Master Program: Construction

Field of Studies: Industrial and Civil Engineering

Years of Studies: 2

Language of Training: Russian

| **№** | **Subject** | **Semester** | **Hours** | **Credits** |
| --- | --- | --- | --- | --- |
| **M.1.1** | **MandatorypartofBlock 1** |
| M.1.1.1 | Psychology. socialcommunications | 1 | 108 | 3 |
| M.1.1.2 | BusinessForeignLanguage | 1 | 108 | 3 |
| M.1.1.3 | AppliedMathematics | 2 | 108 | 3 |
| M.1.1.4 | Basicresearch | 1 | 108 | 3 |
| M.1.1.5 | Organization and management of production activities | 2 | 108 | 3 |
| M.1.1.6 | Organization of design and survey activities | 1 | 108 | 3 |
|  | **TOTAL**  |  | **648** | **18** |
| **M.1.2** | **The variable part of Block 1** |  | **1188** | **33** |
| M.1.2.1 | The language of business communication | 2 | 72 | 2 |
| M.1.2.2 | Probabilistic methods of calculation and theory of reliability of building structures | 2 | 108 | 3 |
| M.1.2.3 | Experimental study of aerodynamic structural systems of buildings | 2 | 108 | 3 |
| M.1.2.4 | Special course on the mechanics of structures interacting with the base | 3 | 180 | 5 |
| M.1.2.5 | Modern methods of construction and technical expertise | 2 | 144 | 4 |
| M.1.2.6 | Building design in conditions of flooding and landslide hazard | 3 | 216 | 6 |
| M.1.2.7 | Special course on nonlinear structural mechanics | 3 | 144 | 4 |
| M.1.2.8 | Fundamentalsofbusiness | 3 | 72 | 2 |
| M.1.2.9 | Technicalregulationinconstruction | 1 | 72 | 2 |
| M.1.2.10 | Information modeling of construction projects life cycle | 3 | 72 | 2 |
| **M.1.3** | **Electives** |  | **468** | **13** |
| M.1.3.1.1 | Philosophical problems of engineering creativity and construction activities | 2 | 72 | 2 |
| M.1.3.1.2 | Ethics and aesthetics in engineering | / 2 | / 72 | / 2 |
| M.1.3.2.1 | Modern problems of urban areas and construction sites | 1 | 216 | 6 |
| M.1.3.2.2 | Special course on the mechanics of structures under aerodynamic effects | /1 | / 216 | / 6 |
| M.1.3.3.1 | Theory and calculation of plates and shells | 1 | 180 | 5 |
| M.1.3.3.2 | Modern cable-stayed, hanging and pneumatic design of buildings and structures | /1 | / 180 | /5 |
|  | **Totalvariablepart** | 2 | **1656** | **46** |
|  | **TotalBlock M.1** | 1 | **2304** | **64** |
| **block 2** | **Practice, including research work (SRW)** |
| **M.2.2** | **The variable part of the Block 2** |  | **1800** | **60** |
| M.2.2.1 | Training (Trial) Practice | 2 | 216 | 6 |
| M.2.2.2 | Training (teaching) practice | 4 | 108 | 3 |
| M.2.2.3 | Industrial (technological) Practice | 4 | 216 | 6 |
| M.2.2.4 | Undergraduatepractice | 4 | 216 | 6 |
| **M.2.2.5** | **Researchwork** |  | **1044** | **29** |
| M.2.2.5 | Researchwork | 1 | 144 | 4 |
| M.2.2.5 | Researchwork | 2 | 216 | 6 |
| M.2.2.5 | Researchwork | 3 | 252 | 7 |
| M.2.2.5 | Researchwork | 4 | 432 | 12 |
| **block 3** | **State final examination** |
| **M.3.1** | **Statefinalexamination** | 4 | **216** | **6** |
| M.3.1.1 | **Preparations for the protection and defense of the Graduation Qualification Work** | 4 | 216 | 6 |
|  | **Totaldirection** |  | **4320** | **120** |
| **F.** | **elective** |  |  |  |
| F.1 | Modern software and design systems for the design of buildings and structures | 3 | 108 | 3 |
| F. 2 | Modeling of structural systems of buildings and structures under seismic actions | 2 | 108 | 3 |