COURSE SYLLABUS
«SYSTEMS OF TECHNOLOGIES: CROP PRODUCTION»

Degree of higher education - Bachelor
Specialization 073 Management
Educational programme «Management»
Academic year 1, semester 1
Form of study __ full-time
Number of ECTS credits___2.4 (4)___
Language of instruction English

Lecturer of the course	**Bohdan Mazurenko, PhD in Agronomy**
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Course page on eLearn	**https://elearn.nubip.edu.ua/course/view.php?id=459**

COURSE DESCRIPTION

(up to 1000 printed characters)

The main goal of the discipline is to provide knowledge on creating optimal technological (agroecological) conditions for producing the required amount of high-quality plant products based on intensive photosynthesis in field crops while maintaining or increasing soil fertility. The main task is to acquire practical skills in producing high-quality, environmentally friendly products with minimal energy and labor costs while maximizing their output per unit of time and per unit of land, which requires the wide implementation of varietal, intensive, energy- and resource-saving, and ecologically appropriate technologies. Theoretical foundations of labor protection, legal foundations of labor protection for workers in crop production, safety techniques in crop production, and fire safety in crop production are covered in the course.

Competencies of the educational programme:

Integrative competency (IC):_ The ability to solve complex specialized tasks and practical problems characterized by complexity and uncertainty in the field of management or in the process of learning, which involves the application of theories and methods of social and behavioral sciences.

General competencies (GC):

GC 4. Ability to apply knowledge in practical situations;

GC 5. Knowledge and understanding of the subject area and understanding of professional activity.

Professional (special) competencies (PC):

PC 7. Ability to choose and use modern management tools.

Program learning outcomes (PLO) of the educational programme: __

PLO 5. Describe the content of the functional spheres of an organization's activity.

COURSE STRUCTURE

Topic	Hours (lecture/laboratory, practical, seminar)	Learning outcomes	Tasks	Assessment
Semester 1				
Module 1 Management of the production process of cultivation technologies of cereals				
Topic 1. The development of plant science and agriculture as a production	**2/2**	**To know** about the current state and prospects for the development of the agriculture sector; the importance, distribution, morphological and	Submitting laboratory work. Completing independent	**35**

industry. The current state of plant production in Ukraine and worldwide.		biological characteristics of agricultural crops; modern technologies for growing field crops and peculiarities of their implementation in soil-climatic zones of Ukraine; ways to improve the quality of agricultural products; sources of expenses for growing agricultural crops and ways to optimize them. .	work (including in eLearn) Pass module control (more than 60 % of maximum points is a check point)	
Topic 2. Cereals is a basis of crop production	**2/2**			
Topic 3. Organizational principles of effective winter wheat cultivation.	**2/2**			
Topic 4. Early and late spring cereals – organizational principles of effective cultivation	**2/2**			
Topic 5. Legumes. Management in cultivation technologies of peas and soybean	**2/2**			
Module 2. Organization of cultivation of industrial crops (raw materials) for processing industry.				
Topic 6. Tuber crops. general characteristics features at management of production	**2/2**	**To be able** to plan and organize the implementation of technological processes in agriculture; to apply innovative elements in crop cultivation technologies; to program crop yields for agricultural crops; to plan the production of high-quality, ecologically safe products with minimal energy costs per unit of output; to prevent yield losses during cultivation, harvesting, and storage; to use operational information for timely and high-quality implementation of complex agricultural work. **To distinguish** between crops and the products obtained from them. **To use acquired knowledge and skills** in production during internships and other practical experiences	Submitting laboratory work. Completing independent work (including in eLearn) Pass module control (more than 60 % of maximum points is a check point)	**35**
Topic 7. Root crops. Sugar beets is a main raw material for sugar production	**2/2**			
Topic 8. The place of oil crops in Ukraine and the world. Choosing a crop and management in its cultivation	**2/2**			
Topic 9. Sunflower and rapeseed - the main oil crops of Ukraine and the world	**2/2**			

Total for 1 semester	**18/18**			**70**
Exam				**30**
Total for course				**100**

ASSESSMENT POLICY

Policy regarding deadlines and resits:	• Tasks must be submitted on time, according to the delivery schedule. • Penalty for delay: - 10% – less 1 month - 20% – more 1 month • Re-assessment will be allowed if you pass all tasks in module
Academic honesty policy:	Plagiarism and re-delivery tasks don`t allow
Attendance policy:	Attendance is mandatory. For objective reasons (for example, illness, international internship) training can take place individually (in online form in consultation with the dean of the faculty)

SCALE OF ASSESSMENT OF STUDENT KNOWLEDGE

Student rating, points	**National grade based on exam results**	
	exams	**credits**
90-100	excellent	passed
74-89	good	
60-73	satisfactory	
0-59	unsatisfactory	not passed

RECOMMENDED SOURCES OF INFORMATION

1. CROP PRODUCTION GUIDE AGRICULTURE. Tamil Nadu Agricultural University. 2020. Link:https://www.freebookcentre.net/biology-books-download/gotoweb.php?id=13855
2. Graham Thiele, Michael Friedmann, Hugo Campos, Vivian Polar, Jeffery W. Bentle. Root, Tuber and Banana Food System Innovations. Springer, 2022. DOI: https://doi.org/10.1007/978-3-030-92022-7
3. Kalenska S., Dmytrishak M., Antal T., Mazurenko B., M. Я. Crop production with basis of fodder production, Kyiv, 2021. [In Ukrainian]
4. Petrichenko V.F., Lykhochvor V.V. Roslynnytstvo. Novi tekhnolohii vyrashchuvannia polevykh kultur: pidruchnyk. - 5-te vid., vyrav., dopov. Lviv: NVF "Ukrainski tekhnolohii", 2020. 806 p. (Title: Crop Production. New Technologies for Field Crop Cultivation: Textbook)

Additional sources of information:

1. Crop production manual. FAO. 2020. Available at: https://www.fao.org/3/ca7556en/CA7556EN.pdf
2. Statistics in Agriculture. Available at: https://fao.org/faostat
3. Ministry of Agriculture Politics http://www.minagro.kiev.ua/
4. Technology of cultivation (field crops) http://agro-business.com.ua/
5. Technology of cultivation (field crops) https://www.agronom.com.ua/
6. Precision farming (Demo tools for studying) https://www.agrivi.com/blog/precision-farming/
7. All about pesticides https://pesticidestewardship.org/homeowner/understanding-pest-management/