SYLLABUS

1. Course title:

PHARMACEUTICAL BOTANY

2. Code:

3. Cycle of study:

1

4. ECTS credits:

5

5. Type of course:

(●) Mandatory ( ) Elective

6. Prerequisites:

7. Class restrictions:

8. Duration / semester:

1 4

9. Weekly contact hours:

9.1. Lectures:	3
9.2. Seminars:	0
9.3. Laboratory/Practice classes:	2

10. Faculty:

Faculty of Pharmacy

11. Department/study program:

Pharmacy (integrated academic study I and II cycle)

12. Lecturer:

dr sc. Ermina Cilovic Kozarevic, assoc. prof.

13. Lecturer's e-mail:

ermina.cilovic@untz.ba

14. Web site:

www.frmf.untz.ba

15. Course aims:

Mastering the basic knowledge of botany. Application of botanical literature. Anatomy, morphology, identification and classification of plant species. The course will prepare students to follow Pharmacognosy I and II.

16. Learning outcomes:

After listening to the lectures, students will gain knowledge about the basics of morphological, anatomical and physiological characteristics of plants, application of botanical nomenclature, identification and classification of plant species with special reference to medicinal plant species.

17. Course content:

Plant cell, cell organelles, cell wall
Morphological degrees of organization - histological organization
Plant and permanent tissues, primary tree structure, leaf structure, root structure, metamorphosis of plants
Basic concepts of plant physiology, water regime, photosynthesisSystematics of plants, morphology, taxonomy and photochemical characteristics of plants.
Algae, mushrooms, lichens, mosses, ferns.
Gymnospermae, Gnetopsida, Ginkopsida, Pinopsida,
Magnoliales Piperales, Ranunculales,Papaverales, Fagales, Urticales, Rosales, Fabales, Myrtale, Rutales, Geraniales, Rhamnales, Euphorbiales, Santales, Apiales, Theales, Capparales, Malvales, Ericales, Primulales, Caryophyllales, Polygonales, Gentianales, Dipsacales, Oleales, Polemoniales, Scrophulariales, Lamiales, Asterales, Zingiberales, Liliales, Orchidales, Poales, Arales

18. Learning methods:

Lectures (L)-Method of presentation, perception, conversation, consultation
Laboratory exercises (LE)

19. Assessment methods:

The knowledge check during the semester takes place through the exercise activity, the practical part of the exam (colloquium) and two tests. Students can earn a maximum of 5 points through the exercise activity. The practical part of the exam (colloquium) is done practically during the last term of exercises and carries a maximum of 15 points. The tests are done in writing, test I in the middle of the semester and covers the topics covered in the lectures until then. A student can achieve a maximum of 15 points on the first test. Test II is taken in the last week of the semester and includes topics from lectures from the second part of the semester. A student can achieve a maximum of 15 points on the second test as well. The tests consist of multiple choice tasks, simple guessing tasks or essay tasks and pictures/ diagrams of certain tissues/organs/plants. The final exam is written and/or oral. It consists of passing the herbarium as the first exam question, then the student approaches passing the remaining part of the final exam, which includes the material from the lectures, i.e. from the suggested literature. The condition for passing the final exam is passing the first exam question (herbar). The maximum number of points a student can achieve in the final exam is 50.

The grade on the exam is based on the total number of points that the student earned by fulfilling pre-exam obligations and taking the exam, and is determined according to the following scale:

Student obligations	Points
Engagement in exercises	5
Practical part of the exam (colloquium)	15
Tests during lectures (T1+T2)	30
Final exam	50

20. Assessment components:

The final success of the student is evaluated using the grading scale as follows:
10 (A) - outstanding performance without errors or with minor errors, 95-100 points
9 (B) - above the average, with some errors, 85-94 points
8 (C) - average, with noticeable errors, 75-84 points
7 (D) - generally good, but with significant shortcomings, 65-74 points
6 (E) - meets the minimum criteria, 55-64 points
5 (F, FX) - does not meet the minimum criteria, below 55 points
The grade 6 (E) is the lowest passing grade.

21. Required reading list:

1. Bektic S, Huseinovic S (2019). Basics of pharmaceutical botany with workbook, Tuzla.
2. Jancic R (2002). Botany of pharmaceuticals, Belgrade.
3. Zivanovic P, Pavlovic S (1999). Systematics of medicinal plants, Belgrade.

22. Web sources:

23. Applicable starting from the academic year:

2018/19.

24. Adopted in the Faculty/Academy session:

17.11.2025.