

		<b>Subject title</b>	<b>Drilling of oil and gas wells</b>								
<b>Lector</b>		<b>PhD. Kolisnyk Vasyl Ivanovych</b>									
<b>Lector assistant</b>		<b>PhD. Hrymaniuk Volodymyr Igorovych</b>									
<b>Training direction</b>		<b>Oil and gas production</b>		<b>Code</b>		<b>6.050304</b>					
<b>Institute</b>	<b>Petroleum Engineering</b>										
<b>Department</b>	<b>Drilling of oil and gas wells</b>										
<b>Form of study</b>		<b>Full-time</b>		<b>Year</b>		<b>III</b>		<b>Semester</b>		<b>6</b>	
<b>Types of academic hours</b>		<b>Total</b>	<b>Lectures</b>	<b>Practical trainings</b>	<b>Laboratory works</b>	<b>Independent + individual work</b>		<b>Course project</b>	<b>ECTS</b>		
		<b>108</b>	<b>32</b>	<b>16</b>	<b>16</b>	<b>44</b>		<b>-</b>	<b>3</b>		
<b>Course goal and objectives</b>											
Course objectives – this is the basic discipline for such specialties as “Well drilling” and “Development of oil and gas production”. It give the ability for students to better understanding of oil and gas well drilling techniqeue and technology, types of drilling rig, basic parameters of drilling mud engineering and well cementing.											
<b>Form of control</b>			Exam								
<b>Requirements for admission to the final control and the method of final evaluation</b>			Examining is conducted in accordance with applicable regulations of the Ministry of Education and Science of Ukraine and the regulations "On the system of current and final control, students' knowledge evaluation and ranking of students".								
<b>List of lectures</b>											
1. Course content, Well drilling history, Methids of well drilling, Well fundamental feafures 2. Types of drilling rig and equipment, BOP, chosing of drilling rig type 3. Equipment for rock cracking. Types of drilling bit. Core drilling. Drilling bit for special job 4. Classification and basic parameters of mud bottom motors. 5. Elements of drilling string. Pipes for drilling, tool joints types. 6. Drilling parameters and basic knwlege for their engineering 7. Drilling mud properties, types of drilling mud. 8. Dirrectional well drilling. Types of deviated wells. 9. Drilling in production layers, its testing and safety procedures. 10. Well casing. Casing design, Basic calculations in well cementing. 11. Different types of problems during of well drilling and cementing and ways of their solution.											
<b>Lesson plan</b>											

**Practical lessons :** Studying of drilling rig types and equipment, Calculation in drilling mud engineering, Casing design, Basic calculation method for evaluating of productive casing strength, Basic calculation method for casing cementing

**Laboratory lessons :** Studying of classification and construction of drilling bit, Measuring of drilling mud basic parameters, Regulating of drilling mud basic parameters, Measuring of cement powder and slurry basic parameters, Analysis of formation exploitation rate according to pressure chart