СИЛАБУС ДИСЦИПЛІНИ
«Organic, bioorganic, physical and colloid chemistry»

Ступінь вищої освіти - Bachelor
Спеціальність 101 Ecology
Освітня програма «Ecology»
Рік навчання 1, семестр 2
Форма навчання _ full-time
Кількість кредитів ЄКТС_3_
Мова викладання _ English

Лектор курсу	_____ Ph.D., Associate Professor Viktoria Krotenko
Контактна інформація лектора (e-mail)	**___krotenkoviktoria66@gmail.com_____**
Сторінка курсу в eLearn	https://elearn.nubip.edu.ua/course/view.php?id=2920

ОПИС ДИСЦИПЛІНИ

(до 1000 друкованих знаків)

The aim of the discipline " Organic, bioorganic, physical and colloid chemistry " is to form students' theoretical foundations of organic, bioorganic, physical and colloid chemistry, practical skills in working with different types of organic compounds, studying the specific features of their behavior in chemical reactions, gaining experience in a chemical laboratory to solve specific practical problems, ability to work with scientific literature. The course of organic, bioorganic, physical and colloid chemistry should be the basis for the study of special disciplines: biochemistry, genetics, etc.

A student must be able to identify patterns of relationship between the structure and structure of chemical compounds; also be able to establish the relationship between the constituent parts of the substance, as well as individual components in mixtures; know the laws of chemical processes; to develop skills.

СТРУКТУРА КУРСУ

Тема	**Години** (лекції/ лабораторні, практичні, семінарські)	**Результати навчання**	**Завдання**	**Оцінювання**
Module 1				
Topic 1. Introduction. The most important theoretical principles of organic chemistry. Aliphatic hydrocarbons.	24	Learn the basic concepts of the subject. Learn the rules of safety when working in a chemical laboratory.	Make a lab work. Do homework on this topic and send them to the elearn	Up to 10 points for laboratory work and homework. Up to 5 additional points for other types of tasks (abstracts, presentations)
Topic 2.	2/4	To study the chemical properties of alcohols, phenols.	Make a lab work. Do homework on	Up to 10 points for laboratory

Hydroxyl organic substances: alcohols, phenols		Master the method of determining them with the help of qualitative reactions	this topic and send them to the elearn	work and homework. Up to 5 additional points for other types of tasks (abstracts, presentations)
Topic 4. Carbonyl and carboxyl compounds: aldehydes, ketones, carboxylic acids, fats	2/4	To study the properties of aldehydes, carboxylic acids, fats. Master the method of obtaining soap from fat.	Make a lab work. Do homework on this topic and send them to the elearn	Up to 10 and 15 points, respectively, for laboratory work and homework Up to 5 additional points for other types of tasks (abstracts, presentations
Module 2				
Topic 4. Carbohydrates	2/4	To study the chemical properties of mono- and polysaccharides. Master the method of determining them with the help of qualitative reactions.	Make a lab work. Do homework on this topic and send them to the elearn	Up to 10 points for laboratory work and homework. Up to 5 additional points for other types of tasks (abstracts, presentations)
Topic 6. Amines. Amino alcohols. Amino acids. Proteins. Heterocyclic compounds	2/4	To study the chemical properties of aromatic amines, amino acids and proteins. Master the method of determining them with the help of qualitative reactions.	Make a lab work. Do homework on this topic and send them to the elearn	Up to 10 points for laboratory work and homework. Up to 5 additional points for other types of tasks (abstracts, presentations)
Module 3				
Topic 1. Fundamentals of physical chemistry ..	3/6	Know the subject and objectives of physical and colloid chemistry of chemistry, prospects for its development, the importance of practical activities of specialists; Know the basic concepts in physical chemistry, the laws of thermodynamics,	Make a lab work. Do homework on this topic and send them to the elearn	Up to 10 points for laboratory work and homework. Up to 5 additional points for other types of tasks (abstracts, presentations)

		Hess's law and its consequences.		
Topic2. Fundamentals of Coloid Chemistry	2/4	Know the basic concepts of colloid chemistry, classification of dispersed systems and surface phenomena. Understand and analyze adsorption processes, Be able to influence the passage of ion exchange processes; select effective adsorbents for selective adsorption. Be able to schematically write the structure of the micelles of lyophobic sol	Make a lab work. Do homework on this topic and send them to the elearn	Up to 10 points for laboratory work and homework. Up to 5 additional points for other types of tasks (abstracts, presentations)
Total 1 sem				**70**
exam				**30**
Total				**100**

ПОЛІТИКА ОЦІНЮВАННЯ

Політика щодо дедлайнів та перескладання:	Роботи, які здаються із порушенням термінів без поважних причин, оцінюються на нижчу оцінку. Перескладання модулів відбувається із дозволу лектора за наявності поважних причин (наприклад, лікарняний).
Політика щодо академічної доброчесності:	Списування під час контрольних робіт та екзаменів заборонені (в т.ч. із використанням мобільних девайсів).
Політика щодо відвідування:	Відвідування занять є обов'язковим. За об'єктивних причин (наприклад, хвороба, міжнародне стажування) навчання може відбуватись індивідуально (в он-лайн формі за погодженням із деканом факультету)

ШКАЛА ОЦІНЮВАННЯ СТУДЕНТІВ

Percentage score	National grade	
90-100	Excellent	Passed
74-89	Good	
60-73	Satisfactory	
0-59	Unsatisfactory	Non-passed