

2023/2024. ACADEMIC YEAR

PROGRAM OF STUDY

Full (Hungarian) name of the subject: GYÓGYNÖVÉNY- ÉS DROGISMÉRET (gyakorlat) II.	
Program: Undivided program (pharmaceutical)	
Schedule: full time	
Short name of the subject: Pharmacognosy practice II.	
English name of the subject: Pharmacognosy II.	
German name of the subject: Pharmakognosie II.	
Type of registration: <u>obligatory</u> /obligatory elective/elective/criteria requirement	
Neptun code of the subject: GYKFMG130G2A (practice)	
Responsible Department: Department of Pharmacognosy	
Responsible tutor Dr. Ágnes Alberti Contact information: - phone: +3620/825-8389 - email: alberti.agnes@semmelweis.hu	Title, academic degree: associate professor, Ph.D.
Name of the persons responsible for the teaching of the subject: Ágnes Alberti Orsolya Csernák Ida Fejős Csenge Anna Felegyi-Tóth Nóra Gampe Ákos Rácz Eszter Riethmüller Alexandra Simon Attila Ványolós	Title, academic degree: associate professor, Ph.D. assistant professor, Ph.D. assistant professor, Ph.D. assistant lecturer, Ph.D. assistant lecturer, Ph.D. assistant professor, Ph.D. assistant professor, Ph.D. trainee assistant professor, Ph.D.
Class per week: 4 practices	Credit point(s): 2 credits practice
Professional content, intent of acquirement and its function in order to implement the goals of the program: The aim of the course is to acquaint pharmacy students with medicinal plants, herbal drugs and the analytical methods applied in their quality assurance. By doing so, it contributes to the education of pharmacy students to become key experts in herbal medicines. It contributes to the training of students with modern knowledge of pharmacognosy at a time when the knowledge about natural substances and herbs has come to the fore and has expanded with new aspects due to European harmonization.	

Short description of the subject:

The topics of the classes follow the biogenetic system of plant materials. It represents a shift in proportion and, in part, selection in the curriculum, that sufficiently emphasizes the importance of knowledge of herbal drugs and their active ingredients that are important in therapeutic practice. At the same time, it provides knowledge in the context of structure-activity relationships for the sufficient processing of newly emerging herbal drugs, possibly of foreign origin, based on their chemical groups. It also introduces the requirements of the European Pharmacopoeia (Ph. Eur.) regarding herbal drugs and preparations. Thus, it provides knowledge of all herbal drugs and active substances that serve as raw materials for phytopharmaceuticals (including those that will soon become traditional OTC medicines) and preventive products (dietary supplements). Knowledge of plant material: drug recognition; macroscopic and microscopic examination. Detection of active ingredients and constituents of herbal drugs (preparation, extraction and purification techniques, general and specific chemical reactions, chromatographic methods), quantitative evaluations (pharmacopoeial and standard methods) and isolation of individual components or selective determination by complex chromatographic and spectroscopic methods. Application of herbal drugs based on their positive effects in prevention, phytotherapy and improving quality of life.

Course data

Recommended term	Contact hours (lecture)	Contact hours (practice)	Contact hours (seminar)	Individual lectures	Total number of contact hours/semester	Normal course offer	Consultations
7th semester	-	56	-	-	56	Autumn semester* Spring semester Both semesters (* Please underline)	--

Program of semester**

Topics of theoretical classes (pro week): -

Topics of practical classes (pro week):

Week 1: Work and fire safety. Requirements of the semester. Investigation of unknown sample.
 Week 2: Essential oil containing drugs. I.
 Week 3: Essential oil containing drugs II.
 Week 4: Investigation of drugs containing valepotriates and bitter substances.
 Week 5: Saponins and chief saponin drugs. Methods used in the identification and quality control of saponins.
 Week 6: Cardioactive glycosides and their main drugs I
 Week 7: Cardioactive glycosides and their main drugs II.
 Week 8: Tropane alkaloid containing drugs. Methods of extracting alkaloids from plant materials.
 Week 9: Isoquinoline alkaloids, their chief drugs
 Week 10: Quinoline and indole alkaloids, their main drugs
 Week 11: Pseudo- and protoalkaloids, their main drugs I.
 Week 12: Pseudo- and protoalkaloids, their main drugs II.
 Week 13: Plant biotechnology
 Week 14: Individual task.: Natural product development. Identification of crude drugs based on the methods prescribed in the Ph. Eur.

Schedule of consultations: on demand

Course requirements

Prerequisites: Pharmacognosy I.
Conditions of attending the classes, amount of acceptable absents, way of presentation of leave, opportunity for makeup: Based on the current Study and Exam regulations
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>Number, topics and dates of tests during the semester, opportunities of makeup and improvement of results***:</p> <p>During the semester, two midterms will be written based on the material of the exercises in writing and/or orally. Verification of material knowledge (examination of unknown drug mixtures, identification of unknown drug powders, recognition of microscopic preparations).</p> <p>The first test takes place during the 7-8th week practice. The report consists of a theoretical and macromorphological examination part, including the studies carried out and described during the practices in weeks 1-7, as well as the material of the seminars. The grade obtained in this process will be counted with a single weight when determining the practical grade.</p> <p>In the 13th week lecture, an obligatory midterm exam will take place, the material of which covers the entire practical material of the semester. The midterm result of the grade is counted with double weight when determining the practical grade. Students who do not achieve at least sufficient (2) grades in the obligatory test must answer an additional part of the exam (herbal drug).</p> <p>Midterm examinations may be replaced and corrected two times each. The results of the first report can be corrected during the two practices following the announcement of grades. We provide an opportunity to retake the obligatory midterm in an out-of-class time in week 14.</p>
<p>Requirements of signature(as provided for in STUDY AND EXAMINATION REGULATIONS § 29):</p> <p>Participation at the practices based on the current Study and Examination regulation. Submission and acceptance of reports. The average of the grades of the midterm examinations is at least 2.0. Successful completion of the obligatory midterm test.</p>
<p>Number and type of projects students have to perform independently during the semester and their deadlines: Preparation of a presentation in a chosen topic, performed at weeks 8-14.</p>
<p>Type of the semester-end examination: signature*/<u>practical grade</u>*/semi-final*/final* (<i>Please underline</i>)</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*/oral*/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>

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:**

Materials of the practices and prescriptions: uploaded continuously to the Moodle system

Drugs to know: list uploaded to the Moodle system at the start of the semester

List of structures: list uploaded to the Moodle system at the start of the semester

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**:**

yes*/no*/on and individual assessment basis* (** Please underline*)

The course description was prepared by:

Dr. Ágnes Alberti