

1. Course Description

COURSE DESCRIPTION FORM																			
Course Code and Title	KM450Inorganic Technologies																		
Course Semester	8																		
Catalog Description (Content) of the Course	Manufacture of soda, Manufacture of chlorine and caustic soda, Fertilizer industry, Cement industry, Ceramic and glass industries,Boron and some other inorganic technologies.																		
Main Textbook	Austin, G.T.,”Shreve’sChemicalProcessIndustries”, 5th Ed., McGraw-Hill, New York, 1984.																		
Supporting Textbooks	• Kent, J.A., “Riegels Handbook of Industrial Chemistry” , 10th Edition, Van Nedrand, New York, 2003. • Moulijn, J.A., Makkee, M., Van Diepen. A., “Chemical Process Technology”, John Wiley&Sons, 2001. • Hocking, M.B., “Handbook of Chemical Technology”, Academic Pres., 1998. • Olcay,A., “KimyasalTeknolojiler” Gazi Kitapevi.1998 • Biçer,A.,Yalçın,H. “İnorganikKimyasalTeknoloji” GaziÜniv., İlkeYaynevi, 2007																		
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	Turkish																		
Object and Target of the Course	Operating a variety of inorganic chemical production processes to learn and become informed about.																		
Learning Outcomes of the Course	To introduce some selected inorganic processes to students To improve the knowledge of students how to use and prepare process flowcharts. To improve Turkish communication ability of students in written andverbally.																		
Mode of Delivery	The mode of delivery of this course is face to face																		
Weekly Schedule of the Course	<table> <tr> <td>1. Week</td><td>National and international liabilities resulting from the global and regional impacts of chemical processes on health, environment and safety. The us</td></tr> <tr> <td>2. Week</td><td>Manufacture of soda</td></tr> <tr> <td>3. Week</td><td>Manufacture of soda</td></tr> <tr> <td>4. Week</td><td>Manufacture of chlorine and caustic soda</td></tr> <tr> <td>5. Week</td><td>Manufacture of chlorine and caustic soda</td></tr> <tr> <td>6. Week</td><td>Midterm exam 1</td></tr> <tr> <td>7. Week</td><td>Fertilizer industry</td></tr> <tr> <td>8. Week</td><td>Fertilizer industry</td></tr> <tr> <td>9. Week</td><td>Cement industry</td></tr> </table>	1. Week	National and international liabilities resulting from the global and regional impacts of chemical processes on health, environment and safety. The us	2. Week	Manufacture of soda	3. Week	Manufacture of soda	4. Week	Manufacture of chlorine and caustic soda	5. Week	Manufacture of chlorine and caustic soda	6. Week	Midterm exam 1	7. Week	Fertilizer industry	8. Week	Fertilizer industry	9. Week	Cement industry
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	10. Week	Cement industry			
	11. Week	Ceramic and glass industries			
	12. Week	Midterm exam 2			
	13. Week	Boron and some other inorganic technologies			
	14. Week	Student presentations			
Educative Activities <i>(Credit will be determined based on the time given for these activities. Should be filled carefully.)</i>	Theoretical Study Hours of Course Per Week 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	2	50		
	Homework				
	Assignment				
	Projects	1	10		
	Practice				
	Quiz				
	Contribution of In-term Studies to Overall Grade		60		
	Contribution of Final Examination to Overall Grade		40		
Attendance					
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			
		Searching in Internet and Library	1	5	5
		Designing and Applying Materials			
		Preparing Reports	1	5	5
		Preparing Presentation	1	5	5

	Presentation	1	1	1					
	Mid-Term and Studying for Mid-Term	2	15	30					
	Final and Studying for Final	1	15	15					
	Other								
	Total work load			124					
	Total work load/25			4.12					
	ECTS of the course			4					
Course's Contribution To Program	No	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							X

		engineering practices on health, environment, and safety.						
	16	Knowledge about awareness of the legal consequences of engineering solutions.	X					
	17	Knowledge on standards used in engineering practice.	X					
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