

**Republic of Iraq**  
**Ministry of Higher**  
**Education and Scientific**  
**Research**  
**Supervision and Scientific**  
**Evaluation Apparatus**



**University: Shatt Al-Arab**  
**College: Engineering**  
**Department: Civil Engineering**  
**Stage: 3<sup>rd</sup> stage**  
**Lecturer name: Dr. Ihsan Qasim**  
**Academic title: Assistant Professor**

## Course Weekly Outline

<b>Name</b>	Dr. Ihsan Qasim Mohammed			
<b>E-mail address</b>	ihsanqasim@sa-uc.edu.iq			
<b>Course name</b>	Soil Mechanics-1			
<b>Course objective</b>	The course aims to present the characteristics of soil used in civil engineering works and how to deal with different types of soil as a construction material and support medium for the foundations of buildings.			
<b>Course description</b>	<ol style="list-style-type: none"> <li>1. Preparing and qualifying specialized engineers to meet the requirements of the labor market in its private and public sectors in civil engineering through diversification in methods of learning and teaching and training students to apply the acquired knowledge and skills to solve realistic problems.</li> <li>2. Providing distinguished academic programs in the field of civil engineering, both theoretical and practical, that comply with international standards of academic quality and meet the needs of the labor market.</li> <li>3. Encouraging and developing scientific research in the fields of civil engineering in general.</li> <li>4. Preparing a stimulating environment for faculty members to develop their knowledge and educational and research skills.</li> <li>5. Building and developing partnership with the governmental and private sectors and society in all its various institutions.</li> </ol>			
<b>References</b>	- Principles of Geotechnical Engineering (By: Braja M. Das, 7th Ed.)			
<b>External sources</b>	-Soil Mechanics (By: R.F. Craig, 4th Ed. or higher)			
<b>Course assessment</b>	<b>Lab.</b>	<b>Quizzes and assessment</b>	<b>Mid-term exam</b>	<b>Final exam</b>
	<b>10</b>	<b>15</b>	<b>20</b>	<b>55</b>
<b>General notes</b>				

**Republic of Iraq**  
**Ministry of Higher**  
**Education and Scientific**  
**Research**  
**Supervision and Scientific**  
**Evaluation Apparatus**



**University: Shatt Al-Arab**  
**College: Engineering**  
**Department: Civil Engineering**  
**Stage: 3<sup>rd</sup> stage**  
**Lecturer name: Dr. Ihsan Qasim**  
**Academic title: Assistant Professor**

### Course Weekly Outline

Week No.	Theoretical	Experimental	Aims
1	Basic Characteristics of soil	Specific gravity test	This module covers a wide range of topics of soil mechanics in order to offer basic knowledge and foundations applicable to various civil engineering problems.
2	Weight-volume relationships	Liquid limit	
3	Weight-volume relationships	Plastic limit	
4	Plasticity of fine grained soil	Seive analysis	
5	Plasticity of fine grained soil	Hydrometer analysis	
6	Soil classification	Proctor test	
7	Soil classification	Field density	
8	Soil compaction	Field density	
9	Soil compaction		
10	Permeability of soil		
11	Permeability of soil		
12	Permeability of soil		
13	Seepage		
14	Seepage		
15	Seepage		