



JSC «Kazakh-British Technical University»  
 Business School  
 Department of “Management”

APPROVED  
 Dean of Business School  
 Ewan Simpson  
 \_\_\_\_\_  
 « \_\_\_\_ » \_\_\_\_\_ 2014.

### SYLLABUS

2014-2015 academic year

Course: ECON374 “Petroleum (Oil and Gas) Economics”  
 Number of credits: 3  
 Term: Fall semester  
 Instructor’s full name: Alex Mosesov

Information on the Instructor	Time and Place		Contact Information	
	Room	Office Hours	Tel.:	E-mail
Assoc. Professor, Management Dept., Ph.D	According to the schedule	According to the schedule	611	a.mosesov@ kbtu.kz

Chair

Джумасеитова А. К.

Instructor

Mosesov A..

## **COURSE DESCRIPTION:**

An appraisal of technical aspects of project evaluation, and details of project economics, with emphasis on how technical data are translated into the numerous assumptions that constitute the economic model of the project; elements of primary concern to banks, and development of a particular cash flow profile; typical methods of performing feasibility studies, economic criteria, debt capacity tests, and project studies; risk analysis, cash flow projections, and project finance and capital requirements.

## **COURSE AIMS:**

To familiarize students with the general petroleum economics, as well as traditional and new methods of economic evaluation of petroleum projects, used by modern petroleum companies.

## **COURSE OBJECTIVES:**

On completion of this course participants should be able:-

- ✓ to understand the modern methods of evaluating investment projects in the oil and gas industry
- ✓ to examine traditional and new methods of investment project evaluation
- ✓ to calculate the economic profitability of petroleum projects to account for the influence of inflation, tax and another factors on project economics
- ✓ to model, analyze, and reduce project risks.

## **LITERATURE**

### ***Core Texts:***

1. Chapters № 2, 3, 4, 5, 6, 7

### ***Recommended Reading***

1. Petroleum Economics. Institute of Petroleum Engineering, Heriot-Watt University, 2005.
2. Project Economics & Decision Analysis, Vol. 1: Deterministic Models. by M.A. Mian. ISBN: 978-0-87814-819-6

### ***Regulatory***

1. Resolution of the Government of the Republic of Kazakhstan on the Approval of the Model Contract for Carrying Out Subsoil Use Operations in the Republic of Kazakhstan, dated 31 July 2001
2. The oil law of the republic of Kazakhstan, issued June 28, 1995, # 2350
3. The Law on Production Sharing Agreements for Conducting Offshore Petroleum Operations, dated 8 July 2005
4. The Law of the Republic of Kazakhstan from July 8, 2005 № 68 "About agreements (contracts) about production division at the carrying out of oil operations at sea", "The Kazakhstan truth" from July 15, 2005 № 188-189
5. The Law of the Republic of Kazakhstan as of January 27, 1996 No. 2828 "On subsoil and subsoil use"

## COURSE OUTLINE

Week	Class work			SIS (Students Independent Study)	TSIS (Teachers Supervised Independent Study)	
	Topic	Lectures	Practice			Core Text (CT) Chapters
1	Evaluation methods, Ch.2	2	1	CT2	Distribution of individual tasks for SIS.	Distribution of individual tasks for TSIS.
2	Upstream petroleum projects, Ch. 2	2	1	CT2	SIS 1	
3	Interest, Ch. 3 Applications of compounding, Ch. 3	2	1	CT3	SIS 2	
4	Discounting and Annuity, Ch. 3	2	1	CT3	SIS 3	
5	Cash Flow Modelling, Ch 4	2	1	CT4	SIS 4	
6	Annual Capital Charge, Ch 4 Internal Rate of Return, Ch 4	2	1	CT4	SIS 5	
7	Acceleration Projects, Ch 4 Project Parameters, Ch 4	2	1	CT4	SIS 6	
8	Methods of project assessment Presentation of Team Projects Mid-term exam	2	1	Covers CT2-4	SIS 7	TSIS 1
8	Resource ownership and Licensing, Ch 5	2	1	CT5	-	
9	Petroleum Development and Taxation Ch 5	2	1	CT5		
9						
10	Sources of Uncertainty and Risk, Ch 6	2	1	CT6	SIS 8	TSIS 2
11	Measures of risk reduction, Ch 7	2	1	CT7	SIS 9	
12	Methods of risk assessment, Ch 7	2	1	CT7	SIS 10	
13	Decision trees, Ch 7	2	1	CT7	SIS 11	
14	Presentation of Team Projects	2	1		SIS 12	TSIS 3
15	<b>FINAL EXAM</b>	2		Covers CT5-7		

## GRADING CRITERIA

№	Assessment criteria	Weeks																Final scores
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16 17	
1	Attendance / Participation		✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓				15%
2	SIS		✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓				15%
3	TSIS										✓	✓	✓	✓				15%
4	Mid-Term								✓									15%
6	Final Exam															✓	✓	40%
	<b>Total:</b>																	<b>100%</b>

	<i>1 attestation</i>	<i>2 attestation</i>	<i>Final Exam</i>	<b>Total</b>
Attendance / Participation	7.5 %	7.5%		<b>15%</b>
SIS	7.5%	7.5%		<b>15%</b>
TSIS		15%		<b>15%</b>
Mid-Term	15%			<b>15%</b>
Final Exam			40%	<b>40%</b>
<b>Total</b>	<b>30%</b>	<b>30%</b>	<b>40%</b>	<b>100%</b>

Thus, the maximum amount of points shall be 100. Grades will be awarded based on the following scale:

## GRADING SCALE

Letter grades for the course follow the same standards as specified in the Catalogue. See the following table for grading scale:

Grading Letters	System Numerical Equivalent	Percentage
A	4.00	95 – 100
A-	3.67	90 – 94
B+	3.33	85 – 89
B	3.00	80 – 84
B-	2.67	75 – 79
C+	2.33	70 – 74
C	2.00	65 – 69
C-	1.67	60 – 64
D+	1.33	55 – 59
D	1.00	50 – 54
F	0	0 - 49

## **COURSE POLICY**

Policies of the course include the following requirements:

- ✓ Cheating or plagiarism leads to a zero grade for the relevant task, project or exam.
- ✓ Missing more than 20% of classes automatically leads to a zero grade for the entire course
- ✓ Fair prepare to all lectures, seminars and home tasks
- ✓ Deliver of all works in time and in good quality.
- ✓ Do not enter into the auditorium after and leave before the teacher without his permission.
- ✓ Switch off all electronic devices during the class
- ✓ Do not make any noise, get up, leave classroom without permission of teacher
- ✓ Tolerate and respect the opinions and feelings of other peoples.

Assistance: Do not hesitate to request any assistance from teacher during the class or office ours.

## **Assessment Policy**

- ✓ If student will get less than 30 points (less than 50%) as the result of two attestations (60 points) before the final exam, student will get Fail grade for the course.
- ✓ If student will get less than 50% on the final exam (less than 20 points out of 40 points), student will get Fail grade for the course.
- ✓ If student will miss the Final Exam without sufficient reasons – student will get Fail grade for the course, even if till Final exam student will get more than 50 points.

Approved by the meeting of the Economic and Management Department Minutes # 1 on \_\_\_\_\_.

Instructor

Mosesov. A.

Chair

Jumaseitova A.K.