

1. Course Description

COURSE DESCRIPTION FORM	
Course Code and Title	CHE486 CHEMICAL RISK
Course Semester	8
Catalog Description (Content) of the Course	Classification Of Chemicals, Identification Of Hazards, Determination And Analysis Of Risks And Precautions
Main Textbook	S. Baysal ve T. Boduroğlu, Akaryakıt ve SPG Satış-Servis İstasyonlarında Teknik Emniyet ve Güvenlik, Uyum Ajans, Ankara, 1997
Supporting Textbooks	1)http://www.sadettinbaysal.com/kitaplar 2)A.İ. Çataltaş (Çev.), Kimyasal Proses Endüstrileri 1-2, İnkılap-Aka, İstanbul, 1983 3) H. Yalçın ve M. Gürü, Malzeme Bilgisi, Palme, Ankara, 2002 4) H. Yalçın ve T. Koç, Mühendisler İçin Korozyon, Kimya Müh.Odası Yayını, Ankara, 1997 6) Z. İmre, Toksikoloji, İstanbul Üniv. Yayınları, İstanbul, 1988
Course Credit (ECTS)	4
Prerequisites of the Course (Compulsory attendance should be indicated here.)	There is no prerequisites.
Type of the Course	Elective
Instruction Language of the Course	Turkish
Object and Target of the Course	Informing the students about the chemical risk, determination of these risks and taking necessary precautions
Learning Outcomes of the Course	Identification of chemical hazards, determination and analysis of risks, determination of precautions
Mode of Delivery	Face to face
Weekly Schedule of the Course	1. Week Classification of Chemical Materials (physical hazards; extinguishing, explosive, oxidizing etc. substances, health related hazards; carcinogen, toxic substances, environmental hazards; environmentally hazardous substances) 2. Week Chemical Material Health Hazards: Chemical Exposure Risk Assessment (identification of hazards, identification and analysis of risks, precautions to be taken) 3. Week Chemical Material Health Hazards: Chemical Exposure Risk Assessment (identification of hazards, identification and analysis of risks, precautions to be taken) 4. Week Chemical Material Health Hazards: Chemical Exposure Risk Assessment (emergencies, health surveillance, education) 5. Week Physical Hazards of Chemical Materials: Fire and Fire Protection 6. Week Physical Hazards of Chemical Materials: Fire and Fire Protection 7. Week Physical Hazards of Chemical Materials: Fire and Fire Protection 8. Week Physical Hazards of Chemical Materials: Explosion type (physical, chemical), Explosion Protection 9. Week Physical Hazards of Chemical Materials: Explosion type (physical, chemical), Explosion Protection

	10. Week Environmental Hazards of Chemical Materials, Storage of Chemical Materials				
	11. Week Corrosion; Mechanism types, different environment corrosion, protection etc.				
	12. Week National Legislation				
	13. Week Presentation				
	14. Week Radioactivity; Fusion and Fusion; Uranium, Thorium, Plutonium and Others; Protection etc.				
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 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	2	40		
	Homework	1	20		
	Assignment				
	Projects				
	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			0
		Reading	7	2	14
		Searching in Internet and Library	7	2	14
		Designing and Applying Materials			0
		Preparing Reports	2	4	8
		Preparing Presentation	2	4	8
		Presentation	2	1	2
		Mid-Term and Studying for Mid-Term	2	3	6
		Final and Studying for Final	3	1	3
		Other			0
		Total work load			97
		Total work load/25			3.88

	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	
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