MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE
National Technical University of Ukraine "Igor Sikorsky Kyiv Polytechnic Institute"
CURRICULUM
(Enrolment 2025)

APPROVED
by Head of Academic Council
Igor Sikorsky Kyiv Polytechnic Institute
_____2025
protocol № _____
Mykhaylo ILCHENKO

Bachelor level in G Engineering, Manufacturing and Construction
Speciality G5 Electronics, electronic communications, instrument engineering and radio engineering
"INTELLIGENT TECHNOLOGIES OF RADIOELECTRONIC EQUIPMENT"
Form of study Full-time
Graduation department
Department of Applied Radioelectronics

Institute: Radio Engineering Faculty
Qualification: Bachelor of Electronics, electronic communications, instrument engineering and radio engineering
Study duration: 3 years 10 months
Basic education: complete general secondary education
Academic groups: PE-41

I. Schedule of educational process

Year	September				October				November				December				January				February				March				April				May				June				July					August			
	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
1																С	С	С	К	К	К	К																С	С	С	К	К	К	К	К	К	К	К	К	К	К	К
2																С	С	С	К	К	К	К																С	С	С	К	К	К	К	К	К	К	К	К	К	К	К
3																С	С	С	К	К	К	К																С	С	С	К	К	К	К	К	К	К	К	К	К	К	К
4																С	С	С	К	К	К	К										С	П	П	П	П	Д	Д	Д	Д	Д	А	А	-	-	-	-	-	-	-	-	-

Symbols: Learning period; С Examination; П Practice; Д Diploma project; А Atestation

II. Summary table of time budget (Weeks)

year	Learning period	Examination	Practice	Diploma project	Atestation	Vacation	Total
1	30	6	0	0	0	16	52
2	30	6	0	0	0	16	52
3	30	6	0	0	0	16	52
4	25	4	4	4	2	4	43

III. Practice

Type of practice	Semester	Weeks
Pre-diploma practice	8	4

IV. Atestation

Subject	Form of graduates assessment	Semester
Diploma project	Graduation Project	8

V. Plan of Educational process

Code in EP	Subjects	Control activities: Exams	Final tests	Module test	CGW, CW, GW	HCW	Abstracts	ECTS crds.	Hours: Total amount	Auditorial: Total	Lectures	Practices	Labs	Self-study	Hours distributing per week among years and semesters: 1st year		2nd year		3rd year		4th year	
															Semester							
															1	2	3	4	5	6	7	8
															Weeks in semester							
															15	15	15	15	15	15	15	10
1	2	3	4	5	6	7		9	10	11	12	13	14	15	17	18	19	20	21	22	23	24
1. Normative educational components																						
1.1. General training cycle																						
GN 01	Analytic Geometry and Linear Algebra		1	1	1			4.0	120	60	30	30		60	4							
GN 02	English Language		2	1				5.0	150	88		88		62	2.93	2.93						
GN 03.1	Higher Mathematics. Part 1. Differential and Integral Calculus of Functions of One Variable	1		1	1			4.0	120	60	30	30		60	4							
GN 03.2	Higher Mathematics. Part 2. Differential and Integral Calculus of Functions of Many Variables, Differential	2		2	2			7.0	210	104	44	60		106	6.93							
GN 03.3	Higher Mathematics. Part 3. Series and Functions of a Complex Variable	3		3	3			5.0	150	60	30	30		90			4					
GN 04	Introduction to Speciality		1	1				2.0	60	30			30	30	2							
GN 05	Engineering and Computer Graphics		1	1	1			5.0	150	60	16	14	30	90	4							
GN 06.1	Informatics. Part 1. Fundamentals of Programming and Algorithms	1		1	1			6.0	180	90	16		74	90	6							
GN 06.2	Informatics. Part 2. Fundamentals of Computer Technology		2	2	2			4.0	120	60	30		30	60		4						
GN 07	Fundamentals of Healthy Lifestyle		2	1				3.0	90	60	16	44		30	2	2						
GN 08	Fundamentals of Metrology		1	1	1			3.0	90	44	16		28	46	2.93							
GN 09	Ukrainian language for Professional Purposes		1	1				2.0	60	30	16	14		30	2							
GN 10.1	General Physics. Part 1	2		2	2			8.0	240	104	60	30	14	136		6.93						
GN 10.2	General Physics. Part 2	3		3	3			4.0	120	46	16	30		74			3.07					
GN 11	History of Science and Technology		2	2				2.0	60	30	16	14		30		2						
GN 12	Fundamentals of Electronic Communications Networks		2	2	2			3.0	90	44	16		28	46		2.93						
GN 13	Environmental Protection Strategy		2	2				2.0	60	30	13	14		30		2						
GN 14	English language for Professional Purposes		4	3				5.0	150	88		88		62			2.93	2.93				
GN 15	Fundamentals of Circuits Theory	3		3	3			8.0	240	120	60	44	16	120			8					
GN 16.1	Circuit. Part 1		3	3	3			3.0	90	46	30		16	44			3.07					
GN 16.2	Circuit. Part 2		4	4	4			4.0	120	76	30	30	16	44				5.07				
GN 17	Theoretical Course of Basic General Military Training / Civil Protection, Defence and Patriotic Education		3					3.0	90	60	36	24		30			4					
GN 18	Electrodynamics and Propagation of Radio Waves	4		4	4			7.0	210	108	42	38	28	102				7.2				
GN 19	Signals and Processes in Radio Engineering	4		4	4			5.0	150	76	30	30	16	74				5.07				
GN 20	Digital Signal Processing	5		5	5			5.0	150	76	30	30	16	74					5.07			
GN 21	Introduction to Philosophy		6	6				2.0	60	30	16	14		30						2		
GN 22	Business Law		6	6				2.0	60	30	16	14		30						2		
GN 23	Economics and Production Organization		7	7				3.0	90	60	30	30		30							4	
GN 24	Labor Safety		7	7				4.0	120	60	30	24	6	60							4	
	Total number of part 1.1	10	19	28	17	0	0	120	3600	1830	718	764	348	1770	29.86	29.72	25.27	20.07	5.07	4	8	0
1.2. Professional training cycle																						
PN 01	Programmable means in intelligent radio electronic equipment		4	4	4			4.0	120	46	16	30		74				3.07				
PN 02	Intelligent Elements Design of Radio Electronic Systems	5		5				6.0	180	90	46	30	14	90					6			
PN 03	Microwave Devices and Antennas	5		5	5			6.0	180	90	44	30	16	90					6			
PN 04	Communication Methods in Intelligent Radio Electronic Systems	6		6				5.0	150	76	30	30	16	74						5.07		
PN 05	Printed Circuit Boards Design	6		6	6			5.0	150	76	16	60		74						5.07		
PN 06	Communication Means in Intelligent Radio Electronic Systems	7		7	7			5.0	150	46	30	30	16	74							5.07	
PN 07	Design and Production Technologies of Intelligent Radio Electronic Equipment	7		7	7			7.0	210	106	60	30	16	104							7.07	
PN 08	Information Protection in Intelligent Radio Electronic Systems		8	8	8			4.0	120	50	20	30		70								5
PN 09	Computer Simulation in Intelligent Systems		8	8	8			4.0	120	50	20	30		70								5
PN 10	Pre-diploma Practice		8					6.0	180	0				180								x
PN 11	Degree Project							6.0	180	0				180								x
PN 12	Intelligent Elements Design of Radio Electronic Systems. Coursework		5					1.0	30	14		14		16					0.93			
PN 13	Communication Means in Intelligent Radio Electronic Systems. Coursework		7					1.0	30	0				30							x	
	Total number of part 1.2	6	6	9	7	0	0	60	1800	674	282	314	78	1126	0	0	0	3.07	12.93	10.14	12.14	10
	TOTAL IN COMPULSORY	16	25	37	24	0	0	180	5400	2504	1000	1078	426	2896	29.86	29.72	25.07	23.34	18	14.14	20.14	10
2. Selective Educational components																						
2.1. General training cycle																						
GS 01	Educational component 1 GU- Catalog		4	4				2,0	60	30	16	14		30				2				
GS 02	Educational component 2 GU- Catalog		3	3				2,0	60	30	16	14		30			2					
	Total number of part 2.1	0	2	2	0	0		4.0	120	60	32	32	0	60	0	0	2	2	0	0	0	0
2.2. Professional training cycle																						
PS 01	Educational component 1 F- Catalog		3	3	3			4.0	120	46	16		30	74			3.07					
PS 02	Educational component 2 F- Catalog		4	4	4			4.0	120	46	16		30	74				3.07				
PS 03	Educational component 3 F- Catalog		7	7	7			4.0	120	46	16		30	74							3.07	
PS 04	Educational component 4 F- Catalog		5	5	5			4.0	120	46	16		30	74					3.07			
PS 05	Educational component 5 F- Catalog		5	5	5			4.0	120	46	16		30	74					3.07			
PS 06	Educational component 6 F- Catalog		5	5	5			4.0	120	46	16		30	74					3.07			
PS 07	Educational component 7 F- Catalog		6	6	6			4.0	120	46	16		30	74						3.07		
PS 08	Educational component 8 F- Catalog		6	6	6			4.0	120	46	16		30	74						3.07		
PS 09	Educational component 9 F- Catalog		6	6	6			4.0	120	46	16		30	74						3.07		
PS 10	Educational component 10 F- Catalog		6	6	6			4.0	120	46	16		30	74						3.07		
PS 11	Educational component 11 F- Catalog		7	7	7			4.0	120	46	16		30	74							3.07	
PS 12	Educational component 12 F- Catalog		7	7	7			4.0	120	46	16		30	74							3.07	
PS 13	Educational component 13 F- Catalog		8	8	8			4.0	120	50	20		30	70								5
PS 14	Educational component 14 F- Catalog		8	8	8			4.0	120	50	20		30	70								5
	Total number of part 2.2	0	14	14	14	0	0	56.0	1680	652	232	0	420	1028	0	0	3.07	3.07	9.21	12.28	9.21	10
	TOTAL IN OPTIONAL educational components	0	16	16	14	0	0	60	1800	712	264	28	420	1088	0	0	5.07	5.07	9.21	12.28	9.21	10
	TOTAL	16	41	53	38	0	0	240	7200	3216	1264	1106	846	3984	29.86	29.72	30.14	28.41	27.21	26.42	29.35	20

Exams	2	2	3	2	3	2	2	0
Final Tests	5	6	4	5	4	6	6	5
Course works	0	0	0	0	1	0	1	0
Course projects	0	0	0	0	0	0	0	0
Module test	9	6	7	6	6	8	7	4
CGW, CW, GW	5	4	5	5	5	5	5	4
Home Control Works (HCW)	0	0	0	0	0	0	0	0
Abstracts	0	0	0	0	0	0	0	0

Registration Number (NP): 17385

The educational component "Practical Training in Basic General Military Training," totaling 7 ECTS credits, is included in the individual curricula of higher education students in accordance with Cabinet of Ministers of Ukraine Resolution No. 734 of June 21, 2024.

The educational component "Civil Protection, Defense, and Patriotic Education" totals 3 ECTS credits, with a distribution of contact hours as follows: 30 hours of lectures, 14 hours of practical classes, and 46 hours of self-study (SRS).

Head of SMCU - G5 _____ Serhii NAIDA

Dean REF _____ Serhii MARTYNIUK

Head of the Department _____ Andrii MOVCHANUK