



## DEPARTMENT OF CIVIL ENGINEERING

### Course Outcomes

<b>Course Name</b>	<b>Elements of Civil Engineering</b>	<b>Semester</b>	<b>1</b>
<b>Course code</b>	18CIV14/24	Batch	2018 - 2022

### **Course Outcomes**

<b>C101.1</b>	Understand the Various Fields of Civil Engineering
<b>C101.2</b>	Compute the resultant of force system & resolution of forces.
<b>C101.3</b>	Locate the centroid & compute the moment of inertia of regular & built-up sections
<b>C101.4</b>	Comprehend the action of forces, moments and other types of loads on rigid bodies and compute the reactive forces
<b>C101.5</b>	Analyse the Bodies In Motion



<b>Course Name</b>	<b>Elements of Civil Engineering</b>	<b>Semester</b>	<b>2</b>
<b>Course code</b>	18CIV14/24	<b>Batch</b>	2018 - 2022

### **Course Outcomes**

<b>C201.1</b>	Understand the Various Fields of Civil Engineering
<b>C201.2</b>	Compute the resultant of force system & resolution of forces.
<b>C201.3</b>	Locate the centroid & compute the moment of inertia of regular & built-up sections
<b>C201.4</b>	Comprehend the action of forces, moments and other types of loads on rigid bodies and compute the reactive forces
<b>C201.5</b>	Analyse the Bodies In Motion



<b>Course Name</b>	<b>Transform Calculus, Fourier Series and Numerical Techniques</b>	<b>Semester</b>	<b>3</b>
<b>Course code</b>	18MAT31	Batch	2018 - 2022

### Course Outcomes

<b>C301.1</b>	Use Laplace transform and inverse Laplace transform in solving differential/integral equation arising in network analysis, control systems and other fields of engineering
<b>C301.2</b>	Demonstrate Fourier series to study the behaviour of periodic functions and their applications in system communications, digital signal processing and field theory.
<b>C301.3</b>	Make use of Fourier transform and Z-transform to illustrate discrete/continuous function arising in wave and heat propagation, signals and systems
<b>C301.4</b>	Solve first and second order ordinary differential equations arising in engineering problems using single step and multistep numerical methods
<b>C301.5</b>	Determine the externals of functional using calculus of variations and solve problems arising in dynamics of rigid bodies and vibration analysis



<b>Course Name</b>	<b>Strength of Materials</b>	<b>Semester</b>	<b>3</b>
<b>Course code</b>	18CV32	Batch	2018 – 2022

### Course Outcomes

<b>C302.1</b>	Understand the concept of stresses and strains of different materials and their interrelationships.
<b>C302.2</b>	Evaluate the development of internal forces and resistance mechanism for 1 dimensional and 2 dimensional structural element.
<b>C302.3</b>	Analyzethe internal resistance of various structural elements subjected to representative transverse loads.
<b>C302.4</b>	Evaluatethe bending, shear and torsional resistance across the sections, when subjected to various loads.
<b>C302.5</b>	Determine the slope and deflection of beams and also understand the behaviour of compression members.



<b>Course Name</b>	<b>Fluid Mechanics</b>	<b>Semester</b>	<b>3</b>
<b>Course code</b>	18CV33	Batch	2018 - 2022

### Course Outcomes

<b>C303.1</b>	Possess a sound knowledge of fundamental properties of fluids and fluid Continuum.
<b>C303.2</b>	Compute and solve problems on hydrostatics, including practical applications.
<b>C303.3</b>	Apply principles of mathematics to represent kinematic concepts related to fluid flow.
<b>C303.4</b>	Apply fundamental laws of fluid mechanics and the Bernoulli's principle for practical applications.
<b>C303.5</b>	Compute the discharge through pipes and over notches and weirs.



<b>Course Name</b>	<b>BUILDING MATERIALS AND CONSTRUCTION</b>	<b>Semester</b>	<b>3</b>
<b>Course code</b>	18CV34	Batch	2018 - 2022

### **Course Outcomes**

<b>C304.1</b>	Understand the selection of suitable building materials required for construction work.
<b>C304.2</b>	Understand the suitable types of foundation based on soil investigation and Masonry construction techniques.
<b>C304.3</b>	Supervise the construction of different building elements based on suitability.
<b>C304.4</b>	Evaluate the building formwork, openings and staircase requirements.
<b>C304.5</b>	Exhibit the knowledge of building finishes in construction.



<b>Course Name</b>	<b>Basic Surveying</b>	<b>Semester</b>	<b>3</b>
<b>Course code</b>	18CV35	Batch	2018 - 2022

### **Course Outcomes**

<b>C305.1</b>	Posses a sound knowledge about basic concepts of surveying
<b>C305.2</b>	Measurement of horizontal dimensions to arrive at solutions to basic surveying problems.
<b>C305.3</b>	Understanding the basic concepts of compass surveying to arrive the solutions for traversing
<b>C305.4</b>	Understanding the basic concepts of ground profile using levelling
<b>C305.5</b>	Understanding the concepts of plane table surveying
<b>C305.6</b>	Estimate the area and volume of earth works and obtain topography of ground using contours



<b>Course Name</b>	<b>Engineering Geology</b>	<b>Semester</b>	<b>3</b>
<b>Course code</b>	18CV36	Batch	2018 - 2022

### Course Outcomes

<b>C306.1</b>	Apply geological knowledge in different civil engineering practice.
<b>C306.2</b>	Students will acquire knowledge on durability and competence of foundation rocks, and confidence enough to use the best building material
<b>C306.3</b>	Civil Engineers are competent enough for the safety, stability, economy and life of the structures that they construct.
<b>C306.4</b>	Able to solve various issues related to ground water exploration, build up dams, bridges, tunnels which are often confronted with ground water problems.
<b>C306.5</b>	Intelligent enough to apply GIS, GPS and remote sensing as a latest tool in different civil engineering construction



<b>Course Name</b>	<b>Computer Aided Building Planning &amp; Drawing</b>	<b>Semester</b>	<b>3</b>
<b>Course code</b>	18CVL37	Batch	2018 - 2022

### Course Outcomes

<b>C307.1</b>	Appraise the basics of Autocad tools.
<b>C307.2</b>	Apply the knowledge of CAD in deteling of various structures and components.
<b>C307.3</b>	Appraise the basic drawings of building elements by using Autocad.
<b>C307.4</b>	Prepare, read and interpret the drawings in a professional set up.
<b>C307.5</b>	Plan and design a residential or public building as per the given requirements.



<b>Course Name</b>	<b>BUILDING MATERIALS TESTING LABORATORY</b>	<b>Semester</b>	<b>3</b>
<b>Course code</b>	18CVL38	<b>Batch</b>	2018 - 2022

### Course Outcomes

<b>C308.1</b>	Understand the basic knowledge of mathematics and engineering in finding the strength in tension, compression, shear and torsion.
<b>C308.2</b>	Identify, formulate and solve engineering problems of structural elements subjected to flexure.
<b>C308.3</b>	Evaluate the impact of engineering solutions on the society and also will be aware of contemporary issues regarding failure of structures due to unsuitable materials.
<b>C308.4</b>	Understand the basic building materials testing in multi-disciplinary areas.
<b>C308.5</b>	Understanding of professional and ethical responsibility in the areas of material testing.



<b>Course Name</b>	<b>Complex Analysis, Probability And Statistical Methods</b>	<b>Semester</b>	<b>4</b>
<b>Course code</b>	18MAT41	Batch	2018 - 2022

### **Course Outcomes**

<b>C401.1</b>	Use the concepts of analytic function and complex potentials to solve the problems arising in electromagnetic field theory.
<b>C401.2</b>	Utilize conformal transformation and complex integral arising in aerofoil theory, fluid flow visualization and image processing
<b>C401.3</b>	Apply discrete and continuous probability distributions in analyzing the probability models arising in engineering field.
<b>C401.4</b>	Make use of the correlation and regression analysis to fit a suitable mathematical model for the statistical data
<b>C401.5</b>	Construct joint probability distributions and demonstrate the validity of testing the hypothesis



<b>Course Name</b>	<b>Analysis of Determinate Structures</b>	<b>Semester</b>	<b>4</b>
<b>Course code</b>	18CV42	Batch	2018 - 2022

### **Course Outcomes**

<b>C402.1</b>	Identification of different forms of structural systems and Indeterminacy.
<b>C402.2</b>	Analyse the beams and trusses subjected to moving loads by using ILD.
<b>C402.3</b>	Determine the Slopes and deflection of determinate beams by force methods.
<b>C402.4</b>	Understand the Concepts Energy Principles.
<b>C402.5</b>	Evaluate internal resistances in arches and cables.



<b>Course Name</b>	<b>Applied Hydraulics</b>	<b>Semester</b>	<b>4</b>
<b>Course code</b>	18CV43	Batch	2018 - 2022

### **Course Outcomes**

<b>C403.1</b>	Apply dimensional analysis to develop mathematical modeling and compute the parametric values in prototype by analyzing the corresponding model parameters.
<b>C403.2</b>	Design the open channels of various cross sections including economical channel sections.
<b>C403.3</b>	Apply Energy concepts to flow in open channel sections, Calculate Energy dissipation
<b>C403.4</b>	Compute water surface profiles at different conditions
<b>C403.5</b>	Design turbines for the given data, and to know their operation characteristics under different operating conditions.



<b>Course Name</b>	<b>Concrete Technology</b>	<b>Semester</b>	<b>4</b>
<b>Course code</b>	18CV44	Batch	2018 - 2022

### **Course Outcomes**

<b>C404.1</b>	Understand the concepts of concrete making materials which include cement, aggregates and admixtures.
<b>C404.2</b>	Comprehend the properties and behaviour of Fresh concrete.
<b>C404.3</b>	Understand the properties and durability requirements of Hardened concrete.
<b>C404.4</b>	Design different concrete mixes as per IS codes.
<b>C404.5</b>	Learn the applications and need for special concrete.



<b>Course Name</b>	<b>Advanced Surveying</b>	<b>Semester</b>	<b>4</b>
<b>Course code</b>	18CV45	Batch	2018 - 2022

### Course Outcomes

<b>C405.1</b>	Apply the knowledge of geometric principles to arrive at surveying problems by the concepts of theodolite and tachometers
<b>C405.2</b>	Understand the concepts of geodetic surveying.
<b>C405.3</b>	Understand, Design and implement the different types of curves for deviating the alignments
<b>C405.4</b>	Analyze the captured spatial data to process and perform to get solutions for surveying problems
<b>C405.5</b>	Using modern instruments to obtain geo-spatial data and analyze, to get solutions for engineering problems with electronic instruments



<b>Course Name</b>	<b>Water Supply &amp; Treatment Engineering</b>	<b>Semester</b>	<b>4</b>
<b>Course code</b>	18CV46	Batch	2018 - 2022

### Course Outcomes

<b>C406.1</b>	Estimate average and peak water demand for a community
<b>C406.2</b>	Evaluate available sources of water, quantitatively and qualitatively and make appropriate choice for a community
<b>C406.3</b>	Evaluate water quality and environmental significance of various parameters and plan suitable treatment system
<b>C406.4</b>	Design a comprehensive water treatment and distribution system to purify and distribute water to the required quality standards



<b>Course Name</b>	<b>Engineering Geology Laboratory</b>	<b>Semester</b>	<b>4</b>
<b>Course code</b>	18CVL47	Batch	2018 - 2022

### **Course Outcomes**

<b>C407.1</b>	The students able to identify the minerals, rocks and utilize them effectively in civil engineering practices.
<b>C407.2</b>	The students will interpret and understand the geological conditions of the area for implementation of civil engineering projects
<b>C407.3</b>	The students will interpret subsurface information such as thickness of soil, weathered zone, depth of hard rock and saturated zone by using geophysical methods
<b>C407.4</b>	The students will learn the techniques in the interpretation of LANDSAT Imageries to find out the lineaments and other structural features for the given area.
<b>C407.5</b>	The students will be able to identify the different structures in the field



<b>Course Name</b>	<b>Fluid Mechanics and Hydraulic Machines Laboratory</b>	<b>Semester</b>	<b>4</b>
<b>Course code</b>	18CVL48	Batch	2018 - 2022

### **Course Outcomes**

<b>C408.1</b>	Properties of fluids and the use of various instruments for fluid flow measurement.
<b>C408.2</b>	working of hydraulic machines under conditions of working and their characteristics



<b>Course Name</b>	<b>Construction Management &amp; Entrepreneurship</b>	<b>Semester</b>	<b>5</b>
<b>Course code</b>	18CV51	Batch	2018 - 2022

### **Course Outcomes**

<b>C501.1</b>	Prepare a project plan based on requirements and prepare schedule of a project by understanding the activities and their sequence.
<b>C501.2</b>	Understand labour output, equipment efficiency to allocate resources required for an activity / project to achieve desired quality and safety
<b>C501.3</b>	Understand the practice of construction quality process, safety in construction & Ethics involved in engineering and profession
<b>C501.4</b>	Analyze the economics of alternatives and evaluate benefits and profits of a construction activity based on monetary value and time value.
<b>C501.5</b>	Establish as an ethical entrepreneur and establish an enterprise utilizing the provisions offered by the federal agencies



<b>Course Name</b>	<b>Analysis of Indeterminate Structures</b>	<b>Semester</b>	<b>5</b>
<b>Course code</b>	18CV52	Batch	2018 - 2022

### **Course Outcomes**

<b>C502.1</b>	Determine the moment in indeterminate beams and frames having variable moment of inertia and subsidence using slope deflection method.
<b>C502.2</b>	Determine the moment in indeterminate beams and frames of no sway and sway using moment distribution method.
<b>C502.3</b>	Construct the bending moment diagram for beams and frames by Kani's method.
<b>C502.4</b>	Construct the bending moment diagram for beams and frames using flexibility method
<b>C502.5</b>	Analyze the beams and indeterminate frames by system stiffness method.



<b>Course Name</b>	<b>Design of RC Structural Elements</b>	<b>Semester</b>	<b>5</b>
<b>Course code</b>	18CV53	Batch	2018 - 2022

### **Course Outcomes**

<b>C503.1</b>	Understand the design philosophy and principles.
<b>C503.2</b>	Analyze the behaviour of RCC beams in flexure and shear Requirements.
<b>C503.3</b>	Design of Rcc beams in flexure and shear as per IS Codes.
<b>C503.4</b>	Design of RC structural elements like slabs and staircases.
<b>C503.5</b>	Design of columns for Pure axial, Uni axial, Biaxial loading cases and design footings.



<b>Course Name</b>	<b>Basic Geotechnical Engineering</b>	<b>Semester</b>	<b>5</b>
<b>Course code</b>	18CV54	Batch	2018 - 2022

### Course Outcomes

<b>C504.1</b>	Will acquire an understanding of the procedures to determine index properties of any type of soil, classify the soil based in its index properties.
<b>C504.2</b>	Will be able to determine compaction characteristics of soil and apply that knowledge to assess field compaction procedures.
<b>C504.3</b>	Will be able to determine permeability property of soils and acquires conceptual knowledge about stresses due to seepage and effective stress; also acquire ability to estimate seepage losses across hydraulic structure.
<b>C504.4</b>	Will be able to estimate shear strength parameters of different types of soils using the data of different shear tests and comprehend Mohr- Coulomb failure theory.
<b>C504.5</b>	Ability to solve practical problems related to estimation of consolidation settlement of soil deposits also time required for the same.



<b>Course Name</b>	<b>Municipal Wastewater Engineering</b>	<b>Semester</b>	<b>5</b>
<b>Course code</b>	18CV55	Batch	2018 - 2022

### **Course Outcomes**

<b>C505.1</b>	Select the appropriate sewer appurtenances and materials in sewer network
<b>C505.2</b>	Design the sewers network and understand the self purification process in flowing water
<b>C505.3</b>	Deisgn the varies physic- chemical treatment units
<b>C505.4</b>	Design the various biological treatment units
<b>C505.5</b>	Design various AOPs and low cost treatment units



<b>Course Name</b>	<b>HIGHWAY ENGINEERING</b>	<b>Semester</b>	<b>5</b>
<b>Course code</b>	18CV56	Batch	2018 - 2022

### **Course Outcomes**

<b>C506.1</b>	Acquire the capability of proposing a new alignment or re-alignment of existing roads, conduct necessary field investigation for generation of required data
<b>C506.2</b>	Evaluate the engineering properties of the materials and suggest the suitability of the same for pavement construction.
<b>C506.3</b>	Design road geometrics, structural components of pavement and drainage
<b>C506.4</b>	Evaluate the highway economics by few select methods and also will have a basic knowledge of various highway financing concepts.
<b>C506.5</b>	Understand pavement and its components, pavement construction activities and its requirements.



<b>Course Name</b>	<b>Surveying Practice</b>	<b>Semester</b>	<b>5</b>
<b>Course code</b>	18CVL57	Batch	2018 - 2022

### **Course Outcomes**

<b>C507.1</b>	Apply the basic principles of surveying to get the solutions of engineering problems for linear and angular measurements.
<b>C507.2</b>	Using the concepts of compass surveying to arrive the solutions for surveying problems by compass survey
<b>C507.3</b>	Using the concepts of level surveying to arrive the solutions for surveying problems by using dumpy level survey
<b>C507.4</b>	Using the concepts of trigonometric level surveying to arrive the solutions for surveying problems by using theodolite and tacheometer survey
<b>C507.5</b>	Using the concepts of surveying to arrive the solutions for surveying problems by using plane table survey
<b>C507.6</b>	Understanding the concepts of using modern surveying instruments



<b>Course Name</b>	<b>Concrete and Highway Materials Laboratory</b>	<b>Semester</b>	<b>5</b>
<b>Course code</b>	18CVL58	Batch	2018 - 2022

### **Course Outcomes**

<b>C508.1</b>	Able to interpret the experimental results of concrete and highway materials based on laboratory tests
<b>C508.2</b>	Determine the quality and suitability of cement.
<b>C508.3</b>	Design appropriate concrete mix Using Professional codes
<b>C508.4</b>	Determine strength and quality of concrete
<b>C508.5</b>	Evaluate the strength of structural elements using NDT technique
<b>C508.6</b>	Test the soil for its suitability as sub grade soil for pavements.



<b>Course Name</b>	<b>Environmental Studies</b>	<b>Semester</b>	<b>5</b>
<b>Course code</b>	18CIV59	Batch	2018 - 2022

### **Course Outcomes**

<b>C508.1</b>	Understand the principles of ecology and environmental issues that apply to air, land, and water issues on a global scale
<b>C508.2</b>	Develop critical thinking and/or observation skills, and apply them to the analysis of a problem or question related to the environment
<b>C508.3</b>	Demonstrate ecology knowledge of a complex relationship between biotic and a biotic components.
<b>C508.4</b>	Apply their ecological knowledge to illustrate and graph a problem and describe the realities that managers face when dealing with complex issues.



<b>Course Name</b>	<b>Design of Steel Structural Elements</b>	<b>Semester</b>	<b>6</b>
<b>Course code</b>	18CV61	Batch	2018 - 2022

### **Course Outcomes**

<b>C601.1</b>	Understand the engineering properties and plastic behaviour of structural steel.
<b>C601.2</b>	Design of Bolted and Welded connections by using limit state method.
<b>C601.3</b>	Design of compression members, built-up columns and column splices by using limit state method.
<b>C601.4</b>	Design of tension members, simple slab base and gusseted base by using limit state method.
<b>C601.5</b>	Design of laterally supported and un-supported steel beams by using limit state method.



<b>Course Name</b>	<b>Applied Geotechnical Engineering</b>	<b>Semester</b>	<b>6</b>
<b>Course code</b>	18CV62	Batch	2018 - 2022

### **Course Outcomes**

<b>C602.1</b>	Ability to plan and execute geotechnical site investigation program for different civil engineering project
<b>C602.2</b>	Understanding of stress distribution and resulting settlement beneath the loaded footings on sand and clayey soils
<b>C602.3</b>	Ability to estimate factor of safety against failure of slopes and to compute lateral pressure distribution behind earth retaining structures
<b>C602.4</b>	Ability to determine bearing capacity of soil and achieve proficiency in proportioning shallow isolated and combined footings for uniform bearing pressure
<b>C602.5</b>	Capable of estimating load carrying capacity of single and group of piles



<b>Course Name</b>	<b>Hydrology and Irrigation Engineering</b>	<b>Semester</b>	<b>6</b>
<b>Course code</b>	18CV63	Batch	2018 - 2022

### **Course Outcomes**

<b>C603.1</b>	Understand the importance of hydrology and its components.
<b>C603.2</b>	Measure precipitation and analyze the data and analyze the losses in precipitation.
<b>C603.3</b>	Estimate runoff and develop unit hydrographs
<b>C603.4</b>	Find the benefits and ill-effects of irrigation.
<b>C603.5</b>	Find the quantity of irrigation water and frequency of irrigation for various crops.
<b>C603.6</b>	Find the canal capacity, design the canal and compute the reservoir capacity.



<b>Course Name</b>	<b>RAILWAYS, HARBOUR, TUNNELING AND AIRPORTS</b>	<b>Semester</b>	<b>6</b>
<b>Course code</b>	18CV645	Batch	2018 - 2022

### Course Outcomes

<b>C604.1</b>	Understand the history and development, role of railways, railway planning and development based on essential criteria's.
<b>C604.2</b>	Learn different types of structural components, engineering properties of the materials, to calculate the material quantities required for construction
<b>C604.3</b>	Understand various aspects of geometrical elements, points and crossings, significance of maintenance of tracks
<b>C604.4</b>	Design and plan airport layout, design facilities required for runway, taxiway and impart knowledge about visual aids
<b>C604.5</b>	Apply design features of tunnels, harbors, dock and necessary navigational aids; also expose them to various methods of tunneling and tunnel accessories



<b>Course Name</b>	<b>REMOTE SENSING &amp; GIS</b>	<b>Semester</b>	<b>6</b>
<b>Course code</b>	18CV651	Batch	2018 - 2022

### Course Outcomes

<b>C605.1</b>	Evaluate the ideal remote sensing features and energy interactions with various geographical features.
<b>C605.2</b>	Collect data and delineate various elements from the satellite imagery using their spectral signature.
<b>C605.3</b>	Analyze different features of ground information to create raster or vector data.
<b>C605.4</b>	Perform digital classification and create different thematic maps for solving specific problems.
<b>C605.5</b>	Make decision based on the GIS analysis on thematic maps.



<b>Course Name</b>	<b>Software Application Laboratory</b>	<b>Semester</b>	<b>6</b>
<b>Course code</b>	18CVL66	Batch	2018 - 2022

### **Course Outcomes**

<b>C606.1</b>	Interpret the results of analysis of beams using software tool.
<b>C606.2</b>	Interpret the results of analysis of portal frames and multi-storey RCC building using software tool.
<b>C606.3</b>	Interpret the results of analysis of plane truss using software tool.
<b>C606.4</b>	Understand the basic features of project management and QGIS Software's.
<b>C606.5</b>	Design and develop Excel spread sheets for structural elements.



<b>Course Name</b>	<b>Environmental Engineering Laboratory</b>	<b>Semester</b>	<b>6</b>
<b>Course code</b>	18CVL67	Batch	2018 - 2022

### **Course Outcomes**

<b>C607.1</b>	Acquire capability to conduct experiments and estimate the concentration of different parameters
<b>C607.2</b>	Compare the result with standards and discuss based on the purpose of analysis.
<b>C607.3</b>	Determine type of treatment, degree of treatment for water and waste water
<b>C607.4</b>	Identify the parameter to be analyzed for the student project work in environmental stream



<b>Course Name</b>	<b>Extensive Survey project</b>	<b>Semester</b>	<b>6</b>
<b>Course code</b>	18CVEP68	Batch	2018 - 2022

### **Course Outcomes**

<b>C608.1</b>	Apply Surveying knowledge and tools effectively for the projects
<b>C608.2</b>	Understanding Task environment, Goals, responsibilities, Task focus, working in Teams towards common goals, Organizational performance expectations, technical and behavioural competencies
<b>C608.3</b>	Application of individual effectiveness skills in team and organizational context, goal setting, time management, communication and presentation skills.
<b>C608.4</b>	Professional etiquettes at workplace, meeting and general
<b>C608.5</b>	Establishing trust based relationships in teams & organizational environment
<b>C608.6</b>	Orientation towards conflicts in team and organizational environment, Understanding sources of conflicts, Conflict resolution styles and techniques



<b>Course Name</b>	<b>Quality Surveying and Contract Management</b>	<b>Semester</b>	<b>7</b>
<b>Course code</b>	18CV71	<b>Batch</b>	2018 - 2022

### Course Outcomes

<b>C701.1</b>	Taking out quantities and work out the cost and preparation of abstract for the estimated cost for various civil engineering works.
<b>C701.2</b>	Prepare detailed and abstract estimates for various road works
<b>C701.3</b>	Prepare the specifications and analyze the rates for various items of work.
<b>C701.4</b>	Assess contract and tender documents for various construction works.
<b>C701.5</b>	Prepare valuation reports of buildings.



<b>Course Name</b>	<b>Design of RCC and Steel Structures</b>	<b>Semester</b>	<b>7</b>
<b>Course code</b>	18CV72	Batch	2018 - 2022

### **Course Outcomes**

<b>C702.1</b>	Design a combined footing and develop structural drawings as per IS codes standards
<b>C702.2</b>	Design a retaining wall as per the requirements
<b>C702.3</b>	Design a RCC portal frame and develop structural drawings as per IS codes standards
<b>C702.4</b>	Design a steel roof stress as per the limit state method
<b>C702.5</b>	Design the gantry girder and plate girder and apply suitable checks



<b>Course Name</b>	<b>Ground Water Hydraulics</b>	<b>Semester</b>	<b>7</b>
<b>Course code</b>	18CV734	Batch	2018 - 2022

### Course Outcomes

<b>C703.1</b>	Find the characteristics of aquifers.
<b>C703.2</b>	Estimate the quantity of ground water by various methods.
<b>C703.3</b>	Locate the zones of ground water resources through exploration.
<b>C703.4</b>	Select particular type of well and augment the ground water storage.



<b>Course Name</b>	<b>URBAN TRANSPORT PLANNING</b>	<b>Semester</b>	<b>7</b>
<b>Course code</b>	18CV743	Batch	2018 - 2022

### **Course Outcomes**

<b>C704.1</b>	Design, conduct and administer surveys to provide the data required for transportation planning
<b>C704.2</b>	Supervise the process of data collection about travel behavior and analyze the data for use in transport planning.
<b>C704.3</b>	Develop and calibrate modal split, trip generation rates for specific types of land use developments.
<b>C704.4</b>	Adopt the steps that are necessary to complete a long-term transportation plan



<b>Course Name</b>	<b>Environmental Protection and Management</b>	<b>Semester</b>	<b>7</b>
<b>Course code</b>	18CV753	Batch	2018 - 2022

### **Course Outcomes**

<b>C705.1</b>	To learn about corporate social responsibility, sustainable consumption and production and different national policies on environmental pollution prevention
<b>C705.2</b>	To learn about different environmental standards, indicators, advanced pollution prevention technologies
<b>C705.3</b>	Appreciate the elements of corporate Environmental Management systems complying to international environmental management system standards
<b>C705.4</b>	Lead pollution prevention assessment team and implement waste minimization options
<b>C705.5</b>	Develop, Implement, maintain and Audit Environmental Management systems for organizations



<b>Course Name</b>	<b>Computer Aided Detailing of Structures</b>	<b>Semester</b>	<b>7</b>
<b>Course code</b>	18CVL76	Batch	2018 - 2022

### **Course Outcomes**

<b>C706.1</b>	Apply the knowledge of RCC and execute the drawing and detailing of beams, slabs and staircase using AutoCAD software.
<b>C706.2</b>	Apply the knowledge of RCC and execute the drawing and detailing of retaining wall using AutoCAD software.
<b>C706.3</b>	Apply the knowledge of RCC and execute the drawing and detailing of water tanks using AutoCAD software.
<b>C706.4</b>	Apply the knowledge of Steel structures and execute the drawings and connection detailing using AutoCAD software.
<b>C706.5</b>	apply the knowledge of Steel structures and execute the drawings and detailing of roof truss, girders using AutoCAD software.



<b>Course Name</b>	<b>GEOTECHNICAL ENGINEERING LABORATORY</b>	<b>Semester</b>	<b>7</b>
<b>Course code</b>	18CVL77	<b>Batch</b>	2018 - 2022

### Course Outcomes

<b>C707.1</b>	Physical and index properties of the soil
<b>C707.2</b>	Classify based on index properties and field identification
<b>C707.3</b>	To determine OMC and MDD, plan and assess field compaction program
<b>C707.4</b>	Shear strength and consolidation parameters to assess strength and deformation characteristics
<b>C707.5</b>	In-situ shear strength characteristics (SPT-Demonstration)



<b>Course Name</b>	<b>PROJECT WORK PHASE - 1</b>	<b>Semester</b>	<b>7</b>
<b>Course code</b>	18CVEP78	Batch	2018 - 2022

### **Course Outcomes**

<b>C708.1</b>	Understand the project planning process
<b>C708.2</b>	Analyze project risks and uncertainties
<b>C708.3</b>	Communicate and present the project at different platform



<b>Course Name</b>	<b>Design of Pre-stressed Concrete</b>	<b>Semester</b>	<b>8</b>
<b>Course code</b>	18CV81	Batch	2018 - 2022

### **Course Outcomes**

<b>C801.1</b>	Analyse the stress encountered in PSC elements during Transfer & at Working stage.
<b>C801.2</b>	Understand the effectiveness of the design of PSC after studying all losses.
<b>C801.3</b>	Application of Structural check for Moment resistance capacity of a PSC sections.
<b>C801.4</b>	Application of Structural check for Shear resistance capacity of a PSC sections.
<b>C801.5</b>	Design PSC beams for Different requirements.



<b>Course Name</b>	<b>Pavement Design</b>	<b>Semester</b>	<b>8</b>
<b>Course code</b>	18CV825	Batch	2018 - 2022

### **Course Outcomes**

<b>C802.1</b>	Able to understand the pavement components and design fundamentals, Analyse stress, strain and deflection by boussineq's ,Burmister's theory
<b>C802.2</b>	Systematically generate and compile required data for design of pavement (Highway and Airfield ).Design of Flexible pavement conforming to IRC 58:2000
<b>C802.3</b>	Evaluate the performance of Flexible pavement, identify the failures and also develops maintenance statement based on site specific requirements.
<b>C802.4</b>	Analyse stress, strain and deflection by Westergaard's theory and Design rigid pavement conforming to IRC 37-2001
<b>C802.5</b>	Evaluate the performance of Rigid pavement ,identify the failures and also develops maintenance statement based on site specific requirements.



<b>Course Name</b>	<b>Project Work Phase - 2</b>	<b>Semester</b>	<b>8</b>
<b>Course code</b>	18CVP83	Batch	2018 - 2022

### **Course Outcomes**

<b>C803.1</b>	Formulate the project objective by detailed literature review
<b>C803.2</b>	Conduct the experimental/ analytical work to achieve the objectives
<b>C803.3</b>	Prepare the detailed report based on the experimental/ analytical work
<b>C803.4</b>	Communicate and present the project at different platform



<b>Course Name</b>	<b>Technical Seminar</b>	<b>Semester</b>	<b>8</b>
<b>Course code</b>	18CVS84	Batch	2018 - 2022

### **Course Outcomes**

<b>C804.1</b>	Work in actual working environment and utilize the technical resource
<b>C804.2</b>	Find appropriate sources that can summarised ,give oral presentation related to the work and integrated into multimedia presentation
<b>C804.3</b>	Engage in independent learning
<b>C804.4</b>	Be aware of imprudence of access to data, knowledge and results of engineering studies.
<b>C804.5</b>	Demonstrate the ability to access and report



<b>Course Name</b>	<b>Internship</b>	<b>Semester</b>	<b>8</b>
<b>Course code</b>	18CVI85	Batch	2018 - 2022

### **Course Outcomes**

<b>C805.1</b>	Assess interest and ability in their field of study
<b>C805.2</b>	Learn to appreciate work and its function in the economy
<b>C805.3</b>	Develop communication, interpersonal and other critical skills