

**MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE
POLTAVA STATE AGRARIAN UNIVERSITY
Department of Plant Breeding, Seed Production and Genetics**

Syllabus of education course

GLOBAL FOOD AND GENETIC RESOURCES



Form description of the education course and information about the creators

Name of the primary discipline	Global food and genetic resources
Name of the structural department	Department of plant breeding, genetics and seed production
Contact information	<i>Lector: Batashova Maria, Makaova Bohdana</i> <i>Office: Department of Plant Breeding, Seed Production and Genetics</i> <i>e-mail: mariia.batashova@pdaa.edu.ua</i>
Prerequisites for education course	English language (not low than A2 level)
Education level	Master degree

Course goals: an understanding of food security and agricultural issues; analyzing the trends from local food production systems to globalization; an understanding of agriculture's role and plant genetic resources in maintaining global food security. Course topics will focus on issues of biodiversity loss and their effective using in agriculture for maintaining global food security.

Course tasks: the understanding of the basis for a sustainable food system from the local to the global scale; the understanding of plant genetic resources as a one of the main element of global food security; mastering scientific terminology in English and skills of its practical use in their professional activities.

Competences:

General:

ZK 1 - the ability to abstract thinking, analysis and synthesis

ZK 2 - ability to work in an international context

ZK 2 - ability to think critically, generating new complex ideas, analysis and synthesis of science knowledge;

ZK 6 - knowledge and understanding of the subject area and understanding of professional activity

ZK 7 - the ability to apply knowledge in practical situations

ZK 9 - the ability to search, process and analyze information from various sources

ZK 11 - the desire to preserve the environment.

Professional:

FK 3 - knowledge and understanding of basic biological and agro-technological concepts, rules and theories related to the cultivation of agricultural and other plants.

FK 4 - the ability to apply knowledge and understanding of physiological processes of agricultural plants to solve production technological problems

FK 6 - the ability to apply methods of statistical processing of research data related to technological and selection processes in agronomy.

Program learning outcomes:

PRN 6. Demonstrate knowledge and understanding of the principles of physiological processes of plants, to the extent necessary for the development of fundamental and professional disciplines.

PRN 8. To have at the operational level methods of observation, description, identification, classification, as well as cultivation of objects and maintaining the stability of agrocenoses while preserving natural diversity.

Education course program:

Topic 1. Global Food System: basic concepts of the food resources

Topic 2. International food security organizations

Topic 3. Challenges for global food security system

Topic 4. Crop domestication and Green revolution

Topic 5. Understanding of the Biodiversity and plant genetic resources

role in stable agriculture

Topic 6. Centers of origin of cultivated crop plants

Topic 7. Using of plant genetic resources in agriculture

Topic 8. Techniques for conservation of plant genetic resources

Assessment of learning outcomes

Program learning outcomes:	Forms of control
PRN 6. Demonstrate knowledge and understanding of the principles of physiological processes of plants, to the extent necessary for the development of fundamental and professional disciplines.	Asking and discussion, performing laboratory work and their defense, performing tasks of independent work.
PRN 8. To have at the operational level methods of observation, description,	Asking and discussion, performing laboratory work

identification, classification, as well as cultivation of objects and maintaining the stability of agrocenoses while preserving natural diversity.	and their defense, performing tasks of independent work.
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Form of control of learning outcomes

Program learning outcomes	Asking and discussion		Laboratory work		Independent work		Control		Total	
	Minimum number of points	Maximum number of points	Minimum number of points	Maximum number of points	Minimum number of points	Maximum number of points	Minimum number of points	Maximum number of points	Minimum number of points	Maximum number of points
PRN 6.	7	10	7	10	8	15	8	15	30	50
PRN 8.	7	10	7	10	8	15	8	15	30	50
Total	14	20	14	20	16	30	16	30	60	100

Forms, scale and criteria for assessing the learning outcomes of higher education students full-time study

Points	Assessment criterion
<i>Asking and discussion</i>	
0	No answer
2	Partial answer of the student and available lecture notes
4	Complete answer of the applicant and available full conspectus of lectures
<i>Performing of laboratory works and their defense</i>	
1	The student completed the task of laboratory work
2	The student completed the task of laboratory work with the report, provided a conclusion of the work performed and a short answer to the control questions with significant errors
3	The student completed the tasks of laboratory work with the report, provided a conclusion of the work performed and an incomplete answer to the control questions
4	The student completed the tasks of laboratory work with the report, provided a conclusion of the work performed and a complete answer to the control questions

<i>Tasks of independent work</i>	
1	The student provided a short answer with significant errors
5	The student provided an incomplete answer
10	The student provided a broad answer with examples

Form of semester control of higher education students in accordance with the work curriculum

Scheme of accrual of points in the education course

Name of topic	Form of evaluation of learning outcomes				
	Asking and discussion	Performing of laboratory works	Independent work	Control	Total
Topic 1. Global Food System: basic concepts of the food resources	2,5	5	4		11,5
Topic 2. International food security organizations	2,5	5	4		11,5
Topic 3. Challenges for global food security system	2,5	5	3		10,5
Topic 4. Crop domestication and Green revolution	2,5	5	4		11,5
Topic 5. Understanding of the Biodiversity and plant genetic resources role in stable agriculture	2,5	5	3		10,5
Topic 6. Centers of origin of cultivated crop plants	2,5	5	4		11,5
Topic 7. Using of plant genetic resources in agriculture	2,5	5	4		11,5
Topic 8. Techniques for conservation of plant genetic resources	2,5	5	4		11,5
Final Control				10	
<i>Разом</i>	20	40	30	10	100

Total number of hours - 90 hours.

Number of Credits - 3.

Form of evaluation of learning outcomes – essay.