

2024/2025. ACADEMIC YEAR							
PROGRAM OF STUDY (FOR STUDENTS OF 3RD YEAR)							
Full (Hun) name of the subject: Gyógyszerhatástan és toxikológia (gyakorlat) I., Gyógyszerhatástan és toxikológia (elmélet) I.							
Program: Undivided program (pharmaceutical)							
Schedule: full-time							
Short name of the subject: Pharmacology I.							
English name of the subject: Pharmacology and Toxicology (practice) I., Pharmacology and Toxicology (theory) I.							
German name of the subject: Pharmakologie und Toxikologie (Praktikum) I., Pharmakologie und Toxikologie (Vorlesung) I.							
Type of registration: obligatory							
Neptun code of the subject: GYKGYH283E1A							
Responsible Department: Semmelweis University, Department of Pharmacodynamics.							
Responsible tutor Dr. Tamás Tábi				Title, academic degree: Associate Professor, PhD			
Contact information: - phone: +36-1-4591500/56412 - email: tabi.tamas@semmelweis.hu							
Name of the persons responsible for the teaching of the subject: Dr. Éva Szökő Dr. György Bagdy Dr. László Tóthfalusi Dr. Tamás Tábi Dr. Rudolf Laufer Dr. Kinga Gecse Dr. Fruzsina Bagaméry Dr. Péter Lakatos Dr. Szabolcs Koncz Dr. Kamilla Varga				Title, academic degree: Full Professor, DSc Full Professor, DSc Full Professor, DSc Associate Professor, PhD Assistant lecturer Assistant lecturer, PhD Assistant lecturer, PhD Resident Lecturer, PhD Resident Lecturer Resident Lecturer			
Class per week: 2 hours lectures 2 hours practice				Credit point(s): 4 credits			
Professional content, intent of acquirement and it's function in order to implement the goals of the program: Understanding the mechanism and effect of drugs.							
Short description of the subject: The course familiarizes students with the mechanisms of action of drugs, their side effects, interactions, and the basics of their therapeutic use. Following the introduction of the general principles of pharmacodynamics and pharmacokinetics, the course provides a detailed discussion of the pharmacological properties of drugs affecting the peripheral nervous system and the cardiovascular system.							
Course data							
Recommend ed term	Contact hours (lecture)	Contact hours (practice)	Contact hours (seminar)	Individual lectures	Total number of contact hours/semester	Normal course offer	Consult ations

6th semester	28	28	-	-	56	Autumn semester* Spring semester Both semesters (* Please underline)	-
--------------	----	----	---	---	----	--	---

Program of semester**

Topics of theoretical classes (pro week):

1. Receptor theory, mechanism of drug effect
2. Dose-response curves. Agonist, antagonist ligands. Adaptive changes after repeated drug administration
3. Fate of drugs in the body. Drug metabolism
4. Pharmacokinetic parameters
5. Factors affecting the effect of drugs
6. Cholinergic drugs
7. Striated muscle relaxants. Adrenomimetics
8. Adrenergic inhibitors. Drugs of glaucoma
9. Drugs affecting the heart
10. Drugs affecting the circulation I
11. Drugs affecting the circulation II. Diuretics
12. Drugs affecting blood coagulation and thrombocytes
13. Lipid lowering drugs
14. Introduction to drug research

Topics of practical classes (pro week):

1. Receptors and other drug targets. Receptor-ligand interaction.
2. Dose-response curves
3. Administration routes and their pharmacokinetic features
4. Modeling pharmacokinetics and plasma concentration-time curves
5. Drug Metabolism
6. Factors affecting the effect of drugs
7. Midterm exam I
8. Cholinergic drugs. Muscle relaxants
9. Adrenergic drugs and drugs of glaucoma
10. Drugs affecting the heart
11. Drugs affecting the circulation. Diuretics
12. Use of cardiovascular drugs. Drugs affecting blood coagulation
13. Midterm exam II
14. Drugs affecting lipid levels. Clinical studies

Other subjects (both compulsory and optional) relating to the transversal issues of the subject. Possible overlaps between subjects:

The course builds on the knowledge acquired in the Basic Pathophysiology course, and indirectly in the Physiology and Biochemistry courses.

Schedule of consultations:

Consultations are available during the practical sessions or at individually agreed-upon times.

Course requirements

Prerequisites:

Basic Medical Pathophysiology I,
Physiological Pharmaceutics and Pharmaceutical dosage forms

<p>Conditions of attending the classes, amount of acceptable absents, way of presentation of leave, opportunity for makeup:</p> <p>The attendance to lectures is highly recommended. The attendance to practices is mandatory. Presence on minimum 75% of practices is required to the acceptance of the semester.</p>
<p>The grading method; the conditions for getting the signature; the number, topic(s) and date(s) of the mid-term assessments, (reports, term tests), and the process in which they contribute to the final grade; and the possibility of their retake or their upgrading retake (as provided in §§ 25-28 of the STUDY AND EXAMINATION REGULATIONS):</p> <p>Two written test exams (Midterm exam I and Midterm exam II) will be held during the 7th and 13th weeks of the course, covering the material from weeks 1-6 and weeks 7-12, respectively. There will be two additional opportunities to retake the exams: during the week following the test and in the final week of the course. The grades of the midterm exams will account for one-third of the final grade for the semester.</p>
<p>Requirements of signature (as provided for in STUDY AND EXAMINATION REGULATIONS § 29):</p> <p>Meeting the attendance requirements. Completion of both midterm tests with at least pass (50%) results.</p>
<p>Number and type of projects students have to perform independently during the semester and their deadlines:</p> <p>Completion of online tasks based on the current week's material.</p>
<p>Type of the semester-end examination: signature*/practical grade*/ comprehensive examination*/<u>end-term examination</u>*</p> <p>Examination requirements: as published by the education-research department on the MOODLE interface by the start of the academic term.</p>
<p>Form of the semester-end examination: written*/<u>oral</u>*/combined examination/<u>practical examination/the assessment of completing project work (according to STUDY AND EXAMINATION REGULATIONS 30.§)</u>* (<i>Please underline</i>)</p>
<p>The possibility and conditions for offering grades:</p> <p>-</p>
<p>A list of the basic notes, textbooks, resources and literature that can be used to acquire the knowledge necessary to master the curriculum and to complete the assessments, with exact description about which of them is required to acquire which part of the syllabus (e.g. description based on topics)), as well as the main technical and other aids and study aids that can be used:</p> <p>Ritter et al.: Rang & Dale's Pharmacology 10th ed. Elsevier 2023</p> <p>The uploaded materials from lectures and practical sessions, the drug list, and other educational resources shared on the Moodle system. A minimum requirement is the knowledge of the names of the drugs listed on the drug list, their mechanisms of action, clinical applications, major side effects and interactions, as well as their special pharmacokinetic properties.</p>
<p>In the case of a subject lasting more than one semester, the position of the teaching/research department on the possibility of parallel enrolment and the conditions for admission****:</p> <p>yes*/no*/<u>on an individual assesment basis</u>* (<i>Please underline</i>)</p>

The course description was prepared by:

Rudolf Laufer

***** A tantárgy tematikáját oly módon kell meghatározni, hogy az lehetővé tegye más intézményben a kreditismerési döntéshozatalt, tartalmazza a megszerzendő ismeretek, elsajátítandó alkalmazási (rész)kézségek, (rész)kompetenciák és attitűdök leírását, reflektálva a szak képzési és kimeneti követelményeire.***