Bachelor Program: 4 years

Institute: Institute of Electronic Engineering & Instrumentation

Study Program: Instrumentation

Profile: Aviation Instruments and Measuring and Computing Complexes

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: history and modernity | 7 | 72 | 2 |
| B.1.1.5 | Engineering Psychology | 1 | 108 | 3 |
| B.1.1.6 | History of Russian Culture | 1 | 72 | 2 |
| B.1.1.7 | Economics and fundamentals of project management | 8 | 108 | 3 |
| B.1.1.8 | Mathematics | 1 | 144 | 4 |
| B.1.1.8 | Mathematics | 2 | 144 | 4 |
| B.1.1.8 | Mathematics | 3 | 144 | 4 |
| B.1.1.8 | Mathematics | 4 | 108 | 3 |
| B.1.1.9 | Physics | 2 | 180 | 5 |
| B.1.1.9 | Physics | 3 | 180 | 5 |
| B.1.1.9 | Physics | 4 | 180 | 5 |
| B.1.1.10 | Computer science | 1 | 180 | 5 |
| B.1.1.11 | Programming and information technology | 2 | 108 | 3 |
| B.1.1.12 | Chemistry | 1 | 108 | 3 |
| B.1.1.13 | Ecology | 2 | 108 | 3 |
| B.1.1.14 | The physical basis of obtaining information | 3 | 108 | 3 |
| B.1.1.14 | The physical basis of obtaining information | 4 | 108 | 3 |
| B.1.1.15 | Applied mechanics | 4 | 108 | 3 |
| B.1.1.15 | Applied mechanics | 5 | 108 | 3 |
| B.1.1.16 | Materials science and technology of structural materials | 6 | 180 | 5 |
| B.1.1.17 | Electronics and microprocessor technology | 5 | 144 | 4 |
| B.1.1.18 | Metrology, standardization and certification | 5 | 180 | 5 |
| B.1.1.19 | Basics of automatic control | 5 | 108 | 3 |
| B.1.1.20 | Fundamentals of instrument and system design | 6 | 144 | 4 |
| B.1.1.21 | Computer technologies in instrumentation | 7 | 108 | 3 |
| B.1.1.21 | Computer technologies in instrumentation | 8 | 72 | 2 |
| B.1.1.22 | Operating safety  | 6 | 72 | 2 |
| B.1.1.23 | Engineering graphics (drawing) | 1 | 72 | 2 |
| B.1.1.24 | Descriptive geometry and computer graphics | 2 | 108 | 3 |
| B.1.1.25 | Physical culture and sports | 1 | 72 | 2 |
| B.1.2.1 | Philosophy of Science and Technology | 6 | 72 | 2 |
| B.1.2.2 | 3D modeling and CAD basics | 3 | 72 | 2 |
| B.1.2.3 | Theoretical mechanics | 3 | 216 | 6 |
| B.1.2.4 | Mathematical modeling of dynamic systems | 4 | 108 | 3 |
| B.1.2.5 | Electrical engineering | 4 | 180 | 5 |
| B.1.2.6 | Organization of information exchange | 7 | 108 | 3 |
| B.1.2.7 | General theory of gyroscopes | 5 | 144 | 4 |
| B.1.2.8 | Monitoring and diagnostics of measuring and computing complexes | 6 | 144 | 4 |
| B.1.2.9 | Digital computing devices and microprocessors of instrument complexes | 6 | 144 | 4 |
| B.1.2.10 | Gyroscopic orientation systems | 7 | 216 | 6 |
| B.1.2.11 | Technological support for the production of measuring and computing complexes | 7 | 144 | 4 |
| B.1.2.12 | Methods and special equipment of instrument-making enterprise management | 7 | 144 | 4 |
| B.1.2.13 | Design of standard units of devices and devices | 8 | 108 | 3 |
| B.1.2.14 | Electric drive in instrumentation | 8 | 180 | 5 |
| B.1.3.1.1 | Mathematical logic and theory of algorithms | 2 | 180 | 5 |
| B.1.3.1.2 | Mathematical foundations of modeling | /2 | /180 | /5 |
| B.1.3.2.1 | Discrete mathematics | 3 | 108 | 3 |
| B.1.3.2.2 | Applied Mathematics | /3 | /108 | /3 |
| B.1.3.3.1 | Unified system of design documentation in instrument engineering | 3 | 108 | 3 |
| B.1.3.3.2 | Unified system of design documentation in instrument engineering | /3 | /108 | /3 |
| B.1.3.4.1 | Introduction to the theory of motion stability | 7 | 72 | 2 |
| B.1.3.4.2 | Oscillation theory | /7 | /72 | /2 |
| B.1.3.5.1 | Electrical measurements | 5 | 72 | 2 |
| B.1.3.5.2 | Measurement theory | /5 | /72 | /2 |
| B.1.3.6.1 | Fundamentals of the innovation economy | 4 | 144 | 4 |
| B.1.3.6.2 | Theory of innovation | /4 | /144 | /4 |
| B.1.3.6.3 | Military training | /4 | /144 | /4 |
| B.1.3.7.1 | Foreign language for professional communication | 5 | 144 | 4 |
| B.1.3.7.2 | Technical translation | /5 | /144 | /4 |
| B.1.3.7.3 | Military training | /5 | /144 | /4 |
| B.1.3.8.1 | Design, operation and reliability of aviation control systems | 6 | 180 | 5 |
| B.1.3.8.2 | Reliability of stabilization, orientation and navigation systems | /6 | /180 | /5 |
| B.1.3.8.3 | Military training | /6 | /180 | /5 |
| B.1.3.9.1 | Analytical methods in instrumentation | 7 | 180 | 5 |
| B.1.3.9.2 | Stabilization, orientation and navigation systems | /7 | /180 | /5 |
| B.1.3.9.3 | Military training | /7 | /180 | /5 |
| B.1.3.10.1 | Satellite navigation systems | 8 | 108 | 3 |
| B.1.3.10.2 | Introduction to Integrated Navigation systems | /8 | /108 | /3 |
| B.1.3.10.3 | Military training | /8 | /108 | /3 |
| B.1.3.11.1 | Sports games | 2 | 82 | 0 |
| B.1.3.11.1 | Sports games | 3 | 82 | 0 |
| B.1.3.11.1 | Sports games | 4 | 82 | 0 |
| B.1.3.11.1 | Sports games | 5 | 38 | 0 |
| B.1.3.11.1 | Sports games | 6 | 44 | 0 |
| B.1.3.11.2 | Recreational physical culture | /2 | /82 | 0 |
| B.1.3.11.2 | Recreational physical culture | /3 | /82 | 0 |
| B.1.3.11.2 | Recreational physical culture | /4 | /82 | 0 |
| B.1.3.11.2 | Recreational physical culture | /5 | /38 | 0 |
| B.1.3.11.2 | Recreational physical culture | /6 | /44 | 0 |
|  | **Total** |  | **7780** | **207** |