Study Programme Description

Name of the higher education institution: Comenius University Bratislava
Address of the higher education institution: Šafárikovo námestie 6, 814 99 Bratislava
Identification number of the higher education institution: 00397865
Name of the faculty: Faculty of Pharmacy
Address of the faculty: Odbojárov 10, 832 32 Bratislava

University body for the approval of the study programme: Accreditation Council of the Faculty of Pharmacy, Comenius University Bratislava, and Accreditation Board of the Comenius University Bratislava.
Date of Approval of the study programme or adjustment of the study programme: 05.11.2015
The date of last change in the study programme description: 6/2022
Reference to the results of the last periodic assessment of the study programme by the university: Minutes from 11th meeting AS Comenius University 24. 6. 2022
Reference to assessment report to the application for accreditation of the study programme under section 30 of the law No 269/2018 Coll: The internal assessment report of the study programme is part of the application - as an annex to the application.

1. Study programme basic data

a) *Title of the study programme and the number according to the register of the study programmes:*
Medical and Diagnostic Devices, Code 17702

b) *The degree of the university studies and ISCED-F code of the education:*
Single study field programme, Bachelor I. degree, ISCED-F code 655

c) *Place/s of realisation of the study programme:*
The Faculty of Pharmacy, Comenius University Bratislava, and its parts, including a retail pharmacy the "Univerzitná lekáreň", retail pharmacy the "Fakultná lekáreň" and the Medicinal Plants Garden.

d) *Title and number of the field, after completion of which the university education or the combination of two study programmes after completion of which the university education is achieved:*
Healthcare Sciences 5618, ISCED FoET 2013 code 0914

e) *Type of the study programme: academically oriented, professionally oriented; translation, translation combination study programme (listing the specialisations); teaching, teaching combination study programme (listing the specialisations); artistic, engineering, doctoral, preparation for the regulated profession, joint study programme, interdisciplinary studies:*
professionally oriented

f) *Awarded academic degree:*
Bachelor (in short „ Bc. ")

g) *Form of study:*
full-time (internal)

h) *In joint study programmes, cooperating institutions, and the range of study obligations the student fulfils at each of the given institutions (§ 54a of the Act on Higher Education Institutions).*
A study programme is not a joint study programme.

i) *The language in which the programme is organised:*
Slovak

j) *The standard length of study in academic years:*
three years

k) *Capacity of the study programme (planned number of students), the actual number of applicants and students.*
Planned number of students admitted to the 1st year is 40. Number of applicants with completed application, number of applicants who attended the National Comparator Exams, and number of students enrolled into the 1st year of study in the study programme Medical and Diagnostic Devices is summarized in table:

Students:	*2009/2010*	*2010/2011*	*2011/2012*	*2012/2013*	*2013/2014*	*2014/2015*	*2015/2016*	*2016/2017*	*2017/2018*	*2018/2019*	*2019/2020*
applied	67	75	67	52	64	62	36	24	24	27	27
attended	49	57	54	42	61	59	30	21	21	26	27
enrolled	37	41	41	42	37	22	16	9	9	12	8

2. Graduate profile and learning objectives

a) The institution defines the study programme's learning objectives, such as students' abilities when completing the programme and the primary learning outcomes.

Completion of the study programme Medical and Diagnostic Devices is conditional on gaining 180 credits at least. The study programme fully respects the Directive of the European Parliament and the Council2005/36/EC. It ends with a state exam consisting of 3 subjects, including the defense of bachelor theses. The students' abilities at the time of completion of the study programme and the main learning outcomes qualify him/her as a Medical Device Technician (qualification level 6 according to SKKR/EKR, SK ISCO-08: 3214001). The performance of this occupation is determined by several legal regulations on professional competence for the performance of healthcare professional activities, which is provided for by the Slovak Government Regulation No. 296/2010 Coll. on professional competence for the performance of the healthcare profession, the method of further education of healthcare professionals, the system of specialisation areas and the system of certified professional activities, the Act No. 578/2004 Coll. on health care providers, healthcare professionals and professional organisations in the healthcare sector and Decree of the Ministry of Health of the Slovak Republic No. 321/2005 Coll. on the scope of practice in certain healthcare professions.

The main aim of the study programme Medical and Diagnostic Devices is for the graduate to acquire competences in the field of medical and diagnostic devices (hereinafter referred to as MD) through practical skills and methodological knowledge at the level of synthesis and evaluation of MD, which serve as a basis for practice and research. The student is able and competent to carry out independently the range of professional activities of a Medical Device Technician. The acquired knowledge and skills lead to the expected competences of the graduate envisaged by the curriculum. Courses are interdisciplinary in nature and are composed of the theoretical and practical part. At the theoretical level, students gain an overview of different medical devices, diagnostic medical devices, from the knowledge of materials technology to the use of software in the field of medical devices for preventive, diagnostic, monitoring, and therapeutic purposes. The outcome of the practical part of the MD study programme is that the graduate acquires practical skills for work in the field, including the treatment and storage of MD using electronic processing (e.g., MEDIX, Duktus), is competent in quality control activities and related safety control of medical devices. The aims of the courses are to:

- acquire knowledge of the law and regulations in the field of MD at the national and European levels,
- use professional terminology,
- process and evaluate data obtained from the exercise of the healthcare profession,
- acquire communication skills and knowledge of psychology and ethics,
- independently design and implement solutions to methodological, professional, or practical problems in their profession,
- present and work effectively as part of a team,
- identify and apply the moral, social, legal, and economic contexts of the discipline,
- acquire the knowledge, skills, and competences that qualify the graduate to practise as a healthcare professional in the relevant profession.

The Course Information Sheets of the bachelor's degree in Medical and Diagnostic Devices are available online https://Bc informacne listy EN.

b) *The institution indicates the professions for which the graduate is prepared at the time of completion and the study programme's potential from the graduate's employability point of view.*

The graduate of the bachelor's degree programme obtains the qualification of Medical Device Technician. He/she is professionally qualified to handle medical devices and provide healthcare in a medical device dispensary (Act No. 262/2011 Coll.). The graduate independently performs professional work activities in ordering, distributing, controlling, and dispensing supplementary assortment and medical devices, refurbishes medical devices in health care institutions which have a central sterilisation department in their organisational structure. The graduate has adequate knowledge of the physical, chemical, and technological properties of the individual components of medical and diagnostic devices (MD) and is familiar with the method of their manufacture, and quality assessment. She/He is responsible for the procurement, and distribution of MD, and observes the principles of their care and storage. The graduate knows function and how to use MD and can provide expert information to patients on their use.

Link: https://www.sustavapovolani.sk/register-zamestnani/pracovna-oblast/karta-zamestnania/496752-zamestnanie/

Medical Device Technicians can also work in the development and manufacture of medical-technical systems and equipment such as pacemakers, MRI machines, and X-ray equipment. They assemble, install, inspect, modify, repair, calibrate and maintain medical-technical equipment and support systems, etc. They are responsible for the operational readiness, safe use, economical operation and appropriate procurement of medical equipment and facilities in hospitals.

Links: https://esco.ec.europa.eu/sk/classification/occupation_main. Profession regulations in EU member states, EEA countries or Switzerland are available at the database: https://ec.europa.eu/growth/single-market/single-market-services/free-movement-professionals/recognition-professional-qualifications-practice_sk.

The performance of the Technician for Medical Devices is determined by the following legislation:

- Act No 578/2004 Coll. No 5757/2004 on health care providers, health care workers, professional organisations in the health care sector and on amendment and supplementation of certain acts, as amended,
- Slovak Government Regulation No. 296/2010 Coll. on professional competence for the performance of the health profession, the method of further education of health professionals, the system of specialisation areas and the system of certified professional activities, as amended
- Decree of the Ministry of Health of the Slovak Republic No. 321/2005 Coll. on the scope of practice in certain health professions, as amended,

- Decree of the Ministry of Health of the Slovak Republic No. 12422/2010 Coll., establishing minimum standards for specialisation study programmes, minimum standards for certification study programmes and minimum standards for continuing education study programmes and their structure.

c) *Relevant external stakeholders who have provided the statement or a favourable opinion on the acquired qualification's compliance with the profession's sector-specific requirements:*
As Medical and Diagnostic Devices is a study programme whose content definition is related to the preparation of experts in regulated occupations with coordination of education in the Appendix No. 2 MSVVS SR no 16/2016 No 16/2016 Coll. and results from study branches assigned to regulated professions according to the Government Regulation No.296/2010 Coll., on 29 March 2021 we asked the Ministry of Healthcare SR for approval of the concord of acquired qualification with sectoral specific requirements for the performance of the occupation.

3. Employability

a) *Evaluation of the study programme graduates employability.*
Graduates of the bachelor's degree programme Medical and Diagnostic Devices will find a wide range of job opportunities in the field of pharmaceutical care (public, hospital pharmacies, medical device dispensaries). They can also find employment in inpatient health care (central sterilization departments, laboratory medicine departments), in public health authorities, in the pharmaceutical industry with a portfolio of medical and diagnostic devices (MD), in manufacturing companies of MD, medical equipment and systems, in distribution companies, as well as in research and education, such as in the Faculty of Pharmacy of Comenius University Bratislava, the Slovak Medical University Bratislava, secondary medical schools. They can find employment at the workplaces of the Department of Medical Devices at the State Institute for Drug Control, in the Department of Medical Devices, in the Office for Healthcare Supervision, and other public offices and institutions. Graduates of the bachelor's degree are professionally prepared to carry out activities in ensuring the prevention of infections caused by medical devices, to cooperate in the certification of medical devices, and the production of medical devices. Graduates of the faculty are in demand on the labour market and have very good employment opportunities not only in Slovakia but also abroad.

b) *If applicable, indicate the successful graduates of the study programme:*

Students:	***2009/2010***	***2010/2011***	***2011/2012***	***2012/2013***	***2013/2014***	***2014/2015***	***2015/2016***	***2016/2017***	***2017/2018***	***2018/2019***	***2019/2020***
Graduates	19	19	27	25	19	25	27	15	15	18	5

Overview of successful graduates of study program: https://absolventi.uniba.sk/index.do

List of some successful graduates of study program:

Name and titles of graduate	Year of graduation	Name and titles of graduate	Year of graduation
Bc. Michaela Bieliková	2022	Bc. Ágnes Lőrincz	2021
Bc. Anikó Dudášová	2021	Mgr. Nikola Mikolášková	2020
Bc. Gabriela Dvorská	2022	Bc. Karol Pavelka	2022
Bc. Andrea Hrmelová	2021	Bc. Patrícia Puskásová	2022
Bc. Lesana Lesia Ilucová	2022	Bc. Liliana Szecsényiová	2020
Bc. Dominika Kramorišová	2021	Bc. Erik Szöllösi	2021
Bc. Andrea Kresťanová	2020	Bc. Natália Tůmová	2020
Bc. Lenka Krnáčová	2022	Bc. Michael Vislocký	2021
Bc. Kristína Kukučková	2021	Ing. Marek Vitikáč	2020
Bc. Aneta Lašáková	2021	Bc. Monika Zelinová	2021

c) *Evaluation of the study programme quality by employers (feedback).*

For the needs of evaluating the quality of the submitted study program, selected employers were sent an inquiry to comment on the requirements for the Bachelor 's study programme Medical and Diagnostic Devices. The delivered letters are available for inspection at the Study Department of the Faculty of Pharmacy of Comenius University Bratislava. Employers who commented positively on the quality of the ongoing study programme are the Slovak Association of Medical Device Suppliers (SK+MED), Slovak Chamber of Pharmacists, Association of Drug and Health Device Suppliers, State Institute for Drug Control, Chief Specialist of the Ministry of Health of the Slovak Republic for Medical and Diagnostic Devices.

4. Structure and content of the study programme

a) *The institution describes the rules for the design of study plans within the study programme.*

The study programme considers the mission and aims determined by the Faculty of Pharmacy, Comenius University Bratislava in the document "Long-term objectives of the Faculty of Pharmacy, Comenius University Bratislava" in research and education. The study programme was created or innovated in terms of trends of development of similar programmes in Europe and worldwide with the consideration of attractiveness for graduates in the first grade of the study programme Medical and Diagnostic Devices. The study programme was created in concord with the needs of the practice. Therefore, one of its main viewpoints at outlining the subjects is the applicability of the acquired knowledge and competencies in the real practice. The study programme and its study plan are designed in the way, that students interested in this study programme might undergo part of the study also abroad. The faculty has rich experience and a wide network of partner universities with similar study programmes to the submitted study programme.

The study programme's profile subjects are (compulsory or compulsory elective subjects) defined to provide the knowledge and skills necessary for completing the study programme. The profile subjects represent theoretical and methodological base in the given field of education. They form a substantial part of the thematic group of state examinations. Together with other educational activities offered to a student in the form of elective subjects, the profile subjects offer the knowledge and skills necessary to achieve educational outcomes in the student's personal and professional development.

Justification for the accreditation of the study programme Medical and Diagnostic Devices:

The study programme Medical and Diagnostic Devices, the 1st degree of university study, is a standard part of the study at the faculties of pharmacy in major world universities, including universities in the countries of the European Union. Studying Medical and Diagnostic Devices at these faculties or universities makes it possible to acquire knowledge and skills in the field of healthcare sciences, and applied in the areas of prevention, diagnosis, and therapy in outpatients (public pharmacies, medical device dispensaries) and hospital facilities (departments of central sterilisation, departments of laboratory medicine), in pharmaceutical care, at regulatory bodies, in medical device development and production, in medical device quality and safety controls (more details in item 3a).

The study program Medical and Diagnostic Devices provides higher education for obtaining professional qualifications according to the Directive 2005/36/EC of the European Parliament and of the Council on the recognition of professional qualifications and the Act no. 578/2004 Coll. Act on Health Care Providers, Health Care Workers, Professional Organizations in Healthcare and on Amendments to Certain Acts.

b) *The institution compiles the recommended study plans for individual study paths:*

The study program, the recommended study plan, and the standard study´s length is regulated in the Higher Education Act. In accordance with the study regulations of the faculty, the study program follows the rules of the European system of transfer and accumulation of credits and the student's workload for the academic year. It adheres to the specified workload expressed by the number of hours of contact teaching together with all activities necessary for the preparation and completion of the course. The number of credits was determined for individual subjects considering the difficulty of the subject in terms of the specific subject area and the method of completing the subject. The subjects within the recommended study plan enable the student to achieve the set learning outcomes.

c) *The study programme generally states:*

A detailed study plan with the necessary explanations is attached to this application (Appendix No. 4c).

The conservative trajectory of the study modifies the study plan as follows:

[a]In the conservative trajectory of study, the course *Selective Topics in Mathematics* is a compulsory elective course and can be considered completed if the student has completed the course *Selective Chapters in Mathematics*.

[b]In the conservative trajectory of study, the course *Public Health I.* is a compulsory elective course and can be considered completed if the student has completed the course *Public Health*.

[c]In the conservative trajectory of study, the course *Public Health II.* is a compulsory elective course and can be considered completed if the student has completed the course *Public Health*.

[d]In the conservative trajectory of study, the course *Basics in Ethics* is a compulsory elective course and can be considered completed if the student has completed the courses *Basics in Ethics (1)* and *Basics in Ethics (2)*.

The learning outcomes and related criteria and the rules for their evaluation so that all the educational goals of the study program are met are listed in the Course Information Sheets.

For each educational part of the study plan/course, the used educational activities (lecture, seminar, exercise, state exam) suitable for achieving the learning outcomes are determined and are listed in the Information Sheets of the courses. The methods by which the educational activity is carried out - full-time, distance, combined - syllabus/syllabi of the course and the student's workload ("scope" for individual courses and educational activities separately) are listed in the Course Information Sheets.

d) *The institution states the number of credits, the achievement of which is a condition for proper completion of studies and other requirements that the student must meet within the study programme and for its proper completion, including the requirements for state examinations, rules for re-study and rules for the extension, interruption of study.*

The minimum sum of credits for the whole Bachelor´s study, which a student must acquire for its successful completion, is 180 credits as defined by the Act No 131/2002 Coll. on Higher Education and Changes and Supplements to Some Laws, § 52 Bachelor's degree program, engineering degree program, and doctoral degree program. The precise allocation of minimal required credits in individual control stages is issued in the Appendix No. 1 to the internal regulation No. 1/2020 (Study regulation of the Faculty of Pharmacy Comenius University Bratislava).
https://www.fpharm.uniba.sk/fileadmin/faf/Legislativa_a_dokumenty/Studijny_poriadok_FaF_UK/VP_2020_1_FaFUK_StudijnyPoriadok_SPrilohami_schvalenyASUK.pdf.

The state exams of the Bachelor´s study consist of three subjects – Medical Devices, Diagnostic Devices, and Defense of the Bachelor Theses. The subjects of state exams are part of the study plan. Detailed conditions for proper completion of studies and other conditions that the student must meet during the bachelor's study of the study program Medical and Diagnostic Devices and for its proper completion are specified in the Study Regulations of the Faculty of Pharmacy, Comenius University Bratislava (CU) (Internal Regulation No. 1/2020), in the following sections:

- Art. 3 Study program, recommended study plan and standard length of study
- Art. 4 Subjects of the study program and educational activities
- Art. 5 Study credit system
- Art. 6 Evidence of study
- Art. 7 Study schedule
- Art. 8 Enrolment for study and enrolment in the next part of the study
- Art. 9 Study plan
- Art. 10 Conditions for re-enrolment of subjects
- Art. 11 Evaluation of study results
- Art. 12 Test
- Art. 13 Control stages of the study

- Art. 14 Bachelor thesis and diploma thesis
- Art. 15 State exam
- Art. 16 Overall study outcome
- Art. 17 Change of study program within the UK
- Art. 18 Recognition of completion of subjects
- Art. 19 Credit transfer during academic mobility
- Art. 20 Interruption of studies and re-enrolment
- Art. 21 Proper completion of studies
- Art. 22 Other study completion

Basic requirements for the Bachelor thesis, way of its submission, check of originality, archiving, and thesis accessibility are regulated by the Internal Regulation No. 12/2013 Guideline of Rector of CU on essential requirements of the final thesis, rigorous thesis and habilitation thesis, control of their originality, archiving and accessibility at CU as amended.

Conditions for regular completion of the Bachelor study at the Faculty of Pharmacy CU Bratislava (hereinafter FPHARM CU):

a. successful completion of all compulsory subjects of the recommended study plan,
b. obtaining at least 174 credits for subjects completed during the study + 6 credits for state exams,
c. successful completion of state exams in three state subjects,
d. successful defence of the final thesis.

e) *For individual study plans, the institution states the requirements for completing the individual parts of the study programme and the student's progress within the study programme in the given structure:*

- the number of credits for compulsory examinations required for the proper completion of studies are:
  158 credits for successful completion of obligatory courses of the study plan, including the preparation of the Bachelor thesis; 8 credits for completing a mandatory 1-month practice in dispensary of medical devices; and 6 credits for successful passing the state exams in Medical Devices, Diagnostic Devices, and Bachelor Thesis Defense,
- students can obtain credits by completing obligatory-elective courses and elective courses in a composition of their choice; to complete their studies successfully, students must obtain 8 credits this way,
- total number of credits required for successful completion of the study: 180,
- the student's progress in the study programme is controlled by the Study Department in the control stages in terms of achieving the minimum number of credits in the given stage of study. Control stages and minimum numbers of credits are defined in the Appendix No. 3 to the internal regulation No. 1/2020 (Study Regulation of the FPHARM CU, https://www.fpharm.uniba.sk/fileadmin/faf/Legislativa_a_dokumenty/Studijny_poriadok_FaF_UK/VP_2020_1_FaFUK_StudijnyPoriadok_SPrilohami_schvalenyASUK.pdf),
- the standard length of study in the Medical and Diagnostic Devices study programme is 3 years; it is recommended that students obtain 60 credits each year,
- student who wants to pass the last state exam must have completed all obligatory courses of the study plan and enough courses so that after passing this state exam he/she can successfully complete his/her studies.

f) *The institution describes the rules for verification of learning outcomes, students' assessment, and the possibilities of appealing against the assessment:*

All types of assessment of study results are designed to unambiguously define the required conditions for completing the subject. The student is informed early enough about regular and resit test possibilities of continual assessment and regular and resit terms of examinations. Each student has the right to be informed of all parts of continuous assessment and examination. The student has the right not to accept the exam evaluation and take part in a resit examination. If the student was evaluated at the regular term of the examination by the mark Fx, or he/she did not register for any of the regular examination terms, he/she has the right to two resit terms. The student has the right to ask for the last resit examination in the form of a board examination. The Dean, on the suggestion of a person bearing the primary responsibility for performance, development, and provision of the study programme quality, will assign at minimum a three-member examination committee. The chairman of the committee is usually a teacher of the given subject. The board examination may also be performed without the student's application if the subject teacher applies for it. The Study Regulations of the faculty define the details of the board examination.

The student can submit a written request for reviewing the decision on his/her expelling from the study. The Dean might comply with the request. Otherwise, the entire application shall be passed within 15 days from the day of the delivery to the Rector of CU together with the attached file and written standpoint to the applicant's statements and objections. Based on a written student's request, the Dean may grant an exception from the terms of the faculty schedule of the study, control Stages of Study, the maximum length of the study interruption in case the student has not fulfilled conditions of the control stages of study or to excuse the missed term. The Study Regulations of the faculty give the details.

g) *Conditions for recognition of studies or a part of studies.*

The study programmes are designed in accord with the rules of ECTS transfers and recognition of credits. The priority is given to the fact that graduates of the study programmes can acquire knowledge and new skills via mobilities at domestic and foreign institutions. Specific requirements for completion of mobilities are defined in the individual study plan of a student. Mobilities are organised within the broad offer of publicly available schemes (Erasmus+, SAIA).

The recognition of the subject's completion is the granting of the evaluation and subsequent assignment of an appropriate number of credit points for the subject, based on the part of the study completed in the past. The student who in the past studied at a university and his/her study was not regularly completed, a student applying for transfer, or a student applying for the change of the study programme within the study branch Healthcare Sciences may ask for recognition of completed subjects, provided he/she fulfils the conditions given in the Study Regulations of the FPHARM CU. The student may apply in writing for recognition of a subject completion before the beginning of the teaching part of the semester of the academic year in which the subject is taught. The Dean decides on recognising the completed subjects after consulting the teachers' opinion of the subjects, recognising of which the student requested. The transfer of credit points is the process of inclusion of credits gained during the study at another university either in the Slovak Republic or at a university abroad into the number of counted credit points of the doctoral student according to Art. 4, Sec. 3 of the

Decree on the Credit System of the Study. Academic mobility is formally conditioned by the learning agreement between the student, CU, and the receiving university. The study's agreement contains a suggested study plan at the receiving university and recognition of corresponding study subjects at the sending university. The subjects that should be completed by the student at the receiving university based on the learning agreement will become a valid part of the student's study plan. The subjects completed at the receiving university within the framework of academic mobility will be recognized by the sending faculty of CU based on the record of the study results, which the receiving university issues at the end of the mobility. The record of study results will become part of the student's study documentation administered by the faculty. The details on the recognition of academic mobility subjects are stated in the Study Regulations of the FPHARM CU.

h) *The institution states the topics of the study programme's final theses (or a link to the list).*
The topics of the Bachelor theses are regularly updated and published in the Academic Information System AIS.

i) *The institution describes or refers to:*

- The rules for assignment, elaboration, reviewing, defence, and assessment of the final theses in the study programme are stated in the Study Regulations of the Faculty of Pharmacy, Comenius University Bratislava (Internal Regulation No. 1/2020) and are freely available on the website address:
  https://www.fpharm.uniba.sk/fileadmin/faf/Legislativa_a_dokumenty/Studijny_poriadok_FaF_UK/VP_2020_1_FaFUK_StudijnyPoriadok_SPrilohami_schvalenyASUK.pdf
- Possibilities and procedures of participation in student mobilities are published on the faculty's website in the part international relationships on the address: https://www.fpharm.uniba.sk/en/relations/
- Rules of complying with the academic ethic and consequences of breach are regulated by the Disciplinary Board of the Faculty of Pharmacy, Ethical Codex and Ethical Board, more detailed information is freely available on the websites:

  Disciplinary Regulations of CU Bratislava for students (the Internal Regulation No. 13/2018)
  https://uniba.sk/fileadmin/ruk/legislativa/2018/Vp_2018_13.pdf

  The Disciplinary Board of CU - Disciplinary Regulations of CU Bratislava for students (the Internal Regulation No. 14/2018)
  https://uniba.sk/fileadmin/ruk/legislativa/2018/Vp_2018_14.pdf

  The Disciplinary Committee for Students
  https://www.fpharm.uniba.sk/en/about-the-faculty/disciplinary-commission/

  Ethical Codex of Comenius University Bratislava (the Internal Regulation No. 23/2021, part No. 8)
  https://uniba.sk/fileadmin/ruk/legislativa/2021/Vp_2021_23.pdf

  Ethical Board of CU
  https://uniba.sk/o-univerzite/organy-uk/eticka-rada-uk/

  The Rules of Procedures of the Ethical Board of CU (the Internal Regulation No. 24/2016)
  https://uniba.sk/fileadmin/ruk/legislativa/2016/Vp_2016_24.pdf
- Procedures applied to students with specific needs:
  The Centre for Support for Students with Specific Needs acts at the Comenius University Bratislava. The centre provides information, advice, supportive services and educational activities for applicants and students with specific needs, teachers and the wider public. A coordinator of the support for students with specific needs acts at the faculty level and assesses the possibilities/restrictions/risks of studying a particular study programme for students with specific needs. The coordinator suggests concrete, adequate adjustments and supportive services determined for a student with specific needs and performs advisory and mediator activities. The coordinator contributes to creating a specific hybrid education system and support for students with specific needs.

  Support Centre for Students with Specific Needs:
  https://uniba.sk/o-univerzite/rektorat-uk/oddelenie-socialnych-sluzieb-a-poradenstva-ossp/centrum-podpory-studentov-so-specifickymi-potrebami-cps/

  The present coordinator for students with specific needs at the Faculty of Pharmacy of CU Bratislava is:
  doc. PharmDr. Szilvia Czigle, PhD. from the Department Pharmacognosy and Botany FPHARM CU
  tel. number: +421 2 501 17 209, e-mail: czigle@fpharm.uniba.sk
- Procedures of submission of incitements and appeals from the side of students are defined in the Study Regulations of the Faculty Pharmacy, Comenius University Bratislava (the Internal Regulation No. 10/2020), which is freely available at the address:
  https://www.fpharm.uniba.sk/fileadmin/faf/Legislativa_a_dokumenty/Studijny_poriadok_FaF_UK/VP_2020_1_FaFUK_StudijnyPoriadok_SPrilohami_schvalenyASUK.pdf

5. Course information sheets of the study programme
In the structure according to Decree no. 614/2002 Coll.
The Course Information Sheets of the study programme Pharmacy are a separate appendix to this Description of the study program and are available on the faculty's website:
https://www.fpharm.uniba.sk/fileadmin/faf/Studijna_agenda/Bc_studium/Informacne_listy/SK-EN/IL_ZDP_EN.PDF,

6. Current academic year plan and current schedule (or hyperlink)
The schedule of the current academic year is available on the website of the faculty: https://www.fpharm.uniba.sk/studium/,
https://www.fpharm.uniba.sk/uploads/media/FaF_UK_Rocenka_2022_2023.pdf,
https://www.fpharm.uniba.sk/studium/bakalarske-studium/odporucany-studijny-plan/

7. Persons responsible for the study programme

a) *A person responsible for the delivery, development, and quality of the study programme (indicating the position and contact details).*
doc. Mgr. Martina Hrčka Dubničková, PhD., a university teacher – associated professor, in the function of associated professor. Contact: Department of Cellular and Molecular Biology of Drugs, Faculty of Pharmacy, Comenius University Bratislava, Odbojárov 10, 832 32 Bratislava, Slovakia, tel.: +421 2 501 17 312, e-mail: martina.hrcka.dubnickova@uniba.sk

b) *List of persons responsible for the study programme's **profile courses** with the assignment to the course and link to the central register of university staff and contact details (they may also be listed in the study plan).*

Teacher of profile course / Contact (workplace, email, tel. number)	**Reference to the Register of the University Employees**	**Name of profile course**
doc. Mgr. Martina Hrčka Dubničková, PhD. Department of Cell and Molecular Biology of Drugs, Faculty of Pharmacy Comenius University Bratislava dubnickova@fpharm.uniba.sk +421 2 501 17 312	www.portalvs.sk/regzam/detail/3703	Healthcare Hygiene
doc. PharmDr. Daniela Mináriková, PhD., MSc. Department of Organisation and Management of Pharmacy, Faculty of Pharmacy Comenius University Bratislava minarikova@fpharm.uniba.sk +421 2 501 17 341	www.portalvs.sk/regzam/detail/5700	Health Economics
doc. Mgr. Andrea Bilková, PhD. Department of Cell and Molecular Biology of Drugs, Faculty of Pharmacy Comenius University Bratislava bilkova@fpharm.uniba.sk +421 2 501 17 316	www.portalvs.sk/regzam/detail/3694	Diagnostic Immunology
doc. PharmDr. Marek Obložinský, PhD. Department of Cell and Molecular Biology of Drugs, Faculty of Pharmacy Comenius University Bratislava oblozinsky@fpharm.uniba.sk +421 2 501 17 314	https://www.portalvs.sk/regzam/detail/3756	Medical and Diagnostic Devices and Biological Environment
PharmDr. Katarína Maráková, PhD. Department of Pharmaceutical Analysis and Nuclear Pharmacy, Faculty of Pharmacy Bratislava marakova@fpharm.uniba.sk +421 2 501 17 248	https://www.portalvs.sk/regzam/detail/5274	Chemical Diagnostic and Health Instruments, their Properties and Standardisation

c) *Reference to the research/art/teacher profiles of persons responsible for the study programme's profile courses.*
The research/art/teacher profiles of persons responsible for the study programme's profile courses are in a separate Appendix 7c).

d) *List of teachers in the study programme with the assignment to the subject and provided with a link to the central Register of University staff, with contact details:*

Obligatory courses:

Teacher of profile course / Contact (workplace, email, tel. number)	**Reference to the Register of the University Employees**	**Name of profile course**
doc. PharmDr. Daniela Mináriková, PhD., MSc. Department of Organisation and Management of Pharmacy, Faculty of Pharmacy Comenius University Bratislava minarikova@fpharm.uniba.sk +421 2 501 17 341	www.portalvs.sk/regzam/detail/5700	Health Economics Public Health I. Public Health II. Medical Devices – Legislation and Regulation Management Basics
doc. PharmDr. Tomáš Tesař, PhD., MPH, MBA Department of Organisation and Management of Pharmacy, Faculty of Pharmacy Comenius University Bratislava tesar@fpharm.uniba.sk +421 2 501 17 343	https://www.portalvs.sk/regzam/detail/20451	Health Economics Public Health I. Public Health II. Medical Devices – Legislation and Regulation

		Basics of Computer Data Processing Health Informatics Management Basics
PharmDr. Zuzana Koblišková, PhD. Department of Organisation and Management of Pharmacy, Faculty of Pharmacy Comenius University Bratislava zuzana.kobliskova@uniba.sk +421 2 501 17 343	https://www.portalvs.sk/regzam/detail/29977	Basics of Computer Data Processing Health Informatics
PharmDr. Ľubica Lehocká, PhD. Department of Organisation and Management of Pharmacy, Faculty of Pharmacy Comenius University Bratislava lehocka@fpharm.uniba.sk +421 2 501 17 346	www.portalvs.sk/regzam/detail/3741	Basics of Ethics Basics of Psychology and Law Professional Practice in Medical Devices Dispensary Internship in Health Institution
PharmDr. Lucia Masaryková, PhD. Department of Organisation and Management of Pharmacy, Faculty of Pharmacy Comenius University Bratislava masarykova@fpharm.uniba.sk +421 2 501 17 343	www.portalvs.sk/regzam/detail/23029	Basics of Ethics
Ing. Mgr. Ingrid Slezáková Department of Organisation and Management of Pharmacy, Faculty of Pharmacy Comenius University Bratislava slezakova@fpharm.uniba.sk +421 2 501 17 374	www.portalvs.sk/regzam/detail/33567	Basics of Psychology and Law
PharmDr. Miroslava Snopková, PhD. Department of Organisation and Management of Pharmacy, Faculty of Pharmacy Comenius University Bratislava snopkova@fpharm.uniba.sk +421 2 501 17 344	www.portalvs.sk/regzam/detail/5273	Professional Practice in Medical Devices Dispensary Internship in Health Institution
Mgr. Eva Drobná, PhD. Department of Cell and Molecular Biology of Drugs, Faculty of Pharmacy Comenius University Bratislava drobna@fpharm.uniba.sk +421 2 501 17 313	www.portalvs.sk/regzam/detail/23106	Healthcare Hygiene Microbiology Diagnostic Immunology
doc. Mgr. Martina Hrčka Dubničková, PhD. Department of Cell and Molecular Biology of Drugs, Faculty of Pharmacy Comenius University Bratislava dubnickova@fpharm.uniba.sk +421 2 501 17 312	www.portalvs.sk/regzam/detail/3703	Healthcare Hygiene Microbiology Diagnostic Immunology
doc. Mgr. Andrea Bilková, PhD. Department of Cell and Molecular Biology of Drugs, Faculty of Pharmacy Comenius University Bratislava bilkova@fpharm.uniba.sk +421 2 501 17 316	www.portalvs.sk/regzam/detail/3694	Diagnostic Immunology Healthcare Hygiene
PharmDr. Hana Kiňová Sepová, PhD. Department of Cell and Molecular Biology of Drugs, Faculty of Pharmacy Comenius University Bratislava kinovasepova@fpharm.uniba.sk +421 2 501 17 316	www.portalvs.sk/regzam/detail/5270	Diagnostic Immunology Healthcare Hygiene Microbiology
PharmDr. Gabriela Greifová, PhD. Department of Cell and Molecular Biology of Drugs, Faculty of Pharmacy Comenius University Bratislava	www.portalvs.sk/regzam/detail/29979	Healthcare Hygiene Microbiology Diagnostic Immunology

greifova@fpharm.uniba.sk +421 2 501 17 312		
doc. PharmDr. Marek Obložinský, PhD. Department of Cell and Molecular Biology of Drugs, Faculty of Pharmacy Comenius University Bratislava malik@fpharm.uniba.sk +421 2 501 17 314	https://www.portalvs.sk/regzam/detail/3756	Medical and Diagnostic Devices and Biological Environment
PharmDr. Andrea Balažová, PhD. Department of Cell and Molecular Biology of Drugs, Faculty of Pharmacy Comenius University Bratislava balazova@fpharm.uniba.sk +421 2 501 17 312	www.portalvs.sk/regzam/detail/3689	Medical and Diagnostic Devices and Biological Environment
Mgr. Ivana Holková, PhD. Department of Cell and Molecular Biology of Drugs, Faculty of Pharmacy Comenius University Bratislava holkova@fpharm.uniba.sk +421 2 501 17 313	www.portalvs.sk/regzam/detail/3717	Medical and Diagnostic Devices and Biological Environment
RNDr. František Bilka, PhD. Department of Cell and Molecular Biology of Drugs, Faculty of Pharmacy Comenius University Bratislava bilka@fpharm.uniba.sk +421 2 501 17 316	www.portalvs.sk/regzam/detail/3693	Medical and Diagnostic Devices and Biological Environment
Ing. Ľudmila Pašková, PhD. Department of Cell and Molecular Biology of Drugs, Faculty of Pharmacy Comenius University Bratislava paskova@fpharm.uniba.sk +421 2 501 17 305	www.portalvs.sk/regzam/detail/15992	Medical and Diagnostic Devices and Biological Environment
PharmDr. Renáta Kubíková, PhD. Department of Cell and Molecular Biology of Drugs, Faculty of Pharmacy Comenius University Bratislava renata.kubikova@uniba.sk +421 2 501 17 307	www.portalvs.sk/regzam/detail/23112	Medical and Diagnostic Devices and Biological Environment
doc. RNDr. Jana Gallová, CSc. Department of Physical Chemistry of Drugs, Faculty of Pharmacy Comenius University Bratislava gallova@fpharm.uniba.sk +421 2 501 17 289	https://www.portalvs.sk/regzam/detail/3709	Physics for Healthcare Professionals
Ing. Jarmila Oremusová, CSc. Department of Physical Chemistry of Drugs, Faculty of Pharmacy Comenius University Bratislava oremusova@fpharm.uniba.sk +421 2 501 17 282	www.portalvs.sk/regzam/detail/3760	Physics for Healthcare Professionals
doc. Mgr. Marcela Chovancová, PhD. Department of Physical Chemistry of Drugs, Faculty of Pharmacy Comenius University Bratislava marcela.chovancova@uniba.sk +421 2 501 17 292	www.portalvs.sk/regzam/detail/12640	Selected Topics in Mathematics Physics for Healthcare Professionals
Mgr. Ondrej Sprušanský, PhD. Department of Pharmacology and Toxicology Faculty of Pharmacy Comenius University Bratislava sprusansky@fpharm.uniba.sk +421 2 501 17 376	www.portalvs.sk/regzam/detail/5656	Biology
Mgr. Lenka Bies Piváčková, PhD. Department of Pharmacology and Toxicology Faculty of Pharmacy Comenius University	www.portalvs.sk/regzam/detail/29055	Biology

Bratislava pivackova@fpharm.uniba.sk +421 2 501 17 387		
PharmDr. Katarína Hadová, PhD. Department of Pharmacology and Toxicology Faculty of Pharmacy Comenius University Bratislava hadova@fpharm.uniba.sk +421 2 501 17 240	www.portalvs.sk/regzam/detail/34269	Biology
PharmDr. Csaba Horváth, PhD. Department of Pharmacology and Toxicology Faculty of Pharmacy Comenius University Bratislava horvath125@uniba.sk +421 2 501 17 386	www.portalvs.sk/regzam/detail/34259	Biology
doc. MUDr. Tatiana Stankovičová, CSc. Department of Pharmacology and Toxicology Faculty of Pharmacy Bratislava stankovicova@fpharm.uniba.sk +421 2 501 17 363	www.portalvs.sk/regzam/detail/3774	Human Anatomy and Physiology Pathology
doc. PharmDr. Anna Paul Hrabovská, PhD. Department of Pharmacology and Toxicology Faculty of Pharmacy Comenius University Bratislava hrabovska@fpharm.uniba.sk +421 2 501 17 377	www.portalvs.sk/regzam/detail/3719	Human Anatomy and Physiology Pathology
PharmDr. Tomáš Rajtík, PhD. Department of Pharmacology and Toxicology Faculty of Pharmacy Comenius University Bratislava rajtik@fpharm.uniba.sk +421 2 501 17 391	www.portalvs.sk/regzam/detail/24993	Human Anatomy and Physiology Pathology
PharmDr. Zuzana Kiliánová, PhD. Department of Pharmacology and Toxicology Faculty of Pharmacy Comenius University Bratislava kilianova@fpharm.uniba.sk +421 2 501 17 387	www.portalvs.sk/regzam/detail/19203	Human Anatomy and Physiology Pathology
prof. PharmDr. Ján Klimas, PhD., MPH Department of Pharmacology and Toxicology Faculty of Pharmacy Comenius University Bratislava klimas@fpharm.uniba.sk +421 2 501 17 368	www.portalvs.sk/regzam/detail/3726	Human Anatomy and Physiology Pathology Fundamentals of Pharmacology (1) Fundamentals of Pharmacology (2)
PharmDr. Stanislava Kosírová, PhD. Department of Pharmacology and Toxicology Faculty of Pharmacy Comenius University Bratislava stanislava.kosirova@uniba.sk +421 2 501 17 364	www.portalvs.sk/regzam/detail/3721	Human Anatomy and Physiology Pathology
PharmDr. Eva Kráľová, PhD. Department of Pharmacology and Toxicology Faculty of Pharmacy Comenius University Bratislava kralova@fpharm.uniba.sk +421 2 501 17 363	www.portalvs.sk/regzam/detail/3733	Human Anatomy and Physiology Pathology
PharmDr. Attila Kulcsár, PhD. Department of Pharmacology and Toxicology Faculty of Pharmacy Comenius University Bratislava atilla.kulcsar@uniba.sk +421 2 501 17 376	www.portalvs.sk/regzam/detail/29542	Human Anatomy and Physiology Pathology
PharmDr. Tatiana Foltánová, PhD. Department of Pharmacology and Toxicology Faculty of Pharmacy Comenius University	www.portalvs.sk/regzam/detail/3707	Pathology

Bratislava foltanova@fpharm.uniba.sk +421 2 501 17 371		
doc. PharmDr. Peter Křenek, PhD. Department of Pharmacology and Toxicology Faculty of Pharmacy Comenius University Bratislava krenek@fpharm.uniba.sk +421 2 501 17 392	www.portalvs.sk/regzam/detail/3734	Fundamentals of Pharmacology (1) Fundamentals of Pharmacology (2)
Mgr. Peter Vavrinec, PhD. Department of Pharmacology and Toxicology Faculty of Pharmacy Comenius University Bratislava vavrinec@fpharm.uniba.sk +421 2 501 17 364	www.portalvs.sk/regzam/detail/19202	Veterinary Medical Devices
doc. PharmDr. Marek Máťuš, PhD. Department of Pharmacology and Toxicology Faculty of Pharmacy Comenius University Bratislava matus@fpharm.uniba.sk +421 2 501 17 374	www.portalvs.sk/regzam/detail/5581	Veterinary Medical Devices
Mgr. Gabriel Dóka, PhD. Department of Pharmacology and Toxicology Faculty of Pharmacy Comenius University Bratislava doka@fpharm.uniba.sk +421 2 501 17 389	www.portalvs.sk/regzam/detail/23053	Fundamentals of Pharmacology (1) Fundamentals of Pharmacology (2)
prof. PharmDr. Adriana Duriš Adameová, PhD. Department of Pharmacology and Toxicology Faculty of Pharmacy Bratislava adriana.duris.adameova@uniba.sk +421 2 501 17 371	www.portalvs.sk/regzam/detail/3686	Fundamentals of Pharmacology (1) Fundamentals of Pharmacology (2)
RNDr. Roman Mikláš, PhD. Department of Chemical Theory of Drugs Faculty of Pharmacy Comenius University Bratislava miklas@fpharm.uniba.sk +421 2 501 17 323	www.portalvs.sk/regzam/detail/3748	Basics of Chemistry of Materials I.
Mgr. Anna Miňo, PhD. Department of Chemical Theory of Drugs Faculty of Pharmacy Comenius University Bratislava anna.mino@fpharm.uniba.sk +421 2 501 17 330	www.portalvs.sk/regzam/detail/32264	Basics of Chemistry of Materials I.
RNDr. Jana Korcová, PhD. Department of Chemical Theory of Drugs Faculty of Pharmacy Comenius University Bratislava jana.korcova@fpharm.uniba.sk +421 2 501 17 330	www.portalvs.sk/regzam/detail/30598	Basics of Chemistry of Materials I.
doc. Mgr. Fils Andriamainty, PhD. Department of Pharmaceutical Chemistry Faculty of Pharmacy Comenius University Bratislava andriamainty@fpharm.uniba.sk +421 2 501 17 229	www.portalvs.sk/regzam/detail/3687	Basics of Chemistry of Materials II.
Mgr. Róbert Šandrik, PhD. Department of Pharmaceutical Chemistry Faculty of Pharmacy Comenius University Bratislava robert.sandrik@uniba.sk +421 2 501 17 221	www.portalvs.sk/regzam/detail/23082	Basics of Chemistry of Materials II.
PharmDr. Eva Salanci	www.portalvs.sk/regzam/detail/32779	Basics of Chemistry of Materials II.

Department of Pharmaceutical Chemistry Faculty of Pharmacy Comenius University Bratislava salanci@fpharm.uniba.sk +421 2 501 17 226		
PharmDr. Katarína Maráková, PhD. Department of Pharmaceutical Analysis and Nuclear Pharmacy, Faculty of Pharmacy Bratislava marakova@fpharm.uniba.sk +421 2 501 17 248	https://www.portalvs.sk/regzam/detail/5274	Chemical Diagnostic and Health Instruments, their Properties and Standardisation
RNDr. Svetlana Dokupilová, PhD. Department of Pharmaceutical Analysis and Nuclear Pharmacy Faculty of Pharmacy Comenius University Bratislava dokupilova@fpharm.uniba.sk +421 2 501 17 249	www.portalvs.sk/regzam/detail/3702	Quality Control of the Medical Devices I. Chemical Diagnostics and Health Instruments, their Properties and Standardisation
Ing. Ivan Benkovský, PhD. Department of Pharmaceutical Analysis and Nuclear Pharmacy Faculty of Pharmacy Comenius University Bratislava benkovsky@fpharm.uniba.sk; +421 2 501 17 253	www.portalvs.sk/regzam/detail/3690	Quality Control of the Medical Devices I. Chemical Diagnostics and Health Instruments, their Properties and Standardisation
doc. PharmDr. Miroslava Sýkorová, PhD. Department of Pharmaceutical Chemistry Faculty of Pharmacy Comenius University Bratislava sykorova@fpharm.uniba.sk; +421 2 501 17 225	www.portalvs.sk/regzam/detail/3779	Quality Control of the Medical Devices II.
PharmDr. Iva Kapustíková, Ph.D. Department of Pharmaceutical Chemistry Faculty of Pharmacy Comenius University Bratislava kapustikova@fpharm.uniba.sk; +421 2 501 17 224	www.portalvs.sk/regzam/detail/24260	Quality Control of the Medical Devices II.
prof. PharmDr. Pavel Mučaji, PhD. Department of Pharmacognosy and Botany Faculty of Pharmacy Comenius University Bratislava mucaji@fpharm.uniba.sk; +421 2 501 17 201	www.portalvs.sk/regzam/detail/3753	Introduction to Botany and Pharmacognosy
doc. Ing. Miroslav Habán, PhD. Department of Pharmacognosy and Botany Faculty of Pharmacy Comenius University Bratislava habn@fpharm.uniba.sk; +421 2 501 17 213	www.portalvs.sk/regzam/detail/7215	Introduction to Botany and Pharmacognosy
PharmDr. Vladimír Forman, PhD. Department of Pharmacognosy and Botany Faculty of Pharmacy Comenius University Bratislava forman@fpharm.uniba.sk; +421 2 501 17 208	www.portalvs.sk/regzam/detail/26326	Introduction to Botany and Pharmacognosy
Mgr. Ondrej Ďuriška, PhD. Department of Pharmacognosy and Botany Faculty of Pharmacy Comenius University Bratislava duriska@fpharm.uniba.sk; +421 2 501 17 213	www.portalvs.sk/regzam/detail/25523	Introduction to Botany and Pharmacognosy
PharmDr. Milica Molitorisová, PhD. Department of Galenic Pharmacy Faculty of Pharmacy Comenius University Bratislava milica.molitorisova@uniba.sk; +421 2 501 17 265	www.portalvs.sk/regzam/detail/5949	Medical Devices I. Medical Devices II. Medical Devices IV. Medical Devices V.

PharmDr. Mária Raučinová, PhD. Department of Galenic Pharmacy Faculty of Pharmacy Comenius University Bratislava maria.raucinova@fpharm.uniba.sk; +421 2 501 17 269	www.portalvs.sk/regzam/detail/21172	Medical Devices II. Medical Devices IV. Medical Devices V.
PharmDr. Veronika Šimunková, PhD. Department of Galenic Pharmacy Faculty of Pharmacy Comenius University Bratislava simunkova@fpharm.uniba.sk +421 2 501 17 263	https://www.portalvs.sk/regzam/detail/24241	Medical Devices II.
PharmDr. Mária Čuchorová, PhD. Department of Galenic Pharmacy Faculty of Pharmacy Comenius University Bratislava cuchorova@fpharm.uniba.sk +421 2 501 17 266	www.portalvs.sk/regzam/detail/5714	Medical Devices III.
PharmDr. Miroslava Špaglová, PhD. Department of Galenic Pharmacy Faculty of Pharmacy Bratislava spaglova@fpharm.uniba.sk +421 2 501 17 263	www.portalvs.sk/regzam/detail/5715	Medical Devices V.
doc. PhDr. Ľudmila Ozábalová, PhD. Department of Languages Faculty of Pharmacy Comenius University Bratislava ozabalova@fpharm.uniba.sk +421 2 501 17 195	www.portalvs.sk/regzam/detail/3761	Latin Terminology for Healthcare Professional (1) Latin Terminology for Healthcare Professional (2)
Mgr. Ivan Lábaj, PhD. Department of Languages Faculty of Pharmacy Comenius University Bratislava ivan.labaj@uniba.sk +421 2 501 17 210	www.portalvs.sk/regzam/detail/20959	Latin Terminology for Healthcare Professional (1) Latin Terminology for Healthcare Professional (2)
PhDr. Darina Kližanová Department of Languages Faculty of Pharmacy Comenius University Bratislava klizanova@fpharm.uniba.sk +421 2 501 17 210	www.portalvs.sk/regzam/detail/3725	Academic English Language Preparation (1) Academic English Language Preparation (2) Academic English Language Preparation (3)
PaedDr. Viera Žufková, PhD. Department of Languages Faculty of Pharmacy Comenius University Bratislava zufkova@fpharm.uniba.sk +421 2 501 17 210	www.portalvs.sk/regzam/detail/18138	Academic English Language Preparation (1) Academic English Language Preparation (2) Academic English Language Preparation (3)
PaedDr. Martina Tibenská, PhD. Department of Physical Education and Sport Faculty of Pharmacy Comenius University Bratislava tibenska@fpharm.uniba.sk; +421 2 501 17 166	www.portalvs.sk/regzam/detail/3781	Physical Education and Sport (1) Physical Education and Sport (2) Physical Education and Sport (3) Physical Education and Sport (4)
Mgr. Lenka Nagyová, PhD. Department of Physical Education and Sport Faculty of Pharmacy Comenius University Bratislava nagyova@fpharm.uniba.sk +421 2 501 17 166	www.portalvs.sk/regzam/detail/5611	Physical Education and Sport (1) Physical Education and Sport (2) Physical Education and Sport (3) Physical Education and Sport (4)
Mgr. Dalibor Ludvig, PhD.	www.portalvs.sk/regzam/detail/5203	Physical Education and Sport (1)

Department of Physical Education and Sport Faculty of Pharmacy Comenius University Bratislava ludvig@fpharm.uniba.sk +421 2 501 17 166		Physical Education and Sport (2) Physical Education and Sport (3) Physical Education and Sport (4)
Mgr. Michal Tokár, PhD. Department of Physical Education and Sport Faculty of Pharmacy Comenius University Bratislava tokar@fpharm.uniba.sk +421 2 501 17 166	www.portalvs.sk/regzam/detail/28583	Physical Education and Sport (1) Physical Education and Sport (2) Physical Education and Sport (3) Physical Education and Sport (4)

Obligatory elective courses:

Teacher of profile course / Contact (workplace, email, tel. number)	**Reference to the Register of the University Employees**	**Name of profile course**
doc. PharmDr. Tomáš Tesař, PhD., MPH, MBA Department of Organisation and Management of Pharmacy, Faculty of Pharmacy Comenius University Bratislava tesar@fpharm.uniba.sk +421 2 501 17 343	www.portalvs.sk/regzam/detail/20451	History of Medical Devices Fundamentals of Law for Healthcare Professionals
JUDr. PhDr. Lilla Garayová, PhD. Department of Organisation and Management of Pharmacy, Faculty of Pharmacy Comenius University Bratislava lilla.garayova@uniba.sk +421 2 501 17 343	https://www.portalvs.sk/regzam/detail/28798	Fundamentals of Law for Healthcare Professionals
Ing. Mgr. Ingrid Slezáková Department of Organisation and Management of Pharmacy, Faculty of Pharmacy Bratislava slezakova@fpharm.uniba.sk +421 2 501 17 374	www.portalvs.sk/regzam/detail/33567	History of Medical Devices
RNDr. Tomáš Fazekaš, PhD. Department of Physical Chemistry of Drugs, Faculty of Pharmacy Comenius University Bratislava tomas.fazekas@uniba.sk +421 2 501 17 283	www.portalvs.sk/regzam/detail/58	Basics of Applied Statistics
RNDr. Alexander Búcsi, PhD. Department of Physical Chemistry of Drugs, Faculty of Pharmacy Comenius University Bratislava busci@fpharm.uniba.sk +421 2 501 17 283	www.portalvs.sk/regzam/detail/15986	Basics of Applied Statistics
doc. RNDr. Ingrid Tumová, CSc. Department of Pharmacology and Toxicology Faculty of Pharmacy Comenius University Bratislava tumova@fpharm.uniba.sk; +421 2 501 17 372	www.portalvs.sk/regzam/detail/3783	First Aid

e) *List of the supervisors of final theses with the assignment to topics (indicating the contact details).*
The supervisors of diploma theses are all employees of the Faculty of Pharmacy on a permanent weekly basis in the position of assistant professor, associate professor, and professor, in accordance with §75 par. 2, 3 and 6 of Act no. 131/2002 Coll. Act on Higher Education Institutions and on Amendments to Certain Acts.

f) *Reference to scientific/artistic-pedagogical characteristics of the supervisor of final theses:*
Scientific-pedagogical characteristics of supervisors are available at the faculty and in the academic information system AIS2.

g) *Students' representatives who represent the interests of students of the study programme (name and contact):*

Students' chamber of the Academic Senate of the Faculty of Pharmacy, Comenius University Bratislava (https://www.fpharm.uniba.sk/en/about-the-faculty/academic-senate/senate-members/). The chairman of the chamber is the doctoral student Mgr. Emil Babiak (emil.babiak@uniba.sk; skas@fpharm.uniba.sk).

h) Study advisor of the study programme (indicating contact details and information on the access to counselling and consultations schedule).

Study advisors – members of pedagogic board		
1. year of study	PharmDr. Iva Kapustíková, Ph.D.	(02)501 17 224
2. year of study	PharmDr. Eva Kráľová, PhD.	(02)501 17 363
3. year of study	PharmDr. Vladimír Forman, PhD.	(02)501 17 208

Study advisors are available for consultation by individual appointment by email or phone. The list of study advisors, including telephone contacts, is available on the website of the Study Department (https://www.fpharm.uniba.sk/en/about-the-faculty/study-department/).

i) Other supporting staff of the study programme – assigned study officer, career counsellor, administration, accommodation department, etc. (with contact details).

The Study department which acts as part of the Dean's Office of the FPHARM CU, is responsible for the complex care for students in the magister study programmes. The office is adequately equipped and prepared personally, professionally, and financially. The supportive professional staff at this office provides tutorial, advisory, administrative, and other supportive services, and related activities for students in the magister study programmes. It also provides administrative support for international mobilities of students. The contact of the employees of this office are on the websites: https://www.fpharm.uniba.sk/en/about-the-faculty/deans-office-and-service-departments/ and on https://www.fpharm.uniba.sk/en/about-the-faculty/study-department/.

Career counselling is provided in cooperation of the Slovak Pharmacy Students' Association and the FPHARM CU. The biggest career counselling activity is the Week of Pharmaceutical Education and Career (TyFaVKa; https://sssf.sk/tyfavka). It is the largest job fair of the pharmaceutical field in Slovakia. The event includes the **Career Days of** Pharmacists**, Medical Device Technicians,** including (KDF; https://sssf.sk/kdf). The aim of the project is to provide comprehensive information about the possibilities and to mediate direct contact between the employers and a potential future employees.

For the **activities in the programme Erasmus+,** department for European Programmes and Erasmus+ at the Office of the Rector of Comenius University Bratislava (CU), manages all activities of the programme which fall into the area of the Vice-rector of CU for International Relations (contacts: https://uniba.sk/o-univerzite/rektorat-uk/oddelenie-pre-europske-projekty-a-erasmus-oep/). At the Faculty of Pharmacy of CU, Erasmus+ activities are covered by the Office for International Relations and Mobilities (contact on https://www.fpharm.uniba.sk/en/about-the-faculty/deans-office-and-service-departments/).

The students in the full-time bachelor study programmes utilise the **accommodation facilities of the Comenius University Bratislava** with the supportive administrative and technical personnel https://uniba.sk/en/international-relations/eninternational-relationserasmus/incoming-students/.

8. Spatial, material, and technical provision of the study programme and support

a) List and characteristics of the study programme classrooms and their technical equipment with the assignment to learning outcomes and courses (laboratories, design and art studios, studios, workshops, interpreting booths, clinics, priest seminaries, science and technology parks, technology incubators, school enterprises, practice centres, training schools, classroom-training facilities, sports halls, swimming pools, sports grounds).

The faculty equipment is sufficient for a high quality of education of subjects within the study programme Medical and Diagnostic Devices. The faculty has enough reconstructed classrooms with quality technical infrastructure, including classrooms for interactive teaching. The study programme Medical and Diagnostic Devices will be pursued mainly at the departments of the FPHARM CU. The place of tuition will depend on the individual course, the department where the course is taught, as well as the year of study of the student.

The teaching bases for theoretical education present 11 departments and 5 purpose-built facilities, which are located on the premises of FPHARM CU in the buildings at Odbojárov street 10, Kalinčiakova street 8, Ružinovská street 12A, Bratislava. Theoretical institutes are equipped with specialised classrooms, seminar rooms, computer rooms with the necessary audio-visual techniques and instrumental equipment for students, libraries with librarian collections for the staff and student needs, and laboratories with contemporary technical equipment covering the needs of modern educational activities. Besides libraries and seminar rooms of particular departments, meeting room of the Scientific Board of FPHARM CU the students can utilise also common study space and auditoriums: the assembly hall with a capacity of 292 students and an area of 272 m^2 with direct stepped sitting, lecture room No. 102 with the capacity of 198 students and area of 142 m^2 with direct stepped sitting, lecture room No. 151 with the capacity of 99 students and area of 85 m^2 with direct stepped sitting and lecture room 418 with the capacity of 96 students and area of 87 m^2 with direct stepped sitting. Laboratories of Department of Pharmaceutical Analysis and Nuclear Pharmacy, Department of Chemical Theory of Drugs, Department of Cell and Molecular Biology of Drugs, Department of Pharmaceutical Chemistry, Department of Pharmacognosy and Botany, Department of Physical Chemistry of Drugs, Department of Pharmacology and Toxicology, Department of Galenic Pharmacy, Central NMR laboratory and laboratories of Toxicologic and Antidoping Centre provide a teaching base for practical teaching.

The existing workplace infrastructure corresponds with the requirements for well-functioning physiological, molecular-biological, and pharmaceutical chemistry environment and solving of scientific projects. The technical conditions also correspond with the methodological procedures needed for the realisation of the theoretical, practical, and scientific part of the study programme, even in parallel way with the study programme in Medical and Diagnostic Devices.

The Department of Pharmaceutical Analysis and Nuclear Pharmacy has essential equipment technique as rotary vacuum evaporators EV400H, VC1000, electromagnetic stirrers with heating plate Heidolph MR Hei-Tec, pH meter, analytical scales Mettler Toledo, lyophylisator FreeZone 2.5 Liter Benchtop, microplate reader Epoch 2 Reader + softvér GEN5. The department has a state-of-the-art microwave reactor for microwave synthesis with in situ Raman spectroscopy (Monowave 400 R, Cora 5001, Anton Paar) for efficient synthesis and analysis of new molecules as potential drugs. Isolation of prepared compounds can be realised by semipreparative LC system, which contains pumps LC-20AP, autosampler SIL-10AP, thermostat of column CTO-20A, PDA detector SPD-M20A, fraction collector FRC-10A, + LabSolutions Software. Prepared compounds can be analysed by UV-VIS spectrometers UV-2700 a UVmini 1240, FT-IR spectrometer UATR Spectrum Two + The Spectrum 10TM software a fluorimeter Cary Eclipse Fluorescence Spectrophotometer. Modular potentiostat Metrohm Autolab PGSTAT12 is used in the electrochemical analysis of drugs. The apparatus is equipped with an FRA module for electrochemical impedance spectroscopy. The electrochemical analysis is also performed by compact potentiostat Metrohm Autolab PGSTAT204. TLC scanner miniGITA + Gina Star TLC software is intended for the analysis of radionuclides. Ultra High Performance Liquid Chromatography Analyzer (UHPLC, Agilent Technologies) is used as a reference analytical method in the analysis of complex mixtures. Electromigration analytical separation methods are developed using Agilent 7100 Capillary Electrophoresis, one column or two, as well as three column, closed system of Isotachophoresis EA102 and EA103 with conductivity and UV-VIS detector (ECOM ECD2000). The device also includes a TIDAS IV highly sensitive photomultiplier with fiber optics for LIF (laser-induced fluorescence) applications and a DAD detector. The SEC Desktop Scanning Electron Microscope with EDS detector (SNE-4500M Plus B, Bruker XFlash630H mini EDS, MCM-100 Ion Sputter Coater) is used to evaluate materials (nanosystems as innovative drug carriers or modifiers of electrochemical analytical sensors).
Three student laboratories in which the subjects Analytical Chemistry I and Analytical Chemistry II are taught: 1 - laboratory of chemical analytical methods (qualitative and quantitative chemical analysis), 2 - laboratory of instrumental analytical methods (electrochemical, optical and separation methods), 3 - laboratory of computer simulations (HPLC, GC, CE simulations, spectrum databases).
The five research laboratories where the basic research takes place, staff: teachers, researchers, doctoral students, and graduates, or technicians: 1 - laboratory of electromigration separation methods (CE-UV / DAD / LIF, CZE, ITP, EKC, etc., 1D, 2D) and electron microscopy, 2 - laboratory of electrochemical methods (CV, SWV, DPV, etc.) and microwave synthesis (with Raman spectroscopy), 3 - laboratory of optical methods (UV, fluorescence spectroscopy, IR), 4 - laboratory of liquid chromatography, synthesis, and isolation techniques (lyophilization, semi-preparative LC), 5 - laboratory of organic synthesis and preparation of complexes.

The Department of Chemical Theory of Drugs has essential equipment technique used in the synthesis of inorganic and organic bioactive compounds: analytical scales (Kern, Sartorius), thermostats (Memmert), magnetic stirrers, ultrasonic baths (Fischerbrand), pH meters, high pressure hydrogenation autoclave AMAR, rotary evaporators (Heidolph) Rodem 6 deionized water generator, SANYO low temperature freezer (-75 ° C), ECOCELL / DUROCELL drying box, melting temperature measuring device - Buchy B450.
The department has modern instrumentation for physicochemical characterization of chemical compounds: FLASH2000 instrument for elemental analysis (CHNS), FT-IR spectrometer NICOLET 6700, UV-VIS spectrophotometer GENESYS 10S, centrifuges SIGMA 3-16K, refrigerated centrifuge Sigma 3-30K, UV-VIS GENESYS 10S spectrophotometer, JASCO J-815 CD spectrometer, BioTek Synergy HT microplate reader, ZetaPlus zeta potential analyser (Brookhaven), fluorimeter for measuring dynamic (time-resolving) fluorescence LifeSpec, FS 5 spectrofluorometer (Edinburgh Instruments), polarimeter Jasco 1010, device for measuring diameters of colloidal particles by the method of dynamic light scattering Brookhaven BI9000AT, computer-controlled tensiometer Kruss K100MK2 for measuring the surface tension of solutions of amphiphilic compounds, computer-controlled electrical conductivity meter WTW for measuring the critical micelle concentration of amphiphilic compounds, FL2002 fluorescence microscope, Dosimat 765 titrator, Biosan Microspin 12 microcentrifuge, Icanclave sterilizer, Benchmark incubator.
The department has modern instrumental analytical technology for identification and determination of chemical compounds and also used in the evaluation of biological activities in vitro: Liquid chromatography-HPLC systems (Agilent), liquid and gas chromatography system combined with mass detection - LC-MS / MS, GC-MS (Thermo Scientific), ORBITRAP LTQ XL high resolution mass spectrometer.
The department has two student laboratories for teaching general and inorganic chemistry and organic chemistry (for 42 students), three synthetic laboratories, a laboratory of liquid chromatography, a laboratory of liquid and gas chromatography and mass spectrometry, a laboratory of physico-chemical methods, a laboratory of spectral methods.

The Department of Cell and Mollecular Biology of Drugs has essential euipment technique as scales and analytical scales (HZY P2003, HZY A2000, HZY A200, KERN), laboratory shakers BioSan MR-1 shaker, and Mini Rocker-Shaker MR-1, pH-meters (Cyber Scan, JENWAY, MERCK, BioSan, Toledo), water bath and shaker with water bath (MEMMERT, Water Bath EL-20R), magnetic stirer (HANNA, MMS 300, MSH 300-BioSan), termoblock TS-100 W-OUT s cooling (BioSaN), orbital shaker on cell cultures (BioSan), centrifuges (MPW 341, BioSan LHC-3000, Sigma 3-30K, MLW-S70, MLW-K23 (Janetzki), HETTICH, microcentrifuges MPW 50/MPW 130, ALC 4214 (Jouan), Hettich 200 R, Hettich EBA 20, Benchmark fuge, Eppendorf, My Fuga Mini), apparatus for preparation of ultrapure water (Watrex, Water Quality), incubators (MEMMERT, BINDER, ICN 120), drying boxs MEMMERT, Beckman Coulter SC100 autosampler, autoclaves on decontamination and sterilisation of equipment (IcanClave, Witeg), desintegrator of biological materials SONIPRET 150 and cryogenne Dewar flask.
The department has also special quipment technique as microscopes for observation of cells (ZEISS, Primostar, Leica) and invert microscope (Bresser), instrumentation for photometric and spectrofluorimetric analysis (UV-VIS (Jenway 6305, 7305), SPEKOL 11 (Zeiss, Jena), SPEKOL 220 (Zeiss, Jena), SFM 25 (Perkin Elmer), spektrophotometer (Hitachi)). Ultracentifuge (BECKMAN Avanti J301) is also located at department, it enable fractionation of biological materials. Electroforetic apparatus (FE20-ATC Five Easy In.) for saparations of DNA, RNA or proteins are deposited at department. Mastercycler X 50 (Eppendorf), ECT–UVC reader VILBER LOVRMAT, qPCR (RT-PCR system 7300 Aplied Biosystem, BioRad, QuamtStudio 3 RT PCR system) is used for research of genetic materials coded in DNA or RNA. Using the Millicell ERS-2 Voltohmmeter, it is possible to measure membrane potential and epithelial cell resistance at the cell culture level in the workplace. For the area of immunochemical examinations, the department has the

equipment of ELISA readers (DYNATECH MR 5000, EPPOCH BioTek). The department has a UVITEC imager playing an important role in the evaluation of molecular biological techniques through innovative camera technology, optical solutions and hardware / software integration, which is key in Life Science research (high sensitivity and performance in imaging processes in the cell).
The department has two student laboratories (for 40 students) and one seminar room (for 25 students) for teaching compulsory subjects. The scientific and research background of the department consists of: 2 microbiological laboratories, 1 immunological laboratory, 2 molecular biology laboratories, 4 laboratories for biochemistry, 1 laboratory for work with plant cell cultures, 1 laboratory for work with cell cultures (GMO risk class 2), 1 laboratory for basic biological procedures, 1 decontamination room.

The Department of Pharmaceutical Chemistry has essential equipment techniques as water bath Memmert, drying chamber UN30, drying chamber MEMMERT UN55M, analytical scales PM480 DeltaRange Mettler, analytical scales Kern ABT 220-4NM, scales KERN PCB 3500-2, electromagnetic stirrers with heating plate Heidolph Hei-Tec s Pt 1000, electromagnetic stirrer BIOSAN MSH-300, shaker IKA Vortex Genius 3, shaker MEDFORM LT3, heaters, UV lamps, rotary vacuum evaporator KNF RC600 with pump KNF SC 920G, rotary vacuum evaporator Heidolph Hei-VAP Ultimate Control ML/G3B XL with pump Heidolph Rotavac Valve Control, distillation apparatus Bűchi B-585 Glass Oven Kugelrohr with pump EDWARDS nXDS15iC, vacuum pump KNF LABOPORT® Vacuum system SH 820, several Kofler melting point apparatus, spectrophotometer ELISA reader Epoch 2 NSC (BioTek), Muffle furnance HT60B, sonicator SONOREX DIGITEC (BANDELIN) several refrigerators and freezers for storage of material at -20°C.
The workplace is also equipped with pH meters, conductometer COND8 (XS INSRUMENTS), polarimeter Polatronic E, refractometer RL 3008. Preparation of new bioactive compounds can be carried out in microwave reactor Discover SP CEM and purification of compounds can be realized by flash chromatography on apparatus PURIFLASH 5.020 Interchim. Spectrophotometer UV-1800 Shimadzu, UV–VIS spectrophotometer Spekol 1300, UV spectrophotometer Milton Roy Spectronic 20d, IR spectrometer Agilent Cary 630 FTIR Instrument Bundle, includes KBr engine and Single Reflection, diamond ATR, HPLC apparatus Delta chrom and Thermo Scientific Utimate 3000 UHPLC can be used for the analysis of prepared compounds and medicines.
The department has two student laboratories (for 48-50 students). The scientific and research background of the department consists of: 2 synthetic laboratories and 4 analytical laboratories.

The Department of Pharmacognosy and Botany has the following instruments: qPCR (RT-PCR, BioRad), NIKON ECLIPSE Ni-E fluorescence microscope, Tuttnauer 3150 EL autoclave, BIAffinity system for analysis of interactions between molecules (Zeiss Jena Optik), Airstream Biohazard Box Class II, centrifuge Hettich Universal 320, flash chromatograph CombiFlash Rf 4X (Teledyne Isco), fast centrifugal partition chromatograph FCPC Kromaton A200 with ELSD and DAD detectors and fraction collector Kromaton), incubator Panasonic 19AIC, cryotome Cryostat SleeMEV, lyophilizer SCANVACvertX microscope C, NIKON ECLIPSE Ni-U, counter freezing box ULT C75, Vacuubrand Biochem-VacuuCenter BVC Control, Direct-Q8 UV for deionized ultrapure water (Millipore, Corporation), calScreener ™ Label-Free Cell Based Assays (SymCel), microplate reader Tecan M200 infinite with dispenser, thermoshaker Biosan CH-100, analytical balances Kern ABJ 220-4NM, UV-VIS spectrometer Genesys 6 (The rmo Eelctro Corp.).
The biological laboratory is GMO 2 certified. Other laboratories of the department: student microscopic laboratory (2x), student chemical laboratory, doctoral laboratory (2x), graduate laboratory (4x).

The Departments of Physical Chemistry of Drugs has essential equipment technique as analytical ascale (0,0001 g, Kern), several laboratory scales (0,001 g), Koflerov melting point apparatus (Electrothermal), conductometers (Phenomenal CO; VWR), UV-VIS spectrophotometer (Avantor V-1200), polarimeter P-1000-LED (Krüss Optronic), refractometer A4 with thermostat PT 31 (Krüss Optronic), several pH meters with equipments (Eutech Instrument, Mettler Toledo, Metrohm), thermostatic bath (Julabo), electromagnetic stirrers Hei-Mix S (Heidolph), electromagnetic stirrers with heating plate (IKA), laboratory shakers GFL 3006 (Helago), incubated shakers (TS100; BioSan) apparatus for preparation of distiled water GFL 2008 (Unimed Pharma), ultrasanic baths (Sonorex (Bandelin)a K5-LE (Kraintek)), Hand Held homogenizer (VWR), vortex mixers VV3 (VWR) a IKA Vortex3 (Sigma-Aldrich), Digital dry bath NDK200 (MiuLab), oil vacuum pumps V-i220-R32 (Value) with vacuum meter DCP3000 (Fisher Scientific). The deparment is also equipped with Ultra Low Temperature Upright Freezer VWR 24086V (VWR Avantor), laboratory refrigerators Mediline (Liebherr) and drying box WS30 (MLW).
The department is equipped with a special technique for the preparation of liposomes. Extruders Liposofast Basic (Avestin) Luvet (Avanti Polar Lipids) and LiposoFast LF-50 (Avestin) are used for this purpose. The laboratories are equipped with Minispin (Eppendorf), EBA 20 (Hettich) and Rotofix 32A (Hettich) centrifuges. There is a single-beam UV-VIS spectrophotometer 8453 with a temperable holder (Agilent), a Fluoromax-4 spectrofluorimeter (Horiba Jobin Yvon) with accessories for stopped flow measurement and a DMA 4500M vibrating densitometer (Anton Paar). The microscopic laboratory is equipped with a polarizing microscope LAB.A1, ZEISS AXIO (Carl Zeiss), a polarizing microscope Eclipse LV100N POL (Nikon) with a temperable stage (Lincam) and a fluorescence microscope Eclipse Ts2R-FL (Nikon). The latest equipment of the department includes a DSC calorimeter Nano DSC with platinum cappilary cells (TA Instrument), a particle size and zeta potential measuring instrument Litesizer 500 (Anton Paar) and a two-beam spectrophotometer with a temperable holder for 8 samples UV -VIS Specord 200 PLUS (AnalyticJena). The SuperMicro graphics GPU Server (located in the CIT server room at Faculty of Mathematics, Physics, and Informatics of CU) and the Lenovo ThinkStation P910 workstation are used for computer chemistry and the design of bioactive substances and drugs.
The department has one student laboratory with a capacity of 22-25 students, 2 larger instrument laboratories, a sample preparation laboratory, 2 smaller laboratories, and a microscopy laboratory.

The basic equipment of the **Department of Pharmacology and Toxicology** and its laboratories at Odbojárov 10 includes various micropipettes (Gilson, Eppendorf, Biohit), analytical balances XA 60/220 (Radwag), fume hood, mini-traps BenchMixer BV1000 (Benchmark), Vortex 1 (IKA), mini centrifuges # 3722L (Fisher Scientific), MyFuge MINI (Benchmark), magnetic stirrers with heating uniSTIRRER 3 (LLG Labware), pH meter FiveEasy Plus (Mettler Toledo), 3D shaker Sunflower Mini-Shaker (Biosan), dry thermostat Bio TDB-100 (Biosan), Micro 200R refrigerated centrifuge (Hettich), Direct Q 3UV ultrapure water preparation plant (Millipore), AF80AS ice maker (Scotsman). For storage of samples and material at reduced temperature, our workplace has several refrigerators, freezers, deep-freezing box MDF-U3286S (Sanyo) for storage at -80 ° C and Dewar vessels for storage of biological material in liquid nitrogen BioCane 20 Storage system (ThermoFisher Scientific) and 34 XT Liquid nitrogen storage (Taylor-Wharton). In the laboratory, we have a Mini-PROTEAN Tetra Cell vertical polyacrylamide electrophoresis apparatus together with a blotting module (Biorad) for the analysis of protein expression by Western blotting. In addition to the basic instruments, such as the Vortex V-1 plus mini-slippers (Biosan) and the MyFuge MINI mini-centrifuges (Benchmark), the two PCR laboratories are equipped with the instrumentation needed

for nucleic acid analysis - horizontal agarose gel electrophoresis apparatus Mupid ™ -One, Mupid ™ - ExU (Mupid), apparatus for detection and documentation of UV Transilluminator + Digimage System gels, DI-01 (Major Science), microvolume UV-VIS spectrophotometer NanoDrop ™ ND-1000 (NanoDrop), centrifuges for PCR plates PlateFuge (Benchmark), thermocyclers Biometra Personal Cycler (Biometra) and Veriti ™ 60-well Thermal cycler (Applied Biosystems) and two real-time PCR systems StepOne Plus (Applied Biosystems) and QuantStudio 3 (Applied Biosystems). In terms of spatial equipment, the workplace has a basic laboratory for the preparation of solutions and sample processing, two PCR laboratories, a darkroom and a laboratory for teaching biology and anatomy and physiology.
Workplaces in laboratories K4 and K5 have basic instrumentation such as laboratory refrigerators, freezers and freezers (Whirlpool, LIEBHERR, LIEBHERR MED LINE, SNIJDERS LAB), pre-weighing and analytical balances (440-35N, 440-35A, KERN, PS 1000 / C / 2, RADWAG, LIBRA, IIAXIS Poland), laboratory shakers and vortices (BENCH ROCKER 2D, ORBI BLOTTER, BenchMark, UNI STIRRER 3, LLG LABWARE, HULA MIXER, THERMO FISCHER SCIENTIFIC, ROLLER MIXER SRT9D BIOT, 23 KARTELL, VORTEX SCIENTIFICA), water baths and shakers with water bath (MEMMERT, Water Bath EL-20R, BANDELIN SONOREX, BANDELIN), magnent mixers (IKA-SCHUTTER MTS2, JANKE KUNKEL IKA - LABORTECHNIK, HOTPLATE STIRRIC, SCI), SCI (THERMO FISCHER SCIENTIFIC), centrifuges (UNIVERSAL 320 R, MICRO 200 R, HETTICH), microcentrifuge (VWR MICROSTAR 12, VWR Made in KOREA), vacuum concentrator (Concentrator plus EPPENDORF), spectrophotometer (BIOTEK ELx800UV, BIOTEK), pH meter InoLAB Ph 7110, IN OLAB, pH80 P.R.C., EU), desiccator (WSL Poland) and cryogenic Dewar storage vessel. The workplace is equipped with instrumentation for ex vivo perfusions according to Langendorff, including heated water bath (Wisd Digital Fuzzy control system, LABORATORY INSTRUMENTS), technique for measuring hemodynamic parameters of the heart (LabChart POWERLAB 430, ADInstruments), peristaltic pump (GILSON, INC. MIDDL desktop computer with monitor (SAMSUNG, ZALMAN) and microscope (Leica A60, LEICA, Singapore). Furthermore, for the field of immunochemical assays, the workplace has SDS-PAGE / Western Blotting equipment, such as electrophoresis sources (Nano PAC - 500, CLEAVER SCIENTIFIC LTD,) and a digital chemiluminescent membrane developing device (myECL imager, THERMO FISCHER SCIENTIFIC).
Workplace on the 3rd floor. at Kalinčiaková has basic instrumentation such as 2 analytical balances Kern abs and 1 Radwag AS 60 / 220lc / 2, common laboratory balances Radwag WTB 2000, pH meter Metler Toledo five easy plus, 2 stirrers with heating LAVAT mm4, stirrer without heating Heidolph, orbital shaker Biosan PSU-20i, dry block thermostat biosan Bio TDB-100, centrifuge Hermle Z326K, vortex Biosan V-1 plus, ruler Stuart srtg, ice maker Bremen, equipment for reverse osmosis water. It also has technology such as the Leica RM2125 microtome, the Optika B-510lD2 fluorescence microscope, and the Bio-Rad PowerPack basic 2 electrophoresis power supply.
Laboratory of doc. Paul Hrabovská has the basic equipment necessary for laboratory work. There are pre-weights (kern PCB 2500-2 and A&D EK-120A), analytical balances (kern ABJ 220-4M), pH meter (hanna instruments HI2210), magnetic stirrer (IKA C-MAG HS 4), centrifuges (rotina 380R Hettich, micro 200R Hettich) and minicentrifuge (VWR galaxy ministar), vortices (V-1 plus Biosan), water bath (N-BIOTEK-NB-301), shaker and incubator (NB-205 QF), minitracker (Minishaker Multi Bio 3D Biosan), thermal shaker (Thermomixer comfort Eppendorff), autoclave (tuttnauer 2840EL-D), microwave oven (Heatwave compact Electrolux), refrigerators (electrolux energy saver, electrolux fresh frostfree) and freezers (chest Whirlpool and gorenje). In addition, the laboratory is fully equipped for a full range of molecular, immunoassay and biochemical methodologies. TissueLyser II is used to prepare tissue homogenates and tissue extracts by high-speed shaking in plastic tubes with stainless steel, tungsten carbide or glass beads. Up to 48 or 192 samples can be processed simultaneously using the appropriate set of adapters. Alternatively, a set of grinding vessels can be used to process large samples. A range of beads, bead dispensers and microtubes and caps are also available. The thermocycler (Termo cycler Bio Rad T-100) is used for DNA sequencing, cloning, probe generation, DNA and RNA quantification, study of gene expression patterns, detection of sequentially labeled sites and many other techniques. There is a complete equipment for working with agarose and polyacrylic gels, including an automated blotting system (Trans Blot Transfer System compact Bio Rad) for working with pre-gated gels (Mini protean TGX precast gels Bio Rad), and a system for fluorescent and chemiluminescent gel imaging (Syngene G box). For the ELISA method, the laboratory is equipped with a plate washer (Biotek ELx50) and a Synergy H4 Hybrid reader spectrophotometer. It allows monitoring of fluorescence intensity, time-resolved fluorescence, fluorescence polarization, AlphaScreen® / AlphaLISA, luminescence, UV-visible absorbance, FRET, TR-FRET, BRET, well area and spectral scanning. Nucleic acids can be quantified at low volume (µl) using a Take3 ™ plate with 2 µl microdots. The isothermal titration calorimeter (MicroCal ITC 200) is used to study a wide range of biomolecular interactions. This system is provided by direct measurements of binding affinity and thermodynamic parameters without labels and in solution in a single experiment.
There is also a menagerie, in this facility for breeding and working with animals (rats, mice) used for scientific purposes, we can work with both conventional and genetically modified animals (mice). In addition, GM mice can be propagated in the device. The department has two modern teaching rooms, which are equipped with a total of 23 Lenovo V13015IKB laptops for teaching - purposes of computer simulations of experiments, pharmacokinetic and pharmacodynamic calculations, testing, and electronic testing of students. The teaching laboratories are also equipped with audiovisual transmission equipment for distance learning and is provided by a Ausdom AW615 digital camera and a Jabra Speak 710 omnidirectional communicator. which allows you to project an image through a data projector (BenQ). The laboratory is also equipped with anatomical models and histological specimens, ECG, sphygmomanometers, spirometers and exhalations, pulse oximeters, glucometers, reflex and sensory examination kits, blood grouping, urine analysis.

The **Department of Organization and Management of Pharmacy** has three computer classrooms. KORF classroom no. The 404 is equipped with HP ProBook training notebooks with an AMD Ryzen 5 microprocessor of 21 pieces and with the Windows 10 Pro Education operating system installed, with access to the Internet and the internal faculty computer network. They contain the office application software MS Office 365 and the latest version of Adobe Acrobat Reader. They allow you to set up the Windows environment, as well as the mentioned applications in Slovak and English for teaching foreign students in the English program. A BENQ data projector is connected to the teacher's computer, which projects the image onto a projection screen and a Canon LaserBase MF 5730 scanner printer. other computer classrooms as well as all computers within the department's rooms. KORF classroom no. 407 contains 20 ASUS 1stCOOL STEP Series desktop PCs with Intel Pentium Gold G6400 4GHz microprocessor and Windows 10 Home operating system installed, with Internet access and an internal faculty computer network. They contain the office application software MS Office 2016 and the latest version of Adobe Acrobat Reader. They allow you to set up the Windows environment, as well as the mentioned applications in Slovak and English for teaching foreign students in the English program. A SONY data projector is connected to the teacher's computer, which projects the image onto a projection screen. The KORF F-club classroom contains 21 pieces of desktop personal computers. Of which 19 pieces with Intel Pentium D 3.40GHz microprocessors, resp.

Intel Pentium 4 3.20GHz and with Windows 7 Enterprise operating system installed. 2 pieces with Intel Pentium G4400 3.30GHz microprocessors have Windows 10 Home operating system installed. All include MS Office 2007 office application software and the latest version of Adobe Acrobat Reader. They allow you to set up the Windows environment, as well as the mentioned applications in Slovak and English for teaching foreign students in the English program. An Acer data projector is connected to the teacher's computer, which projects the image onto a projection screen. All computers in this classroom have the WinLSS medical management system installed, so everyone works in virtual mode as a separate point of sale. 7 computers also have modern Dell S224OT touch screens with a diagonal of 21.5 ", thanks to which they perfectly simulate work in the current real conditions of the pharmacy and medical device dispensary. A cash register with a cash register printer is installed for one of these computers.

The **Department of Galenic Pharmacy** has a device for the preparation of nanoparticles NanoAssemblr® IgniteTM in the nanotechnology laboratory, which can serve for preparation of nanomaterials used in medical devices, it also contains a multifunctional laboratory robot ERWEKA®, lyophilizer CHRIST®, rotary vacuum evaporator IKA®, UV / VIS spectrophotometer SHIMADZU® UV-UV homogenizer for the preparation of STEPHAN® semi-solid dermal drugs. The basic instrumentation in the laboratory includes a JULABO® ultrathermostat, SARTORIUS® analytical balances, a centrifuge, a Teson 1 TESLA® ultrasonic bath, and magnetic stirrers. In the laboratory of analytical-instrumental methods, the department has equipment such as texturometer Texture analyzer Stable Micro Systems TA.TX. PLUS®, UV / VIS spectrophotometer GENESYS 10S®, UV / VIS spectrophotometer HELIOS Gamma 9423®, rheometer / rotary viscometer Rheolab QC ANTON PAAR®, pH meter pHenomenal® VWR, circular polarimeter, OHAUS® analytical balances, UV lamp for substance detection by TLC, penetrometer and Höppler consistometer. The Dissolution Testing Laboratory is equipped with the ERWEKA® Dissolution Device. Galenical laboratories are equipped with several systems of Franz cells / chambers to assess drug liberation. There is also a device for evaluating inhalers - Twin Impinger COPLEY®, laminar boxes EKOSTAR FLOW® and ultrasonic homogenizer SONOPULS®. ERWEKA® friabillator, KORSCH® eccentric tablet press, KILIAN® rotary tablet press, TURBULA® homogenization device, Pellegrin-type coating equipment, conventional coating drums, HAVER & BOECKER sieve (particle size distribution) equipment are used for the preparation and evaluation of solid dosage forms. ® Haver EML 200 digital T, equipment for particle size analysis, fluid equipment for tablet coating. Other equipment includes Soxhlet extraction apparatus, essential oil determination apparatus, capsule filling machines, suppository molds, globules and rods, microscope with integrated VisiScope® camera and tablet, magnetic stirrers, IKA® shaft stirrer and automatic micropipettes. In terms of space, there are four student laboratories at the workplace (including a specialized laboratory for the preparation of sterile drugs and a laboratory for the preparation of granules, tablets, and obituaries) for teaching pharmaceutical technology, medical cosmetics and innovative drug forms and biological drugs. There are also scientific laboratories at the department: a nanotechnology laboratory, a laboratory of analytical-instrumental methods, a laboratory for dissolution testing of drugs, and 4 other scientific laboratories.

The Toxicology and Anti-Doping Centre (TAC) conducts analytical studies of the profiles of pharmaceutical, plant, and biomedical samples to determine the chemical structure and concentration of known and unknown biologically active substances in these samples. For this purpose, the TAC is equipped with a liquid chromatographic analyser hyphenated with an electrospray ionisation interface (ESI) and a detector based on quadrupole - time-of-flight (TOF, time – of – flight) – Agilent Technologies 6520 Accurate – Mass Q-TOF LC/MS, a liquid chromatographic analyser with ESI in conjunction with a triple quadrupole (QQQ) detector – Agilent Technologies 6410 Triple Quad LC/MS, Capillary Electrophoresis Analytical Apparatus - Agilent 7100 Capillary Electrophoresis, which is connected to the QQQ or Q-TOF detectors. The determination of volatile substances, essential oils, short-chain carboxylic acids is performed by a gas chromatograph with a flame ionization detector (FID) - Thermo Finnigan TRACE GC. A single-column, and two-column hydrodynamically closed modular system for capillary electrophoresis Isotachophoresis EA102 is used for the analysis of ionic substances. It enables connection with optical detectors (DAD, LIF) as well as mass detectors (QQQ, Q-TOF) and integration of sample treatment (concentration, pre-separation) with own analysis in an online way, thus minimizing sample handling and increasing application range, reliability, and effectivity of analyses. NEYA and EBA 12 - Hettich Zentrifugen centrifuges are used to prepare samples during the preparation phase. The Forma 88000 series Thermo Scientific deep-freezing box is used to store biological samples at -80 °C. Net resp. ultrapure water is obtained via the Direct-Q 3 UV-R Water Treatment System from Merck. In connection with the implementation of multidisciplinary research, laboratories for pharmacological studies (pharmacoproteomics and pharmacogenomics) and laboratories of chemical and biological information systems and technologies (molecular modeling) are also adequately equipped (PCR, readers, PC stations, etc.).

The Central Laboratory for Nuclear Magnetic Resonance is a special service and research workplace of the faculty, whose activities are focused on providing NMR spectra measurements for the needs of FPHARM CU departments, focusing on confirmation of structure and purity of newly synthesized compounds, determination of physicochemical properties by NMR, identification and structure determination of substances isolated from plant materials. The department has a Varian MR400 spectrometer (Agilent Technologies, CA, USA) with two probes: Varian 400 MHz 5 mm AUTOX PFG and Varian 400 MHz 5 mm AUTOX / ID PFG.

b) *Characteristics of the study programme information management (access to study literature according to Course information sheets, access to information databases and other information sources, information technologies, etc.).*
Library services are provided by **the Central Library of the Faculty of Pharmacy, Comenius University Bratislava (CL FPHARM CU),** which is an educational and information workplace and at the same time part of the scientific and research base of the faculty. The main activities of CL FPHARM CU are predominantly oriented at activities, the prevailing part of which, has a long-term or permanent character:

- supplementing of library fund focused on the coverage of obligatory and obligatory elective subjects – purchase, with a donation, possibly in exchange,
- name and factual processing of all types of documents in the comprehensive online catalogue of the CU in the library information system VTLS/Virtua,
- revision of the librarian fund, elimination of outdated, worn off, and multiplicity literature, physical protection of the librarian fund,
- in-person and online borrowing of the literature,
- inter librarian borrowing service: borrowing of literature from other libraries users, arrangement of request for borrowing from other libraries, acquiring of article copies from scientific journals,
- consultation activity – professional help of users in searching for information,

- provision of study rooms,
- registration of publication activities and citations of the FPHARM CU staff, building a database of publishing activities in EviPub UK with maximum completeness, support of publishing using evaluation systems (use of quantitative and qualitative indicators such as journal indexation in scientometric and other international databases, monitoring of impact factor, quartile and journal validity, calculation of Hirsch index of the staff, notification of so-called predatory practices, etc.).
- research service – overview of the literature on required themes (selective until the level of full texts), overviews of publication activities, citation recherche,
- online access to electronic information sources – bibliographic, citation, and full-text databases, e-print of journals,
- Information education of users – lectures and courses for the student focused on searching for information, creation of citations in writing school theses, work with electronic information sources, lectures within the University of the Third Age,
- ensuring the operation of the textbook store,
- Solving of own projects oriented to grant schemes especially of the Art Support Fund or of the Ministry of Education, Science, and Research of the SR.

Statistical indicators of the Central Library of the Faculty of Pharmacy, Comenius University Bratislava
The status of the librarian collection – 58 304 library units.
The number of registered users as of 31. December 2020 – 867, out of it there is 737 student members.
Approximated number of borrowings carried out in one year before the pandemic COVID-19 – 16 988 in 2019; 15 436 in 2020.

Since in 2018, the library processes bibliographic records on publications of pedagogical and scientific research staff and doctoral students of the full-time and external form of FPHARM CU directly in the database Central Registry of Publishing Activities (hereinafter CRPA) (http://cms.crepc.sk/). The information value of the database is also increased by the record of citations of publications. Outputs from the CRPA database are one of the bases for the distribution of state subsidies to public universities.

Availability of electronic information sources of the Central Library of the Faculty of Pharmacy, Comenius University Bratislava
Central library of FPHARM CU in the frame of NIZPEZ projects (National Information System for Support of Science and Development) provides access to electronic information sources: EBSCOhost, Knovel Library, ProQuest Central, Science Direct, SCOPUS, SpringerLink, Wiley Online Library, Web of Science (Web of Science Core Collection, Current Contents Connect, Essential Science Indicators, Journal Citation Reports, MEDLINE). CL FPHARM CU ensures the acquisition and access to licensed specialized information resources in the field of pharmaceutical sciences: Lexicomp, European Pharmacopoeia online, The Merck Index, the American Chemical Society e-journal collection and selected book titles within platforms: ProQuest Ebook Central Academic Complete.

WWW website and propagation of the Central Library of the Faculty of Pharmacy
The library website (https://www.fpharm.uniba.sk/en/divisions/central-library/) is available in Slovak and English languages. It is regularly updated and allows for optimal services via Internet.

The Faculty of Pharmacy information systems form an inseparable part of information systems of the CU Bratislava. The systems aim to collect data, process, assess, store, and publish relevant information for the study programme needs. The unified authentication system has a unique role in the information systems of the faculty and university, which provides and significantly facilitates the access to critical information sources of the faculty and university from the academic environment, but also from home or from abroad in case of participation at international conferences or study stays. The Academic Information System (AIS2) is another central university system for the complete administration of the study agenda.

The hardware equipment of Faculty of Pharmacy, Comenius University Bratislava and connection to the Internet
Teachers of the faculty have at disposal their personal computer with unlimited access to the Internet sources of information, which is available also to students. The domain environment of the faculty allows for each student to use any computer at the departments of the faculty. Access is possible after authentication with the unique domain username (login). This feature of the IT environment of the faculty offers to teachers and students the possibility of constant availability of a functional computer also during a possible malfunction of their own computer.
The faculty has more than 550 computers, notebooks, and tablets connected to its pedagogical, scientific, and research processes. They are placed in the departments of the FP. Out of the number of computers, 150 computers are available directly for students and doctoral students in the computer rooms and study rooms of the Central Library of the Faculty of Pharmacy. All desktop computers and mobile equipment can provide unlimited connection to the Internet with structured cabling of the LAN net or Wi-Fi net of the faculty. The skeleton of the net is based on an optical cable net, allowing for the fitting of new technologies that acquire the high-speed connection to Internet.
The high-speed Internet provided by the academic net SANET provides teachers and students with the possibility of access to various online information sources. The faculty's premises are covered with Wi-Fi signal of the international net EDUROAM (EDU-cation ROA-ming), which the university maintains. The net EDUROAM is supported by many other significant European and world universities and provides a possibility of trouble-free and instant connection to the Internet at the visit of such a university.
Wi-Fi covers faculty premises and provides for students and PhD. students' free connection to the Internet and access to the Internet information sources via their own IT equipment such as notebooks, tablets, and smartphones. At present, the faculty's Wi-Fi covering provides 13 connection points placed in auditoriums, in the library, in the departments and free premises of the FP with high movement of students.
The faculty is equipped with eight computer rooms. There are 12 computers and a video projector in the computer room at the Department of Chemical Theory of Drugs. All PCs are equipped with the operating system Windows 8.1 in the Slovak language an able to switch to English language. There are 11 computers with the Windows 10 operating system in the computer room of the Department of Pharmaceutical Chemistry located in the TAC. There are 23 Lenovo V13015IKB laptops in two computer rooms at the Department of Pharmacology and Toxicology.
The Department of Organisation and Management of Pharmacy (DOMP) has three computer classrooms:
The first classroom of DOMP is equipped with 21 HP ProBook notebooks with an AMD Ryzen 5 microprocessors and Windows 10 Pro Education operating system installed, with an access to the Internet and the internal faculty computer network. They include MS

Office 365 office application software and the latest version of Adobe Acrobat Reader. They allow to set up the Windows environment, as well as the mentioned applications in Slovak and English language for teaching foreign students in the English program. A BENQ data projector is connected to the teacher's computer, which projects the image onto a projection screen and a Canon Laser Base MF 5730 scanner printer. There is also an HP ProLiant ML 110 G6 file server located in this room, providing 400 GB of file storage for this classroom, as well as other computer classrooms and all computers within the department.
The second classroom of DOMP contains 20 ASUS 1stCOOL STEP Series desktop PCs with Intel Pentium Gold G6400 4GHz microprocessor and Windows 10 Home operating system, with access to Internet and internal faculty computer network. They contain the office application software MS Office 2016 and the latest version of Adobe Acrobat Reader. All computers in the DOMP can be set up the Windows environment, as well as the mentioned applications in Slovak and English language for teaching foreign students in the English program. A SONY data projector is connected to the teacher's computer, which projects the image onto a projection screen.
The third classroom of DOMP contains 21 pieces of desktop personal computers. Of which 19 pieces with Intel Pentium D 3.40GHz microprocessors, respectively Intel Pentium 4 3.20GHz and with Windows 7 Enterprise operating system installed. Two pieces with Intel Pentium G4400 3.30GHz microprocessors have Windows 10 Home operating system installed. All of them include MS Office 2007 application software and the latest version of Adobe Acrobat Reader. An Acer data projector is connected to the teacher's computer, which projects the image onto a projection screen. All computers in this classroom have the WinLSS pharmacy management system installed, so each of them works in virtual mode as a separate point of sale. Seven computers also have modern Dell S224OT touch screens with a diagonal of 21.5 ", thanks to which they perfectly simulate a work in real laboratory conditions of the specific healthcare facility. A cash register with a cash register printer is installed for one of these computers.
Besides the stated, the faculty has at disposal five large auditoriums, fully equipped with the audio-visual technique consisting of a notebook, video projector, projection screen, and PA equipment system. This equipment allows for presenting the materials containing the elements of the multimedia character.
In addition to the computer rooms and auditoriums, the education also runs at computers in libraries and practical rooms of departments of FP. The presentation technique is fixed in most of them and consists of a computer or a notebook, a video projector, and the presentation screen. In the rooms that do not have a fixed installed presentation technique, there is the possibility to use a mobile presentation technique at disposal in six sets at request.
Part of the computer equipment is connected to various special diagnostic and assessment equipment, microscope, and simulators. There is installed control software delivered with the device.

Possibilities of the hardware and software equipment of the faculty and its utilisation in education process of subjects of the study programme:

- the faculty operates own website as part of the CU university website, which allows publishing of relevant information concerning the study programmes on the address www.fpharm.uniba.sk or https://www.fpharm.uniba.sk/en/ in the Slovak and English versions,
- possibility to use the university Moodle environment (moodle.uniba.sk) for E-learning education. E-learning is an innovative form of education and offers possibilities of utilising multimedia educational elements, and new information-communication means to upgrade the educational process attractiveness,
- computers and notebooks of the faculty are equipped with MS Windows 7 and 10,
- possibility to use the programmes of the package MS Office 2016 Professional (Word, Excel, PowerPoint, Outlook, Publisher, Access, InfoPath) according to requirements – for preparation of educational materials and in the process of education, for the administration of the study and study results,
- possibility to utilise licensed software,
- possibility to utilise freely available software.

The whole faculty computer network is managed by the **Department of the Integrated Information and Communication System** of FP of CU, which administers the faculty server equipment, and provides the basic computer network and other networking services. These essential services provided for the user include unlimited connectivity into the Internet secured by the firewall's administration, e-mail service with the address @fpharm.uniba.sk, presentation of the faculty in the form of the website, and a data warehouse with guaranteed backup and renewability in case of breakdowns. Teachers and students can utilise free access to external paid online information sources, paid full-text journal articles, and other library databases run by the Academic Library of CU from the faculty environment. The teachers and students have this service also available from the home environments via remote access thanks to the academic affiliation of CU. This service is part of the information system the university provides centrally and maintains for all its employees and students.

c) *Characteristics and extent of distance education applied in the study programme with the assignment to courses. Procedures for the transition from contact teaching to distance learning. Access, manuals of e-learning portals. Procedures at the transition from the in-person to distant education:*
Distant education is provided with the help of the MS Teams platform, to which all students and employees of CU Bratislava have free access, which allows presentation lectures, seminars, and selected exercises. All study materials are available for students also in the electronic form. MS Forms is used for testing. Alternatively, Moodle is used for remote teaching.
Thanks to the package MS Office 365, which is used by the whole university, sharing of large files is allowed, online teaching and testing can be done in a reliable regimen with fluent transfer of significant data volumes simultaneously. MS Teams and Forms make part of this package, which can be used in online teaching, and online testing. In case of the necessity of faculty transition from in-person study to remote education, the Dean's board of the Faculty of Pharmacy Comenius University Bratislava informs all students via e-mail. In case of short-term transitions, the teacher responsible for the subject informs the students in advance.
The standard part of the educational process is the provision of study materials to students. Several approaches are used for this purpose. The basic information on the subject content is published in the subject information sheet which contains the list of relevant literature needed to master the subject. The faculty tries to provide the required study literature via the Academic Library of the CU. Another way is to publish the presentations on subjects and other study materials of individual departments on the faculty website in accordance with the copyright act. The newest more sophisticated approach is the publishing of the study materials via the system

Moodle and other means of e-learning, which allow the students based on the personal access to university network to use the study material as presentations, videos, tests, and provide direct communication with the teachers and consultations on the subject.
The realisation of the scientific/practical part of the study programme Medical and Diagnostic Devices in the bachelor studies exclusively via the remote teaching would be at most an exception. In practice, the most used education approach is the combined method, where part of in-person theoretical education is replaced with the remote method with an electronic support.

d) *Institution partners in providing educational activities for the study programme and the characteristics of their participation.*
The Faculty of Pharmacy Comenius University Bratislava, based on the signed contracts on practical teaching, cooperates with almost 500 public teaching pharmacies and hospital pharmacies, including medical device dispensatories. All those mentioned healthcare facilities are in all regions of Slovakia.
The Faculty of Pharmacy, Comenius University Bratislava cooperates with many international universities and scientific-research institutions where our student can acquire knowledge and perform part of their research in specialised laboratories equipped with complementary modern equipment. In research and educational activities the FPHARM CU cooperates with the following international workplaces: Masarykova univerzita Brno (Farmaceutická fakulta); University of Eastern Finland (Faculty of Health Sciences, School of Pharmacy); Université de Lorraine (Faculté de Pharmacie de Nancy); University of Pécs (Faculty of Pharmacy); Universität Freiburg (Fakultät für Chemie und Pharmazie); Julius-Maximilians- Universität Würzburg (Fakultät für Chemie und Pharmazie); Śląski Uniwersytet Medyczny w Katowiciach/Medical University of Silesia (School of Pharmacy with the Division of Laboratory Medicine in Sosnowiec); George Emil Palade University of Medicine, Pharmacy, Science, and Technology of Targu Mures (Pharmacy); University of Ljubljana (Faculty of Pharmacy); Universidad CEU San Pablo (School of Pharmacy); Universidad de Castilla - La Mancha (School of Pharmacy); Universidad de Granada / University of Granada (Faculty of Pharmacy); Universitat de Barcelona / University of Barcelona (Faculty of Pharmacy and Food Sciences); Universidad Complutense Relaciones Internacionales/Complutense University of Madrid; Universidad de Murcia / University of Murcia (Faculty of Medicine); Universidade de Santiago de Compostela / University of Santiago de Compostela (Faculty of Pharmacy); Universitat de València (Facultat de Farmàcia / Faculty of Pharmacy); Alma Mater Studiorum - Universita' di Bologna (Facolta' di Farmacia / Faculty of Pharmacy); Università degli Studi di Messina (Dipartimento di Scienze Chimiche, Biologiche, Farmaceutiche ed Ambientali).

e) *Characteristics of the possibilities for social, sports, cultural, spiritual, and social activities.*
The premises of the Faculty of Pharmacy, Comenius University Bratislava (buildings at Odbojárov street and Kalinčiakova street), provide a suitable environment for work and relax in sitting areas in the corridors, buffet, Central Library where the students can meet in their free time, discuss, or study. The faculty provides a connection to Internet for every student/staff member after entering personal identification data. On outdoor premises at the Kalinčiakova street, there is a **newly created park with banks**, where the students may relax. The Faculty of Pharmacy of Comenius University Bratislava runs a fitness centre in the building at Odbojárov Street, which can be used by students and faculty staff. Doctoral students also have at their disposal the Botanical Garden of Comenius University and the Garden of Medicinal Plants of the Faculty of Pharmacy of Comenius University. Especially in the summer months, they can prepare for the examinations or attend the events organised there.
The Department of Physical Education and Sports (DPES) workplace exists at the Faculty of Pharmacy, CU Bratislava. The department's primary mission is teaching of obligatory course on physical education for the faculty students. The department regularly organizes sports events (16 types of physical activities) and educational workshops focused on the implementation of a healthy lifestyle in the daily routine of students and faculty staff. Every year, it carries out winter and summer sports camps, which make part of the block form of teaching the subject Physical Education. It operates a large sports hall at Odbojárov Street, a small sports hall, and a gym, which consists of four zones at Kalinčiakova Street, as well as a rowing club in Bratislava - Karlova Ves, which provides opportunities for physical activities and relaxation. The DPES provides the following sports activities for students of the master and doctoral studies, as well for the staff: tourism, ski trips, rowing on the Small Danube and March rivers. Within the university league, the faculty is involved in the women's and men's volleyball, men's floorball, and men's futsal tournaments. The FP of CU also covers the physical education unit, which has its own tourist club in addition to the orienteering club. It has a total of about 60 adult and 40 children's members. During its existence, the club has educated several students, junior, academic, and senior representatives who have successfully represented Slovakia at the world and European championships, world cups, youth meetings, and many other international events.
Within Comenius University, there is a concert ensemble and choir. The university and the faculty provide workers and doctoral students the possibility to buy a ticket for various cultural events at a reduced price.
University Pastoral centre of Jozef Freinademetz of Comenius University (www.upc.uniba.sk) provides possibilities for spiritual activities during the study.

f) *Possibilities and conditions for the study programme students' participation in mobilities and internships (indicating contact details), application instructions, and rules to recognise this education.*
The students can participate in the international mobility programmes of the European Union as CEEPUS and ERASMUS+, where the application and rules of this education follow the rules of relevant study programmes. The list of participating institutions is regularly updated. The instructions are published on the website of the Faculty of Pharmacy and university (Erasmus+ program) and the Slovak Academic Information Agency - SAIA - the headquarters of the CEEPUS National Office as part of a network of National Agencies located in each Member State of the Program. Within research on their projects, or possibly on the projects of their supervisors, students are sent to partner universities and research institutions in Europe and worldwide. For example, through the National Scholarship Program of the Slovak Republic, which is administratively covered by SAIA, as well as via other bilateral international mobility projects of the Ministry of Education, Science, Research and Sport of the Slovak Republic (e.g., the Austria-Slovakia Action, the Visegrad Fund, and others).

Comenius University can send students abroad to study or for an internship in partner institutions (Utrecht Network, SYLFF, some bilateral agreements) to **63 international universities in almost 40 countries** in Europe and worldwide.

New possibilities of mobilities in the extended programme Erasmus+ are offered by the **university alliance ENLIGHT**, in which the Comenius University Bratislava established cooperation in the year 2020 in the field of education with eight European universities: University in Bordeaux, University in Gent, University in Groningen, University in Gottingen, University in Uppsala, University in Tart,

the Irish National University in Galway, and Basque University. The universities offer to students various educational formats from short-time physical and virtual mobilities in the form of summer schools or so-called live laboratories, up to common study programmes, following the accredited SP in the countries and the recognition of mutually completed subjects.

The binding contractual partnerships allow the participation of interested parties and their representatives in the proposal, approval, performance, and assessment of the study programmes. The agreements specify the conditions of the partner employees' participation in providing the study programme and conditions for the provision of space, material, and information resources and ensuring quality of the study obtained at the partner institution, including preparation of a final thesis.

However, during the present COVID-19 pandemic, prudence is needed when planning international mobility, especially considering the benefits versus risks, especially regarding the receiving country's epidemiological situation.
The coordinators of Erasmus+ acting at the faculty help the applicants to set up a precise study plan at the foreign university, which creates a precondition for the CU recognition of the study completed abroad. Detailed information on students' participation in the international mobilities for academic years is presented in the annual report of the faculty. Thanks to the **Office of Science and Research and Foreign Relations and Office for International Relations and Mobilities,** each employee or student obtains sufficient information on the possibilities of international mobility and has administrative support for mobility. The department of foreign relationships of the FPHARM CU aims to improve the supply of information for students and staff and help to plan their studies and research abroad. The contact to the mentioned offices:

Office for the International Relations and Mobilities of the FPHARM CU:

prof. Ing. Vladimír Frecer, DrSc. – Faculty Coordinator for Erasmus+ / frecer@fpharm.uniba.sk / +421 2 50 117 281

Mgr. Kristína Piatničková, PhD. – Faculty Administrator for Erasmus+ / erasmus@fpharm.uniba.sk / +421 2 50 117 132

Office of Science and Research and Foreign Relations:

Mgr. Adriana Lendvayová - ov@fpharm.uniba.sk / lendvayova@fpharm.uniba.sk / +421 2 50 117 107

9. Required abilities and admission requirements for the study programme applicants

a) Required abilities and necessary admission requirements.

Required abilities necessary for the admission of students to FPHARM CU follow the regularly updated conditions for study and are published on the website of the faculty. Annually, the admission conditions are discussed at the Scientific Board of the FPHARM CU and are approved by the Academic Senate of the Faculty of Pharmacy CU Bratislava. The conditions are published at least two months before the deadline for submitting the application forms. The published announcement contains basic conditions for applying and admission to the study programme, deadline for the application forms, terms, and conditions of the admission procedure. Details are given on the website: https://www.fpharm.uniba.sk/en/admissions/
The basic condition for admission to study is to obtain a full secondary or a full secondary vocational education.
Stratification of applicants for study is performed through National Comparative Examinations (NPS) provided by SCIO, s.r.o., in accordance with the provisions of Act no. 25/2006 Coll. on Public Procurement and on Amendments to Certain Acts, as amended. The main subjects of the NPS for the study program Medical and Diagnostic Devices are Biology and the General Study Prerequisites. Each candidate whose application has been accepted by the faculty is entitled to pass the required pair of NPS tests (natural sciences and GSP) free of charge, after applying a discount coupon, which the applicant will receive on the website of the company implementing the NPS.
Applicants who have submitted a complete application are admitted to study according to the rules:
(a) any candidate who has obtained an overall average grade in the last four years of study at a general or pharmaceutical secondary school up to and including 1.750;
b) each candidate who placed 1st- 3rd place in the national round of the Olympics for secondary school students in the subject Biology;
(c) an applicant not accepted under the condition set out in letter (a) or letter (b) of this point: as ranked in the NPS with the best result.

b) Admission procedures

The study's admission procedures comply with the Admission Rules at the Comenius University Bratislava (the Internal Regulation No. 4/2021, approved according to Art. 27 Sect. 1(a) of Act No. 131/2002 Coll. on Higher Education and on changes and amendments of certain acts by the Scientific Board of the Comenius University). The Admission Rules of CU are freely available on the website https://uniba.sk/fileadmin/ruk/legislativa/2021/Vp_2021_04.pdf.
At the Dean's suggestion, the Academic Senate of FPHARM CU Bratislava each year discusses and approves the document with the title: Rules of the admission procedure at FaF UK for the academic year 2022/2023 for the bachelor's study program Medical and Diagnostic Devices in the Slovak language. These rules are publicly available at least two months before the deadline for the study application on the website of the faculty: https://www.fpharm.uniba.sk/prijimacky/. The cited document contains terms and conditions for applying form, defines obligatory attachments to the application form, instruction for taking the NPS, conditions for admitting and the mode of the admission procedure. The attachments usually include:

- curriculum vitae,
- a copy of the proof of payment of the fee for the admission procedure (postal order, confirmation of the transaction),
- a medical report (confirmation from a doctor) on medical fitness to perform the medical profession of pharmacist in accordance with Act no. 578/2004 Coll. Act on Health Care Providers, Health Care Workers, Professional Organizations in Health Care and on Amendments to Certain Acts.
- in the case of an application for admission without NPS based on average grades: certified copies of certificates of the last 4 years of secondary education.

c) Results of the admission process over the last period.

An overview of recent admission procedures:

Students:	***2009/2010***	***2010/2011***	***2011/2012***	***2012/2013***	***2013/2014***	***2014/2015***	***2015/2016***	***2016/2017***	***2017/2018***	***2018/2019***	***2019/2020***
applied	67	75	67	52	64	62	36	24	24	27	27

attended	49	57	54	42	61	59	30	21	21	26	27
enrolled	37	41	41	42	37	22	16	9	9	12	8
graduated	19	19	27	25	19	25	27	15	15	18	5

The university archives the documentation of the admission procedure, enrolment for the study and enrolment into another part of the study, a record of study results, copies of documents on completion of the study, and other documentation for at least 25 years from the day of study completion.

10. Feedback on the quality of provided education

a) *Procedures for monitoring and evaluating students' opinions on the study programme quality.*
Students can present their feedback in a student survey, which is available after the end of each semester. The survey provides an opportunity to constructively evaluate various aspects of the faculty and the quality of education provided. This data will serve both future students, who will be able to get an idea of individual subjects based on comments and evaluations, but also the lecturers and instructors themselves could find out what students think about the subjects. Finally, the survey is an incentive for the management of individual departments to improve the level of teaching or to adjust study programs. The Faculty has the organizational support, course and evaluation of the survey processed in the internal Directive of the Dean of FP UK (https://www.fpharm.uniba.sk/o-fakulte/legislativa-a-dokumenty/vnutorne-predpisy-faf-uk/). This ensures that feedback from students is used in the design and future maintenance of the quality of the study program. Among other things, the faculty management discusses the results of the surveys, and teachers are advised to respond directly to the evaluation and write comments on the evaluation, which deepens the feedback. In cooperation with the student chamber of the Academic Senate, the popularization of the survey among students is ensured so that the participation is as high as possible.

b) *Results of student feedback and related measures to improve the study programme quality:*
The evaluation of the results of the FaF UK student survey is governed by the Internal Directive of the Dean of FaF UK (https://www.fpharm.uniba.sk/o-fakulte/legislativa-a-dokumenty/vnutorne-predpisy-faf-uk/). It defines, among other things, that the dean, in cooperation with the Management of FaF UK, will prepare a written opinion on the results of the survey, on the comments of students and on the comments of evaluated employees, guarantors of study programs and heads of workplaces. The written opinion is published on the faculty's website in the form of a text document.

c) *Results of absolvent feedback and related measures to improve the study programme quality:*
The opinions and employment of faculty graduates are monitored mainly through communication between teachers (tutors) and their former students. Feedback from the employers of individual faculty graduates is provided mainly by communication between the guarantors of study programs and employers. This communication is natural, as many employers are also partners in the implementation of study programs.

11. References to other relevant internal regulations and information concerning the study or the study programme student (e.g., study guide, accommodation regulations, fee directive, guidelines for student loans, etc.).

Students Accommodation
Accomodation in academic year 2022/2023 (uniba.sk)
ubytovanie.uniba.sk - electronic accommodation system

Guide for the accommodation process for students at Comenius University Bratislava
https://uniba.sk/fileadmin/ruk/as/2020/Ubytovanie/Sprievodca/Sprievodca_ubytovacim_procesom.pdf,
https://uniba.sk/en/about/rektorat-uk/oddelenie-socialnych-sluzieb-a-poradenstva-ossp/centrum-podpory-studentov-so-specifickymi-potrebami-cps/ubytovanie/ - ACCOMMODATION FOR STUDENTS WITH SPECIAL NEEDS (uniba.sk)

Slovak Pharmacy Students' Association
https://sssf.sk/

Accommodation Rules
University town of Ľ. Štúr - Mlyny CU -https://mlyny.uniba.sk/en/accommodation/dormitory-rules/
University Hostel Družba CU -
https://druzba.uniba.sk/fileadmin/mlyny/2022/Dokumenty/Internatny_poriadok_SD_Druzba_2022.pdf

Current information on PhD. study
https://www.fpharm.uniba.sk/en/education/phd-study/

Guidelines for students' loans
https://uniba.sk/detail-aktuality/browse/22/back_to_page/aktuality-1/article/pozicka-pre-pedagogov-a-studentov/

Psychological counselling for students
https://uniba.sk/sluzby/psychologicka-poradna/
Students Scientific Conference of the Faculty of Pharmacy CU
https://www.fpharm.uniba.sk/veda-a-vyskum/svc/svk/

Academic Information System AIS2 guides and manuals for students

https://uniba.sk/o-univerzite/fakulty-a-dalsie-sucasti/cit/citps/ais/prirucky-a-navody/

https://uniba.sk/en/about/faculties-and-units/cit/citps/ais/guides-and-manuals/

University email and Office
https://uniba.sk/en/about/faculties-and-units/cit/citps/university-e-mail-and-office-365/

Comenius University Journal 'Naša univerzita"
https://uniba.sk/nu/