Educational qualification level - Bachelor
Specialty 193 Geodesy and Land management
Educational program «Geodesy and Land Management»
Year of training 1**, Semester** 1
Form of study full-time
Number of credits ECTS – 9,0
The language of instruction is Ukrainian

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Course page in eLearn	https://elearn.nubip.edu.ua/course/view.php?id=705
	https://elearn.nubip.edu.ua/course/view.php?id=706
	https://elearn.nubip.edu.ua/course/view.php?id=707

DESCRIPTION OF THE DISCIPLINE

The discipline provides the formation of theoretical knowledge and skills in the use of computer technology by land managers in their practical work. The structure of computers and principles of computer operation, capabilities of operating systems, PC hardware and software, basic techniques of using the MS Office office suite, basics of the Internet, HTML, creation of Web-pages and basics of geoinformatics are considered.

Purpose

"Geoinformatics, Informatics and Programming" is studied for the first three semesters and provides an opportunity to use computer technology by specialists in geodesy and land management in their practical work.

Task

The study of the discipline is the formation of the specialist's awareness of the prospects for the development and further practical use of computer technology, theoretical knowledge and practical skills on the computer in MS WINDOWS, the basic techniques of using Microsoft Office suite, techniques for creating static Web-pages using HTML hypertext markup languages and their stylization using the CSS cascading style sheet and writing programs using the high-level C ++ language. At the end of the course the basics of geoinformatics are studied, which form the student's knowledge related to the study of geospace as a whole system of heterogeneous objects with their properties and different ways of display..

The discipline provides the formation of a number of competencies:

- general competencies:

GC01. Ability to learn and master modern knowledge.

GC02. Ability to apply knowledge in practical situations.

GC05. Ability to communicate in a foreign language.

GC06. Ability to use information and communication technologies.

GC07. Ability to work autonomously.

GC08. Ability to work in a team.

GC13. Ability to preserve, multiply moral, cultural, scientific values and achievements of society based on understanding of history, 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 technology. activities for recreation and healthy living.

- special competencies:

SC04. Ability to select and use effective methods, technologies and equipment for professional activities in the field of geodesy and land management.

SC05. Ability to use modern information, technical and technological support to solve complex issues of geodesy and land management.

SC06. Ability to perform remote, ground, field and in-house research, engineering calculations for processing research results, prepare research results, prepare reports in solving problems of geodesy and land management.

SC07. Ability to collect, update, process, critically evaluate, interpret, store, publish and use geospatial data and metadata on objects of natural and man-made origin.

SC09. Ability to use tools, instruments, equipment, facilities in the performance of geodetic and land management tasks.

SC10. Ability to monitor and evaluate land.

learning results:

LR2. Organize and manage the professional development of individuals and groups.

LR3. Communicate information, ideas, problems, solutions, personal experience and arguments to specialists and non-specialists.

LR4. To know and apply in professional activity normative-legal acts, normative-technical documents, reference materials in the field of geodesy and land management and related branches.

LR5. Apply conceptual knowledge of natural and socio-economic sciences in performing tasks of geodesy and land management.

LR9. Collect, evaluate, interpret and use geospatial data, metadata on objects of natural and man-made origin, apply statistical methods of their analysis to solve specialized problems in the field of geodesy and land management.

LR10. Select and apply tools, equipment, hardware and software required for remote, terrestrial, field and in-house surveys in the field of geodesy and land management.

LR15. Develop and make effective decisions on professional activities in the field of geodesy and land management, including under conditions of uncertainty.
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COURSE STRUCTURE

Topic	Hours (lectures / laboratory / ndependent)	Learning outcomes	Task	Assessment
Semester 1				
Module 1. INFORMATION TECHNOLOGIES IN GEODESY AND LAND MANAGEMENT				
Topic 1. Introduction	2/2/5	**Know the** prerequisites for the development of computer science as a science and basic techniques in the Windows environment **Apply** practical skills to create, copy, move, delete, restore, search and archive files and documents **Be able to use** different types of cloud environments to store large amounts of information.	Execution of laboratory works, their delivery (including in eLearn); Doing independent work (including in eLearn)	**45**
Topic 2. Hardware	2/4/5	**Know** the principles of functional construction of a computer as a technical tool for working with data **Be able to** work with different distance learning systems using a personal computer **Analyze** features computer network hardware	Execution of laboratory works, their delivery (including in eLearn); Doing independent work (including in eLearn)	**5**
Topic 3. Software	2/2/5	**Know** the basic elements of the operating system interface, as well as features of decision making	Execution of laboratory works, their delivery (including in eLearn);	**20**

		Be able to form the concept of PC software and its structure **Analyze** file and file system, full path to file access **Apply** practical skills in working with anti-virus software	Doing independent work (including in eLearn)	
Modular control			Final test in EHK	**30**
Total content module 1	**6/8/1 5**			**100**

Module 2. INFORMATION PROCESSING IN TEXT EDITORS				
Topic 4. Use of text editors	2/4/0	**Know** the purpose and main tasks of application packages, including Microsoft Office, as well as a text editor Microsoft Word **Be able to** configure the interface and set the parameters of work with Microsoft Word **Apply** practical skills in editing and formatting text in Microsoft Word text editor, as well as entering special characters	Execution of laboratory works, their delivery (including in eLearn);	**20**
Topic 5. Working with tables in text editors	2/4/0	**Know** the capabilities of Microsoft Word to create, edit, format tables of different structure **Be able to** create and insert tables into a document, edit and format tables, sort data in tables and perform elementary calculations in them **Highlight** additional features for working with tables: headers, automatically adding captions to the table, creating a list of tables, etc.	Execution of laboratory works, their delivery (including in eLearn);	**15**
Topic 6. Insert and create graphic objects. Use templates and create forms	2/6/0	**Know** the capabilities of MS Word to create special, templates, flowcharts, charts, graphs and placement of SmartArt graphics in a text editor **Be able to** select, place various layouts of SmartArt graphic objects, edit, format SmartArt graphic objects, in particular, create, edit your own block diagrams **Apply** practical skills in creating templates and forms, as well as links on the page, as well as creating a list of references in a text editor	Execution of laboratory works, their delivery (including in eLearn);	**10**
Topic 7. Editing and formatting text. Work with large documents	2/8/0	**Know** the basic ways to create formulas, footers **Be able to** perform simple calculations in tables in the text editor MS Word, as well as edit footers,	Execution of laboratory works, their delivery (including in eLearn);	**25**

		Apply the basic techniques for text review in MS Word		
Total content module 2	**8/22/ 0**			**100**
Total for semester 1				**70**
Test			**Тест**	**30**

EVALUATION POLICY

Deadline and recompilation policy:	Deadlines are defined in the EHK. Works that are rented out violation of deadlines without good reason, are assessed on lower score. Models are rearranged with permission lecturer if there are good reasons (for example, hospital).
Academic Integrity Policy:	Write-off during independent work, testing and credit prohibited (including the use of mobile devices). Abstracts must have correct textual references to the literature used
Visiting Policy:	Attendance is mandatory. For objective reasons (eg illness, international internship) training can to take place individually (in remote on-line form for in agreement with the dean of the faculty)

STUDENT EVALUATION SCALE

Rating of higher education seekers, points	**National assessment for the results of examinations**	
	exam	**test**
90-100	excellent	credited
74-89	good	
60-73	satisfactorily	
0-59	unsatisfactorily	not credited