

Computer science doctoral study programme, third Bologna cycle

COURSE STRUCTURE of the study programme

The doctoral programme is partly structured, but primarily individual in nature. It consists of the following components, which are described in more detail below:

- in-depth courses in computer science,
- elective skills-based courses,
- seminars,
- individual research work,
- doctoral dissertation.

Upon application for enrolment in the first year, the student selects a supervisor in accordance with their research interests, who provides guidance throughout the study process and in the preparation of the doctoral dissertation.

In-depth courses in Computer science enable advanced study of specific topics within the home programme or, in agreement with the supervisor, also in an interdisciplinary context. They are delivered by higher education teachers engaged in research, incorporating the latest developments in the field. The courses are designed so that the lecturer introduces a topic, while students further develop it through independent study of the literature and the preparation of scientific papers, which they present at seminars. The courses cover key areas such as data structures and algorithms, theoretical computer science, programming languages and techniques, computer communications and systems, as well as systems theory and information analysis.

Within the *elective skills courses*, are designed to develop competencies in scientific research skills, such as communication in science, writing and presenting scientific texts, and knowledge of methodologies for designing and analysing experiments. The selection of courses may also be recommended to the student by the Committee for Monitoring the Implementation of the Doctoral Programme. Two elective skills-based courses are available in the study programme: Scientific skills - Design and analysis of planned experiments (6 ECTS-credits); and Scientific skills - Scientific writing and presentation (6 ECTS-credits).

Within the *seminar subjects*, students present partial results of their research work in both written and oral form, with a level of quality sufficient for the publication of one contribution per year. Students also actively participate in the presentations and discussions of others.

Individual research work represents independent scientific research on the doctoral topic, carried out by the student under the supervision of, and in close collaboration with, the supervisor.

To complete the programme, all academic requirements must be fulfilled. The student must obtain a minimum of 240 ECTS, of which 54 are awarded for the preparation and successful defence of the doctoral dissertation.

The doctoral dissertation is an original contribution to science and must be prepared in accordance with the [Rules on the preparation and defence of the doctoral dissertation at the University of Primorska](#). It may also take the form of a collection of related scientific publications. Students may register the dissertation topic upon enrolment in the third year and after completing at least three advanced courses; any exceptions are decided

by the Committee for Monitoring the Implementation of the Doctoral Programme. The procedure for topic registration and defence is defined by university regulations.

Within the study programme, the Committee for Monitoring the Implementation of the Doctoral Programme in Computer Science and Informatics operates to support the comprehensive development of the candidate as a researcher and professional. The committee consists of at least three members, including the programme coordinator. For the period 2022–2026, the members are Assoc. Prof. Marko Tkalčič (Chair), Prof. Dr. Andrej Brodnik (member), and Assoc. Prof. Klen Čopić Pucihar (member).

The committee oversees enrolment and the selection of supervisors, ensures a broad understanding of the field of computer science and informatics, monitors student progress, and evaluates alignment with research objectives. Based on prior academic background, it may recommend that the candidate supplement their knowledge in the broader field of computer science and informatics. A positive evaluation from both the committee and the supervisor is a prerequisite for progression to the next year of study.

Table 1: Structure of the study programme

Year of study	Study obligation	ECTS-credits (ECTS)	
		ECTS	ECTS/Year of study
1.	In-depth course in computer science	9	60
	In-depth course in computer science	9	
	Elective skills course	6	
	Seminar 1	6	
	Individual Research Work 1	30	
2.	Individual Research Work 2	24	60
	In-depth course in computer science	9	
	In-depth course in computer science	9	
	Elective skills course	6	
	Seminar 2	6	
	Seminar 3	6	
3.	Individual Research Work 3	54	60
	Seminar 4	6	
4.	Seminar 5	6	60
	Individual Research Work (preparation and defense of doctoral dissertation)	54	

Legend:

ECTS credits (ECTS) = credit points awarded under the European Credit Transfer and Accumulation System (ECTS). The credit system facilitates student mobility and the mutual recognition of completed academic requirements.

ECTS credits represent an average estimate of the time required to complete a course and include both organized forms of instruction (lectures, seminars, seminar and laboratory exercises, fieldwork, practical training, etc.) and the student's independent work (exam preparation and other course-related obligations, etc.). One (1) ECTS credit corresponds to 25 to 30 hours of study workload. Credits are awarded upon the successful completion of the requirements for an individual course.

For assistance and guidance, students may consult the study programme coordinator.

Contact:

Programme coordinator:

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