

DEPARTMENT OF GALENIC PHARMACY

Subject: PHARMACEUTICAL TECHNOLOGY 2
Type of course: lectures/ laboratory practicals
Hours in week: 4/ 5
Year: 4.
Number of credits: 9
Lectures: Monday 9.20-11.00; 11.10-12.50, classroom O419

1. **Capsules for oral administration. Hard capsules, soft capsules.**
28.9.2026 PharmDr. Veronika Šimunková, PhD.
2. **Pharmacopoeial methods used for the evaluation of dosage forms.**
28.9.2026 PharmDr. Miroslava Potůčková, PhD.
3. **Semi-solid preparation for cutaneous application. Skin, its anatomy and physiology. Biogalenical aspects of topical preparations. Liberation, penetration, absorption of drugs from semi-solid preparations.**
5.10.2026 PharmDr. Alžbeta Lengyelová
4. **Ointments, creams, pastes. Bases for ointments, creams, and pastes. Production of semi-solid preparations (solution, emulsion, suspension systems).**
5.10.2026 PharmDr. Alžbeta Lengyelová
5. **Viscosity, apparent viscosity, rheology.**
12.10.2026 PharmDr. Alžbeta Lengyelová
6. **Coated tablets. Coating technologies, excipients.**
12.10.2026 PharmDr. Alžbeta Lengyelová
7. **Pulmonary drug delivery. Therapeutic aerosols. Formulation, devices, production, quality control.**
19.10.2026 PharmDr. Mária Čuchorová, PhD.
8. **Aerodispersions as dosage forms, medicated foams. Liquid preparations for cutaneous application. Medicated tampons, sticks.**
19.10.2026 PharmDr. Veronika Mikušová, PhD.

9. Nanocarriers as drug delivery systems.

26.10.2026 Michael Kenneth Lawson, MSc., PhD.

10. Microemulsions

26.10.2026 PharmDr. Miroslava Špaglová, PhD.

11. Modern strategies for the evaluation of oligonucleotides

2.11.2026 doc. PharmDr. Juraj Piešťanský, PhD.

12. Evaluation of drugs based on Critical Quality Attributes (CQAs). Quality-by-design (QbD) approach.

2.11.2026 doc. PharmDr. Juraj Piešťanský, PhD.

13. Drug availability from the drug product - physical and biological availability (absolute and relative). Kinetics of drug release from the drug. Mechanisms of drug permeation across biological membranes. LADME processes and their parameters.

9.11.2026 Michael Kenneth Lawson, MSc., PhD.

14. Modified release peroral dosage forms – prolonged, sustained, delayed release and controlled release of drugs from peroral dosage forms. Drug targeting.

9.11.2026 PharmDr. Veronika Šimunková, PhD.

15. Dosage microforms – pellets, microcapsules, microdragees. Auxiliary materials, methods of preparation.

16.11.2026 PharmDr. Miroslava Špaglová, PhD.

16. Formulation and production of a dosage form containing very slightly soluble and insoluble drugs. Solid solutions. Polymorphism and its relationship to bioavailability.

16.11.2026 PharmDr. Veronika Šimunková, PhD.

17. Therapeutic systems: peroral, parenteral, ocular, intrauterine. Characterisation, advantages, disadvantages.

23.11.2026 PharmDr. Miroslava Špaglová, PhD.

18. Quality assurance in pharmaceutical production and quality control.

23.11.2026 PharmDr. Miroslava Potůčková, PhD.

19. Transdermal therapeutic systems, characterization. Advantages, disadvantages. Enhancers of penetration.

30.11.2026 PharmDr. Miroslava Špaglová, PhD.

20. Biologics. Development, formulation and production of biological drugs.

30.11.2026 PharmDr. ThLic. Mária Raučinová, PhD.

21. Stability and stabilization of drug products. Stability testing. Prediction of stability.

7.12.2026 PharmDr. ThLic. Mária Raučinová, PhD.

22. Pharmaceutical packs and packaging – functions, type of packs, primary and secondary packs, packaging material.

7.12.2026 Michael Kenneth Lawson, MSc., PhD.

23. Dosage forms of veterinary medicinal products. Application and technology of preparation.

14.12.2026 Mgr. Jana Selčanová

24. Technology of preparation of radiopharmaceuticals

14.12.2026 PharmDr. Veronika Mikušová, PhD.