



MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE

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

# CURRICULUM

(Enrolment 2020)

**APPROVED**

by Academic Council

Igor Sikorsky Kyiv Polytechnic Institute  
(meeting protocol № \_\_ from \_\_\_\_\_ 2020)

Head of Academic Council

\_\_\_\_\_ Mykhaylo ILCHENKO

Level PhD

Speciality 131 - Applied mechanics

Educational and Scientific program \_\_\_\_\_

Dynamics and strength of machines

Graduation Departments Dynamics and strength of machines and strenght of materials

Faculty (Institute) Institute of Mechanical Engineering

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

Qualification PhD

Study duration 4 years

Base level Master degree

Educational component 30 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	51	52				
I															E	E	E	R	R	RT	RT	RT																			E	E	H	H	H	H	H	H	H	H	H	H	R	RT	RT	RT
II												I	I		E	E	E	R	R	RT	RT	RT																			E	E	H	H	H	H	H	H	H	H	H	H	R	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	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	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	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	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	28	5		9	42
II	26	5	2	9	42

### Internship

Type of Internship	YEAR	Weeks
Pedagogical Practice	3	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>											
PhC 1	Philosophical principles of scientific	2	1	2	1	6	180	31	49		100
LC 1	Foreign language for scientific activity	2	1	1	2	6	180		76		104
<b>1.2. Vocational training cycle</b>											
GC 1	Methods of design and calculation of machines and structures	3	4			3	90			44	46

<b>GC 2</b>	<b>Reliability of machines and structures</b>	<b>4</b>	<b>3</b>			<b>3,5</b>	<b>105</b>	<b>31</b>	<b>31</b>		<b>43</b>
<b>GC 3</b>	<b>Machine dynamics and control processes</b>	<b>1</b>				<b>3</b>	<b>90</b>	<b>26</b>			<b>64</b>
<b>GC 4</b>	<b>Diagnostics and quality assurance systems</b>		<b>4</b>			<b>2,5</b>	<b>75</b>		<b>18</b>		<b>57</b>
<b>PC 1</b>	<b>Organization of scientific and innovative</b>		<b>2</b>			<b>4</b>	<b>120</b>	<b>36</b>	<b>18</b>		<b>66</b>
<b>PC 2</b>	<b>Pedagogical practice</b>		<b>3</b>			<b>2</b>	<b>60</b>				<b>60</b>
<b>TOTAL of NORMATIVE educational components</b>		<b>5</b>	<b>7</b>			<b>30</b>	<b>900</b>	<b>124</b>	<b>192</b>	<b>44</b>	<b>540</b>
<b>2. Elective components</b>											
<b>PS 1</b>	<b>Educational component 1 of Depart-catalogue</b>	<b>4</b>				<b>5</b>	<b>150</b>	<b>54</b>			<b>96</b>
<b>PS 2</b>	<b>Educational component 2 of Depart-catalogue</b>	<b>4</b>				<b>5</b>	<b>150</b>	<b>54</b>			<b>96</b>
<b>PS 3</b>	<b>Educational component 3 of Depart-catalogue</b>		<b>3</b>			<b>5</b>	<b>150</b>	<b>39</b>			<b>111</b>
<b>TOTAL of ELECTIVE educational components</b>		<b>2</b>	<b>1</b>			<b>15</b>	<b>450</b>	<b>147</b>			<b>303</b>
<b>TOTAL</b>		<b>7</b>	<b>8</b>			<b>45</b>	<b>1350</b>	<b>271</b>	<b>192</b>	<b>44</b>	<b>843</b>

## II. Scientific component

<b>YEAR</b>	<b>The content of the graduate student's scientific work</b>	<b>Forms of control (Reporting)</b>
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 at the Academic Council of the Institute / Faculty by 30.11.2020, reporting on the progress 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 on the topic of the dissertation in accordance with current requirements.	Reporting on the progress of the individual graduate student's plan 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 on the topic of the dissertation in accordance with current requirements.	Reporting on the progress of the individual graduate student's plan 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 progress 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 defense.

**Head of the Scientific and Methodical Board of Speciality** \_\_\_\_\_ / \_\_ Mykola BOBYR

**Head of the Department** \_\_\_\_\_ / \_ Sergii PYSKUNOV

**Dean of the Faculty** \_\_\_\_\_ / \_\_ Mykola BOBYR