Master Degree Program in Geosteering

Curriculum

Semester 1

- Philosophy and methodology of science
- Business foreign language
- Mathematical modeling in tasks of oil and gas industry
- General theory of dynamic systems
- Statistical methods of data processing
- Technological processes of oil and gas industry

Semester 2

- Software for Modelling, Geosteering & Well Design
- Business foreign language
- General theory of dynamic systems
- Directed drilling / Technologies and technical equipment of wells with horizontal tailing-in construction
- Geology of oil and gas / Structural and facial geology of oil and gas accumulations' geology
- Oil and gas field development and operation / Risk assessment in planning and hole making of the horizontal completion

Semester 3

- Design Methodology in Oil-and-Gas Extraction Industry and Project Management
- Economics and O&G Production Management
- Geomechanics and Physical-Chemical Processes in a Well Bore Zone
- Wellbore Trajectory Control in Production Horizons
- Geological & Flow Simulation of Productive Pools

Semester 4

- Wellbore trajectory control in production horizons
- Geophysical methods of producing reservoir explorations / Modern geophysical methods and equipment for oil-and-gas layers research in drilling process
- Trouble prevention and accident elimination in extended reach drilling / Features of horizontal holes flushing

Continuum mechanics in drilling / compound section well engineering

Relevance of the program:

Geonavigation represents combination of the technologies created at the intersection of airspace navigation, drilling, geophysics, geology, production and development of oil and gas fields. Geonavigation becomes the tool which is carrying out research tasks and development of subsurface resources in a distance of considerable extent.

The area of oil and gas sector in economy is dynamically developing, and more and more drilling companies come to the conception of the need to geonavigation of well drilling service. Especially this progressing is shown at development of the new petroliferous regions of the Russian Federation (Eastern Siberia, offshore fields, etc.)

The program is aimed at:

• training of highly qualified specialists for oil and gas industry of Russia, the far abroad and neighboring countries

Advantages of the program:

- Involvement of the leading foreign and Russian scientists and experts of branch science
- Increase in level of proficiency in English
- Availability of the computer simulators providing to operate process of well construction
- Possibility of having a production practice in industrial work
- Training trajectory building-up

After training you will be able:

- To plan research, design-and-engineering and operational kinds of activity;
- To place well bores considering the corrected reservoir models, technological and processing limits of drilling process;
- To form resulting models of reservoir based on drilling;
- To operate oil and gas production.

Job Prospects:

PJSC Gazprom, OOO Gazprom flot, PJSC Rosneft, PJSC Lukoil, PJSC Gazprom neft, PC Zarubezhneft, etc.

Important information

Course duration: 2 years

Study options: off-budget, full-time

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