FEUP **FACULDADE DE ENGENHARIA**
UNIVERSIDADE DO PORTO

DOCTORAL PROGRAMME IN ELECTRICAL AND COMPUTER ENGINEERING

(http://www.fe.up.pt/pdeec)

PROGRAMA DOUTORAL
EM ENG. ELECTROTÉCNICA E COMPUTADORES

DEEC
Departamento
de Engenharia Electrotécnica
e de Computadores

UP - University of Porto

31.000 Students
2.050 PhD Students
2.300 Professors
14 Faculties and 1 Business School
69 Research Units
In Portugal, UP has over 23% of the papers indexed in ISI Web of Science

FEUP – Faculty of Engineering University of Porto

8.199 Students
737 PhD Students
5.832 MSc Students
492 PhD Professors
370 PhD Professors ETI
9 Departments
30 Research Units in 5 Research Institutes

DEEC – Department of Electrical and Computer Engineering

1.570 Students

120 PhD Students

75 Professors

DEEC covers the following areas:

- **Automation Control, Industrial Production Systems**
- **Electronics and Digital Systems**
- **Fundamental Sciences and Electrotechnics**
- **Power Systems**
- **Telecommunications**

Programme Organisation

1st year (60 ECTS*)	2nd to 4th year (180 ECTS*)
Courses	Thesis

1st Semester	2nd Semester
Seminars	Individual Topics
Main Stream 1	
Main Stream 2	
Elective 1	Elective 2

* ECTS (European Credit Transfer System)

Seminars and Individual topics

Seminars and Individual topics are mainly a starting to research work. Individual Topics leads to the preparation of the Thesis Research Plan

Electives

The available electives will be published every year by the Scientific Committee of the PDEEC. Students can enroll Special Topics course and work on a specific topic supervised by a professor associated with the programme.

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Streams (Course streams have the following mandatory sequence of courses)

STREAM	COURSES	
	1st Semester	2nd Semester
Energy Markets	Markets and Regulation	Market Simulation
Power System Dynamics and Control	Signals, Dynamics and Control	Systems with Renewables
Systems and Control	Vector Space Methods	Measure Theory and Stochastic Processes
Discrete Event and Hybrid Systems	Discrete Event Systems	Hybrid Systems
Microelectronics and Microsystems	Microelectronic and Microelectromechanical Technologies	Advanced Microelectronic Systems Design
Test Technology and Design for Testability	Test and Design for Testability	Instrumentation and Systems Testing
Operations Research	Decision Support	Optimization Techniques
Image Recognition and Machine Learning	Machine Learning	Image Analysis and Recognition
Robotics	Robotic Manipulators	Mobile Robotics
Embedded Systems	Real Time Embedded Systems	Parallel and Distributed Embedded Systems
Power Electronics	Power Conversion	Power Electronic Systems
Communication Technologies	Mobile Communications Systems	Advanced Optical Communications Systems
Information and Security	Security of Systems and Networks	Information Theory

Path in the programme (1/3)

Enrolling in the Programme

Students graduated in a field of engineering associated with Electrical and Computer Engineering have the necessary profile to enrol in PDEEC.
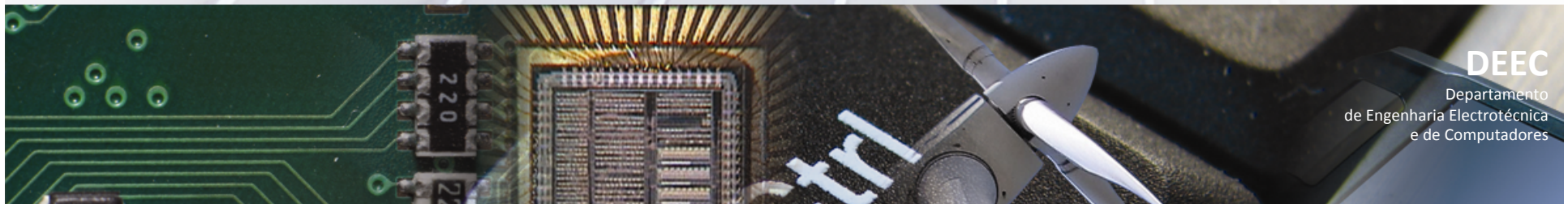Other profiles are likely to be accepted, especially in Computer Science, Physics or Energy and Environment.
The admission of any candidate is subject to analysis and approval
by the Scientific Committee of the Doctoral Programme PDEEC.

Student supervision

The Scientific Committee is responsible for appointing a Supervisor and Supervising Committee to each student and for defining each student's Study Plan, i.e. the courses that he/she must attend, taking in account his/her preferences and the recommendation of the Supervisor, given an identified need to balance and complete the student background.

The Supervising Committee must include the Supervisor, an external examiner and a third member.

The Supervisor is appointed with agreement of the student.

Path in the programme (2/3)

Getting a degree

The Doctor Degree in Electrical and Computer Engineering is granted to the student that:

. Successfully completes 8 courses according to the course organisation of PDEEC, obtaining 60 credit units;

. Gets approval from his Supervising Committee for a Research Plan, submitted up to the end of the first semester of the second year of frequency of the Programme;

. Submits and sees approved an original Thesis, as a result of the Research Plan previously accepted.

Defending the Thesis Research Plan

The research work to be done by the student must be defined by his Supervisor as early as possible, up to the end of the 1st year.
The work done in the course Individual Topics must contribute to the preparation of the Thesis Research Plan to be submitted to the Supervising Committee

The student shall defend his/her Research Plan in a public Session, to have place within 60 days of the submission of the Plan.
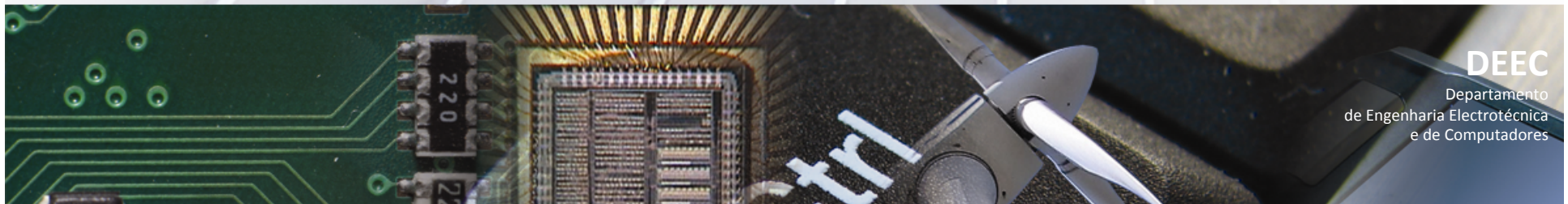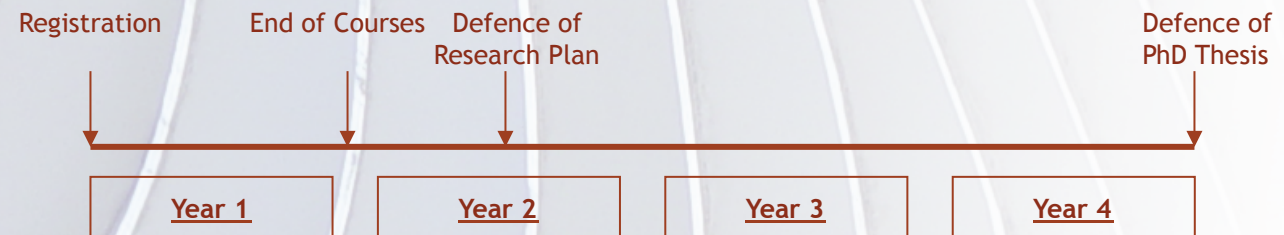
Path in the programme (3/3)

Thesis Submission

The Thesis must be submitted in English (or Portuguese, in cases accepted by the Scientific Committee) before the end of 4 years of frequency of the Programme.

A provisional version of the Thesis will be evaluated by a Committee upon a public defence, and amendments may stipulated.

The Diploma is only granted upon delivery of a corrected and final version of the Thesis.

Registration   End of Courses   Defence of Research Plan   Defence of PhD Thesis

Year 1	Year 2	Year 3	Year 4

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Additional information

The PDEEC is organized In cooperation with USA universities:

Massachusetts Institute of Technology

Carnegie Mellon.

WHAT STARTS HERE CHANGES THE WORLD
THE UNIVERSITY OF TEXAS AT AUSTIN

Dual Degree
The candidates admitted in the PDEEC in the scope of the Carnegie Mellon – Portugal Program obtain simultaneously the PhD degree by FEUP and by the Carnegie Mellon University.

Institutes

The research activity of the professors in DEEC is developed in R&D units recognized by the Portuguese Research Council (FCT), being two of them the Associate Laboratories with the Ministry of Science and Technology (INESC-Porto and INEB). In an evaluation of research labs promoted by FCT three units were classified as Excellent (INESC-Porto, INEB and LIACC) and one with Very Good (ISR Porto).

INESC Porto is a co-signer of the agreements of the joint programmes, CMU/FEUP, MIT/FEUP and UTA/FEUP. FEUP and the US universities (CMU, MIT,UTA) are the "institutions granting the diploma".

FEUP and other institutes associated with FEUP are also eligible as host institutions. They are INEB - Institute of Biomedical Engineering and ISR Porto - Institute of Systems and Robotics.

Host Institutions associated with DEEC

INESCPORTO
INSTITUTO DE ENGENHARIA DE SISTEMAS
E COMPUTADORES DO PORTO

INEB
INSTITUTO DE ENGENHARIA BIOMÉDICA

ISR

instituto de telecomunicações

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Contacts

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