



«OFFSHORE DRILLING», 5 days

COURSE OBJECTIVE:

Development of professional competencies of drilling, exploration, and workover engineers, geologists, geoscientist, supervisors, and project managers in sphere of offshore wells construction technologies.

ACQUIRED ABILITIES:

- Identify offshore wells construction features;
- Know stages of offshore drilling in different environment;
- Consider offshore drilling equipment design and operation principles;
- Understand an offshore drilling rig design and application features in different environmental conditions;
- Solve practical tasks for selection and verification of offshore equipment.

COURSE CONTENT:

Module Name	Content
Offshore well construction	Offshore drilling terms. Metocean conditions. Subsurface conditions.
Drilling islands and piers	Soil islands. Ice islands. Ice-soil islands. Piers. Design. Use environment. Advantages and disadvantages.
Launching barges and submersible drilling rigs	Launching barges. Submersible drilling rigs. Design. Transportation and installation methods. Applicability. Advantages and disadvantages.
Semi-submersible drilling rigs	Classification. Design. Transportation and installation. Applicability. Advantages and disadvantages.
Jack-up drilling rigs	Classification. Design. Transportation and installation methods. Application conditions. Advantages and disadvantages.
Drillship rig	Classification. Design configurations. Transportation and installation. Use environment. Advantages and disadvantages.
Offshore fixed platforms	Gravity platforms. Piled platforms. SPAR/MONOPOD platforms. Ice-resistant platforms. Design. Transportation and installation. Use environment. Advantages and disadvantages.
Downhole equipment features	Rock destruction tool. PDM motor and rotary steerable systems. MWD. Drill pipes. Drilling case accessories.
Subsea wellhead equipment and	Blowout prevention equipment. Well head equipment. Marine

marine conductors	conductors (risers).
Surface equipment for offshore wells construction	Power drive. Pulling and running complex. Derrick drawworks unit. Drill string rotation complex. Pumping-circulating system.
Offshore drilling technics	Features of drilling practices. Tripping. Other support services.
Offshore wells cementing	Cementing equipment. Casing cementing features.
Well construction in the Arctic	The influence of ice load on drilling process and equipment operation. The influence of wind and temperature factors on drilling and equipment.
Safety rules for offshore drilling	Drilling regulations. Rules for drilling rig transportation. Installation rules.
Calculation of equipment loads while offshore drilling	Calculation of drilling rig load. Wave load calculation. Ice load impact. Calculation of drilling rig load during well drilling and cementing.