BULGARIAN ACADEMY OF SCIENCES
INSTITUTE OF MATHEMATICS AND INFORMATICS

Approved:

(Acad. V. Drensky, Director of IMI-BAS)

QUALIFICATION PROFILE

Higher Education Area:
4. Natural Sciences, Mathematics, and Informatics

Professional Field:
4.6. Informatics and Computer Science

PhD Programme:
Informatics

The PhD programme in Informatics provides the third degree of higher education for acquiring the educational and scientific degree of Doctor of Philosophy.

This Qualification Profile determines the knowledge, skills, personal and professional competences of PhD students who have pursued and completed the PhD programme in Informatics.

Requirements for admission and training

The admission and training of PhD students are in accordance with the legal requirements of:

– the Act on Higher Education;
– the Act on Development of the Academic Staff in the Republic of Bulgaria;
– the Regulations on the Implementation of the Act on Development of the Academic Staff in the Republic of Bulgaria;
– the Regulations on the Conditions and Order for Acquiring Scientific Degrees and Occupying Academic Positions at the Bulgarian Academy of Sciences;
– the Regulations on the Conditions and Order for Acquiring Scientific Degrees and Occupying Academic Positions at the Institute of Mathematics and Informatics at the Bulgarian Academy of Sciences;
– the Rules for the Activity of the Training Centre (TC) and the Academic Council (AC) of BAS.

The duration of the programme is:

- 3 years in case of full-time training;
- 4 years in case of part-time training;
- up to 3 years in case of self-study.

The PhD programme in Informatics provides the opportunity to obtain the educational and scientific degree of Doctor of Philosophy in professional field 4.6. Informatics and Computer Science upon:

- successful completion of all stages of the PhD student's individual plan;
- successful defence of the thesis.

Aim

The PhD programme in Informatics aims to train highly qualified specialists with in-depth fundamental and professional competence for individual and team work in research and applied activities as well as teaching in the field of informatics, information technologies, and computer sciences, by creating skills for planning, organising and performing scientific and applied research and presenting its results.

The training in the PhD programme in Informatics is in full compliance with the mission and objectives of IMI-BAS, set out in the Research Development Strategy of the Institute of Mathematics and Informatics, and in particular with its priority area Mathematical Informatics: mathematical foundations of informatics and development of technologies for information security, mathematical linguistics, knowledge processing, and management, construction of digital libraries including digitisation of scientific, cultural and historical heritage, modelling and management of software and information processes and of advanced information service systems, sophistication of software technologies through active application of artificial intelligence methods, etc.

Competences

Holders of the educational and scientific degree of Doctor of Philosophy, awarded by IMI-BAS, shall have acquired intellectual qualities, knowledge, practical skills and habits for:

- independent study;
- teamwork;
- planning and carrying out scientific and practical tasks in time;
- setting problems, proposing solutions, justifying choices of approaches and methods;
- formulating, expressing, and defending scholar arguments, ideas, and concepts;
- conducting comprehensive scientific studies;
- presenting scientific results orally and in writing;
- doing all of the above fluently in English – the global language of informatics and information technologies.

More particularly, the successful PhD graduates in Informatics at IMI-BAS shall:

- have mastered methods and tools for research – collection, synthesis, analysis, and summarisation of scientific information on achievements, good practices, developments, policies, and problems in Bulgaria and around the world related to a specific case study;
- be skilled in conceptual modelling, software design, implementation, and testing of optimal functional models serving the case study;
- be capable of developing models for effective use and further growth of the produced technological tools and services;
- be able to apply schemes for monitoring and (self-)control of the performed research activity.

Careers

PhD Graduates in Informatics are highly qualified specialists, who can work as:
- lecturers in universities, colleges, etc.;
- researchers in scientific institutes and laboratories;
- leaders or members of teams working on national or international projects in fundamental or applied sciences;
- evaluators of projects in the field of informatics, information technologies, and computer science;
- experts in governmental and public structures on issues related to informatics, information technology, and computer science;
- consultants on issues of informatics, information technologies, and computer science;
- specialists in software design and development;
- heads of IT departments, quality management departments in information service systems, etc.

A PhD graduate can:
- participate in various forms of continuing qualification (postdoctoral programmes);
- apply for academic positions and obtain scientific degrees.

The Qualification Profile was approved by the Scientific Council of IMI-BAS on 24.01.2020 (Minutes No. 1).