

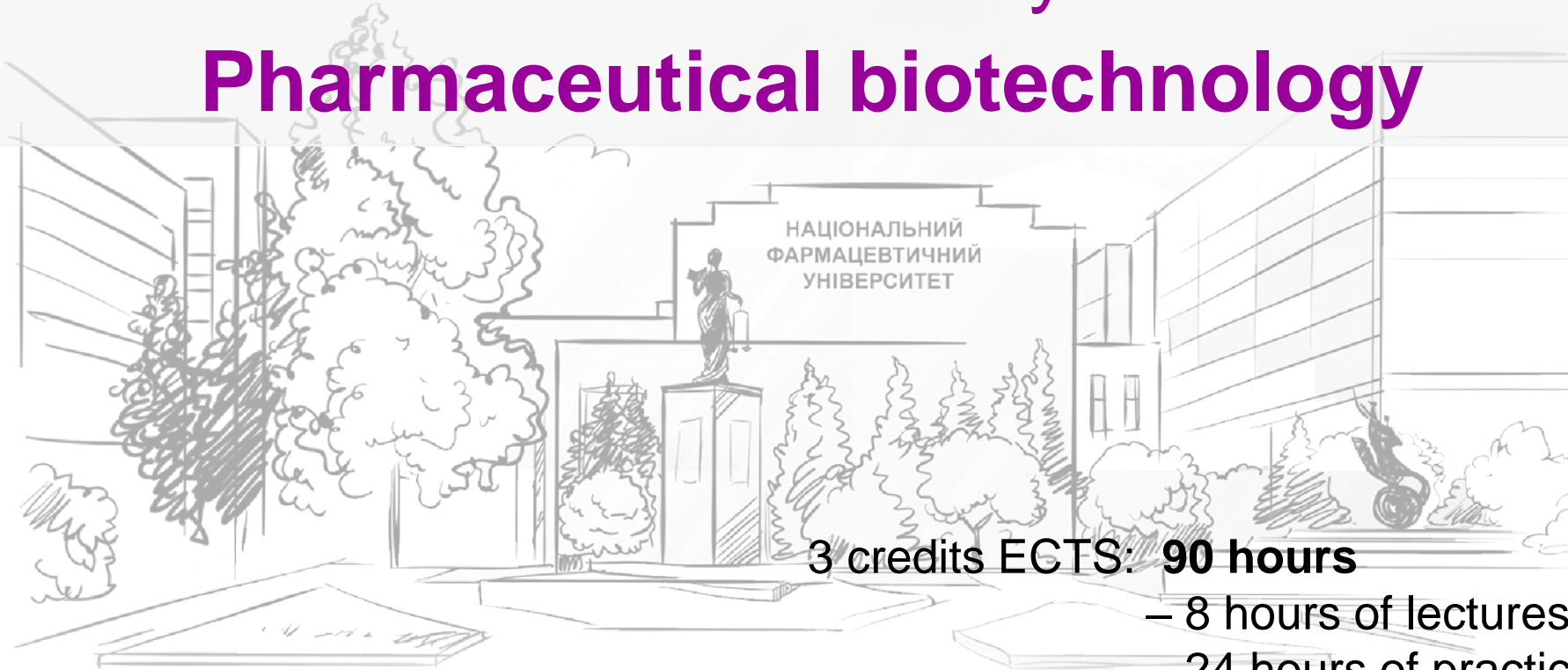


МІНІСТЕРСТВО ОХОРОНИ ЗДОРОВ'Я УКРАЇНИ  
НАЦІОНАЛЬНИЙ ФАРМАЦЕВТИЧНИЙ УНІВЕРСИТЕТ



Кафедра біотехнології

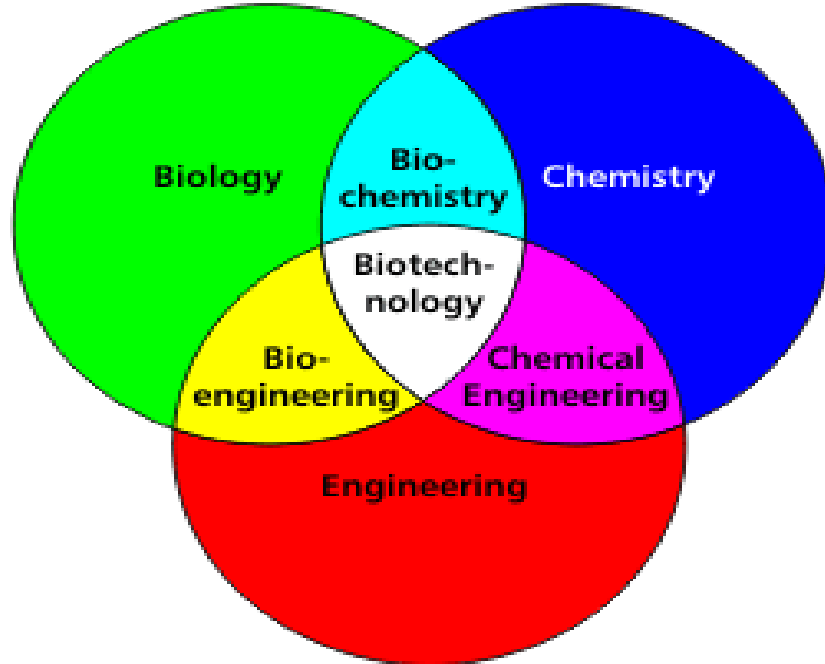
# Selective component EP «Pharmacy» Pharmaceutical biotechnology



**3 credits ECTS: 90 hours**

- 8 hours of lectures
- 24 hours of practical classes

# Dear students!



**Biotechnology - science that studies possibilities **use of living organisms**, their systems or products of life**

**To solve technological problems, as well as exploring opportunities**

**creation of living organisms**

**with the necessary properties by genetic engineering methods**

# Dear students!

Biotechnology has a long history and covers a wide range of processes of modification of biological organisms to meet human needs, starting with the modification of plants and animals by artificial selection and hybridization.

Modern biotechnology owes its success to discoveries in biochemistry, genetics and cell biology, development of genetic engineering methods (since the 1970s), as well as the emergence of new directions, in particular bioinformatics and proteomics.



# Purpose of the discipline:



mastering by students of theoretical bases and practical abilities and skills

- ✓ conducting biotechnological processes,
- ✓ management of microorganism cultivation processes
- ✓ quality control of the received target products,
- ✓ mastering the features and getting acquainted with the achievements biotechnology production pharmaceuticals of the latest generation,

**which will allow to effectively realize the scientific and creative potential of future specialists.**



# Lectures

No	Topic	
1	<b>BIO-OBJECTS AND METHODS OF BIOTECHNOLOGY</b>	
2	<b>MAIN STAGES OF BIOTECHNOLOGICAL PROCESS</b>	
3	<b>PROBIOTICS. BACTERIOPHAGES.</b> general characteristics, drugs, production	
4	<b>BIOTECHNOLOGICAL PRODUCTION OF PREPARATIONS OF MICROORGANISM METABOLITES</b> amino acids, vitamins, enzymes, antibiotics	
5	<b>TECHNOLOGY OF IMMUNE PREPARATION PRODUCTION</b>	
6	<b>HORMONAL DRUGS, WHICH ARE OBTAINED BY BIOTECHNOLOGICAL METHODS</b> Principles and stages of production, dosage forms	
7	<b>CELL TECHNOLOGIES:</b> Plant cell culture technologies Animal cell culture technologies	



Pharmaceutical biotechnology as a discipline contains systematized scientific knowledge

on methods of obtaining drugs and pharmaceuticals substances using living systems and methods of quality control.



# Teachers



Head of Biotechnology department  
Natalia Khokhlenkova



Assistant of Biotechnology department  
Alina Soloviova