

RUSSIAN-ARMENIAN UNIVERSITY

Institute of Engineering and Physics

Department: General Physics and Quantum Nanostructures

SYLLABUS

Specialization «Electronics and Nanoelectronics»

Training program: Master's degree

Form of study: Full-time

Duration of study: 2 years.

Educational process plan

Specialization «Electronics and Nanoelectronics»

						1 course										2 course														
Subject name and types of student academic work						1 semester					2 semester					3 semester					4 semester					Total hours				
						Credits	Amount of hours			Self-employment	Credits	Amount of hours			Self-employment	Credits	Amount of hours			Self-employment	Credits	Amount of hour			Self-employment					
Exam	Satisfactory	Credits	Total classroom hours	Lecture	practical/se minar		Laboratory	Lecture	practical/se minar			Laboratory	Lecture	practical/se minar			Laboratory	Lecture	practical/se minar			Laboratory	Lecture	practical/se minar		Laboratory				
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
	I. HUMANITARIAN EDUCATIONAL BLOCK							12																					432	
1	Professional English						1,2	8	128	4	32	32		80	4	32	32		80											288
2	Academic Writing						3	4	48											4	16	32		96						144
	II. GENERAL PROFESSIONAL COURSE CURRICULUM							24																						864
3	Integrated Photonic Devices and Circuits					1		6	64	6	32	32		152																216
4	Numerical Methods in Physics					1		6	64	6	32	32		152																216
5	Coursework Project on Numerical Methods						1	6	32	6		32		184																216
6	Introduction to Quantum Communication						2	6	64						6	32	32		152											216
	III. CURRICULUM OF SPECIALIZATION COURSES							30																						1080
7	Quantum Nanostructures					2		6	64						6	32	32		152											216
8	Optical Properties of Quantum Dots					2		6	64						6	32	32		152											216
9	Laboratories in Optics Research					3		6	64											6	32		32	152						216
10	Modeling of Nanostructures					3		6	64											6	32	32		152						216
11	Semiconductor Nanoelectronics						3	6	64											6	32	32		152						216
	IV. RESEARCH STRUCTURE							54																						1944
12	Research Project 1						1	8		8				288																288
13	Research Project 2						2	8							8				288											288
14	Research Project 3						3	8												8				288						288
15	Finalization of Research Project						4	20																20				720		720
15	Defense of master's thesis					4		10																10				360		360
	TOTAL Credits							120		30					30					30					30					4320