
	COURSE SYLLABUS
	<u>“Agroforestry”</u>
	Degree of higher education - <u>Bachelor</u>
	Specialization <u>193 – “Geodesy and land management”</u>
	Education program <u>“Geodesy and land management”</u> Academic year <u>4</u>, semester <u>8</u> Form of study <u>full time</u>
	Number of ECTS credits <u>4</u>
	Language of instruction <u>English</u>
	
Lecturer of the course	<u>Professor of the Forests Restoration and Meliorations Department,</u> <u>Doctor of Sciences, Professor Vasyl Yukhnovskiy</u>
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Course page on eLearn	https://elearn.nubip.edu.ua/course/view.php?id=2265

COURSE DESCRIPTION

The purpose of studying the discipline is connected with the need to solve the problems of ecological balance of the land structure, establishing an optimal ratio of arable land, natural lands, forest and water resources, the specifics of the scientific justification of agriculture and agroforestry in modern forest-agrarian ecological systems, as well as studying the need the use of forest amelioration plantations as a means of effective protection of agricultural lands from adverse natural phenomena and improvement of the natural environment, formation of the ecological framework of agro-landscapes.

The main tasks: to acquaint students with the scientifically based possibilities of using the ameliorative effect of protective forest plantations on the state, stability and productivity of agricultural complexes and landscapes, as well as to carry out agroforestry land reclamation, aimed at the creation and effective functioning of completed systems of ameliorative plantings of various purposes.

The discipline ensures the formation of a number of **competencies**:

Integrated competency (IC):

– the ability to solve the problems of agroforestry, the formation of the forest component of agrolandscapes, the evaluation of the amelioration effect of agroforestry plantations and their forest management.

Competencies of the educational programme (GC):

– Ability to learn and master modern knowledge.
– Ability to apply knowledge in practical situations
– Ability to communicate in a foreign language.
– Ability to use information and communication technologies.
– Ability to work autonomously.
– Ability to work in a team.
– Ability to realize one's rights and responsibilities as a member of society; awareness of the value of a civil (free democratic) society and the need for its sustainable development, the rule of law, the rights and freedoms of a person and a citizen in Ukraine.

– The ability to preserve and multiply moral, cultural, scientific values and achievements of society based on an understanding of history, the patterns of development of the subject area, its place in the general system of knowledge about nature and society, as well as in the development of society, technology and technologies, to use different types and forms motor activity for recreation and leading a healthy lifestyle.

Professional (special) competencies (PC):

– Ability to apply theories, principles, methods of physico-mathematical, natural, socio-economic, engineering sciences when performing tasks of geodesy and land management.

– Ability to choose and use effective methods, technologies and equipment for carrying out professional activities in the field of geodesy and land management.

– The ability to perform remote, ground, field and camera surveys, engineering calculations for the processing of survey results, form survey results, prepare reports when solving geodesy and land management tasks.

– Ability to collect, update, process, critically evaluate, interpret, store, publish and use geospatial data and metadata about objects of natural and man-made origin.

– Ability to carry out professional activity in the field of geodesy and land management, taking into account the requirements of professional and civil safety, labor protection, social, ecological, ethical, economic aspects.

Program learning outcomes (PLO) of the educational programme:

– PLO2. Organize and manage the professional development of individuals and groups.

- PLO3. Convey information, ideas, problems, solutions, own experience and arguments to specialists and non-specialists.
- PLO4. Know and apply in professional activity regulatory and legal acts, regulatory and technical documents, reference materials in the field of geodesy and land management and related fields.
- PLO5. Apply conceptual knowledge of natural and socio-economic sciences when performing tasks of geodesy and land management.
- PLO6. To know the history and peculiarities of the development of geodesy and land management, their place in the general system of knowledge about nature and society.
- PLO10. Select and apply the tools, equipment, equipment and software required for remote, terrestrial, field and camera surveys in the field of geodesy and land management.
- PLO15. Develop and make effective decisions regarding professional activity in the field of geodesy and land management, including under conditions of uncertainty.

COURSE STRUCTURE

Topic	Hours (lecture/laboratory, practical, seminar)	Learning outcomes	Tasks	Assessment
Semester 8				
Module 1. Dendrology and silviculture				
Topic 1. General information about the forest	2/2	To know the concept of "forestry", "agroforestry", main characteristics of forest fund of Ukraine and world forests, the value of a forest, the modern concept of Agroforestry development.	Submission of practical work No 1.	10
Topic 2. Fundamentals of forestry and afforestation	2/4	Know and understand different approaches to the interpretation of components of a forest, differentiation of trees in a plantation according to nature of their growth and development.	Submission of practical work No 2. (including in elearn).	15
Topic 3. Forestry- measurement characteristics of stands	2/4	To have knowledge about the types of forest amelioration plantations and the main forestry and biometric characteristics. Know	Submission of practical work No 3. Submission of self-work	20

		and be able to determine the quality of the plantation. Know and understand how to determine the volume of a tree in different ways	No 1 (including in elearn).	
Topic 4. Windbreaks	2/4	To have knowledge of organizational, economic and agroforestry measures for the regulation of the territory and to allocate land erosion funds on the land use plan with subsequent design of relevant measures.	Submission of practical work No 4. Submission of self-work No 2 (including in elearn).	10
Module test No 1				45
Together for module No 1	8/14			100
Module № 2. Forest management.				
Topic 5. Forest meliorate stands – the element of the erosion control system	2/8	To have knowledge of designing a mixing scheme for protective forest plantations and calculate planting material. Know and be able to compile a list of designed protective forest plantations and analyze the compliance of indicators of field protection and general forest cover with optimal values.	Submission of practical work No 5. Submission of self-work No 3 (including in elearn).	30
Topic 6. Basic of forest inventory	4/8	To have knowledge about the forest ripeness. Forest inventory works: preparatory works, field operations, lab treatment of data. The features of the inventory and forest management of agroforestry plantations. Designing of economic activities in agroforestry plantations. Planning and organization of agroforestry works.	Submission of practical work No 6. Submission of self-work No 3 (including in elearn).	20
Topic 7. Greening of rural	1/-	To know and understand the importance of	Submission of self-work	5

places		landscaping for populated areas and master the basic concepts	No 4 (including in elearn).	
Module test No 2				45
Together for module No 2	7/16			100
Total for semester 8	15/30			70
Final certification				30
Final evaluation				100

ASSESSMENT POLICY

<i>Policy regarding deadlines and resist:</i>	Works performed correctly and completed during the classroom session are exempt from oral defense. Works that are submitted late without good reason are evaluated with a lower grade according to the evaluation criteria. Modules can be rearranged with the permission of the lecturer if there are good reasons (for example, sick leave).
<i>Academic honesty policy:</i>	Writing off during tests and assessments is prohibited (including using mobile devices and other gadgets). Presentations must have correct text references to the used literature.
<i>Attendance policy:</i>	Attending classes is mandatory. For objective reasons (for example, illness, participation in scientific and technical events, international internship), training can take place individually (in online form with the agreement of 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

Basic

1. Юхновський В.Ю. Агролісомеліорація: підручник / Юхновський В.Ю., Дударець С.М., Малюга В.М. К.: Кондор, 2012. 372 с.

Secondary

2. Агролісомеліорація / А.Е. Дьяченко, Л.П. Брисова, И.Ф. Голубев и др. М.: Колос, 1979. 208 с.

3. Гірс О.А. Лісовпорядкування: Підручник / Гірс О.А., Новак Б.І., Кашпор С.М. К.: «Арістей», 2004. 384 с

4. Довідник з агролісомеліорації (За ред П.С. Пастернака). К.: Урожай, 1998. 288 с.

5. Калінін М.І. Теоретичні основи лісових меліорацій / М.І. Калінін, О.С. Мельник. Львів: Світ, 1991. 262 с.

6. Лісові меліорації: практикум – навч. посібник / [В.Ю. Юхновський, С.М. Дударець, В.М. Малюга, О.В. Соваков]; за ред В.Ю. Юхновського. К.: Кондор-видавництво, 2015. – 232 с.

7. Пилипенко О.І. Системи захисту ґрунтів від ерозії: підручник / Пилипенко О.І., Юхновський В.Ю., Дударець С.М., Соваков О.В.] ; за ред. О.І. Пилипенко. К. : Кондор, 2019. 372 с.

8. Юхновський В.Ю. Лісоаграрні ландшафти рівнинної України: оптимізація, нормативи, екологічні аспекти. К.: Інститут аграрної економіки, 2003. 273 с.

Internet sources

9. Закон України Про меліорацію земель (Документ 1389-XIV, чинний, поточна редакція – Редакція від 01.01.2019, підстава – 2498-VIII). Режим доступу: <https://zakon.rada.gov.ua/laws/show/1389-14#Text>.

10. Про схвалення Концепції розвитку агролісомеліорації в Україні (РОЗПОРЯДЖЕННЯ КАБІNETУ МІНІСТРІВ УКРАЇНИ від 18 червня 2014 р. № 582-р. Режим доступу: <https://zakon.rada.gov.ua/laws/show/725-2013-%D1%80#Text>.

11. Правила утримання та збереження полезахисних лісових смуг, розташованих на землях сільськогосподарського призначення (Постанова Кабінету Міністрів України від 22 липня 2020 р. № 650) Режим доступу: <https://zakon.rada.gov.ua/laws/show/650-2020-%D0%BF#Text>.