



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

CURRICULUM

(Enrolment 2019 (transitional))

APPROVED

by Academic Council
Igor Sikorsky Kyiv Polytechnic Institute
(meeting protocol № __ from _____ 2020)
Head of Academic Council
_____ Mykhaylo ILCHENKO

Level _____ **PhD** _____
Speciality _____ **142 Power Machinery** _____

Form of study _____ **full-time** _____
(full-time, part-time)

Educational and Scientific program _____
_____ **Power Machinery** _____

Qualification _____
Study duration _____ **4 years** _____

Graduation Departments _____ **Department of Nuclear Power Stations and Engineering Thermal Physics** _____

Base level _____ **Master degree** _____

Faculty (Institute) _____ **Heat and Power Engineering** _____

Educational component _____ **50 ECTS Credits** _____

Schedule of study

YEAR	October	November	December	January	February	March	April	May	June	July	August	September													
I	1	2	3	4	5	6	7	8	9	10	11	12	13	14	E	E	E	R	R	R	RT	RT	RT	RT	RT
II															I	I	E	E	E	R	R	RT	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	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	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)					Internship			
YEAR	Learning period	Examina-tion	Internship	Holiday	Total	Type of Internship	YEAR	Weeks
I	28	5			9	Pedagogical	2	2
II	26	5	2		9			

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
1. Normative components											
Educational disciplines for mastering general-scientific (philosophical) competencies											
301	Philosophical principles of scientific activity	2	1	2	1	6,0	180	31	49		100
Educational disciplines for acquiring language competencies											
302	Foreign language for scientific activity	2	1	1	2	6	180		75		105
Educational disciplines for obtaining in-depth knowledge of the speciality											
303	Methods of intensification of heat and mass transfer processes in heterogeneous systems	1		1	1	4	120	26			94
304	Kinetics of phase transformations in power equipment	2			2	4	120	45			75
305	Technological methods for ensuring the ecological characteristics of energy facilities	3			3	4	120	33	6		81
306	Modern trends and technologies in the energy sector	4		4	4	4	120	36	9		75
Educational disciplines for the acquisition of universal competencies of the researcher											
307	Scientific and innovative activities organization	1		1		4	120	20	6		94
308	Research in modern software environments and 3-D modeling			2	2	3	90	18	18		54
309	Pedagogical practice*			3		2	60				
TOTAL of NORMATIVE educational components		7	4	6	7	37	1020	191	145		624
2. Elective components											
B1	Educational component 1. IF- Catalog	3			3	6,5	195	52	13		130
B2	Educational component 2. IF- Catalog	4			4	6,5	195	54	18		123
TOTAL of ELECTIVE educational components		2			2	13	390	106	31		253
TOTAL		9	4	6	9	50	1500	315	194		991

II. Scientific component

YEAR	The content of the graduate student's scientific work	Forms of control (Reporting)
1st year	The choice of the topic of the graduate student's dissertation, the formation of an individual work plan of the graduate student; execution of the dissertation work under the guidance of the scientific supervisor; preparation and submission for publication of at least 1 publication on the topic of the dissertation in accordance with current requirements.	Approval by the academic council of the institute / faculty by 30.11.2020, reporting on the implementation of the individual plan of the graduate student twice a year
2nd year	Execution under the guidance of the supervisor of the dissertation; preparation and submission for publication of at least 1 publication for the dissertation topic in accordance with current requirements.	Reporting on the implementation of the individual plan of the graduate student twice a year
3rd year	Execution under the guidance of the supervisor of the dissertation; preparation and submission for publication of at least 1 publication for the dissertation topic in accordance with current requirements.	Reporting on the implementation of the individual plan of the graduate student twice a year
4th year	Completion of the dissertation, summarizing the results of publications (at least three) on the topic of the dissertation in accordance with current requirements. Submission of documents for preliminary examination of the dissertation. Graduation certification	Reporting on the implementation of the individual plan of the graduate student twice a year. Providing an opinion on the scientific novelty, theoretical and practical significance of the dissertation results. PhD thesis defence

Head of the SMB of Speciality _____ / **Valery TUZ** /
(Signature) (Name)

Head of the NPS and ETP Department _____ / **Valery TUZ** /
(Signature) (Name)

Dean of the Heat and Power Engineering Faculty _____ / **Yevgen PYSMENNYI** /
(Signature) (Name)