

Course unit title:	Oil & Gas Upstream Technologies		
Course unit code:	OG400		
Type of course unit:	Elective		
Level of course unit:	BSc		
Year of study:	4 th		
Semester when the unit is delivered:	7 th		
Number of ECTS credits allocated :	5		
Name of tentative lecturer(s):	Chatzichristos Christos, Antonis Antoniou, Solon Kasinis (guest lecturer)		
Learning outcomes of the course unit:	<ul style="list-style-type: none"> • Know about Oil & Gas onshore and offshore drilling operations and methods • Understand Reservoir engineering and Enhanced Oil recovery (EOR) methods • Know about Oil & Gas onshore and offshore extraction • Understand Offshore processing and pipelining 		
Mode of delivery:	Face-to-face		
Prerequisites:	None	Co-requisites:	None
Recommended optional program components:			
Course contents:	<ol style="list-style-type: none"> 1. Oil & Gas Offshore and Onshore Drilling <ul style="list-style-type: none"> • Drilling preparations • Oil & Gas Rings • Drilling methods (conventional and new) 2. Reservoir Engineering <ul style="list-style-type: none"> • Reservoir mapping • Reserves estimation • Enhanced Oil Recovery (EOR) • Water-flooding / gas injection to maximize hydrocarbon recovery • Cost effective reservoir depletion schemes 3. Oil & Gas extraction <ul style="list-style-type: none"> • Process Overview • Onshore Facilities • Offshore Facilities • Main Process Sections (Wellheads, Manifolds, Oil/Gas/Water Separation, Gas Compression) • Metering, Storage and Export 4. Oil & Gas Offshore Processing <ul style="list-style-type: none"> • Platform Oil Processing • Platform Gas Processing • Oil & Gas Offshore Pipelining 		
Recommended and/or required reading:	Havard Devold, "Oil & Gas Production Handbook"		
Textbooks:	"Fundamentals of Natural Gas Processing", Arthur Hidnay, Taylor & Francis, 2007		
Software:			
References:	<ol style="list-style-type: none"> 1. "Oil & Gas Production in Nontechnical Language" by Martin S. Raymond, PennWell Corp., October 2005 2. "BP Statistical review of world energy" June 2013 		
Planned learning activities and teaching methods:	<p>The taught part of course is delivered to the students by means of lectures and video presentations, conducted with the help of computer. Lecture notes and presentations will be available through the web for students to use in combination with the textbooks.</p> <p>Lectures will be supplemented by homework assignments and readings.</p>		
Assessment methods and criteria:	<ul style="list-style-type: none"> • Assignments 25% • Mid-Term Exam: 25% 		

	• Final Exam	60%
Language of instruction:	English	
Work placement(s):	No	