

1. Course Description

COURSE DESCRIPTION FORM	
Course Code and Title	KM101 INTRODUCTION TO CHEMICAL ENGINEERING
Course Semester	1
Catalog Description (Content) of the Course	Introduction to chemical engineering, education and chemical processes. Scope. Present and future of chemical engineering in industry. Occupational safety. Engineering ethics.
Main Textbook	Wright, P.H., Introduction to Engineering, 2nd Ed., Wiley, N.Y., 1994.
Supporting Textbooks	• Rubin, E., Introduction to Engineering and the Environment, McGraw-Hill, 2000. • Cutlip, M.B. and Shacham, M., Problem Solving in Chemical Engineering with Numerical Methods, Prentice Hall, N.J. 1999. • Fogler, H.S. and LeBlanc, S.E., Strategies for Creative Problem Solving, Prentice Hall, N.J. 1995. • Periodical Articles
Course Credit (ECTS)	2
Prerequisites of the Course (Compulsory attendance should be indicated here.)	There is no prerequisite or co-requisite for this course. The minimum attendance requirement is 70%.
Type of the Course	Compulsory
Instruction Language of the Course	Turkish
Object and Target of the Course	The aim of the Introduction to Chemical Engineering course is to introduce the Chemical Engineering Profession, its institutions and its fields of study and to make students aware of the ethical responsibilities they must possess in fulfilling their duties in these fields. The target of the course is to demonstrate the basic concepts in Chemical Engineering and their applications in the process to give students the ability to use them in other courses.
Learning Outcomes of the Course	1. To gain knowledge about basic concepts of chemical engineering and chemical processes, 2. To gain awareness of environment, health and safety, 3. To acquired ethical and ethical awareness, 4. To gain writing and oral communication skills 5. To gain report writing and oral presentation skills, 6. To be informed about new topics with the project to be carried out as a group.
Mode of Delivery	The mode of delivery of this course is face to face
Weekly Schedule of the Course	1. Week: Chemical Engineering and career paths of chemical engineers. 2. Week: Measurement and unit systems in engineering. 3. Week: Engineering ethics. 4. Week: Techniques of report writing and presentation. 5. Week: Literature survey and library visit. 6-7. Week: Basic concepts in chemical engineering. 8-9. Week: Chemical processes and environmental impacts. 10. Week: Laboratory visit and safety 11-12. Week: Problem solving and mathematical tools in Chemical Engineering. 13-14. Week: Oral presentations of term projects

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	1	20							
	Homework	0	0							
	Assignment	0	0							
	Projects	1	40							
	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	2	28					
	Practicing Hours of Course Per Week		0	0	0					
	Reading		6	1	6					
	Searching in Internet and Library		3	2	6					
	Designing and Applying Materials		0	0	0					
	Preparing Reports		1	2	2					
	Preparing Presentation		1	3	3					
	Presentation		1	1	1					
	Mid-Term and Studying for Mid-Term		1	4	4					
	Final and Studying for Final		1	5	5					
	Other		0	0	0					
	Total work load				55					
	Total work load/25				2.2					
	ECTS of the course				2					
Course's Contribution To Program	No	Program Learning 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.					×			
	2	Ability to identify, formulate, and solve complex engineering problems; ability to select and apply proper analysis and modeling methods for this purpose.				×				

	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.	×				
	4	Ability to devise, select, and use modern techniques and tools needed for engineering practice; ability to employ information technologies effectively.		×			
	5	Ability to design and conduct experiments, gather data, analyze and interpret results for investigating engineering problems.	×				
	6	Ability to work efficiently in intra-disciplinary teams.				×	
	7	Ability to work efficiently in multi-disciplinary teams;	×				
	8	Ability to work individually.			×		
	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,				×	
	10	prepare design and production reports, give and receive clear and intelligible instructions.	×				
	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.				×	
	12	Awareness of professional and ethical responsibility.			×		
	13	Information about business life practices such as project management, risk management, and change management.	×				
	14	Information about awareness of entrepreneurship, innovation, and sustainable development.		×			
	15	Knowledge about contemporary issues and the global and societal effects of engineering practices on health, environment, and safety.			×		
	16	Knowledge about awareness of the legal consequences of engineering solutions.	×				
	17	Knowledge on standards used in engineering practice.	×				
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