

1. Course Description

COURSE DESCRIPTION FORM	
Course Code and Title	CHE376 Coal
Course Semester	6
Catalog Description (Content) of the Course	Coal formation and classification. Physical and chemical properties of coal. Coal preparation methods. Washing and drying of coal. High temperature processes. Coal combustion processes and their design.
Main Textbook	Kural, O. "Kömür Özellikleri, Teknolojisi ve Çevre İlişkileri", 1. Baskı, İstanbul, 1998.
Supporting Textbooks	<ul style="list-style-type: none"> Kunii, D. and Levenspiel, O. "Fluidization Engineering", 2nd Ed., Butterworth-Heinemann, USA, 1991. Snape, C. "Composition, Geochemistry and Conversion of Oil Shale", NATO ASI Series, Kluwer Academic Publishers, The Netherlands, 1995. Heinsohn, R.J. and Kabel, R.L. "Sources and Control of Air Pollution" 1st Ed., Prentice-Hall, USA, 1999.
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	To give information about coal which is an important energy source for our country including coal preparation, enrichment and production of higher calorific value products from coal starting from the formation of coal. It is aimed that the learners have knowledge about the subjects described.
Learning Outcomes of the Course	Developing new technologic processes which low quality coal is used and designing of coal combustion processes
Mode of Delivery	The mode of delivery of this course is face to face
Weekly Schedule of the Course	1. Week : Introduction to coal 2. Week : Coal formation and classification 3. Week: Physical and chemical properties of coal 4. Week: Physical and chemical properties of coal 5. Week : Coal preparation methods, washing of coal, drying of coal 6. Week : Coal preparation methods, washing of coal, drying of coal 7. Week : Coal preparation methods, washing of coal, drying of coal 8. Week : Coal preparation methods, washing of coal, drying of coal 9. Week : Coking and pyrolysing of coal 10. Week :Coking and pyrolysing of coal 11. Week :Gasification of coal 12. Week :Gasification of coal 13. Week :Gasification of coal 14. Week :Coal combustion processes 15. Week : Coal combustion processes
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 Mid-Term and Studying for Mid-Term Final and Studying for Final

Assessment Criteria		Quantity	Total Contribution (%)						
	Midterm	2	55						
	Homework	2	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								
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		13	1	13				
	Searching in Internet and Library		10	1	10				
	Designing and Applying Materials				0				
	Preparing Reports				0				
	Preparing Presentation				0				
	Presentation				0				
	Mid-Term and Studying for Mid-Term		2	7	14				
	Final and Studying for Final		1	6	6				
	Other				0				
	Total work load				85				
	Total work load/25				3.4				
	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.							
	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					X		

		purpose. (Realistic constraints and conditions may include factors such as economic and environmental issues, sustainability, manufacturability, ethics, health, safety issues, and social and political issues, according to the nature of the design.)					
	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.					
	6	Ability to work efficiently in intra-disciplinary teams.					
	7	Ability to work efficiently in multi-disciplinary teams					
	8	Ability to work individually.			X		
	9	Ability to communicate effectively in Turkish, 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.					
	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.					
	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.			X		
	16	Knowledge about awareness of the legal consequences of engineering solutions.					
	17	Knowledge on standards used in engineering practice.	X				
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