

**NATIONAL UNIVERSITY OF LIFE AND ENVIRONMENTAL SCIENCES OF
UKRAINE**

Department of Vegetable crops



"APPROVED"
Dean of the Faculty (Director of the Institute)
Vitaliy KOVALENKO
"23" May 2024

"APPROVED"

at the meeting of Department of Vegetable crops
Minutes №12 of "21" May 2024

Head of the Department

Ivan FEDOSIY

Guarantor of the AP

"REVIEWED"

Ivan FEDOSIY

**CURRICULUM OF ACADEMIC
DISCIPLINE «Greenhouse's
Technologies»**

Field of knowledge 20 "Agrarian sciences and food"

Specialty 203 "Horticulture and Viticulture"

Academic programme - "Horticulture and Viticulture"

Faculty (Education and Research Institute) Agrobiological

Author(s): Docent – Sleptsov Y.

Kyiv – 2024

Description of the discipline “Greenhouse’s Technologies”

(name)

Academic degree, specialty, academic programme		
Academic degree	Bachelor’s degree	
Specialty	201 «Agronomy»	
Academic programme	«Horticulture and Viticulture»	
Characteristics of the discipline		
Type	optional	
Total number of hours	120	
Number of ECTS credits	4	
Number of modules	2	
Course project (work) (if any)		
Form of assessment	<i>exam</i>	
Indicators of the discipline for full-time and part-time forms of university study		
	Full-time	Part-time
Year of study	2	
Semester	5	
Lectures	30 <i>hours</i>	
Practical classes and seminars	30 <i>hours</i>	
Laboratory classes		
Self-study	60 <i>hours</i>	
Number of hours per week for full-time students	6	

1. Aim, objectives, competences and expected learning outcomes of the discipline

Aim - introducing students to the industry of Protected Cultivated.

Objectives – Greenhouses, covered materials.

Acquisition of competences:

Integral competence (IC): The ability to solve complex tasks and problems in the field of horticulture and viticulture during the implementation of professional activities or in the process of learning, which involves conducting research and implementing innovations, which are characterized by complexity and uncertainty of conditions.

General competences (GC): GC 6. Knowledge and understanding of the subject area and understanding of professional activity.

Special (professional) competences (SC): SC 2. The ability to use skills for growing planting material of fruit, berry crops and grapes, propagation of vegetable and garden plants in open and closed soil and mushrooms.

Expected Learning Outcomes (ELO):

ELO 10. Provide consulting and expertise on innovative technologies in fruit growing and viticulture.

ELO 14. Integrate and improve the production processes of growing vegetables and mushrooms in accordance with current requirements.

2. Programme and structure of the discipline for:

- full-time (part-time) form of study;
- reduced full-time (part-time) form of study

Names of content modules and topics	hours													
	weeks	Total hours	Full time					Correspondent form						
			Lec tu-res	pr	6	7	personal	Total hours	у тому числі					
									L	pr	1	13	Personal	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	
Module 1. Greenhouse's constructions														
Topic 1. Greenhouse's elements and constructions.	1-3	22	4	8			10							
Topic 2. Covering materials.	4-7	24	6	8			10							
Topic 3. Greenhouses technologies	8-10	12	4	4			4							
<i>Total according to module 1</i>		58	14	20			24							
Module 2. Technologies' of vegetable crops in Greenhouses														
Topic 4. Technologies' of vegetable crops in Greenhouses	11-15	32	16	10			36							
<i>Total according to module 2</i>		32	16	10			36							
Total hours		90	30	30			60							

3. Topics of Practical classes

№ з/п	Назва теми	Кількість годин
1	Greenhouse's elements and constructions	8
2	Covering materials	8
3	Greenhouses technologies	4
4	Technologies' of vegetable crops in Greenhouses	36
Total		60

4. Topics for self-study

№ s/n	Topic title	Hours
1	Greenhouse's elements and constructions.	10
2	Covering materials	10
3	Greenhouses technologies	4
4	Technologies' of vegetable crops in Greenhouses	34
	Total	60

5. Tools for assessing expected learning outcomes: (select necessary or add)

- exam;
- credit;
- module tests;
- abstracts;
- graphic design works.
- presentation of laboratory and practical works;

6. Teaching methods:

(select necessary or add)

- verbal method (lecture, discussion, interview, etc.);
- practical method (laboratory, practical classes);
- visual method (illustration, demonstration);
- video method (remote, multimedia, web-based, etc.);
- self-study (completing assignments);
- individual research work;

7. Assessment methods:

(select necessary or add)

- exam;
- credit;
- oral or written assessment;
- module tests;
- essays and reports;
- presentation of practical works.

8. Distribution of points received by students

The assessment of students' knowledge and skills is conducted by means of a 100-point scale and is converted into national grades according to Table 1 of the current *Exam and Credit Regulations at NULES of Ukraine*.

Student's rating, points	National grading of exams and credits	
	exams	credits
90-100	excellent	pass
74-89	good	
60-73	satisfactorily	
0-59	unsatisfactorily	fail

To determine a student's rating in the discipline R_{DIS} (up to 100 points), the received assessment rating R_A (up to 30 points) is added to the academic performance rating R_{AP} (up to 70 points): $R_{DIS} = R_{AP} + R_A$.

9. Teaching and learning aids

- e-learning course of the discipline -
<https://elearn.nubip.edu.ua/course/view.php?id=1468>;
- lectures and presentations (in electronic form);
- textbooks, manuals, tutorials;
- guidelines for studying a discipline by full-time and part-time students;
- internship programmes of the discipline (if included in the curriculum).

10. Recommended sources of information

1. Greenhouse horticulture / Cecilia Stanghellini, Bert Van 't Ooster and Ep Heuvelink. – Wageningen. – 2019.
2. <https://elearn.nubip.edu.ua/course/view.php?id=1468>
3. <https://www.greenhousegrower.com/>



Syllabus of Discipline
«Greenhouse's technologies»

Scientific Degree - Bachelor's degree
Specialty - 201 «Agronomy»
Training Program - «Horticulture and Viticulture»
Year – 2024-2025

EKTS 4,0
English language

Lector
(e-mail)
eLearn

Sleptsov Y.V.
helicopter09@ukr.net
<https://elearn.nubip.edu.ua/course/view.php?id=1468>

ACADEMIC DISCIPLINE DESCRIPTION

(up to 1000 symbols)

Structural elements, engineering systems, and typical projects of various types of greenhouses are studied. The gist of the discipline is to provide students with knowledge on the capacities of construction in order to reduce their costs to obtain the profit.

Acquisition of competences:

Integral competence (IC): The ability to solve complex tasks and problems in the field of horticulture and viticulture during the implementation of professional activities or in the process of learning, which involves conducting research and implementing innovations, which are characterized by complexity and uncertainty of conditions.

General competences (GC): GC 6. Knowledge and understanding of the subject area and understanding of professional activity.

Special (professional) competences (SC): SC 2. The ability to use skills for growing planting material of fruit, berry crops and grapes, propagation of vegetable and garden plants in open and closed soil and mushrooms.

Expected Learning Outcomes (ELO):

ELO 10. Provide consulting and expertise on innovative technologies in fruit growing and viticulture.

ELO 14. Integrate and improve the production processes of growing vegetables and mushrooms in accordance with current requirements.

ACADEMIC DISCIPLINE STRUCTURE

Topic	Hours <small>(lectures/laboratory, practical, seminars)</small>	Learning outcomes	Tasks	Assessment
8 semester				
Module 1				
Topic 1. Greenhouse's elements and constructions.	4\8\10	To know: any elements of Greenhouse's constructions	Completing tests. Writing essays. Self-study (including e-learn).	10
Topic 2. Covering materials.	6\8\10			20
Topic 3. Greenhouses technologies	4\4\4			20

Module 2				
Topic 4. Technologies' of vegetable crops in Greenhouses	16\10\36			20
			Completing tests. Self-study (including e- learn).	
Total for 1st semester				70
Examination				30
Total for the course				100

ASSESSMENT POLICY

<i>Deadlines and exam retaking policy:</i>	<i>EXAMPLE</i> Works that are submitted late without valid reasons will be assessed with a lower grade. Module tests may be retaken with the permission of the lecturer if there are valid reasons (e.g. a sick leave).
<i>Academic integrity policy:</i>	<i>EXAMPLE</i> Cheating during tests and exams is prohibited (including using mobile devices). Term papers and essays must have correct references to the literature used
<i>Attendance policy:</i>	<i>EXAMPLE</i> Attendance is compulsory. For good reasons (e.g. illness, international internship), training can take place individually (online by the faculty dean's consent)

SCALE FOR ASSESSING STUDENTS 'KNOWLEDGE AND SKILLS

Student's rating, points	National grading of exams and credits	
	exams	credits
90-100	excellent	pass
74-89	good	
60-73	satisfactorily	
0-59	unsatisfactorily	fail

11. Recommended sources of information

- Greenhouse horticulture / Cecilia Stanghellini, Bert Van 't Ooster and Ep Heuvelink. – Wageningen. – 2019.
- <https://elearn.nubip.edu.ua/course/view.php?id=1468>
- <https://www.greenhousegrower.com/>