

COURSE DESCRIPTION FORM	
Course Code and Title	CE263 GEOLOGY FOR CIVIL ENGINEERS
Semester	3
Catalog description	Introduction of Geology, Structure at earth crust, Physical and chemical properties of minerals, Rock forming minerals, Igneous and Metamorphic rock, Sedimentation and Sedimentary rock, Geological building materials, Structure and weathering of rock, Earthquake geology, Hydrogeology, Landslides, Tunnel Geology, Dam Geology, Foundation geology, Geologic mapping
Required reading	Geology for Civil Engineers, Prof. Dr. Nail ÜNSAL
Recommended reading	-
ECTS	3
Prerequisites and co-requisites	No prerequisite. Required attendance to lectures is at least 70% of total term hours.
Compulsory/Elective	Compulsory
Language of instruction	English
Aim of course	To explain students the significance of the geological materials and processes in civil engineering applications. To teach students the contemporary issues related to geological engineering.
Learning outcomes of the course unit	Having elementary knowledge of fundamental principles of geology (Minerals, external and internal earth processes). To provide knowledge on the formation of rocks and their physical properties. To explain students the significance of geological materials and processes in civil engineering applications. To provide knowledge on earthquake and groundwater geology To provide knowledge on landslide, tunnel and dam geology
Mode of delivery	The mode of delivery of this course is face to face with usage of computers in the laboratory.
Course content	<ol style="list-style-type: none"> 1. Introduction of Geology 2. Structure at earth crust, Physical and chemical properties of minerals 3. Rock forming minerals 4. Igneous and Metamorphic rock 5. Sedimentation and Sedimentary rock 6. Geological building materials 7. Structure and weathering of rock 8. Midterm 9. Earthquake geology 10. Hydrogeology 11. Land slides 12. Tunnel Geology 13. Dam Geology 14. Foundation geology 15. Midterm / Geologic mapping

Planned learning activities and teaching methods	3 lecture hours per week (3+0) Report preparation Midterm exam and required works Final exam and required works								
Assessment methods and criteria		Quantity	Percentage (%)						
	Mid-terms	2	60						
	Assignment								
	Exercises								
	Projects								
	Practice								
	Quiz								
	Contribution of In-term Studies to Overall Grade %		60						
	Contribution of Final Examination to Overall Grade (%)		40						
Attendance		100							
Workload	Efficiency		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		14	0	0				
	Reading		14	0	0				
	Searching in Internet and Library		14	1	14				
	Designing and Applying Materials		14	0	0				
	Preparing Reports		14	1	14				
	Preparing Presentation		14	0	0				
	Presentation		14	1	14				
	Mid-Term and Studying for Mid-Term		2	5	10				
	Final and Studying for Final		1	5	5				
	Other				0				
	Total Workload:				85				
	Total Workload / 25:				3.4				
	ECTS:				3				
	3								
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 knowledge in these areas in complex engineering problems.						X	
	2	Ability to identify, formulate, and solve complex civil 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 analyzing and solving complex problems encountered in civil engineering practice; ability to employ information technologies and to use at least				X			

		one computer programming language effectively.					
	5	Ability to design and conduct experiments, gather data, analyze and interpret results for investigating complex civil engineering problems or discipline specific research questions.				X	
	6	Ability to work efficiently in intra-disciplinary and multi-disciplinary teams.					
	7	Ability to work individually.					
	8	Ability to communicate effectively in Turkish, both orally and in writing; ability to write effective reports and comprehend written reports.					
	9	Knowledge of English of B1 level according to <u>Common European Framework of Reference</u> .		X			
	10	Prepare design and production reports, make effective presentations, and 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	Consciousness to behave according to ethical principles and professional and ethical responsibility.					
	13	Knowledge on standards used in civil engineering practice.					
	14	Knowledge about business life practices such as project management, risk management, and change management.			X		
	15	Awareness in entrepreneurship, innovation; knowledge about sustainable development.					
	16	Knowledge about the global and social effects of engineering practices on health, environment, and safety, and contemporary issues of the century reflected into the field of engineering.			X		
	17	Awareness of the legal consequences of engineering solutions.					
Name of lecturer(s) and contact information		Prof.Dr.Nail ÜNSAL, nunsal@gazi.edu.tr Prof.Dr. Süleyman PAMPAL, spampall@gazi.edu.tr					