Bachelor Program: 4 years

Institute: Institute of Physics and Technology

Study Program: Chemical Technology

Profile: Chemical Technology

Language of Training: Russian

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **№** | **Subject** | **Semester** | **Hours** | **Credits** |
| B.1.1.1 | History | 1 | 72 | 2 |
| B.1.1.1 | History | 2 | 72 | 2 |
| B.1.1.2 | Philosophy | 5 | 108 | 3 |
| B.1.1.3 | Foreign language | 1 | 108 | 3 |
| B.1.1.3 | Foreign language | 2 | 108 | 3 |
| B.1.1.3 | Foreign language | 3 | 72 | 2 |
| B.1.1.4 | The rule of law and modernity | 3 | 108 | 3 |
| B.1.1.5 | Psychology | 3 | 72 | 2 |
| B.1.1.6 | Fundamentals of Economics and production management | 4 | 108 | 3 |
| B.1.1.7 | Mathematics | 1 | 144 | 4 |
| B.1.1.7 | Mathematics | 2 | 144 | 4 |
| B.1.1.7 | Mathematics | 3 | 108 | 3 |
| B.1.1.7 | Mathematics | 4 | 144 | 4 |
| B.1.1.8 | Computer science | 1 | 144 | 4 |
| B.1.1.9 | Physics | 1 | 144 | 4 |
| B.1.1.9 | Physics | 2 | 144 | 4 |
| B.1.1.9 | Physics | 3 | 108 | 3 |
| B.1.1.10 | Ecology | 1 | 108 | 3 |
| B.1.1.11 | General and inorganic chemistry | 1 | 180 | 5 |
| B.1.1.11 | General and inorganic chemistry | 2 | 180 | 5 |
| B.1.1.12 | Organic Chemistry | 2 | 144 | 4 |
| B.1.1.12 | Organic Chemistry | 3 | 216 | 6 |
| B.1.1.13 | Analytical chemistry and physico-chemical methods of analysis | 4 | 216 | 6 |
| B.1.1.14 | Physical chemistry | 3 | 216 | 6 |
| B.1.1.14 | Physical chemistry | 4 | 216 | 6 |
| B.1.1.15 | Colloidal chemistry | 5 | 180 | 5 |
| B.1.1.16 | Engineering graphics (drawing) | 1 | 72 | 2 |
| B.1.1.17 | Descriptive geometry and computer graphics | 2 | 108 | 3 |
| B.1.1.18 | Applied mechanics | 5 | 216 | 6 |
| B.1.1.19 | Processes and devices of chemical technology | 6 | 252 | 7 |
| B.1.1.19 | Processes and devices of chemical technology | 7 | 252 | 7 |
| B.1.1.20 | Modeling of chemical and technological processes | 6 | 144 | 4 |
| B.1.1.21 | General chemical technology | 5 | 180 | 5 |
| B.1.1.21 | General chemical technology | 6 | 180 | 5 |
| B.1.1.22 | Operating safety | 7 | 108 | 3 |
| B.1.1.23 | Chemical and technological process control systems | 7 | 180 | 5 |
| B.1.1.24 | Physical culture and sports | 1 | 72 | 2 |
| B.1.2.1 | Physical chemistry of composite materials | 6 | 144 | 4 |
| B.1.2.2 | Functional materials | 4 | 144 | 4 |
| B.1.2.3 | Chemical technology for the production of semiconductor devices and integrated circuits | 7 | 180 | 5 |
| B.1.2.4 | Technology of silicate materials | 5 | 144 | 4 |
| B.1.2.5 | Technology of structural materials | 8 | 144 | 4 |
| B.1.2.6 | Nanostructured materials and methods of their preparation | 8 | 180 | 5 |
| B.1.2.7 | Technological documentation of chemical production | 8 | 108 | 3 |
| B.1.2.8 | Information databases in chemistry and chemical technology | 7 | 108 | 3 |
| B.1.2.9 | Crystal chemistry and crystallography | 3 | 108 | 3 |
| B.1.2.10 | Electrochemical production technology | 5 | 108 | 3 |
| B.1.3.1.1 | Conducting patent research | 4 | 108 | 3 |
| B.1.3.1.2 | Intellectual property and ways of its registration | /4 | /108 | /3 |
| B.1.3.2.1 | Thermal methods of materials analysis | 5 | 108 | 3 |
| B.1.3.2.2 | Spectral methods of materials analysis | /5 | /108 | /3 |
| B.1.3.3.1 | Methods of testing materials | 6 | 180 | 5 |
| B.1.3.3.2 | Methods for determining the mechanical properties of materials | /6 | /180 | /5 |
| B.1.3.4.1 | Chemical technology of composite materials production | 7 | 252 | 7 |
| B.1.3.4.2 | Chemical technology of polymer materials and fibers | /7 | /252 | /7 |
| B.1.3.5.1 | Preparation, implementation and registration of R&D results | 8 | 108 | 3 |
| B.1.3.5.2 | Commercialization of R&D results | /8 | /108 | /3 |
| B.1.3.6.1 | Sports games | 2 | 82 | 0 |
| B.1.3.6.1 | Sports games | 3 | 82 | 0 |
| B.1.3.6.1 | Sports games | 4 | 82 | 0 |
| B.1.3.6.1 | Sports games | 5 | 38 | 0 |
| B.1.3.6.1 | Sports games | 6 | 44 | 0 |
| B.1.3.6.2 | Recreational physical culture | /2 | /82 | 0 |
| B.1.3.6.2 | Recreational physical culture | /3 | /82 | 0 |
| B.1.3.6.2 | Recreational physical culture | /4 | /82 | 0 |
| B.1.3.6.2 | Recreational physical culture | /5 | /38 | 0 |
| B.1.3.6.2 | Recreational physical culture | /6 | /44 | 0 |
|  | **Total** |  | **7780** | **207** |