

1. Course Description

COURSE DESCRIPTION FORM	
Course Code and Title	CHE348 Plastic Materials
Course Semester	6
Catalog Description (Content) of the Course	Plastic materials and additives. Usage of the plastics. Environmental effects of plastics. Plastic wastes recycling.
Main Textbook	Savaşçı O.T., Uyanık N., Akovalı G.; Plastikler ve Plastik Teknolojisi, Çantay Kitabevi, İstanbul, 1998
Supporting Textbooks	Brent Strong, Plastics: Materials and Processing 2nd Edition, 2000 Prentice Hall.
Course Credit (ECTS)	3
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 plastic materials.
Learning Outcomes of the Course	Teaching of technological development of advances in the fields of plastic materials and manufacturing
Mode of Delivery	The mode of delivery of this course is Face to face
Weekly Schedule of the Course	1. Week Introduction to plastics
	2. Week The application of plastics
	3. Week The mechanical and thermal properties of polymers
	4. Week The mechanical and thermal properties of polymers
	5. Week Fillers in plastic materials
	6. Week Filler effects on Flame retardancy and impact strength of plastics
	7. Week Preparation of plastic mixtures
	8. Week Preparation of plastic mixtures
	9. Week Plastic processing
	10. Week Physical and mechanical standart test systems
	11. Week Physical and mechanical standart test systems
	12. Week Environmental Aspects of Plastics
	13. Week Environmental Aspects of Plastics
	14. Week Recycling of plastics

	Week									
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		14	3	42					
	Practicing Hours of Course Per Week									
	Reading		10	1	10					
	Searching in Internet and Library		10	1	10					
	Designing and Applying Materials									
	Preparing Reports		1	3	3					
	Preparing Presentation		1	5	5					
	Presentation		1	5	5					
	Mid-Term and Studying for Mid-Term		2	5	10					
	Final and Studying for Final		1	2	2					
	Other		15	0	0					
	Total work load				87					
	Total work load/25				3,48					
	ECTS of the course				3					
	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			X					

		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.					
	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 Information		1. Prof. Dr. Nursel Dilsiz ndilsiz@gazi.edu.tr					