

List of subjects for “Design engineering, production and operation of rockets and aerospace complexes” field of study

1. History
2. Foreign language
3. Philosophy
4. Life safety
5. Physical education
6. Enterprise economics and production management
7. Physics
8. Mathematics
9. Computer science
10. Ecology
11. Applied mechanics
12. Metrology
13. Electrical engineering and electronics
14. Material science and construction material technology
15. Engineering drawing and computer graphics
16. Chemistry
17. Machine engineering basics
18. Fluid and gas mechanics
19. Thermal dynamics and heat transmission
20. Fluid flow, gas and aerodynamics
21. Theory and elements of aircraft control systems
22. CAD systems
23. Rocket design basics
24. Rocket ballistics
25. Rocket engines
26. Theory and calculation of liquid-propellant rocket engine
27. Theory and design engineering of turbopumps
28. Design engineering and calculations of solid-propellant rocket engine
29. Solid-propellant rockets
30. Hydraulic drive and machines in rocket and space technology
31. Elements of pneumatic and hydraulic systems and automatic equipment for aircrafts
32. Applied calculation methods of rocket and space equipment constructions
33. Missile ground equipment
34. Rocket structural mechanics
35. Spacecraft design engineering, construction and production
36. Rocket and space equipment testing and reliability control
37. Design engineering and construction of liquid-propellant rockets
38. Aircraft thermal conditions
39. Aircraft flight dynamics
40. Launcher design engineering and design basics
41. Heat and mass transfer in missile ground equipment
42. Ground equipment dynamics
43. Rocket production technology
44. Ground equipment production technology
45. Goods testing and quality control
46. Construction robustness
47. Fuel and work processes in aircraft and rocket engines
48. Lifting and transporting equipment
49. Solid modeling of rocket and space equipment
50. Rocket engine automatic equipment and control
51. Technical systems design engineering basics
52. Applied physical education
53. Introduction to field of study
54. General military training
55. Department management during peace time
56. Tactical training
57. Weapon design and its tactical use
58. Tactics of departments and units of strategic missile forces
59. Impeller machine theory and calculation
60. Special military training
61. Air-jet engine theory, calculation and design engineering
62. Rocket production history
63. Equipment for machine engineering
64. Numerical control machine tool
65. CAD systems for technological processes engineering in rocket and space equipment
66. Aircraft pneumatic drive
67. Rocket assembly technology
68. Rocket engine assembly technology
69. Thermal-protection material in rocket and space equipment
70. Special machine-tool attachment design engineering
71. Assembly fixture design engineering

72. Composite construction technology
73. Nanotechnology in rocket production
74. Education internship (internship for getting primary professional skills, including skills for research)
75. Production internship (technological)
76. Production internship (operational)
77. Production internship (research)
78. Production internship (pre-diploma)
79. State exams