**Master Program:**

Study Program: **Chemical Technology of nanomaterials and products based thereon**

2 years of studies

Language of Training: Russian

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **№** | **Subject** | **Semester** | **Hours** | **Credits** |
| 1.1.1 | Philosophical problems of science and technology | 1 | 72 | 4 |
| 1.1.2 | Economic analysis and management  | 2 | 72 | 4 |
| 1.1.3 | Theoretical and experimental methods of chemistry | 1 | 144 | 4 |
| 1.1.4 | Business language | 3 | 72 | 2 |
| 1.1.5 | Mass transfer processes in the solid state systems | 2-3 | 180 | 5 |
| 1.2.1 | Technical translation | 1-2 | 144 | 4 |
| 1.2.2 | Functional properties of nanomaterials | 1 | 144 | 4 |
| 1.2.3 | Solid state chemistry | 1 | 180 | 5 |
| 1.2.4 | R&D management | 2 | 108 | 3 |
| 1.2.5 | Manufacturing technologies of nanomaterials  | 3 | 144 | 4 |
| 1.2.6 | Manufacturing of nanostructured materials | 3 | 108 | 3 |
| 1.2.7 | Industrial project management  | 3 | 72 | 2 |
| 1.3.1 | Engineering IT- technologies and computer systems  | 2 | 72 | 2 |
| 1.3.2 | Solid state ionics | 2 | 216 | 6 |
| 1.3.3 | Fundamentals of the electrochemical coatings | 3 | 180 | 5 |
| 1.3.4 | Mathematical modeling and optimization of the technological processes | 2 | 108 | 3 |
| 2.1 | Technological practice | 2 | 216 | 6 |
| 2.2 | Teaching practice | 4 | 108 | 3 |
| 2.3 | Industrial practice | 4 | 216 | 6 |
| 2.4 | Preparation of the thesis | 4 | 216 | 6 |
| 2.5 | R&D activity | 1-4 | 1188 | 33 |
| F1 | Nanomaterials design | 3 | 108 | 0 |
| F2 | Materials testing | 3 | 108 | 0 |
|  | **Total** |  | **4320** | **120** |