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Annotation to the work program of the discipline

Name of disciplines	Основы автоматизации технологических процессов нефтегазового производства / Basics of Automatisation of Technological Processes in Oil and Gas Production
Summary	Objects of control and automation in drilling wells. Basic concepts and definitions of the theory of automatic control. Elements of automation and instrumentation. Automation of technological processes in the construction of wells. General information about the drilling rig as an object of automation and regulation. Adjustable drive in well drilling. Criteria and algorithms for regulating the drilling process. General information about automatic bit feed systems. Optimal automatic control of the drilling process. Automation of tripping operations. Operational reliability of control and automation facilities. Instrumentation and automation service, tasks to be solved. Occupational safety and health during the operation and repair of BKIA and automation equipment
Development results of disciplines (module)	knows the technique and technology of designing technological processes, technological complexes used in production, in particular systems of dispatch control, geological and technical control, etc., standard computer programs for calculating technical means and technological solutions;
Labor intensity, cu.	3
Reporting Forms	Graded (grading)
List of basic and additional literature necessary for mastering disciplines	
Main literature	Ivanov, A.A. Automation of technological processes and production: study guide / A. A. Ivanov. - Moscow: Forum, 2011. - 224 p. Khpamenkov V.G. Automation of technological processes of drilling oil and gas wells / V.G. Khpamenkov: textbook. - Tomsk: Publishing House of TPU, 2012. - 416 p.
Additional literature	Automation of production processes in mechanical engineering: a textbook / Yu. Z. Zhitnikov, B.Yu. Zhitnikov, A.G. Skhirtladze and others. Ed. Yu. Z. Zhitnikova. - Kovrov: KGTA, 2008. - 615 p. Vadetsky, Yu. V. Drilling oil and gas wells: textbook / Yu. V. Vadetsky. - M. : Academy, 2007. - 352 p.