Republic of Iraq

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

College: Shatt Al-Arab University
College: Engineering
Department: Civil Engineering
Stage: 3rd stage

Course Weekly Outline

Week No.	Theoretical
1	Introduction Concrete, Mixing, Placing, Compacting and Curing Shrinkage and Temperature Effect. Concrete Behavior in Compression and Tension. Reinforcing Bars, Reinforcing Steel for Concrete. Properties of Reinforcing Bars. Steel Behavior in Compression and Tension. Quality Control. Design Codes and Specifications. Loads and Safety Provisions.
2	Introduction to Working Stress Method. Applications of the Working Stress Method
3	Behavior of R.C beam under loading and working stress method
4	Flexural analysis of Beam, Rectangular Section: Introduction to Ultimate Strength
5	Method. Behavior of Reinforced Concrete Beam under Bending.
6	Design of Tension Reinforced Rectangular Beams. Design Aids.
7	Practical Consideration in the Design of Beams.
8	Rectangular Sections with Tension and Compression Reinforcement.
9	Flexural Analysis and Design of T-beams.
10	Shear and Diagonal Tension in Beams.
11	Shear Strength of Concrete without Reinforcement.
12	ACI Provisions for Shear Design.
13	Analysis and design of continuous beams.
14	Design and Analysis of Slabs. Types of Slabs.
15	Analysis and Design of One-Way Slab. Temperature and Shrinkage Reinforcement.