

SYLLABUS

1. Course title:

ENNOBLING OF PLANTS

2. Code:**3. Cycle of study:**

1

4. ECTS credits:

6

5. Type of course: Mandatory Elective**6. Prerequisites:**

No prerequisites

7. Class restrictions:

No class restrictions

8. Duration / semester:

1

7

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:

Vlado Guberac, full professor

13. Lecturer's e-mail:

vlado.guberac@pfos.hr

14. Web site:

www.tf.untz.ba

15. Course aims:

Acquiring knowledge about breeding goals, necessary genetic variability, and breeding development.

16. Learning outcomes:

After successfully mastering the course students will be able to:

- plan and perform self-fertilization or crossing and breeding of offspring for the development of a new variety.
- Perform or supervise breeding field experiments (carry out evaluations and measurements of important properties and systematically carry out documentation on the analyzes).
- perform and supervise parts of the multi-annual breeding program within the team.

17. Course content:

Importance of plant breeding for agricultural production. Historical development of plant breeding and processes affecting it. Basic characteristics and steps of plant breeding. Genetic Variability in Plant Breeding. Hybridization methodology. Methods of breeding self-fertilized plants. An example of culture - wheat. Methods of breeding of pollinated plants. An example of culture - corn. Recurrent selection. Breeding to stressful environmental conditions. Number of chromosomes from the standpoint of plant breeding. Mutations in plant breeding. Biotechnology in Plant Breeding. Examples of cultures - corn and soybean.

18. Learning methods:

The most important learning methods in the course are:

- Lectures with the use of multimedia resources, active learning techniques and with active participation and discussion of students;
- Exercises in practice and in orchards;
- Preparation and presentation of group and individual seminar papers from the subjects that are being discussed in the course.

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 course 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 contains a maximum of 100 points and is determined according to the following scale:

Student obligations	Points
Student activity	10
Test I	20
Test II	20
Final exam	50

21. Required reading list:

1. Martinčić, J., Kozumplik, V.(1996) Oplemenjivanje bilja. Sveučilište u Osijeku i Sveučilište u Zagrebu.
2. Kozumplik, V., Pejić, I.(2012) Monografija Oplemenjivanje poljoprivrednog bilja u Hrvatskoj. Agronomski fakultet Sveučilišta u Zagrebu

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

2016/2017

24. Adopted in the Faculty/Academy session: