Bachelor Program: 4 years

Institute: Institute of Power Engineering

Study Program: Electric Power Engineering and Technology

Profile: Thermal Power Plants

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 | 72 | 2 |
| B.1.1.5 | Economic theory | 1 | 72 | 2 |
| B.1.1.6 | Physical culture and sports | 1 | 72 | 2 |
| B.1.1.7 | Fundamentals of project activity | 3 | 72 | 2 |
| B.1.1.8 | Time management | 1 | 72 | 2 |
| B.1.1.9 | Fundamentals of business communication | 1 | 72 | 2 |
| B.1.1.10 | Conflictology | 4 | 72 | 2 |
| B.1.1.11 | Higher Mathematics | 1 | 216 | 6 |
| B.1.1.11 | Higher Mathematics | 2 | 180 | 5 |
| B.1.1.11 | Higher Mathematics | 3 | 216 | 6 |
| B.1.1.12 | Physics | 2 | 180 | 5 |
| B.1.1.12 | Physics | 3 | 216 | 6 |
| B.1.1.13 | Chemistry | 2 | 144 | 4 |
| B.1.1.14 | Computer science | 1 | 144 | 4 |
| B.1.1.15 | Engineering and computer graphics | 1 | 108 | 3 |
| B.1.1.15 | Engineering and computer graphics | 2 | 144 | 4 |
| B.1.1.16 | Materials science, technology of structural materials | 2 | 108 | 3 |
| B.1.1.17 | Theoretical mechanics | 3 | 144 | 4 |
| B.1.1.18 | Applied mechanics | 4 | 216 | 6 |
| B.1.1.19 | Technical thermodynamics | 3 | 144 | 4 |
| B.1.1.19 | Technical thermodynamics | 4 | 144 | 4 |
| B.1.1.20 | Heat and mass transfer | 4 | 144 | 4 |
| B.1.1.20 | Heat and mass transfer | 5 | 144 | 4 |
| B.1.1.21 | Fluid dynamics | 3 | 180 | 5 |
| B.1.1.22 | Operating safety | 7 | 108 | 3 |
| B.1.1.23 | Metrology, thermal measurements and automation | 6 | 180 | 5 |
| B.1.1.24 | Electrical and Electronics engineering | 4 | 144 | 4 |
| B.1.1.24 | Electrical and Electronics engineering | 5 | 144 | 4 |
| B.1.2.1 | Mathematical and computer methods for solving problems of heat engineering, heat power engineering and heat technology | 1 | 108 | 3 |
| B.1.2.1 | Mathematical and computer methods for solving problems of heat engineering, heat power engineering and heat technology | 2 | 108 | 3 |
| B.1.2.2 | Physico-chemical fundamentals of heat engineering, heat power and heat technology processes | 5 | 216 | 6 |
| B.1.2.3 | Energy saving in heat power engineering, heat engineering and heat technology | 7 | 180 | 5 |
| B.1.2.4 | Unconventional and renewable energy sources | 5 | 108 | 3 |
| B.1.2.5 | Boiler installations | 6 | 180 | 5 |
| B.1.2.5 | Boiler installations | 7 | 144 | 4 |
| B.1.2.6 | Turbines of thermal power plants and nuclear power plants | 7 | 180 | 5 |
| B.1.2.6 | Turbines of thermal power plants and nuclear power plants | 8 | 108 | 3 |
| B.1.2.7 | Fundamentals of reliability of TPP equipment | 6 | 144 | 4 |
| B.1.2.8 | Computer technologies in thermal engineering calculations | 7 | 72 | 2 |
| B.1.2.9 | Fundamentals of district heating | 6 | 144 | 4 |
| B.1.2.10 | Thermal and nuclear power plants | 7 | 144 | 4 |
| B.1.2.10 | Thermal and nuclear power plants | 8 | 108 | 3 |
| B.1.2.11 | Economics and management of energy enterprises | 8 | 72 | 2 |
| B.1.2.12 | Repair of TPP equipment | 7 | 108 | 3 |
| B.1.2.13 | Thermal mechanical and auxiliary equipment of thermal power plants | 8 | 72 | 2 |
| B.1.2.14 | Operation of TPP equipment | 6 | 108 | 3 |
| B.1.2.15 | Fundamentals of engineering design and CAD of thermal power plants | 8 | 72 | 2 |
| B.1.2.16 | Physico-chemical bases of water treatment | 5 | 72 | 2 |
| B.1.3.1.1 | Psychology | 4 | 72 | 2 |
| B.1.3.1.2 | Engineering Psychology |  /4 | /72 | /2 |
| B.1.3.2.1 | Fundamentals of Nuclear Reactor Physics | 4 | 144 | 4 |
| B.1.3.2.2 | Physico-chemical bases of nuclear fuel preparation | /4 | /144 | /4 |
| B.1.3.2.3 | Military training | /4 | /144 | /4 |
| B.1.3.3.1 | Environmental protection technologies at thermal power plants | 5 | 144 | 4 |
| B.1.3.3.2 | Environmental protection technologies at nuclear power plants | /5 | /144 | /4 |
| B.1.3.3.3 | Military training | /5 | /144 | /4 |
| B.1.3.4.1 | Methods of calculation of thermal schemes of thermal power plants | 6 | 180 | 5 |
| B.1.3.4.2 | Modeling of modern circuit-parametric calculations of thermal schemes of thermal power plants | /6 | /180 | /5 |
| B.1.3.4.3 | Military training | /6 | /180 | /5 |
| B.1.3.5.1 | Electrical equipment of power plants | 7 | 180 | 5 |
| B.1.3.5.2 | The electrical part of the TPP | /7 | /180 | /5 |
| B.1.3.5.3 | Military training | /7 | /180 | /5 |
| B.1.3.6.1 | Fuel economy of thermal power plants | 8 | 108 | 3 |
| B.1.3.6.2 | Fuel preparation technology at thermal power plants | /8 | /108 | /3 |
| B.1.3.6.3 | Military training | /8 | /108 | /3 |
| B.1.3.7.1 | Sports games | 2 | 82 | 0 |
| B.1.3.7.1 | Sports games | 3 | 82 | 0 |
| B.1.3.7.1 | Sports games | 4 | 82 | 0 |
| B.1.3.7.1 | Sports games | 5 | 38 | 0 |
| B.1.3.7.1 | Sports games | 6 | 44 | 0 |
| B.1.3.7.2 | Recreational physical culture | /2 | /82 | 0 |
| B.1.3.7.2 | Recreational physical culture | /3 | /82 | 0 |
| B.1.3.7.2 | Recreational physical culture | /4 | /82 | 0 |
| B.1.3.7.2 | Recreational physical culture | /5 | /38 | 0 |
| B.1.3.7.2 | Recreational physical culture | /6 | /44 | 0 |
|  | **Total** |  | **7996** | **213** |