

## COURSE SYLLABUS

### Natural Gas production Engineering 610012

#### COURSE DETAILS

**Campus:** Ashdod

Department: Mechanical Engineering

Discipline: Natural gas

Year of Study: Third

Semester: A

Credit: 2.5

ECTS Credit Points: 3.75

Lecturer(s): Jeffrey Bellaiche  
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**Academic year:** 2019-2020

Type of Course: Required

Level of Course: Undergraduate

Mode of Delivery: Face to face

Prerequisites:

Co-Requisites:

Language of Instruction: English

Work Placement(s):

Teaching Assistant(s):

#### AIM

To provide knowledge of the processes used throughout the natural gas chain, their logical sequences, and the chemical reactions, main equipment and operating conditions.

## LEARNING OUTCOMES

On successful completion of the course, the students will be able to:

1. Understand the fundamentals of natural gas.
2. Have a good knowledge of the processes used in the natural gas chain
3. Solve simple, realistic engineering problems.

## COURSE CONTENTS

Week	Subject	Relevant Reading
1	Introduction to natural gas.	[1]
2	General processes of natural gas.	[1]
3	Hydrate inhibition.	[1]
4	Gas dehydration	[1]
5	Acid-gas removal.	[1]
6	General review.	
7	Midterm quiz.	
8	Mercury removal and liquid recovery.	[1]
9	Production chemistry.	[1]
10	Environmental challenges: air and water discharges.	[1]
11	Material balance and flow analysis.	[1]
12	System performance.	[1]
13	General review.	

## RECOMMENDED OR REQUIRED READING

Text book:

1. *Havard Devold (2013), Oil and Gas Production Handbook: An Introduction to Oil and Gas Production, Transport, Refining and Petrochemical Industry.*

## PLANNED LEARNING ACTIVITIES AND TEACHING METHODS

Lecture hours: 2, Practice hours: 1. Two frontal lecture hours and 2 practice sessions per week, combining traditional teaching methods with personal experience, a common-sense approach, as well as the use of audiovisual presentations and the resolution of practical, real-world problems.

## ASSESSMENT METHODS AND CRITERIA

Criterion	Percentage	Comments
Final Exam:	70%	A passing grade of 56 or higher is mandatory. If the final exam score is below 56, that becomes the final course grade.
Quizzes:	30%	