

COURSE DESCRIPTION

Academic year: 2026/2027	
University: Comenius University Bratislava	
Faculty: Faculty of Pharmacy	
Course ID: FaF.KGF/06-Mgr-A/26	Course title: Pharmaceutical Technology (2)
Educational activities: Type of activities: lecture / laboratory practicals Number of hours: per week: 4 / 5 per level/semester: 56 / 70 Form of the course: on-site learning	
Number of credits: 9	
Recommended semester: 7.	
Educational level: I.II.	
Prerequisites:	
Course requirements: Attendance of the lectures and practical exercises is obligatory. On each practical exercise, a test is written, and at least 60 % must be achieved from each test. Methods and options for compensating absences will be defined in the course syllabus. The course is completed when at least 60% is achieved in the final oral exam. Assessment: A: 92,00–100,00 %, B: 84,00–91,99 %, C: 76,00–83,99 %, D: 68,00–75,99 %, E: 60,00–67,99 %, FX: less than 60.00%	
Learning outcomes: Pharmaceutical technology deals with the composition, formulation, manufacturing, evaluation, and quality of medicines and drug products. It studies the conditions under which drugs and pharmaceutical excipients are transformed into medicines by technological processes, and the relationships of the medicines to the effect and action of the drug. After passing the course, the student will have a complex theoretical knowledge of the drug products and medicines as dispersion and application systems and practical experience in the compounding of dosage forms. Students will be able to prepare basic dosage forms (e.g. tablets, coated tablets, granulates, ointments, creams, and others).	
Class syllabus: • Semi-solid preparations for cutaneous application. The basis for semi-solid preparations. Production. • Transdermal therapeutic systems. Medicinal and cutaneous patches. • Solid dosage forms for oral application (tablets, coated tablets, capsules). • Preparations for inhalation. Aerodispersions. • Modified release dosage forms. Time- and site-specific drugs. • Dosage microforms. Drug carriers - lipid and polymeric nanoparticles. • Drug release, release, and absorption kinetics. • Biopharmacy, mechanism of drug transfer through biological membranes, bioavailability. • Stability and stabilization of drug products. • Quality assurance in pharmaceutical production and quality control. • Pharmaceutical packs and packaging.	

- Biologics and biosimilars.
- Technology of vaccine and radiopharmaceutical preparation

Recommended literature:

Aulton, M. E.: Aulton's Pharmaceutics: the design and manufacture of medicines. Edinburgh: Churchill Livingstone,

Lectures in Pharmaceutical technology

Tichý E., Starýchová L., Čuchorová M.: Solid dosage forms – Laboratory practices, Bratislava UK, 2015

Tichý E., Špaglová M., Bartoníková K.: Liquid dosage forms – Laboratory practices, Bratislava UK, 2016

Tichý E., Šimunková V., Halenárová A.: Emulsions, suspensions, ointments, creams, pastes, suppositories, and pessaries – Laboratory practices, Bratislava UK, 2017

European Pharmacopoeia current edition. Strasbourg: EDQM.

<https://www.fpharm.uniba.sk/pracoviska/ustredna-kniznica/externe-informacne-zdroje/>

Languages necessary to complete the course:

English

Notes:
Past grade distribution

Total number of evaluated students: 0

A	ABS	B	C	D	E	FX
0,0	0,0	0,0	0,0	0,0	0,0	0,0

Lecturers: PharmDr. Alžbeta Lengyelová, PharmDr. Veronika Šimunková, PhD., PharmDr. ThLic. Mária Raučinová, PhD., PharmDr. Mária Čuchorová, PhD., PharmDr. Miroslava Špaglová, PhD., PharmDr. Veronika Mikušová, PhD., Ing. Michael Kenneth Lawson, PhD., PharmDr. Miroslava Potůčková, PhD., doc. PharmDr. Juraj Piešťanský, PhD., PharmDr. Jarmila Prieložná, PhD., PharmDr. Daniel Krchňák, DiS, PharmDr. Zuzana Berkešová, PharmDr. Paula Čermáková, PharmDr. Andrea Halenárová, Mgr. Ivana Kopáčová, PhD. Eva Nováková

Last change: 11.06.2026

Approved by: prof. PharmDr. Ján Klimas, PhD., MPH