student, included in the total duration of the grade.

Usually, the first 60 initial ECTS are generic in nature aimed at formulating basic competencies of the current knowledge branch. This way, students have the possibility to enroll in another similar study.

1.3.2 Graduate degrees

They are not organized by branches of knowledge and only specific guidelines are given when corresponding regulatory rules of the profession requires it. Exceptionally, and only in the cases of regulated professions (Directive 2005/36/EC of the European Parliament), the graduate degrees are linked to their own guidelines.

Master's degrees can have between **60 and 120 ECTS credits**, in which all kinds of learning are included with their corresponding evaluations. The master's degree ends with the elaboration and public oral defence of a project or end-of-master's work by the student, included in the total duration of the degree.

In the case of postgraduate studies, the initiative has been within universities in collaboration with the regional administrations, who define and develop their own strategies and also the organization of specialized formation and research training.

1.3.3 Doctoral studies

Currently, the Spanish third cycle programs contains a series of formation activities in parallel of doing the research activities which will lead to defend the PhD thesis. Below-given table illustrates different stages throughout PhD studies:

Year 1	Year 2	Year 3	Year 4	Year 5
Formation activities			Extra year	Final extra year
	Recommended foreign stays			

The PhD student and supervisor present a research plan in the first 6 months of the thesis. The said plan will be evaluated by the doctorate program commission each year throughout the duration of postgraduate studies throughout the whole program.

Next section describes different options to be enrolled on a PhD/ doctoral study.

Different options for PhD access

The Royal Decree 43/2015² introduced some modification to the PhD access for the sake of facilitating the internationalization of the Spanish university graduates. It opens the possibility of degrees with a duration of 3 and 4 years, and Masters of 1 or 2 years, in a way that complements the generalist and specialized training to access to the doctorate (in any case the minimum number of ECTS in Degree + Master \geq 300 ECTS to access a doctoral study).

In general, to access an official doctorate program it will be necessary to have been awarded the official Spanish title, or equivalent, and a university master, or equivalent, provided that they have exceeded, at least, 300 ECTS credits in the set of these two studies.

1.3.4 References to the national qualifications frameworks

The Spanish qualifications framework (Marco Español de Cualificaciones - MECU³) follows the European one⁴. There exists a link between different levels and level descriptors for

² <https://www.boe.es/boe/dias/2015/02/03/pdfs/BOE-A-2015-943.pdf>

³

Established under Royal Decree: Ministry of Education (2011). 1027/2011, Spanish qualifications framework for Higher Education]: <http://www.boe.es/boe/dias/2011/08/03/pdfs/BOE-A-2011-13317.pdf>

⁴ Cedefop (2016). *The application of learning outcomes approaches across Europe.*

referencing the MECU to the European qualifications framework (EQF) levels. In order to make Spanish qualifications easier to understand different levels describe the qualifications in terms of learning outcomes. Through it is easier to identify, validate and recognize all kinds of learning outcomes (including non-formal and informal learning), regardless of the way they were acquired.

The MECU levels are labelled 1 to 4 and correspond to the four levels given in the FQ-EHEA: advanced VET, bachelor, master and doctorate. Of these, the first is a non-university higher education level included to support and promote lifelong learning. Some advanced vocational education and training (VET) is considered higher education (HE) but is undertaken outside the university system; such advanced VET studies may be recognized not only for admission to university but also as ECTS credits where learning outcomes are properly aligned. These four highest levels are based on the Dublin descriptors.

The table below illustrates the equivalences among different qualifications framework.

EQF ⁵	SQF ⁶	SQF-EHEA	QF-EHEA
8	8	Doctorate	Third cycle
7	7	Master	Second cycle
6	6	Bachelor	First cycle
5	5	Advanced VET	First cycle

1.3.5 National statistics on research and role of the HEIs within the research system

Research activities may have private and public funding⁷. The enterprises are responsible for the largest amount of money invested in R&D (0.63% related to GDP in the year 2015, with the aim to increase he said data to 0.72% of the GDP by 2020). They have about 90.000 people employed in the R&D departments. Additionally, the public sector includes 40.000 staff people in different administrations and 74.000 researchers in the HEIs. Currently, the investment in R&D in the public sector has undergone a diminishing tendency standing at a 1.23% of the GDP and aiming to increase to 2.0% by 2020.

http://www.cedefop.europa.eu/files/3074_en.pdf

⁵ EQF - European qualifications framework

⁶ SQF - Spanish qualifications framework

⁷ Plan Estatal de I+D+i 2017-2020.

http://www.idi.mineco.gob.es/stfls/MICINN/Prensa/FICHEROS/2017/PlanEstatal_IDI_vB.pdf

Research modalities.

At the university level, the research can be considered from three points of view:

- Teaching Support: training of research staff at the highest level (doctoral students), to meet the needs that arise in the industry and in academia.
- Activity that brings new knowledge: development of basic research that contributes to a better knowledge of certain topics.
- As a scientific and technical basis for the progress of society: development of technologies that allow the country to increase the economic level and the degree of technological autonomy.

The research might be classified into two types:

- Basic research: It is investigated by the mere fact of advancing knowledge.
- Applied research: The main objective is to achieve practical results.

Research structure at HEIs

The legislation determines how research must be carried out in the HEIs. There exist different entities: research groups, departments and university research institutes. The typical organizational structure of research at HEIs is the following: the head of the research and the highest rank is the vice-president for Research. It has different units under control: research groups, research centers, enterprise relationship unit and patents, results unit.

1.4. Relationships between HE and Enterprises: internships, placements, practicum, etc.

The relationship between HEs and enterprises mainly covers the area of research and student internships. Teachers at the university or the staff of the enterprise are not involved in mobility. Research contracts can be signed between university and enterprises which fund the research. In all other cases the call for research funding determines mandatory articles to be followed: in particular public private partnerships must be formed up, and a mixed consortium must be to be settled to obtain public funds. Placements in companies help students understand better how the world of work operates and how to apply research methods from industry, business or the institutions to their own work. Doctoral programs may offer placements in companies with research departments.

Taking part in an external placement requires that an educational cooperation agreement between the university and the company or institution involved for the practical training of students be signed beforehand. This agreement will be formalized at the proposal of the body responsible for running the doctoral programme and will be signed in the name of the HEI by the Rector or competent Vice-rector, and by the legal representative of the company or institution, of the person delegated by the same.

On the other hand, internships and placements are considerably increasing due to the highly interest that society has about the insertion of HE graduates into the country labour market. Internships are regulated by different laws; some concerning universities and others related to labour relations. The internships are comprised of work practices that either form part of curricula or are not included in it.

It is important to know that there exist a university committee who approves strategic decisions and controls each university. The said committee includes different society stakeholders: so relevant and concerned enterprises are presented in some way.

Universities promote results dissemination and research exploitation through different policies. On one hand they should do it, because their funding is related to research results. Spain is divided in regions and each region administration has its own formula to better use money of the population in the HEIs. On the other hand, the universities know that research and result exploitation are key for the success of the institution. Therefore, universities usually have calls for research projects, research grants, mobility, patents, prizes related to transfer research results to society, and so on. In the last years, a large effort has been made to increase the ratio of entrepreneurship among graduates. There are several contests for attracting funds to students' start-ups.

1.5 Brief presentation of the doctorate level

1.5.1 How is doctorate level organized in the country?

Spanish HEIs offer a wide range of doctoral programs aimed at training researchers in the five branches of knowledge: Arts and Humanities, Sciences, Social and Legal Sciences, Health Sciences, and Engineering and Architecture.

Cycle 3 studies are regulated in Spain by the Ministry of Education, Culture and Sports (MEC). As the competences in education are transferred to the regional governments, apart from the global scheme for a common structure of cycle 3 studies, each region has its own particularities. There is a central database of doctoral programs that are publicly available and the MEC, having the last word to approve or dismiss a proposal, usually makes a direct translation of the regional decisions.

The national agency for quality (ANECA) has also been distributed along the different regions in a form of distinct legal figures (Foundations, Agencies, Institutes, etc.), so the approval (verification and accreditation) of doctoral programs of universities located in the region will be evaluated by an independent external quality agency which informs the regional government who decides about the convenience of opening/closing doctoral programs. When there is a joint doctoral program with more than one region involved in the process, one university will act as the main coordinator and the evaluation of the doctoral program is done via the quality agency in that region.

1.5.2 Number of HEIs providing Cycle 3.

There is a total of 42 Spanish universities where it is possible to study a doctorate.

The research fields of interest are defined at regional levels, giving more funds to research lines aligned with those strategic topics. Research runs in parallel with doctoral programs; PhD students are the fundamental base of research results in Spain.

The evaluation of the PhD defence will lead to an overall rating awarded to the thesis in accordance with the following scale: "NOT SUITABLE", "APPROVED", "NOTABLE", and "OUTSTANDING". For this, each member of the evaluation panel board must write down a report about the awarded qualification. Additionally, the PhD thesis may have the mention of "cum laude" if the overall grade is outstanding and, in this sense, all the members unanimously award a positive grade in an anonymous vote. There are prizes for the best PhD thesis at each University in the field of Sciences and Humanities.

1.5.3 National statistics on Doctorate studies⁸

The total number of students enrolled in 3rd cycle studies is 28.546, 27.390 in state universities and 1.156 in private ones.

⁸ Datos y Cifras del Sistema Universitario Español. Curso 2015-2016. <https://www.mecd.gob.es/dms/mecd/servicios-al-ciudadano-mecd/estadisticas/educacion/universitaria/datos-cifras/datos-y-cifras-SUE-2015-16-web-.pdf>

In the table below, it is shown the number of PhD defended and students enrolled in the 2014/2015 academic year.

Branch of Teaching	Number of doctoral programs	of Enrolled Students
Social Sciences and Law	255	7,628
Engineering and Architecture	251	5,203
Arts and Humanities	157	5,086
Health Sciences	170	6,564
Sciences	225	4,065
Total	1,035	28,546

In the table below, it is shown the number of PhD defended and students enrolled in the 2014/2015 academic year.

Year	Number of defended PhDs
2011	9.483
2012	10.504
2013	10.889
2014	11.316
2015	14.694
2016	20.049

The increase in PhDs defended in the 2016 year has been motivated largely by the deadline that new regulations introduced in the doctoral studies in 2011.

Chapter 2: Nature and characteristics of doctorate studies

2.1 Information on Doctorate program design (methodology, ECTS...)

The Spanish doctorate is not measured by ECTS. There are some formative activities to be fulfilled along the duration of the doctorate. These activities are regulated for each particular doctoral program and can be related to either general skills or specific competences related to the particular program.

Table below shows the number of PhDs defended in the 2016 academic year regarding the study field.

Study Field	N° PhDs Defended
Services	75
Agriculture - veterinary	360
Education	958
Computer Science	958
Business, Administration and Law	1.348
Engineering, Industry and Architecture	1.601
Social sciences, journalism and documentation	2.256
Health and social services	3.015
Arts and Humanities	3.104
Sciences	5.536

2.2 Characteristics of the Cycle 3 study

2.2.1 Organization of Cycle 3 studies: selection, admission and enrollment

Before applying for admission to a doctoral program, the student should contact a possible thesis supervisor. First entry point could be to get in touch with the coordinator of a particular doctoral program.

The process of access and admission onto a doctoral programme involves the applicant and the responsible academic committee directly. When applying for admission onto a doctoral programme, it is recommended that candidates follow these steps:

- Check they meet the general access and specific admission requirements.
- Find out all the details about the doctoral programme they like to enroll.
- Contact the doctoral programme's coordinator and their potential thesis supervisor.
- Apply to the Doctoral School for access by fulfilling the admission application form, attaching all the required documentation.

After checking that the student meets the access requirements, the Doctoral School sends the documentation to the corresponding doctoral programme's academic committee in order for it to decide whether or not to admit the student.

Once admitted, the academic committee will assign the student a tutor. The student will have to sign the Learning and Good Practice Agreement, together with the tutor and the thesis supervisor. This Learning and Good Practice Agreement and other admission documents must then be returned to the Doctoral School.

The UAH Doctoral School will notify students of their admission once all due documentation has been received in the prescribed period and on paper. Should the academic committee refuse admission, students may make the relevant appeal within three days after receiving the notification of the decision. Should the decision still be negative, students may appeal to the Rector.

Students will then enroll in the corresponding doctoral programme by means of the self-enrollment system. They will also make their payment in the mode selected.

In its annual memorandum each programme's Quality Commission must analyse enrollment data and study the complaints and suggestions of stakeholders in order to identify the existence of any problems, difficulties or anomalies in the access and admission procedure. The following indicators will be taken into account:

- Percentage take-up of places
- Evolution of enrollment data

Each programme's quality commission will be in possession of the following sources of evidence:

- Pre-registration forms or admission applications.
- Enrollments.

2.2.2 Training Activities

To help students acquire the competences corresponding to a doctoral degree, Doctoral Schools offer various training activities which together amount to a coherent training

strategy designed in collaboration with different doctoral programme coordinators. It usually includes:

- Transferable skills training
- Specific training activities

Students must enter the training activities they perform in the course of their doctoral studies in a personalized control record called Record of Activities Document.

Transferable skills training

Each academic year, the Doctoral School runs three types of optional transferable skills activities, the aim of which is to develop the competences and personal capacities common to all our doctoral programs.

- Seminars. The School offers annually a series of seminars for students of all doctoral programs on matters related to the search and management of information, the oral and written presentation of research, project preparation, ethical aspects of research, and so on. It is advisable to attend these seminars during the first or second year of the doctorate.
- Young researchers' seminars. These seminars provide students with the opportunity to present their research and preview some of its findings before their fellow-students and lecturers. It is advisable to carry out this activity in the second or third year of the doctorate.
- Research stays in companies or institutions. To help students to gain an insight into the world of work and to apply research methods from industry or institutions, our doctoral programs may organize research stays in companies or institutions with research departments.

Other transferable skills activities

Together with the transferable skills activities, students can also take courses, seminars and other activities offered by other universities or institutions, Spanish or foreign, either face-to-face or online, obtaining the corresponding certificate; this, for instance, can be the case of Coursera, edX, MiriadaX, etc.

The contents of all these activities should fit the definition of transferable skills training (that is to say, acquisition of competences that are common to all the branches and disciplines of the doctorate) and they must previously have the approval of the Tutor

and the Thesis *Supervisor*.

Specific activities

Each doctoral programme will have a range of specific training activities catering to the interests of its students. The programme's academic committee will be in charge of planning them, establishing necessary criteria, defining their goals and contents, and formulating control procedures, bearing in mind what the programme's verification memorandum has to say on the matter. The range of specific activities varies largely for each doctoral programme.

2.2.3 Status, competencies and role of the supervisor

The doctoral research is carried out under the guidance of a supervisor in compliance with the Regulations concerning the writing, authorization and examination of doctoral theses.

At the time of admission to the doctoral program or not later than three months after enrolment, the Academic Committee in charge of the doctoral program will assign each student a doctoral thesis supervisor, who may be any Spanish or foreign doctor.

The thesis supervisor will have full responsibility for the coherence and suitability of the training activities, for the impact and innovativeness of the thesis' subject matter in its field, and for guiding the planning and tailoring, where necessary, of other projects and activities in which his or her student participates.

The main duties of supervisors are to:

- be in line with the Learning and good practice agreement adopted by the School,
- review their Record of Activities Document regularly,
- report on and endorse their' Research Plan periodically,
- ensure that the results of their students' research are fruitful, and are disseminated and put to use by means, for instance, of papers, transfers to other research contexts or, where appropriate, commercialization,
- emit a favorable report on the Doctoral Thesis.

The thesis may be jointly supervised by other doctors when there are good academic reasons for doing so, such as the interdisciplinary nature of the subject matter or programs run in collaboration with national or international partners.

Supervisors of doctoral theses must have demonstrable research experience, as accredited by the award of a favourable six-year research assessment in the last ten

years or by satisfying any combination of the following criteria: leadership of research projects, participation in research projects, supervision of doctoral theses, and publications. In the case of joint supervision, only one supervisor need be in possession of a favourable six-year research assessment.

2.2.4 Thesis defense

The Doctoral Thesis is an original piece of research written by the doctoral student and represents the core of the Research Plan.

It is possible to present the thesis as a compendium of articles written by the student and published in relevant journals. The minimum number of articles is three. In this case, in addition to articles, the thesis must include an overview summary lending coherence to the piece of research as a whole, indicating its overall line of argument, and appending a chapter by way of conclusion.

The Academic Committee will be responsible for approving the submission of the Thesis. If the defence of the Thesis is authorized, the Academic Committee of the programme will draft and approve the panel proposal, using the standard form. The panel will be appointed by the Official Postgraduate Studies Committee.

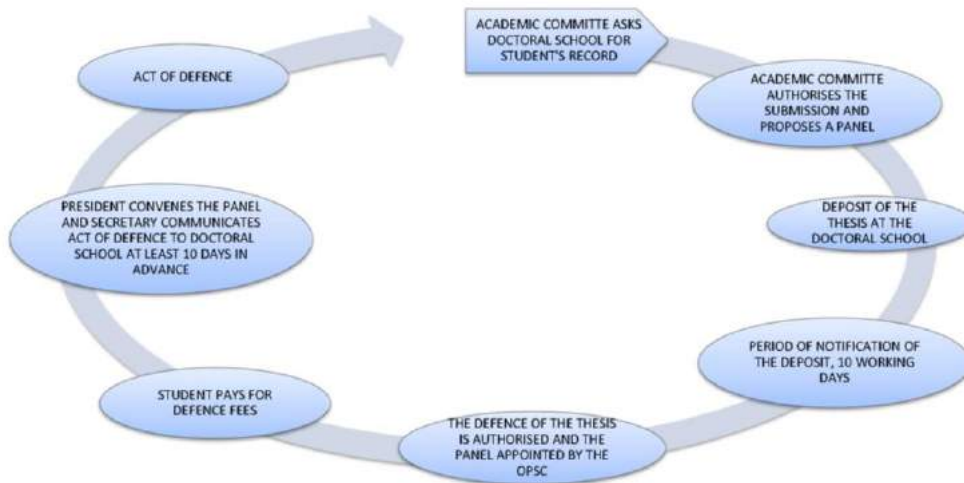
For programs under previous decrees, the Department responsible for the programme will perform these procedures.

In the case of foreign students who have written their doctoral thesis in a language other than their mother tongue, the same level of linguistic competence will apply as reflected in the admission requirements of the doctoral programme in which they are pursuing their studies.

If the doctoral thesis is written in the framework of a co-tuition agreement, where relevant the language requirement stipulated in said agreement will be taken into account.

The figure below shows the typical process for the final phase of a Spanish doctoral thesis.

- PROCESS OF THE FINAL PHASE OF THE DOCTORAL THESIS -



The paperwork from the deposit of the PhD till the exam lasts for around 4 months.

The doctorate regulations specify that the book presented to the exam cannot be later modified. This is not the case for other EU countries which encourage the student to improve the PhD book after the exam.

2.2.5 Diversification of Doctoral studies

To increase the relationship between enterprises and universities with respect to the doctoral studies, the Spanish government has included in the regulations the possibility to do the PhD thesis while working in a company. The idea behind this regulation is to involve the enterprises in the definition of the PhD topics. Therefore, the results of the PhD are directly transferred to the society. Different measures have pushed forward these industrial doctorates as it is the funding of the salary for the PhD candidate while doing the thesis in the enterprise. The HEI supervisor must agree with the tutorship at the enterprise the research topics and do the monitoring similar to other doctorate students doing the research at the university.

2.2.6 Internationalization of Doctoral studies

Mobility schemes

Through the participation of university teaching staff and, where appropriate, researchers and experts of repute in this scheme, it is hoped to enhance university doctoral studies and increase cooperation between Spanish and foreign institutions. With regard to student mobility, the aim is to facilitate activities related to research in doctoral programs run in other research centers of universities / research laboratories.

What is more, mobility is part and parcel of studies pursued under the terms of joint degree agreements among Spanish or foreign universities.

Mobility is promoted in different ways

- Joint doctoral programs between different universities.
- The study plan is devised and approved jointly by two or more universities.
- An agreement specifies the academic and administrative conditions in which the studies are to be conducted.
- The agreement provides for, as appropriate, the mobility scheme which affects both teaching staff and students.
- The formalization of co-tutelage agreements for doctoral theses.
- Mobility grants and subventions offered by the Ministry of Education in different ambits.
- Doctoral theses with International Mention.
- Grants aimed at teaching staff and students.
- Short stays tied to Research Staff and University Teaching Staff Scholarships funded by each University.

PhD with International Mention

The Spanish PhDs may have an international doctorate mention. In this way, the doctoral diploma might include the international doctorate ("Doctor international") mention on its reverse. The PhD defense should fulfill the following requirements:

- During the compulsory study period to achieve the Doctoral degree, the Doctoral student must have completed a three-month stay outside Spain, in a HEI or a prestigious research Centre, finishing studies or carrying out research studies. The period outside Spain and the activities involved need to be endorsed by the Director and authorized by the Academic Commission and will be included in the Doctorate activities document.
- A part of the Doctoral thesis, at least the summary and the conclusions, must have been written and presented in one of the usual languages for scientific communication in its field of knowledge. It will have to be different from any of the Spanish official languages. This rule will not apply when the reports on the time spent outside Spain and the experts are from a Spanish-speaking country.
- The thesis must have been evaluated by a minimum of two expert Doctors who belong to a non-Spanish Higher Education or research Institution: at least one

expert belonging to any non-Spanish Higher Education Institution or research Centre, holding a Doctor's degree, and different from the responsible person for the period spent outside Spain mentioned in paragraph a), must have been part of the thesis Evaluation Board.

The defense of the thesis will have to be held in the same Spanish University where the student has enrolled or, in case of joint Doctorate programs, in any of the participating Universities, according to the rules specifying the collaboration agreements.

When depositing the doctoral thesis, the doctoral student must accredit a level of B2 in the language in which the thesis is to be defended should this be other than his or her mother language.

Joint Doctoral Degree

Additionally, it is possible to do a joint doctoral degree (also called "joint doctorate" or "cotutelle doctorate") is a degree awarded by two (or more) different institutions, who share the responsibilities of supervising, coordination and examining a researcher's work towards a PhD degree.

The co-tutelage procedure must comply with these requisites:

- The modes of admission to doctoral studies and to the deposit and examination of the doctoral thesis will be those which govern tertiary level studies at the relevant university.
- Those interested in doing on a doctorate under co-tutelage should pursue their studies under the control and responsibility of a thesis supervisor from each of the universities involved.
- Each thesis co-tutelage will be carried out in the framework of a tailored agreement between the two universities involved and on the basis of the principle of reciprocity. By virtue of the agreement each institution will acknowledge the validity of the doctoral thesis on the strength of a single presentation and each university will undertake to issue the degree title of doctor.
- The doctoral candidate will be registered at both universities but exempt of payment at one of them. The agreement must specify which the exempting university is.
- The period for researching and writing the thesis will be no longer than three years from the signing of the agreement and will be divided between the

universities into alternating periods of residence at each. The minimum total period of residence at either will be six months, the rest of the residence being at the other. Each period of residence may be single or distributed across several periods.

- Publication, exploitation and protection of the results of the research carried out will be insured by both institutions in line with each country's stipulated procedures.
- The thesis will be examined once only at one of other of the two universities. One clause setting out this provision must be included in the agreement signed by both institutions.
- The panel for examining the thesis will be designated by mutual accord of both universities, while its composition will be in accordance with current legislation in both countries.
- The thesis will be written in one of the languages used habitually for scientific communication in the relevant field of knowledge and supplemented with an abstract written in one of the official languages spoken in the country of one of the universities that sign the co-tutelage agreement.

2.3 Positioning of Cycle 3

Due to the autonomy of Spanish universities, each doctoral school proposes their doctorate programs in line with the strategic targets and directions singled out in each particular university. The doctoral research subjects are usually aligned with those having a good research line and being held by a certain number of researchers. It is worth mentioning that each doctoral program has 3 researchers supporting each research line highlighted in their description.

Despite the fact that each university can promote and maintain a doctorate program, the regional governments provide funds in different calls and only those doctorate programs with strong research results will capture funds to keep going, so in fact it is a competition system where to be alive you need to obtain good research results or it will be the university itself who will pay for the costs of maintaining that structure. The funds that universities receive are related to research and quality of doctorate programs. Every six years each doctorate program is evaluated by an external quality agency. There are different key measurements to evaluate the quality of the doctorate program.

There is a minimum acceptable number in order not to discontinue a program. Additionally, a doctorate program can apply for a special quality mention. There are funds and research calls where only those quality doctorate programs can apply for. Taking a look at the employment of PhD thesis students, the first table below shows the ratio of people that has a job, and second table a job with the corresponding PhD level, both for people who have defended the PhD thesis in 2010, showing the employment data for 2011 and 2014 year, 1 and 4 years after the defence of the thesis.

Branch of Teaching	2011	2014
Social Sciences and Law	65.1%	64.6%
Engineering and Architecture	70.3%	67.8%
Arts and Humanities	52.5%	50.7%
Health Sciences	77.0%	76.2%
Sciences	59.6%	57.0%
Total	66.2%	68.3%

Branch of Teaching	2011	2014
Social Sciences and Law	93.7%	94.7%
Engineering and Architecture	96.9%	95.1%
Arts and Humanities	94.0%	94.8%
Health Sciences	96.9%	96.5%
Sciences	94.0%	91.3%
Total	95.3%	94.4%

A person with a PhD thesis has a high specialization in specific matters (which for a particular time can be a great advantage, but for the future the company may consider it an inconvenience), but his vision of the future, his ability to work in international contexts (and often intercultural) and his ability to perform technological surveillance gives it the possibility to open new avenues of research and find new applications to its advances. The great capacity to work, innovative vocation, experience in risk management, and other characteristics that can be obtained throughout the career path are brought about to the company by doctors, and doctoral students. However, even given the facts highlighted above, small and medium enterprises do not have many PhDs in their staffs. Only 4% of enterprises in Spain underline the importance of a PhD thesis

in their job process.

Therefore, the Spanish government empowers the PhD jobs with some programs such as “Torres Quevedo”. These grants are for a job of three years' duration for the employment of doctors who develop industrial research projects, experimental development or previous feasibility studies, in order to favor the professional career of the researchers, as well as to stimulate the demand in the private sector for personnel sufficiently prepared to undertake R+D plans and projects, and to help the consolidation of recent technology companies' creation. The grant will be used to co-finance the salary and the Social Security contribution of the researchers hired during each of the annuities, considered independently.

2.4 Monitoring of Doctoral Students and graduates

2.4.1 Monitoring done by Doctoral Program Academic Committee/Tutors

In accordance with the regulation of Spanish doctoral studies, monitoring and assessment of doctoral candidates will be conducted annually by the Academic Committee of the doctoral programme.

To do this, the following procedure is normally used:

- The Tutor / Thesis Supervisor writes down a report on his or her doctoral student. If the Supervisor is different from the Tutor or when there are several supervisors, each will write a different report. The report will mainly consider the training activities performed by the student and the development of the Research Plan, or its draft if not yet approved.
- This report, together with an updated copy of the student's Record of Activities Document, is sent to the Coordinator of the Academic Committee and evaluated by the Academic Committee
- Once the assessment has been completed, the Academic Committee will fill in the corresponding annual assessment and monitoring reports and forward them, together with the report(s) from the Tutor / Thesis Supervisor, to the Doctoral School. A positive assessment is required in order to continue in the programme.

In the event of a properly grounded negative assessment, the student must be reassessed in six months' time. To this end, if his or her Research Plan had already been approved, a new Plan will be drawn up.

Should the second consecutive negative assessment be repeated, the student will leave the programme definitively.

Among other monitoring tasks, tutors will:

- Oversee student's dealings with the Academic Committee of the programme.
- Sign the written undertaking setting out their supervisory functions with respect to their students.
- Submit to regular review their students' Record of Activities Document.
- Report on periodically and endorse their students' Research Plan.
- Help their students in the course of their training, providing them with the information, guidance and resources needed for their studies.
- Comply with the School's Learning and good practice agreement.

2.4.2 Rights and duties of doctoral students

In addition to all the rights contemplated in Spanish regulations, doctoral students have the following rights:

1. To be evaluated according to public, objective, transparent and pre-established criteria, of their training activities, with an evaluation that takes into account the global creativity of the works and research results in the form of publications, patents and others, as well as the context of its formative evolution.
2. Recognition of the authorship of the works produced during their training and the protection of their intellectual property, particularly the results of the doctoral thesis and previous research, in the terms established in the legislation current on the subject.
3. To have a tutor to guide their training process and a director, and if appropriate co-director, with accredited research experience, to supervise the completion of the doctoral thesis.

The doctoral students also have different duties that are next summarized:

1. Study and active participation in academic activities that help to complete their training, as well as maintain a structured and regular relationship with their tutors and thesis directors and have updated the document of activities according to current regulations.
2. Observe the recognized ethical practices and the fundamental ethical principles corresponding to their disciplines, as well as the ethical standards included in the

various national, sectoral or institutional deontological codes. The student must sign an agreement /commitment to comply with the code of good practices adopted by UAH Doctoral School.

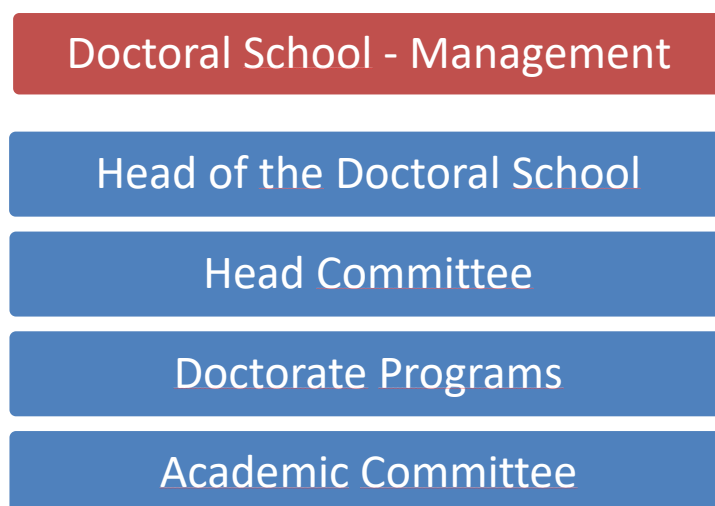
3. Respect the principle of intellectual property or joint ownership of data when the research is carried out in collaboration with supervisors and / or other researchers.
4. Know and comply with internal regulations on safety and health, especially those that refer to the use of laboratories, field work and other research environments.

Chapter 3: Internal quality assurance mechanisms

3.1 Case study of IQA mechanisms at Alcala University

The IQA of cycle 3 studies at Alcala University (UAH) is done by the Doctoral School and different commissions inside it. The UAH Doctoral School was created on 29 October 2012 with a view to develop and deliver doctoral degrees in the five branches of knowledge: Arts and Humanities, Sciences, Legal and Social Sciences, Health Sciences, and Engineering and Architecture.

Doctoral programs cater for the advanced training of students in research techniques and culminate in the preparation and examination of an original piece of research work known as the Doctoral Thesis. If completed successfully, the degree of Doctor is awarded, which is the highest academic university degree. The following figure shows the structure and organization of the cycle 3 management unit at UAH:



3.2 Doctoral School

The Doctoral School is organized, and its doctoral programs regulated in accordance with the Royal Decree 99/2011, and the Internal Regulations of the Doctoral School.

The following are the objectives of the Doctoral School at UAH:

1. Design a doctoral training model aligned with the research and training strategy of UAH, creating the appropriate framework so that Doctoral students carry out quality research.
2. Achieve a solid transversal education and the acquisition of competences by the doctorates, in order to facilitate their labor insertion.

3. Promote the national and international mobility of doctoral students, as well as that of the directors and tutors involved in their training.
4. Involve the administration, companies and other entities outside the University in the activities of the School, with the aim of better guidance of the doctorate to social needs.
5. Track the professional trajectory of the graduated doctors.

The Head of the Doctoral School at UAH have the following responsibilities:

1. Direct and coordinate the activity of Doctoral School and ensure the continuity and fulfillment of its objectives.
2. Represent the Doctoral School in front of the governing bodies of the UAH and in as many instances as necessary.
3. Execute and enforce the agreements of the Management Committee of Doctoral School.
4. Manage the budget of Doctoral School.
5. Prepare the annual reports, strategic plans, budget guidelines and the closing of the preceding fiscal year and send them to the Management Committee for approval.
6. Direct and supervise the compliance with the code of good practices and the obligations corresponding to the task of the same, as well as adopt the necessary measures to solve the problems that may occur.

The Head Committee of the Doctoral School at UAH is composed by the Head of Doctoral School, the coordinators of doctoral programs, different external actors from external entities with teaching agreements with the UAH at doctorate level, an administration person and 5 doctoral students. This Head Committee has the following responsibilities:

1. Define and organize general-training activities for doctoral students and regulate other activities of interest for their training.
2. Supervise the training and research activities organized by the Academic Commissions of the Doctoral Programs.
3. Ensure the monitoring of the teachings by guaranteeing the quality of the same.
4. Analyze the proposals for Doctoral Programs, studying in each case the academic and economic viability, strategic opportunity, compliance with current regulations and academic quality of the Program.
5. Propose to the Commission of Official Postgraduate Studies, for approval and subsequent transfer to the Governing Council, the Doctoral Programs for

verification and authorization by the competent bodies.

6. Approve the annual report of the Director, which must include a report of the activities of the Doctoral School.
7. Guarantee the monitoring of the professional insertion of the doctors who have been trained in the Doctoral School.
8. Prepare and approve the proposal for Internal Regime Regulations and, where appropriate, the modifications thereof.
9. Approve the Guide of good practices to be signed by the members of the school.
10. Resolve the conflicts that arise between the different organs of the School of Doctorate, in accordance with the current regulations of the UAH.
11. Resolve the incidents that occur in the application of this regulation, promoting if necessary its modification or proposing the creation of other development standards.

There is a permanent committee comprised of members from the Head Committee of the Doctoral School to resolve particular easy tasks that appeared in the daily work. These decisions must be accepted by the Head Committee in the next meeting.

Each Doctoral Programme has an Academic Committee composed of the Programme Coordinator and at least one representative from each of its lines of research. As the body responsible for the Doctoral Programme's training and research activities, the functions of the Academic Committee are:

1. To approve the Doctoral Programme's research plan and to send it to the Official Postgraduate Service for registration.
2. To assign tutors to the students of the Doctoral Programme and, should there be reasonable grounds for doing so, to manage any changes of tutor at any stage of the Doctoral Programme.
3. To assign thesis supervisors to the students of the relevant doctoral programme in a period no longer than six months after enrollment and, should there be reasonable grounds for doing so, to manage any changes of supervisor at any stage of the programme.
4. To authorize the co-supervision of theses when there are good academic reasons for doing so, such as the interdisciplinary nature of the subject or doctoral programs run in collaboration with other national or international institutions.
5. To subject to annual assessment and modify as necessary the research plan and the memorandum of the activities undertaken by the students of the Doctoral

Programme, as well as the reports of their tutors and thesis supervisors.

6. To make a grounded decision regarding the continuation or otherwise of the Doctoral Programme of the students on that programme.
7. To determine the exceptional circumstances which might affect the non-publication of certain contents of theses, as laid down in article 14, section 6 of Royal Decree 99/2011.
8. To authorize stays and activities outside Spain as part of the doctoral student's training programme with a view to obtaining the International Doctor Mention.
9. To issue reports on doctoral students' applications to join or leave doctoral programs, for approval by the Managing Committee.
10. To authorize the examination of the thesis of each of the programme's doctoral students and to propose the examining panel for said thesis.

3.3 Doctoral School Quality Committee

The Quality Committee is the body responsible for planning and monitoring the School's Quality Assurance System. It runs in parallel to the management and activities of doctorate programs. The University of Alcalá's strong commitment to quality in its doctoral programs, allowing the specialization of students in their academic, professional or research careers, have made doctoral degrees take a central position within the academic offer of the University. In this sense, the UAH Doctoral School sets the following general objectives related to quality:

- To ensure that the quality policy of the UAH Doctoral School is understood and accepted by all staff and is available to everyone.
- To extend the culture of quality and continuous improvement in the administrative and academic performance of doctoral programs.
- To improve students' satisfaction through direct and individual attention, which facilitates their progress, improves their academic performance and places them in a position of competitive advantage when trying to get into the workplace.
- To achieve a permanent commitment to continuous improvement as a standard norm of conduct and to propose, and carry out, the corrective and preventive actions that may be necessary.
- To ensure the Quality Assurance remains effective and is periodically monitored and reviewed.

3.4 Doctoral Studies - Satisfaction Questionnaires

The Quality Committee of the Doctoral School will conduct satisfaction questionnaires relating to the transversal training activities in order to assess thereby how they were carried out and, when necessary, to make pertinent proposals for improvement in its annual monitoring report. To this end, the following indicators will be taken into account:

- Number of transversal training activities offered.
- Number of places offered in each activity.
- Number of students participating in each one.
- Report assessing student surveys.
- Number of students participating in work placements.
- Number of signed cooperation agreements.

3.5 Doctoral Programme's Quality Commission

Each doctoral programme's quality commission will be in possession of training activity satisfaction surveys in order to assess thereby how they were carried out and, when necessary, to make pertinent proposals for improvement in its annual Quality memorandum, which will be written as part of the process of monitoring the programme. Each programme's quality commission must analyze annually the number of teachers and students who have travelled to another university, whether at home or abroad, and those who have arrived as visiting lecturers. Similarly, accountability is done for number of students proceeding from other universities and those who decide to follow their studies in another university.

Each programme's quality commission will be in possession of the following sources of evidence:

- The number of signed co-tutelage agreements.
- The number of students writing their thesis under co-tutelage.
- The number of theses examined with the international mention, which entails a stay in another research institution.
- The number of students carrying out placements in institutions requiring mobility.
- Grants and subventions applied for and awarded.

- Degree of student's satisfaction with the mobility scheme.
- Where appropriate, the number of universities participating in joint doctoral programs and the number of students enrolled in those programs.

3.6 Keeping track of ex alumni

The Placements and Orientation service at UAH performs periodical studies of UAH graduates' record of securing employment. In order to keep track of departing doctors, the service maintains a record containing data from a questionnaire to be carried out using the computer application as set out in the doctoral programmes' verification memoranda.

Each year, the Doctoral School informs all its ex alumni of the benefits of fulfilling the questionnaire. The questionnaire contains three types of data:

1. Academic data:
 - a. Undergraduate and master' s degrees completed
 - b. Doctoral studies: program, dates, duration, grade, mobility, prizes, etc.
2. Professional data:
 - a. Corporate or professional sector
 - b. Periods and length of occupation
 - c. Company or institution: name, number of employees, location, etc.
 - d. Professional category and position
3. Other data.
 - a. Does your company carry out I+D projects?
 - b. Is a PhD required for your position?
 - c. Did your PhD help you secure your job?
 - d. Do you continue to do research, or do you expect to do so in the near future?
 - e. Is your work related to your doctoral thesis?
 - f. Are you in touch with your thesis supervisor/s?
 - g. Are you in touch with the department or institute which ran your doctoral programme?
 - h. How would you rate your doctoral programme?

When an ex alumnus opens the application, the questionnaire will appear on screen with the latest data already filled in so that he or she will only have to enter the data which

have changed with respect to the last questionnaire.

Once the data have been collected from the questionnaires, the results are assessed. To this end the computer application generates an assessment report of all questionnaire results. This report will be available to the doctoral programme's quality commission in order for it to analyze the results and, as appropriate, determine improvements.

The Quality Commission's annual memorandum will also take into account the following data related to the results of the last 5 years:

- Grades achieved by doctoral theses (giving the percentage of theses awarded the distinction Cum Laude).
- European doctorates of doctorates with international mentions.
- Prizes (extraordinary doctorate prizes, or others).
- Success rate of full-time students: percentage of total full-time candidates who submit and defend their theses in 3, 4 or 5 years.
- Success rate of part-time students: percentage of total part-time candidates who submit and defend their theses in 5, 6, 7 or 8 years.

Handling incidents, complaints and suggestions

The University's General Secretariat makes available various channels to attend to any member of the university community or external user of its services who may wish to register an incident, complaint or suggestion about the activities of the various centers or administrative services. By means of its Virtual Campus and web-page, the UAH informs stakeholders of their right to register incidents, complaints or suggestions and how to do so.

There is a Complaints and Suggestions Box, the aim of which is to keep a record of complaints, ideas or suggestions about the working of the doctoral school. Interested parties may make a complaint or suggestion in two ways:

1. In person: by filling out, printing and handing in at any of the University of Alcalá's registries the form available from the UAH website.
2. Electronically: by sending the completed form to quejas.sugerencias@uah.es. An email address must be given.

When the UAH Doctoral School receives a complaint, the grounds of the grievance or incident are examined, and appropriate measures are proposed with a view to solving the anomaly. At the same time, the feasibility of suggestions made is studied and their possible contribution to improving the operation or quality of the service.

Moreover, the doctoral programme coordinator or its teaching staff may receive complaints directly from the students. If so, they must inform the programme's quality commission and, where necessary, the services or personnel affected by the complaint or suggestion.

Interested parties will be notified of all action taken in the space of 20 days and advised that, should they remain dissatisfied with the measures adopted, they should appeal to superior university authorities, such as the University Ombudsman.

Each complaint or suggestion will be kept on file. If the complaint implies any abnormal functioning of the services, relevant action may be taken on a case by case basis. Under no circumstances will the complaints made be treated as administrative appeals.

On the basis of the complaints received, the University's General Secretariat produces a report about the study of the grounds and the actions taken.

Once a year the programme's quality commission examines the complaints and suggestions received in the course of the academic year; analyses the most recurrent grounds for complaint, the solution rate for complaints and the suitability or viability of suggestions. The following indicators are taken into account:

- Number of incidents per academic year.
- Number of complaints received per academic year.
- Number of suggestions received per academic year.
- Incident solution rate.
- Complaints solution rate.

Each programme's quality commission book the following reports:

- A document approving the internal investigation of incidents, complaints and suggestions.
- Incident or complaints files.
- Annual reports about incidents, complaints and suggestions received in the doctoral programme.

3.7 Stakeholder satisfaction

Stakeholder satisfaction is assessed by means of questionnaires targeting students, teaching staff, doctors of the School and administration and service staff.

Data from the satisfaction questionnaire for students on doctoral programs will be sent to the Quality Technical Unit, which will take charge of processing them and sending

them to each doctoral programme's Quality Commission.

For teaching staff, a general questionnaire has been designed which must be completed at the end of each academic year. The data will be processed by the Quality Technical Unit and analyzed by the relevant doctoral programme's quality commission.

The satisfaction survey of administration staff related to doctoral studies will be carried out every two years. The Quality Technical Unit will process the data it generates and send it to those responsible for each doctoral degree.

The data that emerges from all these questionnaires will be analyzed annually by each doctoral programme's quality commission and presented in its Quality Memorandum.

3.8 Teaching and research staff training

The UAH DS plans, manages, monitors and assesses specific training activities for teaching staff which contribute to their professional development and encourage innovation and streamlining of teaching practice. This is a key activity when it comes to sharing, diffusing and conceiving innovative experiences related to the doctoral programs.

The training activities for teaching staff participating in doctoral programs may be characterized as opportunities for reflection whose purpose is to deepen awareness and knowledge of particular issues related to research supervision. The activities are open access and free and coordinated by reputed professionals belonging to the UAH or to other institutions.

As a support structure for teaching staff, the UAH's Virtual Classroom is responsible for training in the use of e-learning platforms for managing learning and teaching. The Virtual Classroom holds beginners' and advanced level courses in the use of new methodologies and technological tools of application to teaching. Doctoral programs may make use of the Virtual Learning Unit and the virtual teaching platform, Blackboard, for any activity related to them.

Each programme's quality commission will set out in its Quality memorandum the following indicators relating to teaching staff training activities:

- Number of training activities run.
- Number of participants.
- Number of user registrations on the virtual platform, broken down into teaching staff and students.

3.9 Resources

Each doctoral programme makes available different material resources and support for its students: laboratories and workshops, libraries, access to databases, connectivity, and so forth, details of which are set out in the programme's verification memorandum. In its Quality memorandum, each doctoral programme's quality commission will analyze whether the available material resources and other facilities are sufficient to guarantee the students' research. The following indicators will be taken into account:

- Available material resources and other facilities for students.
- External resources and travel grants providing financial aid for attending conferences and for stays abroad.
- Funding of seminars, day conferences and other national and international training initiatives.
- Percentage of students who obtains post-doctoral grants or contracts.

3.10 Analysis, improvement and accountability

Each doctoral programme's quality commission must write an annual report stating the programme's results. This report, the Quality memorandum, will be sent to the UAH Doctoral School Quality Committee for approval. The memorandum will assess the results of the doctoral programme, achievement of the prescribed quality goals and the efficacy of improvement actions undertaken and make recommendations for whatever new improvements may be needed. Attached to this Quality memorandum will be an annual plan of improvements.

The memorandum will be made available by whichever means are deemed appropriate to the stakeholders nominated by the quality commission. Once approved by the UAH Doctoral School, it will be sent with the rest of the programmes' memoranda to the UAH Quality Committee, which will inspect it and write a general university quality memorandum. This in turn will be brought before Governing Body by the Vice-rector responsible for matters of quality for its approval and then published appropriately in line with the UAH's Communication Plan.

Chapter 4: External quality assurance (EQA) mechanisms and national policies

4.1 National strategy in terms of Doctorate level and QA of Doctorate level: state of the art

The Spanish Royal Decree 99/2011 regulates the official teaching of doctorate, establishes a new normative framework that implements a new structure for the doctoral programs, adopting the guidelines of the European Higher Education Area (EHEA) and recommendations from various European and international forums. All these relate to the structure and organization of the doctorate, the competencies to be acquired, the conditions of access and the development of the research career in its initial stage, the fundamental role of the supervision and tutorship of the research training, the insertion of this training in a research environment that stimulates communication and creativity, the internationalization and mobility essential in this type of studies, and the evaluation and accreditation of the quality as reference for its recognition and international appreciation.

One of the key aspects of the new structure, defined in Royal Decree 99/2011, is related to the definition of the research and doctoral training strategy at the university. The university, according to what it establishes in its regulations, must define its strategy in research and doctoral training, which has to be articulated through doctoral programs carried out in doctoral schools or in its other relevant research units, as established in its statutes, the respective collaboration agreements and the aforementioned royal decree. Within the framework of this strategy, each doctoral program should be designed by an academic commission.

Doctoral programs must be verified by the Board Council of Universities (BCU) and authorized in its implementation by competent authorities (education councils from each regional government), in accordance with the provisions of article 35.2 of Organic Law 6/2001, as amended by law 4/2007 of universities. The titles to be obtained must be registered in a unified register⁹ of universities, centers and titles, in accordance with Royal Decree 1509/2008, of 12 September.

In the verification process, the BCU sends the program proposals from the universities to

⁹ <https://www.educacion.gob.es/ruct/home>

quality agencies; either national or regional, in order to develop the relevant evaluation report, which is mandatory and decisive. The goal of the processes designed for the evaluation of the proposals is to generate the information required by the administration as well as for the authorization to start the doctoral program studies.

The national regulation envisages the creation of doctoral schools and sets up academic commissions for the doctoral programs, as well as the figure of doctoral program coordinator. Enter as novelty the document of activities of the doctoral student anticipating a system of supervision and monitoring of the PhD thesis and establishes for the first time a maximum period of duration of the studies of doctorate with the possibility of differentiating the student dedication to part time or full time. On the other hand, the new ordination establishes a regulation of doctoral studies which leads to a clearer distinction between the second cycle of studies (master's degree) and the third cycle (doctorate), determining also the specific criteria for the verification and evaluation of the doctoral programs.

Among the main novelties is also the anticipation that the panel boards responsible for evaluating doctoral theses should be formed mostly by doctors outside the university and other collaborating institutions. There are also other interesting aspects related to the protection of confidential data and patents of the research work and establishes the possibility of including in the PhD thesis title the mention of "International Doctor".

The royal decree, in turn establishes the organization of doctoral training and competencies to be acquired by the PhD student and the requirements for access to admission criteria. The doctoral programs should include some research training that will not require to be organized and described in terms of ECTS credits and should include both transversal training and specific to the scope of each program, although in any case the essential activity of the doctoral student is research.

The organization of such training and the procedures for its control should be reported for the verification of the doctoral programmes and it is a fundamental part for the renewal of accreditation of such programs.

Also, obtaining a Doctor's degree should provide high professional training in diverse areas, especially in those that require creativity and innovation.

Verification, monitoring and renewal of program accreditation of doctorate

Doctoral programs leading to the obtaining of the official doctorate degree must be verified by the BCU and approved by the corresponding regional government, must undergo an evaluation procedure every six years for the purpose of renewing the

accreditation. In order to guarantee the quality of the doctorate and the correct development of the doctoral formation, the university must justify the existence of excellent research teams with relevant experience in the corresponding field.

The verification and accreditation of doctoral programs takes into account the percentage of researchers with accredited experience, the competitive projects in which they participate, the recent publications and the funding available to doctoral students. Also, the degree of internationalization of doctorates will be valued, with special attention to the existence of collaboration networks, the participation of professors and international students, the mobility of professors and students, and the thesis results such as joint supervision, European and international mentions, joint publications with international researchers, relevant seminars, or any other criteria determined at this respect.

Promotion of doctoral training

The Ministry of Education establishes an annual call to grant a doctoral program with a mention “Excellence Program” to those doctoral programs to highlight their results and high level of internationalization. Additionally, the Ministry of Education establishes a call to give a mention of excellence to the doctoral schools that stand out for their prestige and special international projection.

4.2 External quality assurance policy

External quality assurance in higher education is undertaken by the national agency (ANECA) and a number of agencies within some of the autonomous regions. The competences of the quality assurance agencies vary depending on the procedures being undertaken and whether or not the agency is a member of the European Association for Quality Assurance in Higher Education (ENQA¹⁰) and the European Quality Assurance Register (EQAR¹¹).

ANECA has established several instruments for external and independent evaluation of doctoral proposals: verification, monitoring, accreditation. All these instruments have the following common objectives:

- To ensure the quality in the design of the proposals of official doctoral programs through an improvement-oriented process.

¹⁰ ENQA: <http://www.enqa.eu>

¹¹ EQAR: <https://www.eqar.eu/>

- To ensure the linkage of the verification process with monitoring, modification and accreditation in accordance with the framework for the verification, monitoring, modification and accreditation of the official studies. In this sense, doctoral programs will have an annual monitoring process identical to that currently developed by the degree and master's degrees. At the same time, the necessary actions will be promoted to incorporate and exploit the main indicators linked to the development of doctoral programmes.
- To promote the elaboration of proposals for new programs that are appropriate in content and form, both for the evaluation and for the generation of public information that is associated with the official qualifications.
- Identify proposals with *ex-ante* evaluation, in order to assess more strongly the bases that justify their formulation and the academic and research resources that will make them viable and sustainable over time.
- To ensure that both the people who prepare the proposals for official doctoral programs and the people who evaluate them share exactly the same benchmarks.
- Establish equivalent and linked evaluation procedures for the undergraduate, master and doctoral studies.

4.3 The Verification of doctoral programs

4.3.1 The evaluation committees of the quality agencies

One of the elements that contributes to guaranteeing the validity, reliability and usefulness of external evaluation processes is the performance of the external experts (peer review). The quality and independency of the evaluation process lay down on the experts, which are constituted in commissions in which they provide the scientific-technical and disciplinary orientation; both as professionals and users.

4.3.2 Specific Evaluation Commissions (SEC)

The quality agency (national or regional) usually sets up different Specific Evaluation Commissions (SEC) for different fields of knowledge and one in particular. They are of permanent character. The SECs are responsible for the evaluation of programs and

institutions, and therefore, the process of verification, monitoring, modification and accreditation. The SECs main function is to evaluate the sustainability and adequacy of proposals for new studies.

The SEC composition varies in number, which depends on the number of official degrees and university centers they evaluate. SEC can create subcommittees by scope. In particular, the SEC of official doctoral degrees has the following composition:

- the president, usually a Professor with recognized academic merits.
- at least two academic people for each of the knowledge fields.
- a PhD student.
- a secretary, usually a personal from the technical staff of the quality agency.

The SEC can be assisted by other experts of recognized prestige who will advise them on specific aspects of the evaluation of qualifications that are under their responsibility. The experts send independent technical reports that will be taken in consideration by the corresponding SEC.

4.3.3 The evaluation process

The main stages of the accreditation process are the following:

- 1) **Strategic planning of doctoral programs at the university.** Which doctoral programs will be implemented in the next academic year if the evaluation process of the studies is passed.
- 2) **Research and doctoral training strategy.** The university must present its doctoral research and training strategy to the quality assessment agency before submitting any of their study programs for the verification process. This document will be valued by the SEC to know the justification of the implementation of such programs, which will be completed later with the information that each doctoral program includes in the verification report. The Research and Doctoral Training report must contain at least the following aspects:
 - The mission of the university with regard to the research and the objectives to achieve.
 - Consolidated research areas and priority lines.
 - The relationship with the R&D environment (institutions involved in R&D and their funding programs).
 - The instruments in the university to monitoring the activities of the

research groups involved in the doctoral programs.

- The areas in which the different doctoral programmes are structured and, for each area, the programmes that form part of it (map of studies). Also, is convenient to include the university master's degrees directly related.
- The management methodology and systems for doctoral training (schools of doctorate, other units involved).
- The human resources and materials currently available or previewed in the future.
- The rules of intellectual property and how to carry out doctorates in collaboration with companies.

It is recommended that the strategy in doctoral research and training be valid for at least 6 years, which is the period in which the doctoral programs must be re-accredited. Then it will be a good time to review the research strategy based on the results obtained and the situation of the R&D context.

Once the strategy has been exposed, the university will be able to present its proposals for new doctoral programs. These proposals will be grouped into the different areas specified in the strategy. That is to say, all the programmes that are part of a specific field will be presented for verification at the same time (for example, all the programs of that university in the field of biomedicine, humanities, anthropology, economy, engineering, chemistry, etc.). Thus, the CEA will be able to assess in a more appropriate way the context and the justification of the programs, their synergies, the human resources and their alignment with the research strategy and of doctoral training of the university.

- 3) **Request for verification.** The universities must present their proposals by means of online application that the Ministry of Education, Culture and Sport (MECD) provides.
- 4) **Review and acceptance of the application.** The BCU will review the documentation provided and accept the request if it meets the requirements established. Otherwise, it will be required to be corrected, for which the universities will have a period of 10 days. If the request data is accepted, the request is transferred to the relevant QAA, that will resolve it within a maximum of 9 months.
- 5) **Evaluation of the proposal.** The proposal shall be allocated to the SEC of doctoral programmes, which will evaluate it in accordance with the standards

and criteria set out before.

- 6) **Preliminary verification report.** The SEC will provide a preliminary verification report, which will forward to the universities through the MECD's computer application to submit allegations, if appropriate.
- 7) **Interaction SEC-Program.** The responsible of program/university may interact with the SEC commission through its secretary, who will have to enable the relevant mechanisms to solve the questions or require some clarification from other members. If necessary, a meeting will be held between the programme managers and the members of the SEC.
- 8) **Allegations.** Within approximately 20 days, the institution may submit the allegations it deems appropriate to the previous report for the SEC to take into consideration. The allegations must resolve those aspects that SEC has indicated in the preliminary report.
- 9) **Review of Allegations.** SEC will evaluate the new proposal made by the institution and analyze whether the possible deficiencies detected have been corrected.
- 10) **Final report.** After evaluating the allegations presented, the SEC will provide, through the MECD's computer platform, the final verification report for the BCU take it into consideration. The outcome of the report shall be expressed in terms of favourable or unfavourable.
- 11) **Verification resolution.** Once received the QAA report, the BCU will resolve the verification or not of the proposal of new program that carries out the university institution.
- 12) **Appeals.** The university may appeal against this decision within a maximum period of one month from its notification. If the resource is admitted to process, the BCU must send it to QAA within a maximum of 3 months.
- 13) **Appeal resolution.** The complaint will be assessed by the Appeals Commission, which shall request at least two academics from the doctorate programme, external to the SEC and without regard to the preliminary evaluation of the proposal. The review of the appeal shall be based solely on the report proposed by the University and on all the documentation contained in the dossier. The additional information provided during the evaluation process will not be considered unless there is any clarification of the information presented initially.

- 14) **Appeal report.** Within one month, the appeals committee must issue the corresponding report, which shall be transferred to BCU.
- 15) **Resolution on the appeal.** Once the appeal report has been received, the BCU will issue a definitive resolution within 2 months, which must be exhausted by the administrative route. The decision will be communicated to the university, the regional government and the national MECD. The lack of resolution expressed in this period will allow to consider the appeal as dismissed.

4.3.4 Standards and evaluation criteria

The following aspects should be assessed to verify a new doctoral programme proposal:

1. Description of the doctoral program.
2. Competences.
3. Access and admission of students.
4. Training activities.
5. Organization of the programme.
6. Human resources.
7. Material resources and support services available to doctoral students.
8. Review, improvement and results of the program.

The structure of the evaluation protocol to request verification of the proposal, responds to the logic (answering questions) that is shown below:

What is the aim of the program and why is it proposed?

First of all, it is required to set the definition of the study with respect to the aspects that administratively identify the proposal and those that justify its interest and need, besides to the training profile intended.

How will it be achieved?

The programme's training objectives must be achieved through the quality assurance of the following processes:

- The access and admission of students, who set up the starting point of the formative process, and the supervision and monitoring actions of the PhD student, together with the formative actions of the proposal, to ensure that students reach the training profile intended.
- The planning of training activities, which designs, organizes and implements

the training, monitoring and evaluation activities aimed at achieving the profile of formation that is intended.

- The human resources and material resources and support needed to reach the training profile.

What results are expected and how will their achievement be guaranteed?

The expected results expressed in quantitative values of the indicators and the quality assurance mechanisms will allow the monitoring, review and improvement of the official doctorate programmes and the procedures, in order to ensure the achievement of the profile established according to the results obtained or their modification if necessary.

4.4 The processes of Monitoring and Accreditation of doctoral programs

The monitoring of doctoral programs has two fundamental objectives. On the one hand, it must be a useful tool for the management of the university enabling the internal evaluation of its development using the analysis of the values of certain indicators (thesis defended, insertion of the doctoral students, satisfaction of the doctoral students and professors, etc.), in order to be able to diagnose the reality and develop proposals for improvement. On the other hand, the monitoring, along with the visit that will be made to the centres of study, **will be the main evidence for the accreditation of doctoral programs.**

The objective is to make the process of consideration about the development of doctoral programs the basis for earning the accreditation. In other words, the accreditation is set as the culmination of the monitoring process. The idea is to understand both processes as a single one: a process of continuous improvement culminating with the external validation of the obtained results.

To achieve this objective, it is essential that the evidences consulted during the monitoring process coincide with those necessary to accredit the programs and, among them, the key is the self-report.

The monitoring reports of doctoral programs (ISPD) should reflect on the six same dimensions that are taken into account in the accreditation process: training program, public information, the adequacy of professors to the program, the effectiveness of learning support systems, the internal quality assurance system, and the review, improvement and quality of the program results. This reflection in the form of a

monitoring report should be produced *at least every three years*. However, programs and institutions should tend to implement mechanisms to obtain the main development and academic results indicators from each course.

This structure of the monitoring report must be identical to the self-report for accreditation in order to make the integration of both processes effective. In this way, the latest monitoring report will become the self-report and should provide a reflection of the synthesis of the doctoral program's development since the verification or last accreditation.

Universities should submit to the **Quality Assessment Agency** the monitoring reports prepared until the first accreditation of the programs. Periodically, the Agency will select some of the received ISPD's to be evaluated, prioritizing the reports of the doctoral programs that the universities themselves identify that require special attention, those that contain proposals of significant modifications and those that are considered appropriate according to the analysis of their development indicators.

Each university shall, preferably each year, prepare a university monitoring report (ISU) to be used to assess the monitoring process in the institution, the detected problems in the development of the programs and their academic results, the actions of improvement proposed or implemented and the detection of good practices that can be disseminated in the whole of the institution. This report has no style requisites and covers programs that have made a monitoring report in that academic year. It is compulsory to send them to the Quality Agency until all of the institution's doctoral programs have been accredited for the first time. In universities where doctoral programs are under the responsibility of a doctoral school, the ISU becomes the school's report.

According to the VSMA framework, the modifications of the doctoral programs are linked to the previous analysis carried out in the monitoring process, so that significant changes may be requested only if an ISPD has been prepared and is therefore linked to the reflection stemmed from said report. (The intervening evaluation committees are those described in section 4.3.1).

4.4.1 Evaluation of the Monitoring Process

The phases of the monitoring process are:

- **Elaboration of the ISPD.** The program ponders on the development of the study and elaborates the corresponding report according to what establishes its SGIQ

and the standards and criteria of this guide. This report must follow a fixed structure done supplied by the Agencies.

- **Selection of the ISPD.** The Quality Agency will inform the universities about the ISC to be selected for evaluation annually. It will be possible to prioritize the reports of those doctoral programs that the universities identify as requiring special attention, those that contain proposals of significant modification and those considered appropriate according to the analysis their development indicators.
- **Evaluation of the ISPD.** One of the fundamental aspects of this evaluation will be to assess, on the one hand, the development of the doctorate program and, on the other, the adequacy and relevance of the monitoring process and its report.
- **Evaluation report.** Quality Assessment Agency will send the ISPD evaluation reports approved by the CEA to the universities.
- **Allegations.** Within a period of approximately one month, the institution may submit any allegations it deems appropriate to the prior reports for the Appeals Committee to take into consideration and resolve the appeal.

4.4.2 Elaboration of monitoring reports (ISPD)

The processes associated with the teaching quality assurance are described in the Systems of Internal Quality Assurance (SGIC) of the institutions, which must have as main objective the continuous improvement of the doctoral programs and the scope of the objective of accreditation. Therefore, the SGIC is the main source of information necessary for the doctoral programs monitoring and as the key instrument for its accreditation.

To guarantee the quality of the process, the ISPD must be, among other things:

- Complete, rigorous and concrete. It must analyze and ponder the elements considered key to the situation to be analyzed and improved.
- Based on evidence generated throughout the development of the program.
- Systematic and detailed regarding the analysis of the causes and, therefore, of what is necessary to undertake the improvements.
- Balanced, both in positive aspects and in aspects that need to be improved.
- Shared and validated by the university community, to ensure its representativeness in the analysis, in accordance with the procedures established

in the SGIC.

ISPD elaboration stages

ISPD elaboration responsibility

The responsibility for the elaboration and approval of the monitoring report shall be established by the SGIC. The established body should take into account the opinion of the different interest groups of the doctoral program, such as academics, teaching and administrative staff, doctoral students and other collectives deemed appropriate.

The last ISPD prior to the accreditation process will correspond to the self-report for the accreditation visit and, therefore, must also undergo a public presentation open to the entire educational community linked to the program.

Information collection systematics

The elaboration of the ISPD will take into account all those evidences and all those indicators that derive from the procedures contemplated in the SGIC. Data and analyses from both the doctoral program and the pertinent centre must be kept in mind. The information may be of a quantitative or qualitative nature and include from management data and indicators on the *inputs* or entries to processes and results of the center or doctoral school activity.

Once all the information is available, the responsible entity will have to analyze and reflect on the total volume of data, in order to meet the established standards and define an improvement plan.

The last ISPD of the accreditation process must cover the period between verification and the time of the external visit for accreditation.

Contents of the ISPD

The institution should reflect on whether the quality standards of accreditation are being achieved or, on the contrary, it is necessary to implement actions in order to succeed. It is displayed as a document articulated in the same six sections that should be used in the accreditation process.

- 1. Presentation of the programme.** In this section the institution must provide an overview of the program to set the background for the reader of the report. Thus, data can be provided on the most significant achievements of the program's trajectory (number of doctoral students and doctorates, teaching staff and its typology, etc.).
- 2. ISPD elaboration process.** The institution should briefly describe the process

followed in the elaboration of the ISPD, stressing whether there have been problems in the process (data collection, etc.) or discrepancies with respect to what was expected in the SGIC. It must clearly state the responsible body, the elaboration period, the body and the date of its approval.

It is essential that the ISPD becomes the main tool for the modification or accreditation of doctoral programs, as such the period in which it is produced is very relevant and must be always previous and linked to the launching of these processes. Any deviation from the expected timing must be clearly indicated.

3. Assessment of the scope of the standards in this section, the institution must develop an evidence-based argument about the extent of the standards.

Depending on the standard in question, the doctoral program and/or the institution must carry out an assessment by referring directly to the most significant data that show the standards observance. In each case the degree of fulfillment of the intended objectives and the scope of the established specifications (for example, has the intended number of defended thesis been reached, or is the number of lines of research reasonable, etc.). The standards to be considered are as follows:

1. Formative program quality.
2. Public information relevance.
3. Suitable teaching staff.
4. Learning support systems effectiveness.
5. Internal quality guarantee system efficiency.
6. Quality of results.

It is advised to include an evaluation of the scope of each these standards in the ISPD. In this sense, the institution can use the following scale values:

- ***In progress towards excellence.*** The standard is fully achieved and there are also examples of good practices that exceed the minimum required.
- ***Has been reached.*** The standard is fully achieved in the doctoral program.
- ***Has been reached with exceptions.*** A minimum level of the standard has been reached, but there are aspects that must be improved. These aspects can be improved in a reasonable period of time.
- ***It's not enough.*** The doctoral program does not get the minimum

required level to reach the corresponding standard. The improvements that must be introduced are of such magnitude that it is not possible to reach the standard in a reasonable time span.

4. Evaluation and the improvement plan

The doctoral program should analyze and reflect on its functioning and development. This reflection should be based on both public information and data, the indicators and qualitative information derived from its SGIC. If the institution considers it opportune, a global assessment can be made to summarize the development of the program.

Taking into account the evaluative analysis, improvement actions must be planned (detailing and defining a time schedule and responsibilities). The effectiveness of these actions may be greater if linked to the objectives and results of the program indicators.

It must also give specific answers to the actions that had been proposed and planned in the ISPD of the previous period, confirming those that have been implemented and explaining the failure of those that were not carried out and set to the following period.

5. Evidence

Evidences must be taken into account during the elaboration of the ISPD and only the most relevant should be enclosed in the elaboration of the self-report for the accreditation.

University monitoring reports (ISU)

Taking into account the ISPD, the university will evaluate the development of all its doctoral programs. The incidents that may have occurred during the elaboration and approval of the ISPC should be specified. The ISU will focus on those doctoral programs that require special attention and on those that stand out for their excellent implementation and excellent development. The report will also collect, where appropriate, interdisciplinary improvement actions to promote the improved development and monitoring of all programs. The university will decide the most appropriate model and structure for that report. In the event that the university has a doctorate school, the preparation of the ISU will be the responsibility of this center.

4.4.3 Evaluation standards and criteria

Quality of the training program

The institutions must have processes within their SGIC that allow the design and approval of doctoral programs, in a manner consistent with European standards and guidelines for the internal quality assurance in HEI, especially the ESG 1.2 (approval, control and periodic review of programs and studies), which recommends that "academic institutions should have formal mechanisms for approving, evaluating and periodically monitoring their programs and qualifications» (ENQA, 2005).

Those responsible for the doctoral program should analyze whether the design of the program (lines of research, competencies and formative activities profile) is updated according to the requirements of the discipline and responds to the formative level required in the MECES:

The program has mechanisms to ensure that the doctoral candidates' enrollment profile is adequate, and their number is consistent with the characteristics and distribution of the research lines of the program and the number of vacancies offered.

The program has adequate supervisory mechanisms for doctoral students and, where appropriate, training activities.

Indicators that need to be considered to evaluate this standard are as follows:

- Offer and demand.
- Students enrolled (each new income).
- Total number of students enrolled.
- Percentage of foreign students enrolled.
- Percentage of students from other universities.
- Percentage of students enrolled part-time.
- Percentage of students with scholarship.
- Percentage of students according to access requirements.
- Percentage of students according to research line.

4.4.4 Relevance of public information

According to ESG 1.7 (public information), "Institutions must regularly publish updated, impartial and objective information, both quantitatively and qualitatively, about programmes and qualifications they offer."

This information should be public and easily accessible to the whole society and should include information about operational development of the doctoral program and the results derived therefrom.

On the other hand, the ESG 1.1 (policy and procedures for quality assurance) states that "The strategy, policy and procedures must have a formal status and be publicly available." Therefore, the institution should also report on the SGIC and, especially, on the monitoring and accreditation processes of the doctoral program.

The publication of information guarantees transparency and facilitates accountability, in line with European benchmarks on quality in higher education. Specifically, regarding to ESG 1.6 (information systems), "institutions must ensure that they collect, analyse and use relevant information for the effective management of their curricula and other activities".

To ensure the quality of public information, institutions should periodically reflect about the validity, relevance and updating of public information, accessibility, and continuous improvement of quality guarantee processes.

The institution is therefore expected to analyze whether it adequately informs all stakeholders on the characteristics of the doctoral program and on the management processes that guarantee its quality.

The institution publishes truthful, complete and updated information of the doctoral program characteristics, its operational development and the results obtained.

The institution guarantees an easy access to the relevant information of the doctoral program to all stakeholders. This information includes the monitoring results and, if applicable, its accreditation.

The institution publishes the SGIC in which the doctoral program is framed.

Evidences that need to be considered to evaluate this standard are as follows:

- Institution web or Study web (University).
- Documentation of Processes of the SGIC about public information, collection of information and accountability (University).

4.4.5 Efficiency of the internal quality assurance system

This section must respond to ESG Point 1.1, which states that ' institutions must have a policy of procedures associated with guaranteeing the quality and criteria of their programs and qualifications.

They must also explicitly engage in the development of a policy that recognizes the

importance of quality and quality assurance in their work. To achieve this goal, a strategy for continuous quality improvement must be developed and implemented. The strategy, policy and procedures must have a formal status and be publicly available. The role of students and other stakeholders should also be taken into account. This section also replies to the ESG 1.2, which recommends that "academic institutions should have formal mechanisms to approve, evaluate and periodically monitor their programs and studies."

Those responsible for the doctoral program should analyse on whether it has an IQA system formally established and implemented that ensures, in an efficient way, the quality and the continuous improvement of the doctorate program

The implemented SGIC facilitates the design and approval processes of the doctoral program, its monitoring and its accreditation.

The implemented SGIC guarantees the collection of information and relevant results for the efficient management of doctoral programs.

The implemented SGIC is periodically reviewed to analyze its suitability and propose improvement plans to optimize it.

Evidences that need to be considered to evaluate this standard are as follows:

- Documentation of the SGIC (University):
 - Process of design and approval of doctoral programs.
 - Process of monitoring of doctoral programs.
 - Accreditation process for doctoral programs.
 - SGIC review process.
- Plans and monitoring of the improvement actions of the doctoral program (University).
- Tools that allow revealing the degree of satisfaction of stakeholders (University).

4.4.6 Teaching staff quality and suitability

Teaching staff must have the experience and training appropriate to the objectives of the doctoral program, and be sufficient in number and dedication to assume their main functions: tutoring and thesis management, teaching and evaluation of the training activities, and, if applicable, the management of the program, etc.

Ensuring the quality and suitability of teaching staff responds directly to European standards for internal quality assurance in HEI. Specifically, the ESG 1.4 (Teaching staff

quality assurance) recommends that “Institutions should find the adequate system to ensure professors are trained and competent”. This system should be made available to persons conducting the external assessment and must be detailed in the relevant reports (ENQA, 2005).

Those responsible for the doctoral program should analyze on whether the number of teachers is sufficient and appropriate, according to the characteristics of the doctoral program, the scientific field and the number of students.

Teaching staff should have an accredited research activity.

Teaching staff should be sufficient and have the proper dedication to develop their functions.

The doctoral program needs to have the appropriate framework to promote thesis management.

The participation of foreign professors and international doctors in monitoring commissions and thesis committees is adequate in the scientific field of the program.

Those responsible for the doctoral program should analyze on the maintenance of the initial conditions (in verification process), specially on the following aspects:

- The accredited experience of the teaching and research staff.
- The quality of scientific contributions.
- The number of ongoing competitive research projects.
- The international activity of professors.

Evidences that need to be considered to evaluate this standard are as follows:

- Competitive research projects ongoing in which the IP is a professor in the doctoral program (University).
- Professors who participate in ongoing competitive research projects (University).
- Relevant scientific contributions of the professors in the field of the program (University).
- Foreign professors supervising doctoral theses, and which teach training activities (University).
- Results of the promotion actions for advising doctoral theses (university).
- If applicable, a training plan or SGIC documents related to the teaching staff quality assurance, human resources policies, etc. may be considered.

Indicators that need to be considered to evaluate this standard are as follows:

- Number of supervisors of the defended thesis (University).

- Recognized research periods (six-years period) of the thesis supervisors (university).

4.4.7 Effectiveness of learning support systems

In addition to the teaching and research staff, institutions make available to doctoral students different services and resources to motivate, facilitate and enrich their learning. In this context, the ESG 1.5 (learning resources and student support) recommends: "Institutions must ensure that the available resources to support student learning are adequate and appropriate for each program " (ENQA, 2005).

The institution is therefore expected to analyze on whether material resources and services needed for developing the envisaged activities in the doctorate program and for training the doctoral student are sufficient and appropriate to the number of doctoral students and to the characteristics of the program.

This section refers to all the services and resources that contribute to the support of learning. Available material resources should be suitable for the number of doctoral students and the characteristics of the doctoral program. Moreover, services available to doctoral students should adequately support the learning process and facilitate the insertion into the labor market.

The scope of this section includes:

- Material resources, such as facilities (workspaces for doctoral students, laboratories, computer rooms, libraries, etc.), technological infrastructures, equipment and scientific-technical material, etc.
- Services, mainly those of reception and other logistical benefits (housing, advice on legal matters regarding the residence, etc.), academic orientation (scholarships, mobility, projects, etc.) and professional orientation and labour insertion.

Evidences to be considered to evaluate this standard are as follows:

- Documentation of the SGIC on the process of quality assurance of material resources (University).
- Institutional plans to facilitate labour insertion (university).
- Documentation of the SGIC on the process of support and orientation to doctoral students (university).

Indicators that need to be considered to evaluate this standard are as follows:

- Doctoral students' satisfaction with the studies (University).

- Satisfaction of the thesis supervisors with the studies (University).

4.4.8 Quality of results

Evaluation of learning in the elaboration of doctoral thesis is the process that allows to determine the degree of results achievement, as the ESG 1.3 (student evaluation) includes, which recommends: «The students must be evaluated using criteria, standards and procedures that are published, and applied in a coherent manner ' (ENQA, 2005). Both the doctoral theses and the formative activities and the evaluation system must be pertinent, public and appropriate to certify the learning reflected in the training profile. The adequacy of the evaluation system implies a judgment on their relevance (validity) and an assessment of the extent to which these activities discriminate and ensure their quality (reliability).

The results of the labour insertion of the doctors also have to be evaluated in this section, since they are one of the key outcomes of the university formation. This section should take advantage of the richness of information system of universities, since this will allow a contextualized analysis of its main indicators.

Those responsible of doctoral program are expected to analyze on whether doctoral theses, formative activities and evaluation are consistent with the training profile, and whether the quantitative results of the academic and labour insertion indicators are adequate.

- Doctoral theses, training activities and their evaluation are consistent with the intended formative profile.
- Values of the academic indicators are suitable for the characteristics of the doctoral program.
- Values of the labour insertion indicators are suitable for the characteristics of the doctoral program.

Evidences that need to be considered to evaluate this standard are as follows:

- Documentation of the SGIC on the processes associated with the development of the doctorate program and the collection and analysis of the results for the improvement (University).
- Doctoral theses generated within the framework of the doctorate program (University).
- Information about training activities and evaluation systems (University).

Indicators that need to be considered to evaluate this standard are as follows:

- Number of full-time defended theses.
- Number of part-time defended theses.
- Average length of the full-time doctoral program.
- Average length of part-time doctoral program.
- Percentage of students that do not complete the program.
- Percentage of theses with the Laude qualification.
- Percentage of doctors with international mention.
- Number of scientific contributions of doctoral theses.
- Percentage of students that complete research stays.
- Employment rate.
- Rate of suitable employments regarding doctoral studies.

Part II - French Case Study

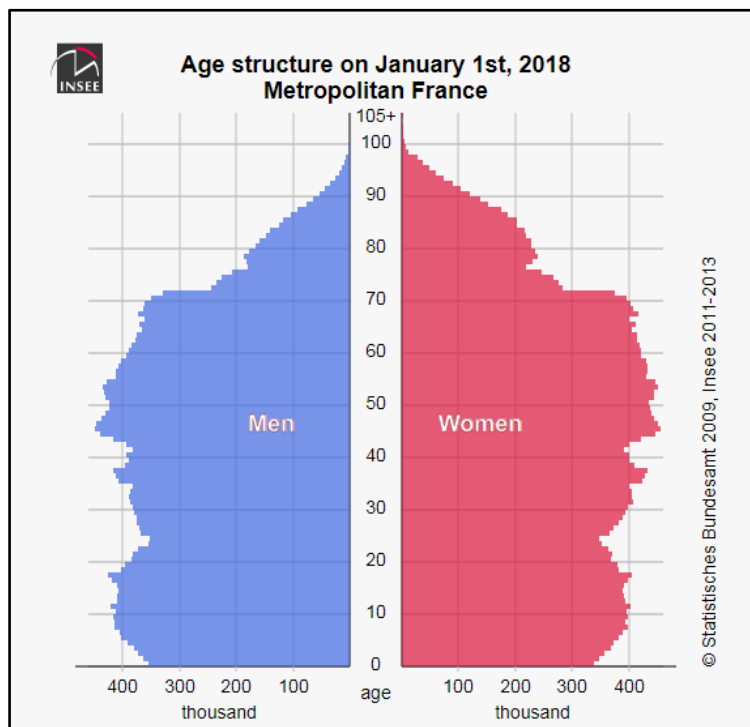
Chapter 1: Overall landscape - National Higher Education (HE), research and QA context (with focus on Doctorate level)

1.1 Brief presentation of the HE and research system

1.1.1 General relevant information the French HE and research system

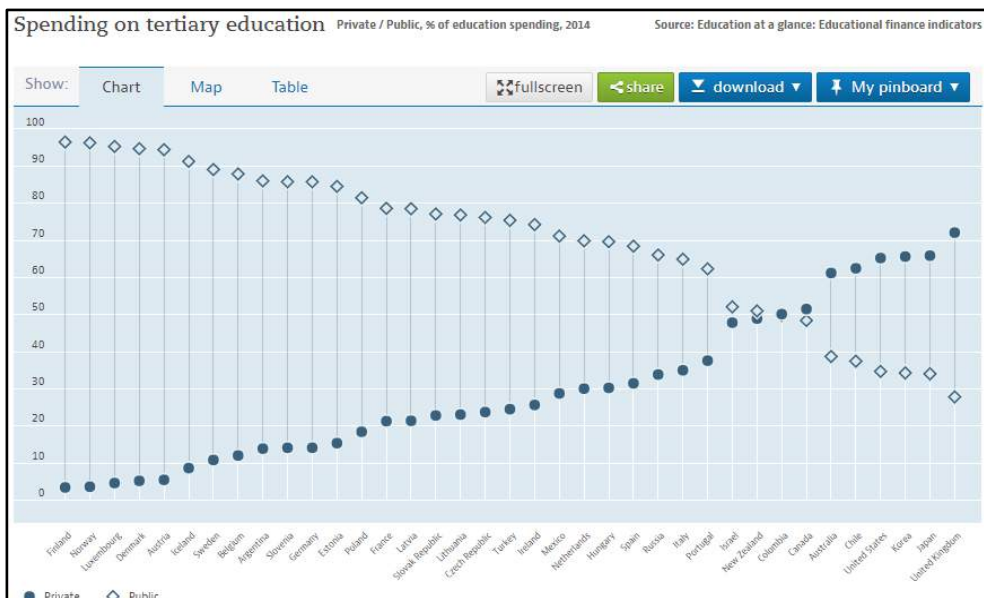
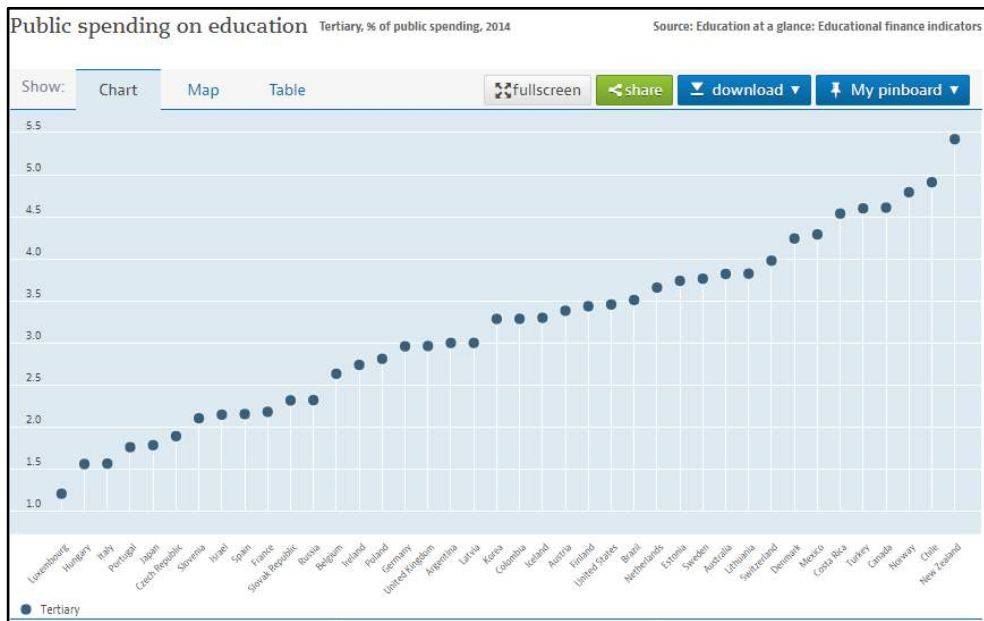
- France is at the heart of Europe, sharing borders with Spain, Italy, Switzerland, Germany, Luxembourg, Belgium and the principalities of Andorra and Monaco. With an area of 551 695 km² (metropolitan part), France has a population of 67 186 638 inhabitants (2018). The gross domestic product (GDP) per capita is 38 000 USD (2016).

age	Mill.	%	% women
65+	13.15	19.6	56.9
20-64	37.63	56	50.9
<20	16.41	24.4	48.9
Total	67.19	100	51.6

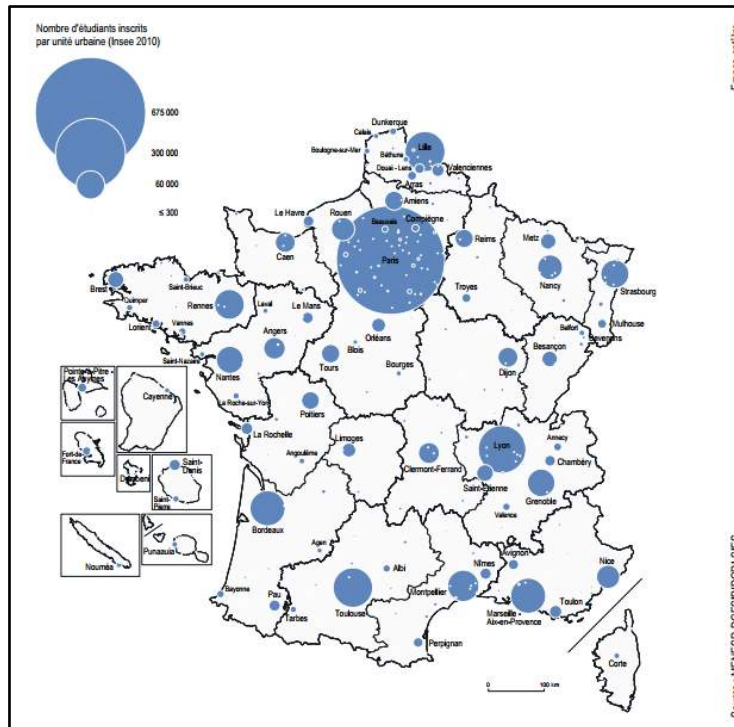


Source: Insee, population estimates (end of 2017)

- France is one of the world's most research intensive nations with €48 billion in R&D investment and it is the 5th largest economy in OECD for R&D spending. The share of GDP devoted to research is 2.23%. The education and higher education system benefits from large national investments. France average spending per student is similar to the other OECD countries.



- In France, there are about 3500 higher education institutions (HEIs), public or private, and among them:
 - 74 universities (2017) and most of them are public,
 - 230 engineering schools (30% of them within the universities),
 - 220 business schools,
 - 120 schools of arts,
 - 20 architecture schools.



Students registered in the Higher education system, Source Ministry of HE, *L'état de l'Enseignement supérieur et de la Recherche en France* (N° 10 - Avril 2017)

- Students registered in the French Higher education system

In 2015, there were 2 551 000 students registered in the higher education system, with 60% of them at the university. This number is increasing since decades and 2 900 000 students are expected in 2025.

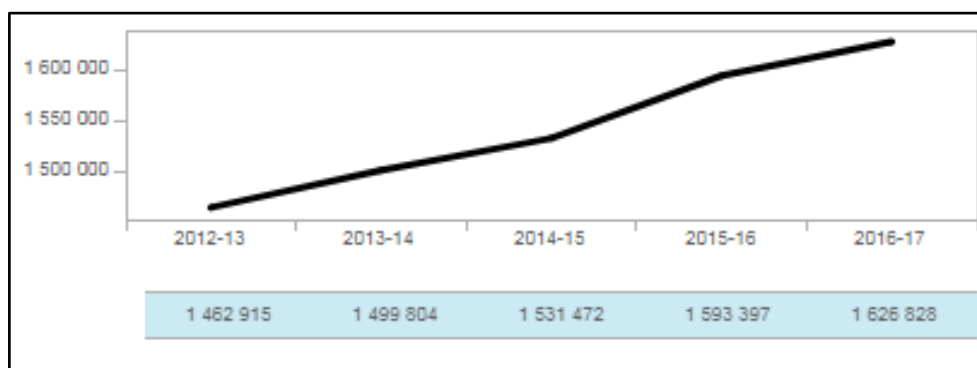
Students registered in the HE system (by 1000, source Ministry of HE)

	1960	1970	1980	1990	2000	2010	2015	2025 (projection)
Université	215	661	858	1 160	1 397	1 437	1 593	1 838
dont IUT		24	54	74	119	117	116	128
STS	8	27	68	199	239	242	256	273
CPGE	21	33	40	64	70	80	86	94
Autres établissements et formations	66	130	215	293	454	560	616	707
Ensemble	310	851	1 181	1 717	2 160	2 319	2 551	2 912
Part de l'université (en %)	69,3	77,7	72,7	67,5	64,7	62	62,5	63,1

Source : MENESR-DGESIP/DGRI-SIES.

- Students registered at the French universities

In 2016, there were 1 626 828 students registered in French universities, and 60% of them were female. (Source Ministry of HE, see graph below)



Cycles	2012-13		2013-14		2014-15		2015-16		2016-17	
1er	879 756	60,1%	901 932	60,1%	921 737	60,2%	966 994	60,7%	994 151	61,1%
2ème	520 658	35,6%	536 165	35,7%	549 074	35,9%	566 734	35,6%	573 093	35,2%
3ème	62 501	4,3%	61 707	4,1%	60 661	4,0%	59 669	3,7%	59 584	3,7%
Total général	1 462 915	100,0%	1 499 804	100,0%	1 531 472	100,0%	1 593 397	100,0%	1 626 828	100,0%

The previous table shows the repartition of students among the LMD scheme.

- References to the national qualifications frameworks

At the end of secondary school, and with a national Diploma called “Baccalaureat”, the French national qualifications framework system for higher education is directly based on the Bologna process. There are 3 steps: Licence - Master and Doctorate. Licence is 3 years after the Baccalaureat (180 ECTS), Master 5 years (120 ECTS) and then Doctorate for 3-4 years.

1.1.2 Relationships between higher education and companies: internships, placements, practicum, etc.

In France, the public sector and businesses still play a relatively limited role in doctoral programmes. This can be explained by the fact that in France, as the post of a scientific expert is not highly valued. The difference in the hiring salary between a graduate from

a top school and a doctoral student from the same school is minimal.

Less than one in seven engineers currently continues their studies to pursue a doctorate. However, this number varies significantly depending on the specialization: 25% of engineers specialized in physics, materials and energy, 22% of chemists, 13% of aerospace specialists and 2% of civil engineering, construction, mining and geology graduates are doctoral students. Many engineers pursue a doctorate degree in order to perform their research without having to choose between academic research and more applied research. Doing research also lets them work in France in their specialism since companies are much less inclined to relocate their research centres outside the country than they are their production plants. Some aspiring doctors, some follow this course of study to shift into public research, while others opt for a career in the private sector, particularly through industrial research training agreements (conventions industrielles de formation par la recherche (CIFRE¹²)).

France's CIFRE initiative allows businesses to receive financial support to recruit young doctoral students whose research projects, under the supervision of a public research unit, will lead to a PhD.

CIFRE doctoral students account for just under 10% of total numbers. CIFREs work with three partners:

- a business (or non-profit organization, local authority acting under a public or social project), which gives a doctoral student a research project for his/her thesis,
- an external research unit which provides scientific supervision for the doctoral student,
- a doctoral student who holds a Master's degree.

The company hires a young Master's graduate for a permanent or 3-year contract, with a minimum gross annual salary of €23,484 (€1,957 per month) and gives him/her a research project for his/her thesis topic. The company in turn receives an annual grant of €14,000 for three years from the National Research and Technology Association (A.N.R.T.). A collaboration agreement is established between the company and the unit, specifying the conditions under which research will be conducted and the intellectual

¹² <http://www.enseignementsup-recherche.gouv.fr/cid22130/les-cifre.html##dispositif>

property clauses for the results obtained by the doctoral student. The doctoral student's research will qualify for a research tax credit under the same criteria that apply for any researcher working for a company. There are no nationality or age requirements for the doctoral student.

Since 1981, 26,450 doctoral students have benefited from the CIFRE initiative and brought together 9,000 companies and 4,000 research teams from a wide range of business sectors and scientific fields. The number of CIFRE application submissions has grown steadily and doubled in a decade, reaching 1,750 in 2011. After a 3-year general decline in the number of applications, the initiative recorded an 8% increase in 2016. In 2016, 1,377 new CIFREs were accepted. The success rate (ratio between the number of CIFREs attributed and the number of applications) is 83%. CIFREs account for 10% of doctoral students who receive funding.

- Some examples of incentives to promote results dissemination and research exploitation policy:

Over the past ten years, French universities or groups of institutions have put in place technology transfer bodies (SATT) and incubators to support start-up creation, often in cooperation with the schools.

Around thirty of these incubators were accredited in March 2014 as “PEPITE¹³” (Pôle Etudiant pour l'Innovation, le Transfert et l'Entrepreneuriat) by the French Ministry of Higher Education, Research and Innovation, in partnership with the Caisse des dépôts. The purpose of these initiatives is to bolster and personalize support for future entrepreneurs. While they mainly target young PhD graduates, they are also for students of all levels, regardless of their projects. The concrete aim is to “raise student awareness” and foster entrepreneurship, to “train” as many students as possible in entrepreneurship during their studies and particularly during their doctorate studies, and “support” students through a personalized approach.

¹³ <http://www.enseignementsup-recherche.gouv.fr/pid30796/pepите.html>

1.2. Brief presentation of the doctorate level

1.2.1 Organization of cycle 3 studies in France

A doctorate is a higher university degree incorporated in the Bologna LMD scheme. The doctorate comes right after the master (Doctorate: 8 years after the high school diploma (3 + 2 + 3)).

It is certified by a nationally recognized degree, issued by a higher education institution and authorized by the Ministry of Higher Education and Research (university, private doctoral school).

The usual length of doctorate studies is 3 years (or more) of academic and/or applied scientific research work. It is validated as a result of a thesis defense.

Doctoral studies involve several individuals and bodies: PhD student; Thesis supervisor; Research unit; Company (where applicable); Thesis supervisory committee; Doctoral school; Defense committee, etc. The aim is to offer doctorate students scientific training in research, with the support of a thesis supervisor and a research unit, in addition to training to prepare for graduate employment.

Useful links:

Order of August 2006 on the Doctorate Degree:

<https://www.legifrance.gouv.fr/affichTexte.do?cidTexte=JORFTEXT000000267752>

<http://www.enseignementsup-recherche.gouv.fr/cid20185/la-formation-doctorale.html>

Order of May 2016 on the Doctorate Degree:

<https://www.legifrance.gouv.fr/affichTexte.do?cidTexte=JORFTEXT000032587086>

All sections in italics are taken from the article by Pierrick Gandolfo, “La réussite doctorale en France: constats et bonnes pratiques”, Article in press in Peter Lang Editions, 2017.

Pierrick Gandolfo is a professor at the University of Rouen Normandy. He is a scientific advisor to Hcéres and coordinator of the process for evaluation of doctoral schools under the evaluation of programmes Department.

“According to the new Order of 25 May 2016 establishing the national framework for education and the procedures for awarding national doctorate degrees (and under terms similar to the Order of 6 August 2006), “the doctorate is a research programme and professional research experience. [...]

It includes personal research performed by the doctoral student, supplemented by additional training approved by the doctoral school. It focuses on scientific, economic, social, technological or cultural research. It is validated by the awarding of a national doctoral degree.” The Order also specifies that “doctoral schools [...] shall organize the training of doctoral students and prepare them for employment once their doctoral degree has been completed”.

“Apart from a few exceptions, doctoral schools are organized into themes, with a range of disciplines covering those of the research units with which they are associated. Around 270 French doctoral schools are evenly distributed between Sciences, Technology and Healthcare (with some 90 in Science and Technologies and 50 in Life Sciences and Environment) and Humanities and Social Sciences (with over 40 in Law, Economics, Management and 80 in Literature, Languages and Humanities). At the start of the 2014 academic year, there were over 75,000 doctoral students enrolled (with around half in Sciences, Technology and Healthcare) and around 14,400 doctorate degrees were awarded (two-thirds of which were in Sciences, Technology and Healthcare).”

More information on Doctoral Schools, see above 2.3

1.2.2 Number of HEIs providing Cycle 3:

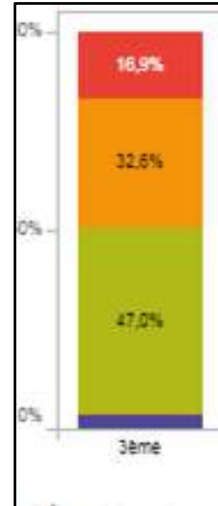
In total, 67 of France’s 74 universities¹⁴ are grouped into 20 communities of universities and institutions and 5 associations of institutions awarding doctorate degrees. Only universities are able to award doctorate degrees. Schools are unauthorized to do so.

¹⁴ Meaning 67 universities, 3 technology universities (Compiègne, Belfort-Montbéliard and Troyes) and Jean-Francois Champollion University Center for Teaching and Research, which are EPSCPs (French public scientific, cultural and professional institutions), which are not part of universities, Université Paris-Dauphine and Université de Lorraine, which are “grands établissements”, and the Centre Universitaire de Formation et de Recherche de Mayotte, which is a public administrative institution. https://publication.enseignementsup-recherche.gouv.fr/eesr/10/EESR10_R_38-le_doctorat_et_les_docteurs.php

1.2.3 National statistics on Doctorate studies (Source Ministry of Higher Education)

•60 000 students are registered at doctorate level. 50% are female and 37% are foreign students.

	Law and economics
	Humanities
	Sciences
	Sport
	Health



• A decreasing number of doctoral students:

Chart 1.2.3a: Students registered at doctorate level, by field of study from 2009 to 2015

	Human Sciences and humanities
	Society sciences
	Medecine and Biology
	Other

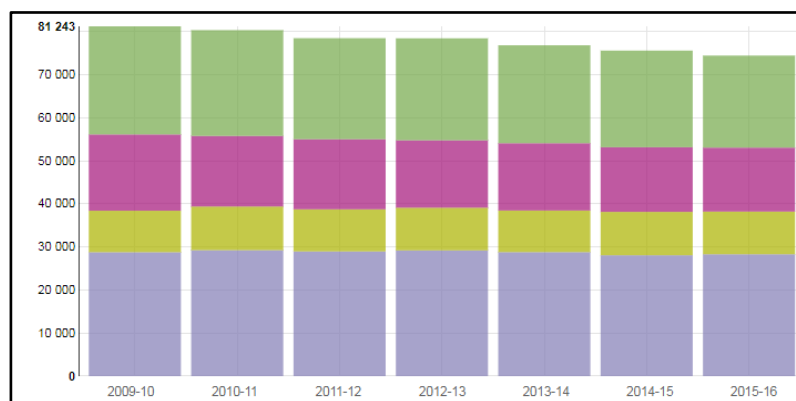
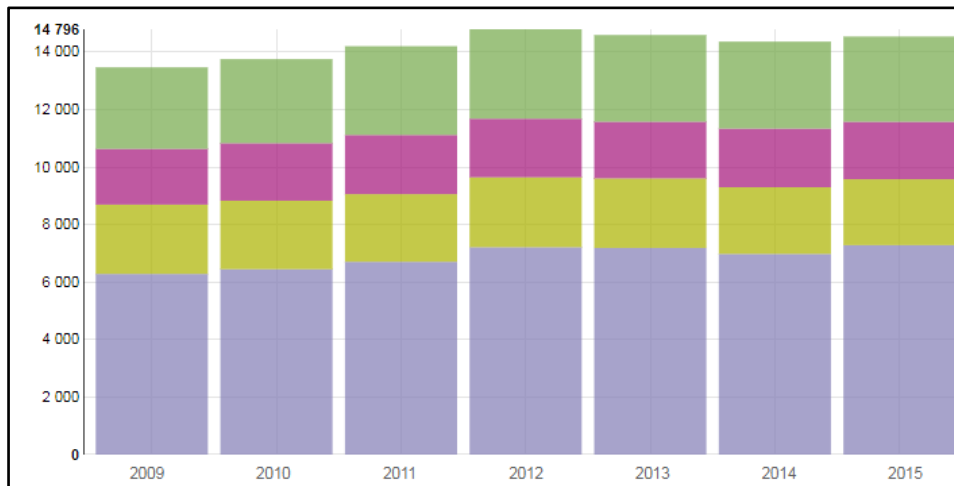


Chart 1.2.3b: Degrees awarded at doctorate level, by field of study from 2009 to 2015 ¹⁵.



Interesting thing is that the number of registered students is decreasing, whereas the number of degrees awarded is increasing in the meantime.

¹⁵https://publication.enseignementsup-recherche.gouv.fr/eesr/10/EESR10_R_38-le_doctorat_et_les_docteurs.php

Chapter 2: Nature and characteristics of doctorate studies

2.1 Information on Doctorate program design (methodology, ECTS...)

All doctoral schools, *“in the continuation of previous university study programmes, must provide its doctoral students with theoretical and practical resources to prepare them for integration into society, whether in the private or academic sector, at a level that corresponds to their qualifications.”*

Most of these resources are accessible via a range of scientific and professional programmes which are “clearly organized and coherent in terms of content (knowledge of the field, methodological, analytical and critical thinking aptitudes, etc.) and the number of course hours.”

Within lead institutions with doctoral schools, a doctoral college (or equivalent body) often manages professional/cross-disciplinary courses while the doctoral schools centralize and coordinate thematic/scientific courses. These are developed in partnership with directors of research units/federations/institutes, technological platforms or Master’s programmes.

Although existing regulations do not impose a specific number of hours, the majority of doctoral schools require that their doctoral students take and pass a defined number of courses ranging from a few dozen hours to 500 hours, with most ranging from 80 to 120 hours. Doctoral students are typically asked to take an equal proportion of thematic and professional courses.

Whether offered by the doctoral school or a doctoral college, these courses always supplement all the knowledge and skills acquired in the students’ host research unit. Ideally, and as defined in the Order of 25 May 2016, doctoral students complete and regularly update a “portfolio [...] comprising the personalized list of all the doctoral student’s activities during his/her programme, including teaching, dissemination of scientific culture or technology transfer, which exhibits the skills developed while working towards a doctorate degree¹⁶.”

¹⁶ Pierrick Gandolfo, *op. cit.*

2.2 Characteristics of the Cycle 3 study

2.2.1 Organization of Cycle 3 studies (selection, admission and progression)

- Admission criteria

The prerequisite for enrolling in a doctoral programme is to hold a national Master's degree or equivalent Master's level degree, particularly a master's obtained within the European Higher Education Area.

For individuals with an equivalent degree obtained outside France but which does not automatically equate to the master's level within the European Higher Education Area, or who have been granted credit for previous knowledge as per Article L. 613-5 of the French Education Code, the head of the institution may enroll them in the doctorate programme as an exception on the recommendation of the doctoral school Council. Individuals who do not have a national Master's or equivalent degree obtained abroad, and who want to be granted credit for acquired knowledge as per Article L. 613-5 of the French Education Code in order to enroll in a doctorate programme, must be candidates for enrolment in the doctorate programme with the doctoral school and indicate that the thesis supervisor has agreed to supervise their research and submit their research project.

In all cases, doctoral students must renew their enrolment at the university each year. Doctoral students may apply to suspend their enrolment for a maximum of one year. This one-year hiatus remains exceptional and is subject to the conditions stipulated in the internal rules of the doctoral school.

- Selection criteria

While some doctoral schools invest fully in recruiting their doctoral students via systematic competitive selection processes with candidate interviews, others leave full control in the hands of thesis supervisors and/or overseeing research units.

Enrolment in the PhD programme must specify the research topic, the context of the PhD programme and the host unit.

The thesis topic must lead to original and informative research and be feasible within the scheduled timeframe. The thesis topic is chosen jointly between the young researcher and the thesis supervisor and made official upon enrolment. The thesis supervisor, chosen for his/her recognized expertise in the research field in question, must help the doctoral student identify the innovative nature of the topic within the scientific context and ensure that it is relevant. He/she must also ensure that the doctoral student demonstrates initiative and innovative thinking while conducting his/her research.

Funding for the doctoral student during the degree is not mandatory, however some doctoral schools, especially in the fields of science and technology, only accept their doctoral students once 3 years' of PhD funding has been obtained.

- Progression

At the beginning of the doctorate degree, the thesis supervisor and director of the research unit must determine the resources required to conduct the research and ensure that access is provided to them. The doctoral student, therefore, is integrated into his/her host unit as a full-fledged researcher.

The thesis supervisor undertakes to regularly follow the progress of research and discuss new directions that could be taken in light of the results already obtained. He/she is obligated to inform the doctoral student of potential positive feedback or objections and criticism of his/her work and make recommendations on how to improve it.

Since the Order of May 2016 reforming doctoral studies, starting in the 2nd year of enrolment, doctoral students must present their research to a thesis supervisory committee (CST) comprising at least two members (professors). The members are appointed by the Director of the doctoral school for their scientific expertise and/or their experience in thesis supervision or research. The thesis supervisor may not be a member of the thesis committee. The names of the committee members and their contact details are immediately communicated to the doctoral students. The doctoral student may ask the thesis committee to meet at any time.

The thesis committee assesses the training conditions of doctoral students and the progress of their research in an interview at the end of the 2nd year of enrolment at the latest, and every subsequent year of enrolment. It prevents or resolves any conflict, discrimination or harassment issues. The committee therefore conducts an “interview” with the doctoral student in order to ensure that the conditions for writing the thesis are met (working conditions, communication with the thesis supervisor, work motivation, etc.) and to assess the progress of the thesis. It is not so much meant to monitor scientific aspects as it is to provide educational and especially human support. Its purpose is to ensure that the thesis is progressing well and to notify the doctoral school if problems arise between the doctoral student and the thesis supervisor, or if research is at a standstill.

Furthermore, a thesis supervisor may also contact a committee to inform it of its own problems with a doctoral student. According to the government order, this “interview” may be conducted remotely. The only firm rule is that the thesis supervisor may not be a member of the thesis committee.

According to Article 13 of the Order of 25 May 2016, the committee must issue recommendations and a report of the interview to the director of the doctoral school, the doctoral student and the thesis supervisor.

In addition to this, the role of the doctoral school is to provide doctoral students with methodological, transferable skills and scientific training. Students choose most of the courses they wish to take. However, doctoral schools make some of these courses and training mandatory (language, participation in the orientation day, doctoral student events, etc.).

Each course is approved by the doctoral school based on its own criteria and gives rise to European Credit Transfer System credits (ECTS credits). Each doctoral school has set the minimum number of credits required to defend a thesis.

A thesis is a step in the research and management process for a professional project. It must meet scheduled deadlines in accordance with the spirit of the doctoral programme and in the interest of the doctoral student.

2.2.2 Status, competencies and role of the supervisor

The supervisor has a crucial role as the PhD student is placed under his/her control and responsibility.

- Who can be a thesis supervisor? (Order of 25 May 2016, as amended by the Order of 1 July 2016)

- Full professors and senior lecturers/assistant professors with “accreditation to supervise research” (HDR)
- Individuals who hold a doctorate, chosen by the head of the institution on the basis of their scientific competencies on the proposal of the doctoral school’s director, after consulting the academic council’s research committee

In accordance with regulations, the thesis may be supervised jointly by two thesis supervisors, under the conditions of the Order of 25 May 2016. The rate of involvement of each co-supervisor must be specified at the time of initial enrolment in the doctorate programme and then in an agreement signed by the institution(s) with which they are affiliated.

Co-supervision may be shared between one of these people and one or two people from the socio-economic sector, recognized for their competencies in the field.

To ensure that each doctoral student and his/her research is supervised effectively with all necessary attention, thesis supervisors oversee a limited number of young researchers. The maximum number of doctoral students supervised by a thesis supervisor is stipulated in the internal rules of each doctoral school (generally between 3 and 20, depending on the doctoral school and field of study). This also contributes to a reduction in the number of drop-outs.

2.2.3 Thesis defense mechanisms and regulations

Thesis defense must be conducted in accordance with the Order of 25 May 2016 (Articles 17 to 19).

As per Article 17 of the Order of 25 May 2016, “authorization to defend a thesis is granted by the head of the institution, based on the opinion of the director of the

doctoral school, on the recommendation of the thesis supervisor” and once the research has been reviewed by at least two rapporteurs.

To give an opinion in favour of the thesis defense, the director of the doctoral school requests that the doctoral student be attributed the number of ECTS credits requested in the course supervision procedure. They must obtain two favourable pre-defense reports from two external experts (who usually then sit on the examination board). They must also obtain approval from the director of the doctoral school and the president of the university (usually represented by the vice-chair of research). Software is increasingly being systematically applied to all theses to verify the existence of plagiarism before authorization for thesis defense is given.

The evolution of the role of the supervisor:

“Beyond aspects dedicated strictly to research, the role of thesis supervisors has changed considerably. They are more involved in orienting doctoral students in the courses they choose (thematic or cross-disciplinary courses taught at the school and/or doctoral college and/or in preparing them for their future after obtaining their PhD (no longer limited to the sole prospect of a job as a researcher or professor). They provide guidance to their doctoral students and give them all the information required to explore several career paths, in the academic or non-academic field, in France or abroad.”

“The growing importance higher education institutions are placing on the quality of supervision has led many to offer training dedicated specifically to thesis supervisors. This initiative is fully in line with the new Order of 25 May 2016, which states that doctoral schools must “provide thesis supervisors with specific training or guidance.” Although this training is often met with scepticism, feedback from supervisors or future supervisors who have completed training is generally quite positive. In an effort to improve quality, some institutions would even like to make this type of training compulsory to obtain certification to direct research (HDR). Other institutions believe that it is better to maintain a certain degree of flexibility and rely on effective communication, leaving supervisors free to decide whether or not to participate in this initiative. In return, all doctoral students are expected to invest themselves fully in their projects and become increasingly independent in their research and the collective

tasks of their overseeing research unit¹⁷.”

The thesis examination board is formed and appointed in accordance with Article 18 of the Order of 25 May 2016.

It must include at least one professor with accreditation to direct research employed at the institution and the thesis supervisor(s).

Thesis supervisors may participate in discussions but may not lead the debates. They participate in the deliberations but do not take part in the final decision. The thesis supervisor(s) are therefore taken into account in the ratios which may be considered within the doctoral college for members within or outside the overseeing institution.

They sign the thesis defense report but do not sign the deliberation report. When the thesis defense report mentions the deliberation, it must be stated that the decision was made by the members of the examination board excluding the thesis supervisor(s).

Participation of the examiners in the thesis defense via videoconference is authorized on an exceptional basis, under the conditions stipulated in Article 19 of the Order of 25 May 2016.

But, the president of the examination board must be physically present for the thesis defense.

The language of the thesis defense is the language in which the thesis was written. However if the language is not French, the members of the thesis examination board may express themselves in French.

Levels of distinction (similar to Latin honors) must be awarded in accordance with the provisions of the Order of 2009, which were not amended by the Order of 25 May 2016. The opinions of the jury are included in the thesis defense report and can be included in the deliberation report.

2.2.4 Diversification of Doctoral studies

¹⁷ Pierrick Gandolfo, *op.cit.*

In addition to the “classic” PhD and the old “doctorate at work”, a new kind of doctorate/PhD is now being increasingly developed, the “practice-led” PhD.

Nowadays, having a PhD is a condition for a growing number of senior positions on the international market, be it in public institutions such as museums, or in private companies such as architectural firms. An increasing number of French universities have therefore recognized the importance of developing a practice-led PhD programme that meets the needs of architects, landscape architects, custodians, curators, artists and writers who want to pursue an international career.

In France, the SACRe¹⁸ (Science, Art, Creation and Research) PhD sponsored by PSL Université Paris¹⁹, and the PhD in “Practices and Theory of Artistic and Literary Creation” offered by the University of Aix-Marseille, or the future Practice-led PhDs of the Paris-Seine University, bring artists and academics together around a creative project, but fail to include architecture, landscape and heritage.

Internationally, on the other hand, initiatives for this new type of PhD or doctoral programmes do exist and are increasingly common, for instance at RMIT Europe, SEAHA²⁰ (University of Brighton, UCL and Kingston University in the United Kingdom), and NACCA in Maastricht²¹.

Practice-led research aims to incorporate practice into the research process, based on the belief that practice is one means for producing knowledge. In line with the most recent theoretical and epistemological developments in the field of creation, the idea is to go beyond the practice-led research stances currently used, in order to design and operationalize practice-led research strategies in which practice is the driving force, a source of both the research questions and findings. This is a matter of putting practice into a strategy of continuous improvement through research, via a stance of reflexivity towards its own approaches, tools and arguments for intervention.

¹⁸ <http://www.femis.fr/sacre-phd-programme-psl>

¹⁹ <https://www.univ-psl.fr/en>

²⁰ <http://www.seaha-cdt.ac.uk/>

²¹ <https://www.maastrichtuniversity.nl/research/institutes/macch/nacca>

Practice-led research will also borrow from research for practice, as it aims to inform and guide professional practices. However, this dimension is intrinsic (though often implicit) to the requirement of reflexivity, reproducibility and transferability, which is one of the criteria for scientific work.

Practice-led research strives to invent specific forms of dissemination and exploitation required by the research project itself, and to create a pool of high-level professionals capable of tackling the challenges not only of higher education and research but also their employment in the public and private sectors by broadening students' cross-sector opportunities through transferable skills.

2.2.5 Internationalization of Doctoral studies

Doctoral studies are increasingly internationalized for several reasons:

- There are a number of foreign students studying for doctorates in France,
 - Career opportunities might be broader with an international doctorate,
 - There are an increasing number of incentives to promote mobility in addition to internationalised doctorate studies.
-
- Joint supervision:

The easiest way to internationalize doctorate studies is the international jointly supervised doctorate (cotutelle²²). This is based on the tradition of cooperation between professors, while also developing the international dimension of doctoral schools and scientific cooperation between French and foreign research teams.

Some basic information to keep in mind:

- Conditions: Agreement with one or more foreign higher education institutions
- Content: In each country, the thesis must be under the responsibility of a thesis supervisor who exercises his/her supervisory functions in partnership with the other supervisor.

²² https://ressources.campusfrance.org/catalogues_recherche/diplomes/fr/cotutelle_fr.pdf

According to the Order of 25 May 2016, joint-supervision (cotutelle) was established to reinforce the international dimension of doctoral schools, facilitate the mobility of doctoral students and develop scientific cooperation between French and foreign research teams. A cotutelle is established between two institutions in different countries. An agreement must be signed to define the principles governing the cotutelle thesis. The doctoral student enrolls at both institutions. He/she conducts research under the responsibility of a thesis supervisor in each country who undertakes to fully perform his/her supervision duties in collaboration with the other thesis supervisor(s). Only one thesis defence will take place. After the thesis defence, the candidate obtains a doctorate degree from each of the partner universities. Cotutelles therefore enable students to obtain two degrees.

Regulations and procedures are the ones governing doctoral programmes in France and in the partner country. Both universities recognize the validity of the established cotutelle and that of the defended degree (Doctor Degree in the French university and equivalent degree in the foreign university).

There are two possibilities with regard to the conferment of the degree:

- Either the student receives a degree conferred jointly by both institutions. Then, the degree conferment letter states both titles (for example, Doctorat en littérature française and PhD in French literature)
- Or the student receives two PhD from both institutions. Each degree stating the specific title in each university, stating that the thesis had been defended in the framework of the cotutelle and specifies the name of the partner institution.

In both cases, the thesis is defended in only one of the two institutions associated to the cotutelle, on decision of both directors of research.

How does the cotutelle work?

Every year of preparation of his/her thesis, the student enrolls in both universities while enrolment fees are paid to only one them.

Social insurance during the cotutelle is covered by a agency the name of which is specified in the cotutelle memorandum of agreement. Accommodation arrangements made by the student in the partner country and the financing plan (nature of assistance

applied for by the student) are specified in the agreement.

Duration of thesis preparation is necessarily divided up between the two institutions part of the cotutelle by alternate periods in each country (of at least one year in France). The normal duration of doctoral programme is 3 years in France.

Publication, valorisation / promotion and protection of a thesis topic and research outcomes, are carried out by the doctoral candidate's both host laboratories, according to the specific procedures in each country.

Oral defence of the thesis

The jury of the oral defence is appointed by mutual agreement by both partner universities. Its composition is based upon a well-balanced proportion of members from each institution, among them, both supervisors, and external scientific representatives. The financing of the defence in the framework of the cotutelle is often subject of specific help. Accommodation expenses are reimbursed or covered by the host university. Travel costs of jury's members are covered by the other partner university in accordance with institutional modalities.

Language of the oral defence

When national languages in both countries are different, the thesis is drafted in the language admitted as writing language for theses in one or other of the partner universities. The same rule applies for the oral defence. The doctoral candidate must nevertheless draft an abstract of his/her thesis in the other language.

Assistance for mobility may be granted to facilitate travels.²³

- The European doctorate:

Universities may also issue a European Doctorate²⁴ for their PhD students.

²³Source CampusFrance, Note sur le doctorat en co-tutelle, février 2016.

²⁴Some examples : <https://www.universite-paris-saclay.fr/en/node/8802>,

<https://edseg.univ-lyon3.fr/Presentation/2735-European-Doctorate-label>

<https://www.univ-paris5.fr/eng/INTERNATIONAL/Strategy-2010-2013/International-degrees/European-Doctorate-Label>

<https://college-doctoral.u-bordeaux.fr/en/Internationalization/Systems/The-European-doctorate-label>

This degree is based on the principles decided upon at the Conference of University Rectors and Presidents on European Doctorates. The European doctorate is a traditional doctorate degree with a “European label” certificate issued by the president of the university.

The following four conditions must be met in order to apply for the “European label” when the thesis defence is being organised:

- 1- the doctoral student must have studied for at least one term in a European country other than the country of the thesis defence;
- 2- the authorisation to defend the thesis is granted based on the reports of at least two HDR accredited professors from higher education institutions from two European States outside the country where the thesis is to be defended;
- 3- at least one thesis examiner must be from a higher education institution in a European State other than the country where the thesis is to be defended;
- 4- part of the defence must be conducted in a European national language other than the national language(s) of the country where the thesis is to be defended.

This process is not the same as the cotutelle but may be overlapped with it.

This “label” does not appear on the doctorate diploma but is an advantage for promoting the doctoral programme internationally.

Candidates wishing to obtain the “European label” must simply inform their doctoral school before the thesis defence.

2.3 Positioning of Cycle 3: doctoral school and links with research

- Presentation and role of doctoral schools in France:

“In France, all doctoral students are affiliated with one of the country’s 261 doctoral schools, operating under the responsibility of one or more accredited institutions or a community of universities and institutions (ComUE)²⁵ .”

“Doctoral schools use the human, financial and material resources provided by their lead institution(s). Although it is not always the case, the average annual budget of a doctoral school is often around €100 per doctoral student. Each doctoral school is free to use this grant at its own discretion to cover the costs of the courses it offers, annual events (e.g. orientation days, science days), the mobility of its doctoral students (participation at national and international conferences, research unit work placements) or travel expenses for thesis defense examiners (limited use for some humanities and social science fields).”

”In general, student numbers at doctoral schools range between 200 and 400 with 60 to 80 at the lower end, and up to 1,200 doctoral students at the other extreme. Doctoral schools are typically placed under the responsibility of a director who may be assisted by one or two co-directors. They are supported by a Council (the composition of which is regulated) and a Committee, which is formed at the discretion of the doctoral school. The Council usually meets three to four times a year to adopt the school’s strategy while the Committee is a less formal and more reactive body which manages the files of doctoral students and the doctoral school on a continual basis. It is important to note that a growing number of doctoral schools have one or two doctoral students on the Committee to increase their involvement in the school’s affairs and facilitate communication between management and the student body.”

²⁵ Pierrick Gandolfo (professor at the Université de Rouen-Normandie, Hcéres Scientific advisor, Programme evaluation department, coordinator of the Doctoral Schools evaluation), “The doctoral success in France: reports and best practices”, article in press in Peter Lang Editions.

"More specifically, doctoral schools need to contribute to the standardization and international visibility of university PhD programmes, and the organization of sites. They provide doctoral students with a multi-disciplinary culture as part of a coherent scientific project. They implement a student selection policy based on clear and overt criteria, i.e. they "inform students of enrolment conditions, required skills, available funding, the type, quality and rates of employment after obtaining the doctorate degree" (as per Article 3 of the Order of 25 May 2016). They ensure that research units and teams provide doctoral students with proper supervision. They ensure that doctoral students are able to prepare and defend their thesis in optimal conditions. They organize scientific and intellectual dialogue between doctoral students (e.g. within a college of doctoral schools). They offer doctoral students courses and training which are useful for their research and career plans and necessary for acquiring broad scientific knowledge. They provide tools to help PhD graduates find employment in public institutions and the private sector. They follow-up and monitor PhD graduate employment. Finally, they open up opportunities across Europe and internationally, particularly by promoting joint thesis supervision (cotutelles)²⁶."

- Articulation with research

The doctorate studies are the results of research conducted within a research unit with which the doctoral student is affiliated while enrolled in the PhD programme

Doctoral research topics may be proposed by research units, and doctoral students are then chosen based on their skills and expertise to perform the research. The situation depends heavily on the local context and the research field. In the scientific field, research units often propose the topics, while in humanities and social sciences, it is often the supervisor and the future doctoral students themselves.

During their research work, doctoral students join a research unit or team that guides them throughout their study programme. Their research is promoted under this arrangement through seminars, conferences, "Journées d'étude", events, etc.

Research units' directors must facilitate the scientific and material integration of

²⁶ Ibid.

doctoral students within their research units. Research units monitor the progress of doctoral students' research. This may consist of thesis interviews, research presentations within the research unit or at a "Journée de Doctorants" (open-house day for doctoral students) before a community of recognized and skilled researchers, with professors from outside the institution if possible, in an effort to improve quality.

2.4 Monitoring of Doctoral Students and graduates

2.4.1 Guidance of doctoral students

"The longitudinal follow-up of thesis research is essential for guiding all doctoral students and limiting situations leading to students dropping out of the programme. This follow-up may be conducted in several ways using complementary methods defined or managed by the thesis supervisor, the host research unit and/or the doctoral school. The thesis supervisor is naturally the main person who follows the progress of doctoral students' research. In most cases, doctoral students are followed up via regular meetings with their advisors. However, the frequency of these meetings can vary significantly depending on the context in each field. In the sciences, technology and healthcare field, doctoral students are generally, although not always, required to conduct experiments within their research unit or adjacent technology platforms, thus facilitating almost daily communication with their thesis supervisors. This scenario is rarer for humanities and social science doctoral students as their research does not require their presence at a research unit. While this difference is in no way a weakness for ensuring effective follow-up, it does mean that in the humanities and social sciences field, regular meetings, albeit less frequent than in sciences, technology and healthcare, need to be scheduled so that supervisors can advise students on their research. For research activities, follow-up may be supplemented by tools developed within the research unit, such as internal lectures given by the doctoral students, or by putting in place steering committees made up of researchers or professors from the research unit or another body. It should be underlined that in this case again, there are differences from one field to another, with research activities sometimes confined to the work between the doctoral student and supervisor."

"Regardless of the field, the doctoral school is responsible for putting in place suitable tools to follow-up doctoral students with the aim of monitoring the progress of the

thesis in terms of the results and publications/outputs of the student, and the acquisition of additional skills in the broad sense, to prepare them for their future once they have obtained the PhD. To be operational and effective, these tools (validated by the Council of the doctoral school) must be adapted to the profiles of the doctoral students and be implemented in collaboration with the research units and thesis supervisors²⁷.”

2.4.2 Doctoral training courses

The overarching structure of the doctorate in France is based on research activities but also on training courses. Doctoral students choose the courses they plan to take from a course guide, with their supervisor. Some doctoral schools have made certain courses compulsory while others have not. Some examples of courses provided:

1) Université Paris Saclay²⁸

université
PARIS-SACLAY

Formations proposées 2017 - 2018

Cliquer sur la formation pour accéder à son descriptif

Accompagnement de la thèse	- Préparation à l'Après thèse	Communication et médiation scientifique	Connaissance de l'entreprise	Culture générale du jeune chercheur	Définir son projet professionnel	Entrepreneuriat
Formations générales en langues et ouverture culturelle – Anglais	Formations générales en langues et ouverture culturelle – Arabe	Formations générales en langues et ouverture culturelle – Chinois	Formations générales en langues et ouverture culturelle – Espagnol	Formations générales en langues et ouverture culturelle – Français large étranger	Formations générales en langues et ouverture culturelle – Italien	Formations générales en langues et ouverture culturelle – Japonais
Formations générales en langues et ouverture culturelle – Portugais	Formations générales en langues et ouverture culturelle – Russe	Formations scientifiques disciplinaires proposées par une école doctorale	Formations scientifiques pluridisciplinaires proposées par une école doctorale	Outils et méthodes pour bien exercer son métier de doctorant	Parcours " Conseil et expertise en innovation "	Parcours " Enseignement du supérieur "
Valorisation de la recherche et innovation						

	Dates de début
<p>Consulting sector, recruitment, approach and practice</p> <ul style="list-style-type: none"> Discover reality of consulting job, provide information from insider perspective about consulting Understand recruitment process of consulting firms: steps, challenges and prerequisites Understand key success factors of preparation process for such recruitment: firms target , planning... Master a successful storyline interview Master transversal methodology and structured approach to succeed in consulting cases interviews Review a synthesis of key business topics and reasoning's required to succeed in consulting cases Master business cases interview through practice on panel of original cases covering various spectrum of interviews formats: quantitative, directed interviews, open interviews, written interviews Be able to integrate consulting cutting-edge methods and approaches in professional daily work, project tasks completion, team management, provision of formal and informal 	14 mai 2018

²⁷ *Ibid.*

²⁸ <https://www.universite-paris-saclay.fr/en/node/8644>

2) Université Grenoble Alpes²⁹

Training of doctoral students is additional to research work. The student must complete a minimum of 120 hours of training during the dissertation preparation period (there is no upper limit). The training is compulsory and should include the following elements:

- **1/3rd of the training must be related to the subject area of the dissertation**, accounting for about 40 hours.

These courses are administered by the Doctoral School and are chosen by the student and his/ her supervisor. Every year, the Doctoral School offers doctoral students a range of scientific training courses. The doctorate partners can offer other courses to meet the individual requirements of the doctoral students.

- **2/3rds of the training are unrelated to the subject area of the dissertation**, and must include at least 24 hours dedicated to professional insertion.

These courses are offered by the institutes' doctoral schools, the Doctoral College of Université Grenoble Alpes and the DFI, its doctoral department for Training, Initiation and Professional Insertion ("service Doctoral pour la Formation, l'Initiation et l'insertion professionnelles" in French) for doctoral training labels. Doctoral students can also enrol in external training courses as long as they are validated by their doctoral school.

✦ [See the training catalogue \(in French\)](#)

■ Doctoral training labels

The Doctoral College of *Université Grenoble Alpes* also offers five training programmes (labels) targeting five clearly identified employment sectors:

- **Advice and expertise**
- **Public institutions and international organisations**
- **Starting a business**
- **Research, Business and Innovation**
- **Research, and higher education**

2.4.3 Rights and duties of doctoral students

The new Order of May 2016 requires that a study agreement be signed by doctoral students and their thesis supervisors. This agreement includes aspects such as the research schedule, the professional and personal plans of the doctoral student and the individual study programme related to the project. The Order also specifies that the agreement "may be amended as needed at each re-enrolment by an addendum signed between the parties" (Article 12). This is often called the thesis charter. The respect of intellectual property and ethical rules is a very important aspect of doctoral studies. For the past several years, before the defense, the thesis is submitted electronically and examined by plagiarism detection software.

²⁹ <https://doctorat.univ-grenoble-alpes.fr/en/during-a-doctorate/doctoral-student-training/>

How do conclude doctoral studies?

“Doctoral students (and sometimes supervisors) struggle to handle the end of the PhD programme. Although it ultimately shapes the profile of future graduates, this difficult time can also result in dropouts, whether from substantial problems or the inability to finish the manuscript (and/or publications related to the thesis) or a lack of funding for the thesis. In this second case, having to continue research and obtain other sources of funding is in conflict with the workload involved in writing the thesis and preparing the defense. Regardless of the context, it is easy to see how important it is for doctoral schools to provide operational supervision in addition to the natural investment of the supervisor and host research unit.”

“In a report published in 2014 by the French Ministry of National Education, Higher Education, Research and Innovation (MENESR), statistics showed that 40% of theses defended in 2012 took less than 40 months to complete. A third of doctoral students required an extra year and 11% of PhD degrees took six years or more. Half of the shorter doctorates were in exact sciences, whereas around 30% of doctorates in humanities and social sciences were obtained in over six years, and only 14% in less than 40 months.

These differences between fields mostly stem from the fact that a high number of doctoral students in humanities and social sciences are employed, forcing them to juggle employment and their PhD studies. This scenario does not just apply to this field, as clinicians studying for their doctorate of science degrees also need to fulfil their hospital obligations, thus increasing the average time it takes for them to complete their science doctorate degrees. These professional obligations sometimes cause working doctoral students to temporarily suspend their doctorate studies. Since September 2016, doctoral students are able to defer their studies for up to one year.

This new practice is meant to be used on an exceptional basis (according to the Order) and will likely be proposed by doctoral schools primarily to employed doctoral students³⁰.”

³⁰ Pierrick Gandolfo, *op.cit.*

2.4.5 Socio-economic aspects

- Scholarships and subsidies

“Around 65% of doctoral students receive specific funding, 19% rely on a paid employment and 12% are not financed. These numbers hide significant disparities between fields as all doctoral students in sciences, technology and healthcare are typically funded by a doctoral contract (or equivalent funding) while some humanities and social sciences fields tend to have a high number of employed students, especially secondary school teachers combining teaching/marking and work on their thesis. Others are forced to fund their doctorate studies through part-time jobs, making it more difficult to successfully complete their doctorate degree³¹.”

- Integration into the job market

“The 2006 Order states that doctoral schools “shall organize follow-up of the integration of PhD graduates, and more generally all their doctoral students, on the labour market.” The new 2016 version replaced the term “integration” by “career”, mentioning that this follow-up is carried out “in coordination with the departments within the relevant institutions.” Surveys are therefore usually managed by an observatory or doctoral college (or equivalent body). The quality of these surveys depends on their potential use, both for communicating with doctoral students and informing them of available career options through the promotion of their future degree, and for retrospectively changing how the doctoral school’s general operation. In line with the previous paragraph, it is expected that the PhD graduates questioned participate and contribute to providing doctoral schools and lead institutions with information that could later be used as real management tools for doctoral programmes.

In a report published in December 2015 on PhD graduate employment three years after their graduation in 2010, the French Centre for Research on Education, Training and

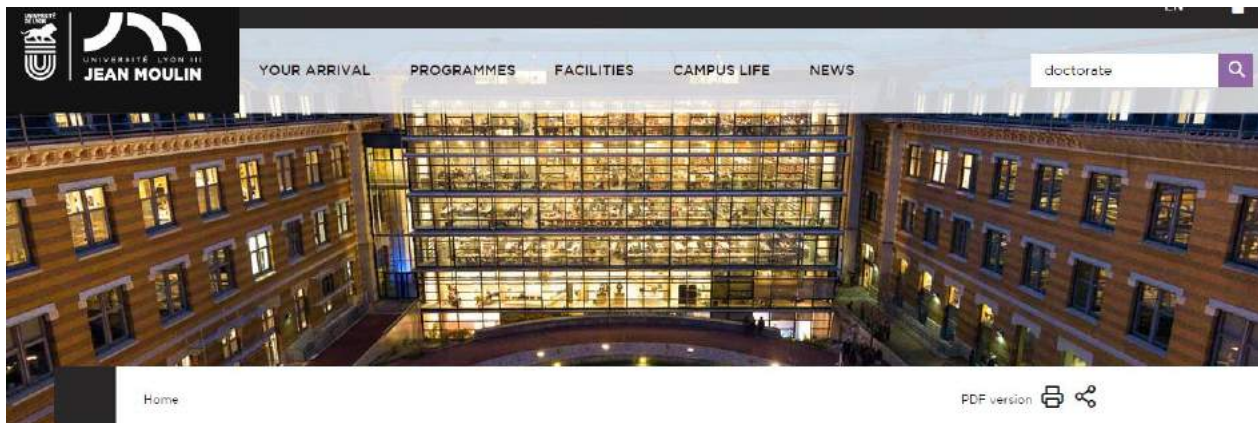
³¹ *Ibid.*

Employment (Céreq) stated that “in a situation of economic downturn between 2011 and 2013, PhD graduates benefited from an increase in the number of research positions in businesses and the public sector.” These positions were also more stable with 82% of graduates on a permanent contract, compared to 67% in 2010. The unemployment rate fell by two points between 2001 and 2013, from 11% to 9%, below that of master’s graduates. However, the positive trend in these figures hides a strong disparity between fields, with especially encouraging results for engineering sciences, computer science and electronics, but continued difficulties for doctors of Chemistry, Biology, Earth Sciences and Humanities. Interestingly, the report mentioned that “no “typical profile” emerged for an unemployed PhD graduate” and that “the conditions under which the thesis was carried out had no influence on the likelihood of being unemployed three years after thesis defense.” However, reassuringly, the measures implemented by doctoral schools to improve career opportunities for PhD graduates were positive factors that need to be recognized.

Too many young PhD graduates are still limiting their doctorate to a three to five-year research project on a specific topic. Too few of them are objectively capable of fully applying all knowledge and (above all) skills learned during their doctorate studies. Beyond mere expertise, the abilities to summarize and remain objective on a specific topic, and for many fields, the experience of working as a team with individuals with very different profiles (researchers, professors, engineers, technicians, administrative staff, students), make the doctorate the only qualification to provide such adaptability, making doctoral-level graduates real “Swiss army knives”. In the pursuit of their Holy Grail, they not only had to establish various strategies to find solutions to all kinds of problems frequently encountered when working on a research topic, but, above all, developed a rebound capacity that only this level of university education can provide. It is almost inevitable for doctoral students to encounter a large number of difficulties (technical, methodological, operational, relational problems, etc.) that they must somehow overcome to succeed in their studies. Without doubt, doctoral schools and doctoral students/graduates must invest more in making this level of qualification, which is unique in France, better known to the general public and any potential employers³².”

³² Ibid.

Chapter 3: Internal quality assurance mechanisms



WELCOME TO JEAN MOULIN LYON 3 UNIVERSITY

Internal Quality Assurance mechanisms at Lyon III University

The question of the internal quality of the doctoral studies arises during all the key periods of these studies: the registration in the Phd, its preparation, its defense, but also after the defense.

Methodological note: It's difficult to distinguish the national rules imposed on all French universities from the margins of maneuver left to the universities. To present the margins of maneuver, we must rely on national rules and decline them through the example of the largest doctoral school of the University Jean Moulin Lyon 3 by its number of students, the doctoral school of law.

3.1 Internal quality during the Phd registration

Condition related to the student:

- French general rule: to hold a master's degree or equivalent
- Specific application made to doctoral school of law: average mark of 12/20 at the master's degree, 14/20 mark in the dissertation

Condition related to the thesis director:

- French general rule: maximum number of PhD students supervised by a thesis

director, taking into account the constraints linked to the disciplines, in particular the rare disciplines, set by the doctoral school board

- Specific application to doctoral school of law: 10 students. In fact, the average supervision rate is 3 doctoral students per thesis director (320 PhD students for 104 directors)

3.2 Internal quality during the Phd preparation

Monitoring committee:

- French general rule: establishment of an annual monitoring committee from the 2nd year of doctorate
- Specific application to doctoral school of law: almost perfect compliance with the national rule as soon as the text enters into force (which is not the case in all the doctoral schools of this university a priori): of the 196 PhD students concerned in 2016-17, 185 were seen by the monitoring Committee in 2015-17, 3 having requested a caesura year.

Evaluation of curricula and training activities:

- French general rule: evaluation must be carried out regularly, notably through surveys of doctoral students. As part of a process of continuous improvement of the curriculum, the results of the evaluations are the subject of presentations and debates within the council of the doctoral school
- Specific application to doctoral school of law: simple provision of results

3.3 Internal quality for the thesis defense

- French general rule: jury: between 4 and 8 members with balance between external/internal members; also gender equity. Moreover, the thesis director takes part in the jury, but no longer takes part in the decision.
- Specific application to doctoral school of law: the first two criteria are fully applied, the third is not always achieved (this is an objective towards which we tend); the director is sometimes involved in decision-making.

3.4. Internal quality after the Phd award

Beyond the official texts, several quality criteria can be taken into account:

- Average duration
- Ratio between the number of inscriptions and the number of theses defended and in how long
- Number of official dropouts, number of non-registrations
- Method of funding, as an indicator of the time that the doctoral student can give to his work

With regard to doctoral school of law:

- Average duration of theses in year: 5.33 in 2014, 5.6 in 2015, 5.25 in 2016
- Number of theses defenses: 52 in 2014, 41 in 2015, 37 in 2016, 40 in 2017
- Number of registrations: 297 in 2014-15, 322 in 2015-16, 320 in 2016-17
- Number of official dropouts: 12 in 2014-15, 12 in 2014-12015, 5 in 2016-17
- Number of non-registrations: 35 in 2014-15, 26 in 2014-15, 28 in 2016-17

Chapter 4: External quality assurance mechanisms and national policies

4.1 National strategy and policy in terms of Doctorate level and QA of Doctorate level: state of the art

Replacing AERES, the High council for the evaluation of research and higher education (Hcéres³³) is an independent administrative authority, created by Law ³⁴ n° 2013-660 of July 22nd 2013.

Hceres is the national quality assurance agency, member of ENQA and registered at EQAR, and is responsible for the evaluation of programmes, institutions and research units.

Hcéres seeks to follow best international practice in the performance of its missions. With regard to evaluation criteria, its methods are based, on principles of objectivity, transparency and equal treatment for all organizations assessed, and, with regard to the selection of the individuals responsible for evaluations, on world-class scientific expertise, neutrality and balance in the representation of themes and opinions. HCERES seeks to prevent conflicts of interest in the composition of the expert committees responsible for carrying out evaluations. It may perform evaluations directly or verify the quality of evaluations performed by other bodies by validating the procedures used. Hcéres enables the organizations and institutions that it evaluates directly to present, at their request, observations throughout the evaluation procedure, and at its conclusion.

Regarding doctoral schools in France, they are evaluated every five years by the Hcéres Evaluation of Programmes Department.

Evaluation is based on doctoral school projects for the next five-year contract. It may involve a renewal of the same project with or without modifications (change in title, management, etc.), a merger or the restructuring of several doctoral schools, or the

³³ <http://www.hceres.fr/>

³⁴ https://www.legifrance.gouv.fr/affichTexte.do;jsessionid=E248667E924662099357C1640F63A146.tpdjo08v_3?cidTexte=JORFTEXT000027735009&categorieLien=id

Source: Hcéres, <http://www.hceres.fr/MODALITES-D-EVALUATIONS/Campagne-d-evaluation-2018-2019/Evaluation-des-ecoles-doctorales>

creation of a new project (ex-nihilo).

The evaluation of doctoral school projects is based on a review and self-evaluation (internal evaluation managed by the lead institution(s)) of the general operation of schools under the previous contract. For each project, a panel of experts is commissioned by Hcéres. This panel is formed of four to six members, including a chair and recent doctoral graduate, and analyses the report of pre-existing doctoral schools and the doctoral school projects for the next contract.

A half-day site visit of each doctoral school is organized in the form of interviews between the panel of experts and school stakeholders, doctoral students and project leaders.

All visits to a site's doctoral schools are grouped over two to three days. In order to understand the site context, the first half day is dedicated to providing the entire panel of experts with i) a contextual presentation of the lead institution(s) and (ii) an operational presentation of the doctoral programme policy of the site (College or equivalent body).

The aim of this evaluation is policy is not to get any control on doctoral schools. The purpose of the evaluation is the continuous improvement and enhancement of the institutions and programs. The evaluation is aimed at providing the institution his own image in a mirror, communicate about its mission and strategies and demonstrate the way it does perform its mission.

The national QA system

“The accreditation of institutions is underpinned by periodic evaluation carried out by the French High Council for Evaluation of Research and Higher Education (HCÉRES). These evaluations are carried out on site, by panels of peers, i.e. current or former doctoral school directors and an expert “young PhD graduate” (who recently defended his or her thesis, holds a doctoral-level position and contributed to the operation or coordination of his or her original doctoral school). A circumstantial report is drawn up by the chair of the HCÉRES panel for each doctoral school in order to analyze the school's review and project on the basis of three key criteria: the doctoral school's operation and association with research, doctoral student supervision and training,

follow-up and employment of doctors. These reports are sent to the doctoral schools' lead institutions, which are able to make comments. The evaluation reports and these comments are then sent to the Ministry of National Education, Higher Education, Research and Innovation (MENESR) and published on the HCÉRES website³⁵."

The HCERES evaluation standards

"For external evaluations of doctoral schools carried out by HCÉRES, an interview is systematically organized behind closed doors between the panel of experts and a panel representing doctoral students from the school in question. Various points are discussed, but special attention is paid to the doctoral programme. Although it is not always the case, these interviews often reveal that i) doctoral students are insufficiently consulted for developing and modifying their range of study programmes, ii) the accessibility of certain programmes does not always meet all demand, iii) programmes are not always evaluated by their users, and if they are, the doctoral schools do not necessarily take into account analysis of the opinions collected to change the format/volume/content of programmes with negative feedback. These experiences show that there is sometimes a lack of consultation between the doctoral school (or doctoral college) and doctoral programme students."

The "Hcéres Standards for external evaluation of a doctoral school" is structured as follows:

1 - The school's operation and association with research

This section describes and analyses the following aspects:

- *Positioning of the doctoral school within the higher education and research institutions.*
- *The doctoral school's organization and governance.*
- *Doctoral student recruitment and orientation policy.*
- *The doctoral school's scientific policy.*

2 - Supervision and training of doctoral students

This section describes and analyses the following aspects:

³⁵ Pierrick Gandolfo, *op.cit.*

- *Doctoral student supervision policy.*
- *Doctoral student monitoring measures.*
- *Range of study programmes and events offered to doctoral students.*
- *Policy on vivas and thesis duration.*

3 - Monitoring of the career paths of doctoral graduates

This section describes and analyses the following aspects:

- *Actions carried out to promote career opportunities of its doctoral graduates and the doctoral programme.*
- *Measures for monitoring the careers of its doctoral graduates.*
- *Data analysis, communication and use³⁶.*”

4.2 Future incentives for Cycle 3 at national level

- National incentive: the reform of the doctoral studies

Doctoral policy in France was overhauled in May 2016 with an order creating for example the individual advisory committee that must systematically meet with each doctoral student once a year starting in the second year of enrolment in order to report on the doctoral students work and any problems he or she may have encountered with the thesis supervisor (or vice versa). Major changes also include stricter thesis durations (3 or 6 years, one additional year as an exception) and the fact that the thesis supervisor may not take part in the thesis examination board’s decision.

- Local incentives for HEIs / professors/students engaged in Cycle 3

Supervising doctoral students and guiding them towards thesis defense is promoted through career development for professors.

Financial bonuses for professors who work as thesis supervisors no longer exist in France, but, depending on the institutions, professors may be granted time in lieu for the

³⁶ *Ibid.*

number of doctoral students they supervise.

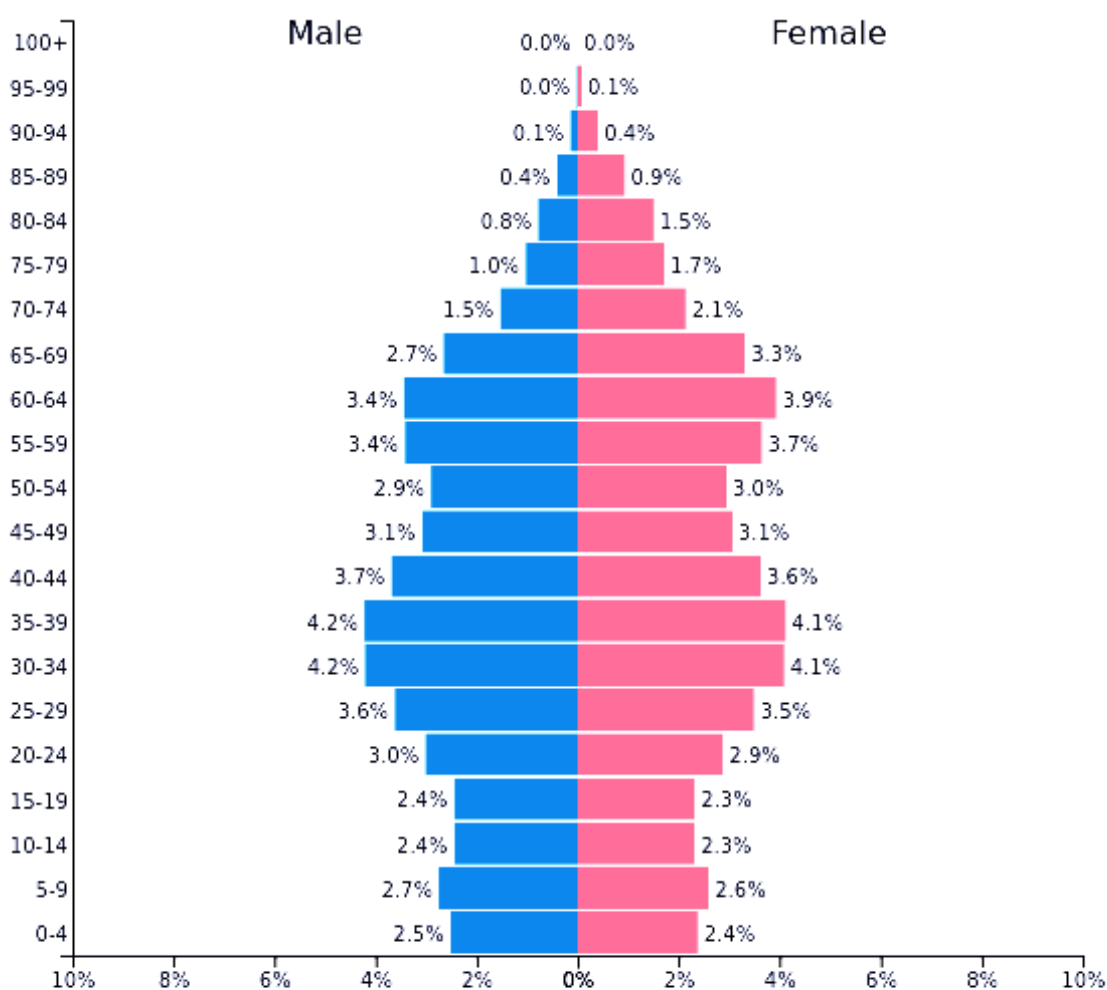
However, the main motivation remains the recognition gained from the theses supervised, the defense of these theses and the quality of these theses and young doctoral graduates.

Part III - Polish Case Study

Chapter 1. Overall landscape - National Higher Education (HE), research and QA context (with focus on Doctorate level)

1.1 Brief presentation of the HE and research system (including general relevant information about Spain HE cycle studies)

Poland is one of the current 28 countries composing the European Union. Its area is 312,679 km². The current population is 38,422,346 people. The Polish capital is Warsaw, located in the center of the country. The GDP (PPP) in 2018 (estimate) is \$30,827 per capita. The current population pyramid for Poland is the following.



PopulationPyramid.net

Poland - 2017
Population: **38,563,573**

In Poland the higher education institutions by type of school (academic year 2015/2016) are the following:

SPECIFICATION		Grand total	Of which females	Of grand total - forms of studies			
o - total p - public n - non-public				full-time programmes		part-time programmes	
				total	of which females	total	of which females
	o	1348 822	776 464	895 725	520 672	453 097	255 792
TOTAL	p	1034 161	587 284	813 596	473 258	220 565	114 026
	n	314 661	189 180	82 129	47 414	232 532	141 766
	o	403 690	271 251	324 677	217 852	79 013	53 399
<i>Universities</i>	p	393 252	264 334	314 891	211 424	78 361	52 910
	n	10 438	6 917	9 786	6 428	652	489
	o	285 165	104 222	220 433	87 670	64 732	16 552
<i>Technical universities</i>	p	272 767	99 750	216 277	86 021	56 490	13 729
	n	12 398	4 472	4 156	1 649	8 242	2 823
	o	68 031	40 078	50 041	31 804	17 990	8 274
<i>Agricultural academies</i>	p	67 179	39 803	49 845	31 725	17 334	8 078
	n	852	275	196	79	656	196
	o	174 603	104 370	69 867	40 612	104 736	63 758
<i>Academies of economics</i>	p	66 563	40 473	46 861	28 457	19 702	12 016
	n	108 040	63 897	23 006	12 155	85 034	51 742
	o	43 751	33 500	25 705	19 631	18 046	13 869
<i>Higher teacher education schools</i>	p	34 540	26 390	23 635	18 034	10 905	8 356
	n	9 211	7 110	2 070	1 597	7 141	5 513
<i>Medical universities</i>	o=p	62 270	44 991	52 755	38 817	9 515	6 174
<i>Maritime universities</i>	o=p	8 911	2 762	6 397	1 972	2 514	790
<i>Physical academies</i>	o=p	24 754	13 070	20 960	11 169	3 794	1 901
	o	17 082	11 436	14 683	9 892	2 399	1 544
<i>Fine arts academies</i>	p	16 055	10 882	14 131	9 589	1 924	1 293
	n	1 027	554	552	303	475	251
	o	5 656	2 536	3 394	1 333	2 262	1 203
<i>Theological academies</i>	p	389	233	389	233	-	-
	n	5 267	2 303	3 005	1 100	2 262	1 203

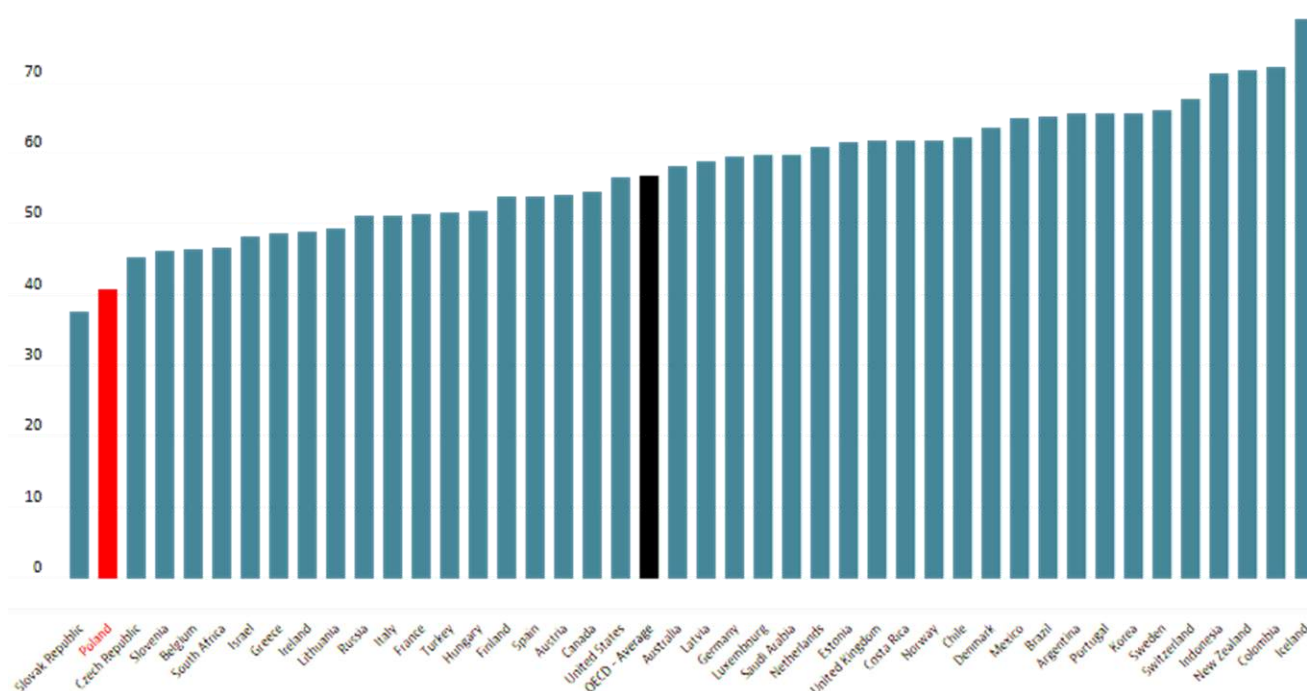
	o	227 176	138 958	86 916	52 851	140 260	86 107
<i>Other higher education institutions</i>	p	59 748	35 306	47 558	28 748	12 190	6 558
	n	167 428	103 652	39 358	24 103	128 070	79 549
	o=p	22 759	8 147	17 461	6 300	5 298	1 847
<i>Academies of the Ministry of National Defence</i>							
<i>Academies of the Ministry of Interior and Administration</i>	o=p	4 974	1 143	2 436	769	2 538	374

The statistics of the academic year 2015/2016 about the graduates of higher education institutions by type of school (including foreigners) are the following:

SPECIFICATION		Grand total	Of which females	Of grand total - forms of studies			
- grand total p - public n - non-public				full-time programmes		part-time programmes	
				total	of which females	total	of which females
	o	364 619	233 202	231 734	147 605	132 885	85 597
TOTAL	p	274 763	173 223	214 129	136 137	60 634	37 086
	n	89 856	59 979	17 605	11 468	72 251	48 511
	o	104 290	76 992	80 850	59 373	23 440	17 619
Universities	p	100 954	74 637	77 860	57 264	23 094	17 373
	n	3 336	2 355	2 990	2 109	346	246
	o	77 195	33 441	61 755	28 200	15 440	5 241
Technical universities	p	74 815	32 269	61 134	27 878	13 681	4 391
	n	2 380	1 172	621	322	1 759	850
	o	18 209	11 820	13 994	9 599	4 215	2 221
Agricultural academies	p	17 987	11 708	13 955	9 582	4 032	2 126
	n	222	112	39	17	183	95
	o	50 314	33 276	18 613	12 059	31 701	21 217
Academies of economies	p	20 051	13 645	13 937	9 285	6 114	4 360
	n	30 263	19 631	4 676	2 774	25 587	16 857
	o	14 473	11 523	7 479	6 063	6 994	5 460
Higher teacher	p	11 080	8 942	7 017	5 685	4 063	3 257

education schools							
	n	3 393	2 581	462	378	2 931	2 203
Medical universities	o=p	13 252	10 431	11 527	9 146	1 725	1 285
Maritime universities	o=p	1 791	819	1 168	514	623	305
Physical academies	o=p	6 622	3 871	5 504	3 225	1 118	646
	o	4 588	3 073	3 844	2 572	744	501
Fine arts academies	p	4 387	2 945	3 760	2 514	627	431
	n	201	128	84	58	117	70
	o	1 071	590	625	301	446	289
Theological academies	p	64	36	63	36	1	-
	n	1 007	554	562	265	445	289
	o	65 372	44 270	20 878	14 208	44 494	30 062
Other higher education institutions	p	16 318	10 824	12 707	8 663	3 611	2 161
	n	49 054	33 446	8 171	5 545	40 883	27 901
Academies of the Ministry of National Defence	o=p	6 236	2 727	4 821	2102	1 415	625
Academies of the Ministry of Interior and Administration	o=p	1 206	369	676	243	530	126

Employment by education level (in 2016) was not enough high:



1.2. National regulations concerning Polish higher studies.

In 2005 the Law on Higher Education undoubtedly contributed to solving many problems affecting the functioning of the Polish higher education system.

- Higher Education Institutions

The Higher Education Institutions (HEIs) in Poland are divided into state (*public*) and private (*non-public*) institutions. There are two main categories of higher education institutions: *university-type* and *non-university institutions*. In the university-type HEIs, at least one unit is authorized to confer the academic degree of Doctor (*PhD*), i.e. offers at least one doctoral programme.

Public universities in Poland

Name in English	Location	Established in
University of Białystok	Białystok	1997
Casimir the Great University	Bydgoszcz	1969
University of Gdańsk	Gdańsk	1970
Jagiellonian University	Kraków	1364
John Paul II Catholic University	Lublin	1918
Maria Curie-Skłodowska University	Lublin	1944
University of Łódź	Łódź	1945
University of Warmia and Mazury	Olsztyn	1999
Opole University	Opole	1994
Adam Mickiewicz University	Poznań	1919
University of Rzeszów	Rzeszów	2001
University of Silesia	Katowice	1968
University of Szczecin	Szczecin	1945
Nicolaus Copernicus University	Toruń	1945
University of Warsaw	Warsaw	1816
Cardinal Stefan Wyszyński University	Warsaw	1954
University of Wrocław	Wrocław	1702
University of Zielona Góra	Zielona Góra	2001

Jan Kochanowski University	Kielce	1969
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- **Structure of studies in Poland**

The higher education institutions run full-time, extramural, evening and external courses. Full-time courses are defined as the basic type of studies.

Poland conforms to the guidelines from the Bologna Process in European higher education. The degree system based on the three-cycle structure has been successfully implemented together with the European Credit Transfer and Accumulation System (ECTS). The European standard in higher education makes it easier for students to obtain recognition of their qualifications in other countries.

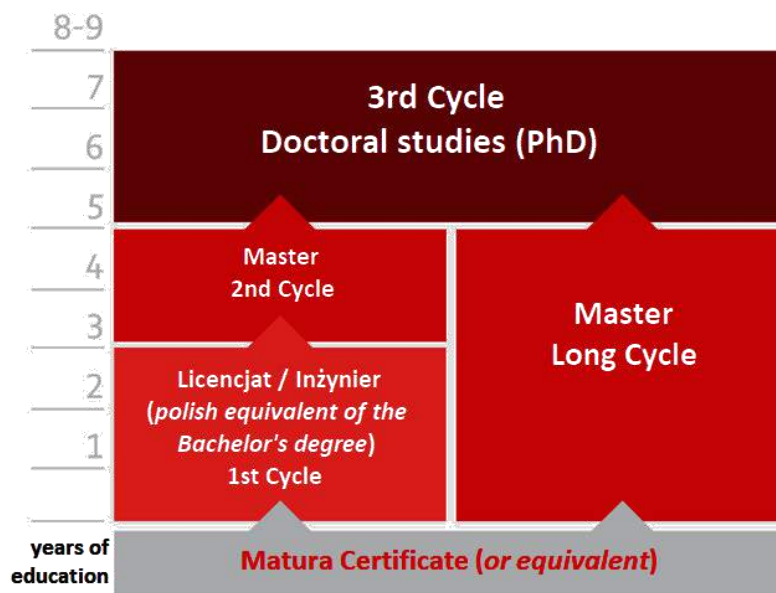
1st Cycle	<p>First-cycle studies (3 to 4 years) lead to the professional title of a <i>licencjat</i> or <i>inżynier</i> (Engineer, in the field of engineering, agriculture or economics). This is the Polish equivalent of the Bachelor's degree. It is focused on preparing students for future employment or for continued education within the Master's degree programmes. To obtain this degree, students must earn 180-240 ECTS credits.</p>
2nd Cycle	<p>Second-cycle studies - <i>Master's degree programme</i> (1.5 to 2 years) following the first cycle studies and leading to the professional title of Master (<i>magister</i>, or an equivalent degree depending on the study course profile). It is focused on theoretical knowledge, as well as application and development of creative skills. In artistic disciplines, the focus is on the development of creativity and talents. Master's degree holders may enter a doctoral programme (third-cycle studies). To obtain the degree, students must earn 90-120 ECTS credits.</p>
Long-cycle studies	<p>In addition to the general structure, 11 fields of study including acting, art conservation and restoration, canon law, dentistry, law, medical analysis, medicine, production and photography, pharmacy, psychology and veterinary medicine, offer long-cycle programmes only.</p> <p>Long-cycle studies - <i>Master's degree programme</i> (4.5 to 6 years) leading to the professional title of Master (<i>magister</i>, or an</p>

equivalent degree depending on the study course profile). To obtain this degree, students must earn 270-360 ECTS credits. Such single long-cycle studies are based on an integrated study programme which contains both basic studies and in-depth specialisation. Completion of this degree will provide a qualification corresponding to the Master's degree at the second-cycle studies.

3rd Cycle

Third-cycle studies - *Doctoral degree programmes* (normally 3 to 4 years) accessible for graduates of Master's degree programme, leading to a PhD degree, offered by the university type schools as well as some research institutions (departments of the Polish Academy of Sciences as well as research and development institutions). The PhD degree is awarded to candidates who submit and successfully defend a doctoral dissertation before the thesis committee and pass the doctoral examination.

Graphically we have the following:



go-poland.pl/ru/structure-studies-poland

- Examinations

All higher education institutions are required to end their courses with examinations. There may be several independent examinations or tests in separate parts of a subject. Usually, oral and written examinations are held at the end of each semester during the

examination session. Students sit examinations on each subject separately. The performance assessment period covers either one semester or one academic year. To successfully complete a semester (or a year), a student must attain the pass mark (at least “satisfactory”) for all assessments and examinations in the subjects covered by the curriculum and obtain performance assessment credits for all integrated placements.

Grading: Each HEI identifies its grading scale in its Study Rules. The most common scale comprises the following marks:

- **5 very good** (bardzo dobry)
- **4 good** (dobry)
- **3 satisfactory** (dostateczny)
- **2 unsatisfactory / fail** (niedostateczny)
- **credit / pass** (zaliczenie)

Sometimes the plus symbol or decimal is used to modify the numerical grades.

It must be pointed out at this time that grades awarded according to the scale are not directly transferable to the ECTS credits.

- **ECTS credits**

In addition to the grading scale, there are HEIs who implement European Credit Transfer System (ECTS) under which a certain number of credits is allocated to a given subject, independently of marks awarded. To complete a year successfully, the student has to collect 60 credits (30 per semester).

The ECTS (European Credit Transfer System) is the standard adopted by all universities in the European Higher Education Area (EHEA) in the process of convergence between Europe’s higher education systems. Since 2007, all Polish higher education institutions have been required to use ECTS for both credit transfer and accumulation within their degree programmes. The ECTS credits allow foreign students’ periods of study at HEIs in Poland to be recognized.

- **Diploma**

In order to graduate, students are required to:

- pass a performance assessment for all subjects, integrated placements and practical work sessions, and pass all examinations covered by the study programme set for a given field of study;

- present, at an appointed date, a diploma project and attain a pass mark for that project;
- pass the diploma examination.

Upon graduation, the student receives a diploma of completion of studies in a specific field of study together with a *Diploma Supplement* (copy of the diploma translated into a foreign language, describing the degree, level and specialisation).

1.3. International cooperation

In line with internationalization requirements, the knowledge of a foreign language (mainly English) is mandatory. at the minimum required level is B2 during recruitment, publications in international ranking lists, participation in international and foreign conferences, and publications in international languages. In addition, the following steps are planned for international doctoral studies: participation in international exchange programs, publication of at least one scientific article in a journal from the Journal Citation Reports list, ERIH lists and SCOPUS database; submission of an application for funding of scientific research to an international agency providing funding for research, at least one-month academic internship at a foreign scientific unit, implementation of part of the classes in English, participation in projects financed under international grants. So,

- degree programmes or individual courses can „normally” be taught in foreign languages,
- degree programmes can be offered jointly by two or more HEIs, including international HEIs,
- there are joint diplomas (left for regulation by the High Education Minister),
- Polish HEIs can establish their units abroad & foreign HEIs can establish their units in Poland etc.

The Act of March 18, 2011 on the amendment to the Act of Higher Education Law, the Act on Academic Degrees and the Academic Title and on the Degrees and Title in the field of Art and on the amendment of some other Acts was the finale of the work carried out since 2008 under the “Plan of the National Strategy for the Development of the Country” approved by the resolution of the Council of Ministers on 24 November 2009

and the Polish Rectors' Foundation in 2009 and 2010. The same amendment Act amended 12 other laws.

The reform of the higher education system has not ended in 2011. Among the amending laws, the Act of July 11, 2014 is of particular importance. First of all, the issue of commercialization (direct and indirect) of research results has been normalized, with a view to increasing the material motivation for conducting innovative research programs. The attempt to organize the definitions of concepts that have been settled in higher education; eg. learning outcomes, has been addressed in the issue of regulating the functioning of the Integrated Information System on Science and Higher Education, intensified the methods of combating plagiarism of diplomas, introducing (among others) the legal basis of the nationwide repository of written thesis papers and extending the basis of disciplinary responsibility of students and staff of science and academics / didactics. There are also provisions that give doctoral students a lot of privileges, while emphasizing the legal status of them and the rules governing the monitoring of graduates.

1.4 Institutions managing the higher education

Universities in Poland are autonomous in all areas of their activity on the principles set out in the Act on Higher Education. The Ministry of Science and Higher Education is the appropriate Ministry for the supervision of higher education in Poland.

The Minister of Science and Higher Education determines the National Qualifications Framework (and the Polish Qualifications Framework), including a description of learning outcomes for the areas of education, including levels and profiles of education.

A representative body of higher education, which cooperates with the Minister for Science and Higher Education and other authorities and public administration in determining the state education policy in the field of higher education, is the Main Council of Higher Education.

The evaluation of the quality of education is made by the Polish Accreditation Commission.

The Polish Accreditation Committee is an independent expert body working to improve the quality of education in all public and non-public higher education institutions operating in the Polish higher education system.

PKA (Accreditation Committee) performs program and institutional evaluations and presents the results of these assessments to the minister of higher education, opinions

on the establishment of the university and the university or its basic organizational unit entitles to conduct studies in a specific field, level and profile of education, opinions on the restoration of suspended permission to conduct studies in a specific field, level and profile of education, as well as opinions on the establishment of a university or branch in Poland by a foreign university.

1.5 Assessment of the quality of higher education

Different quality aspects of HEIs are evaluated. This evaluation has among its objectives at least the following ones: the measurement of the performance of the public service of the HEIs, the comparison and transparency among universities and improvement of teacher quality. Additionally, these quality data will serve as a point of information for public administrators in decision-making procedures and promoting mobility and excellence of teachers and students.

The objectives set out in the preceding paragraph are fulfilled through the evaluation, certification and accreditation of:

- Studies aimed at obtaining national or international certificates of validity, including that of a Doctor and the qualifications of universities and higher education centers;
- Teaching, research and teacher-management activities, as well as higher education centers;
- Other activities and programs that may be carried out as a result of the promotion of the quality of teaching and research by public administrations.

The external bodies responsible for improving the quality of education, the assessment of which determines the grade and quality of education are:

- Polish Accreditation Commission,
- the Accreditation Commission for Academic Medical Schools (ACAMS),
- the National Accreditation Council for Nurses and Midwifery Schools
- the University Accreditation Commission are

Jan Kochanowski University in Kielce recognizes the strategic goal of ensuring the highest quality of education. The University take into account:

- the provisions of the Bologna Declaration,
- the Act of Higher Education,
- European Qualifications Framework

- Polish Qualifications Framework etc.

In terms of UJK, the “quality” includes:

- the improvement of the “quality management”
- the enlightening of “institutional quality” by measuring the performance of key internal and external stakeholders
- the implementation of mechanisms that minimize deviations between expectations and actual outcomes.

In order to improve the quality of education, UJK implements also the quality improvement in the field of university resources management, ie:

- finance,
- didactic-science and ICT infrastructure,
- knowledge and human resources.

The quality assurance system for doctoral education (as well as first and second cycle of studies and postgraduate studies) in Poland is on several levels. It takes place at:

- classes in individual subjects resulting from the study plan (responsible: tutors, doctoral studies supervisor);
- Faculty of Graduate Studies (Faculty Commission of Quality Education);
- University (Rector’s Plenipotentiary Representative for Quality Assurance of Training, University Commission for Quality of Education).

1.6. Categories of teachers of higher schools

- Academic teachers

Academic teacher - teacher working at the university. Academic teachers based on the Act of 27 July 2005 Law on Higher Education are employed as:

- research and teaching staff,
- teaching staff,
- research staff,
- certified librarians and certified documentation and scientific information employees.

- Research and teaching staff

Scientific employees devote themselves entirely to scientific and research work. Academic and didactic staff can be employed in the following positions:

- full professor,
- Associate Professor,
- visiting professor,
- Assistant Professor,
- assistant.

- **Duties of research and teaching staff**

Pursuant to the law on higher education, research and teaching staff are obliged to:

- educate and educate students,
- conduct scientific research and development work; develop scientific or artistic creativity;
- participate in the organizational work of the university.

- **Researchers from Polish universities in accordance with the law are required to:**

- conduct scientific research and development work; develop scientific or artistic creativity,
- participate in the organizational work of the university.

- **Teaching staff**

The teaching staff are exempt from conducting scientific and research work, they devote their working time entirely to didactics (classes with students) and related organizational matters. Teaching staff can be employed in the following positions:

- senior lecturer / senior instructor.
- lecturer,
- lector / instructor.

- **In vocational high schools, teaching staff may also be employed in positions of:**

- full professor,
- Associate Professor,
- visiting professor,
- assistant.

- Duties of teaching staff

Pursuant to the Act on Higher Education, teaching staff are obliged to:

- educate students,
- improve their professional qualifications,
- participate in the organizational work of the university.

The teaching staff in tertiary education by level and sex - in 2015 (in thousands), in statistics are the following in EU and Poland:

	Tertiary total			Short-cycle tertiary			Other tertiary		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
EU-28 (*)	1 448.5	843.9	604.6	93.7	47.1	46.6	1 291.5	764.4	527.1
Belgium	28.6	14.7	13.9	-	-	-	-	-	-
Bulgaria	23.7	12.3	11.4	-	-	-	23.7	12.3	11.4
Czech Republic	16.5	9.9	6.6	0.1	0.0	0.1	16.4	9.9	6.6
Denmark	37.1	21.2	15.9	1.7	1.0	0.7	35.4	20.2	15.2
Germany	396.2	244.8	151.4	0.0	0.0	0.0	396.2	244.8	151.4
Estonia	4.8	2.5	2.4	-	-	-	4.8	2.5	2.4
Ireland (†)	9.2	5.2	4.1	-	-	-	9.3	5.2	4.1
Greece (‡)	15.2	10.2	5.0	-	-	-	15.2	10.2	5.0
Spain	157.0	90.3	66.7	33.0	17.1	15.9	124.0	73.2	50.8
France (*)	109.2	67.8	41.4	20.9	14.4	6.5	88.3	53.4	34.8
Croatia	16.1	8.4	7.7	-	-	-	16.1	8.4	7.7
Italy	90.0	56.4	33.5	-	-	-	90.0	56.4	33.5
Cyprus	2.9	1.7	1.2	0.6	0.3	0.3	2.3	1.4	0.9
Latvia	6.8	3.0	3.8	1.1	0.4	0.7	5.7	2.6	3.1
Lithuania	13.1	5.7	7.3	-	-	-	13.1	5.7	7.3
Luxembourg	0.8	0.5	0.3	0.1	0.0	0.0	0.7	0.5	0.3
Hungary	21.0	12.2	8.9	0.8	0.5	0.3	20.2	11.7	8.6
Malta	1.6	1.1	0.6	0.2	0.2	0.1	1.4	0.9	0.5
Netherlands	62.6	34.8	27.8	1.1	0.6	0.5	61.4	34.2	27.3
Austria	60.9	34.9	26.0	9.3	4.5	4.8	51.6	30.4	21.2
Poland	97.4	54.2	43.3	0.6	0.2	0.5	96.8	54.0	42.8
Portugal (‡)	32.3	18.0	14.4	-	-	-	33.5	18.8	14.7
Romania	27.8	14.0	13.7	-	-	-	27.8	14.0	13.7
Slovenia	7.1	4.2	2.9	1.4	0.7	0.7	5.7	3.5	2.3
Slovakia	12.8	7.0	5.8	0.5	0.2	0.3	12.3	6.8	5.5
Finland	14.9	7.3	7.6	-	-	-	14.9	7.3	7.6
Sweden	34.1	19.0	15.1	0.5	0.3	0.2	33.6	18.7	14.9
United Kingdom (†)	148.5	82.6	65.9	22.8	10.9	11.8	128.8	73.5	55.4
Liechtenstein	0.1	0.1	0.0	-	-	-	0.1	0.1	0.0
Norway	27.7	15.1	12.6	0.7	0.3	0.4	27.0	14.8	12.3
Switzerland	33.3	21.9	11.4	-	-	-	33.3	21.9	11.4
FYR of Macedonia (‡)	3.4	1.7	1.7	-	-	-	3.4	1.7	1.7
Serbia	10.7	5.9	4.8	-	-	-	10.7	5.9	4.8
Turkey (‡)	142.4	81.5	60.9	16.6	10.1	6.5	125.8	71.4	54.4

(*) Short-cycle and other tertiary: 2014.

(†) Independent private institutions: excluded. Other tertiary education: includes short-cycle tertiary education; 2014. Academic staff in government dependent private institutions: excluded.

(‡) 2014.

(*) Independent private institutions: excluded. Short-cycle tertiary education: includes post-secondary non-tertiary personnel.

(†) Other tertiary education and total tertiary education: includes post-secondary non-tertiary personnel giving courses in higher education institutions. Other tertiary education: 2014.

Source: Eurostat (online data codes: educ_uoe_perp01)

1.7 Description of national qualification framework

- Internal Quality Assurance System:

1. refers to all stages and aspects of the didactic process,
2. includes the activities for the improvement of higher education, doctoral and postgraduate programs,
3. takes into account: the way of verifying the effects of education on all faculties and levels of higher education, doctoral studies and postgraduate studies;

assessment of achievement of the assumed learning outcomes; assessments by students, doctoral students and postgraduate students after the end of each education cycle; conclusions from the monitoring of the professional careers of university graduates and conclusions from the study of employers' expectations and the compatibility of learning outcomes with the needs of the labor market.

- **The aim of the Internal Quality Assurance System is to:**

1. take care of fulfilling the mission and strategy of the University in the area of improvement and quality assurance,
2. increase the attractiveness and competitiveness of UJK towards other universities,
3. continue the improvement of the quality of education in the UJK and building quality culture,
4. create and promote pro-quality activities and involve the entire academic community in this process,
5. improve the quality of education of teaching staff, infrastructure and didactic offer,
6. create the clear and open standards for monitoring and evaluation of the teaching process.

In order to carry out the tasks of the Internal Quality Assurance System for Higher Education, we set up the University Commission of Quality of the Education. It consists of the University Education Quality Assurance Team and University Quality Assessment Team. Within the latter, there are two subassemblies:

- **Teachers Training Subcommittee** - Subcommittee on Doctorate and Postgraduate Studies (PSDiP):

According to the Order No. 78/2015 of the Rector of the University of Jan Kochanowski in Kielce (19 October 2015) the tasks of the Subcommittee on Doctorate and Postgraduate Studies are:

1. supporting, monitoring and analyzing the quality of education at doctoral and postgraduate studies,
2. analysis of the compliance of doctoral and postgraduate studies with the applicable internal and external regulations,
3. giving opinions on the programs of doctoral and postgraduate studies,
4. proposing changes to the doctoral and postgraduate education programs aimed at

improving the quality of education,

5. analysis of the adequacy of methods of verification of attainment of the assumed effects of education at doctoral and postgraduate studies.

At the level of the faculties of the university there are Faculty Quality Assurance Training Committees which have established:

- Departmental Quality Assurance Teams,
- Faculties for Quality Assessment of Education,
- Directional Learning Programs Teams.

The effects of doctoral education (and how they are verified and documented) determine the organizational unit running doctoral studies. In the case of UJK, such unit is the department.

The provision of high quality doctoral education is, inter alia, a way of constructing plans for these studies, which ensure the participation of doctoral students in:

- compulsory courses in subjects closely related to the field of study
- optional subjects developing professional skills, preparing the doctoral student for research or research and development work,
- optional classes, developing teaching skills, preparing the doctorate to practice to the profession as a teacher,
- professional practice.

An important part of the Internal Quality Assurance System is the research³⁷ conducted as pools at the university, faculties and field surveys among:

1. students, doctoral students, postgraduate students and graduates of particular levels and forms of studies,
2. academic teachers,
3. non-academic staff serving the education process.

The internal quality assurance system is an important part of the quality system of university-wide procedures and on departmental level - faculty procedures. They are constantly reviewed and updated. At present, among the general-purpose procedures at

³⁷ These researches are conducted with the principals of voluntary, confidentiality and openness of the results. Doctoral students, as well as first- and second-degree students, and postgraduate students, may complete surveys from their individual accounts at the Virtual University.

The surveys assessing the academic teachers for the fulfillment of their didactic duties are carried out each time after the completion of classes in the given year and in the field of studies; the questionnaires evaluating the classes are conducted after each course of the subject in the given year and the course of study. The results obtained in these surveys serve to improve the quality of education.

UJK, there are:

1. The procedure for the creation, modification and abolition of higher education courses / doctoral and postgraduate studies,
2. The procedure for assessing the effectiveness of achievement of assumed learning outcomes,
3. The procedure for assessing the internal quality assurance system for education,
4. The procedure of providing students with didactic, scientific and material support,
5. The procedure for handling the course of studies,
6. Dissemination procedure,
7. The procedure of the general university survey,
8. Assessment procedure for an academic teacher,
9. The procedure for monitoring the professional careers of graduates,
10. The procedure of dissertation,
11. The procedure for holding and documenting student internships,
12. The procedure of class attendance,
13. The procedure of mode and method of conducting certification exams from foreign languages,
14. Student participation in elective courses,
15. The procedure for the introduction of grades to the Virtual University,
16. The procedure for dealing with complaints and conclusions and resolving conflicts.

The detailed description of the internal quality assurance system (presented here) concerns Jan Kochanowski University in Kielce. Solutions in individual Polish universities may differ, but it is important that in each institution - both public and non-public - the system works:

- The systematic work to improve the quality of education is conducted by the Polish Accreditation Commission (PAC). It is created by a panel of experts working to improve the quality of education in all public and non-public HEIs, is qualified to evaluate the fulfillment of conditions for teaching and quality assessment at I, II and III degrees of studies and postgraduate studies, and to evaluate the activities of core organizational units in the universities.
- PAC was created on January 1, 2002 (under the name the State Accreditation

Commission) under the Act of 20 July 2001 amending the Act on Higher Education Act at that time and the scope of its tasks and competences was redefined and expanded by the current Act of 27 July 2005 about the Higher Education, as well as the Act of 23 June 2016 on amending the Act on Higher Education and some other acts.

- Passing the assessment of the Polish Accreditation Commission is obligatory and its negative rating may result in the decision of the minister responsible for higher education to revoke or suspend the right of education in the given field of study and the level of education (also for doctoral studies).
- The Polish Accreditation Commission conducts a program of evaluation based on the evaluation of the quality of education in the fields of study, the levels and the profile of higher education.
- The amended Act on Higher Education and related regulations allow PAC a less formal and more substantive approach to assessing the quality of education in Polish higher education institutions.

While preparing the detailed criteria for program evaluation, the Commission adopts solutions based on current legislation but also takes into account “Quality Assurance Standards and Guidance in the European Higher Education Area” according to which the program evaluation criteria consist of:

- the concept and curriculum, its consistency with the mission and strategy of the institution, and the ability to achieve learning outcomes;
- the education staff;
- the cooperation with the socio-economic environment;
- the didactic and scientific infrastructure and educational resources;
- caring for students and supporting learning and achieving outcomes.

By assessing the quality of education in the fields of general-studies, PAC analyzes primarily:

- the interrelationship of research activities with the learning and teaching process in a particular direction,
- the impact of researches on the achievement of learning outcomes,
- the ability of students to participate in research.

In the case of a practical profile, the focus of the Commission is on how to provide students with the opportunity to acquire:

- knowledge,
- practical skills,
- social competence in conditions as close as possible to actual jobs³⁸.

The general approach of the PAC is based on the principle that the most important impact on the quality of education is a well-thought-out, modern education program that responds to the challenges of the present day, carried out by appropriately selected teaching staff in the conditions necessary to achieve the goals set. The Commission also takes into consideration:

- the clearly defined effects to be achieved by the graduate;
- the fact of ensuring the application of effective, diverse and aptly chosen and tailored student learning approaches to learning outcomes, with particular emphasis on the degree of diplomacy;
- the confirmation of achievement by graduates of all assumed learning outcomes.

The amendment of the Act on Higher Education took into consideration the process of education (and especially the system of regulations concerning quality assurance and evaluation of education) in Polish universities which were very bureaucratic. Universities have developed extensive internal procedures to document in detail their efforts for a good quality of education. This in mainly concerned the functioning of the formal internal structure of the quality assurance system. Meanwhile, the measure of quality culture should be the efficiency of this system, and the Polish Accreditation Commission should evaluate its effectiveness rather than the formal description.

When making changes to the quality assessment system, it was assumed that the quality assessment of PAC in education should be of a substantive nature and should be based on a clear set of criteria. Changes in the Act of Higher Education Law consist in departing from the need to verify the PAC's compliance with numerous formal conditions for conducting studies in a particular direction, level and profile of education. The process of checking the legality of teaching will be separated from the process of substantive evaluation of the quality of education. In order to minimize bureaucratic burdens for study units, the formal verification will be based on the data collected by the reporting system, including the POL-on system.

³⁸ In assessing the educational programs at the different levels of education, the Commission takes into account the characteristics of the education levels included in the Polish Qualifications Framework and adjust the programs to the appropriate level of the Framework.

The PAC's quality assessment process (or, at least, in the assumptions made by the authors of the last amendment of the Act) was supposed to have the character of a dispute concerning all general evaluation criteria defined in the ordinance of the Minister of Science and Higher Education. Its participants are the evaluation team and the academic community - academic teachers, students and staff supporting the learning process, which participates in the delivery of education on the assessed direction. As the result of such a dispute, in addition to the evaluation by the evaluation team, recommendations should be made, the implementation of which will guarantee the improvement of the learning process.

The amendment of the Law on higher education abolished PAC's institutional assessment, which consisted in evaluating the core activity of the organizational unit of the institution and was carried out in the unit where the program evaluation had been conducted in most of its courses. There are voices, especially among PAC experts, that this type of assessment should be reintroduced. PAC's opinions and conclusions are presented to the minister competent for higher education.

- **The Polish Accreditation Commission has the status of full member in:**

- 1) Central and East European Network for Quality Assurance Agencies in Higher Education (CEENQA) - since January 2002
- 2) European Consortium for Accreditation (ECA) - since December 2005,
- 3) International Network for Quality Assurance Agencies in Higher Education (INQAAHE) - since 2007,
- 4) European Association for Quality Assurance in Higher Education (ENQA) - since January 2009.

Since 15.01.2009, the Commission is in the European Quality Assurance Register for Higher Education (EQAR), a register of agencies operating under the European Standards and Guidelines for Quality Assurance.

In 2012, the American National Committee on Foreign Medical Education and Accreditation (NCFMEA) assessed that the procedures and standards used by the Polish Accreditation Commission in the accreditation process of medical schools are comparable to those of the US.

Pursuant to the provisions of the PAC's Statute, the Commission's activities are the subject to external review (once every 5 years). The first such assessment was carried out by the International Panel of Experts in 2008, and its result allowed the inclusion of

the Polish Commission in the European Registry of Quality Assurance Agencies (EQAR). As a result of the next review at the turn of 2013 and 2014, the full membership of PAC in ENQA has been confirmed.

Qualifications obtained through doctoral studies completing by the doctoral degree in a specific field have been entered into the Integrated Qualification System (Act of 22 December 2015 on the Integrated Qualification System) - corresponding to 8th level of Polish Qualification Framework.

Qualifications awarded in the Polish higher education system

Type of studies:	Name of qualification	ECTS credits	Planned qualification level in the PQF
first cycle studies (Bologna first cycle)	diploma certifying the professional title of licencjat /inżynier or equivalent title	at least 180	6
second cycle studies (Bologna second cycle) or long cycle studies	diploma certifying the professional title of magister /magister inżynier or equivalent title (e.g. physician)	second cycle studies – at least 90 long cycle master degree studies: at least 300 (5 year studies), 360 (six year studies)	7
third cycle studies (Bologna third cycle)	– diploma certifying the academic degree of <i>doktor</i> in a specific discipline	45-60	8
<i>additionally:</i>			
postgraduate non-degree studies	certificates of completion of postgraduate non-degree studies	at least 60; (the studies should not be less than two semesters)	depending on the programme

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- An integral part of the Integrated Qualification System is the Polish Qualification Framework.

The Polish Qualifications Framework is a modern, coherent European Qualifications Framework (EQF), a way of determining, organizing and describing qualifications, including the effects of education obtained through:

- 1) formal education (schools, higher education)
- 2) non-formal education - outside the general education,
- 3) vocational and higher education system (eg. qualification, language, specialist - certified)
- 4) courses,
- 5) learning outcomes in non-formal education (eg. professional experience and practice, internships, student internships, independent learning).

Schematically we can present the matter as followed (including the Polish National Qualification Framework - PQF):

Chapter 2. Organization of doctorate in Poland

2.1 Main characteristics of doctoral studies

Doctoral studies are conducted in Poland in units with the appropriate powers conferred by the Central Commission on Degrees and Titles at the request of the organizational unit.

The Central Commission:

- 1) takes into account the level of scientific or artistic activity of the unit and the number of people employed in it who hold the title of professor or the degree of habilitated doctor.
- 2) confers this right after consultation with the Central Council for Science and Higher Education.
- 3) influences the process of quality assurance in the sense that it controls the level of scientific and didactic staff employed in the doctoral student body and has the power to revoke the assigned powers if the organizational unit ceases to meet the required conditions set forth in the Act.
- 4) makes a periodic assessment of the fulfillment of the conditions for awarding a Ph.D.
- 5) is also the body to which an applicant for a doctorate can appeal against a resolution of a refusal (after reviewing the appeal, within no more than six months, the Central Commission either upholds the contested resolution or, by repealing it, refers the case to the board of the same or another organizational unit for reconsideration).
- 6) keeps, updates and publishes on its website:
 - the information about the organizational units authorized to assign degrees along with a list of these degrees;
 - the information about organizational units that the Central Commission has restricted, revoked or suspended the right to assign degrees, the date it was suspended, and the reason for the restriction, withdrawal or suspension of entitlement;
 - the information about organizational units conducting doctoral studies;

- the summaries of doctoral dissertations and reviews submitted to the doctoral degree.

The internal evaluation process consists, among others, in determining the effectiveness of achievement of the assumed learning outcomes by assessing the students' achievements of the assumed learning outcomes and verification of the methods of assessment and evaluation. Responsible persons are:

- lead teachers,
- supervisors,
- reviewers (of doctoral dissertation),
- tutors,
- curricular teams for curricula,
- Faculty Unit for Assessing the Quality of Education
- the University Team for Assessing the Quality of Education.

The verification of effectiveness of achievement of the assumed learning outcomes is realized by:

- the assessment of the subject card (curriculum) and verification of the assumed learning outcomes in the area of knowledge, skills and social competences;
- the diploma process - through the diploma thesis the assumed effects of education are verified. They are evaluated by the promoter and reviewer (diplomas at the various faculties and the diploma procedure);
- student practice (doctoral) - the learning outcomes gained during student internships are complementary to the concept of education;
- the international exchange of students - obtaining information from students about their knowledge, skills and social competences in the context of staying in a partner university;
- the achievement of scientific circles - feedback through external reviews (scientific publications, speeches at conferences, awarded by the Rector and the Minister's scholarship);
- investigating the fate of graduates - by providing feedback on the acquired knowledge, skills and competences and their relevance to the labor market;

- the survey of employers' opinions - opinions of employers on educational programs, including the expected learning outcomes and methods of their verification, especially concerning practical training;
- monitoring the activities that prepare students to acquire in-depth knowledge and skills in conducting research and practical work-related training.

Verification of the quality of education during doctoral studies is inter alia:

- 1) the staged works - performed by a doctoral student during studies: colloquium, tests, final papers, presentations, case studies;
- 2) the exams on the subject - questions prepared for the exam should not go beyond the content included in the course card delivered during lectures / exercises. Student has the right to justify by the instructor received on the assessment exam; the form of the examination: oral / written, practical is determined by the teacher and included in the card of the subject;
- 3) the credit and the credit with the grade - the teacher defines the assessment criteria, gives the student the marks and justifies the assessment received by the student on the credit. Criteria for assessment and its components are defined in the course card;
- 4) the report on the implementation of scientific research and progress in the preparation of the dissertation, provided by the scientific supervisor or promoter - at the end of each year of study;
- 5) the parameterization of scientific achievements - doctoral students of UJK are obliged to introduce their own scientific achievements (for the academic year) through individual profile to the Scientific Research module.

The verification of the achievement of directional learning's outcomes is also a positive credit for doctoral dissertations, writing a dissertation, positively reviewed and defended.

According to the recent amendment of the Act on Higher Education, the Minister of Science and Higher Education "conducts the Unified Anti-plagiarism System, which cooperates with the national repository of written diploma theses, and assures the free use of this system by universities" - according to this provision since the academic year 2018/19 every university's obligation will be to verify diploma theses in the central system run by the Ministry of Science and Higher Education. The anti-plagiarism procedure will cover all bachelor's, master's, and doctoral theses. So far, universities in

Poland have used different anti-plagiarism systems (eg Plagiat.pl or Open Anti-plagiarism Systems) - the obligation to carry out the anti-plagiarism procedure has introduced (since the academic year 2015/16) by the amendment of the Higher Education Act of 1.10.2014

According to this amendment the rectors of the universities until 31.12.2018 must submit to the national repository of written thesis papers data on works which defence was successful after 30 September 2009.

Transition of the anti-plagiarism procedure is a condition of admission the work for the diploma / defence dissertation. If the assessment shows that the work does not meet the criteria of the anti-plagiarism procedure and at the same time contains a prerequisite for plagiarism, then such work is not admitted to the dissertation examination / submission of the dissertation and is not added to the anti-plagiarist database.

A work that does not meet the criteria of the anti-plagiarism procedure and also contains the premises for plagiarism is a subject to additional evaluation by the commission appointed by the dean. The commission consists of a dean or an assistant dean, a promoter and other specialist in the subject matter of a given thesis with a doctoral degree or a scientific title. It makes a final judgment on whether a job is plagiarized.

Of course, the problem is the degree of digitization not only of diploma and doctoral studies, but also - and perhaps above all - the literature of the subject. If a student / doctoral student uses materials, that are in a foreign languages and are not included in the database, the anti-plagiarist systems are unable to detect unauthorized / unreported borrowings.

On the Internet you can find lots of tips / guides telling people what to do to avoid the anti-plagiarism program and “do not get caught” on plagiarism. So, this is still a problem that is not completely resolved. Many people stress that there is still a huge role to play here to fulfill the thesis supervisor. The effectiveness of the anti-plagiarism systems used by the Polish universities has been negatively assessed by the Supreme Chamber of Control in 2014, accusing them of being unprofitable and ineffective - they can easily be deceived, they do not even detect the primitive borrowings of popular portals, and the results of their work are incomparable between colleges / universities. Professor Tadeusz Grabiński, after analyzing the anti-plagiarist programs used by Polish universities (Plagiat.pl, Open Antipollution System, Podkarpackie Anti-Plagiarism

Platform and Genoa), thinks that instead of wondering how much borrowing already means plagiarism, one should show (for each field separately) how much original work is in a given work.

The universities define the relevant ECTS regulations and standards. The faculty council / doctoral program manager will individually set up an education plan and program for a doctoral student undertaking studies at another university or research institute in accordance with ECTS. The number of ECTS credits is attributed to all subjects from which the doctoral student has obtained a credit according to the study plan and the ECTS standards.

2.2 Diversification of doctoral studies

It is planned to introduce three paths of doctoralisation in Poland: in doctoral schools that will operate at research and research and teaching universities, through doctoral grant and "free foot" grant.

In addition, as part of the diversification of doctoral studies, the identification of doctoral and professional doctorates as well as the diversification of doctoral environmental and interdisciplinary studies is considered.

As part of the implementation by the Ministry of Science and Higher Education of the project "Education at doctoral studies: Development of doctoral programs with different profiles", implemented under the priority axis III Operational Program Knowledge Education Development in 2017, 6 framework programs of doctoral studies with different profiles were developed. They include the following criteria: profile (academic vs. application), type of cooperation with the project partner (intersectoral, interdisciplinary or ordinary, ie implemented independently by the unit), coverage (national vs. international) and area of knowledge (according to the National Science Center classification). These are the programs: academic, international (ST), application, intersectoral. national (HS), academic, interdisciplinary, international (HS), application, interdisciplinary and intersectoral, national (ST), academic, interdisciplinary, international (NZ) and application, intersectoral, national (NZ).

2.3 Thesis

The procedure of defence of the doctoral dissertation provides for the following preliminary steps to be carried out:

- a) submission of the PhD student's work to the promoter,
- b) analysis of the work via the anti-plagiarism system,
- c) accepting work by a supervisor and an appropriate scientific council,
- d) appointment of two external reviewers in the rank of habilitated doctors,
- e) handing over the work for a review,
- f) after positive reviews are received, the appropriate scientific council sets the date of defence and the composition of the commission,
- ✓ the defence procedure consists of two parts - public and closed. The first part goes through these steps: presentation of the PhD student's profile by the promoter, presentation of dissertations by a doctoral student, presentation of the review by reviewers,
- ✓ questions to the doctoral student by the members of the commission and present on the public defence,
- ✓ PhD student's answers for reviewers' comments and questions,
- g) evaluation of doctoral student's response by reviewers and asking questions.

In the closed part, the committee discusses the work and course of the defence and makes a secret ballot on the defence and (possibly) honoring the work.

After the public announcement of the results and the positive approval of the defence by the doctoral committee, the appropriate scientific council in a secret ballot gives the PhD student a doctorate.

2.4 Coherence between the master's and doctoral level (possible statistics at the level of studies and field of study, etc.)

The coherence between the master's and doctoral level was introduced in 2016 by adopting the Integrated Qualification System and the 8-stage Polish Qualifications Framework.

Master's studies are covered by level 7 framework, doctoral studies - level 8.

The frameworks contain the unification of 8 areas of knowledge along with specific fields and disciplines of science and art.

In Poland, it is possible to write a doctorate from a different field of science than a completed master's degree.

The Act on Higher Education in art. 196 stipulates that a person who possesses the second degree qualifications, ie a master's degree, may be admitted to doctoral studies.

The special conditions for recruitment for doctoral studies are defined by the university senate, and in the case of a scientific unit - by the individual scientific council.

- **Various options for access to PhD students (third degree studies, "freelancer" etc.)**

In Poland, the PhD degree of doctoral degree is given to a person who has a master's degree, a master's degree, a doctor or equivalent, passed doctoral examinations and defended his doctoral dissertation (dissertation).

The doctoral degree is awarded by those faculties of higher education institutions or scientific institutions that have the power to broadcast.

The preparation of the doctoral dissertation can be carried out either as part of the work at the university as an assistant (valid for 8 years from taking up the post), or by studying at doctoral studies (third degree studies) operating at individual universities or "free rate" within the framework of independent cooperation in a scientific supervisor.

- **National statistics on research and the role of higher education institutions in the research system**

In 2016, general expenditure on research and development in Poland amounted to 17943044,600 thousand PLN (4059512,3 thousand euros), of which 5630383,9 thousand PLN (1273842,5 thousand euros) are expenditures of higher education, and 419683.9 thousands PLN (949511 thousand euros) - outlays directly from higher education institutions. At the same time 394265 thousand PLN (89,200,2 thousand euros) are own funds of higher education institutions.

It is worth mentioning that the majority of this amount is for higher public schools - 389764.2 thousand PLN (881819.5 thousand euros).

If we combine the engagement in research and development of the staff, from 213971 people in Poland 123786 have worked in the higher education system, and 108817 - directly in higher education institutions (including 99870 in higher public schools).

The Number of tertiary education students by level and sex - 2015 (thousands), statistically is the following (in EU and Poland):

	Tertiary total			Short-cycle tertiary			Bachelor's or equivalent			Master's or equivalent			Doctoral or equivalent		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
EU-28	19 530.6	8 969.2	10 561.3	1 397.5	668.8	728.7	11 984.4	5 597.4	6 387.0	5 423.1	2 324.0	3 099.1	725.5	379.0	346.5
Belgium	504.7	222.7	282.0	24.4	9.0	15.4	365.9	160.0	205.9	97.9	44.8	53.1	16.5	8.9	7.6
Bulgaria	279.0	126.8	152.2	-	-	-	186.7	88.4	98.3	85.6	35.1	50.5	6.6	3.2	3.4
Czech Republic	395.5	168.9	226.6	1.0	0.4	0.6	236.9	101.2	135.7	133.1	53.6	79.5	24.6	13.7	10.9
Denmark	313.8	134.7	179.1	35.0	17.7	17.2	195.1	80.2	114.8	73.8	31.9	41.9	9.9	4.9	5.1
Germany	2 977.8	1 550.1	1 427.6	0.4	0.1	0.3	1 792.4	981.5	811.0	988.8	459.5	529.3	196.2	109.1	87.1
Estonia	55.2	22.7	32.5	-	-	-	36.3	15.4	20.9	16.0	6.1	10.0	2.9	1.2	1.7

2.5 Research structure at universities

Research at universities in Poland is conducted as part of:

- 1) professional development (work on doctoral and postdoctoral dissertations); each researcher has the right to paid scientific leave for the finalization of research works,
- 2) so-called statutory research (as part of the obligation to conduct research and annual reports on scientific work), statutory research most often consists of working in research groups, statutory research is financed from the pool of university budgetary resources,
- 3) so-called own (personal) research, own research is also financed from the pool of university budgetary resources earmarked for research activity,
- 4) funds obtained in various types of competitions, primarily the National Science Center and the National Center for Research and Development (Preludium, Etiuda, Sonata, Maestro, Symphony, and Horizon);
- 5) projects and grants for new researchers (Diamond grant, Mobility Plus, Iuventus Plus)
- 6) research grants,
- 7) orders of business entities.

2.6 Relations between higher education and enterprises: internships, internships, etc.

Since 2014 in the plans for higher studies of all three levels, an obligatory subject is the apprenticeship (from 100 to 350 hours at the general academic profile and three months at the practical profile studies), carried out in institutions and enterprises corresponding to the profile and field of study. From 2014, the possibilities of employers' influence on studies have also significantly expanded.

Employers can co-create study programs, jointly with the university to organize internships, conduct theoretical and practical classes for students, sit at a university convention, and give an opinion on its development direction for the future.

Academic Career Offices (ABK) have been created at universities, where employers submit internship offers. ABK operate at the interface of higher education with the labor market. They provide students with information about job offers, internships and apprenticeships, advise and organize training on the labor market.

More and more often, there are ordered courses directed at the labor market in Polish universities. The dissemination of this phenomenon is served by the governmental project "Competence Development Program 2014-2020". Labor offices, academic career offices and student organizations organize the so-called Job fairs, aimed at creating opportunities to meet jobseekers with companies seeking employees.

Internships may be co-financed by universities as part of grants from the Ministry of Science and Higher Education and additionally from European funds. Since 2009, the National Center for Research and Development has allocated almost 2 mln. PLN (454545 euro) for internships and apprenticeships.

The employer concludes a contract on professional program practice directly with the university. It defines in it the program, didactic and organizational supervision as well as undertakes to provide a position and tools for work.

Such an agreement is to help in defining the objectives of good practice - from the point of view of the employer (career goals) as well as the university (educational goals).

Employment rates by detailed tertiary educational attainment level, 25-44 years-old, for 2015 (in %) are the following:

	Women					Men				
	Total Tertiary	ISCED 5	ISCED 6	ISCED 7	ISCED 8	Total Tertiary	ISCED 5	ISCED 6	ISCED 7	ISCED 8
EU	82.4	80.1	82.0	83.4	88.5	90.3	89.3	89.1	91.4	95.3
Belgium	88.0	87.8	88.5	87.3	88.0	90.8	85.4u	90.6	90.9	94.2
Bulgaria	85.0	N/A	80.1	87.9	:u	90.9	N/A	87.6	92.5	:u
Czech Republic	73.1	55.6u	71.4	74.0	82.3	94.6	100.0u	87.4	96.9	99.4
Denmark	85.0	86.2	84.8	84.8	90.9	90.2	92.1	87.2	92.2	97.1
Germany	85.0	89.9	85.0	84.4	90.2	93.8	95.7	93.9	93.3	96.5
Estonia	80.4	79.1	82.0	79.2	75.5u	94.9	93.4	95.0	94.9	100.0u
Ireland	81.0	76.0	82.2	84.7	86.2	89.0	88.7	88.2	90.8	96.0
Greece	68.4	N/A	67.6	74.5	87.8	76.1	N/A	74.9	82.4	94.2
Spain	76.2	70.7	78.9	77.7	89.0	84.4	83.0	84.0	85.5	92.6
France	84.8	85.1	84.4	85.1	79.9	89.7	90.5	86.0	91.1	94.8
Croatia	83.1	81.6	74.3	85.4	100.0u	84.6	87.7	76.1	86.4	87.8u
Italy	70.8	:u	63.0	73.4	84.8	80.1	:c	66.2	84.7	89.4
Cyprus	79.8	78.1	79.7	80.6	94.3u	87.0	89.5	83.6	89.2	98.0u
Latvia	83.4	77.5	82.1	87.5	:u	94.6	94.3	93.4	96.7	100.0u
Lithuania	90.3	N/A	88.6	93.6	:u	94.5	N/A	93.4	96.9	:u
Luxembourg	85.7	85.5	85.7	86.0	84.0u	93.1	95.6	91.8	93.4	92.0
Hungary	78.3	72.5	78.0	79.5	83.4	95.7	94.0	95.6	95.9	100.0
Malta	92.1	93.1	92.6	91.1	:u	96.6	97.3	96.2	97.4	:u
Netherlands	88.8	89.6	87.8	90.1	95.4	93.4	91.1	92.6	94.9	97.7
Austria	85.5	87.2	75.9	87.0	88.3	90.4	90.7	78.3	93.8	89.2
Poland	86.4	:u	77.5	88.4	92.3	93.9	:u	91.3	94.8	100.0
Portugal	84.4	N/A	77.8	86.2	84.5	85.9	N/A	75.3	89.9	93.5
Romania	87.9	91.6	82.9	90.3	:u	93.5	96.6u	88.6	95.5	:u
Slovenia	85.1	77.4	84.4	86.7	90.0	92.2	96.1	88.5	92.0	93.2
Slovakia	71.9	67.2u	62.1	73.8	78.0	92.4	85.6u	81.7	94.3	100.0
Finland	81.3	85.9	80.2	81.4	83.7	89.4	91.0	88.9	89.5	92.4
Sweden	88.6	78.5	90.3	91.7	92.2	91.0	87.6	89.7	94.5	95.3
United Kingdom	85.2	79.1	88.4	87.0	93.8	93.8	92.5	95.1	92.9	94.8

Source: Eurostat (EU-LFS special extraction, 2015). Note: N/A: not applicable, u: low reliability. ISCED 5: short-cycle tertiary, ISCED 6: bachelor, ISCED 7: master and ISCED 8: doctorate.

ISCE - International Standard Classification of Education

ec.europa.eu/education/sites/education/files/monitor2016_en.pdf

2.7 National statistics on doctoral studies

The consequence of the recognition of doctoral studies for third-cycle studies (after undergraduate and graduate studies) was their massification.

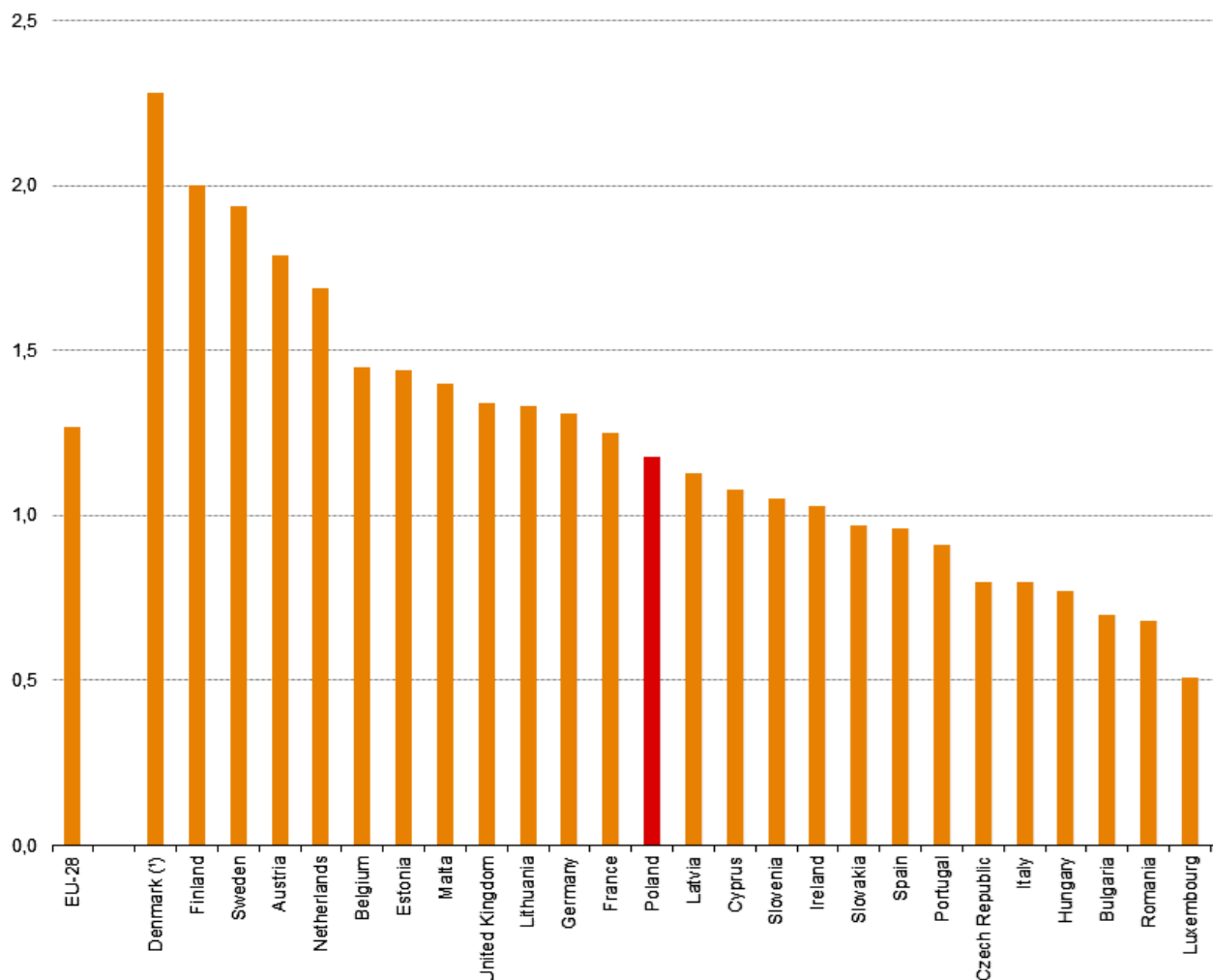
In the years 2006-2013, the number of doctoral students in Poland increased by 40%. In the academic year 2011/2012, the number reached 40,000 and has not fallen below this level since then. In 2015, 43 177 people were educated in third degree studies in Poland. The participation rate of doctoral students in the population of all students in Poland is 2 percent (this is slightly lower than the average for countries in the European Higher Education Area - 3%.) There is a drop in the number of men in doctoral studies by 8% compared to 2000, the share of women for 5 years has remained stable at 52-53 %.

In the academic years 2008/2009 - 2012/2013 the number of assistants decreased by almost two thousand (from 11,844 to 9,914). At the same time, the number of doctoral students at public universities increased from 27 743 to 36 340 people. Thus, the

structure of doctoralisation has changed qualitatively. The functions of assistants are often performed by doctoral students. Of the 261 graduates of PhD studies from 2013-2014, only 108 (41.4%) obtained such a degree. Units conducting doctoral studies in the field of exact and medical sciences achieved higher effectiveness of education - 66 percent. their graduates obtained a PhD title than units carrying out humanities and social studies - there the title was obtained by approx. 27 percent. graduates.

The percentage of graduates of full-time doctoral studies from 2013 - 2014 who have defended doctoral theses was the highest in art (57.5%), medical (56%) and technical (48.6%) colleges, and the lowest in pedagogical colleges (20.7%).

Public expenditure on tertiary education relative to GDP (in % in 2014) in EU and Poland are the following:



Note: Greece and Croatia, not available.

(*) 2013.

Source: Eurostat (online data code: educ_uoe_fine06)

ANNEXES

Annex 1 - HCERES criteria for external evaluation of doctoral schools in France

Evaluation campaign 2018-2019, Group E

November 2017

The High Council for Evaluation of Research and Higher Education (hereinafter referred to as Hcéres) has built up its process of evaluation of doctoral schools (DS) on a set of values and objectives specific to any DS. The above-mentioned set is further divided into criteria which are grouped in three domains of quality management of a doctoral school:

- Domain 1: Operation and scientific positioning of the school.
- Domain 2: Supervision and training of doctoral students.
- Domain: Follow-up of the professional career of doctors.

As highlighted above, these three domains are organized in "criteria" which are further subdivided into objectives to be reached by a DS (and / or a College or equivalent structure, and the institutions that carry it). Explicit in terms of criteria, these references are used by the Hcéres evaluation panel to assess, in their dynamics, the quality and effectiveness of the overall functioning of DSs.

This Framework allows DSs to build their own assessment, prior to the development of their project. This approach is part of the overall self-assessment approach led by lead or associate institutions.

DOMAIN 1: OPERATION AND SCIENTIFIC POSITIONING OF THE SCHOOL

Criterion 1-1: DS is positioned legibly and effectively within higher education and research institutions.

- The title of the DS is consistent with the scientific scope of all the related research units.
- The positioning of the DS and its interactions with its host institution(s) and a doctoral college (or equivalent structure, if it exists) are relevant and effective.

- The functioning of the doctoral college, where it exists, ensures the good representation of different actors and users of DS. The pooling of inter-DS activities by the College is justified, effective and operational.
- DS weaves effective bilateral links with its research units to provide significant added value in the overall functioning of the school (recruitment of PhD students, provision of training, follow-up of PhD students and PhDs, promotion / promotion of doctorate, etc.).

Criterion 1-2: The organization and governance of the DS meet its operational needs.

- The governance of the DS is effective and adapted to its profile and context (Management, possible co-directors, bureau, council, commissions, etc.). The DS adopts rules of procedure, which, taking into account its context and characteristics, details the modalities of its overall operation.
- The DS relies on a school council, which meets regularly, ideally at least three times a year. Its composition is in conformity with the texts in force, and its missions and modalities of operation are clearly defined and communicated to the users and partners of the DS.
- The involvement and participation of doctoral student representatives is effective. The DS gives these representatives the means to communicate effectively with all doctoral students and graduates of the school.
- The DS has visible and functional means of internal and external communication. In this way, the DS ensures that the administrative procedures (access to the recruitment contest, registration, re-entry days, etc.), research activities in the broad sense (integration into a research unit, recognition of the skills developed within other partner research structures, etc.), scientific and / or professional events (DS Days, training courses, conference courses, etc.) are accessible to and known by doctoral students and their theses supervisors.
- The DS regularly conducts its own self-assessment, including surveys of doctoral students. In practice, it defines a procedure and indicators relating to its activity (from the reception of doctoral students to the career progression of graduates) and follows their progress. It benefits from its self-assessments to change its overall functioning and define its path. It ensures that the conclusions of these self-assessments (and the resulting evolutions) are disseminated to the institution, the members of its Board and all its users.

Criterion 1-3: The DS and its partners adopt a clear policy for the recruitment and Integration of PhD students.

- The DS follows a thesis funding policy that is consistent with its objectives and self-assessment (see above). This policy implies management of all types of thesis financing.
- The DS sets precise rules for the recruitment of doctoral students. The procedures adopted (choice of thesis topics, publications, recruitment procedures, admission requirements, funding threshold, etc.) are accessible, explicit and equitable.
- The DS ensures that recruited doctoral students have until the defence, sufficient financial resources (and adapted to their level of qualification) and appropriate conditions for the completion of the doctorate (supervision, material means, etc.).
- Adequate facilities for the reception of PhD students enable diverse interested parties (French / foreign doctoral students, salaried / non-salaried, disabled, etc.) to integrate quickly and efficiently into corresponding DS, research unit and establishment.
- The DS grounds its operations on a doctoral charter the elaboration/validation of which is under the responsibility of accredited institutions. This Charter sets the conditions for monitoring and supervising doctoral students, through a training agreement, and defines the reciprocal commitments between doctoral students and thesis departments.

Criterion 1-4: The DS and its partners set a clear scientific policy that is comprehensive and consistent with its profile and its environment.

- DS's scientific missions are determined in partnership with its research units (and the Institutes, research federations, etc.) in line with their scientific scope and outreach.
- Beyond research units, operational interactions are established with institutions, the doctoral college (or equivalent structure, if it exists), the region, industries and / or communities. The DS measures the added value of these interactions and integrates them into its overall functioning.
- Designed with a view to enhancing the doctorate and optimizing the career progression of PhDs, scientific policy is part of a local, national and international dynamic.
- Based on international links with foreign institutions and / or research units / centers, the DS implements a comprehensive and operational international accessibility policy (management of incoming and outgoing flows, management of theses in co-supervision, reception of foreign PhD students, mobility aid, etc.).

DOMAIN 2: SUPERVISION AND TRAINING OF DOCTORAL STUDENTS

Criterion 2-1: The DS applies a strict doctoral student supervision and follow-up policy.

- In compliance with its scientific positioning and its potential of supervision (and their evolution), the DS sets precise and explicit rules in terms of supervision (number of PhD students / supervisors, modalities of supervision, management of co-supervision and co-supervision, particular profiles of PhD students, etc.).
- In line with the Doctorate Charter implemented by accredited institutions, the DS provides its PhD students with a Training Agreement that includes all the elements listed in the decree of 25 May, 2016. Closely linked to the monitoring system of PhD students, this Convention may be modified during re-registration.

Criterion 2-2: The DS implements mechanisms to ensure the follow-up of its PhD students.

- With the participation of local stakeholders, and based on the PhD Charter and the Training Convention, the DS sets up and coordinates the individual monitoring committees of its doctoral students. The procedures for setting up and operating these committees must be clearly defined, legible and transparent for PhD students and PhD supervisors.
- Individual monitoring committees are adapted to the profile of doctoral students to effectively monitor the progress of their thesis work (results obtained, publications / productions, training courses, etc.) and the preparation of their career progression. It also ensures that the conditions (financial, supervisory and material) are adequate.
- The DS implements mechanisms (including the individual monitoring committee) to prevent any form of conflict, discrimination or harassment, and to limit situations that may lead to abandonment. The Charter also includes the terms of mediation in case of conflict, or of breach of scientific integrity, and also details the rules of procedure.

Criterion 2-3: The DS offers tailored training and a set of adapted events to its PhD students.

- The DS sets up a training policy adapted to the profiles of its doctoral students (hourly training required / recommended, types of training offered, methods of validation and evaluation of training, etc.).
- In partnership with the research units and the Doctoral College (or equivalent structure, if it exists), the DS builds for its PhD students an offer of disciplinary / scientific and professional training. This offer is consistent with the scientific scope of the DS, the profile of its doctoral students and the career paths to which future graduates can aspire.
- The DS or the Doctoral College (or equivalent structure, if it exists) sets up, for all PhD students, training in research ethics and scientific integrity.

- The evaluation of each course (disciplinary / scientific and professional) by doctoral students, is analyzed and exploited by the DS (in partnership with any other structure in charge of doctoral training or their evaluation) to enrich / improve the offer overall.
- With the contribution of local actors (including doctoral students when it is justified), the DS implements or participates in complementary / scientific / professional actions / events (DS days, Doctoriales, forums, "My thesis in 180 seconds", etc.). For each type of action, the methods of access, validation and evaluation, in particular by PhD students, are defined and disseminated.
- With the help of appropriate tools proposed by the DS (and / or the doctoral college and the institution), doctoral students conduct their own assessment of disciplinary and transversal skills acquired throughout their doctorate, thus constituting, in the form of a portfolio, their "skills portfolio".

Criterion 2-4: The DS puts in place explicit rules on the defence and duration of theses.

- Explicit criteria for thesis defence are communicated by the DS to doctoral students and doctoral departments. By ensuring the production of new knowledge, these criteria guarantee the quality of the doctorate.
- Taking into account the profile of its doctoral students (scientific discipline, salaried / non-salaried, co-supervised thesis, etc.) and any special conditions (maternity leave, sick leave, hyphenation, etc.), the DS displays clear and adapted objectives in terms of duration of theses.

DOMAIN 3: MONITORING THE PROFESSIONAL PATH OF DOCTORS

Criterion 3-1: The DS carries out concrete actions to favor the career progression of its doctors and to value the doctorate.

- The DS informs its doctoral students of the conditions of access to all the jobs (academic or non-academic) to which they can be eligible.
- In partnership with the leading institutions and the Doctoral College (or equivalent structure, if it exists), the DS contributes to the continuation of the professional career of its future graduates, on jobs (academic or non-academic) which require the degree of a Doctor.
- In partnership with the leading institutions and the Doctoral College (or equivalent structure), the DS sets up mechanisms to valorize / promote the doctorate among the partners (academic and private): local, national and international.

CRITERION 3-2: THE DS SETS UP EFFECTIVE monitoring of the integration of doctors into the job market.

- . With the participation of doctoral students/doctors, the DS and its institutional partners seek to create an “alumni” directory or network of former doctoral students.
- With reference to the Charter, the DS ensures that its PhD students are aware of their commitment to respond to any request for information on their professional career after the PhD.
- With the active participation of research units and thesis departments, the DS (and / or any structure of the institution providing this mission) puts in place an effective system for monitoring the cohorts of its doctors, guaranteeing a high rate of usable responses.
- The monitoring mechanism takes into account the nature / profile / remuneration / geographic location, and evolution of jobs held by doctors.

Criterion 3-3: The data collected is analysed, communicated and used by the DS.

- The DS takes ownership of the data collected, analyzes and disseminates it to its Board, candidates / PhD students / doctors and various local partners involved in the doctoral training.
- The analysis of the career path of PhDs is used to make the DS evolve in terms of functioning (scientific policy, choice of thesis topics, recruitment of PhD students, etc.), supervision (supervision rules , format / functioning of the individual monitoring committee, etc.) and training of PhD students (nature / volume of disciplinary and professional training, scientific days of the DS, Doctoriales, etc.).
- Analysis of employment data is used to strengthen promotion of the doctorate to local, national and international partners (institutions and socio-economic partners).

Annex 2 - External Evaluation Standards for Doctorates out of France (ISCED Level 8)

Adopted by the HCÉRES College on March 26, 2018

INTRODUCTION

The content and structure of programmes can vary a great deal depending on the country. There are a number of classification types for facilitating comparison and adopting common terms. For these standards, HCERES chose to use the UNESCO International Standard Classification of Education (ISCED), the “widely-used global reference classification for education systems³⁹”, which is periodically revised. ISCED 2011 was adopted by the UNESCO General Conference in November 2011 and has 8 levels.

Level 8 of the ISCED corresponds to “doctoral or equivalent level”, defined using the following major characteristics:

- “Programmes at ISCED level 8, or doctoral or equivalent level, are designed primarily to lead to an advanced research qualification. Programmes at this ISCED level are devoted to advanced study and original research, and are typically offered only by research-oriented tertiary educational institutions, such as universities. Doctoral programmes exist in both academic and professional fields.
- ISCED level 8 usually concludes with the submission and defence of a thesis, dissertation or equivalent written work of publishable quality, representing a significant contribution to knowledge in the respective field of study. Therefore, these programmes are typically based on research and not only on course work. In some education systems, ISCED level 8 programmes contain very limited course work, or none at all, and individuals working towards a doctoral degree engage in research mostly independently or in small groups with varying degrees of supervision. In some education systems, doctoral research is undertaken by individuals employed by the university as junior researchers or research assistants who are undertaking at the same time their doctoral studies.
- Entry into ISCED level 8 programmes or junior research positions normally requires the successful completion of specific ISCED level 7 programmes. Achievement of an ISCED level 8 qualification provides access to professions requiring highly qualified academic

³⁹ <http://uis.unesco.org/en/topic/international-standard-classification-education-isced>

skills and research positions for government and industry, and to research and teaching positions in educational institutions that offer ISCED level 6, 7 and 8 programmes.”

HCERES has built its doctorate evaluation and accreditation process on a set of values and objectives that doctorates must pursue to ensure a certain level of quality.

These objectives are organised around four areas:

- Area 1: Positioning of the doctorate.
- Area 2: Organisation and management of the doctorate
- Area 3: Supervision and training of doctoral students.
- Area 4: Integration of doctors into the job market.

These four areas are organised into “standards”, representing the objectives for a doctorate (for example, organised into doctoral programmes and/or doctoral schools) and their lead institutions to achieve. These standards are broken down into criteria explaining the type of actions to be carried out.

This document can be used by institutions to develop self-evaluation of their doctorate. The approach therefore fits into their overall continuous improvement approach.

Finally, these standards are used by the HCERES evaluation panel within its activities to assess the quality and effectiveness of a doctorate’s general operation.

AREA 1: POSITIONING OF THE DOCTORATE

Standard 1-1: The doctorate’s distinctive features and objectives are clearly defined.

- The doctorate content can be easily identified and is clear with regard to the scientific scope covered.
- The doctorate’s target audience is clearly identified.
- The objectives of the doctorate are clearly defined, formulated and brought to the attention of all stakeholders.
- The doctorate is in keeping with the institution’s scientific policy.

Standard 1-2: The positioning of the doctorate is consistent with its environment.

- The positioning of the doctorate and its interactions with its lead institution(s) are relevant, formally set out and effective.
- The doctorate contributes to capacity building in the institution.
- The doctorate works with research units whose scope, potential and scientific topics are consistent with its objectives.

- These research units are involved in the doctorate (recruitment of doctoral students, teaching, monitoring of doctoral students and graduates, exploitation of results/promotion of doctoral programmes, etc.).
- The doctorate interacts with the socio-economic and socio-cultural environments, which have a role in training doctoral students and/or integrating doctoral graduates into the job market.
- Through international links with foreign institutions and/or research units/centres, the doctorate has a clear and operational policy on international orientation which benefits doctoral students (work placements, training, conferences, research residencies, etc.).
- The doctorate benefits from an incentive policy (at university level, partnership level or national level) to develop doctoral studies. Where applicable, partnership agreements (between universities, with local authorities or international agreements) are established to ensure the long-term financial stability and future of the programme.

AREA 2: ORGANISATION AND MANAGEMENT OF THE DOCTORATE

Standard 2-1: Effective organisation and management is in place for the doctorate.

- The doctorate's organisational structure is based on a scientific, teaching and administrative team that successfully manages and coordinates it. The roles and responsibilities of each team member are clearly defined and understood by all stakeholders.
- Governance of the doctorate (directors, any co-directors, board, committees, etc.) is adapted to its context and objectives, and involves doctoral student representatives.
- Management is based on clearly defined rules, which detail procedures for general operation of the doctorate and are brought to the attention of users (charter, in-house regulations, etc.).
- The doctorate has material and human resources, including pooled resources, that are consistent with its objectives (premises, staff, digital platform and dedicated software, information systems, digital document resources).
- The doctorate has operational internal and external communication tools. Doctorate activities (administrative procedures, research activities, scientific and/or professional training events, etc.) are accessible to doctoral students and stakeholders.
- Internal quality assurance mechanisms are in place within the doctorate. Regular self-evaluation of the doctorate is based on a procedure and clearly identified activity indicators. In particular, this includes surveys for doctoral students and thesis supervisors (e.g. evaluation of teaching and follow-up systems) and helps the doctorate

to develop. The conclusions of these self-evaluations and the resulting changes are communicated to the lead institutions, doctoral students and other doctorate stakeholders.

Standard 2-2: There is an explicit policy for funding and recruiting doctoral students which is adapted to their programme.

- The doctorate is based on a transparent thesis funding policy, which is consistent with its objectives and the institution's scientific policy. The policy involves controlled management of this funding.
- Precise rules for recruitment have been established. The procedures adopted (choice of thesis topics, admission conditions, type and amount of funding, etc.) are accessible, explicitly stated and fair.
- Student induction services are suitable for all types of doctoral students (international students, students with disabilities, etc.) to help them complete their doctorate under the best conditions.
- Doctoral students recruited have the appropriate conditions for preparing their doctorate (supervision, material resources, etc.) and sufficient financial resources up to defence of their thesis.

AREA 3: SUPERVISION AND TRAINING FOR DOCTORAL STUDENTS

Standard 3-1: The doctorate applies a strict doctoral student supervision and follow-up policy.

- Precise and explicit rules are set for supervising and follow-up of doctoral students (quality of supervisor, number of doctoral students per supervisor, management of co-director or co-supervisor situations, etc.): these rules are brought to their attention
- The reciprocal commitments of doctoral students and thesis supervisors (or directors) are clearly defined and brought to their attention.
- The doctorate includes individual and regular follow-up of doctoral students, with clearly defined, coherent and transparent procedures for doctoral students and thesis supervisors.
- This follow-up measures thesis progress (results obtained, publications/outputs, teaching received, etc.), checks preparation for employment, and ensures that appropriate conditions are in place (finances, supervision and material resources).
- Measures to combat fraud, plagiarism and corruption are applied within the doctorate.

- The doctorate has systems for preventing any forms of conflict, discrimination and harassment, and for limiting situations which may lead to students dropping out of the programme. In the event of a conflict or lack of scientific integrity, appeal mechanisms for mediation are in place and brought to the attention of users.

Standard 3-2: The doctorate offers diverse teaching and organises supplementary events.

- Doctoral students have access to disciplinary/scientific teaching and professional training (soft skills, work placements, work experience, etc.) suited to their profile and career plans. Doctorates raise awareness of research ethics and scientific integrity.
- The teaching proposed is based on the expertise of research units and socio-economic partners associated with the doctorate.
- Methods for accessing and validating this teaching (test of knowledge acquired, required/recommended number of teaching hours before thesis defence, etc.) are clearly defined and known by users.
- The doctorate invites doctoral students to take part in supplementary scientific and/or professional events or actions, such as scientific events, conferences or panel discussions, etc. For each type of action, the methods for access, validation and evaluation, particularly by doctoral students, are defined and communicated.

Standard 3-3: The doctorate is based on explicit rules for thesis duration and defence.

- The doctorate has set clear and suitable objectives with regard to the duration of theses and re-enrolment of doctoral students each year, taking into account the profiles of doctoral students and any special conditions (employed doctoral students, training leave, parental leave, maternity leave, sick leave, etc.).
- Explicit criteria for authorising thesis defence (producing new knowledge, exploitation of results, validating teaching, mobility, etc.) are communicated to doctoral students and thesis supervisors.
- Organisation rules for thesis defence (composition of the examination board and role of its members, convening notice, manuscript submission, etc.) are communicated to doctoral students and supervisors. These rules are defined in a fair and transparent manner.

AREA 4: INTEGRATION OF DOCTORS INTO THE JOB MARKET

Standard 4-1: The doctorate includes mechanisms to promote the integration of doctors into the job market.

- In partnership with the lead institutions, the doctorate implements systems to promote the doctorate among local, national and international partners (public and private sector).
- Doctoral students are informed of the requirements and conditions for accessing all potential positions.
- Appropriate tools are used to evaluate the skills (discipline-specific and transferable skills) acquired throughout the doctorate.

Standard 4-2: The doctorate has effective monitoring of the integration of doctors into the job market.

- There is an effective monitoring system for cohorts of doctors, ensuring a high level of usable responses.
- The monitoring system takes into account type, profile, remuneration, geographical location and career development in jobs held by doctors.
- With the participation of doctoral students/doctors, the doctorate and its institutional partners seek to create an “alumni” directory or network of former doctoral students.

Standard 4-3: The data collected is analysed, communicated and used.

- Doctorate managers use the data collected, ensuring that it is analysed and sent to doctorate applicants/doctoral students/doctors and stakeholders.
- Analysis of employment data is used to develop the doctorate (recruitment and follow-up of doctoral students, additional teaching and events proposed, etc.).
- Analysis of employment data is used to strengthen promotion of the doctorate to local, national and international partners (institutions and socio-economic partners).