DESIGN OF REINFORCED CONCRETE STRUCTURES

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TYPE OF COURSE : Rerun | Core | PG
COURSE DURATION : 12 weeks (20 Jul’20 - 09 Oct’20)
EXAM DATE : 17 Oct 2020

INTENDED AUDIENCE : B.E/B.Tech, B.Arch
INDUSTRIES APPLICABLE TO : This course will be recognized by design consultancy firms and construction industries.

COURSE OUTLINE:
Design of reinforced concrete structures is an introductory design course in civil engineering. In this course, basic elements governed by bending, shear, axial forces or combination of them are identified and are considered as building blocks of the whole structure. Different methods of design will be briefly described before introducing the limit states of collapse and serviceability. The design will be done as per IS 456:2000

ABOUT INSTRUCTOR:
Prof. Nirjhar Dhang is currently Professor of the Department of Civil Engineering, Indian Institute of Technology, Kharagpur, where he teaches Bridge Engineering, Structural Health Monitoring & Control, Design of Reinforced Concrete Structures. He works in the field of structural engineering particularly in the area of concrete, structural health monitoring & control and railway bridges applicable for high speed rail. He has done many consultancy and research project work. He has published 30 papers in International/National journals and conferences.

COURSE PLAN:
Week 01 : Introduction, Different methods of design of reinforced concrete structures
Week 02 : Working stress method
Week 03 : Limit state of collapse - flexure
Week 04 : Design of singly reinforced beam
Week 05 : Design of doubly reinforced beam
Week 06 : Limit state of collapse - shear
Week 07 : Design for shear
Week 08 : Design of slab
Week 09 : Design of compression members
Week 10 : Design of footing
Week 11 : Design of staircase
Week 12 : Limit state of serviceability