1. GENERAL INFORMATION				
1.1. Course teacher	Associate Professor Vladislav Brkić, PhD		1.6. Year of the study	II.
1.2. Name of the course	Reservoir stimulation		1.7. ECTS credits	4
1.3. Associate teachers	-		1.8. Type of instruction (number of hours L + E + S + e-learning)	27L+0E+27S+6e-learning
1.4. Study programme (undergraduate, graduate, integrated)	graduate		1.9. Expected enrolment in the course	15
1.5. Status of the course	☐ mandatory	☒ elective	1.10. Level of application of e-learning (level 1, 2, 3), percentage of online instruction (max. 20%)	level 2, 10% online
2. COUSE DESCRIPTION				
2.1. Course objectives	Acquisition of knowledge and skill necessary for determining the damage of the near wellbore zone and for selecting the appropriate reservoir stimulation technique and hydraulic fracturing design.			
2.2. Enrolment requirements and/or entry competences required for the course	-			
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; Analyse reservoir rock and reservoir fluids properties; Predict reservoir behaviour and the behaviour of hydrocarbon and geothermal water production system; Optimize hydrocarbon and geothermal water production.			
2.4. Expected learning outcomes at the level of the course (3 to 10 learning outcomes)	Select parameters that affect the productivity of the well, evaluate the components of the skin factor and their impact on the productivity curve; Define the effective radius of the well and the production and classify the impact of individual components on the pressure drop in the wellbore zone; Define reservoir treatment techniques to remove damage; Analyse chemical treatment and acid washing programs from different production wells data; Presenting the basic features of the model of hydraulically generated fractures; Analyse the conductivity of the fracture and assess the priorities to optimize of hydraulic fracturing process; Select properties of the fracturing fluid and surface equipment for fracturing.			

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2.5. Course content (syllabus)	Reservoir productivity; Types of permeability damage near wellbore zone; Sandstone treatment; Carbonate treatment; Mechanics of hydraulic fracturing; Models of hydraulic fracturing; Field work.								
2.6. Format of instruction:	☒ lectures ☒ seminars and workshops ☐ exercises ☐ online in entirety ☐ partial e-learning ☒ field work			☒ independent assignments ☐ multimedia and the internet ☐ laboratory ☒ work with mentor ☐ (other)			2.7. Comments: -		
2.8. Student responsibilities	Attendance at 80% of classes and exercises, write and presente seminar								
2.9. Monitoring student work	Class attendance	YES		Research	YES		Oral exam	YES	
	Experimental work		NO	Report		NO	Seminar presentation	YES	
	Essay		NO	Seminar paper	YES		Research presentation	YES	
	Preliminary exam		NO	Practical work		NO			
	Project		NO	Written exam		NO	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**
	Bellarby, J. (2009.): *Well Completion Design*, Elsevier, 2009.	YES	NO
	Economides, M.J., Nolte, K.G. (2000.): *Reservoir Stimulation*, John Wiley & Sons, Ltd., New York, 2000.	YES	YES
2.11. Optional literature	SPE Webinars, OnePetro papers online.		
2.12. Other (as the proposer wishes to add)			

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