

Specialist degree Program

Study Program: Construction of unique buildings and structures

Duration: 5 years

Language of Training: Russian

№	Subject	Semester	Hours	Credits
C.1.1.1	History	1	108	3
C.1.1.2	Philosophy	5	108	3
C.1.1.3	Foreign language	1	108	3
C.1.1.3	Foreign language	2	108	3
C.1.1.3	Foreign language	3	144	4
C.1.1.4	Legal studies (legislation in construction)	6	108	3
C.1.1.5	Economy	5	108	3
C.1.1.6	Sociology	8	108	3
C.1.1.7	Psychology	4	108	3
C.1.1.8	Cultural Studies	5	108	3
C.1.1.9	Mathematics	1	180	5
C.1.1.9	Mathematics	2	144	4
C.1.1.9	Mathematics	3	180	5
C.1.1.9	Mathematics	4	108	3
C.1.1.10	Computer science	2	144	4
C.1.1.10	Computer science	3	108	3
C.1.1.11	Engineering graphics (drawing)	1	108	3
C.1.1.12	Descriptive geometry and computer graphics	2	108	3
C.1.1.12	Descriptive geometry and computer graphics	3	72	2

C.1.1.13	Chemistry	1	144	4
C.1.1.14	Physics	1	252	7
C.1.1.14	Physics	2	108	3
C.1.1.14	Physics	3	144	4
C.1.1.15	Ecology	11	144	4
C.1.1.16	Theoretical mechanics	2	144	4
C.1.1.16	Theoretical mechanics	3	3	108
C.1.1.17.1	Strength of materials	3	108	3
C.1.1.17.1	Strength of materials	4	144	4
C.1.1.17.2	Structural mechanics	5	108	36
C.1.1.17.2	Structural mechanics	6	108	3
C.1.1.17.3	Elasticity theory with the basics of plasticity and creep theory	5	108	3
C.1.1.17.4	Soil mechanics	6	180	5
C.1.1.17.5	Foundations and foundations of structures	9	144	4
C.1.1.18	Fluid and gas mechanics	4	108	3
C.1.1.19	Technical heat engineering	5	108	3
C.1.1.20	Theoretical foundations of electrical engineering	4	108	3
C.1.1.21	Fundamentals of Metrology, standardization, certification and quality control	6	144	4
C.1.1.22.1	Engineering geodesy	1	108	3
C.1.1.22.1	Engineering geodesy	2	108	3

C.1.1.23	Architecture	4	108	3
C.1.1.24	Life safety	10	180	5
C.1.1.25	Building material	2	108	3
C.1.1.25	Building material	3	108	3
C.1.1.26	Nonlinear problems of construction mechanics	7	108	3
C.1.1.26	Nonlinear problems of construction mechanics	8	72	2
C.1.1.27	Theory of calculating plates and shells	6	144	4
C.1.1.27	Theory of calculating plates and shells	7	108	3
C.1.1.28	Dynamics and stability of structures	8	180	5
C.1.1.29	Seismic resistance of structures	9	108	3
C.1.1.29	Seismic resistance of structures	10	72	2
C.1.1.30	Reinforced concrete and stone structures (General course)	8	180	5
C.1.1.30	Reinforced concrete and stone structures (General course)	9	108	3
C.1.1.31	Metal structures (General course)	7	288	8
C.1.1.31	Metal structures (General course)	8	108	3
C.1.1.32	Technological processes in construction	6	108	3

C.1.1.32	Technological processes in construction	7	180	5
C.1.1.33	Organization, planning and management in construction	9	108	3
C.1.1.33	Organization, planning and management in construction	10	108	3
C.1.1.34	Basics of construction technology for buildings and special structures	8	144	4
C.1.1.34	Basics of construction technology for buildings and special structures	9	108	3
C.1.1.35	Construction economics	9	216	6
C.1.1.36	Building physics	5	216	6
C.1.1.37	Inspection and testing of structures	11	180	5
C.1.1.38	Operation and reconstruction of structures	10	144	4
C.1.1.38	Operation and reconstruction of structures	11	6	216
C.1.1.39	Physical Culture	1	72	2
C.1.1.40	History of transport construction	5	108	3
C.1.1.41	Geographic information systems in construction	8	180	5
C.1.1.42	Engineering and	4	144	4

	geological support for the construction of highways, airfields and special structures			
C.1.1.43	Surveys and design of highways, airfields and special structures	5	108	3
C.1.1.43	Surveys and design of highways, airfields and special structures	6	108	3
C.1.1.44	Technology and organization of construction of highways, airfields and special structures	10	108	3
C.1.1.45	Operation of highways, airfields and special structures	7	108	3
C.1.1.46	Reconstruction of highways, airfields and special structures	11	108	3
C.1.2.1	The security of highways during the design and reconstruction	11	72	2
C.1.2.2	Project management	10	252	7
C.1.2.3	Mechanization and automation of construction	7	288	8
C.1.2.4	Optimization of parameters of highways during the reconstruction	11	72	2
C.1.3.1.1	Philosophy of science and technology	6	72	2
C.1.3.1.2	History of science and	/6	/72	/2

	technology			
C.1.3.2.1	The mathematical apparatus of the theory of risk in road construction	4	72	2
C.1.3.2.2	Mathematical modeling of road parameters optimization	/4	/72	/2
C.1.3.3.1	Computer-aided design systems for highways, airfields, and special structures	4	72	2
C.1.3.3.2	3D modeling system for highways, airfields, special structures and related infrastructure	/4	/72	/2
C.1.3.4.1	The software package Credo-dialogue in the design of transportation facilities	11	72	2
C.1.3.4.2	Landscape design of highways	/11	/72	/2
C.1.3.5.1	Team sports	2	82	0
C.1.3.5.1	Team sports	3	82	0
C.1.3.5.1	Team sports	4	82	0
C.1.3.5.1	Team sports	5	38	0
C.1.3.5.1	Team sports	6	44	0
C.1.3.5.2	Sports and recreation activities	/2	/82	0
C.1.3.5.2	Sports and recreation activities	/3	/82	0
C.1.3.5.2	Sports and recreation activities	/4	/82	0

C.1.3.5.2	Sports and recreation activities	/5	/82	0
C.1.3.5.2	Sports and recreation activities	/6	/44	0
C.2.1	1st Training practice*	2	108	3
C.2.2.1	2nd Training practice*	4	54	1,5
C.2.2.2	2nd Training practice (performing)	4	162	4,5
C.2.3	Manufacturing practice**	6	108	3
C.2.4	Industrial practice (technological)	8	108	3
C.2.5	Industrial practice	10	216	6
C.2.6	Internship	12	972	27
C.2.7.	Research work	9	108	3
C.2.7.	Research work	10	108	3
C.2.7.	Research work	11	108	3
C.3	The state final examination (the basic part)		216	6
F.1	Probabilistic methods in highway design, construction, and operation	4	72	
F.2	Designing highways with the Credo-dialog software package	11	72	
	Total		13288	360