

## SYLLABUS

## 1. Course title:

PLANT NUTRITION

## 2. Code:

## 3. Cycle of study:

## 4. ECTS credits:

## 5. Type of course:

 Mandatory  Elective

## 6. Prerequisites:

No prerequisites

## 7. Class restrictions:

No class restrictions

## 8. Duration / semester:

## 9. Weekly contact hours:

9.1. Lectures:

2

9.2. Seminars:

0

9.3. Laboratory/Practice classes:

1

## 10. Faculty:

Faculty of Technology

## 11. Department/study program:

Agronomy

## 12. Lecturer:

## 13. Lecturer's e-mail:

**14. Web site:**

www.tf.untz.ba

**15. Course aims:**

Familiarization with soil and plant processes of physical, chemical, physiological and biochemical nature, which in the interaction of plants and substrates, affects the adoption, movement and distribution of nutrients. Plant nutrition provides knowledge about primary organic production in the soil-plant-atmosphere system, with emphasis on the yield height and yield quality.

**16. Learning outcomes:**

After successfully completing the course, the student will be able to:

- know the division of chemical elements from the point of view of plant nutrition
- explain the fertility of the soil, and the status and dynamics of nutrition in the soil
- interpret the influence of soil fertility and nutrient content in plants, on productivity of plants
- explain the process of adopting the nutrients
- interpret the results of soil analysis

**17. Course content:**

Introduction to plant nutrition. Herbal nutrients (mineral, organic foods and nourishing nutrients). Herbal nutrients (nutrient Allocation). nutrients in soil (soil as a substrate of vegetable nutrition). Nutrients in the soil (forms and content of nutrients in the soil, soil nutrients dynamics). Productivity of plants (external and internal growth factors, genetic specificity of mineral nutrition). The regularity of growth and yield creation. The supply and content of mineral substances in plants. Adoption of nutrients. Primary and secondary microelements. Useful and toxic elements.

**18. Learning methods:**

The methods of learning in the course are:

- Lectures with the use of multimedia resources,
- Field exercises

**19. Assessment methods:**

After half of the semester (in the 8th week), students take the writing test, which includes previously treated topics from lectures and exercises. The student can achieve a maximum of 20 points on the first test. In the 13th week of the semester, students take the writing test, which includes previously treated topics from lectures from the second semester. The student can achieve a maximum of 20 points on the second test. 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. For a continuous activity in lectures throughout the semester, the student can achieve 0 to 10 points. The final exam is written or oral. All students have the right to go to the final exam. The maximum number of points a student can achieve on the final exam is 50. The minimum number of points on the final exam is 25.

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 to pass the course, a student must have at least 54 cumulative points of which at least 25 points on the final exam.

**20. Assessment components:**

The assessment of the exam is based on the total number of points the student has obtained by fulfilling the pre-requisites and passing the exam and is determined according to the following scale:

Student Obligations	Points
Presence and activity in class	10
Test I	20
Test II	20
Final Exam	50
Total	100

**21. Required reading list:**

1. Vukadinović V. i Lončarić Z. (1997): Ishrana bilja, Sveučilište J. J. Strossmayera u Osijeku, Poljoprivredni fakultet Osijek.
2. Lončarić, Z. (2005): Program vježbi iz kolegija Ishrana bilja. Poljoprivredni fakultet Osijek.

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

2016/2017

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