



1. GENERAL INFORMATION			
1.1. Course teacher	Tenured Professor Nediljka Gaurina-Medićurec, PhD	1.6. Year of the study	II
1.2. Name of the course	Advanced Drilling Technologies	1.7. ECTS credits	4
1.3. Associate teachers	Teaching Assistant Petar Mijić, PhD	1.8. Type of instruction (number of hours L + E + S + e-learning)	28,5L+13,5E+15S+3e-learning
1.4. Study programme (undergraduate, graduate, integrated)	graduate	1.9. Expected enrolment in the course	10
1.5. Status of the course	<input type="checkbox"/> mandatory	<input checked="" type="checkbox"/> elective	1.10. Level of application of e-learning (level 1, 2, 3), percentage of online instruction (max. 20%) level 3, 5% online
2. COUSE DESCRIPTION			
2.1. Course objectives	Acquisition of knowledge for designing casing drilling, underbalanced drilling, managed pressure drilling and extended reach drilling.		
2.2. Enrolment requirements and/or entry competences required for the course	Passed exams from <i>Drilling engineering</i> from first year of graduate study.		
2.3. Learning outcomes at the level of the programme to which the course contributes	Independently solve complex engineering problems in petroleum engineering and geoenergy engineering; Design wellbore for hydrocarbon and geothermal water exploitation.		
2.4. Expected learning outcomes at the level of the course (3 to 10 learning outcomes)	Compare casing drilling (CD) methods; Design managed pressure drilling (MPD); Design under pressure drilling (UBD); Formulate the specifics of extended reach drilling (ERD); Estimate application of solid expandable tubulars (SET).		
2.5. Course content (syllabus)	Casing drilling and liner drilling technology; Managed pressure drilling (MPD); Underbalanced drilling (UBD); Specifics of extended reach drilling (ERD); Solid expandable tubulars and their applications; Analysis of case study.		
2.6. Format of instruction:	<input checked="" type="checkbox"/> lectures <input checked="" type="checkbox"/> seminars and workshops <input checked="" type="checkbox"/> exercises <input type="checkbox"/> online in entirety <input type="checkbox"/> partial e-learning <input type="checkbox"/> field work	<input type="checkbox"/> independent assignments <input type="checkbox"/> multimedia and the internet <input type="checkbox"/> laboratory <input type="checkbox"/> work with mentor <input type="checkbox"/> (other)	2.7. Comments: -
2.8. Student responsibilities	Active participation in lectures, auditory exercises and seminars, preparation and presentation of seminars, taking written and oral exams.		

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2.9. Monitoring student work	Class attendance	YES		Research		NO	Oral exam	YES			
	Experimental work		NO	Report		NO					
	Essay		NO	Seminar paper	YES						
	Preliminary exam	YES		Practical work		NO					
	Project		NO	Written exam	YES		ECTS credits (total)	4			
2.10. Required literature (available in the library and/or via other media)	Title						Number of copies in the library	Availability via other media			
	McLennan, J. et al (1997.): <i>Underbalanced Drilling Manual</i> , Gas Research Institute, Chicago, Illinois. – selected chapters						YES	YES			
	Byrom, T.G. (2015.): <i>Casing and Liners for Drilling and Completion, Design and Application</i> , Second edition, Elsevier. – selected chapters						NO	YES			
	Halliburton (2016.): <i>Extended Reach Drilling - Solutions and Applications</i> , Halliburton – selected chapters						NO	YES			
	Bourgoine, A. (2014.): <i>Directional Drilling and Deviation Control: Definitions and Reasons for Directional Drilling</i> . – selected chapters						YES	YES			
	Hesham F. Tantawy, H.F. (2014.): <i>Extended Reach Drilling: A New Vision</i> , CreateSpace Independent Publishing Platform, pp. 138. – selected chapters						NO	YES			
	Verma, L. (2015.): <i>Managed Pressure Drilling</i> , Scitus Academics LLC, pp. 240. – selected chapters						NO	YES			
2.11. Optional literature	Bill Rehm, B., Schubert, J.; Haghshenas, A.; Paknejad, A. S.; Jim Hughes, J. (2008.): <i>Managed Pressure Drilling</i> , Gulf Publishing Company, Tulsa, Oklahoma. – selected chapters										
	OnePetro papers.										
2.12. Other (as the proposer wishes to add)	-										