TÉCNICO LISBOA

Post-Graduation Area

PhD Student guide

2023-2024

Table of contents

Message from the President of Técnico Lisboa

President of Técnico Lisboa

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It's a great pleasure to welcome you to Instituto Superior Técnico. Our school was created almost 110 years ago to bring scientific and technological training to Portugal. Nowadays, Técnico has approximately 11,000 students of more than 60 different nationalities. It's a school of engineering, science and architecture, highly internationalized, that promotes the relationship between university-business-society and encourages innovation, entrepreneurship, job creation and knowledge. Técnico is a prestigious school in Portugal and abroad for its academic excellence.

In a rapidly changing world, the new challenges that we face today regarding education, training and research are vast and of enormous complexity. Fulfilling Técnico' s mission in the second century of its existence implies that we continue to contribute to the scientific and technological progress in order to address the complex challenges of the future, thus contributing to a fairer society.

We count on you, new Técnico PhD students, to help us fulfill our mission and vision.

IST organization

[Técnico Lisboa](#) (IST) was created in 1911 following the division of Lisbon Industrial and Commercial Institute. The first director was engineer Alfredo Bensaude, who promoted a profound renewal in engineering teaching methods by creating the first engineer programs: Mining, Civil, Mechanical, Electrical and Chemical-Industrial. IST contributes for more than one century to the development of society by promoting and sharing excellence in higher education.

IST is geographically located in three different campuses: the **[Alameda Campus](#)** located in one of the Lisbon's most central areas concentrates the main administrative services, academic activities and research facilities; the **[Taguspark Campus](#)**, a modern campus close to Lisbon inaugurated in 2000 that makes part of an important Science and Technology Park in information and communication technologies, also includes academic and research facilities; and the **[Tecnológico e Nuclear Campus](#)** an exclusive technology park for research in nuclear sciences, radiological protection and nuclear safety.

IST is organized in **[11 Departments](#)** which are responsible for the undergraduate (bachelor and masters) and postgraduate (PhD) education across several disciplines from architecture, engineering, science and technology. The current faculty body of IST comprises more than 850 PhD holder professors and researchers, around 500 technical and administrative supporting staff, and more than 11.000 students enrolled in all stages of university education.

IST currently offers **33 PhD programs** attended by more than 1.000 students among which are 30% international students from 70 different nationalities. Some of the PhD programs are offered in association or in partnership with prestigious national and international universities (e.g. MIT, CMU, UT Austin, EPFL), entitling students to spend leaving periods abroad and granting a dual degree. Postgraduate students are highly encouraged to pursue an international experience taking advantage of the strong international connection of IST's faculty body and involvement in several international engineering education and **research networks** (e.g. CLUSTER, CEASER, EIT InnoEnergy, Sino-EU Platform). Each Doctoral Program is coordinated by a faculty professor. The coordinator is responsible for the scientific and pedagogical management of the Doctoral Program, being open to help students with the necessary support to ensure a smooth transition during all phases of the PhD program.

The scientific research at IST is primarily conducted through **25 research centers** providing a wide range of laboratory infrastructures that support postgraduate students research. These research centers address a multidisciplinary research in a truly international and multicultural atmosphere, fostering knowledge transfer to society and promoting the involvement of researchers in RD&I and projects in their areas of expertise.

IST management is supported by the Scientific Council and the Pedagogical Council boards that advise and make recommendations to the President of IST following the strategic orientations of the School.

The **Scientific Council** is responsible for managing the research policy and ensure the higher standards in education and scientific research quality in the school. The Scientific Council is composed

by its President plus 24 members representative of IST's faculty body of professors and researchers among which 8 are representative of the research centers. The Scientific Council has a Vice-President that is responsible for the 3rd cycle studies (PhD).

The **Pedagogical Council** is responsible to ensure the pedagogical quality in the school and is composed by its President plus 23 members, among which 11 are representative of IST's faculty body of professors and 12 are students' representatives among which a PhD student.

Doctoral Milestones and Requirements

Since the initial registration as a PhD student, a set of milestones and requirements should be formally monitored during the PhD program:

- PhD starter checklist
- First year as a PhD student
- Second and following years as a PhD student
- PhD thesis submission & examination procedures

PhD starter checklist

As a new PhD student, mind the following initial steps that allow you to start enjoying the full facilities made available at IST and be well equipped to start your PhD program:

Registration – Make sure you are registered in the Doctoral Program at Técnico, and check in the student section of your FenixEdu personal page that you are enrolled in the Doctoral Program courses. If not, please contact the administrative staff

and/or the Post Graduation Area. If you do not have a personal Técnico ID, contact the IT services.

Get your Técnico ID card – Make sure you get your Técnico ID card, which identifies you as a member of Técnico community. The card also allows you to make payments, provides access to buildings, parking (in FenixEdu follow Personal Area > Parking) and use the printing machines. See more details here. You can apply for your card in your FenixEdu. Just follow Personal > Personal Area > Técnico Card.

Check list – Check helpful information to boost your stay @ IST: the Student's Guide (which includes a chapter on **Visa and Legal Formalities**) and the Survival Guide for mobility and international students.

Fees and funding – IST does not support PhD students fees and so you can consider apply for funding from external institutions, e.g. the Portuguese Foundation for Science and Technology PhD Studentships. The tuition fees may also be supported by the research center where you will develop your research work. There is also the possibility of joining IST teaching staff as a Teaching Assistant during your PhD. In this case students may be eligible to the "Prémio Brito Camacho" which provides an additional financial aid for students having no supporting fund.

Make sure you know the PhD key-dates – According to IST rules, you are required to conduct a Doctoral Seminar within 24 months of your admission in the Doctoral Program before the Thesis Advisory Committee (CAT) (check your enrollment date in FenixEdu following Student > Curriculum). The continuation of your PhD studies will be pending on a positive report from the

CAT. Should this evaluation be positive, the provisional version of the PhD Thesis should be submitted within 4 years following your admission date. It is however possible to extend this limit one more year if you are registered as a part-time student.

First year as a PhD student

As a student starting your Doctoral Program at IST, you should be aware of the following important formalities:

Meet your Supervisor – Your relationship with your supervisor is crucial for the success of your PhD program. Your Supervisor shall be able to provide specific information to your research as well as relevant training opportunities, computational resources and inform you on student/supervisor responsibilities. Your supervisor will also provide your office and desk allocation and guide you with the procedure regarding security clearance. Additionally, your supervisor should inform you of whether or not you should apply for a collaboration role within a IST-based research center. If you do not yet have a Supervisor, please contact the coordinator of your Doctoral Program.

The following is a list of topics you may find useful to explore in discussions with your Supervisor:
– Supervisory team
– Research plan and objectives
– Expected research dissemination outcomes (research articles, seminars, etc.) and available funding
– Regularity of supervision meetings and feedback
– Office and desk allocation, IT and laboratory resources

Define your curricular program – During the first year as a PhD student you will be mostly focused in completing specific courses from the curricular program of your PhD. In most of the cases your curricular plan is flexible and can be customized in accordance to your background knowledge and unique scientific interests. Tailor your curricular plan with your PhD supervisor is the best way to achieve this. Most of the PhD programs require 30 ECTS credits of curricular units to be completed (1 semester full time). Some of the courses require an examination to pass, others are project-based. Throughout the courses you will be stimulated to attend research seminars, make oral presentations of your work and broaden other complementary soft skills competences.

Second and following years as a PhD student

The full involvement in the research phase of your PhD program should be on its way at the moment you complete the curricular program of your PhD. From the second year until the submission of the Thesis, the following relevant aspects must be considered:

Report from the Thesis Advisory Committee – By the end of the second year you should have already conducted a Doctoral Seminar with the purpose of presenting your PhD work plan to the Thesis Advisory Committee (CAT). The CAT will comment and assess the current state of your research and issue a report on whether or not you are expected to complete the requirements of the Doctoral Degree. The continuation of your PhD studies should be pending on a positive report from this committee. Therefore, it is very important at this stage to discuss with your Supervisory team your work plan and have a clear idea about the scientific questions you are addressing, how do you plan to

address them and which resources are going to be needed, and what are the main scientific expectations.

Research environment – During your Doctoral program you will be most certainly developing your work at a research center/department that will provide the physical and IT resources appropriate for the development of your research. These include suitable office room conditions, access to adequate computing facilities and library resources (physically and/or online) and access to laboratorial infrastructures. Financial support for your research activities and work dissemination is also instrumental for the 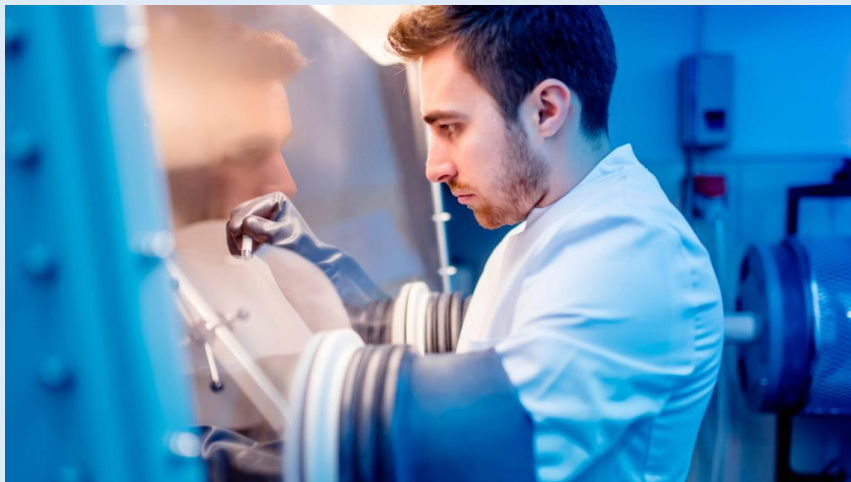development of your work. Discuss with your Supervisor and select the most important international conferences, workshops, or summer schools that you should attend and receive financial support from the research center/department or from a specific research project that can sponsor your travel expenses.

A stimulating research environment is key for the success of your work. Besides your Supervisory team you will be stimulated to discuss your research with faculty members and other PhD students from your group and interact with a wider national and/or international community. Throughout your PhD program you are invited to attend research seminars with invited guests, faculty members and other PhD students, as well as to present your work in seminars promoted by your research center/department.

PhD thesis submission & examination procedures

After completing your PhD research work you should be ready to start writing your PhD thesis and eventually submit it. The submission decision must have the approval from your

Supervisory team. Most of the PhD theses are written in English, but you can also write it in Portuguese. In special cases other EU languages are allowed. Guidelines for thesis submission like, templates, thesis cover, formatting rules, etc. can be found at the [Academic Examinations](#) site. IST takes serious attention to plagiarism and intellectual property conflicts, so every student must declare that the submitted PhD thesis corresponds to an original work of their own authorship and that it fulfills the requirements of the [Code of Conduct and Good Practices from the University of Lisbon](#).)In European Portuguese)

To complete your PhD program you should defend your PhD thesis before a jury composed of academic staff from IST and from outside the university. During the defense you will be invited to give a 30 minutes viva voce presentation of your main PhD scientific results, followed by a discussion with all members of the jury (total time should not exceed 2h30). The final classification awarded is one of the following by order of significance: "Fail", "Pass", "Pass with distinction", "Pass with distinction and Honors". The highest classification should only be considered by the jury if i) the candidate exhibits an average classification of the curricular program units that is ≥ 16 (in 20), ii) there is an explicit recommendation from the Supervisory team for the thesis to be considered for the highest classification, and iii) the PhD thesis contains outstanding scientific breakthroughs that demonstrate a significant advance in the domain of the thesis and the candidate have demonstrated an outstanding record of academic excellence in all the dimensions of their PhD work. Only 20% of the PhD thesis in IST reach the highest classification.

Students feedback

Having feedback from PhD students is essential to help IST improve processes and quality over the PhD programs bettering support and further assistance to PhD students. You will be requested to answer 2 anonymous surveys which will become available through the FenixEdu personal page:

- Intermediate Survey: this survey will be requested 24 months after starting your PhD program. It aims to evaluate your experience during the initial period of the PhD, focusing on the enrolled curricular program courses, the working conditions made available for developing your research, the relation with the supervisory team and access how helpful was the presentation of your PhD thesis proposal to the Advisory Committee;

- Final Survey: this survey is requested at the terminus of your PhD program after the final defense. You will have the opportunity to rate your overall experience during the entire PhD program on several items, such as the quality of your supervisory team's guidance, how adequate were the computational and laboratory resources available to

develop your research, about the opportunities you had to present the work to your pairs, and the institutional support and advice been given.

Integration within Técnico for PhD Students

The following list contains a brief description of some of the services at Técnico particularly useful for PhD students:

Post-Graduation Area – Manages administrative processes and procedures related with Doctoral Programs like registration, tuition fees, course enrolments, issue certificates and diplomas, PhD thesis submission, etc. It takes care also of the recognition of the foreign higher education degrees or diplomas, as well as the

instruction and organization of the public sessions for other academic titles (e.g. Habilitations). Helpful information can be consulted in the FAQ section.

Technology Transfer Office – Provides assistance regarding intellectual property, promotes entrepreneurship and innovation through several initiatives and competitions and helps with career development. Also establishes corporate partnerships between Técnico and the industry.

Ethics Committee – The Ethics Committee has the mission of promoting high ethical standards at IST. The Ethics Committee may present proposals or recommendations in this regard consult on ethical issues raised related to teaching, scientific research, service provision to the community and functioning of the institution's services.

Projects Division – Provides advisory support in the preparation for scientific project calls (e.g., Marie Skłodowska-Curie Actions, Horizon Europe 2021-2027, European Research Council (ERC)) and helps communicate funding opportunities.

Library – At the IST Library students will have access to information services and resources to support research through unlimited access to thousands of scientific publications.

IT Services – Manages the network infrastructure of IST, as well as the main information systems of IST. Provides computer and network support.

International Affairs Division – Handles all aspects related with international affairs (international mobility, university partnerships, international projects and funding, etc), which are detailed here. Works in cooperation with the Researcher and Project Technical Support Office for the identification of international funding opportunities and assistance in project calls.

Academic Development Unit – Beyond the work regarding the teaching-learning process, it provides students with soft skill training and coaching. It is also responsible for promoting the "*Workshop for Teaching Assistants*" specially oriented for those

that are involved for the first time on giving classes or wish to improve the teaching skills.

Health Services – Provides medical support in the areas of general medicine, dental medicine, psychology, clinical analyses, among other specialties.

Student Support Unit – Promotes the Técnico students' integration, supporting all kind of activities that contribute for a better involvement in the academic community.

PhD Student's Club – The PhD Student's Club aims at establishing a communication platform between students from all doctoral programs at IST, help building a strong community by exploring collaborations and actively engage PhD students in several external activities.

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