

Bachelor Program:

Study Program: Instrumentation Engineering

Duration: 4 years

Language of Training: Russian

№	Subject	Semester	Hours	Credits
B.1.1.1	History	1,2	144	4
B.1.1.2	Phylosophy	5	108	3
B.1.1.3	Foreign language	1-3	288	8
B.1.1.4	The Rule of Law: History and Modernity	7	72	2
B.1.1.5	Engineering psychology	1	108	3
B.1.1.6	Cultural history of Russia	1	72	2
B.1.1.7	Economics and foundations of project management	8	108	3
B.1.1.8	Mathematics	1-4	540	15
B.1.1.9	Physics	2-4	540	15
B.1.1.10	Informatics	1	180	5
B.1.1.11	Programming and information technology	2	108	3
B.1.1.12	Chemistry	1	108	3
B.1.1.13	Ecology	2	108	3
B.1.1.14	Physical basis of information acquisition	3-4	216	6
B.1.1.15	Applied mechanics	4-5	216	6
B.1.1.16	Materials Science and Construction Materials Technology	6	180	5
B.1.1.17	Electronics and Microprocessor Technology	5	144	4
B.1.1.18	Metrology, standardization and certification	5	180	5
B.1.1.19	Foundations of automatic control	5	108	3
B.1.1.20	Basic Design of Instruments and Systems	6	144	4
B.1.1.21	Computer Technology in Instrumentation Engineering	7-8	180	5
B.1.1.22	Health and safety	6	72	2
B.1.1.23	Engineering graphics (drawing)	1	72	2
B.1.1.24	Drawing Geometry and Computer Graphics	2	108	3

B.1.1.25	Physical culture and sports	1	72	2
B.1.2.1	Phylosophy of Science & Technologies	6	72	2
B.1.2.2	3D- Modelling and CAD fundamentals	3	72	2
B.1.2.3	Theoretical mechanics	3	216	6
B.1.2.4	Mathematical Modeling of Dynamic Systems	4	108	3
B.1.2.5	Electrical equipment	4	180	5
B.1.2.6	Organization of exchange of information	7	108	3
B.1.2.7	General theory of gyroscopes	5	144	4
B.1.2.8	Monitoring and diagnostics of measuring and computing complexes	6	144	4
B.1.2.9	Digital Computing Devices and Microprocessor of Instrument Systems	6	144	4
B.1.2.10	Gyroscopic navigation systems	7	216	6
B.1.2.11	Technological support of measurement and computer systems manufacturing	7	144	4
B.1.2.12	Methods and special equipment of instrumentation engineering enterprise control	7	144	4
B.1.2.13	Design of standard instrument and device assemblies	8	108	3
B.1.2.14	The electric drive in instrumentation engineering	8	180	5
B.1.3.1.1	Mathematical logic and algorithm theory	2	180	5
B.1.3.2.1	Discrete mathematics	3	108	3
B.1.3.3.1	Standards of design documentation	3	108	3
B.1.3.4.1	Basics of stability of motion theory	7	72	2
B.1.3.5.1	Electrical measurements	5	72	2
B.1.3.6.1	Basics of innovate economics	4	144	4
B.1.3.7.1	Foreign language for professional communication	5	144	4
B.1.3.8.1	Device, operation and durability of aviation control complexes	6	180	5
B.1.3.9.1	Analytical methods for instrumentation engineering	7	180	5
B.1.3.10.1	Satellite navigation systems	8	108	3
B.1.3.11.1	Team sports	2-6	328	0

B.2.1.1	Educational introductory practice	2	216	6
B.2.2.1	Educational research practice	4	216	6
B.2.2.2	Industrial design practice	6	216	6
B.2.2.3	Industrial research practice	8	108	3
B.2.2.4	Graduating practice	8	216	6
B.3	State Final Attestation (base part)			6
	Total		8752	240