Course Outcomes	OPTIMIZATION TECHNIQUES- 22CSE11
CO1	Achieve Knowledge of design and development of problem solving skills.
CO2	Understand the principles of optimization.
CO3	Design and develop analytical skills.
CO4	Summarize the Linear, Non-linear and Geometric Programming
CO5	Understands the concept of Dynamic programming
Course Outcomes	**MATRIX METHODS OF STRUCTURAL ANALYSIS- 22CSE12**
CO1	Formulate force displacement relation by flexibility and stiffness method
CO2	Analyze the plane trusses, continuous beams and portal frames by transformation approach
CO3	Analyse the structures by direct stiffness method
Course Outcomes	**Advanced design of RC structures - 22CSE13**
CO1	Achieve Knowledge of design and development of problem solving skills.
CO2	Understand the principles of Structural Design
CO3	Design and develop analytical skills.
CO4	Summarize the principles of Structural Design and detailing
CO5	Understands the structural performance.
Course Outcomes	**MECHANICS OF DEFORMABLE BODIES - 22CSE14**
CO1	Achieve Knowledge of design and development of problem solving skills
CO2	Understand the principles of stress-strain behaviour of continuum
CO3	Design and develop analytical skills
CO4	Describe the continuum in 2 and 3- dimensions
CO5	Understand the concepts of elasticity and plasticity.
Course Outcomes	**STRUCTURAL DYNAMICS – 22CSE15**
CO1	Achieve Knowledge of design and development of problem solving skills.
CO2	Understand the principles of Structural Dynamics
CO3	Design and develop analytical skills.
CO4	Summarize the Solution techniques for dynamics of Multi-degree freedom systems
CO5	Understand the concepts of damping in structures.
Course Outcomes	**Structural engineering lab 1 -22CSEL16**
CO1	Achieve Knowledge of design and development of experimenting skills.
CO2	Understand the principles of design of experiments
CO3	Design and develop analytical skills.
CO4	Summarize the testing methods and equipments.
Course Outcomes	**RESEARCH METHODOLOGY AND IPR -22RMI17**
CO1	Discuss research methodology and the technique of defining a research problem
CO2	Explain the functions of the literature review in research, carrying out a literature search, developing
CO3	Explain various research designs and their characteristics.
CO4	Explain the art of interpretation and the art of writing research reports

CO5	Discuss various forms of the intellectual property, its relevance and business impact in the changing global business environment and leading International Instruments concerning IPR
Course Outcomes	**ADVANCED DESIGN OF STEEL STRUCTURES - 22CSE21**
CO1	Able to understand behavior of Light gauge steel members
CO2	Able to understand design concepts of cold formed/unrestrained beams
CO3	Able to understand Fire resistance concept required for present days.
CO4	Able to analyze beam column behavior
Course Outcomes	**FINITE ELEMENT METHOD OF ANALYSIS - 22CSE22**
CO1	Explain the basic theory behind the finite element method.
CO2	Formulate force-displacements relations for 2-D elements
CO3	Use the finite element method to analyze real structures.
CO4	Use a Finite Element based program for structural analysis
Course Outcomes	**EARTHQUAKE RESISTANT STRUCTURES (Elective 1) - 22CSE233**
CO1	Achieve Knowledge of design and development of problem solving skills.
CO2	Understand the principles of engineering seismology.
CO3	Design and develop analytical skills.
CO2	Understand the concepts of earthquake resistance of reinforced concrete buildings.
CO4	Summarize the Seismic evaluation and retrofitting of structures.
Course Outcomes	**DESIGN OF MASONRY STRUCTURES (Elective 2) - 22CSE243**
CO1	Achieve Knowledge of design and development of problem solving skills.
CO2	Understand the principles of design and construction of masonry structures
CO3	Design and develop analytical skills
CO4	Summarize the masonry Characteristics
CO5	Evaluate the strength and stability of the masonry structures
Course Outcomes	**STRUCTURAL ENGINEERING LAB-2 -22CSEL26**
CO1	Achieve Knowledge of design and development of programming skills.
CO2	Understand the principles of structural analysis and design
CO3	Design and develop analytical skills
CO4	Summarize the performance of structures for static and dynamic forces.
Course Outcomes	**DESIGN OF BRIDGES - 22CSE31**
CO1	Describe historical growth, select ideal site and bridge, calculate values of design parameters of slab culvert at critical section as per IRC, design and detailing required for the execution of the project.
CO2	Carry out analysis of box culvert as per IRC to obtain the values of design parameters and to design and detail the components following IS code procedure.
CO3	Demonstrate the use of Pigeauds Method and Courbon's Methodin the analysis of T beam bridge as per IRC, design to obtain the safe dimensions various components, optimum reinforcement required following IS code procedure.

CO4	Display the use of Courbon's Methodin the analysis of PSC bridge as per IRC, design to obtain the safe value of pre stressing force, obtain the dimensions of various components to keep the stresses within codal provisions following IS code procedure.
CO 5	Analysis a balanced cantilever bridge as per IRC and to obtain the safe values of design parameters and to design and detail the components as per IS code procedure
Course Outcomes	**DESIGN CONCEPTS OF SUBSTRUCTURES (Elective- 1) - 22CSE321**
CO1	Achieve Knowledge of design and development of problem solving skills.
CO2	Understand the principles of subsoil exploration.
CO3	Design and develop analytical skills.
CO4	Identify and evaluate the soil shear strength parameters.
CO5	Understand the concepts of Settlement analysis.
Course Outcomes	**RETROFITTING AND REHABILITATION OF STRUCTURES (Elective 2) - 22CSE333**
CO1	Achieve Knowledge of design and development of problem solving skills.
CO2	Understand the cause of deterioration of concrete structures.
CO3	Design and develop analytical skills.
CO4	Summarize the principles of repair and rehabilitation of structures.
CO5	Understands the concept of Serviceability and Durability.
Course Outcomes	**PROJECT WORK PHASE -2 - 22CSE41**
CO1	Demonstrate a sound technical knowledge of their selected project topic.
CO2	Undertake problem identification, formulation, and solution.
CO3	Design engineering solutions to complex problems utilising a systems approach.
CO4	Communicate with engineers and the community at large in written an oral forms.
CO5	Demonstrate the knowledge, skills and attitudes of a professional engineer