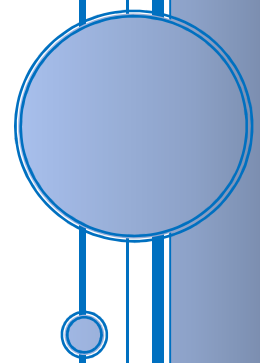


**Overview on the Portuguese Higher Education  
System at Doctoral Study Level**

**Doctoral Programs at the Instituto Superior Técnico,  
University of Lisbon, Portugal**

Victor Barroso, João Costeira, and João Xavier  
2017



# Overview on the Portuguese Higher Education System at Doctoral Study Level

*Doctoral Programs at the Instituto Superior Técnico, University of  
Lisbon, Portugal*

## Contents

Introduction.....	3
Brief Historical Review .....	3
Doctoral Studies in Portugal .....	4
General Provisions .....	4
Academic Degrees and Diplomas .....	4
Doctoral Studies .....	5
Degree of Doctor .....	5
Award of the Degree of Doctor .....	5
Access and Admission into the Cycle of Studies Leading to the Doctoral Degree.....	6
Cycle of Studies Leading to the Doctoral Degree.....	6
Special Regime for the Presentation of the Thesis .....	6
Thesis Committee or Jury .....	7
Award of the Doctoral Degree .....	7
Final Qualification of the Doctoral Degree .....	7
Regulatory Norms of the Doctoral Cycle of Studies .....	7
Award of Degrees in Association .....	8
Object of association .....	8
Award of the Degree .....	8
Mobility .....	8
Guarantee of Mobility.....	8
Crediting.....	10
Rules Applicable to Crediting .....	10
Non Creditable Activities .....	11
Other Provisions .....	11
Rules Governing the Operational Aspects of the Jury’s Meetings .....	11
Foreign Languages .....	11
Funding .....	11
Accreditation and Commencement of a Cycle of Studies.....	11
Accreditation .....	11
Competence for Accreditation .....	12
Commencement of a Cycle of Studies .....	12

Funding of Doctoral Programs .....	12
Scientific Research and Technological Development Projects Grants in All Scientific Domains .....	12
FCT Doctoral Programs .....	13
Purpose and Overview .....	13
Evaluation Committee .....	13
FCT Advanced Training Fellowships .....	13
Types of Research Fellowships .....	13
Application, Evaluation, and Granting .....	15
Candidates .....	15
Evaluation of the Applications .....	16
Grant Awarding .....	16
Values (in euros) of the Different Fellowships .....	16
The Doctor Degree Awarded by IST .....	17
Introduction .....	17
Regulations of IST Doctoral Programs .....	18
Qualifier Exams .....	18
Thesis Monitoring Committee .....	18
Agreements for International Co Supervision .....	18
Doctoral Programs at IST .....	19
Doctoral Programs Offered by IST (2016) .....	19
FCT Doctoral Programs Offered by IST (2016) .....	19
International Doctoral Programs .....	20
Dual Degree Partnerships .....	20
The Carnegie Mellon Program .....	20
IST-EPFL Joint Doctoral Initiative .....	22
Other International Collaborative Programs .....	23
MIT   Portugal Program .....	23
UT Austin   Portugal .....	24
Conclusions .....	25
Annex .....	26
Visit to IST in May 20-21 2015 .....	26
Visit to IST in May 25 and 27 2016 .....	27

## INTRODUCTION

This document is prepared in the framework of the TEMPUS Project “RODOS – Reform of Doctoral Studies in Serbia (544093-TEMPUS-1-2013-1- RS - TEMPUS-SMGR-2013-5028/001-001)”, to summarize the presentations given on the occasion of the visits of the RODOS-project delegation to Instituto Superior Técnico (IST), University of Lisbon, Lisbon in May 2015 and 2016.

We present the Portuguese regulations for Doctoral Studies in general. We also address several programs offered by IST, which are representative of different designs and funding enabled by the Portuguese law. Administrative and assessment/accreditation issues are also considered.

## BRIEF HISTORICAL REVIEW

In Portugal, the creation of the *General Studies*, or University, is due to King D. Dinis who, on 12 November 1288, assembled in Montemor-o-Novo several clerics who, being aware of the state of the relations between the monarch and the Holy See, requested by their initiative the apostolic allowance for the foundation of the University in Portugal.

This request aims to prevent many young Portuguese from having to leave their country to attend higher studies in the Universities of Italy, France and Spain. Only on August 9, 1290, after the normalization of relations between Portugal and the Holy See, the confirmation bull finally came,

King D. Dinis made public his intention to establish the *General Studies* in Lisbon. The Royal Decree says:

"Wishing to enrich our Kingdoms with this precious treasure, We have done well to ordain, in the Royal City of Lisbon, for the honor of God and of the Blessed Virgin Mother and also of the Martyr St. Vincent, whose holy body is venerated in that city, a *General Study* that We, not only endowed with numerous doctors in all the arts, but also awarded with many privileges. But, because some people tell Us that many will come from various parts to our *General Study* if they can enjoy safety of bodies and goods, We want to develop it in good conditions, and We promise, with this letter, full security to all those who study or want to study in the future, and We will not allow them to be offended by anyone, even if they are of the greater dignity, but rather We will heal them from offenses and violence. Moreover, those who come to us can and should fundamentally rely on the many favors of the Royal Highness".

The location chosen for the *General Studies* was in Lisbon, the quarry in the Alfama neighborhood, near the City Gate of the Cross, or of the Old Coin. In the General Studies, Laws, Canons, Grammar, Logic and Medicine were taught there (music was also included, but later in 1309).<sup>\*</sup> In 1537 the first Portuguese University was transferred to Coimbra.

At the end of the eighteenth century, higher education was reestablished in the capital, Lisbon, through Courses, Schools and Institutes. In 1911 part of those Courses and Schools met at the University of Lisbon. The Instituto Superior Técnico was founded in

---

<sup>\*</sup> Translated from <http://cabo-carvoeiro-historico.blogspot.com/2009/09/fundacao-da-primeira-universidade-em.html>.

1911 and integrated in the Universidade Técnica de Lisboa (Technical University of Lisbon) when this was created in 1930.

The actual Universidade de Lisboa (ULisboa) is the successor of the Universidade Técnica de Lisboa and the former University of Lisbon, resulting from the merger between these two institutions (Decree-Law number 266-E / 2012, of December 31). This project culminates in the desire to join, in the same institution, the various areas of knowledge, thus creating the best conditions to follow the contemporary evolution of science, technology, arts and the humanities.

## DOCTORAL STUDIES IN PORTUGAL

The higher education system in Portugal is regulated by the Decree-Law number 74/2006, of March 24, as modified by the Decree-Law number 107/2008, of July 25, the Decree-Law number 230/2009, of September 14, the Decree-Law number 115/2013, of August 7, and the Decree-Law number 63/2016, of September 13.

In the preamble of the DL 74/2006 it can be read “The Government Program established as one of its essential objectives for the higher education policy in the period 2005-2009 to guarantee the qualification of the Portuguese in the European area, making the activation of the Bologna Model a single opportunity to promote the attendance of higher education, improve the quality and relevance of a diversity of training offers, encourage the mobility of our students and the internationalization of our training programs.

The DL 74/2006 characterizes the higher education system in accordance with the directives of the Bologna System:

1. The higher education system is organized in three cycles of studies;
2. The differentiation of objectives between the Polytechnic and the University subsystems, in the light of comparable European experience, and in a context of equal dignity and requirements but of different vocations;
3. The definition of the objectives of each of cycle of studies in the perspective of the competencies to be acquired, by adopting the results of the collective work carried out at the European level and carried out in the Dublin descriptors, bearing in mind that the transition from a system of education based on knowledge transfer to a system based on the development of skills by the students is a critical issue in the whole of Europe, with a particular expression in Portugal;
4. The organization of the courses based on the European credit transfer and accumulation system of credits (ECTS).

## General Provisions

### Academic Degrees and Diplomas

In Polytechnic Institutes the academic degrees conferred are those of bachelor (*licenciado*) and master and also the diploma of professional high-level technician.

The university education, confers the academic degrees of bachelor (*licenciado*), master, and doctor.

## Doctoral Studies

### Degree of Doctor

The degree of doctor is conferred to those who demonstrate:

1. The ability to systematically understand a scientific field of study;
2. The skills, aptitudes and methods of research associated with a scientific field;
3. The ability to envisage, design, adapt and carry out a meaningful research respecting the requirements imposed by the standards of academic quality and integrity;
4. The ability to carry out a significant set of original research work that has contributed to the extension of the frontiers of knowledge, part of which deserves national or international dissemination in publications with a selection committee;
5. The ability to critically analyze, evaluate and synthesize new and complex ideas;
6. The ability to communicate with their peers, the remaining academic community, and society in general, about the area in which they are specialized;
7. The ability to promote, in a knowledge-based society, technological, social or cultural progress in an academic and / or professional context.

The degree of doctor is conferred in a branch of knowledge or in a specialty.

### Award of the Degree of Doctor

1. The branches of knowledge and specialties in which each university or university institute confers the doctoral degree are established by its legal and statutorily competent board.
2. The degree of doctor in a branch of knowledge or specialty can only be conferred by universities or university institutes that, cumulatively:
  - a) Have a faculty academically qualified and specialized in the branch of knowledge or specialty;
  - b) Have the human and material resources necessary to guarantee the level and quality of the training provided;
  - c) Demonstrate to have the human and organizational resources necessary to carry out research in the area;
  - d) Demonstrate to have, by themselves or through their participation or collaboration, or of their lecturers and researchers, in external scientific institutions, an accumulated experience of research and a relevant scientific and academic production in that branch of knowledge or their specialty;
  - e) Have a coordinator of the study cycle degree doctorate holder who is specialized in the field of knowledge or specialty and your cycle in a full-time regime.
3. For the purposes of sub-paragraph a) of the preceding paragraph, it is considered that the teaching staff is
  - a) own, when the total faculty is formed by a minimum of 75% of full time teachers;
  - b) academically qualified, when the total faculty is fully constituted by holders of a doctor's degree, being however possible in exceptional cases to integrate non-doctorate teachers with a recognized academic, scientific or professional curriculum;

- c) specialized, when the total faculty is constituted by a minimum of 75% of holders of a doctor's degree in this branch of knowledge or its specialty.
- 4. The verification of the satisfaction of the requirements referred to above is done within the scope of the accreditation process.

## **Access and Admission into the Cycle of Studies Leading to the Doctoral Degree**

1. To access to the cycle of studies leading to the degree of doctor can apply those who hold:
  - a) a master's degree or legal equivalent;
  - b) a bachelor's degree with a scientific and academic curriculum particularly relevant and attesting their capacity to carry out this cycle of studies as recognized by the statutorily competent scientific board of the university or university institute where they wish to be admitted;
  - c) a scientific or professional curriculum particularly relevant and attesting their capacity to carry out this cycle of studies as recognized by the statutorily competent scientific board of the university or university institute where they wish to be admitted.

## **Cycle of Studies Leading to the Doctoral Degree**

1. The cycle of studies leading to the degree of Doctor integrates the elaboration of an original thesis specially designed for this purpose and appropriate to the nature of the field of knowledge or specialty.
2. Alternatively, under equivalent conditions and having regard also to the nature of the field of knowledge or specialty, the cycle of studies leading to the doctoral degree may, under the conditions laid down in the regulations of each higher education institution, be composed by:
  - a) the duly framed compilation of a coherent and relevant set of research papers already published in journals with selection committees of recognized international merit; or
  - b) in the field of the arts, by a work or group of works or achievements with innovative character, accompanied by a written statement explaining the design and preparation process, research capacity and its framing in the evolution of knowledge in the field in which is inserted.
3. The cycle of studies leading to the doctoral degree should aim essentially at the oriented learning of high-level research practice, and may eventually include the attendance of a set of curricular units forming what is called a doctoral course.

## **Special Regime for the Presentation of the Thesis**

1. Those who meet the conditions to access to the cycle of studies leading to the doctoral degree, but are not registered in the cycle of studies, neither have a scientific advisor appointed by the university or university institute, may request the presentation of a thesis to the public act of defense.
2. It is incumbent upon the scientific board legally and statutorily competent of the university or university institute to decide on the application, after the appreciation of the applicant's curriculum of the applicant and the assessment of

the appropriateness of the thesis to the objectives targeted by the degree of doctor.

### **Thesis Committee or Jury**

1. The thesis, or the works foreseen in the paragraph “Cycle of Studies Leading to the Doctoral Degree” above, are object of a public examination and discussion driven by a thesis committee appointed by the legal and statutorily competent board of the university or the university institute.
2. The thesis committee is composed by:
  - a) the rector, who chairs, or by whom he appoints for this purpose;
  - b) a minimum of four members holding a doctoral degree, one of these being the scientific advisor.
3. Whenever there is more than one advisor only one can join the jury.
4. At least two of the members of the thesis committee shall be appointed from among professors and researchers with a doctoral degree from other national or foreign higher education or research institution.
5. It is also possible for individuals with recognized competence in the scientific area in which the thesis or works are integrated to be a member of the jury.
6. The jury must include at least three professors or researchers in the scientific field in which the thesis or works are integrated.
7. The deliberations of the jury shall be taken by a majority of its members, by means of a justified roll-call vote, where abstention is not permitted.
8. The chair of the jury has a casting vote, which he may exercise only if:
  - a) he is a professor or a researcher in the scientific area or areas of the of the cycle of studies; or
  - b) in the event of a tie.
9. The minutes of the jury meetings include the vote of each of its members and the respective justifications, which may be common to all or to some members of the jury.

### **Award of the Doctoral Degree**

The degree of doctor is conferred to those who have obtained approval in the public act of defense of the thesis or of the works foreseen in the paragraph “Cycle of Studies Leading to the Doctoral Degree”.

### **Final Qualification of the Doctoral Degree**

1. A final qualification can be awarded to the academic degree of doctor in the terms set by the regulatory norms approved by the university or university institute that assigns the degree.
2. The final qualification awarded by the by the thesis committee must consider the qualifications obtained in the curricular units of the doctoral course, if any, and the merit of the thesis or the works assessed in the public act.

### **Regulatory Norms of the Doctoral Cycle of Studies**

The legal and statutorily competent board of each university or university institute approves the norms regarding the following matters:

- a) Rules of admission to the cycle of studies, especially the academic and curricular conditions, the application rules and the selection criteria;



- b) Possible existence, duly justified, of a doctoral course and, when it exists, the curricular structure, the plan of studies, and the conditions under which a candidate can be dismissed of attending;
- c) The process of appointment of the scientific advisor or counselors, the conditions in which co advising is allowed, and the rules to be observed in the advisement process;
- d) The process of registration of the doctoral theme;
- e) Conditions for the preparation of the thesis or the presentation of the works submitted for public defense;
- f) Rules on the presentation and delivery of the thesis or works and their assessment;
- g) Rules on the maximum deadlines for the public act of defense;
- h) Rules on the composition, appointment and operation of the thesis committee;
- i) Rules on the public act of defense;
- j) Process of awarding the final qualification.

## Award of Degrees in Association

### Object of association

1. Higher education institutions may associate themselves with other national or foreign higher education institutions to carry out the courses leading to degrees, coordinating the human and material resources of the Institutions.
2. The study cycles leading to the degrees in association shall be accredited by the Agency for the Assessment and Accreditation of Higher Education and registered by the Directorate-General for Higher Education, as study cycles in association, when aiming at the award of a degree;
3. When the association involves foreign higher education institutions, the Agency for the Assessment and Accreditation of Higher Education may integrate the results of evaluation and accreditation procedures carried out by foreign or international institutions within the principles adopted by the European system for the guarantee of the quality of higher education.

### Award of the Degree

1. When all the higher education institutions in the association are legally competent to award the degree, this can be attributed:
  - a) by all the institutions together;
  - b) only by one of the institutions.
2. When one of the higher education institutions is not legally competent to award the degree, in particular because it belongs to a subsystem which does not have competence to do so, only the competent institution or higher education institutions can do it.

## Mobility

### Guarantee of Mobility

The mobility of students between national higher education institutions, in the same or in different subsystems, as well as between national and foreign higher education institutions, is ensured through the European credit transfer and accumulation system,

based on the principle of mutual recognition of the level of the training contents and skills acquired.

## Crediting

1. Foreseeing to pursuing studies to obtain an academic degree, higher education institutions:
  - a) May credit the training carried out in other cycles of studies conferring a degree in national or foreign higher education institutions, either obtained within the framework of the Bologna System or that obtained previously;
  - b) Credit the curricular units successfully completed, up to a limit of 50% of the total credits of the cycle of studies;
  - c) Can credit the training carried out in courses not conferring academic degrees taught in national or foreign higher education institutions, up to 50% of the total credits of the cycle of studies;
  - d) May credit the training provided in the course of technological specialization up to a limit of one third of the total credits of the study cycle;
  - e) May credit other training not covered by the preceding subparagraphs up to a limit of one third of the total credits of the cycle of studies;
  - f) May credit duly proven professional experience, up to a limit of one third of the total credits of the study cycle.
2. The total number of credits awarded under points d) to f) of the previous number may not exceed two thirds of the total credits of the study cycle.
3. In the cycles of studies leading to the doctor's degrees, the limits to the crediting fixed by the previous numbers refer to the doctoral course of the doctoral program.
4. Credits made under paragraph 1 (a) and (d) shall be null and void where the foreign institutions in which the training was given are not recognized by the competent authorities of the respective State as forming part of its higher education system, as Established by Article I.1 of the Convention on the Recognition of Qualifications concerning Higher Education in the European Region, approved for ratification by Resolution of the Assembly of the Republic number 25/2000, of March 30.
5. The allocation of credits under paragraph 1 (f) may be totally or partially conditioned by the results of specific knowledge assessment procedures.

## Rules Applicable to Crediting

1. The crediting process is regulated by a set of rules approved by the legal and statutorily competent board of the higher education institution.
2. The regulation of the crediting process shall contain provisions relating to:
  - a) the documents that must instruct the application;
  - b) the competent boards for assessment and decision;
  - c) the publication of decisions;
  - d) the definition of deadlines.
3. The crediting involves, necessarily, the intervention of the scientific council or of a jury specifically appointed for that purpose.
4. The crediting takes into account the level of credits as well as the area in which they were obtained.
5. Parts of curricular units cannot be credited.
6. The crediting:
  - a) Is not a sufficient condition for admission in the cycle of studies;

- b) Takes effect only after admission to the cycle of studies and only for that cycle of studies.
7. The Agency for the Evaluation and Accreditation of Higher Education includes in the evaluation of the cycles of studies the analysis of the practices of higher education institutions in what respects to the crediting process.

## Non Creditable Activities

Cannot be credited:

- a) Teaching in cycles of studies conferring or not an academic degree that is not authorized in the terms of the law;
- b) Teaching courses in a cycle of studies conferring or not an academic degree outside the institution to which the accreditation applies.

## Other Provisions

### Rules Governing the Operational Aspects of the Jury's Meetings

1. The functioning of the thesis committee or jury shall be governed by the provisions of the Code of Administrative Procedure in all matters not considered in the decree-law 63/2016, of September 13.
2. The meetings of the jury prior to the public defense act may be held by teleconference.
3. In the public defense act, the chair of the jury may authorize the participation by teleconference of a number of members not exceeding 50% of the total number of members, as long as there are technical conditions for their full participation in the public defense examination.

### Foreign Languages

Higher education institutions may consider the use of foreign languages in:

- a) Teaching in any of the cycles of studies referred to in this decree-law;
- b) The writing of doctoral thesis, works, and reports, and in their respective public act of defense.

### Funding

1. Accreditation and / or registration of a cycle of studies, whether or not conferring an academic degree, does not necessarily imply its public funding.
2. The public funding of a cycle of studies of a higher education institution is decided within the legal framework and taking into account the structure of the higher education network.

## Accreditation and Commencement of a Cycle of Studies

### Accreditation

1. The accreditation of a cycle of studies consists in verifying the fulfillment of the legal requirements required for its creation and operation.
2. Accreditation covers all institutions of higher education and all cycles of studies conferring academic degree.

## Competence for Accreditation

1. Accreditation is carried out within the framework of the European system of quality assurance in higher education, and is a competence of the Agency for Evaluation and Accreditation of Higher Education.
2. The Agency for Evaluation and Accreditation of Higher Education is an entity endowed with scientific and technical autonomy.
3. The Agency for Evaluation and Accreditation of Higher Education interacts with higher education institutions, professional associations and other relevant entities.
4. The accreditation is carried out within the respect due to the scientific and pedagogical autonomy of higher education institutions.

## Commencement of a Cycle of Studies

1. The commencement of a cycle of studies aiming at conferring an academic degree requires prior accreditation by the Agency for the Evaluation and Accreditation of Higher Education, and the subsequent registration by the Directorate-General for Higher Education.
2. The accreditation and the subsequent registration of a cycle of studies implies the recognition of the degree conferred.

## FUNDING OF DOCTORAL PROGRAMS

The Foundation for Science and Technology (FCT) is the governmental agency responsible for the public funding of the scientific and technological Portuguese system. FCT directly funds research institutions, research projects, and doctoral programs. FCT also funds advanced training, namely through doctoral and postdoctoral fellowships.

## Scientific Research and Technological Development Projects Grants in All Scientific Domains

It is a priority of the Science and Technology policy to grow, strengthen and consolidate the National Scientific and Technological System (STCN), making it more competitive in the national and international context.<sup>†</sup>

In this context, the promotion and strengthening of the competences of the scientific and technological institutions, through the participation of their research teams in scientific research projects and technological development in different scientific domains, is of particular importance.

FCT regularly gives to researchers the opportunity to submit applications for research projects. This is done both in open calls of annual periodicity to all scientific areas and through other competitive calls directed to targeted research in certain specific fields or themes. In both cases, the evaluation of the proposals submitted is carried out by independent panels, involving national and foreign experts of recognized merit and suitability, each panel being appointed for each scientific area.

Research projects cover all fields of science, from the life sciences and health to the social and human sciences, and also through engineering, exact sciences, natural and

---

<sup>†</sup> Based on <http://www.fct.pt.apoios.projectos.index.phtml.en>

environmental sciences. The different kinds of the research projects to be supported are specified in the Notice of Opening of each of the calls.

## FCT Doctoral Programs

### Purpose and Overview

FCT wishes to contribute to train the next generation of highly qualified researchers and higher education faculty by supporting internationally competitive, research based Doctoral Programs. ‡

FCT Doctoral Programs are expected to bring together higher education institutions, research institutions and industry (when relevant), to:

- a) Promote world class graduate education and research based training;
- b) Foster collaborations and sharing of resources between Portuguese institutions, to bolster the international quality and status of these institutions;
- c) Equip students with the necessary transferable skills to become excellent scientists as well as active members of the communities they may find themselves in.

FCT Doctoral Programs may be one of three types:

- a) National should involve at least one higher education institution and one research institution (both Portuguese);
- b) With Industry – should involve at least one research institution, one industrial R&D partner, and one Portuguese higher education institution;
- c) International – should involve at least one higher education institution and one research institution (both Portuguese) and foreign higher education institution or R&D institution.

Funding for FCT Doctoral Programs covers the costs of:

- a) Doctoral student fellowships (national or mixed, if the student also spend part of his / her cycle of studies in a foreign higher education institution or R&D institution), for three or four years maximum, and / or research grants;
- b) Initiation to scientific research grants, each one for a maximum duration of one year;
- c) Courses, laboratory and / or other types of field work that may be necessary to achieve the scientific objectives of the doctoral program.

Selected doctoral programs are funded for four years. Extra funding is conditional on a decision by FCT, based on reports prepared by the FCT doctoral program coordinator.

### Evaluation Committee

In each call, a restricted number of Doctoral Programs proposals are approved, based on the decision of an international, independent evaluation panel.

## FCT Advanced Training Fellowships

### Types of Research Fellowships

---

‡ Based on [http:// www.fct.pt/apoiios/programasdoutoramento/index.phtml.en](http://www.fct.pt/apoiios/programasdoutoramento/index.phtml.en)

This subsection was prepared based on the set of regulations defined by the FCT to manage the advanced training fellowships, directly or indirectly funded by the FCT.

### Guest Scientist

- a) The guest scientist scholarships (BCC) are intended for doctors with a high merit scientific curriculum for the development and realization of research activities in Portuguese scientific and technological institutions, including the coordination of research projects.
- b) The total duration of this type of scholarship may vary from one month to three years.

### Postdoctoral Grants

- a) Post-doctoral fellowships (BPD) are intended for doctors, preferably those who have obtained the degree for less than six years, to carry out advanced research work in Portuguese scientific institutions of recognized high standing.
- b) The duration of the scholarship is, as a rule, annual, and renewable for a maximum of six years subject to a favorable opinion in the evaluation made at the end of the first three-year period, and cannot be granted for periods of duration inferior to three consecutive months.
- c) On an exceptional basis and depending on the available budget of the funding entity, the BPD may include periods of activity abroad, with a maximum duration of one year for doctorates in Portugal and six months for doctorates abroad.

### Doctoral Grants

- a) Doctoral scholarships (BD) are directed to those who meet the conditions necessary to access to a doctoral program and wish to develop research work leading to the degree of doctor.
- b) The duration of the grant is, as a rule, annual, renewable for a maximum of four years, and cannot be granted for periods of less than three consecutive months.
- c) The BD may relate to doctoral studies running in Portugal or abroad. The BD also applies to studies that run in Portugal and abroad (mixed BD).
- d) In the case of mixed BD, the period of the work plan that takes place in a foreign institution depends on the available budget of the financing entity, and may not, in general, exceed two years. Only in very exceptional cases, this time can be exceeded.

### Doctoral Grants in Companies

- a) Doctoral fellowships in companies (BDE) are intended for those who meet the necessary conditions to access to a doctoral program and wish to develop research activities in a business environment.
- b) The assignment of this type of scholarship supposes the existence of a work plan that specifies in detail the objectives, the conditions of support to the research activity of the student in the company, and the expected interaction between the company and the university institution conferring the degree. In particular, the articulation between the scientific supervision guaranteed by a university professor or researcher and the corresponding business supervision should be foreseen and accomplished through a protocol.
- c) As a rule, the duration of the grant is, annual, renewable for a maximum of four years, and cannot be granted for periods of less than three consecutive months.
- d) The BDE only can apply to programs running in Portugal.

- e) In the absence of specific provisions, the rules for BD are applicable to BDE.

### Research Grants

- a) Research grants (BI) are intended for bachelors, masters or doctors, to obtain scientific training in research projects, or in national scientific and technological institutions.
- b) The duration of the scholarship is, as a rule, annual, renewable for a maximum of five years, and cannot be granted for periods of less than three consecutive months.

### Scientific Initiation Grants

- a) Scientific initiation grants (BIC) are intended for students enrolled for the first time in a higher education institution at a bachelor's or integrated master's degree program to initiate or reinforce their scientific training, integrated into research projects to be developed in national institutions.
- b) The duration of the scholarship is, as a rule, annual, renewable for up to two years depending on good academic performance, and cannot be granted for periods of less than three consecutive months.

### Grants for Internships in International Scientific and Technological Organizations

- a) Grants for internships in international scientific and technological organizations (BEST) are intended for bachelors or holders of a higher level academic degree, preferably those awarded by a Portuguese higher education institution, in order to provide training opportunities in international scientific and technological organizations of which Portugal is a member, under conditions to be agreed with them.
- b) The duration of the grant is, as a rule, annual, renewable for a maximum of five years, and cannot be granted for periods of less than three consecutive months.

### Mobility Grants

- a) Mobility grants (BMOB) aim to encourage mobility and transfer of knowledge and technology between R&D institutions and companies or other entities, public or private, with activities of economic, social or public administration nature in the country.
- b) These fellowships are intended for bachelors, masters or doctors to carry out R&D activities in companies or other public or private entities, for participation in advanced training programs involving companies or business associations and scientific institutions or universities, or to carry out activities that promote technological innovation, namely in risk capital management entities, technological intermediation, intellectual property management and scientific advice.
- c) The duration of the grant is, as a rule, annual, renewable for a maximum of three consecutive years, and cannot be granted for periods less than one consecutive month.

## Application, Evaluation, and Granting

### Candidates



1. Without prejudice to the provisions of the following paragraphs, can apply to the scholarships financed directly or indirectly by FCT:
  - a) National citizens or citizens of other member states of the European Union;
  - b) Citizens of third states, holders of valid residence permits in Portugal or beneficiaries of long-term resident status, under the terms of the applicable Portuguese Law;
  - c) Citizens of third countries with which Portugal has celebrated reciprocity agreements.
  - d) Citizens of third countries, provided that in the notice of opening of the call an individual interview selection method is foreseen.
2. For scholarships with a work plan to be carried out, totally or partially, in foreign institutions, only can apply citizens that live permanently and usually in Portugal.
3. In the case of scholarships directly funded by the FCT for applicants with a doctoral degree, foreign citizens not resident in Portugal can also apply, provided that the application is supported by a national host institution and that the work plan is to be accomplished entirely in Portuguese territory.
4. Citizens who have already benefited from a scholarship directly financed by the FCT may not apply a second time for the same type of fellowship (doctoral or postdoctoral).

### **Evaluation of the Applications**

1. The evaluation of the applications shall be carried out in accordance with the parameters set out in both the notice of the call and in the evaluation script, taking into account the candidate's intrinsic merit, work plan and conditions offered by the Host institution.
2. The granting of the fellowship is dependent on compliance with the requirements set forth in the notice of of the call, the result of the scientific evaluation, the receipt of the required documentation and the budgetary availability of the financing entity.

### **Grant Awarding**

1. The award of the fellowship is executed through the award of a grant, under the conditions set forth in the regulations and the contract agreement to be signed between the financing institution and the grant holder.
2. Grants are not awarded to those who did not accomplish his duties as grant holders under a previous scholarship contract financed directly or indirectly by FCT, in particular when the final or progress reports have not been delivered or when, in accordance with the applicable law or regulation, refunds eventually due have not been returned.

### **Values (in euros) of the Different Fellowships**

The grants monthly payed have the following values:

Guest scientist:	2060 –2650	
Postdoctoral grants:	1495 (in Portugal)	2245 (abroad)
Doctoral grants:	980	1710
Doctoral grants in companies:	980	

Research grants:		
(Doctor)	1495	2245
(Master)	980	1710
(Bachelor)	745	1450
Scientific initiation grants:	375	

In the case of the doctoral grants, the grant holder is necessarily enrolled in a doctoral program, and therefore the grant includes the annual tuition fee in the amount of 2750 euros.

## THE DOCTOR DEGREE AWARDED BY IST

### Introduction

The Decree 19:081, of September 1930, created the Universidade Técnica de Lisboa<sup>§</sup> (UTL), as the association of higher education schools and institutes that, due to their culture and research, and besides the professional education and training for which they were created in the first place, aim at emphasizing their contribution for the development of state economy by studying its most important and urgent problems. IST was one of the first institutes integrated in the UTL. This law also recognizes the capability of the higher education institutes and schools integrated in the UTL to award the degrees of graduate and doctor (in engineering, for the case of IST).

Up to the fifties of the past century the role of the IST was fundamentally to train and graduate engineers for insertion in the technological and industrial community. At that time, a remarkable cast of teachers not only for specialty courses but also for courses on sciences of engineering (basics of engineering), was admitted to the IST. Since then IST has been at the forefront of teaching mathematics, physics, chemistry, mineralogy and geology. However, systematic and well defined lines of research were very incipient if not almost non-existent.

For the first time, since 1928, in 1955 someone with scientific background and aware of the international status of science and technology is appointed for the position of Minister of Education. In 1955, in the context of the reform of the Portuguese Education System, the publication of the Decree-Law number 40378, of November 14, 1955, establishes the “New Contents and Structure of the Graduation on Engineering in the Portuguese Universities.” One of the most important actions taken by this Decree-Law confers to the IST and to the Faculty of Engineering of the University of Oporto the capability of conferring the doctoral degree in some engineering specialties. In July 1962, the first doctoral degree, curiously in the area of Physics, was awarded by IST.\*\*

A significant increase in the number of doctor degrees awarded by IST/UTL started in the late eighties / early nineties of the past century. The structure and regulations of the doctoral programs offered by IST was for the first time specified in 2003, in such a way that its adaptation to the Bologna Model in 2006 was straightforward.

---

<sup>§</sup> Technical University of Lisbon

\*\* This last paragraph and the following were adapted from “*Enquadramento Histórico/Legislativo da Criação do Complexo Interdisciplinar e Sua Evolução no Contexto das Dinâmicas da Investigação Científica Universitária em Portugal*,” Abreu Faro, July 2007.

Actually, IST offers doctoral programs of independent, self-directed academic research, during which students obtain skills for Research, Development and Innovation (RDI) at a high specialized level. The doctoral programs include an advanced study doctoral course, which grants a total of credits between 30 and 60 ETCs. This contributes to the development of a research work written up in a thesis. The doctoral programs have a duration of 3 (to 4) academic years and are aimed at holders of a bachelor's or a master's degree who have obtained adequate basic skills in the specialized field to which they are applying. The doctoral programs also support the development of research and generic skills to equip students to operate successfully as a professional researcher in any setting.

Doctoral programs at IST are, in some cases, provided in association with national and international universities and, in several of those cases, a dual degree is granted. Students actively participate in national and international research projects. Also, they are encouraged to patent their ideas and to develop an entrepreneurial attitude.

## **Regulations of IST Doctoral Programs**

As it should be, the specific regulations approved by the Scientific Council of IST follow in general the actual form of the Decree-Law 74/2006. However, there are some specificities that we should address here.

### **Qualifier Exams**

In each doctoral program, qualifier exams can be required as a prerequisite for the continuation in the program. Students have to obtain a successful grade (minimum 10 out of 20) in a maximum of three (3) courses in areas related to the topic of research. Students who do not achieve the approval in all the qualifier exams will be excluded. They can in any case apply for a second time after at least one year over the date of exclusion.

### **Thesis Monitoring Committee**

When considered in the specific regulation norm of a doctoral program, the Thesis Monitoring Committee (TMC) is composed by the student's scientific supervisor and a minimum of two members, professors or researchers of IST or from other higher education institution.

### **Public Presentation of the Thesis Proposal**

Whenever imposed by the regulation norm of a doctoral program, the seminar for the public presentation of both the research work already developed and of the thesis proposal shall be given with the presence of the TMC no later than 24 months after the program start.

### **Competencies of the TMC**

The TMC shall draw up a progress report on the work plan of the thesis proposal, including the suggested corrections and the expected date of the conclusion of the thesis. The TMC must also guarantee the follow up of the research work until the conclusion of the thesis.

### **Agreements for International Co Supervision**

Agreements for the preparation of the thesis can be celebrated with other foreign higher education institutions, legally empowered to award the doctoral degree or equivalent.

## Doctoral Programs at IST

In the following we list the programs offered by or with the participation of IST in 2016. The first list includes the programs offered exclusively by IST. The second list includes only the doctoral programs directly funded by FCT, where IST is the principal institution or a participant institution. The occurrence of repetitions only reflects the fact that that particular doctoral program have students with grants supported by the FCT program together with students funded by grants supported by other funding mechanisms.

### Doctoral Programs Offered by IST (2016)

Advanced Materials and Processing  
 Aerospace Engineering  
 Architecture  
 Bioengineering  
 Biomedical Engineering  
 Biotechnology and Biosciences  
 Chemical Engineering  
 Chemistry  
 Civil Engineering  
 Climate Changes and Sustainable Development Policy  
 Computational Engineering  
 Earth-Resources  
 Electrical and Computer Engineering  
 Engineering and Management  
 Engineering and Public Policy  
 Environment Engineering  
 Information Security  
 Information Systems and Computer Engineering  
 Leaders for the Technical Industries  
 Materials Engineering  
 Mathematics  
 Mechanical Engineering  
 Naval Architecture and Marine Engineering  
 Petroleum Engineering  
 Physics  
 Refining, Petrochemical and Chemical Engineering  
 River Restoration and Management  
 Statistics and Stochastic Processes  
 Sustainable Energy Systems  
 Technological Changes and Entrepreneurship  
 Technological Physics Engineering  
 Territorial Engineering  
 Transportation Systems

### FCT Doctoral Programs Offered by IST (2016)

Advanced Integrated Microsystems  
 Advanced Materials and Processing  
 Advanced Program in PLAsma Science and Engineering  
 Analysis and Mitigation of Risks in Infrastructures

Applied and Environmental Microbiology  
 Bioengineering  
 Bioengineering – Cell Therapies and Regenerative Medicine  
 Biotechnology and Biosciences  
 Catalysis and Sustainability  
 Eco-Construction and Rehabilitation  
 Environmental Hydraulics and Hydrology  
 International Doctorate Network in Particle Physics, Astrophysics and Cosmology  
 Leaders for Technical Industries  
 Lisbon Mathematics  
 Materials Chemistry  
 Medical Chemistry and Biophysics  
 Networked Interactive Cyber Physical Systems  
 Physics and Mathematics of Information  
 Radiopharmaceutical Sciences in Molecular Imaging and Cancer Therapy  
 Refining, Petrochemical, and Chemical Engineering  
 River Restoration and Management  
 Robotics, Brain and Cognition  
 Science, Technology and Policy  
 Sustainable Energy Systems  
 Transportation Systems

## INTERNATIONAL DOCTORAL PROGRAMS

In this section we consider international agreements involving collaborative doctoral programs. In this context, we highlight the programs with the Carnegie Mellon University in the USA and with École Polytechnique Fédérale de Lausanne in which dual degrees are conferred.

### Dual Degree Partnerships

#### The Carnegie Mellon Program ††

##### Overview

The Carnegie Mellon|Portugal Program is an education, research, and innovation platform that connects Portuguese research institutions, universities and companies in cooperation with Carnegie Mellon University (CMU). The partnership, which is funded by the Foundation for Science and Technology, fosters the development of an international ecosystem of talent development, knowledge creation, and innovation in emerging areas of Information and Communication Technologies (ICT).

The key instruments of the Carnegie Mellon|Portugal Program are: talent development of faculty, students and professionals from the industry, through dual degree Doctoral and Professional Masters programs, and a faculty exchange program; research and innovation in potentially profitmaking technologies, through multidisciplinary projects carried out by integrated teams from universities and companies, with an orientation towards new products and services for international markets; and industry collaboration through an Industry Affiliates program. These instruments are applied in focused areas

---

†† <https://ai.tecnico.ulisboa.pt/en/programas-de-estudo/programas-duplos-graus/cmu-portugal/>

of ICT where Portugal can gain competitive advantages, continuously under discussion in the scientific and industrial communities.

The Carnegie Mellon|Portugal Program involves the universities represented by the Council of Rectors of Portuguese Universities, together with a large number of research centers, companies and the Carnegie Mellon University.

The involvement of IST/UL in the Carnegie Mellon|Portugal Program is focused on doctoral degrees and research projects. The doctoral programs are dual degree programs, i.e., the graduates of these programs receive two degrees: one awarded by Carnegie Mellon and one awarded by IST/UL alone or in association with other Portuguese University. As such, the programs are structured to satisfy the degree requisites of all the Universities involved.

### Carnegie Mellon | Portugal Activities at IST

Within the Carnegie Mellon|Portugal Program, IST/UL is involved in the following research areas and dual doctoral programs.

#### - Doctoral Program in Computer Science

The Doctoral Program in Computer Science is offered by the Department of Computer Science at CMU and by the Department of Computer Science and Engineering at IST/UL; MAP-I consortium, composed of the Universidade do Minho, Universidade de Aveiro, and Universidade do Porto; Faculdade de Ciências e Tecnologia of the Universidade de Coimbra; Faculdade de Ciências of the Universidade de Lisboa, and Faculdade de Ciências e Tecnologia of the Universidade Nova de Lisboa.

#### - Doctoral Program in Computer Science – Information Security

The Doctoral Program in Computer Science – Information Security is offered by the Department of Computer Science at CMU and by IST/UL.

#### - Doctoral Program in Electrical and Computer Engineering

The Doctoral Program in Electrical and Computer Engineering is specially focused on Networked Sensor, Communication, and Decision Systems, offered by CMU and the Department of Electrical and Computer Engineering at IST/UL.

#### - Doctoral Program in Engineering and Public Policy

The Ph.D. Program in Engineering and Public Policy (EPP) focuses on the technological and policy issues that arise when designing, developing, implementing and managing networked infrastructures, with specializations in networked industries such as Information and Communication Technologies (ICTs) and Energy Networks. It is offered jointly by IST/UL and the EPP Department at CMU, with collaboration from the Universidade Católica Portuguesa.

#### - Doctoral Program in Language Technology

The Doctoral Program in Language Technology is offered by the Language Technology Institute of the School of Computer Science of CMU. The dual degree awarded at IST/UL is in Electrical and Computer Engineering or in Information Systems and Computer Engineering.

#### - Doctoral Program in Mathematics

The Doctoral Program in Mathematics is offered by the Department of Mathematical Sciences at CMU and by the Departments of Mathematics at IST/UL; Faculdade de Ciências of the Universidade de Lisboa; and Faculdade de Ciências e Tecnologia of the Universidade Nova de Lisboa.

#### - Doctoral Program in Technological Change and Entrepreneurship

The Doctoral Program in Technological Change and Entrepreneurship is offered through the SETChange Program at CMU. It involves the Department of Engineering and Public Policy, the Department of Social and Decision Sciences, the Heinz School and the Tepper School at CMU, together with the Department of Engineering and Management at IST/UL and the Universidade Católica Portuguesa.

### More About the Carnegie Mellon | Portugal Doctoral Programs

The dual degree doctoral programs are structured so that students spend part of their time at CMU (40%) and the remainder in Portugal (60%). Students will be supervised by one faculty from CMU and one from IST/UL or from another Portuguese Partner University and must satisfy the requirements of all the Universities involved in order to obtain the degree.

Upon successful completion of the Program, a Ph.D. Degree is awarded by a CMU College and a Doctoral Degree is awarded by IST/UL alone or in association with one or more Portuguese Partner Universities.

### Grants

A limited number of Ph.D. grants are offered by FCT to interested candidates wishing to enroll as doctoral students in these doctoral programs.

## IST-EPFL Joint Doctoral Initiative<sup>‡‡</sup>

### Goals

The Instituto Superior Técnico (IST) and the École Polytechnique Fédérale de Lausanne (EPFL) have established a Joint Doctoral Initiative. The PhD program, comprises a curricular component as well as a strong research activity.

During the duration of the PhD program, students will spend about 50% of their time at IST and 50% of their time at EPFL and be advised by faculty members from both institutions.

### Focus Areas

The Joint Doctoral Initiative is oriented towards seven Focus Areas. The choice of areas is, in many cases, grounded on existing or long standing collaborations and correspond to areas where both EPFL and IST have strong competences and want to work together to build synergies and take advantages of their research and complementarities.

The Focus Areas in the Initiative are the following:

- a) Biological and Medical Imaging
- b) Distributed and Cognitive Robotics
- c) Computational and Stochastic Mathematics

---

<sup>‡‡</sup> <https://ai.tecnico.ulisboa.pt/en/programas-de-estudo/programas-duplos-graus/ist-epfl-joint-doctoral-initiative/>

- d) Antennas and EM devices for Wireless Applications
- e) Environmental Hydraulics
- f) Plasma Physics
- g) Architecture

## Other International Collaborative Programs

### MIT | Portugal Program

#### Overview

The MIT|Portugal Program is a collaboration between Portuguese Universities, Research centers, Industry and the Massachusetts Institute of Technology (MIT) that seeks to promote the investment in science, technology and higher education as a catalyzer for social and economic development in Portugal.

Launched in 2006, the program has built a research platform for cutting-edge concepts in promising areas of science and technology such as stem cell engineering for regenerative medicine, sustainable energy and transportation systems, integrated product design and medical devices.

The MIT|Portugal Program promotes the development of demonstration research projects (test-beds) for the development of new products and services with a global reach, fostering an increase of competitiveness of Portuguese economy in the knowledge-based industry. A core component of the Program is its pioneer model in the field of education with emphasis on the Innovation and Entrepreneurships and in the collaboration of Portuguese Universities and MIT.

#### MIT | Portugal Activities at Técnico Lisboa

IST has been leading MIT | Portugal Program research projects across the different fields of action and also a degree awarding institution in four engineering systems disciplines:

- a) Bioengineering Systems
- b) Engineering Design and Advanced Manufacturing
- c) Sustainable Energy Systems
- d) Transportation Systems

To date, the program has enrolled more than 500 students from all over the world and has involved at least 70 faculty members and researchers at MIT and 270 Portuguese faculty.

#### Doctoral Programs

The four doctoral programs are offered by a consortia of Portuguese institutions in collaboration with the MIT.

- Doctoral Program in Leaders for Technical Industries (LTI)

Doctoral program offered by the University of Lisbon (IST) in association with the University of Minho (School of Engineering) and the University of Porto (FEUP).

Academic background: mechanical, electronic, industrial, chemistry or material/polymers engineering; other technical education background may be considered, e.g., mathematics, physics or industrial design.

- Doctoral Program in Sustainable Energy Systems



PhD degree offered by the University of Lisbon (ISEG, IST, FCUL) in association with the University of Coimbra (FEUC and FCTUC) and the University of Porto (FEUP).

Academic background: mechanical, electrical and electronics, civil or environmental engineering; computer science; physics; architecture; economics or management.

- Doctoral Program in Bio-Engineering Systems

Doctoral program offered by University of Lisbon (IST) in association with the New University of Lisbon (FCTUNL), the University of Coimbra (FCTUC), and the University of Minho.

Academic background: biological and biochemical engineering, molecular and cellular biology, biochemistry, biotechnology, pharmaceutical sciences or other areas related with bioengineering.

- Doctoral program in Transportation Systems

Doctoral program offered by the University of Lisbon (IST) in association with the University of Coimbra (FCTUC) and the University of Porto (FEUP).

Academic background: candidates may come from a range of areas, including civil engineering, urban planning, computer science, economics or other social and engineering sciences.

## UT Austin | Portugal

### Overview

Under the University of Texas at Austin|Portugal Program, the Collaboratory for Emerging Technologies (CoLab) was launched on March 22, 2006. The CoLab has been a long-term collaborative project that aims to increase research and postgraduate studies in emerging technologies, with particular emphasis on media and digital content, advanced computing, mathematics, as well as other emerging technologies.

CoLab's strategy relies on promoting Portuguese scientific and technological capacity and reinforcing the status of Portugal's scientific institutions at an international level. This program involves a partnership between the University of Texas at Austin and several national universities and laboratories in Portugal.

The activities of CoLab are divided in three major groups:

1. Interdisciplinary research and advanced education activities in areas encompassing digital media, advanced computing and mathematics;
2. On-job training for entrepreneurs and technology transfer officers and related technology commercialization activities, including internships and an exchange program for entrepreneurs and technology transfer officers, in a way to form a University Technology Enterprise Network, UTEN; and
3. Continuous identification and promotion of cooperation in emerging technologies between UTAustin and Portuguese institutions.

### UT Austin-Portugal Activities at IST

Within CoLab, IST is involved in the following research activities and dual doctoral programs:

- CoLab UT Austin | Portugal Mathematics and Doctoral Program in Mathematics

Under the CoLab agreement, IST will participate in several events and initiatives: the Lisbon-University of Texas at Austin Doctoral Program in Mathematics (LUTAMath), a post-doctoral and junior faculty exchange program, summer schools and research projects.

The LUTAMath is a joint doctoral program between the Mathematics Departments of the three Lisbon public Universities (Instituto Superior Técnico, Universidade de Lisboa and Universidade Nova de Lisboa) and the University of Texas at Austin.

The CoLab Mathematics Summer Schools aim at providing an opportunity for doctoral students and junior faculty to meet and learn from well known specialists in diverse areas of mathematics. The first summer school was held at Instituto Superior Técnico in June 16-20, 2008.

- Advanced Computing and Doctoral Program in Computational and Engineering Sciences

Under the CoLab agreement, Instituto Superior Tecnico (IST) will participate in several events and initiatives: the IST|University of Texas at Austin Doctoral Program in Computational Engineering, a post-doctoral and junior faculty exchange program, research workshops and projects.

The joint doctoral program is organized by IST (Departments of Mechanical Engineering, Civil Engineering and Mathematics) and the University of Texas at Austin.

The CoLab workshop in Computational Engineering: Fluid Dynamics is a yearly event that aims at bringing together doctoral students and junior faculty with well known experts in the areas of Computational Engineering. The first workshop was held at Instituto Superior Técnico, Lisbon, from July 10-11 2008.

## CONCLUSIONS

This report addressed the organization of doctoral programs in the Portuguese Universities. The most important aspects of the applicable law were presented and explained, as well as the mechanisms for funding offered by FCT. We introduced the doctoral programs offered by IST, and specially the programs that benefit from the participation of high level international universities.

Here we refer that, during the project, two study visits to IST of participants from the involved partners were organized and took place in May of 2015 and 2016. For informative purposes we add the annex with the agendas of both events.

## ANNEX

### Visit to IST in May 20-21 2015

May 20, Morning Session, Meeting Room of IST

- 10:00 **Welcome**  
Prof. Arlindo Oliveira, President of IST
- 10:15 **Policies for Science and Technology: Doctoral Programs and International Partnerships**, Prof. João Sentieiro
- 11:00 Coffee Break
- 11:15 **One Year of RODOS Project: Developments and Results**, Prof. Srdjan Stankovic
- 11:45 **MIT - PORTUGAL**, Prof. Paulo Ferrão
- 12:05 **CARNEGIE MELLON - PORTUGAL**, Prof. João P. Costeira
- 12:25 **EPFL - IST**, Prof. José Santos Victor
- 12:45 Discussion

13:00 Lunch (North Tower, level 0)

May 20, Afternoon Session, ISR Meeting Room (North Tower, level 7)

- 14:00 **Doctoral Programs at IST**, Prof. Leonel Sousa
- 14:45 **Doctoral Program on Electrical and Computer Engineering**, Prof. Mário Figueiredo
- 15:30 Visit to research labs at ISR
- 16:45 Coffee Break
- 17:00 Visit to research labs at IT

May 21, Morning Session, Room V0.15 (Civil Pavillion, Level 0)

- 10:00 **APPLAuSE - Advanced Program in Plasma Science and Engineering**, Prof. Luís Lemos Alves
- 10:30 **Doctoral Program on Mathematics**, Prof. Miguel Abreu
- 11:00 Coffee Break
- 11:30 **Doctoral Program on Mechanical Engineering**, Prof. Helder Rodrigues
- 12:15 Visit to research labs at the Dept. of Mechanical Engineering
- 13:15 Lunch (North Tower, level 0)

May 21, Afternoon Session, Dept. of Bioengineering

- 14:30 **Doctoral Program on Bioengineering**, Prof. Joaquim Sampaio Cabral

15:15	Visit to research labs at the Dept. of Bioengineering
16:15	Coffee Break
16:45	Closing meeting
19:30	Dinner

## Visit to IST in May 25 and 27 2016

May 25, Morning Session, Room V0.15 (Civil Pavillion, Level 0)

10:00	<b>Welcome</b> Prof. Victor Barroso, IST
10:15	<b>Two Years of RODOS Project: Developments and Results</b> Prof. Radmila Marinković-Nedučin, Project Deputy Coordinator
11:00	Coffee Break
11:15	Doctoral program on <b>Advanced Integrated Microsystems (AIM)</b> . Prof. João Pedro Conde
11:45	<b>International Doctorate Network in Particle Physics, Astrophysics and Cosmology (IDPASC)</b> , Prof. Mário Pimenta
12:15	Doctoral program on <b>Physics and Mathematics of Information: Foundations of Future Information Technologies (DP-PMI)</b> , Prof. Yasser Omar
12:45	Discussion
13:00	Lunch (North Tower, level 0)

May 25, Afternoon Session, Room V0.15 (Civil Pavillion, Level 0)

14:30	<b>Doctoral Program on Networked Interactive Cyber Physical Systems (NETSyS)</b> Prof. João Paulo Costeira
-------	---

May 27, Morning Session, Room V0.15 (Civil Pavillion, Level 0)

10:00	<b>The Portuguese Quality Assurance Agency and the Portuguese Accreditation System (Doctoral Programmes)</b> Prof. Madalena Fonseca, Secretary General of the Agency for Assessment and Accreditation of Higher Education – A3ES, and University of Porto
10:20	<b>Accreditation of Doctoral Programmes: The Experience of IST</b> Dr. Marta Pile, Coordinator of IST Institutional Studies and Planning Office, and member of IST Quality Management Committee
10:40	Discussion
11:00	Coffee Break

- 11:30 Doctoral Program on ***Environmental Hydraulics and Hydrology (EHH)***,  
Prof. António Heleno Cardoso
- 12:15 Visit to research labs at the Depart. of Civil Engineering and Architecture

13:00 Lunch (North Tower, level 0)

May 27, Afternoon Session, Room V0.15 (Civil Pavillion, Level 0)

- 14:30 ***Management and Coordination Meeting***  
***Project goals, achieved results, planned activities***, Prof. Ružica Maksimović  
***Action plans for establishing doctoral schools at the Serbian Universities***, RS partners'  
representatives  
***Quality assurance of the Project, Extension of the eligibility period of Project and Financial Reporting***
- 15:15 ***Round table: Accreditation standards for joint study programs***  
Prof. Radmila Nedučin
- 16:30 Closing remarks