

1. Course Description

COURSE DESCRIPTION FORM			
Course Code and Title	CHE466 PETROCHEMICAL TECHNOLOGY		
Course Semester	8		
Catalog Description (Content) of the Course	Development of petrochemical technology. Raw materials. Production methods of various petrochemicals. Petrochemical industry in Turkey and employed technologies.		
Main Textbook	1) Kimyasal proses endüstrileri, A.İ. Çataltaş (Çev.), İnkılap, İstanbul, 1985 2) Petrochemicals, A.M. Brownstein, Petroleum Pub., New York, 1972 3) Industrial chemicals, W.L. Faith, D.B. Keyes and R.L. Clark, John Wiley & Sons, New York, 1966 4) Petrokimya, DPT-ÖİK Raporu, Ankara, 1994		
Supporting Textbooks	1) Kimyasal proses endüstrileri, A.İ. Çataltaş (Çev.), İnkılap, İstanbul, 1985 2) Petrochemicals, A.M. Brownstein, Petroleum Pub., New York, 1972 3) Industrial chemicals, W.L. Faith, D.B. Keyes and R.L. Clark, John Wiley & Sons, New York, 1966 4) Petrokimya, DPT-ÖİK Raporu, Ankara, 1994		
Course Credit (ECTS)	4		
Prerequisites of the Course (Compulsory attendance should be indicated here.)	-		
Type of the Course	Elective		
Instruction Language of the Course	English		
Object and Target of the Course	To be informed about petrochemical technology. To study production techniques and state of industry.		
Learning Outcomes of the Course	1. Knowledge access to any research 2. Individual ability to work		
Mode of Delivery	Face to face		
Weekly Schedule of the Course	1. Week : Introduction, definition of petrochemical industry, its state in the world and Turkey 2-3. Week: Basic and intermediate petrochemical raw materials; ethylene-propylene, aromatics, styrene, caprolactam etc., definition, usage areas, production technologies 4-5. Week: Distillation of crude oil 6. Week: Distillation of crude oil 7-8. Week: Thermoplastics, low and high density polyethylene, definition, properties, production techniques, state of industry. 9 Week: Polyvinyl chloride, definition, properties, production techniques, state of industry. 10. Week: Polypropylene, definition, properties, production techniques, state of industry 11. Week: Polystyrene and the others, definition, properties, production techniques, state of industry. 12. Week: Plastic auxiliaries, plastifiers, emulsifiers, stabilizers, antioxidants etc. 13. Week: Synthetic fibers and yarn, nylon, polyester etc. 14. Week: Synthetic fibers and yarn, nylon, polyester etc.		
Educative Activities (Credit will be determined based on the time given for these activities. Should be filled carefully.)	Theoretical Study Hours of Course Per Week Mid-Term and Studying for Mid-Term Final and Studying for Final		
		Quantity	Total Contribution (%)
	Midterm	2	60
	Homework	0	0
	Assignment	0	0
	Projects	0	0

Workload of the Course	Activity		Total Week Count	Weekly Duration (in hour)					Total Workload in Semester
	Theoretical Study Hours of Course Per Week		12	3					36
	Mid-Term and Studying for Mid-Term		2	20					40
	Final and Studying for Final		1	20					20
	Total work load								96
	Total work load/25								3.84
	ECTS of the course								4
		Number	Program Outcomes	1	2	3	4	5	
1		Adequate knowledge of engineering subjects and ability to use theoretical areas to model and solve				X			
2		Ability to identify, formulate, and solve complex engineering problems; ability to select and apply proper analysis and modeling methods for this purpose.			X				
3		Ability to design a complex system, process, device or product under realistic constraints and conditions, in such a way as to meet the desired result; ability to apply modern design methods for this purpose.			X				
4		Ability to devise, select, and use modern techniques and tools needed for engineering practice; ability to employ information technologies effectively.			X				
5		Ability to design and conduct experiments, gather data,			X				

			analyze and interpret results for investigating engineering problems.						
	6		Ability to work efficiently in intra-disciplinary teams.		X				
	7		Ability to work efficiently in multi-disciplinary teams;			X			
	8		Ability to work individually.		X				
	9		Ability to communicate effectively in Turkish/English, both orally and in writing; Ability to write effective reports and comprehend written reports, make effective presentations,			X			
	10		prepare design and production reports, give and receive clear and intelligible instructions.			X			
	11		Recognition of the need for lifelong learning; ability to access information, to follow developments in science and technology, and to continue to educate him/herself.			X			
	12		Awareness of professional and ethical responsibility.			X			
	13		Information about business life practices such as project management, risk management, and change management.		X				
	14		Information		X				

