Republic of Iraq

Ministry of Higher Education and Scientific Research Supervision and Scientific Evaluation Apparatus



College: Shatt Al-Arab University College Department: Civil Engineering Stage: 1st stage Lecturer name: Dr. Ihsan Q. Mohammed Academic title: Assistant Professor

Course Weekly Outline

Name	Ihsan Qasim Mohammed Al-abboodi				
E-mail address	IhsanQasim@sa-uc.edu.iq				
Course name	Engineering Geology				
Course objective	The course aims to provide basic information about the components of the earth's crust, types of rocks, forms of geological structures, factors and forces that affect the earth's crust, earthquakes, volcanoes, the natural properties of soil and subsurface water geology as an introduction to studying the geology of tunnels, dams and reservoirs sites, and the use of geological maps and geological survey.				
Course description	 1 - Introducing the concept of engineering geology and its importance in knowing the origin, history and formation of the sphere Earth and the forces acting on its rocks. 2 - Determining the environmental problems resulting from geological phenomena, their causes, and ways to reduce their effects. 3 - Describe engineering methods for analyzing and designing systems that help solve foundation geological problems. 4 - Clarify the sources of groundwater and their relationship to surface water and how to avoid its risks during implementation Engineering Works. Explain the methods of drawing topographic sections and knowing the thickness of the layers of the earth's surface. A6-Determining the required investigation methods for the locations of important buildings and facilities and the type of geological phenomena influential. 				
References	1. Principle of Engineering Geology & Practices, Al-Tai Majid Aboud Jassim				
External sources	Engineering Geology and Geological Maps book by Ibrahim Ali Abido				
Course assessment	Lab.	Quizzes and assessment	Mid-term exam	Final exam	
	10	15	20	55	
General notes					

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Week No.	Theoretical	Experimental	Aims
1	Definition of geology Earth Structure	Types of rocks	and ways logical
2	Mineral groups	Types of rocks	rry gecc and ion na
3	Physical properties of minerals	Types of rocks	, histo ises, a ation ation id its stigat nome
4	Physical and engineering properties of rocks	Types of rocks	he origin their cau ve found we to avc aphic sec ired inve gical phe
5	Rock cycle geological structures	Types of rocks	wing the mena, mena, mena, and hc and hc opogrie required geologies and hc geologies and hc mena, be the mena mena mena mena mena mena mena men
6	Earthquakes Volcanoes	How to recognise rocks	hat he hat he hat he hat he hat he vater a ving t
7	Geological origin and properties of soil and rivers	How to recognise rocks	ortance in ological I systems 1 surface v ls of drav Determin und the ty
8	Transport and sedimentation in rivers	How to recognise rocks	l its impo its rocks from gec signing (nship to e methoc ce. A6- I acilities <i>a</i>
9	The origin and sources of subsurface water	How to recognise rocks	logy and cting on esulting ig and de ir relatio h's surfa gs and fa gs and fa
10	subsurface water movement Artesian wells	How to recognise rocks	ering gec e forces a roblems r r analyzin r and the Works. E of the eart nt buildin
11	topographic maps	How to recognise rocks	ngine nd the ttal pi dwate ting ^v ers c oortau
12	contour lines	Hardness test for rocks	of er nen ounc impe
13	Topographic Profile & vertical section	Hardness test for rocks	ncept e Earl nviron ng me s of gr ons of th ons of th
14	Geological and geotechnical investigations of engineering building sites	Permeability test for soil	oducing the colion of the spher ermining the et ce their effects ceribe engineeri ms. rify the sources implementation ng the thickness ls for the locati tial.
15	Engineering geology and foundation problems	Permeability test for soil	 Intr formati formati formati formati ducing knowit method influen