

List of subjects for “Oil and gas engineering” field of study

Major – Operation and maintenance of facilities for oil, gas and refined products transportation and storage

1. History
2. Foreign languages
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. Technical systems reliability
13. Automatic control theory
14. Electrical engineering and electronics
15. Metrology, standardization and certification
16. Materials science
17. Engineering drawing and computer graphics
18. Chemistry
19. Technical projects regulatory documents
20. Oil and gas engineering basics
21. Research basics
22. Applied physical education
23. Statistical analysis, methods and means of research
24. Technical diagnosis basics
25. Quality management system

26. Information and measurement systems basics
27. Measurement, testing and control methods and means
28. Computer-aided design basics
29. Production fluid collection and preparation
30. Oil and gas preparation technology and processes
31. Hydraulics and oil and gas hydromechanics
32. Hydraulic processes of pipeline transport facilities
33. Oil and gas pipelines machinery and equipment
34. Construction machinery and equipment
35. Corrosion protection
36. Electrochemical protection of gas and oil pipeline equipment
37. Building constructions
38. Steel and reinforced concrete structures
39. Main gas and oil pipeline design engineering and operation
40. Pipeline transportation of oil, oil products and gas
41. Engineering geodesy
42. Engineering support of construction
43. Pump and compressor stations design engineering and operation
44. Pump and compressor stations operation and maintenance
45. Geology
46. Engineering and geological surveys
47. Flow mechanics
48. Fluid and gas mechanics
49. Oil and gas pipeline maintenance and repair
50. Construction of pipeline for hydrocarbon transportation
51. Gas networks and gas storage facilities
52. Gas distribution systems

53. Soil mechanics, foundations and substructures of oil and gas facilities
54. Engineering geology and foundations of pipeline for hydrocarbon transportation facilities
55. Thermodynamics and heat transfer
56. Thermal engineering
57. Oil depots and filling stations design engineering and operation
58. Oil storage facilities and filling stations design engineering and operation
59. Education internship (internship for getting primary professional skills, including skills for research)
60. Production internship (internship for getting professional skills and experience in the field of study)
61. Production internship (pre-diploma practice)
62. State exams

Major - Operation and maintenance of oil and gas industry technological facilities

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24. Technical diagnosis basics
25. Quality management system
26. Information and measurement systems basics
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28. Computer-aided design basics
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30. Oil and gas preparation technology and processes
31. Hydraulics and oil and gas hydromechanics
32. Hydraulic processes of pipeline transport facilities
33. 3D modeling and strength analysis of low temperature, technological and compressor equipment
34. Applied computer science in mechanical engineering
35. Compressor equipment for main compressor stations
36. Theory, calculation and design of dynamic compressor machines
37. Compressor equipment for gas-filling, air-separating and mobile compressor stations
38. Reciprocating compressor theory, calculations and construction
39. Main gas and oil pipeline design engineering and operation
40. Pipeline transportation of oil, oil products and gas
41. Gas turbine and diesel units for compressor stations

42. Low-temperature machines
43. Compressor stations design engineering and operation
44. Compressor and vacuum machines and units design engineering
45. Computer technology in chemical and oil and gas machinery, compressor and low-temperature engineering
46. Engineering analysis of technological machines and systems
47. Working fluids for low-temperature, vacuum and compressor equipment
48. Refrigerating equipment theoretical basics
49. Heat transfer and pump equipment for compressor stations
50. Heat transfer equipment for compressor, low-temperature and chemical-technological units
51. Low-temperature technological equipment for compressor stations and distribution pipelines
52. Refrigerating machines and units
53. Production and installment of technological equipment for compressor stations
54. Production of technological equipment for chemical and oil and gas industries
55. Thermodynamics and heat transfer
56. Thermal engineering
57. Oil depots and filling stations design engineering and operation
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