



**«ECOLOGICAL DAMAGE PREVENTION: OFFSHORE AND COASTAL OIL SPILL DISASTERS», 3 days**

**COURSE OBJECTIVE:**

Development of professional competencies of ecology department specialists in sphere of prevention and mitigation of oil spills consequences, minimization of pollution, and monitoring technics for offshore and coastal areas.

**ACQUIRED ABILITIES:**

- Plan prevention activities for offshore and coastal areas;
- Choose methods for ecological survey of soil, water and other elements samples;
- Map sensitive environment zones for offshore and coastal oil spills prevention plan;
- Consider regional features of environmental objects.

**COURSE CONTENT:**

Module Name	Content
Current environmental problems during construction and operation of offshore and coastal oil & gas facilities	Continental shelf and coastal zone. Environmental fragility of offshore and coastal areas. Human impact resistance. Cases of ecological problems arisen while construction and operation of offshore and coastal oil & gas facilities. Natural ecosystem self-cleaning and self-recovery ability: heavy metals, oil HC, etc.
Main environmental factors considered in the studies on offshore and coastal oil spills environmental impact	Geological survey requirements. Pre-design study of natural conditions for environmental impact assessment. Environmental objects (air, precipitation, water, soil, bottom deposits, biota) and nature assessment. Main environmental parameters. Water environment qualities. Wave process, pump moving, etc. Characteristics of soils and bottom deposits. Biota parameters. LOC system, critical load.
Content and principles of oil spill contingency plan (OSCP) development	What facilities require development of oil spill contingency plan (OSCP). Planning tasks for prevention and mitigation of emergency caused by oil spills. The content of oil spills prevention and mitigation plan. Case studies of offshore plan development (OSCP).

<p>Maps of environmentally fragile areas for oil spills prevention plan (offshore and coastal zones)</p>	<p>Main tasks and principles of environmentally fragile areas mapping for coastal and offshore zones. Mapping technics. The content environmental exposure chart atlas for coastal and offshore zones. Examples of environmentally fragile offshore and coastal zones.</p>
<p>Ecological surveys for prevention and mitigation of oil spills in offshore and coastal zones</p>	<p>Main tasks and objectives of coastal and offshore areas monitoring. Monitoring technics. Main monitoring objects for prevention of oil spills in offshore and coastal areas. Case studies of offshore and coastal areas monitoring with different pollutants: heavy metals, oil HC, etc.</p>