

MINISTRY OF EDUCATION OF THE REPUBLIC OF AZERBAIJAN
Western Caspian University

Approved: _____
Executive Vice-Rector of Western Caspian
University R.H.Baghirov

Program Code and title: **050629 Mechatronics and Robotics
Engineering**

“ _____ ” The year 2024

Program duration: 4 years (8 semesters)

Curriculum plan
(for Bachelor's Level)
I. Academic Schedule

courses	September					October				November				December				JANUARY				February				March				April				May				JUNE				JULY				August						
	1	8	15	22	29	6	13	20	27	3	10	17	24	1	8	15	22	29	5	12	19	26	2	9	16	23	2	9	16	23	30	6	13	20	27	4	11	18	25	1	8	15	22	29	6	13	20	27	3	10	17	24
	7	14	21	28	5	12	19	26	2	9	16	23	30	7	14	21	28	4	11	18	25	1	8	15	22	29	8	15	22	29	5	12	19	26	3	10	17	24	31	7	14	21	28	5	12	19	26	2	9	16	23	31
I																		::	::	::	::	::	=	=														::	::	::	::	::	=	=	=	=	=	=	=	=		
II	=	=																::	::	::	::	::	=	=														::	::	::	::	::	=	=	=	=	=	=	=	=		
III	=	=																::	::	::	::	::	=	=														::	::	::	::	::	=	=	=	=	=	=	=	=		
IV	=	=																::	::	::	::	::	=	=	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x			

SIMBOLS: THEOROTICAL TRAINING INTERNSHIP EXAMINATION SESSION FINAL STATE ATTESTATION VACATION



II. ACADEMIC TEACHING PLAN

№	Subject code	Subject Name	Credits number	Total hours	Non-curricular hours	Classroom hours	Including			Prerequisite (courses required to be taken) Course Code	Intended Semestr of Course (Falland Spring)	Weekly Course
							Lecture	Seminar	Laboratory			
1	2	3	4	5	6	7	8	9	10	11	12	13
	GS-B00	General subjects	30	900	510	390	60	330				
1	GS-B01	History of Azerbaijan	5	150	90	60	30	30			spring-2	4
2	GS-B02.01	Business and academic communication in a foreign language-1	7	210	105	105		105			fall-1	7
3	GS-B02.02	Business and academic communication in a foreign language -2	8	240	135	105		105		GS-B02.01	spring-2	7
4	GS – B03	Business and academic communication in Azerbaijani	4	120	75	45		45			fall-1	3
	GCS-B00	Elective subjects	6	180	120	60	30	30				
5	GCS-B04	First block 1.Philosophy 2. Introduction to multiculturalism 3.Sociology 4. The Constitution of the Republic of Azerbaijan and foundations of law 5.Logic 6. Ethics and aesthetics	3	90	60	30	15	15			fall-3	2
6	GCS-B05	Second block 1.Information technology (by specialty) 2.Information management 3.Political science 4. Fundamentals of Entrepreneurship and Introduction to Business	3	90	60	30	15	15			fall-7	2
	SS-B00	Specialized subjects	120	3600	2295	1305	720	580	5			87
7	SS-BO1	Linear Algebra and Analytical Geometry	4	120	75	45	30	15			fall-1	3
8	SS-BO2	Mathematical Analysis	8	240	150	90	45	45			spring-2	6
9	SS-BO3	Applied Mathematics	4	120	75	45	30	15			fall-3	3
10	SS-BO4	Physics	5	150	105	45	30	10	5		fall-1	3
11	SS-BO5	Fundamentals of Mechatronics and Robotics	6	180	105	75	45	30			fall-3	5
12	SS-BO6	Theoretical Mechanics	6	180	120	60	30	30			spring-2	4
13	SS-BO7	Fundamentals of Programming	7	210	150	60	30	30			fall-1	4
14	SS-BO8	Theory of Machines and Mechanisms	6	180	105	75	45	30			fall-3	5
15	SS-BO9	Data Structures and Algorithms	7	210	135	75	45	30			spring-4	5
16	SS-B10	Database Systems	7	210	120	90	60	30			fall-5	6
17	SS-B11	Design of Mechatronics and Robotics Systems	8	240	150	90	45	45			spring-4	6
18	SS-B12	Electronics	6	180	120	60	30	30			spring-4	4
19	SS-B13	Robotics Control	6	180	120	60	30	30			fall-5	4
20	SS-B14	Modeling and Simulation of Dynamic	6	180	120	60	30	30			spring-6	4

		Systems										
21	SS-B15	Theory of Automatic Control	6	180	120	60	30	30			fall-7	4
22	SS-B16	Digital Signal and Image Processing	7	210	120	90	45	45			spring-6	6
23	SS-B17	Sensors and Actuators	7	210	120	90	45	45			spring-6	6
24	SS-B18	Computer Graphics	5	150	105	45	30	15			fall-5	3
25	SS-B19	Flexible Manufacturing Systems	6	180	120	60	30	30			fall-7	4
26	SS-B21	Civil Defense	3	90	60	30	15	15			spring-6	2
	VSS-BOO	Subjects Determined by the Higher Education Institution	60	1830	1140	690	345	345				46
27	VSS-BO1	I block: Specialized Foreign Language-1 (English)	3	90	45	45		45			fall-1	3
28	VSS-BO2	II block: Specialized Foreign Language- 2(English)	3	120	90	30		30			spring-2	2
29	VSS-BO3	III block: 1. Descriptive Geometry and Engineering Graphics 2. Engineering Design Systems 3. Engineering Graphics and Design	5	150	90	60	30	30			fall-3	4
30	VSS-BO4	IV block: 1. Electrical Engineering 2. Laser and Its Applications 3. Nanotechnology	6	180	120	60	30	30			fall-3	4
31	VSS-BO5	V block: 1. Embedded Microprocessors 2. Microprocessors and Microcontrollers 3. Basics of Circuitry	5	150	90	60	30	30			spring-4	4
32	VSS-BO6	VI block: 1. Engineering Mathematics 2. Mathematical Logic Problems 3. System Analysis	4	120	75	45	30	15			spring-4	3
33	VSS-BO7	VII block: 1. Materials and Processes 2. Materials Science 3. Automated Design Systems for Devices	4	120	75	45	30	15			fall-5	3
34	VSS-BO8	VIII block: 1. Social Engineering 2. Industrial Devices 3. Intelligent Systems	4	120	75	45	30	15			fall-5	3
35	VSS -BO9	IX block: 1. Physical Principles of Information Acquisition, Modern Sensors, and Transducers 2. Electromagnetism 3. Digital Electronics	4	120	75	45	30	15			fall-5	3
36	VSS-B10	X block: 1. Optical Information Systems 2. Mechanics of Manipulator Mechanisms 3. Mechanical Engineering	4	120	75	45	30	15			spring-6	3
37	VSS-B11	XI block: 1. Modern Programming Languages 2. IoT Technologies 3. Cloud Technologies	3	90	60	30	15	15			spring-6	2
38	VSS-B12	XII block: 1. Metrology, Standardization, and Certification. 2. Quality Control and Metrology 3. Measurement Technologies	5	150	90	60	30	30			fall-7	4
39	VSS-B13	XIII block: 1.Computerized Biomedical Devices 2. Basics of Device Technologies	5	150	90	60	30	30			fall-7	4
40	VSS-B14	XIV block: 1. Biomedical Devices, Apparatus, Systems, and Complexes 2. Technical Methods of Biomedical Diagnostics	5	150	90	60	30	30			fall-7	4
		Practice	30								spring-8	
		TOTAL	240									

III. DURATION OF TRAINING

Education Year		Theorotical training	Examination session	Practice	FCE	Vacation
I		30	10			10
II		30	10			12
III		30	10			12
IV		15	5	14	6	4
TOTAL		105	35	14	6	38

	I semester	II semester	III semester	IV semester	V semester	VI semester	VII semester	VIII semester
Weekly workload	23	23	23	22	22	23	22	

Examinations number	6	5	6	6	6	6	6	
Credits number	30	30	30	30	30	30	30	30

Director of the Center for Teaching
Organization and Management: :
_____ Phd P.Akhundov
«_____» _____ the year 2024

It was approved by the Scientific Council of WCU,
«_____» (Protocol №) at the meeting held in 2024