Lesson Plan

Name of Faculty: - **Mr. Sandeep Kumar (Theory)**

Discipline: - **Civil Engineering**

Semester: - **4th**

Subject: - **Reinforced Cement Concrete**

Lesson Plan Duration: - 15 weeks (from Jan-2019 to Apr-2019)

Work Load:- Lectures-5

WEEK	THEORY	
	LECTURE DAY	TOPIC
1	1	Introduction, concept of RCC
	2	Reinforced material
	3	Properties of mild steel and HYSD bar
	4	Loading on structure
	5	Working stress method
2	1	Limit state method
	2	Introduction on shear and development length
	3	Shear on working stress method
	4	Shear strength of concrete without shear reinforcement
	5	Maximum shear stress
3	1	Shear reinforcement
	2	Numerical problems
	3	Singly reinforced beam, basic assumption of RCC beam
	4	Stress strain curve , neutral axis
	5	Balanced ,under reinforced, over reinforced beam, moment of resistance for single reinforced beam
4	1	Design of single reinforced beam
	2	Numerical problems
	3	Limit state method
	4	Partial safety factor for load and material , design loads
	5	Stress block, parameter
5	1	Singly reinforced beam
	2	Theory and design of RCC Beam by limit state method
	3	Theory and design of RCC Beam by limit state method
	4	Numerical problems
	5	Numerical problems
6	1	Introduction on doubly reinforced beam
	2	Theory and design of doubly RCC beam
	3	Design procedure of doubly RCC beam
	4	Numerical problems
	5	Numerical problems
7	1	Behavior of T-Beam
	2	Isolated T beam

	3	Inverted T beam
	4	Introduction on one way slab
	5	Theory and design of simply supported one way slab by limit state
8	1	Theory and design of simply supported one way slab by limit state
	2	Reinforcement details
	3	Reinforcement details
	4	Design procedure of one way slab
	5	Numerical problems
9	1	Numerical problems
	2	Numerical problems
	3	Introduction on two way slab
	4	Theory and design of simply supported two way slab by limit state
	5	Theory and design of simply supported two way slab by limit state
10	1	Reinforcement details
	2	Reinforcement details
	3	Design procedure of two way slab in all condition
	4	Numerical problems
	5	Numerical problems
11	1	Axially loaded column
	2	Classification and effective length of column
	3	Specification of longitudinal and lateral ties
	4	Design procedure of different type of column
	5	Numerical problems
12	1	Numerical problems
	2	Numerical problems
	3	Prestressed concrete
	4	Concept and method prestessing
	5	Advantages and disadvantage, losses in prestress
13	1	
	2	
	3	Sessional 1st
	4	Assignment work and class work
	5	Revision and discussion
14	1	
	2	
	3	Sessional 2nd
	4	Assignment work and class work
	5	Revision and discussion
15	1	
	2	
	3	Sessional 3rd
	4	Assignment work and class work
	5	Revision and discussion