Bachelor Program: Construction

Field of Studies: Industrial and Civil Engineering

Years of Studies: 4

Language of Training: Russian

| **№** | **Subject** | **Semester** | **Hours** | **Credits** |
| --- | --- | --- | --- | --- |
| **B.1.1** | **MandatorypartofBlock 1** |
| B.1.1.1 | History | / 2.1 | / 144 | /4 |
| B.1.1.1 | History | 1 | 72 | 2 |
| B.1.1.1 | History | 2 | 72 | 2 |
| B.1.1.2 | Philosophy | 6 | 108 | 3 |
| B.1.1.3 | Foreignlanguage | / 3,1,2 | / 288 | /8 |
| B.1.1.3 | Foreignlanguage | 1 | 108 | 3 |
| B.1.1.3 | Foreignlanguage | 2 | 108 | 3 |
| B.1.1.3 | Foreignlanguage | 3 | 72 | 2 |
| B.1.1.4 | Legal regulation of construction. corruption risks | 1 | 72 | 2 |
| B.1.1.5 | Psychology | 1 | 72 | 2 |
| B.1.1.6 | Businesssector | 3 | 108 | 3 |
| B.1.1.7 | Maths | / 1,2 | / 324 | /9 |
| B.1.1.7 | Maths | 1 | 180 | 5 |
| B.1.1.7 | Maths | 2 | 144 | 4 |
| B.1.1.8 | Informationtechnologyinconstruction | / 2.1 | / 180 | /5 |
| B.1.1.8 | Informationtechnologyinconstruction | 1 | 72 | 2 |
| B.1.1.8 | Informationtechnologyinconstruction | 2 | 108 | 3 |
| B.1.1.9 | Engineeringandcomputergraphics | / 2.1 | / 216 | / 6 |
| B.1.1.9 | Engineeringandcomputergraphics | 1 | 108 | 3 |
| B.1.1.9 | Engineeringandcomputergraphics | 2 | 108 | 3 |
| B.1.1.10 | Chemistry | 1 | 108 | 3 |
| B.1.1.11 | Physics | / 1,2 | / 180 | /5 |
| B.1.1.11 | Physics | 1 | 108 | 3 |
| B.1.1.11 | Physics | 2 | 72 | 2 |
| B.1.1.12 | Ecology | 5 | 72 | 2 |
| B.1.1.13 | theoreticalmechanics | 3 | 144 | 4 |
| B.1.1.14 | FundamentalsofTechnicalMechanics | 3 | 144 | 4 |
| B.1.1.15 | Fundamentalsofgeotechnics | 5 | 108 | 3 |
| B.1.1.16 | Theengineeringgeodesy | 2 | 108 | 3 |
| B.1.1.17 | engineeringgeology | 1 | 72 | 2 |
| B.1.1.18 | Basics of the buildings architecture | 3 | 144 | 4 |
| B.1.1.19 | Basicsofbuildingstructures | 4 | 108 | 3 |
| B.1.1.20 | ConstructionMaterials | 2 | 144 | 4 |
| B.1.1.21 | Healthandsafety | 8 | 108 | 3 |
| B.1.1.22 | Metrology, standardization, certification and quality management | 5 | 108 | 3 |
| B.1.1.23 | Fundamentals of heat and ventilation | 4 | 108 | 3 |
| B.1.1.24 | Fundamentals of water and wastewater | 4 | 108 | 3 |
| B.1.1.25 | Electricalandelectricity | 4 | 108 | 3 |
| B.1.1.26 | Technologicalprocessesinconstruction | 5 | 144 | 4 |
| B.1.1.27 | Fundamentals of organization and management in construction | 7 | 108 | 3 |
| B.1.1.28 | FluidMechanics | 3 | 72 | 2 |
| B.1.1.29 | Bases of technical operation of buildings and structures | 5 | 72 | 2 |
| B.1.1.30 | PhysicalCultureandsport | 1 | 72 | 2 |
|  | **TOTAL**  |  | **3852** | **107** |
| **B.1.2** | **The variable part of Block 1** |
| B.1.2.1 | Basicsof BIM-technology | 3 | 72 | 2 |
| B.1.2.2 | Strengthofmaterials | 3 | 144 | 4 |
| B.1.2.3 | Structuralmechanics | /4 | / 252 | / 7 |
| B.1.2.3 | Structuralmechanics | 3 | 108 | 3 |
| B.1.2.3 | Structuralmechanics | 4 | 144 | 4 |
| B.1.2.4 | Informationmodelinginconstruction | 7 | 72 | 2 |
| B.1.2.5 | Design of civil and industrial buildings | 5 | 180 | 5 |
| B.1.2.6 | Reinforced concrete and stone structures | / 4.5 | / 288 | /8 |
| B.1.2.6 | Reinforced concrete and stone structures | 4 | 144 | 4 |
| B.1.2.6 | Reinforced concrete and stone structures | 5 | 144 | 4 |
| B.1.2.7 | constructionmechanization | 3 | 72 | 2 |
| B.1.2.8 | Foundations of buildings and structures | 8 | 144 | 4 |
| B.1.2.9 | Metalconstructions | / 5.6 | / 252 | / 7 |
| B.1.2.9 | Metalconstructions | 5 | 108 | 3 |
| B.1.2.9 | Metalconstructions | 6 | 144 | 4 |
| B.1.2.10 | Structures made of wood and plastics | 7 | 216 | 6 |
| **B.1.2.11** | **Inspection of buildings and structures** | **8** | **72** | **2** |
| B.1.2.12 | operation of the organization and maintenance of buildings | 7 | 108 | 3 |
| B.1.2.13 | The technology of construction of buildings and structures | 6 | 144 | 4 |
| B.1.2.14 | Organization, planning and construction management | 7 | 216 | 6 |
| B.1.2.15 | Estimateworkinconstruction | 8 | 72 | 2 |
| **B.1.3** | **Electives** |  | **1516** | **33** |
| B.1.3.1.1 | Design of buildings and structures of reinforced concrete | 6 | 144 | 4 |
| B.1.3.1.2 | Variant design of the structures of buildings and structures | / 6 | / 144 | /4 |
| B.1.3.2.1 | Designing of special metal structures | 7 | 144 | 4 |
| B.1.3.2.2 | Design of thin elastic rods | / 7 | / 144 | /4 |
| B.1.3.3.1 | Computer models of buildings and structures | 6 | 144 | 4 |
| B.1.3.3.2 | Course on reinforced concrete and masonry structures | / 6 | / 144 | /4 |
| B.1.3.4.1 | Innovativebuildingmaterials | 4 | 144 | 4 |
| B.1.3.4.2 | The durability of building materials and structures | /4 | / 144 | /4 |
| B.1.3.5.1 | The total resistance of buildings and structures | 5 | 144 | 4 |
| B.1.3.5.2 | The dynamics and stability of structures | /5 | / 144 | /4 |
| B.1.3.6.1 | Design of underground industrial and civil buildings | 6 | 180 | 5 |
| B.1.3.6.2 | Reconstruction of industrial and civil buildings and structures | / 6 | / 180 | /5 |
| B.1.3.7.1 | Special course on technology of construction of buildings and structures | 7 | 180 | 5 |
| B.1.3.7.2 | Specialcivilengineeringtechnology | / 7 | / 180 | /5 |
| B.1.3.8.1 | Course on structures made of wood and plastics | 8 | 108 | 3 |
| B.1.3.8.2 | Technology and organization of works on reconstruction of buildings and structures | /8 | / 108 | / 3 |
| B.1.3.9.1 | Team sports | / 2-6 | / 328 |  |
| B.1.3.9.1 | Team sports | 2 | 82 |  |
| B.1.3.9.1 | Team sports | 3 | 82 |  |
| B.1.3.9.1 | Team sports | 4 | 82 |  |
| B.1.3.9.1 | Team sports | 5 | 38 |  |
| B.1.3.9.1 | Team sports | 6 | 44 |  |
| B.1.3.9.2 | Physical Education  | / 2-6 | / 328 |  |
| B.1.3.9.2 | Physical Education | / 2 | / 82 |  |
| B.1.3.9.2 | Physical Education | / 3 | / 82 |  |
| B.1.3.9.2 | Physical Education | /4 | / 82 |  |
| B.1.3.9.2 | Physical Education | /5 | / 38 |  |
| B.1.3.9.2 | Physical Education | / 6 | / 44 |  |
|  | **Total** |  | **3820** | **97** |
| **Total unit B.1** |  | **7672** | **204** |
| **Block 2 Practice** | **1080** | **30** |
| **B.2.1** | **MandatorypartBlock 2** |  | **108** | **3** |
| B.2.1.1 | Training (geodesic) Practice | 2 | 108 | 3 |
| **B.2.2** | **The variable part of the Block 2** |  | **972** | **27** |
| B.2.2.1 | Training (surveying) Practice | 2 | 108 | 3 |
| B.2.2.2 | Training (Trial) Practice | 4 | 216 | 6 |
| B.2.2.3 | Industrial (technological) Practice | 6 | 216 | 6 |
| B.2.2.4 | Production (design) practice | 8 | 108 | 3 |
| B.2.2.5 | Production (performing) practice | 8 | 108 | 3 |
| B.2.2.6 | Undergraduatepractice | 8 | 216 | 6 |
| **block 3** | **Statefinalexamination** |
| **B.3** | **State final examination** | 216 | **216** | **6** |
| B.3.1 | Preparations for the protection and sewn WRC | 216 | 216 | 6 |
|  | **TOTAL**  | **8968** | **8968** | **240** |
| **F.** | **Elective** |  |  |  |
| F.2 | Uniquebuildingsandstructures | 5 | 72 | 2 |
| F.3 | Design of the bases and the bases in conditions existing building | 5 | 72 | 2 |
| F.4 | Technology and organization of construction of high-rise and large-span buildings | 7 | 72 | 2 |