AY : 2019-20	II YEAR- I Sem	
On successful completion of this course the students will be able:		
SNO	**Course Outcomes**	**Taxonomy**
SPECIFIC LEARNING OUTCOMES – MATHEMATICS-III (15A54301)		
C211.1	To Solve linear system of equations and calculate the Eigen values and Eigen vectors of the given square matrices.	Apply
C211.2	To Apply Cayley – Hamilton theorem to find the inverse and powers of a square matrix. Discuss the nature of the quadratic form.	Apply
C211.3	To Predict the Use of numerical techniques find solution of algebraic and transcendental Equations.	Apply
C211.4	To Estimate the interpolating value of the function using Numerical techniques.	Evaluate
C211.5	To Demonstrate the best fit of curves for the given data and Evaluate define integrals using Newton cotes Formula	Apply
C211.6	To Solve numerical methods to find numerical solution of ordinary and partial differential equations	Apply
SPECIFIC LEARNING OUTCOMES –Electrical and Mechanical Technology (15A01301)		
C211.1	To Explain about constructional details and principles of operation of DC machines	Understand
C211.2	To Explain about working and classification of DC machines as generators and Motors	Understand
C211.3	To Explain about the testing and application of Synchronous Machines	Understand
C211.4	To Explain various types of welding process with neat sketch	Understand
C211.5	To Explain working of IC engines and gas turbines	Understand
C211.6	To Explain principles of air conditioning	Understand
SPECIFIC LEARNING OUTCOMES – Building Materials and Construction (15A01302)		
C212.1	To Explain the ability about different materials such as stones, bricks, tiles, wood, aluminum, glass & paints and their classification , manufacture and structural requirements.	Understand
C212.2	To Prepare appropriateness and sustainability of materials for construction projects.	Create
C212.3	To Describe materials for construction of building.	Understand
C212.4	To Understand various building components such as lintels, arches, types of roofs and joinery such as doors, windows and masonry works with the materials used in making.	Understand
C212.5	To Understand the quality of various construction materials.	Understand
C212.6	To Identify and select the materials for construction activities.	Remember
SPECIFIC LEARNING OUTCOMES – Strength of Materials-I (15A01303)		
C213.1	To Understand the materials properties & definition of stress strain with their relationship, various loadings like gradually applied load, shock load, sudden load and impact load.	Understand
C213.2	To Design the various failures occur in the structure by shear & bending forces	Create
C213.3	To Design simple beam sections	Create
C213.4	To Understand the concept of the slope & deflection method Double integration and Macaulay's methods.	Understand

C213.5	To Identify various types of beams & solve the problems based on the moment area method, to know the concept of Mohr's theorem.	Remember
C213.6	To Understand the conjugate beam method & to find the various stresses acting on the chimneys, retaining walls and dams	Understand
SPECIFIC LEARNING OUTCOMES – Surveying I (15A01304)		
C214.1	To Calculate preliminary surveying in the field of civil engineering applications such as structural, highway engineering and geotechnical engineering	Apply
C214.2	To Outline accurate measurements, field plotting and adjustment of traverse	Analyse
C214.3	To Identify various conventional instruments involved in surveying with respect to utility and precision	Remember
C214.4	To Estimate survey for applications, such as road alignment and height of the building etc	Evaluate
C214.5	To Illustrate the measurements in the field and plot them in chart.	Analyse
C214.6	To Evaluate differences in elevation, draw and utilize contour plots and calculate volumes for earth work.	Evaluate
SPECIFIC LEARNING OUTCOMES – Fluid Mechanics (15A01305)		
C215.1	To Explain fundamental knowledge of fluid, its properties and behaviour under various conditions of internal and external flows	Understand
C215.2	To Calculate fluid forces acting on different surfaces	Apply
C215.3	To Analyse about buoyancy and stability of a floating body & submerged body	Analyse
C215.4	To Formulate the equations used for analysis of dynamic fluids.	Create
C215.5	To Solve discharge by using continuity equations and energy equation	Apply
C215.6	To Examine energy losses in pipe transitions and sketch energy gradient lines	Apply
SPECIFIC LEARNING OUTCOMES – Surveying Laboratory – I (15A01306)		
C216.1	To Evaluate the survey and to collect field data	Evaluate
C216.2	To Prepare field notes from survey data	Create
C216.3	To Interpret survey data and compute areas and volumes	Understand
C216.4	To Identify the various measurements	Remember
C216.5	To Interpret the data which can be collected in the site	Understand
C216.6	To Analyse the Total Station for various measurements	Analyse
SPECIFIC LEARNING OUTCOMES – Strength of Materials Laboratory (15A01307)		
C217.1	To Differentiate the Mechanical properties of Materials through various tests	Understand
C217.2	To Interpret the material properties under different stress and strain conditions.	Understand
C217.3	To Predict the engineering properties of materials by using Hardness Test.	Apply
C217.4	To Calculate the Compressive and Tensile stresses of the material by using UTM.	Apply
C217.5	To Understand the Concepts of Shear Test and Impact Test on Materials.	Understand
C217.6	To Calculate the Deflection for Continuous beam by using Deflection test.	Apply

AY : 2019-20	III YEAR- I Sem	
On successful completion of this course the students will be able:		
S NO	**Course Outcomes Statement**	**Taxonomy**
SPECIFIC LEARNING OUTCOMES – Design and Drawing of RCC structures(15A01501)		
C311.1	To Recognize the design philosophies of reinforced concrete structures	Understand
C311.2	To Apply the principles, procedures and current code requirements to analysis and design of reinforced concrete beams	Apply
C311.3	To Identify the behavior of reinforced concrete members in bond, anchorage, shear and torsion	Remember
C311.4	To Analyse and design reinforced concrete compression members.	Analyse
C311.5	To Analyse the load on the structure and design the footings	Analyse
C311.6	To Design combined column footing.	Create
SPECIFIC LEARNING OUTCOMES – Estimation, Costing and Valuation (15A01502)		
C312.1	To Apply different types of estimates for different building elements.	Apply
C312.2	To Analyse the rates and bill preparation different building elements	Analyse
C312.3	To Prepare the concepts of specification writing	Create
C312.4	To Estimate different volumes of earthwork	Evaluate
C312.5	To Compare the difference between contractors and tenders	Evaluate
C312.6	To Estimate the valuation of assets	Evaluate
SPECIFIC LEARNING OUTCOMES –Geotechnical Engineering I(15A01503)		
C313.1	To Differentiate the properties of soils such as phase relationships, unit weight, water content, grain size distribution, index properties, methods of soil classifications and compaction characteristics in soils	Understand
C313.2	To Interpret the concepts of total, neutral and effective stress in soils, principles of Darcy's law, permeability and seepage in soils and their effects in engineering applications	Understand
C313.3	To Express the concepts of stress distribution under varying load conditions using Boussinesq's and Westergaard's theories.	Understand
C313.4	To Summarize the principles of Terzaghi's theory of primary consolidation, settlement in soils and associated properties	Understand
C313.5	To Analyse the shear stress and shear strength properties in soils, Mohr diagrams, and methods of finding the shear strength parameters of soils using direct shear test, unconfined compression test and tri-axial shear tests.	Analyse
C313.6	To Analyse the Mohr's circle	Analyse
SPECIFIC LEARNING OUTCOMES – Engineering Geology(15A01504)		
C314.1	To Interpret the knowledge of principles of engineering geology	Understand
C314.2	To Analyse the properties of various rocks and minerals	Analyse
C314.3	To Justify the suitability of sites for various civil engineering structures.	Evaluate
C314.4	To Explain the knowledge for use of geological strata in the analysis and design the civil engineering structures.	Understand
C314.5	To Describe the suitability of water and soil conservation projects.	Remember
C314.6	To Analyse the structural behavior by using geophysical methods	Analyse
SPECIFIC LEARNING OUTCOMES – Structural Analysis II(15A01505)		
C315.1	To Analyse three and two hinged ,circular and parabolic arches	Analyse
C315.2	To Apply slope deflection and moment distribution methods to	Apply

	indeterminate structures	
C315.3	To Calculate the effect of support settlements for indeterminate structures	Apply
C315.4	To Analyse indeterminate structures by kani's method	Analyse
C315.5	To Understand various matrix methods	Understand
C315.6	To Understand the principles of plastic collapse, shape factor and behaviour of structures due to ultimate and accidental loading	Understand
SPECIFIC LEARNING OUTCOMES – Water Harvesting and Conservation(15A01507)		
C317.1	To Identify the causes of soil erosion	Remember
C317.2	To Design soil conservation measures in a watershed	Create
C317.3	To Design water harvesting and ground water recharging structures	Create
C317.4	To Evaluate the measures for reclamation of saline soils	Evaluate
C317.5	To Analyse the water conservation techniques.	Analyse
C317.6	To Discuss the analysis for water conservation for various soils	Understand
SPECIFIC LEARNING OUTCOMES – Engineering Geology Laboratory (15A01508)		
C318.1	To Interpret the knowledge of principles of engineering geology	Understand
C318.2	To Identify the physical properties of Minerals and Rocks in the laboratory	Remember
C318.3	To Justify the suitability of sites for various civil engineering structures.	Evaluate
C318.4	To Explain the knowledge for use of geological strata in the analysis and design the civil engineering structures	Understand
C318.5	To Describe the suitability of water and soil conservation projects.	Understand
C318.6	To Analyze the structural behaviour by using geophysical methods.	Analyze
SPECIFIC LEARNING OUTCOMES – Geotechnical Engineering Laboratory (15A01509)		
C319.1	To Classify the soil based on Index Properties of Soil	Analyze
C319.2	To Calculate the Field and Dry Density of Cohesion-less and Cohesive soils.	Apply
C319.3	To Determine the Coefficient of Permeability of Coarse grained and Fine grained soils& also Compressibility Characteristics of Soil..	Apply
C319.4	To Evaluate the Shear Strength Parameters of Soil.	Evaluate
C319.5	To Interpret the Engineering Properties of soil by Direct Shear Test	Understand
C319.6	To Demonstrate various Experiments on Consolidation of Soil.	Apply
SPECIFIC LEARNING OUTCOMES – Audit course - Social Values & Ethics (15A99501)		
C311.1	To Differentiate between Basic Concepts of Family and Society	Understand
C311.2	To Analyse about Social Harmony and National Integration	Analyse
C311.3	To Understand the knowledge about Environment Issues	Understand
C311.4	To Explain about Gender Sensitization, Civil/ Self Defence	Understand
C311.5	To Differentiate between Physical, Psychological, Social problems	Understand
C311.6	To Differentiate between Kriyas, Bandhas and Mudras	Understand

AY : 2019-20	IV YEAR- I Sem	
On successful completion of this course the students will be able:		
SNO	**Course Outcomes Statement**	**Taxonomy**
SPECIFIC LEARNING OUTCOMES – Finite Element Methods(15A01701)		
C411.1	To Understand the fundamental concepts of the Finite Element Method (FEM)	Understand
C411.2	To Apply the basic properties, behaviour and usage of different types of finite elements	Apply
C411.3	To Develop shape functions and stiffness matrices for spring and bar elements	Create
C411.4	To Apply natural and Arial coordinate systems to constant strain triangle and linear Strain triangle elements	Apply
C411.5	To Identify the application and characteristics of FEA elements such as bars, beams, plane and Iso-parametric elements	Remember
C411.6	To Create Finite Element models and solve typical Civil Engineering. Problems using FEM	Create
SPECIFIC LEARNING OUTCOMES – Transportation Engineering II(15A01702)		
C412.1	To Interpret the importance of railway infrastructure planning and design	Understand
C412.2	To Identify the factors governing design of railway infrastructures	Remember
C412.3	To Design and analyze the railway track system	Create
C412.4	To Explain the process of execution of railway projects	Understand
C412.5	To Analyse and design of the airport runway	Analyse
C412.6	To Analyse about the description of harbours & ports	Analyse
SPECIFIC LEARNING OUTCOMES – Environmental Engineering(15A01703)		
C413.1	To Identify the source of water and water demand	Remember
C413.2	To Apply the water treatment concept and methods	Apply
C413.3	To Prepare basic process designs of water and wastewater treatment plants collect, reduce, analyze, and evaluate basic water quality data	Create
C413.4	To Determine the sewage characteristics	Apply
C413.5	To Apply environmental treatment technologies and design processes	Apply
C413.6	To Predict the causes of air pollution and noise pollution	Evaluate
SPECIFIC LEARNING OUTCOMES – Water Resource Engineering II(15A01704)		
C414.1	To Understand various hydraulic structures such as diversion head work, canal falls and structures involved in cross drainage works	Understand
C414.2	To Differentiate the different aspects of design of hydraulic structures	Understand
C414.3	To Design various canal systems	Create
C414.4	To Design head and cross regulator structures	Create
C414.5	To Identify various types of reservoir and their design aspects	Remember
C414.6	To Discuss about flood routing concepts & Design of different types of dams	Understand
SPECIFIC LEARNING OUTCOMES – Design and Drawing of Irrigation Structures(15A01705)		
C415.1	To Express knowledge of various irrigation structures	Understand
C415.2	To Discuss various structures involved in cross drainage work	Understand

C415.3	To Design various irrigation structural components	Create
C415.4	To Solve design aspects of irrigation structures	Apply
C415.5	To Illustrate various operation procedures of hydraulic structures	Apply
C415.6	To Design and identify various types of reservoirs	Create
SPECIFIC LEARNING OUTCOMES – Ground Improvement Techniques(15A01706)		
C416.1	To Understand soil dewatering techniques with respect to field conditions.	Understand
C416.2	To Understand grouting techniques with respect to field conditions.	Understand
C416.3	To Understand about the improvement of in-situ cohesive soils as well as Cohesion less soils	Understand
C416.4	To Design the principles of reinforced soil walls.	Create
C416.5	To Apply the Applications of geo synthetics in suitable field conditions	Apply
C416.6	To Identify about the problematic soil	Remember
SPECIFIC LEARNING OUTCOMES – Rehabilitation and Retrofitting of Structure(15A01710)		
C410.1	To Identify and define all the terms and concepts associated with deterioration and distress in concrete structures.	Remember
C410.2	To Design and develop maintenance of structures, type and properties of repair materials etc	Create
C410.3	To Develop various maintenance and repair strategies	Create
C410.4	To Evaluate the existing buildings through field investigations	Evaluate
C410.5	To Understand different strengthening methods for structural retrofitting and jacketing	Understand
C410.6	To Understand various types of sensors and building instrumentation	Understand
SPECIFIC LEARNING OUTCOMES – CAD Laboratory(15A01711)		
C4111.1	To Sketch out Two Dimensional sketches, views in CAD environment	Apply
C4111.2	To Apply structural drawing of reinforced concrete elements such as beams.	Apply
C4111.3	To Design structural drawing of Reinforced Concrete Elements such as Beams.	Create
C4111.4	To Design Structural drawings of steel elements such as Tension members and Compression members.	Create
C4111.5	To Design Structural drawings of steel elements such as Beams, Column Base and Roof Trusses	Create
C4111.6	To Design Various connections or Joint details.	Create
SPECIFIC LEARNING OUTCOMES – Environmental Engineering Laboratory(15A01712)		
C4112.1	To Estimate various parameters like PH, Chlorides, Sulphates, Nitrates in water	Evaluate
C4112.2	To Demonstrate the laboratory experiments on various parameters of water and waste water.	Apply
C4112.3	To Analyse the technical laboratory report on quality assessment of potable and waste water.	Analyse
C4112.4	To Estimate of industrial effluents of samples in the laboratory	Evaluate
C4112.5	To Apply the laboratory results in the basic environmental design and in the field of Engineering	Apply
C4112.6	To Analyse and estimate the quality of water both in potable water and waste water.	Analyse