Course Name: Advanced Structural Analysis
YEAR & SEM: I & I Sem

CE	Course Outcomes	Bloom/ Taxonomy Level
PC1101SE.1	Analyse the continuous beams, rigid jointed frames and pin jointed structures by stiffness method.	**ANALYZE**
PC1101SE.2	Analyse the continuous beams, rigid jointed frames and pin jointed structures by flexibility method.	**ANALYZE**
PC1101SE.3	Formulate the element and global stiffness matrices by direct stiffness method and learn equation solution techniques.	**APPLY**
PC1101SE.4	Understand and differentiate between the linear and nonlinear analyses.	**UNDERSTAND**
PC1101SE.5	Solve the problems pertaining to beams on elastic foundation.	**APPLY**

Course Name: Advanced Solid Mechanics
YEAR & SEM: I & I Sem

CE	Course Outcomes	Bloom/Taxonomy Level
PC1102SE.1	Solve the problems of 3-D elasticity with confidence.	**ANALYZE**
PC1102SE.2	Work independently with the problems of 2-D elasticity in Cartesian/polar coordinates.	**UNDERSTAND**
PC1102SE.3	Familiarize with the use of Airy's stress function in 2-D problems of elasticity in Cartesian/polar coordinates.	**APPLY**
PC1102SE.4	Equip with the knowledge of various theories of torsion of prismatic bars of various cross sections and can solve the problems of torsion.	**UNDERSTAND**
PC1102SE.5	Interpret and apply the theory of elasticity to practical problems of structural engineering	**APPLY**

Course Name: Research Methodology and IPR

YEAR & SEM: I & I Sem

CE	Course Outcomes	Bloom/ Taxonomy Level
MC5121ME.1	Define research problem, review and asses the quality of literature from various sources	**UNDERSTAND**
MC5121ME.2	Improve the style and format of writing a report for technical paper/ Journal report, understand and develop various research designs	**REMEMBER**
MC5121ME.3	Collect the data by various methods: observation, interview, questionnaires	**APPLY**
MC5121ME.4	Analyse problem by statistical techniques: ANOVA, F-test, Chi-square	**ANALYZE**
MC5121ME.5	Understand apply for patent and copyrights	**UNDERSTAND**

Course Name: Advanced Reinforced Concrete Design

YEAR & SEM: I & I Sem

CE	Course Outcomes	Bloom/ Taxonomy Level
PE1117SE.1	Design the beams curved in plan and deep beams.	**ANALYZE**
PE1117SE.2	Propose the deep beams, domes and various type water tanks	**CREATE**
PE1117SE.3	Differentiate and design the bunkers and silos.	**EVALUATE**
PE1117SE.4	Formulate the raft, pile and machine foundations.	**CREATE**

Course Name: Design of Prestressed Concrete Structures

YEAR & SEM: I & I Sem

CE	Course Outcomes	Bloom / Taxonomy Level
PC1127SE.1	Familiarize with fundamentals of pre-stressed concrete, methods and systems of pre-stressing and losses of pre-stress.	**UNDERSTAND**
PC1127SE.2	Analyse and design the sections for flexure, shear bond and anchorages.	**ANALYZE**
PC1127SE.3	Estimate the deflections of pre-stressed concrete elements.	**ANALYZE**
PC1127SE.4	Know the circular pre-stressing, analysis and design of statically indeterminate beams.	**ANALYZE**
PC1127SE.5	Able to design the compression & tension members using pre-stress methodology.	**EVALUATE**
PC1127SE.6	Solve the problems pertaining to axial members, slabs and grid floors.	**APPLY**

Course Name: Disaster Management

YEAR &SEM: I & I - Sem

CE	Course Outcomes	Bloom/Taxonomy Level
AD9002CE.1	Learn to demonstrate a critical understanding of key concepts in disaster risk reduction and humanitarian response.	**UNDERSTAND**
AD9002CE.2	Critically evaluate disaster risk reduction and humanitarian response policy and Practice from multiple perspectives.	**UNDERSTAND**
AD9002CE.3	Develop an understanding of standards of humanitarian response and practical relevance in specific types of disasters and conflict situations.	**UNDERSTAND**
AD9002CE.4	Critically understand the strengths and weaknesses of disaster management approaches, planning and programming in different countries, particularly their home country or the countries they work in.	**UNDERSTAND, ANALYZE**

Course Name: Advanced Concrete Lab

YEAR & SEM: I & I Sem

CE	Course Outcomes	Bloom/Taxonomy Level
PC1152SE.1	Understand the rheology of special Concrete- fly ash-based Concrete- geo-polymer Concrete and Fibre Reinforced Concrete.	**UNDERSTAND**
PC1152SE.2	High strength – Mix design	**CREATE**
PC1152SE.3	Conduct cube, cylinder strength and modulus of rupture of high strength	**UNDERSTAND**
PC1152SE.4	Conduct of NDT of concrete	**APPLY**

Course Name: Seminar

YEAR & SEM: I & I Sem

CE	Course Outcomes	Bloom/ Taxonomy Level
PC1154SE.1	Develop the habit of referring the journals for literature review.	**REMEMBER**
PC1154SE.2	Understand the gist of the research paper.	**UNDERSTAND**
PC1154SE.3	Identify the potential for further scope.	**ANALYZE**
PC1154SE.4	Present the work in an efficient manner.	**APPLY**
PC1154SE.5	Write the documentation in standard format.	**CREATE**

Course Name: Structural Health Monitoring

YEAR & SEM: II & I Sem

CE	Course Outcomes	Bloom/ Taxonomy Level
PC1121SE.1	Understand the fundamentals of maintenance and repair strategies.	UNDERSTAND
PC1121SE.2	Diagnose for serviceability and durability aspects of concrete.	EVALUATE
PC1121SE.3	Know the materials and techniques used for repair of structures.	UNDERSTAND
PC1121SE.4	Decide the appropriate repair, strengthening, rehabilitation and retrofitting technique required for a case study building.	EVALUATE
PC1121SE.5	Use an appropriate health monitoring technique and demolition technique.	APPLY

Course Name: Major Project Phase – I

YEAR & SEM: II & I Sem

CE	Course Outcomes	Bloom/ Taxonomy Level
PC1156SE.1	Exposed to self-learning various topics.	UNDERSTAND
PC1156SE.2	Learn to survey the literature such as books, journals and contact resource persons for the selected topic of research.	UNDERSTAND
PC1156SE.3	Learn to write technical reports.	UNDERSTAND
PC1156SE.4	Develop oral and written communication skills to present.	APPLY
PC1156SE.5	Defend their work in front of technically qualified audience	APPLY

Course Name: Retrofitting and Rehabilitation of Structures

YEAR & SEM: II & I Sem

CE	Course Outcomes	Bloom/ Taxonomy Level
PE1121SE.1	Understand the fundamentals of maintenance and repair strategies.	UNDERSTAND
PE1121SE.2	Diagnose for serviceability and durability aspects of concrete.	EVALUATE
PE1121SE.3	Know the materials and techniques used for repair of structures.	UNDERSTAND
PE1121SE.4	Decide the appropriate repair, strengthening, rehabilitation and retrofitting technique required for a case study building.	EVALUATE
PE1121SE.5	Use an appropriate health monitoring and demolition techniques.	APPLY