

FORM: Syllabus
Course description

General information		
Course Holder	Anita Pamuković, senior lecturer	
Course title	Basics of plant breeding	
Study programme	Karst Agriculture – Plant production	
Course status	Ordinary	
Year	I	
Evaluation in ECTS credits and forms of class conducting	ECTS coefficient of student workload	3
	Number of classes (L+P+S)	30 (20+10)

1. COURSE DESCRIPTION

1.1. Course objectives

Plant breeding provides basic knowledge for understanding the process of using the effect of genes in improving the economic properties of cultivated plants. It is fundamental to point out the goals of breeding as a scientific and professional discipline whose goal is ultimately the creation of new cultivars in terms of yield, intended quality, disease resistance, response to stress conditions, adaptability and the like.

1.2. Terms for enrollment

Enrolled 2nd year

1.3. Expected learning outcomes related to the course

- Analyze and describe the reproduction systems of the most important agricultural crops and define genetic variability and its sources.
- Estimate the state and trends of plant breeding in the context of the introduction of plant material.
- Describe the ways of inheriting the most important agronomic traits, the interaction of a variety (genotype) and the environment in the context of plant production.
- Define similarities and differences in the breeding of annual and perennial plants and their reproductive material.
- Compare the preferred variety type and breeding methods (conventional and biotechnological) for individual agricultural crops for different agricultural productions.
- Plan and perform self-fertilization or crossbreeding and breeding of progeny for the development of a new variety.
- Perform breeding experiments (perform evaluations and measurements of important properties and systematically keep documentation on the performed analyzes).

1.4. Course content

1. History of plant breeding
2. Objectives and importance of plant breeding

- 3. Genetic divergence
- 4. Introduction of plants
- 5. The concept of phenotype, genotype and properties in plant breeding
- 6. Systematics from the point of view of plant breeding
- 7. Reproductive systems in agricultural plants
- 8. Plant breeding methods
- 9. Types of cultivars

1.5 *Forms of class conducting*

- | | |
|----------------------------------------------------|----------------------------------------------------------------|
| <input checked="" type="checkbox"/> lectures | <input checked="" type="checkbox"/> independent work |
| <input type="checkbox"/> seminars and workshops | <input checked="" type="checkbox"/> multimedia and the network |
| <input checked="" type="checkbox"/> practice | <input checked="" type="checkbox"/> laboratory |
| <input type="checkbox"/> e-learning | <input checked="" type="checkbox"/> mentor work |
| <input checked="" type="checkbox"/> field learning | <input type="checkbox"/> other _____ |

1.6. *Comments*

1.7. Student obligations Regular attendance of lectures and practice, tasks, colloquiums, exam preparation, exams

Students are required to attend 75% of lectures and 100% of exercises. In case of unjustified absence of 25% of hours in lectures, students will receive a seminar paper on a topic from the areas they missed in class.

1.8. Student evaluation method ¹

Attendance	0,50	Class activity	0,50	Seminar paper	Experimental work
Written exam		Oral exam	1,0	Essay	Research
Project		Written exam	1,0	Report	Practical work
Portfolio					

1.9. *Evaluation of the students' work during classes and in the final exam*

¹ IMPORTANT: Each Student Evaluation Method should be followed by a corresponding share in the ECTS credits for each activity so that the total number of ECTS points corresponds to the credit score of the subject. You can use blank fields for additional activities.

The student has the right to take two tests of knowledge from the content of lectures and exercises. If the student has not passed all the colloquia, he / she takes a written exam. Grading of the colloquium and / or the written part of the exam is done according to the following criteria: sufficient (2) 60-69%, good (3) 70-79%, very good (4) 80-89% and excellent (5) 90-100% . At each colloquium it is necessary to answer 60% of the questions correctly. The total points achieved in the two colloquia are recognized as the points achieved in the final written exam. Colloquium dates are agreed during the teaching process. The student does not have the possibility of exemption from the final (oral part) exam. The student is required to pass the final written exam if he / she has not achieved the minimum number of points in all colloquia. Grading of the written part of the exam is done according to the following criteria: sufficient (2) 60-69%, good (3) 70-79%, very good (4) 80-89% and excellent (5) 90-100%. Students who take a colloquium or pass a written exam will have the right to take the oral exam. The oral exam will include questions from the entire teaching material, where students will have the opportunity to define, explain, give examples, analyze and connect the learned material. The final grade represents the sum of points that the student has achieved in the colloquia (2) and / or in the final exam. The number of points is converted into grade points.

1.10. Compulsory reading (at the time of application of the study program proposal)

- Allard, R. W. Principles of Plant Breeding. 1999.

1.11. Additional reading (at the time of application of the study program proposal)

- Wats, L. 1980. Flower and Vegetable Plant Breeding. Gover Books. ISBN 0-901361-35-6
 - Callaway, D.J., Callaway, M.B. 2000. Breeding Ornamental Plants. Timber Press, Inc. Oregon. USA. ISBN 0-88192-482-2

1.12. Number of copies of the compulsory reading units compared to the number of students currently attending the course

<i>Title</i>	<i>Number of copies</i>	<i>Number of students</i>
-	0	
-	0	

1.13. Quality assurance methods that ensure the acquisition of knowledge, skills and competencies

Student progress is continuously monitored during lectures and exercises. During the classes, students are introduced to possible problems related to the material of the course and their creativity and independent work is encouraged. Continuous conduct of colloquia or exams analyzes student performance. At the end of the semester, an evaluation of teachers and subjects is conducted by students (student surveys).

Students' comments on teaching are used to improve the quality of teaching. Information on the achieved learning outcomes is used for the preparation of self-evaluation of teachers and, if necessary, for changes and / or additions to the study program of the course, methods of work and student assessment.