Study Plan

School: Institute for Research and Advanced Training
Degree: Doctorate
Course: Computer Sciences (cód. 264)

1st Year - 1st Semester

Component code	Name	Scientific Area Field	ECTS	Duration	Hours
INF09258D	Introduction to Scientific Research	Informatics	12	Semester	312

Group of Options

Component code	Name	Scientific Area Field	ECTS	Duration	Hours
INF09259D	Distributed informatiom systems / System interoperability and integration	Informatics	6	Semester	156
INF09260D	Semi Structured Databases and Networked Ontologies	Informatics	6	Semester	156
INF09261D	Information Extraction and Question Answering systems for Textual Bases	Informatics	6	Semester	156
INF09262D	Intelligent Control and Decision	Informatics	6	Semester	156
INF09263D	Automatic Classification and Kernel Methods	Informatics	6	Semester	156
INF09264D	Knowledge Representation and Reasoning in Natural Language Processing Systems	Informatics	6	Semester	156
INF09265D	Parallel Execution for Declarative Programming	Informatics	6	Semester	156
INF09266D	Advanced Techniques on Constraint Programming	Informatics	6	Semester	156

1st Year - 2nd Semester

Component code	Name	Scientific Area Field	ECTS	Duration	Hours
INF09267D	Qualifiying Test	Informatics	6	Semester	156
Thesis					

2nd Year - 3rd Semester

Component code	Name	Scientific Area Field	ECTS	Duration	Hours
INF09268D	PhD Seminar I	Informatics	6	Semester	156
Thesis					

2nd Year - 4th Semester

Component code	Name	Scientific Area Field	ECTS	Duration	Hours
INF09269D	PhD Seminar II	Informatics	6	Semester	156
Thesis					

3rd Year - 5th Semester

Component code	Name	Scientific Area Field	ECTS	Duration	Hours
INF09270D	PhD Seminar III	Informatics	6	Semester	156
Thesis					

3rd Year - 6th Semester

Component code	Name	Scientific Area Field	ECTS	Duration	Hours
INF09271D	PhD Seminar IV	Informatics	6	Semester	156
Thesis					

Conditions for obtaining the Degree:

*** TRANSLATE ME: Para aprovação na componente curricular deste programa de doutoramento é necessário a aprovação (através de avaliação ou creditação) das seguintes unidades curriculares:

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1º Semestre{\}newline

- 1 UC Obrigatórias num total de 12ECTS {\}newline

- 3 UC's Optativas num total de 18 ECTS do conjunto de optativas disponiveis no plano de estudos deste curso{\}newline

2º Semestre{\}newline

-1 UC Obrigatória num total de 6ECTS {\}newline

2º Ano{\}newline

3º Semestre:{\}newline

-1 UC Obrigatória num total de 6ECTS {\}newline

4º Semestre{\}newline

-1 UC Obrigatória num total de 6ECTS {\}newline

3º Ano{\}newline

5º Semestre:{\}newline

-1 UC Obrigatória num total de 6ECTS {\}newline

6º Semestre:{\}newline

-1 UC Obrigatória num total de 6ECTS{\}newline

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Para obtenção do grau, é necessário a aprovação na tese num total de 120 ECTS. ***

Program Contents

Back

Introduction to Scientific Research (INF09258D)

Scientific method: theory, observations, formal validation, experimental validation.
Scientific Communication: information lookup, indexes, writing articles, quoting work.
Professional ethics.
Peer Review: principles, variants.
Workshop on free subjects: as author, as member of the PC.

Back

Distributed informatiom systems / System interoperability and integration (INF09259D)

Concepts and paradigms of distribution/integration;
Levels of integration: semantic, architectural and technological;
Distributed/integrated architectures ;
Distributed/integrated technology;
Reference models: based on virtual data, functions, messages, etc.
Fragmentation: interfaces, databases, processes;
On the fly access; access via replicas, replica updates;
Distributed transactions protocols;
Gateways and middleware;
Security;
Standardization;
Heterogeneous systems;
Legacy systems;
Common/reusable services;
Hiperdistributed systems;
Case studies;
Methods of assessing solutions;
Frameworks and tools

Back

Semi Structured Databases and Networked Ontologies (INF09260D)

Back

Information Extraction and Question Answering systems for Textual Bases (INF09261D)

Back

Intelligent Control and Decision (INF09262D)

Back

Automatic Classification and Kernel Methods (INF09263D)

Back

Knowledge Representation and Reasoning in Natural Language Processing Systems (INF09264D)

Back

Parallel Execution for Declarative Programming (INF09265D)

- Computational models for Logic Programming
- Parallel Logic Programming: OR-parallelism, independent and dependent AND-parallelism, table parallelism
- Constraint Programming: distributed constraint satisfaction, parallel constraint solving
- Applications

Back

Advanced Techniques on Constraint Programming (INF09266D)

Back

Qualifiying Test (INF09267D)

n/a

Back

PhD Seminar I (INF09268D)

N/A

Back

PhD Seminar II (INF09269D)

(same as for Seminário Doutoral I)

Back

PhD Seminar III (INF09270D)

(same as for Seminário Doutoral I)

Back

PhD Seminar IV (INF09271D)

(same as for Seminário Doutoral I)