



Faculty of Petroleum Refining and Petrochemistry

Study Program: Chemical and Biochemical Processes Informatics and Engineering

Study period: 4 years Bachelor
 Academic year structure: 2 semesters (14 weeks per semester)
 Examination sessions: winter session (January/February)
 summer session (June/July)
 Total ECTS: 240 (+4)

Courses per year (C-course, S-seminar, L-Laboratory, P-project)

1st YEAR

No	Course	1 st Semester					2 nd Semester				
		C	S	L	P	ECTS	C	S	L	P	ECTS
1	Linear Algebra, Analytical and Differential Geometry	3	2	-	-	7					
2	Inorganic Chemistry 1	2	1	1	-	5					
3	Informatics Fundamentals	2	-	2		3					
4	Computer Programming and Programming Languages	2	-	2	-	5					
5	Analytical Chemistry and Instrumental Analysis	3	-	2	-	5					
6	Fundamentals of Cybernetics	2	-	1	-	3					
7	Physical Education	-	1	-	-	1					
8	Foreing Languages 1	-	2	-	-	2					
9	Mathematical Analysis						2	2	-	-	6
10	Chemistry						3	-	2	-	4
11	Physics						3	1	1	-	5
12	Systems Theory						2	-	2	-	6
13	Data Bases						2	-	1	-	3
14	Probability Theory and Mathematical Statistics						2	2	-	-	4
15	Physical Education						-	1	-	-	1
16	Foreing Languages 2						-	2	-	-	2



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2nd YEAR

No	Course	1 st Semester					2 nd Semester				
		C	S	L	P	ECTS	C	S	L	P	ECTS
1	Computer Structure	2	-	1	-	3					
2	Applied Physical Chemistry 1	2	1	1	-	5					
3	Impulse Transfer Phenomena and Specific Equipment	2	-	2	-	5					
4	Computer aided Graphics	2	-	2	-	3					
5	Petroleum Chemical and Technology	3	-	2	-	6					
6	Physical Education	-	1	-	-	1					
7	Organic Chemistry 1	3	-	2	-	6					
	Electrotechnics and electronics										
8	Foreing Languages 3	-	2	-	-	2					
9	Mass Transfer Processes 1						3	-	2	-	5
10	Industrial catalysis and catalysts						2	-	1	-	3
11	Heat Transfer Processes						3	-	2	-	4
12	Numerical Methods						2	-	2	-	4
13	Applied Physical Chemistry 2						3	1	1	-	4
14	Physical Education						-	1	-	-	1
15	Organic Chemistry 2						2	-	1	-	4
	Material resistance							1	-		
16	Foreing Languages 4						-	2	-	-	2
17	Industrial Training 1 (3 weeks x 30 hours)						-	-	-	-	4

3rd YEAR

No	Course	1 st Semester					2 nd Semester				
		C	S	L	P	ECTS	C	S	L	P	ECTS
1	Mass Transfer Processes 2	3	-	2		6					
2	Heat Transfer Processes – Project	-	-	-	2	2					



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3	Optimization of technological processes	2	-	2	-	4					
4	Chemical Processes Modelling	2	-	2	-	4					
5	Chemical and Biochemical Reactors	3	-	2	-	5					
6	Object Programming	2	-	2	-	4					
7	Artificial Intelligence	2	-	2	-	5					
	Computers Networks and INTERNET										
8	Thermocatalytical Processes in Petroleum Industry 1						3	-	3	-	5
9	Computer Aided Graphics						2	-	3	-	5
10	Management and Engineering of Production Systems						2	-	2	-	4
11	Chemical Processes Control in Chemical Industry 1						2	-	2	-	4
12	Dynamics of Chemical Systems						2	-	2	-	4
13	Mass Transfer Processes 3 - Project						-	-	-	2	2
15	Academic Ethics and Integrity						2	-	1	-	3
	Elements of mechanical engineering										
16	Industrial Training 2 (3 weeks x 30 hours)						-	-	-	-	4

4th YEAR

No	Course	1 st Semester					2 nd Semester				
		C	S	L	P	ECTS	C	S	L	P	ECTS
1	Thermocatalytical Processes in Petroleum Industry 2	3	-	3		5					
2	Thermocatalytical Processes in Petroleum Industry 3 - Project	-	-	-	1	2					



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3	Chemical Processes Control in Chemical Industry 2	2	-	2	-	4					
4	Petrochemical Technology	2	-	2	-	5					
5	Real Time Processes Control	2	-	2	-	5					
6	Real Time Processes Control - Project	-	-	-	1	2					
7	A. Numerical Equipments for Chemical Processes Control	2	-	2	-	4					
	A. Industrial Data Networks										
8	B. Human-Machine Interface	2	-	2	-	3					
	B. Advanced Automatic Adjustment Algorithms										
9	Analysis and Synthesis of Technological Processes						4	-	3	-	6
10	Analysis and Synthesis of Technological Processes- Project						-	-	-	2	2
11	Biochemical Processes Engineering						2	-	1	-	3
12	Lube oil Manufacturing Technology						4	-	3	-	6
13	Safety Equipment and Industrial Plants						3	-	2	-	5
	Pollution Prevention and Environmental Protection										
14	Diploma Project Elaboration						-	-	-	4	4
15	Diploma Project Industrial Training (2 weeks)						-	-	-	-	4