# SYLLABUS

**1. Course title:**

PHARMACOGNOSY II

**2. Code:**

**3. Cycle of study:**

1

**4. ECTS credits:**

6

**5. Type of course:**

(●) Mandatory ( ) Elective

**6. Prerequisites:**

Student does not have to pass any subject before this.

**7. Class restrictions:**

No restrictions

**8. Duration / semester:**

1 8

**9. Weekly contact hours:**

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

**10. Faculty:**

Faculty of Farmacy

**11. Department/study program:**

Farmacy (integrated I and II cycle)

**12. Lecturer:**

dr. sc. Ermina Cilović Kozarević, assoc. prof.

**13. Lecturer's e-mail:**

ermina.cilovic@untz.ba

**14. Web site:**

www.frmf.untz.ba

**15. Course aims:**

Acquisition of basic knowledge about pharmacologically active metabolites of plants and animals (chemical and physical characteristics, distribution, biological activity), as well as natural medicinal raw materials - drugs (morphological and anatomical characteristics, chemical ingredients, methods of production, identification, action and application), with special with reference to drugs that have an effect on the gastrointestinal, cardiovascular, urogenital and respiratory systems.

**16. Learning outcomes:**

The student should be able to independently identify drugs, know the possibilities of their application, participate in the design, organization and management of the drug production process and ensure their quality.

**17. Course content:**

Definition of natural medicinal raw materials (drugs) and drug preparations, history of use, production and quality assurance. Primary and secondary plant metabolism. Classification of natural pharmacologically active ingredients based on chemical structure and biosynthetic origin. Classification of drugs based on the structure and action of active ingredients. Chemical structure, physical characteristics, biological role, principles of isolation and purification of certain classes of active metabolites. Biological sources of drugs, macroscopic characteristics, ingredients, identification, pharmacological action and drug use.
Drugs with flavonoids, anthraquinones, phenolic acids, lignans
Iridoid glycosides, sulfur heterosides, cyanogenic heterosides
Steroidal triterpenes (phytosterols, cardiotonic heterosides)

**18. Learning methods:**

Teaching methods: lectures (theoretical classes) and laboratory exercises (practical classes). The lectures include the entire material provided by the curriculum and are conducted ex cathedra. Laboratory exercises take place according to the curriculum and are carried out by students' independent work, by students' work in small groups, in the pharmacognosy laboratory or by demonstration (according to the possibilities). Attendance at laboratory exercises and lectures is mandatory.

**19. Assessment methods:**

The knowledge check during the semester takes place through the exercise activity, two colloquiums and a practical exam, which are done in writing and/or orally form. Colloquium I is held in the middle of the semester, and colloquium II at the end of the semester, within the schedule of exercises and includes material related to the theoretical part of the exercises. The practical exam is held at the last time of the exercises and includes material related to the practical part of the exercises. The final exam is done in writing and/or orally form in the scheduled exam times, it includes the material provided by the curriculum. Unpassed parts of the exam are also taken during the final exam.
Exercise activity carries a maximum of 5 points (minimum 3 points); Colloquium I carries a maximum of 10 points (min. 6 points); Colloquium II carries a maximum of 10 points (minimum 6); The practical exam carries a maximum of 25 points (minimum 13); The final exam carries a maximum of 50 points (minimum 27).

**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. Kovacevic N (2004). Basics of Pharmacognosy, Belgrade
2. Saric-Kundalic B, Ademovic Z, Mazic M (2019). Introduction in Pharmacognosy II, Tuzla
3. Durić K (2016). Phytotherapy, from traditional to medicine based on scientific evidence, Sarajevo (1-174).

**22. Web sources:**

**23. Applicable starting from the academic year:**

2018/19

**24. Adopted in the Faculty/Academy session:**

17.11.25.