



MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE  
National Technical University of Ukraine "Igor Sikorsky Kyiv Polytechnic Institute"  
**CURRICULUM**

(Enrolment 2019)

**APPROVED**

by Academic Council

Igor Sikorsky Kyiv Polytechnic Institute  
(meeting protocol № 5 from "30" 06 2020)

Head of Academic Council

Mykhaylo ILCHENKO

Level PhD

Specialty 162 - Biotechnologies and bioengineering

Educational and Scientific program Biotechnologies

Graduation Departments Industrial biotechnology

Ecobiotechnology and Bioenergetics

Bioinformatics

Faculty (Institute) Biotechnology and biotechnics

Form of study part-time

(full-time, part-time)

Qualification PhD of biotechnologies and bioengineering

Study duration 4 years

Base level Master degree

Educational component 40 ECTS Credits

**Schedule of study**

YEAR	October					November					December					January					February					March					April					May					June					July					August					September				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50										
I											E	E	E	E	R	R	R	R	R	RT	RT	RT																			E	E	H	H	H	H	H	H	H	H	H	H	H	H	H	RT	RT	RT		
II											I	I	E	E	E	R	R	R	R	RT	RT	RT																			E	E	H	H	H	H	H	H	H	H	H	H	H	H	H	RT	RT	RT		
III	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	RT	RT	RT																			R	R	H	H	H	H	H	H	H	H	H	H	H	H	H	RT	RT	RT		
IV	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	RT	RT	RT																			R	R	H	H	H	H	H	H	H	H	H	H	H	H	H	RT	RT	RT		

Symbols: Learning period E Examination I Internship R Research RT Report A Assessment H Holiday

**I. Educational component**

Summary table of time budget (Weeks)					
YEAR	Learning period	Examination	Internship	Holiday	Total
I	48	4			52
II	48	4			52

Internship		
Type of Internship	YEAR	Weeks
Pedagogical	2	2

**Plan of Educational process**

Code	Educational components	Distribution for terms (semesters)				ECTS Credits	Number of hours					
		Exams	Final tests	Individual task	Module test		Total	Lectures/practical lessons			Self-study	
								Lectures	Practical	Laboratory		
1	2	3	4	5	6	7	8	9	10	11	12	
<b>1. Normative components</b>												
<b>1.1. General training cycle</b>												
30 1	General scientific (philosophical) discipline	2	1			1	4	120	8	6		106
30 2	Foreign language for scientific activity	2	1	1	2	6		180		14		166
<b>1.2. Vocational training cycle</b>												
30 3	Integration and differentiation of modern scientific knowledge in biotechnology	3			3	4	4	120	6	2		112
30 4	Problematic issues of environmental biotechnology and bioenergy	3			3	4	4	120	6	2		112
30 5	Modern achievements of bioengineering and bioinformatics	4			4	4	4	120	6	2		112
30 6	Academic discipline for the acquisition of language competencies sufficient to present and discuss the results of scientific work in English orally and in writing		2			2		60	4	2		54
30 7	Pedagogical internship**		3			2		60				60
30 8	Organization of scientific and innovative activity		4		4	4	4	120	6	2		112
<b>TOTAL of NORMATIVE educational components</b>		<b>5</b>	<b>5</b>	<b>1</b>	<b>6</b>	<b>30</b>		<b>900</b>	<b>36</b>	<b>30</b>		<b>834</b>
<b>2. Elective components</b>												
B1	Elective disciplines in the field of postgraduate research. Educational component 1 F-Catalog	3			3	5		150	6	2		142
B2	Elective disciplines in the field of postgraduate research. Educational component 2 F-Catalog	4			4	5		150	6	2		142
<b>TOTAL of ELECTIVE educational components</b>		<b>2</b>			<b>2</b>	<b>10</b>		<b>300</b>	<b>12</b>	<b>4</b>		<b>284</b>
<b>TOTAL</b>		<b>7</b>	<b>5</b>	<b>1</b>	<b>8</b>	<b>40</b>		<b>1200</b>	<b>48</b>	<b>34</b>	<b>0</b>	<b>1118</b>

**II. Scientific component**

YEAR	The content of the graduate student's scientific work	Forms of control (Reporting)
1st year	Preparation of the literature review of own scientific research topic; Experimental samples manufacturing and elaboration of the own research methodology and methods. Participation in scientific and practical conferences (seminars)	Approval of the PhD-student's individual plan of work at the academic council of the institute / faculty, reporting on the progress of the PhD-student's individual plan of work twice a year
2nd year	Conducting of own research on the dissertation topic and analysis of research results. Preparation and publication of at least 1 article on the research topic; participation in scientific and practical conferences (seminars) with the publication of papers.	Reporting on the progress of the PhD-student's individual plan of work twice a year
3rd year	Conducting of own research on the dissertation topic; substantiation of scientific novelty of the obtained results, their theoretical and / or practical significance. Preparation and publication of at least the 1 article in scientific professional editions on the research topic; participation in scientific and practical conferences (seminars) with the publication of papers.	Reporting on the progress of the PhD-student's individual plan of work twice a year
4th year	Generalization of the scientific results and preparation of the dissertation. Summarizing information about publications of research results of the dissertation (not less than 3 papers) in accordance with current requirements. Implementation of the obtained results and receiving of supporting documents. Submission of documents for preliminary peer-review of the dissertation. Preparation of a scientific report	Reporting on the progress of the PhD-student's individual plan of work twice a year. Providing the confirming documents on the scientific novelty, theoretical and practical significance of the dissertation results.

Head of the Scientific and Methodical Board of Speciality \_\_\_\_\_ /Nataliia GOLUB\_ /

Head of the Department \_\_\_\_\_ / \_Yevhenii KUZMINSKY/ /

Dean of the Faculty \_\_\_\_\_ / Oleksii DUHAN /