



UNIVERSITY OF BELGRADE
FACULTY OF PHARMACY

GENERAL INFORMATION ON STUDIES IN 2020



1. A BRIEF HISTORY OF THE FACULTY OF PHARMACY: A TRADITION LASTING MORE THAN 80 YEARS

In October 24th, 1939 - The Pharmaceutical Department was inaugurated at the Faculty of Medicine in Belgrade. Pharmacy students attended 17 courses subdivided into four departments:

- Department of Chemistry
- Department of Pharmacology and Toxicology
- Department of Biology
- Department of Botany and Zoology

In October 19th, 1945 - The National Assembly of the Republic of Serbia passed the Decision on the Foundation of the Faculty of Pharmacy in Belgrade (No. 2221). This date was proclaimed the Faculty day and celebrated each year.

In May 31st, 1991 - The Faculty of Pharmacy was inaugurated in a new building.

In October 1st, 1991 – Four years curriculum turned into five years study program.

In October 1st, 2006 – Integrated academic studies harmonized with the Bologna Declaration were implemented.



2. INTEGRATED ACADEMIC STUDIES

The studies at the Faculty of Pharmacy are integrated academic studies that last for five years, i.e. ten semesters, including students' professional training and diploma thesis, granting 300 ECTS points upon their completion.

The Pharmacy Study Program was accredited in the English language and enrolls eight students.

Studies are carried out according to the curriculum entirely harmonized with the Bologna Declaration concept. Each course from the syllabus is valued with ECTS points (European Credit Transfer System) and the overall studies are evaluated with the ECTS score.

One ECTS credit is assigned to 25 to 30 student's working hours spent at all teaching activities, as well as in self-learning to complete the required learning outcomes. Student will acquire them after passing exams, i.e. meeting other requirements issued by the study program.

Specified teaching methods include lectures, theoretical and practical classes comprising laboratory (experimental) work, seminar papers and other teaching methods. Interactive teaching carried out at the Faculty of Pharmacy implies students' active involvement in their learning process providing deeper knowledge and skills in the most common way.

Teaching at the **Pharmacy Study Program** referred to *Introduction to Professional Training, Professional Training I* and *Professional Training II* courses is carried out in collaboration with pharmacies. Students' professional training lasting six months is fully compliant with the EU Directive requirements 2005/36/EU and 2013/55/EU on regulated professions that will certainly facilitate the recognition of professional qualifications in the EU.

Professional training enables students to apply previously acquired theoretical and practical knowledge in their practical work to reach the competences provided by the study program outcomes in order to be well-prepared for individual and professional teamwork.

At the **Pharmacy Study Program** students will acquire relevant knowledge on **drugs** (their chemical composition and physical and chemical properties of their active ingredients; pharmaceutical dosage forms; making magistral or galenic preparations; quality and quality control of drugs, their active ingredients and excipients), **patient** (human body, disease and therapy) and **health care system** (pharmaceutical business systems, health care system and national drug policy, IT systems, regulatory and legislative rules, ethical principles).

Through studies students will acquire skills and competences related to *laboratory work; operative use of analytical methods and techniques; handling of apparatus and equipment; pharmaceutical qualitative and quantitative analyses; safe handling of chemical and pharmaceutical materials and waste products; predicting possible risks in pharmaceutical procedures and practical work; making magistral and galenic preparations; supervision and upgrading of pharmaceutical production; evaluation and observation of laboratory analyses; identification of general symptoms and disease signs as well as possible interactions, side effects and toxic drug effects; oral and written professional communication with patients and doctors as well as other health care practitioners and the publicity; generation and critical evaluation of information and data; self-learning and planning of self-continual education; professional use of professional literature and IT systems; individual and team work; drafting, design and work on research projects; identification and resolving problems regarding professional matters and making decisions.*

COURSE TIMETABLE PER YEAR

PHARMACY STUDY PROGRAM

FIRST YEAR

	Code	Course title	Semester	Classes (Theory + exercise)	ECTS
1	F107	Introduction to Pharmacy	I	15+0	1
2	F101	Biology and Human Genetics	I	45+30	5
3	F102	Human Morphology	I	45+30	5
4	F103	General and Inorganic Chemistry	I	60+30	6
5	F106	Organic Chemistry 1	I	60+30	6
6	F104	Physics	I	30+15	3
7	F105	Mathematics	I	30+30	4
8	F1013	Statistics in Pharmacy	II	30+15	3
9	F1012	General Biochemistry	II	45+15	5
10	F108	Pharmaceutical Physiology 1	II	45+30	5
11	F1010	Organic Chemistry 2	II	60+30	7
12	F1011	Physical Chemistry	II	45+15	5
13	F109	Analytical Chemistry 1	II	30+30	4
14	FSOF1	Introduction to Professional Training	II	200*	1
Total				540+300+200*=1040	60

*Professional Training carried out in collaboration with pharmacies

SECOND YEAR

	Code	Course title	Semester	Classes (Theory + exercise)	ECTS	
15	F201	Pharmaceutical Physiology 2	III	45+15	5	
16	F204	Immunology	III	40+20	5	
17	F202	Analytical Chemistry 2	III	45+45	7	
18	F203	Instrumental Methods	III	45+45	7	
19	F205	Pharmaceutical Chemistry 1	III	45+30	6	
20	F207	Pathophysiology 1	IV	30+30	5	
21	F206	Pharmaceutical chemistry 2	IV	45+60	8	
22	F208	Botany	IV	45+45	7	
23	F209	Microbiology	IV	60+30	7	
24	Elective block 1 (1/8)					3
	F111	Application of Information Technology in Pharmacy	IV	10+35		
	F112	Foreign Language in Professional Communication of Pharmacists	IV	20+25		
	F113	Colloid chemistry	IV	30+15		
	F114	Integration of metabolic pathways	IV	25+20		
	F115	Chemistry of Bioelements	IV	30+15		
	F116	Selected topics in Physiology	IV	30+15		
	F117	Basics of Molecular Genetics	IV	30+15		
	F118	Analytical Reagents	IV	30+15		
Total				430+335=765	60	

THIRD YEAR

	Code	Course title	Semester	Classes (Theory + exercise)	ECTS
25	F301	Pathophysiology 2	V	30+30	5
26	F302	Pharmacology 1	V	60+27	6
27	F304	Pharmaceutical Chemistry 3	V	60+60	9
28	F305	Pharmacognosy	V	30+30	4
29	F303	Bromatology	V	45+30	5
30	F306	Pharmacology 2	VI	60+27	6
31	F308	Pharmaceutical Technology 1	VI	45+90	9
32	F305	Pharmacognosy	VI	45+30	6
33	F309	Medical Biochemistry	VI	60+45	7
34	Elective block 2 (1/8)				
	F211	Selected Topics in Pathophysiology	VI	23+22	3
	F212	Selected Topics in Pharmaceutical Chemistry	VI	45+0	
	F213	Selected Topics in Microbiology	VI	30+15	
	F214	Medicinal plants and the environment	VI	30+15	
	F215	Analysis of food and dietary products	VI	0+45	
	F216	Analysis of herbal drugs and preparations	VI	15+30	
	F217	Selected Chapters of Analytical Chemistry with Module of Green Chemistry	VI	30+15	
F218	Foreign Language in Academic and Professional Use	VI	20+25		
Total				465+384=849	60

FOURTH YEAR

	Code	Course title	Semester	Classes (Theory + exercise)	ECTS
35	F403	Pharmacotherapy	VII	26+30	5
36	F401	Pharmacokinetics	VII	45+45	7
37	F404	Pharmaceutical Technology 2	VII	50+55	7
38	F405	Phytotherapy	VII	30+30	4
39	F402	Toxicology	VII	60+45	8
40	F403	Pharmacotherapy	VIII	25+30	4
41	F407	Dietetics	VIII	30+30	4
42	F406	Pharmaceutical Technology 3	VIII	45+60	7
43	F408	Cosmetology	VIII	30+30	4
44	F409	Pharmaceutical Practice	VIII	30+30	4
45	F4010	Basics of Pharmaceutical Management	VIII	15+15	2
	Elective block 3 (1/8)				
46	F311	Public health in pharmaceutical practice	VIII	30+15	3
	F312	Pharmaceutical Marketing	VIII	30+15	
	F313	Sport pharmacy	VIII	30+15	
	F314	Medical devices	VIII	30+15	
	F315	Communication in Pharmacy Practice	VIII	10+35	
	F316	Drug metabolism	VIII	30+15	
	F317	Acute Drug Poisoning	VIII	30+15	
	F318	Laboratory Diagnosis of Metabolic Disorders	VIII	30+15	
47	FSOF2	Professional Training I	VIII	200*	1
Total				416+415+200*=1031	60

* Professional Training I carried out in collaboration with pharmacies

FIFTH YEAR

	Code	Course title	Semester	Classes (Theory + exercise)	ECTS
48	F501	Clinical Pharmacy	IX	45+60	7
49	F502	Industrial Pharmacy	IX	45+45	6
50	F504	Pharmaceutical Ethics and Legislation	IX	30+15	3
51	F503	Drug Analysis	IX	60+60	8
52	Elective block 4 (1/9)				
	F4I1	Novel Drug Delivery Systems	IX	30+15	3
	F4I2	Dosage forms for paediatric population	IX	30+15	
	F4I3	Pharmacoepidemiology and pharmacoconomics	IX	30+15	
	F4I4	Pharmaceutical regulative in drug control	IX	30+15	
	F4I5	Substances of abuse	IX	30+15	
	F4I6	Experimental design in drug analysis	IX	30+15	
	F4I7	Selected chapters of clinical pharmacokinetics	IX	30+15	
	F4I8	Chemical carcinogens	IX	30+15	
	F4I9	Ecotoxicology	IX	30+15	
53	Elective block 5 (1/8)				
	F5I1	Fundamentals of pharmaceutical biotechnology	IX	30+15	3
	F5I2	Veterinary medicines	IX	30+15	
	F5I3	Pharmaceutical care services	IX	30+15	
	F5I4	Pharmaceutical Supply Chain Management	IX	15+30	
	F5I5	Interprofessional education	IX	15+30	
	F5I6	Human Health Risk Assessment	IX	30+15	
	F5I7	Drug Design and Synthesis	IX	30+15	
	F5I8	Pharmacotherapy in pediatrics	IX	30+15	
54	FSOF3	Professional Training II	X	15+660*+30**	
55	FZR	Final Work	X		15
Total				255+210+660*+30**=1155	60

* Professional Training II carried out in collaboration with pharmacies

** Other forms of teaching

3. OUTCOMES

After graduation and acquiring the **Master of Pharmacy** degree our students have a wide range of opportunities for their professional engagement. Depending on their predispositions they will acquire knowledge and create data basis that will support them later on in their involvements in various areas of pharmacy.

4. STUDENTS LIFE

The Faculty of Pharmacy is situated nearby two students' residences. There are a few facility settings in the interior of the Faculty such as canteen service, a library and a computer room with internet connection available to all students.

Our students have very active students' life as well as many opportunities to be involved in SEP, ERASMUS and TWIN students' exchange program.

Many students' organizations, sections, workshops and the existence of the unique students' choir of Belgrade University allow students to cultivate and raise their affinities, hobbies and creative enthusiasm through their university studies.

Here is the list of students' organizations and branches at the Faculty of Pharmacy:

- Students' Science and Research Center
- The Journal SupHa
- The Choir Raskovnik
- PharmArt student photo section
- Sport Society
- Belgrade Pharmacy Students' Association (BPSA)
- Students' Parliament
- Humanitarian activities
- Literary sessions



After graduation we are available to our colleagues for all types of professional support and continuing education courses, as well as their further postgraduate professional development.