СИЛАБУС ДИСЦИПЛІНИ
«GEOINFORMATION LAND AND CADASTRAL SYSTEMS»
Ступінь вищої освіти - Бакалавр
Спеціальність: 193 «Геодезія та землеустрій»
Освітня програма: «Геодезія та землеустрій»
Рік навчання: 2020-2021, семестр 8
Форма навчання: денна
Кількість кредитів ЄКТС: 3
Мова викладання: англійська

Лектор курсу	**Кошель Антон Олександрович**
Контактна інформація лектора (e-mail)	**Кафедра геоінформатики і аерокосмічних досліджень Землі корп.6, кім.129 koshel_a@nubip.edu.ua**
Сторінка курсу в eLearn	**https://elearn.nubip.edu.ua/course/view.php?id=1693**

ОПИС ДИСЦИПЛІНИ

The purpose of the course is to master and acquire the necessary theoretical knowledge and practical skills in the field of geoinformation support of the state land cadastre and knowledge formation on the development of geoinformation land cadastral national systems of Ukraine and the world, the contribution of Ukrainian and foreign scientists.

The task of studying the discipline is to form a specialist's theoretical knowledge and practical skills of geoinformation support of land cadastral works for planning the development of territories, inventory of land resources, forecasting the state of the land fund, control over the use and protection of soils.

The discipline provides the formation of a number of competencies:

general competencies:

- ЗК01. Ability to learn and master modern knowledge;
- ЗК06. Ability to use information and communication technologies.

special competencies:

- SK05. Ability to use modern information, technical and technological support to solve complex issues of geodesy and land management;
- SK07. Ability to collect, update, process, critically evaluate, interpret, store, publish and use geospatial data and metadata on objects of natural and man-made origin;
- SK13. Ability to develop land management and land valuation documentation, cadastral documentation, fill in state land, urban planning and other cadastres.

Program learning outcomes:

- PH9. 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;
- PH10. Select and apply tools, equipment, hardware and software necessary for remote, ground, field and in-house research in the field of geodesy and land management;
- PH12. Develop land management documentation, cadastral documentation and land valuation documentation using computer technology, geographic information systems and digital photogrammetry, fill in the data of state land, urban planning and other cadastres;
- PH13. Plan and perform geodetic, topographic and cadastral surveys, process the results in geographic information systems.

СТРУКТУРА КУРСУ

Тема	Години	Результати навчання	Завдання	Оцінювання
8 семестр				
MODULE 1. BASIC CONCEPTS OF GEOINFORMATION SUPPORT OF LAND CADASTRE				
Topic 1. Objectives and content of the course. The concept of geoinformation support of land cadastre.	2/2/5	Understand the theoretical foundations of the modern process of land cadastre geoinformation support and its role in the system of land relations. Know the tasks, basic concepts and definitions, requirements for geoinformation land cadastral systems. Know the content, structure of the course geoinformation land cadastral systems.	Execution of the laboratory and its delivery (including in elearn).	4
Topic 2. Regulatory documents and standardization in the study of the discipline "Geoinformation land cadastral systems".	1/2/4	Understand the structure and standards governing the operation of geoinformation land cadastral systems. Know the basic legal documents governing the creation and operation of geoinformation land cadastral systems. Know the international ISO standards for the creation of geoinformation support land cadastral systems.	Execution of the laboratory and its delivery (including in elearn).	4/2
Topic 3. Equipment and software for the implementation of geographic land cadastral system.	1/4/5	Know the hardware, basic equipment and existing software on the market for the creation and development of geoinformation land cadastral systems. Know the classification of land use restrictions.	Execution of the laboratory and its delivery (including in elearn). Performing independent work (including in elearn).	4/2
Topic 4. Geoinformation modeling. Land	2/4/5	Know the types of land cadastral databases and geodata banks.	Execution of the laboratory and its	2/4

cadastral databases. Data banks.		Distinguish geoinformation modeling in geoinformation land cadastral systems.	delivery (including in elearn).	
Topic 5. Functions of land information systems.	2/3/4	Know geoinformation land cadastral systems as components of land information systems (LIS). Understand the main functions and tasks that solve land information systems.	Execution of the laboratory and its delivery (including in elearn).	6
MODULE 2. THE CONCEPT OF CREATING GEOGRAPHIC INFORMATION LAND CADASTRAL SYSTEMS.				
Topic 6. Information base of geoinformation systems. The concept of creating geographic information land cadastral systems.	3/5/7	Know the basis of the source of geospatial information for the creation of the National Cadastral System (NCS). Understand the main components of the NCS information base. Know the conceptual foundations, principles, architecture of the NCS.	Execution of the laboratory and its delivery (including in elearn).	4/2
Topic 7. Fundamentals of analysis and cartographic modeling. Cartographic support of SLC.	2/5/7	Know the main tasks of GIS analysis in geoinformation land cadastral systems. Know cartographic modeling using CALCS. Understand the types of cartographic support of the State Land Cadastre, its types.	Execution of the laboratory and its delivery (including in elearn). Performing independent work (including in elearn).	4/2
Topic 8. Basics of creating land cadastral information. Cartographic methods of working with land cadastre. Index cadastral map (plan).	2/5/8	Know the principles of creating land cadastral information. Understand the electronic terrain map information classifier. Know the basics of creating and working with digital index cadastral maps (plans).	Execution of the laboratory and its delivery (including in elearn).	4/2
Всього	15/30/45	-	-	70
Екзамен	30	-	-	30
Всього за курс				100

ПОЛІТИКА ОЦІНЮВАННЯ

Deadline and recompilation policy:	Works that are submitted in violation of deadlines without good reason are evaluated at a lower grade. Rearrangement of modules takes place with the permission of the lecturer if there are good reasons (for example, hospital).
Academic Integrity Policy:	Write-offs during tests and exams are prohibited (including the use of mobile devices). Abstracts, presentations must have correct text references to the literature used.
Visiting 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).

ШКАЛА ОЦІНЮВАННЯ СТУДЕНТІВ

Рейтинг здобувача вищої освіти, бали	**Оцінка національна за результати складання екзаменів заліків**	
	екзаменів	**заліків**
90-100	відмінно	зараховано
74-89	добре	
60-73	задовільно	
0-59	незадовільно	незараховано