Information on enrolling doctoral academic studies

Admission requirements:

- completed diploma academic studies or integrated academic studies at the Faculty of Pharmacy or other faculties as provided by the study program, with the scope of at least 300 ECTS and overall average mark of at least 8 (eight)
- applicants with overall general mark below 8 (eight) are required to have had papers published
- applicants who completed higher education in the duration of at least eight semesters under the syllabus and curriculum in effect before the Law on Higher Education came into force are required to have the average mark of at least 8.50.

For more information on the study program and on the tuition fees please visit the website of the Faculty of Pharmacy, University of Belgrade

www.pharmacy.bg.ac.rs



Doctoral academic studies are offered in modules that provide students with up-todate, latest contents and thus an opportunity to advance the existing knowledge, acquired in different pharmaceutical areas. Study program of doctoral academic studies in pharmaceutical sciences is in line with the recognised European educational programs in pharmacy.

Contribution to science and high quality of doctoral academic studies are also reflected in numerous publications in renowned international journals for the field of pharmaceutical and other related sciences.

Doctoral academic studies modules:

- Bromatology
- Cosmetology
- Drug Analysis
- Medical Biochemistry
- Pharmaceutical Chemistry
- Pharmaceutical Microbiology
- Pharmaceutical Technology
- Pharmacognosy
- Pharmacokinetics and Clinical Pharmacy
- Pharmacology
- Social Pharmacy and Research in **Pharmacy Practice**
- Toxicology

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Doctoral academic studies Pharmaceutical sciences

University of Belgrade Faculty of Pharmacy

Acquire the highest level of education in pharmacy at one of the most prominent Faculties of the University of Belgrade

The only Faculty of Pharmacy in Serbia with more than 70 years of tradition





The Faculty of Pharmacy organises doctoral academic studies in a number of modules accredited by the Ministry of Education, Science and Technological Development of the Republic of Serbia. Each module lasts for 36 months.



Social Pharmacy and Research in Pharmacy Practice

This module offers advanced education in social pharmacy and introduction into systematic review of pharmacy practices. A PhD in this field is fully capable of independent research in the areas of pharmaceutical services provision, pharmacist professional performance evaluation, use of medicines in specific patient populations, ethical analysis and appraisal of specific situations, patient adherence, humanistic, clinical and social outcomes of medication use and quality of services and work processes.

Pharmacology

The aim of this module is to provide integrated approach to medicines: from receptors and drug action to benefits and risks of therapy options. Research methodology covers wide areas of *in vivo* and *in vitro* pharmacological tests and models, as well as the use of pharmacoepidemiological tools.

Pharmacognosy

This module offers examination of genetic, chemical and morphological variations of wild growing plants and thus possibilities for better understanding different levels of diversity, polymorphism and regulatory mechanism of adaptation. Knowledge and research skills acquired can be utilised to develop technology for production and control of herbal drugs, for production and proper application of herbal medicinal products as well as for discovering new herbal drugs and herbal substances with pharmacological effect.

PhD Modules Pharmaceutical sciences

Cosmetology

Through acquiring a doctoral degree in cosmetology you will become a professional capable of developing a fully individual approach to formulation, preparation and/or manufacturing, quality control and evaluation of efficacy and safety of cosmetic products for different purposes, taking into account relevant scientific data. PhD students will learn how to select optimum cosmetic raw materials, how to evaluate sensory characteristics of products, and also to organise, perform and properly analyse the results of *in vivo* studies of effectiveness of cosmetic preparations being formulated.

Pharmaceutical Microbiology

This module is designed to provide PhD students with the tools required for a research career. Research activities of the faculty involve a broad spectrum of sub-disciplines and utilise biochemical and molecular approaches to study problems in microbiology.

Toxicology

This module offers state-of-the-art doctoral training in mechanisms of toxicity, models and methods in toxicology, and knowledge about the most important toxic agents through mandatory courses, and, in addition, also a broad range of courses for more specialised academic consideration. This program prepares students for further multidisciplinary research in influence of toxic agents on human health and the environment. Our mission is to educate and train the next generation of toxicologists who will be capable of improving public health and well-being.

Pharmaceutical Chemistry

This module presents research in molecular modelling, synthesis, SAR, QSAR and structural elucidation of novel biologically pharmacologically active compounds ligands. Students will acquire knowledge about chemical, biopharmaceutical and analytical examination of biologically pharmacologically active compounds ligands.

Bromatology

This module is devoted to the study of food composition, physiological effects of nutrients, and their role in health and disease. It also includes issues of food safety as well as principles and effects of food processing.

Drug Analysis

In this module students will acquire scientific knowledge related to development and improvement of existing methods that are in accordance with the latest scientific trends and offer most up-to-date information and knowledge in drug analysis. This module places special emphasis on investigating various chemometrical strategies that allow complex problem solving in analytical systems by employing mathematical and statistical techniques.

Pharmaceutical Technology

This module covers preformulation and formulation studies of drug delivery systems; design and characterisation of microparticulate drug delivery systems and colloidal drug carriers; biopharmaceutical characterisation of drugs and dosage forms and application of machine learning tools and optimisation methods in development of formulations and processes.

Pharmacokinetics and Clinical Pharmacy

This module offers PhD students knowledge and skills for critical evaluation of scientific literature, independent research, interpretation and presentation of scientific results in the field of population pharmacokinetics, monitoring of adverse reactions, drug interactions and adherence. This program, involving seminar papers, elective and mandatory courses and independent research, aims to enabling students to solve specific problems they will encounter in practice. On completing the module students will be capable of independently conducting research projects in pharmacokinetics and clinical pharmacy.

Medical Biochemistry

This module offers comprehensive knowledge in the field of biochemistry of human body in health and disease and about importance of biochemical tests in clinical practice. The program includes extensive independent research in the field of medical biochemistry, resulting in scientific publications in leading international journals.

