

## STANDARD 1: STUDY PROGRAMME STRUCTURE

Study program of specialized academic studies *Toxicological risk assessment of environmental contaminants* lasts for one year, granting 60 ECTS points upon its completion. The study programme contains both mandatory and elective courses and no final work is envisaged. Teaching is done by working with small groups of students, individual (mentor) work. Teaching methods (lectures, consultations, seminars, etc.) are adapted to the number of students, and all incorporate usage of computers. Proposed learning methods include interactive lectures, workshops organized for theoretical exercises and solving problem exercises that are carried out individually by students. The study programme structure enables students to gain comprehensive knowledge on theoretical principles of toxicological risk assessment, and the latest approaches to solving specific problems and case studies, which acquires knowledge and skills relevant to the performance of future activities in the field of environmental pollutants and risk assessment.

Considerable attention is dedicated to independent work of students. Especially motivated students have the opportunity of being directly included in independent research through individual work with a mentor and participation in scientific research projects.

### TABLES AND SUPPLEMENTS

[Supplement 1.1. Faculty of Pharmacy website](#)

Supplement 1.1a. Publication of the Faculty: Prospective students informer

## STANDARD 2: PURPOSE OF STUDY PROGRAMME

Purpose of the study programme, specialized academic studies *Toxicological risk assessment of environmental contaminants* is to educate specialists and to enable them reaching expertise in toxicology and human health risk assessment due to exposure to environmental contaminants.

Following the courses, students acquire specific knowledge that is necessary for independent work on tasks in the system of healthcare, and also skills and research methods which will allow them to perform tasks in professional and ethical manner. This program is aimed to produce experts for specific pharmaceutical disciplines who will further work on improvement of pharmaceutical practice.

The study programme is designed to give course participants a broad understanding of national, European and international legislation related to pharmaceutical practice and toxicological risk assessment, and also to implement legislation in everyday practice. After completing the course student gained the skills of ethical analysis and critical thinking while making decisions and solving problems concerning pharmaceutical, toxicological, ecological and other biomedical disciplines.

### TABLES AND SUPPLEMENTS

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## STANDARD 3: GOALS OF THE STUDY PROGRAMME

The primary goal of the study program is to train professionals dealing with environmental contaminants and toxicological risk assessment. The programme aims to provide extensive training in principles and theoretical basis of toxicology, ecotoxicology, toxicology of environmental contaminants including food toxicology, models and methods used to test toxicity and ecotoxicity of chemicals, principles of risk characterisation and classification and labelling of chemicals.

It aims to provide chemists, pharmacists, biologists, technologists, physicians, dentists, veterinarians and agricultural engineers with extensive knowledge on environmental contaminants and skills in various fields of toxicology, particularly important for evaluation of toxicity and ecotoxicity of chemicals, hazard identification, risk characterization, classification and labelling of chemicals.

Attending the study course, students continuously upgrade their knowledge in specific areas of pharmacy, that later enables them implementation of acquired knowledge in professional work. Through the study program students are trained to use full capacity of skills and knowledge on environmental contaminants in critical assessment of the quality and results of toxicity tests and in making dossier, dossiers evaluation, human health risk assessment and ecotoxicological risk assessment.

Diplomas obtained in this field will be recognized by the European institutions, allowing students to pursue further professional development or scientific training (doctoral study) in the field of pharmacy and related disciplines.

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## STANDARD 4: COMPETENCIES OF GRADUATED STUDENTS

Description of general and course specific competencies of students

After completing the study program students are expected to be able to apply the gained knowledge in the field of toxicological risk assessment of environmental pollutants.

A candidate who has studied the study program is qualified to perform tasks in the field of toxicology and ecotoxicology that will allow him to be part of a multidisciplinary team that addresses the issues of environmental pollution and public health.

The specialist is capable to understand the national, European and international legislation and to perform professional activities in line with legislative basis. By using different tools and methods, the specialist is also capable to present the results of his work orally or in written form. Acquired degree enables continuing education: admission to doctoral academic study in medical and natural sciences.

Description of learning outcomes

Students who successfully complete this program of study are capable to:

- implement gained knowledge on toxicology of chemical pollutants in professional tasks,
- assess the risk to human health related with exposure to environmental chemicals,
- work either independently or within a team in a broad spectrum of activities regarding toxicological risk assessment,
- develop various solving problem approaches,
- participate in conducting educational process and in continuous professional perfecting, life-long learning and scientific work.

After graduation, the student obtains a degree of specialist of pharmacy.

### TABLES AND SUPPLEMENTS

[Supplement 4.1. Diploma supplement](#)

## STANDARD 5: CURRICULUM

The study program *Toxicological Risk Assessment of Environmental Contaminants* lasts one year (two semesters) granting 60 ECTS points upon their completion, and consisting of the 10 courses: 5 mandatory and 5 optional courses that students get to choose 2 from. Mandatory courses are: General Toxicology, Principles of Ecotoxicology, Environmental contaminants, Toxicity tests and Chemicals Risk Assessment; optional courses are: Pharmaceutical waste, Toxicovigilance, Regulatory toxicology, Toxicological laboratory and good laboratory practice, Management of chemical accidents. The study program consists of 3 mandatory courses in first semester, two mandatory courses and two elective courses in the second semester.

Methodology of the courses include lectures, exercises, study and research work (S&R) and other types of work including seminars, presentations etc.

### TABLES AND SUPPLEMENTS

[Table 5.1. Semesters and year of studies timetables](#)

Table 5.2. Courses specifications

[Table 5.3. The study programme: list of the elective courses](#)

Table 5.4. List of courses according to the group of courses

Supplement 5.1. Timetable

[Supplement 5.2. The book of courses \(printed or electronic form at the institution website\)](#)

## STANDARD 6: QUALITY, MODERNITY AND INTERNATIONAL HARMONIZATION OF THE STUDY PROGRAM

Study program is harmonized with the acknowledged European study programs in the field of Toxicology and is designed to follow global trends and scientific achievements in human health risk assessment. All of the relevant courses are included in the study program of *Toxicological Risk Assessment of Environmental Contaminants*. Study program courses enable the students opportunity to extend and improve fundamental knowledge and skills in the area of toxicology and human health risk assessment, making them qualified to participate in national and international, multidisciplinary research projects.

The level of presence of specific scientific disciplines, the scope and the content of courses, as well as the teaching methods, are in accordance with the representative educational programs at international high education institutions, particularly in Europe.

### TABLES AND SUPPLEMENTS

Supplement 6.1,2,3. Documentation of at least three accredited international programs to which the presented study program is harmonized to

Supplement 6.4a, 6.4b, 6.4v, 6.4g. Recommendations or accordance with the representative good practices of the European institutions

## STANDARD 7: STUDENT ENROLLMENT

In the accordance with the needs of the profession in specialized academic studies *Toxicological Risk Assessment of Environmental Contaminants* enrolls students who meet the conditions stipulated by the Rule book on Specialized Academic Studies of the Faculty of Pharmacy and the Rule book on student enrollment to the study programs of the University of Belgrade. Enrollment is open to public. It is published by the University in the media.

The number of students enrolled in the specialized academic studies *Toxicological Risk Assessment of Environmental Contaminants* is determined by the general plan for study programs of the Faculty of Pharmacy adopted by Scientific-Educational Assembly and submitted to the University of Belgrade Assembly. University of Belgrade announced a joint competition for the enrollment of students in specialized academic studies.

### TABLES AND SUPPLEMENTS

Table 7.1. Review of the number of students being admitted to the study program

Table 7.2. Review of the number of students per year of the study program in the current school year

Supplement 7.1. Open call for the admission of applicants

Supplement 7.2. Rule book on Specialized Academic Studies

Supplement 7.3. Conditions for the enrolment of students (abstract from the institution Status or other document)

## STANDARD 8: EVALUATION AND PROGRESS OF STUDENTS

Student evaluation is based on scientific and professional activities, pre-exam requirements, exam results and seminar studies. Exams are taken in written and/or oral form. Examination methodology in each subject is defined by subject Curricula and Program. The final evaluation is a result in total of demonstrated progress during classes and progress in written and/or oral exam, organized after completion of the classes.

Communication between teachers and students is realized through mentoring. The students are allowed to consult the subject teacher in the time allocated for consultation and be engaged in research or do independent seminary studies on given subjects.

The students' success on the exams are from five (5) to ten (10), which is based on the actual number of points.

### TABLES AND SUPPLEMENTS

Table 8.1. Collective list of points for each of the courses that the student acquires through exam prerequisites and the final exam

Table 8.2. Statistical data on the progress of students on the study program



## STANDARD 9: TEACHING STAFF

In order to achieve successful and high quality teaching on study program *Toxicological Risk Assessment of Environmental Contaminants*, Faculty has adequate full-time teaching staff. In addition to full-time teachers and assistants, Faculty occasionally hires teachers and teaching associates from other faculties, as well as researchers from accredited scientific-research institutions. Narrow disciplines in scientific areas of teachers are in complete accordance with the program and consequently lectures are covered with competent teaching staff.

On the Faculty of Pharmacy, great attention is given to the professional and scientific development of teachers and teaching associates. Teaching staff of Faculty participates in organization of national and international Meetings and courses of continual education. Great number of teachers is engaged on projects financed by Ministry of science, and scientific activity is confirmed by numerous articles in leading international journals.

### TABLES AND SUPPLEMENTS

Table 9.1. Scientific, artistic and professional qualifications of teachers and responsibility in teaching

Table 9.2. List of teachers engaged in the study program

Table 9.3. Summary review of number of teachers in certain scientific disciplines and narrow disciplines in scientific or artistic areas

Table 9.4. List of teaching associates engaged in the study program

Supplement 9.1. Copies of work cards or work contracts of teaching staff (if accreditation of study program is required)

Supplement 9.2. The Rulebook about election of teachers (if accreditation of study program is required)

[Supplement 9.3. The book of teachers \(with information specified in identical way as in tables from standards, if tables are not enclosed\)](#)

Supplement 9.4. Evidence about public availability of information about teachers and teaching associates (publication or website of the Institution)

Supplement 9.5. Teaching load and summary review of teachers and number of classes.

## STANDARD 10: ORGANIZATION AND RESOURCES

For conducting the study program of specialist academic studies *Toxicological Risk Assessment of Environmental Contaminants*, Faculty of Pharmacy possess appropriate space, laboratories with laboratory equipment and chemicals, classrooms and amphitheatres for attending lectures, well-stocked libraries with books, textbooks, handbooks and scientific journals. Furthermore, the Faculty possesses computer labs and classrooms with internet access. Faculty provides permanent approach to the different kinds of information in electronic form, and access to the significant international and national scientific journals is provided as well.

For performing study program a necessary number of teachers, assistants, teaching associates, and technical associates are engaged.

### TABLES AND SUPPLEMENTS

Table 10.1. List of rooms with areas in the faculty building in which lectures are conducted on this study program

Table 10.2. List of equipment for conducting study program

Table 10.3. List of library units which are relevant for study program

Table 10.4. List of books which are available to students on study program

Table 10.5. Literature coverage of mandatory courses (books, collections, practicum which are in libraries or in stock)

Supplement 10.1. Inventory book

Supplement 10.2. Proof of existing information technology, number of internet connections, etc.

## STANDARD 11: QUALITY CONTROL

In order to perform quality control of the study program of specialist academic studies *Toxicological Risk Assessment of Environmental Contaminants*, Faculty of Pharmacy implements defined standards and procedures for the quality assessment, such as program evaluation during the studies and the evaluation of graduated students' competences. These activities are designed with the aim to continuously monitor and improve quality of the curriculum, teaching, evaluation system, textbooks and literature.

Quality control of the study program is performed regularly and systematically by self-evaluation process (once a year) and external quality assurance assessment (every three years).

Students actively participate in quality control and evaluation of the study program.

### TABLES AND SUPPLEMENTS

Table 11.1. List of members of Commission for quality control

Supplement 11.1. Report about results of self-evaluation process of the study program

Supplement 11.2. Published document – Quality assurance politics

Supplement 11.3. Regulations on Textbooks

Supplement 11.4. Extract from the Statutes of the institution which regulates foundation and scope of work of Commission for quality assurance

## STANDARD 12: DISTANCE LEARNING

The Institution does not organize distance learning.