Doctoral Programme in Network and Information Technologies

Doctoral Programme in Network and Information Technologies

UOC Universitat Oberta de Catalunya

Start
18 Sep 2025

Online
100%

Admission: March 5, 2024

Languages: Catalan, Spanish, English

Official qualification

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Programme quality

The quality of this degree programme is endorsed by the Catalan University Quality Assurance Agency (AQU), which ensures that rigorous standards, including those demanded by the EHEA, are met.

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Presentation

The scientific production and training capacity of the researchers in the different UOC groups involved in IT, multimedia and telecommunications justify the creation of a specific doctoral programme, with a separate identity, to consolidate research and knowledge exchange activities in this area. Therefore, the IT, Multimedia and Telecommunications (IMT) Department at UOC is offering this **Doctoral programme in Network and Information Technologies**.

The research lines and groups associated with the programme are organized around network and information technologies, focusing on areas such as information security, distributed systems, open and decentralized networks, multimedia systems and applications, e-learning technology, information systems, computer vision, and software and service engineering. Several of these research lines are being pursued at the University's two research centres: **Internet Interdisciplinary Institute (IN3)** and the **eLearning Innovation Center (eLinC)**.

The IMT Department, with the support of the two research centres linked to the University, is focusing its attention on scientific development in the area of network and information technology through a higher-education offering (including undergraduate, masters and doctorate degrees) that corresponds to the aforementioned working lines and in response to current demand.

Several research groups in the IMT Department offer research projects funded by competitive calls for proposals at the national and international level, have earned recognition from quality agencies within the university system, include accredited teaching faculty and have an extensive list of publications in prestigious scientific journals and conferences that validate their research trajectory.

Over thirty of the lecturers in the programme hold doctorates and are qualified to direct doctoral theses within the Network Information Technologies Doctoral Programme. Moreover, the two aforementioned research centres provide grant programmes (UOC grants) for visiting lecturers, resident lecturers, post-doctoral researchers and invited lecturers, among others, that promote collaboration with groups and researchers from other universities and contribute added value to the doctoral programme.

Download the brochure for the programme

Official qualification

The UOC's Doctoral Programme of Network and Information Technologies is a programme that has been approved by the Spanish Universities Council, and its implementation has been authorized by the Government of Catalonia, in accordance with current legislation.

The UOC's doctoral programmes have full academic validity throughout Spain; where such is the intention, they are qualifications to perform regulated professions, in accordance with the regulations applicable in each case.

The certificates for these programmes are issued together with a Diploma Supplement (DS), providing details of what the student studied, their results, the professional competencies obtained and the qualification's level in the Spanish higher education system; the aim of this is to facilitate recognition of the qualification and promote students' and graduates' mobility within the European Higher Education Area (EHEA).

In other countries, the validity of the official university qualifications issued by the UOC will depend on each specific country's education laws.

1st

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Programme of study
Study plan

In order to acquire the advanced training required for the research project, the student must complete, during the doctoral programme, the subjects, courses or activities that comprise his or her personal academic itinerary.

The training offering consists of diverse training activities with different types, duration, timeframes and objectives, which are structured in five blocks (methodology courses, subject-specific research seminars, complementary training, research-oriented complementary training activities and the doctoral research seminar).

Table summarising the blocks that comprise the training offering in the organised research phase:

In any case, the inclusion of courses, seminars and activities in the academic itinerary of the doctoral candidate shall depend on the individual's prior research training and experience, as well as the specific area or topic addressed in his or her research project.

Bridging courses

These are courses lasting one semester, taught using the UOC's e-learning platform, and giving advanced training on research methodologies in some of the fields that will be the subject of the research project. These are mandatory for students who have not previously received this training, and must be taken and passed in the second semester.

The courses allow students to acquire advanced knowledge and master a range of research methodologies, enabling them to successfully analyse relevant aspects of information technologies and networks.

For illustrative purposes, the methodology courses liable to be included in a student's training plan in the second semester of their research period are shown below.

Some of the courses that may be included in the student's study plan in the second semester are detailed below:

Timing	Field of network and information technologies	ECTS credits	Type	Language
1st or 2nd semester	**Research methodologies in network and information technologies**	5	Mandatory	English
1st or 2nd semester	**Research techniques in network and information technologies**	5	Mandatory	English
1st or 2nd semester	**English B2.1**	6	Optional	English
1st or 2nd semester	**English B2.2**	6	Optional	English

Students' study plans may include optional courses, designed to take into account specific learning needs associated with the admission requirements. They are assigned by the Doctoral Degree Academic Committee. Particularly in the case of students from outside the European Higher Education Area, these may include courses from the UOC's range of university master's degrees. Students who enrol on these will need to study and pass them during the first academic year of their doctoral studies.

Research, transfer and entrepreneurship courses

The UOC also offers research, transfer and entrepreneurship courses in English. These are for students, researchers and faculty and are aimed at strengthening research in academic, scientific and business areas.

Research, transfer and entrepreneurship courses can be recognized as free elective credits on bachelor¿s degree courses. If you are studying a doctoral degree at any university and have obtained a competitive grant, these courses can also be linked to the funding.

You can check all the courses in the website: https://estudios.uoc.edu/en/doctoral-programmes

Workshops

The student may be able to take part in short learning activities to support their research, depending on the nature of their previous studies, research interests and course mode (full-time on-site, or online).

Once doctoral students have been admitted to the research period of the doctoral programme, the UOC provides them with personalized pathways, designed taking into account their specific skills and research capabilities (particularly with regard to research methodologies), as well as their research interests. The pathway may thus include courses, seminars and other activities intended to hone their research skills. Any such activities included on the doctoral student's personalized pathway must necessarily be taken and successfully completed.

Itinerary and duration

Five types or blocks of academic activities are considered when defining the **personalised academic itinerary** that supports the doctoral candidate's research plan, based on the following criteria:

Methodology courses

Students must undertake and pass in the first year, if not completed previously, the advanced research methodology courses corresponding to their research activity within the programme.

Subject-specific research seminars

Students shall undertake and pass in the first year a subject-specific research seminar linked to the area or topics covered in their research plan (when applicable).

Complementary training

In addition, the students' academic itinerary may include complementary training. This is configured based on the UOC masters-level offerings and, if the candidate enrols, these must be undertaken and passed during the academic year.

Research-oriented complementary training activities

Depending on the student's previous studies, research interests and the doctoral programme mode (full-time face-to-face or distance), the student may also be required to participate in short training activities that support the research.

Doctoral research seminars

Students in the programme must participate actively throughout the research phase in a doctoral research seminar corresponding to the subject of their doctoral thesis, whether face-to-face or virtual (depending on the mode of the doctoral programme).

Activities in face-to-face teaching mode

Activities in the organized research period in face-to-face teaching mode

Activities in distance teaching mode

Activities in the organized research period in distance teaching mode

Continuation requirements

The maximum duration of the programme is **three years** if pursued **full-time** and **five years** if **part-time**, counting from the doctoral candidate's admission to the programme until presentation of the doctoral thesis. Calculation of this period does not include parental leave or extended sick leave the Academic Commission of the programme considers justified.

Nevertheless, the Academic Commission may authorise extension of these time limits to the maximums permitted by law and under the conditions established for the corresponding doctoral programme.

Following enrolment in the programme, a document of activities is created for each candidate. This document states all the activities assigned to the doctoral candidate by the Academic Commission.

Before the end of the first year, the doctoral candidate must prepare a research plan that includes the methodology to be used and the objectives to be achieved, in addition to the resources and timeframe for writing the thesis.

Each year, the programme's Academic Committee will assess each doctoral student's research plan and activity document, together with the reports to be submitted by their tutor, thesis supervisor and other members of their Thesis Supervisory Committee. To continue on the programme, they must receive a positive assessment.

Research lines

Academic team

Doctoral School Management
David Masip Rodó

Doctoral Programme Coordination
Ferran Adelantado Freixer

Academic Committee
Ferran Adelantado Freixer

Helena Rifà Pous

Joan Manuel Marquès Puig

Robert Clarisó Viladrosa

Santiago Caballé Llobet

Àgata Lapedriza Garcia

Tutorial Support
Alberto Sendín Escalona

More than25 years' experience in e-learning

In 1995 the UOC was launched as the world's **first fully online university**. More than 25 years later, we are still pioneers in digital education.

Our **eLearning Innovation Center** oversees the evolution of our educational model, to ensure unique, high-quality, connected and networked learning experiences.

Call for applications

General requirements

To be admitted to the organized research period of the Doctoral Programme in Network and Information Technologies, students must meet both the general University and specific programme requirements.

To this end, students must first submit proof of meeting one of the following sets of requirements:

a)   Hold a an official university master's degree issued by a higher education institution in the European Higher Education Area (EHEA) and have passed a minimum of 300 ECTS credits out of all official university courses.

b)   Hold an official Spanish university degree, or one from an EHEA member country, that allows them admission to a master's course, and have passed a minimum of 300 ECTS credits out of all official university courses, of which at least 60 must be at the master's level.

c)   Hold an official Spanish graduate degree of at least 300 ECTS credits in line with EU legal regulations.

d)   Candidates with degrees from education systems outside the EHEA, whose degrees do not require homologation (official recognition by the Spanish Ministry of Education), must hold a level of education equivalent to Spanish university master's degrees that authorizes admission to doctoral studies in the country issuing the degree.

e)   Be a university graduate and have passed with a positive assessment at least two years of education on a programme to be awarded the official degree of any of the health sciences specialities.

f)   Hold a Spanish doctoral qualification in accordance with the previous university system.

g)   Be a graduate, architect or engineer and be in possession of the Advanced Studies Diploma (DEA), awarded in accordance with the provisions of Royal Decree 778/1998, of 30 April 1998, or have obtained research proficiency, regulated in Royal Decree 185/1985, of 23 January 1985.

Candidates who have not successfully completed the initiation to research credits for a university master's degree programme will have to take those bridging courses specified by the programme, if any.

The continued enrolment on the doctoral programme of candidates who hold only an official university bachelor's degree that, in accordance with EU law, consists of 300 ECTS credits or who have not taken and successfully completed at least 20 initiation to research credits as part of a university master's degree programme is contingent on the successful completion of the relevant bridging courses for the initiation to research module, pathway or subjects for the corresponding training period.

According to Decree 822/202, of September 28, students with a disability equal to 33% or more have a reservation of 5% of the places.

Admission requirements

As well as the general and additional requirements established by the University, the doctoral programme in Network and Information Technologies establishes the following specific requirements:

- If you're not a citizen of an English-speaking country, **you must provide proof of a level of English equal to or higher than B2** in accordance with the Common European Framework of Reference (CEFR).
- If you have attended school or have completed a bachelor's or master's degree (or equivalent qualification with regards to enrolment in the doctorate programme) in English in a country where English is an official language, you will be deemed to have an equivalent level to the one required.
- You may also demonstrate your linguistic competency in English by means of another official certificate that proves you have a level equivalent to or higher than the one required. You can consult this equivalency table to see examples of certificates that correspond to these levels.

Candidates for the part-time (online) doctoral programme who do not meet the required level will have the opportunity to access the doctoral programme with a B1 level i**f they undertake to attain a B2 level before completing the research plan** at the end of the first year. According to regulations, if the student does not attain this level, the research plan cannot be approved.

If you wish to enrol in the programme on a full-time basis, you must provide proof of a level equal to or higher than B2 from the time of application.

The UOC's Centre for Modern Languages offers English courses to attain the minimum level required for admission into the different doctoral programmes.

The UOC offers an online English language proficiency test, which can be accessed via this link, to accredit your knowledge of English. A score of between 72 and 94 accredits a level corresponding to B2 as defined by the CEFR. When taking this test, you must specify the code that corresponds to the UOC (Universitat Oberta de Catalunya): 4418. This code does not exempt the student from paying the corresponding exam cost and fees.

Meeting the above requirements does not guarantee admission to the doctoral programme. These requirements must be met in order to apply for admission to the doctoral programme.

If you apply for a UOC grant, you must accredit a level equal to or higher than B2 from the time of application. For other grants, financial aid or research contracts, please consult the terms and conditions and requirements for each case (level of English and part-time or full-time format).

Admission documents

All candidates who apply to be admitted on a doctoral programme at the UOC should submit the following documents:

- A photocopy of their DNI, NIE or passport.

- A **statement of interest** in which the candidate makes a short presentation of their career and explains the candidate's specific reasons for applying to the programme (their motivations), a description of their research interests and the links with the research group.

- A **letter of endorsement (optional)** that appears in the name of research that supports the personal doctoral project, as well as its intention to be your tutor.

- A **curriculum** that describes the programmes and master's degree or postgraduate courses the candidate has taken that are related to the research interests described in the statement of interest and, if applicable, a description of previous scientific output.

- An example of a **recent academic paper** (in Catalan, Spanish or English).

- **Academic certificates** for the doctoral student's previous training, which state the subjects taken and the mark obtained, the sitting, the kind of subject, the number of credits and the average mark in the academic transcript, if this has not been submitted to prove that the admission requirements have been met.

- Certificate of the **level of English** required by the doctoral programme.

- **Documents that prove that the candidate meets the admission requirements,** you will find more information on this section within the Office's *Secretary* Campus.

In the case of university qualifications obtained in higher education systems outside the European Higher Education Area (EHEA) and not homologated (officially recognized by the Spanish Ministry of Education), the university degree must be authenticated via diplomatic channels (or, if necessary, in a Hague Convention apostille). When certificates, degrees and academic transcripts are not written in an official language of the Spanish state or in English, these documents must be accompanied by their sworn translation into Catalan, Spanish or English. Failure to provide these documents or the fact that the details they contain do not match what was stated in the

Once the admission documentation has been reviewed and your application accepted, admission to the programme depends on your presenting the official documentation.

Evaluation criteria

- A maximum of 25 points for the undergraduate academic transcript (or equivalent). If the weighted average of the transcript (using the number of credits for each course as the weight for each mark), is calculated using the habitual scale: 0 for Fail, 1 for Pass, 2 for Good, 3 for Merit and 4 for Distinction, points shall be assigned as follows:
  - 0 points if the mark is less than 1.
  - 5 points if the average mark is between 1 and 1.5.
  - 10 points if the average mark is between 1.5 and 2.
  - <> 15 points if the average mark is between 2 and 2.5.
  - 20 points if the average mark is between 2.5 and 3.
  - 25 points if the average mark is 3 or above.

- A maximum of 15 points for the masters-level academic transcript (or equivalent). If the weighted average of the transcript (using the number of credits for each course as the weight for each mark), is calculated using the habitual scale: 0 for Fail, 1 for Pass, 2 for Good, 3 for Merit and 4 for Distinction, points shall be assigned as follows:
  - 0 points if the mark is less than 1.
  - 4 points if the average mark is between 1 and 2.
  - 8 points if the average mark is between 2 and 2.5.
  - 12 points if the average mark is between 2.5 and 3.
  - 15 points if the average mark is 3 or above.

- A maximum of 10 points for prior scientific production by the candidate, with the following weighting:
  - 10 points if the candidate accredits a work published or accepted in a JCR-indexed journal (or another reference index that the Academic Commission considers valid).
  - 8 points for a work published or accepted in a non-JCR-indexed journal or another reference index that the Academic Commission considers valid), as long as the publication process for the journal involves *peer review.*
  - 6 points for a work published or accepted at an international conference with *peer review.*
  - 4 points for a work published or accepted at a national conference with *peer review*
  - 2 points for a final thesis in a research-oriented masters degree.

- A maximum of 5 points for accrediting a level of English equal to or higher than B2 in the European Common Reference Framework (ECRF):
  - 5 points for accrediting a level of English of C2 in the ECRF, for example: 96 or more points on the Internet-based TOEFL, Cambridge University Certificate of Proficiency in English, or 7.5 or higher on the IELTS examination
  - 3 points for accrediting a level of English of C1 in the ECRF, for example: 79 or more points on the Internet-based TOEFL, Cambridge University Certificate of Advanced English, or 6.5 or higher on the IELTS examination
  - 1 point for accrediting a level of English of B2 (minimum level required by the programme) in the ECRF, for example: 65 or more points on the Internet-based TOEFL, Cambridge University First Certificate in English, or 5.5 or higher on the IELTS examination

- A maximum of 10 points for the letter of introduction: 4 points for correct composition of the letter and 6 points for adequately justifying the relevance of the proposal or the candidate's research interest to the research lines indicated in the call for applications.

- A maximum of 10 points for the personal interview: The candidate's knowledge of the programme, interest in its research lines and the consistency of the interview with the letter of introduction shall be assessed. A faculty member who is responsible for the preferred research line expressed in the candidate's application and at least one other faculty member who is also a member of the Academic Commission for the programme shall participate in the interview.

- A maximum of 10 points for the suitability of the training, experience and the relevance of the candidate's research interests to the programme and to one of its research groups and lines. This scoring system is consistent with that stated in the Regulations for UOC doctoral studies. These points shall be assigned based on the letter of introduction, the personal interview and the documentation submitted by the candidate.

- A maximum of 5 points for references: 1 point for each of the references supplied (up to three) and 2 additional points for submitting complementary information (such as curriculum vitae, personal or academic relationship to the candidate and letters of recommendation).

- A maximum of 10 points for other qualifications submitted by the candidate, such as accreditation of prizes, patents, grants, research fellowships at reference centres or prior professional experience in R&D+i.

The minimum score for admission to the programme is 50 points based on the aforementioned criteria. In the event of insufficient candidates with scores of at least 50 points in a call for applications, positions shall remain unfilled. Regardless of the total score obtained, at least one point in English is mandatory for admission to the programme.

Places in the programme will be awarded taking into account the available positions in each of the research lines being offered. Therefore, more competitive lines may require a higher score for admission than other lines once the candidates have been ranked by score. In any case, a minimum score of 50 points will be required for all lines.

Calendar

1 December 2023: Start of the call for applications for access and admission to doctoral programmes.

12 February 2024: End of the call for applications for access and admission to doctoral programmes.

19 February 2024: Publication of the provisional lists of applications to be assessed. The lists will be published on the Doctoral School website.

19 February to 26 February 2024: Period for appeals of the applications to be evaluated.

29 February 2024: Publication of the final lists of applications to be assessed. The lists will be published on the Doctoral School website.

** The publication of the final lists of applications to be assessed will be published on 14 March.

6 May 2024: Publication of the provisional resolution on the accepted online and granted candidates. The lists will be published on the Doctoral School website.

6 May to 16 May 2024: Period for appeals of the selection of online and granted candidates.

27 May 2024: Publication of the final resolution on the candidates admitted to the doctoral programmes and those who are granted. The lists will be published on the Doctoral School website.

July 2024: Start of the enrolment period 2024-25.

September 2024: Start of the academic year 2024-25.

Request access

1   Apply for the Welcome and Information Service

Apply for the Welcome and Information Service is a free, no-obligation procedure that provides you with a user name and password that will allow you to enter the UOC's Virtual Campus, from where you will be able to:

1.   Contact experts who will help you settle any doubts you may have about applying.
2.   Consult the Campus Secretary's Office for information about the programme of studies, enrolment prices, documentation, etc.

Access requirements

Before requesting access, check that you meet the requirements for the programme you want to be admitted to.

Access form

On the access form, you must give your personal details and the educational level you have attained.

Access Documentation

You will find a list of the documentation you need when you request access and can consult the Campus Secretary's Office.

> **Discounts**
>
> If you are eligible for any of the **discounts** stated in the Price Decree, you will have to submit the appropriate documentation, following the instructions given by the virtual Secretary's Office.

2   Access the Campus and contact the researcher

Virtual campus

After you have requested access, you will receive a user name and password that will allow you to access the Virtual Campus, where you will find all the information and resources you may need.

Researcher

You will find the information to contact the lead researcher in the "research lines" section. The researcher can provide support for preparing your application and will be your sponsor, if he or she agrees. Once you have been admitted to the programme, he or she will advise and guide you in choosing courses, in accordance with your prior academic background, your interests and the amount of time you have.

Virtual Secretary's Office

There is a Procedure on the Campus where you can consult and manage all academic matters, such as viewing the programme of studies, payment options or the discounts available.

3   Apply for admission

You can complete the admission form the virtual campus **Procedures / Doctoral programme admission documentation**, where you will have to give your academic details, whether you want to apply for a grant and the research line you are interested in.

You must submit an enrolment proposal after having chosen the courses you want to follow during the semester, which your tutor will analyse so that you can complete enrolment with his or her counselling. It is a step prior to completing enrolment.

4   Send the digital documentation

Having completed the previous step, you must attach the documentation in the same section. You can see which documentation you must attach in the corresponding section within **Procedures / Doctoral programme admission documentation.**

When you have completed all the steps, the doctoral programme's academic committee will assess the applications that have been submitted.

If you pass the first phase of the admission process, you will receive notification confirming that you have entered the second phase and a telephone interview will be scheduled.

If you pass the second phase of the admission process, you will receive notification to confirm that you have been admitted. You will have a maximum of one month (counting from the admission notification) to confirm your acceptance of the place on the doctoral programme; if this confirmation from you is not received, you will not be admitted to the programme.

It is at this point that you will be able to complete enrolment, choosing your preferred payment option from among those available. If you are eligible for any of the discounts stated in the Price Decree, you will have to submit the appropriate documentation, following the instructions given by the virtual Secretary's Office.

Remember that once you have enrolled, you will have ten days to send the admission documentation.

> The Government of Catalonia establishes the public prices for credits and other academic services charged by public universities in Catalonia and the UOC. You can consult the prices in Decree 125/2023, of June 28th.
>
> The fees will be those applicable when enrolment is completed. Subject to annual revisions.

Price and enrolment Fees

Price per credit	32,28€/cr*
Price per learning resources credit	15,16€/cr*

Biannual Fees

Fee for supervision, tutorship and continous assessment of the doctoral thesis	200,56€
Fee for the management of your record	54,54€
Fee for learning support services	101,47€

Fees

Fee for requesting your certificate	218,15€
Fee for oral examination and defence of the doctoral thesis	156,87€
Fee for requesting your record	54,54€