

COURSE DESCRIPTION FORM

Course Code and Title	CHE367 Corrosion and Protection from Corrosion		
Course Semester	5		
Catalog Description (Content) of the Course	General concepts of corrosion. Corrosion types. Protection methods from corrosion. Industrial applications.		
Main Textbook	H. Yalçın, T. Koç, Mühendisler için Korozyon, TMMOB, KMO Yayınları, Ankara, 1997.		
Supporting Textbooks	- Zaki Ahmad, Principles of Corrosion Engineering and Corrosion Control, Elsevier Science & Technology Books, 2006. R. Winston Revie and Herbert H. Uhlig, Corrosion and Corrosion Control: An Introduction to Corrosion Science and Engineering, Fourth Edition, John Wiley & Sons, Inc., New Jersey, 2008. - A.W. Peabody, R.L. Bianchetti (Eds.), Paabosy's Control of Pipelines Corrosion, Second Edition, NACE International Press., Houston, Texas, 2001.		
Course Credit (ECTS)	3		
Prerequisites of the Course (Compulsory attendance should be indicated here.)	There is no prerequisite for this course, Compulsory attendance (70 %)		
Type of the Course	Elective		
Instruction Language of the Course	English		
Object and Target of the Course	To inform about corrosion and to teach methods to prevent corrosion		
Learning Outcomes of the Course	- Awareness of the effects of corrosion on daily life - Corrosion engineering and its industrial applications - Preparation for implementation of chemistry and electrochemistry engineering courses		
Mode of Delivery	There is no prerequisite or co-requisite for this course		
Weekly Schedule of the Course	Weeks	Topics	
	1	Introduction	
	2	Basic Concepts	
	3	Corrosion Kinetics	
	4	Types of Corrosion and Environments	
	5	Cathodic Protection.	
	6	Corrosion Control by Inhibitors	
	7	Coatings	
	8	Coatings	
	9	Corrosion Prevention by Design	
	10	Selection of Materials for Corrosive Environments	
	11	Atmospheric Corrosion	
	12	Boiler Corrosion	
	13	Concrete Corrosion	
	14	Concrete Corrosion	
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		Sayı	Toplam

			2	Katkı (%)					
	Midterm		2	25					
	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	Ekinlik	Hafta sayısı	Süre Saat/Hafta	D.Sonu toplam iş yükü					
	Theoretical Study Hours of Course Per Week	14	3	42					
	Practising Hours of Course Per Week	0	0	0					
	Reading	6	1	6					
	Searching in Internet and Library	6	1	6					
	Designing and Applying Materials	0	0	0					
	Preparing Reports	1	5	5					
	Preparing Presentation	1	5	5					
	Presentation	1	1	1					
	Mid-Term and Studying for Mid-Term	2	5	10					
	Final and Studying for Final	1	5	5					
	Other	0	0	0					
	Total Workload			80					
	Workload / 25			3,2					
	ECTS Credit			3					
Course's Contribution To Program	Num.	Program Ourcomes			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. (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.						×	
	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, both orally and in writing; knowledge of a minimum of one foreign language.					×		
	10	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.						×	
	11	Awareness of professional and ethical responsibility.						×	
	12	Information about business life practices such as project management, risk management, and change management.					×		
	13	Information about awareness of entrepreneurship, innovation, and sustainable development.				×			
	14	Knowledge about contemporary issues and the global and societal effects of engineering practices on health, environment, and safety.				×			

	15	Knowledge about awareness of the legal consequences of engineering solutions.		×			
	16	Ability to write effective reports and comprehend written reports, prepare design and production reports, make effective presentations, and give and receive clear and intelligible instructions.			×		
	17	Knowledge on standards used in engineering practice.			×		
Name of Lecturer(s) and Contact Information		1. Prof. Dr. Muzaffer BALBAŞI , mbalbasi@gazi.edu.tr 2. 3.					