NECN R20 Course Outcomes

IV B.Tech Sem-I

S.NO	Course Code	Subject	Course Outcomes
1.	20CE2014	Design of Steel Structures	1. Explain the terms, design philosophies and relevant IS codes & Design the Bolted and Welded connections.
			2. Design & Detailing of Tension, compression & roof trusses under different conditions.
			3. Design & Detailing of laterally supported and unsupported beams.
			4. Design & Detailing of Built-up compression members and Column bases.
			5. Design & Detailing of components of Plate and Gantry girder.
2.	20CE2015	Estimation And Quantity Surveying	1. Estimate the various structural elements
			2. Illustrate various methods of detailed estimates for different structures
			3. Explain the specifications
			4. Analyze the Rate analysis
			5. Summarize the valuation of buildings
3.	20CE4018	Professional Elective-IV(Municipal Solid Waste Management) MOOCS	1. Understand the solid waste management.
			2. Study of comparative assessment of waste generation and composition of developing and developed nations.
			3. Understand the transportation and disposal of solid waste (waste disposal).
			4. Study of product recovery and recycling of solid waste.
			5. Understand Recovery Of Biological Conversion Products
4.	20CE4023	Professional Elective-V(EIA)	1. Classify the different methodologies of EIA and conditions under which a particular method can be adopted.
			2. Find conservation areas and plant species at risk.
			3. Illustrate the important plant or animal groups.

			4. Determine how well the environmental management systems and equipment are performing. Verify compliance with the relevant national, local or other laws and regulations.
			5. Prepare EIA reports.

III B.Tech Sem-I

S.NO	Course Code	Subject	Course Outcomes
1.	**20CE2008**	**Design of Reinforced Concrete Structures**	1. Apply clauses of IS:456-2000 code design specifications for different structural designs & Design the beams with different end conditions
			2. Understand and Design the beams for shear, torsion and bond
			3. Design one way slabs and two way slabs with different end conditions
			4. Design the RCC columns with combined bending and compression
			5. Design foundations and stair cases of different shapes
2.	**20CE2009**	**Geotechnical Engineering-II**	1. Understand the necessity of soil exploration.
			2. To enable the student to analyze slopes of stability.
			3. Compute Earth pressures acting on the retaining walls.
			4. Understand the design of shallow foundations.
			5. Design the well foundations and Pile foundations.
3.	**20CE2010**	**Water Resources Engineering**	1. Understand of the concepts of hydrologic processes, Precipitation and Curves .
			2. Describe the process, measurement and estimation of hydrological components: Evaporation, Infiltration.
			3. Develop runoff and Hydrograph estimation and apply to engineering practices.
			4. Understand and analysis of ground water hydrology.
			5. Understand the design steps of reservoir.
4.	**20CE4002**	**Pavement Materials (Professional Elective-**	1. Understand the Mechanical properties of soil as pavement material.
			2. Describe aggregate strength properties by various tests.
			3. Know about importance Bitumen as a binding agent.

		I)	4. Design cold and hot recycled bituminous mixtures.
			5. Understand about properties of cement as pavement material.

III B.Tech Sem-II

S.NO	Course Code	Subject	Course Outcomes
1.	**20CE2011**	**Concrete Technology**	1. Illustrate the types of cements and manufacturing of concrete
			2. Explain testing of fresh concrete and Admixtures
			3. Describe the elasticity, creep and shrinkage of the hardened concrete
			4. Summarize the special concretes and Non_ Destructive testing
			5. Apply the ACI and IS 10262 methods to design the mix proportions of concrete.
2.	**20CE2012**	**Environmental Engineering**	1. Identify the sources of water and intake works for collection. Be able to forecast and calculate water demand.
			2. Understands the stages and process of water treatment methods.
			3. Understand the various methods of conveyance and distribution of water. Be able to design pipe-networks by hardy-cross method. Understand various joints, valves and house service connections.
			4. Analyze the waste water collection system & its characteristics.
			5. Explain the processing and management of waste water and sludge treatment.
3.	**20CE2013**	**Highway Engineering**	1. Interpreting the concept of highway planning and alignment.
			2. Executing the geometric design of highway.
			3. Annotating the types of highway materials and construction.
			4. Integrating the concept of pavement design.
			5. Exemplifying the concept of traffic engineering.
			1. Understand irrigation systems & methods of application of water.
			2. Estimate the irrigation water requirement of crops

4.	**20CE4009**	**Irrigation Engineering**	3. Design channels using Kennedy's and Lacey's regime theory
			4. Design the lined canals.
			5. Understand the management of canal irrigation
5.	**20CE4011**	**Prestressed Concrete**	1. Understand the development & methods of prestressing.
			2. Understand the losses in prestressing.
			3. Analyse and design the sections to withstand flexure.
			4. Design various prestressed concrete structural elements for shear.
			5. Control deflections in prestressed concrete beams.

II B.Tech Sem-I

S.NO	Course Code	Subject	Course Outcomes
1.	**20ES1013**	**Fluid Mechanics**	1. Students able to identify the properties of fluids, Pressure and Understand the importance of flow measurement & Statics.
			2. Students able to Determine the hydrostatic forces and buoyancy forces on different bodies.
			3. Students able to understand the kinematics of fluid's with different equations like continuity equation etc.
			4. Students able to find the velocity & discharge by using orifices, notches & weirs.
			5. Students able to understand the friction, minor & major losses in pipes and its experimental procedures.
2.	**20CE2001**	**Building Construction and Planning**	1. Students able to understand the different types of foundation, masonry, Floors
			2. Students able to understand the different types of Arches, Doors and Windows, Lintels and Roof
			3. Students able to demonstrate the causes of DPC and treatment of water leakages
			4. Students able to learn the different building Bylaws and Building planning
			5. Students able to memorizes Learn the different planning of building and Residential building
3.	**20CE2002**	**Strength of Materials**	1. Students able to define the concepts of simple stresses and strains and estimation of stresses for Bars of varying sections, composite bars and Temperature stresses.
			2. Examine the variation of bending moment and shear force at any section and identify the position and the magnitude of maximum and minimum values for all practical loading cases
			3. Assess Bending and shear stresses in beams subjected to different loadings for different machine parts

			4. Ability to transform the state of stress at a point and determine the principal and maximum shear stresses using equations as well as the Mohr's circle
			5. Explain the types of column and apply the Euler's theory to find the parameters for different end condition.
4.	**20CE2003**	**Surveying**	1. Students able to generalized the basic concept of surveying and chain surveying
			2. Students able to identify the methods of compass surveying and Plane Table surveying
			3. Students able to calculate the levelling surveying
			4. Students able to compute the Theodolite and Traversing surveying
			5. Students able to measure the contouring & computation of areas and volumes

II B.Tech Sem-II

S.NO	Course Code	Subject	Course Outcomes
1.	**20CE2004**	**Geotechnical Engineering-I**	1. Characterize and classify soils based on different limits.
			2. Determine the permeability of soils and stratified soils.
			3. Compute seepage stresses in soils under various loading conditions.
			4. Understand the consolidations and settlement of soils.
			5. Calculate the shear strength of soil under different drainage conditions.
2.	**20CE2005**	**Hydraulics engineering**	1. Understand characteristics of Types of channel flows and channels
			2. Analyze characteristics for uniform and non-uniform flows in open channels.
			3. Design different types of turbines and impact of jets
			4. Design of axial inward reaction Turbines
			5. Analyze the Rayleigh's & Buckingham's pi theorems
3.	**20CE2006**	**Structural Analysis**	1. Analyze various statically indeterminate structures like continuous beams for various loading conditions.
			2. Sketch shear force and bending moment diagrams of continuous beams and frames by slope deflection & moment distribution method.
			3. Analyze the continuous beams by Flexibility Matrix method.
			4. Analyze the continuous beams by Stiffness Matrix method.
			5. Determine the internal forces in Three-hinged arches subjected to various loading conditions & Sketch the influence line diagrams.

4.	**20CE2007**	**Surveying & Geomatics**	1. Understand the principles and purpose of Tacheometry in finding out the constants.
			2. Familiarize the concept of Triangulation and setting out for different works.
			3. Understand the terms, elements and classify the different types of curves.
			4. Summarize the basic principles of GPS, Total station & EDM in Civil Engineering
			5. Illustrate the basic principles of Remote sensing and Geographical Information systems.
5.	**20MC8002**	**Environmental Science**	1. Types of natural resources
			2. Describe ecosystem and biodiversity its con
			3. Explain the environmental pollution and solid waste management
			4. Describe the social issues and ACTs on environment
			5. Explain human population effects on environment