

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



**College: Shatt Al-Arab University**  
**Department: Civil Engineering**  
**Stage: 3<sup>th</sup> stage**  
**Lecturer name: Ahmed Abdel Razzaq**  
**Academic title: Ass. Lecturer**

## **Course Weekly Outline**

<b>Name</b>	Ahmed Abdel Razzaq Diwan					
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<b>Course name</b>	Reinforced concrete designs-1					
<b>Course objective</b>	The course aims to provide the basic methods in the analysis and design of reinforced concrete structures.					
<b>Course description</b>	<p>A- Cognitive objectives</p> <p>A1- Apply basic knowledge in understanding the tests of basic materials used in the formation of reinforced concrete.</p> <p>A2- Explain laboratory testing methods approved by international codes.</p> <p>A3- Apply analysis methods specific to beams, including the method of operational stresses in the analysis and design of beams.</p> <p>A4- Methods of analysis and design of beams with rectangular and special sections and methods of designing beams for shear as well as analysis and design of beams with one direction.</p>					
<b>References</b>	Structural Concrete Theory and Design, By Nadim Hasson ,Akthem Aktham Al manseer,6th Edition 2015					
<b>External sources</b>						
<b>Course assessment</b>	<b>Home work</b>	<b>Quizzes</b>	<b>Report</b>	<b>Project</b>	<b>Mid-term exam</b>	<b>Final exam</b>
	<b>10</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>50</b>
<b>General notes</b>						



## Course Weekly Outline

Week No.	Theoretical	Aims
1	Introduction to building materials science.	<b>A- Cognitive objectives</b> <b>A1-</b> Apply basic knowledge in understanding the tests of basic materials used in the formation of reinforced concrete. <b>A2-</b> Explain laboratory testing methods approved by international codes. <b>A3-</b> Apply analysis methods specific to beams, including the method of operational stresses in the analysis and
2	General properties of building materials.	
3	General properties of building materials.	
4	Mechanical properties of engineering materials.	
5	Stress-strain curves of some materials.	
6	Agreement for some engineering materials.	
7	Creep and factors affecting it and its curve.	
8	Fatigue and finding a final result.	
9	Types of bricks, their types, classification and manufacture.	
10	Types of bricks, their types, classification and manufacture.	
11	Wood and its composition and preservation.	
12	Iron materials, their types, preparation and factors affecting them.	
13	The Holy Bible, its types and specifications.	
14	Types of gypsum and the most important gypsum products.	
15	Local women's bonding materials and their types.	