

CURRICULUM

60711500- Mechatronics and Robotics

Name of qualification: **Bachelor of Engineering Sciences**
 Official length of programme: **Four years studies, 240 credits**
 Mode of studies: **Continual studies**

Course type	Course code	Course name	Credit	Hours	Classes					Self-study	Course type	Course code	Course name	Credit	Hours	Classes					Self-study
					Total	Lecture	Practice	Labs	Seminar							Total	Lecture	Practice	Labs	Seminar	
1 semester (15 weeks)										2 semester (15 weeks)											
1		Modern history of Uzbekistan	4	120	60	30			30	60	1		Physical education and sport	2	60	30		30			30
1		Physics 1	4	120	60	30	16	14		60	1		Physics 2	4	120	60	30	14	16		60
2		Information technology in technical systems	4	120	60	30	16	14		60	3		Foreign language 1	4	120	60		60			60
1		Higher Mathematics 1	6	180	90	44	46			90	1		Higher Mathematics 2	4	120	60	30	30			60
3		Open elective course 1	4	120	60	14	30	16		60	2		Electromechanical systems (with term paper)	4	120	60	30	30			60
1		Uzbek (Russian) language 1	4	120	60		60			60	2		Uzbek (Russian) language 2	4	120	60		60			60
2		Engineering and computer graphics	4	120	60	30	30			60	2		Algorithmization and information processing	4	120	60	30	30			60
											6		Internship	4	120						
Total for semester:			30	900	450	178	198	44	30	450	Total for semester:			30	900	390	120	254	16	0	390
													Qualification practice	0							
Total for year:			56	1800	840	570	452	60	30	840	Total for year:			56	1800	840	570	452	60	30	840
3 semester (15 weeks)										4 semester (15 weeks)											
2		Open elective course 2	4	120	60	30	30			60	2		Electronics and electron elements of robotics 1	4	120	60	30	16	14		60
2		Circuitry and microprocessor systems 1	4	120	60	30	16	14		60	2		Circuitry and microprocessor systems 2 (with course project)	4	120	60	30	14	16		60
2		Electronics and electron elements of robotics 1	6	180	90	44	30	16		90	2		Solid mechanics 2	4	120	60	30	14	16		60
1		Higher Mathematics 3	4	120	60	30	30			60	2		Control theory	4	120	60	30	14	16		60
3		Open elective course 3	4	120	60	30	30			60	3		Microcontrollers and programming	4	120	60	30	30			60
2		Solid mechanics 1	4	120	60	30	16	14		60	2		Metrology and standardization	4	120	60	30	16	14		60
1		Foreign language	4	120	60		60			60	1		Internship	6	180						
Total for semester:			30	900	450	194	212	44	0	450	Total for semester:			30	900	360	360	104	76	0	360
													Internship	0							
Total for year:			54	1800	810	554	316	120	0	810	Total for year:			54	1800	810	554	316	120	0	810
5 semester (15 weeks)										6 semester (15 weeks)											
1		Philosophy	4	120	60	30			30	60	4		Economics and management	4	120	60	30	30			60
3		Mechatronic system drives 1	4	120	60	30	16	14		60	4		Mechatronic system drives 2 (with coursework)	6	180	90	44	30	16		90
2		Robotics 1	4	120	60	30	16	14		60	4		Robotics 2 (with term paper)	4	120	60	30	14	16		60
3		Ecology	4	120	60	30	16	14		60	4		Open elective course 4	4	120	60	46	14			60
4		Solid mechanics 3	4	120	60	30	14	16		60	2		Design of control systems of microcontrollers	4	120	60	30	30			60
4		Modern and industrial robots	6	180	90	44	30	16		90	2		Internship	8	240						
4		Computer design and control (CAD, CAM, CAE)	4	120	60	30	30			60	4										
Total for semester:			30	900	450	224	122	74	0	450	Total for semester:			30	900	330	180	118	32	0	330
													Industrial Internship	0							
Total for year:			60	1800	780	404	240	96	0	780	Total for year:			60	1800	780	404	240	96	0	780
7 semester (15 weeks)										8 semester (10 weeks)											
4		Control systems and design of robots 1	6	180	90	44	16	30		90			Control systems and design of robots 1 (with term paper)	6	180	90	46	30	14		90
4		Programming of robots	4	120	60	30	30			60	5		Mobile robots	6	180	90	44	30	16		90

