DOCTORAL PROGRAMME IN ELECTRICAL AND COMPUTER ENGINEERING

2012-2013

Annual Annex to the Programme Guidelines

Scientific Committee

Programme Director

Aurélio Campilho, Ph.D. (campilho@fe.up.pt)

José Alfredo da Silva Matos, Ph.D. (jsm@fe.up.pt)
João Tomé Saraiva, Ph.D. (jsaraiva@fe.up.pt)
Aníbal Coimbra de Matos, Ph.D. (anibal@fe.up.pt)

CONTENTS

1 INTRODUCTION

This document is the 2012-2013 annex to the general document "PROGRAMME GUIDELINES". This annex presents relevant and specific information for the academic year 2012-2013, including:

- Important dates, fees and other information
- Calendar
- Streams and courses offered in 2012-2013

1.1 Important dates for application to the programme

For 2012-2013 academic year, the important dates are the following:

1st PHASE

Application.....	20.APR to 02.JUL.2012
Results	17.JUL.2012
Registration	13.SEP to 19.SEP.2012

2nd PHASE

Application	06.OUT to 30.NOV.2012
Results	14.DEC.2012
Registration	07.JAN to 11.JAN.2013

The selected candidates should start the studies in the semester immediately after being notified.

1.2 Fees

Full Time: 3000 €/per academic year

Part Time: 1800 €/ per academic year (60% of Full Time Tuition)

1.3 How to apply

For application the candidates should submit electronically through the FEUP website http://www.fe.up.pt. For the evaluation of the applications, the PDEEC Scientific Committee will take into consideration the following items, being the first four mandatory:

1. Curriculum Vitae of the candidate.
2. Certified transcripts of grades obtained in all courses and of final marks in degrees held by the candidate.
3. Motivation statement.
4. At least two recommendation letters (these letters should be sent directly by electronic means by the persons who write them to pdeec@fe.up.pt).
5. GRE – Graduate Record Examinations (http://www.ets.org/gre/).
6. TOEFL – Test of English as a Foreign Language (http://www.ets.org/).

The PDEEC Scientific Committee may require an interview to the candidate.

For any additional information you may contact the PDEEC Secretariat.

PDEEC Secretariat:
José António Nogueira (jan@fe.up.pt) ; Tel.:+351.225081870

2 Streams and Courses offered in 2012-2013

PDEEC courses are organized in two semesters. First year students typically select two main streams plus two electives. Each main stream is composed of two courses (one course per semester). The electives are chosen within PDEEC or other doctoral programmes at FEUP. Seminars and Individual Topics are additional courses intended to help the student start the research work, and to prepare the thesis research plan under the supervision of a professor. Students must find a thesis supervisor during the first semester. The research plan needs to be discussed and approved by the Supervisory Committee at the end of the first year.

The general organisation of the programme is as follows:

1st Semester	2nd Semester
Seminars	Individual Topics
Main Stream 1 (two courses)	
Main Stream 2 (two courses)	
Elective 1	Elective 2

The PDEEC courses offered for 2012-2013 are shown in the following table. The student's course plan needs to be approved by the PDEEC Scientific Committee.

The streams opened in 2012-2013 are the following:

- Energy Markets (**ENMAR**)
- Power System Dynamics and Control (**PSDCO**)
- Systems and Control (**SYCON**)
- Discrete Event and Hybrid Systems (**DEHSY**)
- Image Recognition and Machine Learning (**IMRML**)
- Microelectronics and Microsystems (**MICRO**)
- Test Technology and Design for Testability (**TTDTE**)
- Operations Research (**OPRES**)
- Robotics (**ROBOT**)
- Embedded Real-Time Systems (**ERTS**)
- Security and Information (**SECINF**)

The students can select as Electives the courses in the other streams or from other Doctoral Programmes at FEUP with similar number of ECTS, namely:

1. Doctoral Programme on Sustainable Energy Systems (PDSSE)
   http://paginas.fe.up.pt/~pdsse/
2. Doctoral Programme in Informatics Engineering
   http://paginas.fe.up.pt/~prodei/site/presentation.php
3. Doctoral Programme in Telecommunications (MAP-TELE)
   http://www.map.edu.pt/tele

This selection needs approval from the PDEEC Scientific Committee and requires acceptance from the PhD Programme from which the student has selected the elective(s).

The courses offered in 2012-2013 are listed in the following table.

STREAM	COURSES Course coordinator, Other lecturers (the list of course professors will be updated briefly) 1st Semester	2nd Semester
Energy Markets (**ENMAR**)	**Markets and Regulation** J. Tomé Saraiva	**---**
Power System Dynamics and Control (**PSDCO**)	**Signals, Dynamics and Control** J. Peças Lopes Maria Helena Vasconcelos	**Systems with Renewables** J. Peças Lopes
Systems and Control (**SYCON**)	**Vector Space Methods** Maria do Rosário Pinho Margarida Ferreira	**Measure Theory and Stochastic Processes** Fernando Fontes Paulo Lopes dos Santos
Discrete Event and Hybrid Systems (**DEHSY**)	**Discrete Event Systems** Fernando Lobo Pereira	**---**
Image Recognition and Machine Learning (**IMRML**)	**Machine Learning** Jaime Cardoso (c)	**Image Analysis and Recognition** Pedro Quelhas (c)
Microelectronics and Microsystems (**MICRO**)	**Microelectronic and Microelectromechanical Technologies** Vítor Tavares Luís Rocha (UM) (c)	**---**
Test Technology and Design for Testability (**TTDTE**)	**Test and Design for Testability** José Machado da Silva (c)	**---**
Operations Research (**OPRES**)	**Decision Support** José Fernando Oliveira	**Optimization Techniques** Maria Antónia Carravilla Maria Cristina Ribeiro
Robotics (**ROBOT**)	**Robotic Manipulators** Paulo Gomes da Costa	**Mobile Robotics** Paulo Gomes da Costa
Embedded Real-Time Systems (**ERTS**)	**Real-Time Embedded Systems** Luís Almeida Stefan Petters (ISEP)	**Parallel and Distributed Embedded Systems** Eduardo Tovar (ISEP) (a)
Security and Information (**SECINF**)	**Security of Systems and Networks** João Barros	**Information Theory** João Barros
ELECTIVES		
	Signal Analysis, Classification and Processing Diamantino Freitas Sérgio Cunha	**Hardware/Software System Development** José Carlos Alves João Cardoso **Grid Computing** A. Pimenta Monteiro **Network and Systems Archictecture and Management** Ricardo Morla (c)
	Special Topics Aurélio Campilho	**Special Topics** Aníbal Matos
INDIVIDUAL TOPICS		
	Seminars Helder Leite Paulo Portugal	**Individual Topics** Aníbal Matos

ISEP – Instituto Superior de Engenharia
UM – Universidade do Minho

a) to be defined;
b) to be confirmed
c) Accredited course under dual PhD program Carnegie-Mellon - Portugal

3 Faculty in 2012-2013

PROFESSORS	
Aníbal Matos – anibal@fe.up.pt	José Machado da Silva – jms@fe.up.pt
António Pimenta Monteiro – apm@fe.up.pt	José Fernando Oliveira - jfo@fe.up.pt
Aurélio Campilho – campilho@fe.up.pt	José Carlos Alves – jca@fe.up.pt
Cristina Ribeiro - mcr@fe.up.pt	Luís Almeida – lda@fe.up.pt
Diamantino Freitas – dfreitas@fe.up.pt	Luís Rocha (UM) – lrocha@dei.uminho.pt
Eduardo Tovar (ISEP)- emt@dei.isep.ipp.pt	Margarida Ferreira – mmf@fe.up.pt
Fernando Fontes – ffontes@fe.up.pt	Maria do Rosário Pinho – mrpinho@fe.up.pt
Fernando Lobo Pereira – flp@fe.up.pt	Paulo Costa - paco@fe.up.pt
Helder Leite – hleite@fe.up.pt	Paulo Lopes dos Santos – pjsantos@fe.up.pt
Helena Vasconcelos – mhv@fe.up.pt	Paulo Portugal – pportugal@fe.up.pt
Jaime Cardoso – jsc@fe.up.pt	Pedro Quelhas – pedro.quelhas@gmail.com
João Barros – jbarros@fe.up.pt	Ricardo Morla - rmorla@fe.up.pt
João Cardoso - jmpc@fe.up.pt	Sérgio Cunha – sergio@fe.up.pt
João Peças Lopes – jpl@fe.up.pt	Stefan Petters (ISEP) – smp@isep.ipp.pt
J. Tomé Saraiva – jsaraiva@fe.up.pt	Vitor Tavares - vgt@fe.up.pt