1. Course Description

COURSE DESCRIPTION FORM	
Course Code and Title	CHE462POLYMER TECHNOLOGY
Course Semester	8
Catalog Description (Content) of the Course	Polymerization mechanism, polymer structure, molecular weight and classification of polymers. Polymeric reactives and petrochemical monomers. Synthesis methods and process. Polymeric additives and filler materials. Polymer handling methods. Some industrial polymer process and engineering.
Main Textbook	Joel Fried, Polymer Science and Technology 2nd Edition, Prenctice Hall, 2003
Supporting Textbooks	Polymer Chemistry, An Introduction, Charles E. Carraher, Jr, Marcel Dekker, 4th Edition, 1992.
Course Credit (ECTS)	4
Prerequisites of the Course (Compulsory attendance should be indicated here.)	There is no prerequisite or co-requisite for this course.
Type of the Course	Elective
Instruction Language of the Course	English
Object and Target of the Course	The course is taught to get students acquainted with basic concepts in polymer chemistry.
Learning Outcomes of the Course	To teach the basic concepts of polymer chemistry and and to give the ability to establish a relationship between the material selection and design
Mode of Delivery	The mode of delivery of this course is Face to face
Weekly Schedule of the Course	1. Week Polymer matrix, polymer molecular weight and classification 2. Week Polymer matrix, polymer molecular weight and classification 3. Week Polymer matrix, polymer molecular weight and classification 4. Week The polymerization mechanism 5. Week The polymerization mechanism 6. Week Polymeric reactive monomers 7. Week Polymericreactivemonomers 8. Week Synthesis methods and processes 9. Week Synthesis methods and processes 10.Week Polymer additives and fillers 11.Week Processing methods of polymer 12.Week Processingmethods of polymer 13.Week Processing methods of polymer

	14.Week Some industrial polymer processes and engineering
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 Reading Searching in Internet and Library Preparing Reports Preparing Presentation Presentation Mid-Term and Studying for Mid-Term Final and Studying for Final

Assessment Criteria

	Quantity	Total Contribution (%)
Midterm	50	2
Homework	10	5
Assignment	0	0
Projects	0	0
Practice	0	0
Quiz	0	0
Contribution of In-term Studies to Overall Grade	60	
Contribution of Final Examination to Overall Grade	40	
Attendance	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	15	3	45
Reading	10	1	10
Searching in Internet and Library	20	1	20
Preparing Reports	1	5	5
Preparing Presentation	1	5	5
Presentation	1	1	1
Mid-Term and Studying for Mid-Term	2	5	10
Final and Studying for Final	1	2	2
Total work load			98
Total work load/25			3,92
ECTS of the course			4

Course's Contribution To Program

Number	Program Outcomes	1	2	3	4	5
1	Adequate knowledge in mathematics, science and engineering subjects pertaining to the relevant discipline; ability to use theoretical and applied information in these areas to model and solve engineering problems.	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, analyze and interpret results for investigating engineering problems.	X				
	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 about awareness of entrepreneurship, innovation, and sustainable development.	X				
	15	Knowledge about contemporary issues and the global and societal effects of engineering practices on health, environment, and safety.	X				
	16	Knowledge about awareness of the legal consequences of engineering solutions.	X				
	17	Knowledge on standards used in engineering practice.			X		

Name of Lecturer(s) and Contact Iınformation	Prof. Dr. Nursel Dilsiz ndilsiz@gazi.edu.tr