



1. GENERAL INFORMATION			
1.1. Course teacher	Associate Professor Jasna Orešković, PhD	1.6. Year of the study	II.
1.2. Name of the course	Integrated Well Logging and Seismic Data Interpretation	1.7. ECTS credits	4
1.3. Associate teachers	Teaching Assistant Josipa Kapuralić, PhD	1.8. Type of instruction (number of hours L + E + S + e-learning)	30L+15E+10S+5e-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, 8,3% on line
2. COUSE DESCRIPTION			
2.1. Course objectives	Students shall develop basic knowledge and skills within seismic reflection data interpretation and their correlation to well logging data, as necessary to understand the subsurface relationships and to delineate reservoirs.		
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	Analyse reservoir rock and reservoir fluids properties; Plan hydrocarbon and geothermal reservoir management.		
2.4. Expected learning outcomes at the level of the course (3 to 10 learning outcomes)	Explain fundamental aspects of seismic wave propagation; Make interpretations of the more common well logging measurements; Correlate the results of different logging measurements; Perform well-seismic ties; Construct synthetic seismograms; Construct 3D surface based on well logging and seismic data.		
2.5. Course content (syllabus)	Theoretical knowledge about seismic reflections from geological boundaries; Seismic acquisition and processing principles of 2D and 3D seismic data; Well logging data acquisition and seismic-well tie; Vertical and horizontal resolution of seismic data; Direct hydrocarbon indicators; Basic seismic interpretation techniques; Map generation; Time to depth conversion; Fundamental seismic attributes.		
2.6. Format of instruction:	<input checked="" type="checkbox"/> lectures	<input checked="" type="checkbox"/> independent assignments	2.7. Comments:



	<input type="checkbox"/> seminars and workshops <input checked="" type="checkbox"/> exercises <input type="checkbox"/> online in entirety <input checked="" type="checkbox"/> partial e-learning <input type="checkbox"/> field work	<input type="checkbox"/> multimedia and the internet <input type="checkbox"/> laboratory <input type="checkbox"/> work with mentor <input checked="" type="checkbox"/> computer lab (other)	-						
2.8. Student responsibilities	Attending lectures and compulsory exercises in addition to an exercise in the computer lab through usage of software for well and seismic data analysis. The exercises are solved through teamwork or individually.								
2.9. Monitoring student work	Class attendance	YES	Research	NO	Oral exam	YES			
	Experimental work	NO	Report	NO					
	Essay	NO	Seminar paper	NO					
	Preliminary exam	NO	Practical work	YES					
	Project	YES	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			
	Yilmaz, Ö. (2001.): <i>Seismic Data Analysis</i> . Society of Exploration Geophysicists.				NO	YES			
2.11. Optional literature	Lowrie, W. (2007.): <i>Fundamentals of Geophysics</i> (Ch. 3). Cambridge University Press.								
	Chopra, S., Marfurt, K.J. (2007.): <i>Seismic attributes for Prospect Identification and Reservoir Characterization</i> . Society of Exploration Geophysicists.								
	Ellis, D.V., Singer, J.M. (2008.): <i>Well Logging for Earth Scientists</i> . Springer, 2nd edt.								
	Articles								
2.12. Other (as the proposer wishes to add)	-								