



National Technical University of Ukraine "Igor Sikorsky Kyiv Polytechnic Institute"

CURRICULUM
(educational component of the training program)
2020/ 2021 year
(Enrollment 2019)

APPROVED

Vice-Rector for Academic Affairs
Igor Sikorsky Kyiv Polytechnic Institute

Level PhD

Field of study

16 Chemical and bioengineering

Form of study

part-time

Specialty

162 - Biotechnologies and bioengineering

Educational component

40 ECTS Credits

Anatolii MELNYCHENKO

Educational and Scientific Program

Biotechnologies

Base level

Master degree

* 30 * 06 2020 p.

I. Educational component

No	Educational components	Name of the Chair	ECTS Credits	Hours	Number of hours										Distribution for terms (semesters)										Distribution of hours for years and terms (semesters)												
					Total	Lectures/practical lessons					Self-study	Exams	Final tests	Module tests	Course projects	Course works	CGW,CW, GW	Home tests	Abstracts	3 semester		4 semester															
						Total	Lectures	Practical	Laboratory	Individual task										Lectures	Practical	Laboratory	Total	Lectures	Practical	Laboratory	Total	Lectures	Practical	Laboratory							
																															Total	inc. individual Lessons	inc. to curriculum	inc. individual Lessons	inc. to curriculum	inc. individual Lessons	inc. to curriculum
1. Normative components																																					
<i>Educational disciplines for mastering general scientific (philosophical) competencies</i>																																					
<i>Educational disciplines for acquisition language competencies</i>																																					
<i>Educational disciplines for acquisition in-depth knowledge of the specialty</i>																																					
1	Integration and differentiation of modern scientific knowledge in biotechnology	Industrial Biotechnology	4	120	36	18	18								84	3	3								8	6	2										
2	Problematic issues of environmental biotechnology and bioenergy	Environmental Biotechnology and Bioenergy	4	120	36	18	18								84	3	3									8	6	2									
3	Modern achievements of bioengineering and bioinformatics	Bioinformatics	4	120	36	18	18								84	4	4											8	6	2							
Total			12	360	108	54	54								252	3	3								16	12	4	8	6	2							
<i>Educational disciplines for the acquisition of universal competencies of the researcher</i>																																					
4	Organization of scientific and innovative activity	Environmental biotechnology and bioenergy	4	120	36	18	18								84	4	4												8	6	2						
5	Pedagogical internship**	Environmental biotechnology and bioenergy	2	60											60																						
Total			6	180	36	18	18								144	2	1											8	6	2							
TOTAL of NORMATIVE educational components			18	540	144	72	72								396	3	2	4							16	12	4	16	12	4							
2. Elective components																																					
6	Modern development of waste processing biotechnologies and bioenergy	1* Environmental Biotechnology and Bioenergy	5	150	36	18	18								114	3	3									8	6	2									
7	Controlled synthesis of metabolites	1* Environmental Biotechnology and Bioenergy	5	150	36	18	18								114	4	4												8	6	2						
TOTAL of ELECTIVE educational components			10	300	72	36	36								228	2	2									8	6	2	8	6	2						
Total			28	840	216	108	108								624	5	2	6							24	18	6	24	18	6							
Number of			Exams			5										3										2											
			Final tests			1												1										1									
			Module tests			6												3										3									
			Individual tasks																																		
			Course projects																																		
			Course works																																		
			CGW,CW, GW																																		
			Home tests																																		
Abstracts																																					

Internships**

No	Type of Internship	Term of carrying out	Duration, weeks	semester
1	Pedagogical Internship	07.12.20-27.12.20	2	3

Distribution of hours for preparation and defense PhD

Type of work	Hours for 1 PhD-student	Chair	Number of PhD students		Total hours	
			B	C	B	C
			Scientific supervizing	25 hours per semester	Environmental Biotechnology and Bioenergy	

* Number of students who chose the discipline

Head of SMB _____ / Natalia GOLUB \

Guarantor of ESP _____ /Natali GOLUB /