

MINISTRY OF EDUCATION OF THE REPUBLIC OF AZERBAIJAN  
Western Caspian University

I confirm: \_\_\_\_\_  
Western Caspian University  
Executive Vice-Rector R.H.Baghirov

Code and name of the specialty: 050629 Mechatronics and Robotics  
Engineering (Full time)

“ \_\_\_\_\_ ” 2024

Study Period: 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	=	=																																																														

**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 (first teaching necessary) code of subjects	Teaching The Subject Intended Semester Held (Fall Or Spring)	Weekly class load
							Lecture	Seminar	Laboratory			
1	2	3	4	5	6	7	8	9	10	11	12	13
	<b>ÜF-B00</b>	<b>General subjects</b>	<b>24</b>	<b>720</b>	<b>906</b>	<b>727</b>	<b>60</b>	<b>639</b>				<b>22</b>
1	ÜF-B01	History of Azerbaijan	5	150	90	60	30	30			Spring-2	4
2	ÜF-B02.01	Business and academic communication in a foreign language-1	7	210	105	105		105			Fall-1	7
3	ÜF-B02.02	Business and academic communication in a foreign language -2	8	240	120	120		120		ÜF-B02.01	Spring-2	8
4	ÜF – B03	Business and academic communication in Azerbaijani	4	120	75	45		45			Fall-1	3
	<b>ÜFS-B00</b>	<b>Elective subjects</b>	<b>6</b>	<b>180</b>	<b>120</b>	<b>60</b>	<b>30</b>	<b>30</b>				<b>4</b>
5	ÜFS-B04	<b>First block</b> 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	ÜFS-B05	<b>Second block</b> 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
	<b>İF-BOO</b>	<b>Specialized subjects</b>	<b>120</b>	<b>3600</b>	<b>2295</b>	<b>1305</b>	<b>720</b>	<b>580</b>	<b>5</b>			<b>87</b>
7	İF-BO1	Linear Algebra and Analytical Geometry	4	120	75	45	30	15			Fall-1	3
8	İF-BO2	Calculus	8	240	150	90	45	45			Spring-2	6
9	İF-BO3	Applied Mathematics	4	120	75	45	30	15			Fall-3	3
10	İF-BO4	Physics	5	150	105	45	30	10	5		Fall-1	3
11	İF-BO5	Fundamentals of Mechatronics and Robotics	6	180	105	75	45	30			Fall-3	5
12	İF-BO6	Theoretical Mechanics	6	180	120	60	30	30			Spring-2	4
13	İF-BO7	Fundamentals of Programming	7	210	150	60	30	30			Fall-1	4
14	İF-BO8	Theory of Machines and Mechanisms	6	180	105	75	45	30			Fall-3	5
15	İF-BO9	Data Structures and Algorithms	7	210	135	75	45	30			Spring-4	5
16	İF-B10	Database Systems	7	210	120	90	60	30			Fall-5	6

17	IF-B11	Mechatronics and Robotics Systems Design	8	240	150	90	45	45			Spring-4	6
18	IF-B12	Electronics	6	180	120	60	30	30			Spring-4	4
19	IF-B13	Robotics Control	6	180	120	60	30	30			Fall-5	4
20	IF-B14	Modeling and Simulation of Dynamic Systems	6	180	120	60	30	30			Spring-6	4
21	IF-B15	Theory of Automatic Control	6	180	120	60	30	30			Fall-7	4
22	IF-B16	Digital Signal and Image Processing	7	210	120	90	45	45			Spring-6	6
23	IF-B17	Sensors and Actuators	7	210	120	90	45	45			Spring-6	6
24	IF-B18	Computer Graphics	5	150	105	45	30	15			Fall-5	3
25	IF-B19	Flexible Manufacturing Systems	6	180	120	60	30	30			Fall-7	4
26	IF-B21	Civil Defense	3	90	60	30	15	15			Fall-1	2
	<b>ATMF-BOO</b>	<b>Subjects Determined by the Higher Education Institution</b>	<b>60</b>	<b>1800</b>	<b>1125</b>	<b>675</b>	<b>360</b>	<b>315</b>				<b>45</b>
27	ATMF-BO1	<b>I block:</b> Specialized Foreign Language-1 (English/German)	3	90	60	30		30			Spring-2	2
28	ATMF-BO2	<b>II block:</b> 1.Descriptive Geometry and Engineering Graphics 2.Engineering Graphics and Design	5	150	90	60	30	30			Fall-3	4
29	ATMF-BO3	<b>III block:</b> 1. Electrical Engineering 2. Laser and Its Applications 3. Nanotechnology	6	180	120	60	30	30			Fall-3	4
30	ATMF-BO4	<b>IV block:</b> 1. Embedded Microprocessors 2. Microprocessors and Microcontrollers 3. Basics of Circuitry	5	150	90	60	30	30			Spring-4	4
31	ATMF-BO5	<b>V block:</b> 1. Engineering Mathematics 2. Mathematical Logic Problems 3. System Analysis	4	120	75	45	30	15			Spring-4	3
32	ATMF-BO6	<b>VI block:</b> 1. Materials and Processes 2. Materials Science 3. Automated Design Systems for Devices	4	120	75	45	30	15			Fall-5	3
33	ATMF-BO7	<b>VII block:</b> 1. Social Engineering 2. Industrial Devices 3. Smart Systems	4	120	75	45	30	15			Fall-5	3
34	ATMF-BO8	<b>VIII block:</b> 1. Physical Principles of Obtaining Information, Modern Sensors, and Converters 2. Electromagnetism 3. Digital Electronics	4	120	75	45	30	15			Fall-5	3
35	VSS -BO9	<b>IX block:</b> 1. Optical Information Systems 2. Mechanics of Manipulator Mechanisms 3. Mechanical Engineering	5	150	105	45	30	15			Spring-6	3
36	ATMF-B10	<b>X block:</b> 1. Modern Programming Languages 2. IoT Technologies 3. Cloud Technologies	5	150	90	60	30	30			Spring-6	4
37	ATMF-B11	<b>XI block:</b> 1. Metrology, Standardization, and Certification. 2. Quality Control and Metrology 3. Measurement Technologies	5	150	90	60	30	30			Fall-7	4
38	ATMF-B12	<b>XII block:</b> 1.Computerized Biomedical Devices 2. Basics of Device Technologies	5	150	90	60	30	30			Fall-7	4
39	ATMF-B13	<b>XIII block:</b> 1. Biomedical Devices, Apparatus, Systems, and Complexes 2. Technical Methods of Biomedical Diagnostics	5	150	90	60	30	30			Fall-7	4
40		<b>Internship</b>	<b>30</b>								Spring-8	
		<b>TOTAL</b>	<b>240</b>									

### III. DURATION OF TRAINING

Education year	Theoretical training	Exam	Internship	Holiday
I	30	10		10
II	30	10		12
III	30	10		12
IV	15	5	20	4
<b>Total</b>	<b>105</b>	<b>35</b>	<b>20</b>	<b>38</b>

	1 <sup>st</sup> semester	2 <sup>nd</sup> semester	3 <sup>rd</sup> semester	4 <sup>th</sup> semester	5 <sup>th</sup> semester	6 <sup>th</sup> semester	7 <sup>th</sup> semester	8 <sup>th</sup> semester
<b>Weekly class load</b>	22	23	22	23	2 3	2 2	23	
<b>Examinations number</b>	6	5	5	6	6	7	6	
<b>Credits number</b>	30	30	30	30	30	30	30	30

**Director of the Center for Organization and  
Management of Education:**

\_\_\_\_\_ PhD, P. Akhundov

« \_\_\_\_\_ » \_\_\_\_\_ 2024

**Scientific Council of WCU « \_\_\_\_\_ »**

**Approved at the meeting of \_\_\_\_\_ dated in the year 2024**

**(Protocol No. \_\_\_\_\_).**