



Course Weekly Outline

Name	Dr. Wisam Abdullah		
E-mail address			
Course name	High way Pavement		
General course objective	1- The course aims to present the basic elements of geometric design for highways and deals with the dimensions and layout of visible features of the highway. The features normally considered are the cross-section elements, sight distance consideration, horizontal curvature, gradients, and intersection. 2- The course aims to present the basic element for designing the pavement (flexible & Rigid) also analyze all stresses and applied loads on the pavement and take into consideration choosing the materials used in the pavement construction.		
Course description / special objectives	1- Gives us an idea about the roads of ancient times. 2- The emphasis of the geometric design is to address the requirement of the driver and the vehicle such as safety, comfort, efficiency, etc. 3- The characteristics of cross-sectional elements are important in highway geometric design because they influence safety and comfort. 4- Horizontal alignment is one of the most important features influencing the efficiency and safety of a highway. 5- Knowledge and Understanding of highway design features. 6- Bituminous materials, Natural Asphalt, constituents of asphalt cement, and test of asphalt. 7- The emphasis of the different aggregate characteristics with size and		
References	1-Handbook: The Handbook of Highway Engineering.By T.F.Fwa.2006. 2. Handbook: Highway Engineering Handbook.By Roger.L.b.and Kenneth J. 2nd.ed. 2004.		
External sources			
Course assessment	Assignments and quizzes	Midterm Exam	Final exam
	40	10	50
General notes			

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: 4th stage
Lecturer name: Dr. Wisam Abdullah
Academic title: Lecturer

Course Weekly Outline

Week No.	Theoretical	Unit-chapter	Aims
1	Introduction		Scientific and research skills are developed through teaching and learning activities. Analysis and design-solving skills are further developed by employing a set of problems prepared by the lecturers in small study groups and all work submitted is evaluated and responded to.
2	Bituminous Materials, Test for Asphalt		
3	Bituminous Materials, Test for Asphalt		
4	Aggregate, Physical Properties of Methods of Blending		
5	Aggregate, Physical Properties of Methods of Blending		
6	Bituminous Mix Design, Marshal Mix Design		
7	Bituminous Mix Design, Marshal Mix Design		
8	Stress distribution through the pavement, Calculation of stresses and deflections		
9	Stress distribution through the pavement, Calculation of stresses and deflections		
10	Design Introduction to Pavement, Types of Pavements, CBR Design Method		
11	Design Introduction to Pavement, Types of Pavements, CBR Design Method		
12	Flexible pavement design methods, AASHTO Design Methods		
13	Rigid Pavement, Rigid Pavement Types, Types of Joints in Rigid Pavement		
14	Rigid Pavement, Critical load position, Temperature Stresses		
15	Applications of PDE		