

# SYLLABUS DESCRIPTION

## Outline of syllabus contents for the PhD studies in Informatics

	Winter semester	Summer semester
Third year	Seminar paper, Presentation of a part of the project, (10 ECTS) Elaboration of a PhD thesis, Consultations (10 ECTS) Draft version of the PhD thesis (10 ECTS)	Finishing the PhD thesis, Review (20 ECTS) Public defence of the PhD thesis (10 ECTS)
Second year	Elective subject (9 ECTS) Elective subject (9 ECTS) Research project III on a topic of the student's choice (9 ECTS) Registering for a PhD thesis (3 ECTS)	Elective subject (9 ECTS) Elective subject (9 ECTS) Research project III on a topic of the student's choice (9 ECTS) PhD Theses (3 ECTS)
First year	Methods and Models of Research in Computer Technology (9 ECTS) Mathematical Logic and Algebra in Computer Technology (9 ECTS) Research project I on a topic of the student's choice (9 ECTS) PhD concept paper (3 ECTS)	Large-Scale Distributed Systems (9 ECTS) Advanced Computer Networks (9 ECTS) Research project II on a topic of the student's choice (9 ECTS) Elaboration of the PhD concept paper (3 ECTS)

### Mandatory subjects

Methods and Models of Research in Computer Technology
Mathematical Logic and Algebra in Computer Technology
Large-Scale Distributed Systems
Advanced Computer Networks

### Elective subjects<sup>1</sup>

Each elective subject can be taken in any of the first, second, third or fourth semester of the third cycle of studies.

1	Advanced Computer Graphics
2	Multimedia Systems
3	Advanced Databases
4	Computer Vision
5	Real-time Computing and Embedded Systems
6	Machine Learning
7	Software Quality Assurance and Project Management

<sup>1</sup> “The choice of elective subjects is offered by the Faculty of Informatics. According to the Law on Higher Education, as well as the Law on Amending the Law on Higher Education, the students can choose from the elective subjects at the University on their own and in accordance with the University’s Regulation on Compatibility of Subjects.”

8	Critical Systems
9	Artificial Intelligence
10	Web Technologies
11	Computer-Aided Modelling
12	Technologies for Electronic Commerce
13	Formal Design of Systems
14	Advanced Computing Systems
15	Distributed Computing Systems
16	Advanced Cryptology
17	Decision Making Models

# THIRD CYCLE OF ACADEMIC STUDIES – PhD STUDIES

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## ACADEMIC SYLLABUS

### FIRST YEAR, FIRST SEMESTER

1	Methods and Models of Research in Computer Technology	10+15	9
2	Mathematical Logic and Algebra in Computer Technology	10+15	9
3	Research project I on a topic of the student's choice	10+15	9
4	PhD concept paper	5+ 10	3

A total of 30 ECTS credits per semester

### FIRST YEAR, SECOND SEMESTER

1	Large-Scale Distributed Systems	10+15	9
2	Advanced Computer Networks	10+15	9
3	Research project II on a topic of the student's choice	10+15	9
4	Elaboration of a PhD concept paper	5+ 10	3

A total of 30 ECTS credits per semester

### SECOND YEAR, THIRD SEMESTER

1	A subject from the list of elective subjects	10+15	9
2	A subject from the list of elective subjects	10+15	9
	Research project III on a topic of the student's choice	10+15	9
	Registering for a PhD thesis		3

A total of 30 ECTS credits per semester

### SECOND YEAR, FOURTH SEMESTER

1	A subject from the list of elective subjects	10+15	9
2	A subject from the list of elective subjects	10+15	9
3	Research project III on a topic of the student's choice	10+15	9
4	PhD Theses		3

A total of 30 ECTS credits per semester

### THIRD YEAR, FIFTH SEMESTER

1	Seminar paper, Presentation of a part of the project		10
2	Elaboration of a PhD thesis, Consultations		10
3	Draft version of the PhD thesis		10

A total of 30 ECTS credits per semester

### THIRD YEAR, SIXTH SEMESTER

1	Finishing the PhD thesis, Review	15+15	20
2	Public defence of the PhD thesis		10

A total of 30 ECTS credits per semester

A total of 180 ECTS credits per 6 semesters – doctor's degree

Earning a Doctor of Philosophy degree.