

SYLLABUS

1. Course title:

PEDOLOGY

2. Code:**3. Cycle of study:****4. ECTS credits:****5. Type of course:** Mandatory Elective**6. Prerequisites:**

No prerequisites

7. Class restrictions:

No restrictions

8. Duration / semester:**9. Weekly contact hours:**

9.1. Lectures:

3

9.2. Seminars:

0

9.3. Laboratory/Practice classes:

2

10. Faculty:

Faculty of Technology

11. Department/study program:

Agronomy

12. Lecturer:

Husejin Keran, associate professor

13. Lecturer's e-mail:

husejin.keran@untz.ba

14. Web site:

www.tf.untz.ba

15. Course aims:

The main objective of this course is to introduce students with the origin and development of soil, as a special sphere in which various pedogenetic processes take place, and rational exploitation of the soil as a limited natural resource and to find measures to increase maintenance or increase the potential fertility of the soil.

16. Learning outcomes:

After successfully mastering the course students will be able to:

- recognize pedogenic processes based on morphological features of the soil
- describe the physical and chemical properties of the soil
- determine limitations with respect to soil properties
- propose soil repair measures
- to carry out soil sampling in a broken and untreated state, in the field
- determine the basic physical and chemical properties of soil samples in the laboratory

17. Course content:

Soil as a three-phase system. Pathogenetic factors and processes. Origin, composition and division of humus. Soil organisms. Texture of soil. Soil structure. Specific soil densities and soil porosity. Forms of groundwater, hydrological constants and water movement in the soil. Thermal properties of soil and air in the soil. The texture and the most important features of soil colloids. A solution of the soil, soil reaction and repair of soil reaction, oxidation-reduction potential of the soil. The elements in the soil. Morphological characteristics of the soil. Classification of soil. Losses, soil damage and soil protection. Cartography.

18. Learning methods:

The most significant learning methods in the course are:

- lectures with the use of multimedia resources,
- the technique of active learning and with the active students participation and discussion,
- field exercises,
- laboratory exercises.

19. Assessment methods:

After half of the semester, students take the writing test (first test), which includes previously treated topics with lectures and exercises. The test consists of different tasks where each correct answer is scored depending on the complexity of the task, ie, in the first test the student can achieve a maximum of 25 points. After the end of the semester students take the writing test (second test) covering the treated topics with lectures and exercises in the second part of the semester. The test consists of complex tasks where the student in the second test can achieve a maximum of 25 points. All students take both tests on the subject at the same time, thereby achieving uniformity of the level of knowledge that is being tested, as well as the conditions under which the student takes the exam. As part of the pre-requisites, students are required to take a written colloquium covering specific topics of practical content of the subject. Students can earn 0 to 10 points for a completed colloquium. Also, for a continuous activity on lectures and exercises throughout the semester, students can achieve 0 to 10 points.

The final exam is oral. The right to go out on the final exam is given to students who have reached the minimum number of points on the first and second test and colloquium.

At the oral exam students answer three questions drawn from the program of the subject, treated in lectures and exercises. The maximum number of points a student can earn on an oral exam is 30.

Checks on all forms of knowledge are recognized as a cumulative test if the result is positive after each individual check and is at least 50% of the total of the predicted and / or required knowledge and skills.

In order for a student to pass a course, he must have a minimum of 54 cumulative points of which a minimum of 15 points at the final exam.

20. Assessment components:

Student obligations	Points
Attendance and student activity	10
Colloquium	10
Tests (I+II)	50
Final exam	30
Total	100

21. Required reading list:

1. Resulović, H., Čustović, H., (2002) Pedologija, Univerzitetska knjiga, Sarajevo;
2. Čustović, H., Mirza, T. (2003) Praktikum za pedološka istraživanja Sarajevo;;
3. Škorić A. (1986) Postanak, razvoj i sistematika tla, Zagreb.

22. Web sources:**23. Applicable starting from the academic year:**

2016/2017.

24. Adopted in the Faculty/Academy session: