



SYLLABUS OF DISCIPLINE

«Biology I (Botany)»

Level of high of high education – Bachelor

Speciality 101 Ecology

Study program «Ecology»

Year of study1, semestr 2

Form of study full-time tutiion, distance learning

Number of credits of ECTS 4

Language of study English, Ukrainian

Lecturer of course

Contact information

(e-mail)

Page of course in eLearn

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<https://elearn.nubip.edu.ua/course/view.php?id=1164>

COURSE DESCRIPTION

(up to 1000 printed characters)

Aim is to study the laws of development of plants as major components of biosphere.

Tasks are:

- to study botanical terminology and methods of investigation of plants that are necessary to study
- plants on practice; to form for student's general vision of the plant world.
- to learn, to analyze and to work with the literature and botanical objects;
- to learn a technique of experimental research of botanical objects in laboratory and in practice;
- to learn the laws of morphological and anatomical structure and development of plants and
- microorganisms;
- to learn a technique of identification of plants, their taxonomy;
- to learn and to analyze the botanical phenomena, changes and to form the appropriate conclusions.

Competencies of the educational programme:

Integrative competency (IC): The ability to solve complex specialized problems and solve practical problems in the field of ecology, environmental protection and balanced nature management, which involves the application of basic theories and methods of environmental sciences, which are characterized by the complexity and uncertainty of conditions.

General competencies (GC):

GC1. Knowledge and understanding of the subject area and professional activity.

GC8. Ability to conduct research at an appropriate level.

Professional (special) competencies (PC):

PC2. Ability to critically understand basic theories, methods and principles of natural sciences.

PC8. The ability to justify the need and develop measures aimed at preserving landscape and biological diversity and forming an ecological network.

Program learning outcomes (PLO) of the programme:

PLO2. Understand the main environmental laws, rules and principles of environmental protection and balanced nature use.

PLO17. To be aware of the responsibility for the effectiveness and consequences of the implementation of complex environmental protection measures.

STRUCTURE OF COURSE

Theme	Hours (lectures/practical work/selfwork)	Results of study	Tasks	Evaluation
2 semester				
Quiz 1				
1. Cytology, Hystology, Organography, Propagation	9/8	Has to know terms, systematic and main groups of plants; Can operate on the botanical terminology and methods of investigation of plants that are necessary to study plants on practice. The variety of plants induces the study of specific features of different groups of plants, their development, phylogenic relations and value for ecology and nature protection.	Submitting laboratory or work 1-4 on eLearn course "Biology I (botany)". Completing independent works 1 and 2 on eLearn course "Biology I (botany)". Taking test 1	19
2. Systematic of Low Plants and High spore plants	16,5/19,5	Has to know terms, systematic and main groups of plants; Can operate on the botanical terminology and methods of investigation of plants that are necessary to study plants on practice. The variety of plants induces the study of specific features of different groups of plants, their development, phylogenic relations and value for ecology and nature protection.	Submitting laboratory or work 5-14 on eLearn course "Biology I (botany)". Completing independent works 3 and 4 on eLearn course "Biology I (botany)". Taking test 2	39
Quiz 2				
3.	2,5/2,5	Has to know terms and basic topics on geography of plant, geobotany and phytocoenology, ecology of plants; Can operate on the botanical terminology and methods of investigation of plant communities that are necessary to study plan cover on practice. The variety of plants induces the study of specific features of different groups of plants, their ecological and phytocoenotical relations with other organisms and value for ecology and nature protection.	Submitting laboratory or work 15 on eLearn course "Biology I (botany)". Completing independent work 5 on eLearn course "Biology I (botany)". Taking test 3 and final test.	12
Total per semester				70
Exam				30
Total				100

ASSESSMENT POLICY

Policy regarding deadlines and resits:	Works after deadline without reasons have lower level of mark Modules can be retested with permission of the lecturer.
Academic honesty policy:	Cheating on exam and testing is forbidden
Attendance policy:	Study is obligatory except some reasons (illness etc). Individual study is possible with the permission of faculty dean.

SCALE OF THE EVALUATION

Sum of marks for all types of activity	National evaluation due to results of exams and tests	
	Exams	Tests
90-100	excellent	Passed
74-89	good	
60-73	satisfactory	
0-59	unsatisfactory	Not passed

RECOMMENDED SOURCES OF INFORMATION

Handbooks and articles

1. Esau, K. (1965). Plant anatomy. *Plant Anatomy.*, (2nd Edition).
2. Pott, R. (2011). Phytosociology: A modern geobotanical method. *Plant Biosystems-An International Journal Dealing with all Aspects of Plant Biology*, 145(sup1), 9-18.
3. Singh, G. (2019). *Plant systematics: an integrated approach*. CRC Press.
4. Tertyshnyy A. P. (2014). Botany with elements of plant ecology. Kyiv: Phytosociocentre. 562 p.

On-line resources

1. Bryophyte Ecology. Available at the link: <https://digitalcommons.mtu.edu/bryophyte-ecology/>
2. World Ferns. Available at the link: <https://worldplants.webarchiv.kit.edu/ferns/>
3. The Gymnosperm Database. Available at the link: <https://www.conifers.org/index.php>
4. The Plant List Available at the link: <http://www.theplantlist.org/>
5. Plants of the World online Available at the link: <http://powo.science.kew.org/>
6. iNaturalist. Available at the link: <https://www.inaturalist.org>
7. Global Biodiversity Information Facility (GBIF). Available at the link: <https://www.gbif.org>