



R.T.E. SOCIETY'S  
**RURAL ENGINEERING COLLEGE,**  
**HULKOTI-582 205.**

(Approved by A.I.C.T.E.(New Delhi) Affiliated to V. T. U. Belagavi)

Ph No. 08372-289097

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(ESTD-1980)

Dist. Gadag

State: Karnataka

**DEPARTMENT OF CIVIL ENGINEERING**

**COURSE OUTCOMES**

Branch : Civil Engineering Semester : 3 Scheme : 2018

Course: TRANSFER CALCULUS, FOURIER SERIES & NUMERICAL METHODS(18MAT31) Year: 2019-20

CO1	Student will be able to understand and apply the knowledge of laplace transform in solving ordinary differential equations.
CO2	Student will be able to solve the fourier series expansion of function analytically and numerically.
CO3	Student will be able to apply fourier transform to solve continuous model problems and z-transform techniques to solve difference equations.
CO4	Student will be able to solve ode of first order and first degree using appropriate numerical methods.
CO5	Student will be able to apply numerical method to solve second order ode and solve simple problems of calculus of variations.

Branch : Civil Engineering Semester : 3 Scheme : 2018

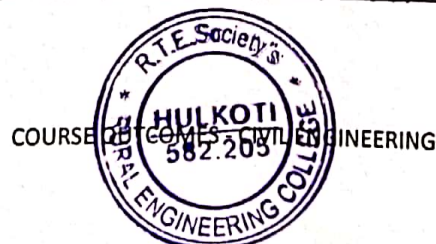
Course: STRENGTH OF MATERIALS(18CV32) Year: 2019-20

CO1	Student will be able to evaluate the basic concepts of the stresses and strains for different materials and strength of structural elements.
CO2	Student will be able to evaluate the development of internal forces and resistance mechanism for one dimensional and two dimensional structural elements.
CO3	Student will be able to analyse different internal forces and stresses induced due to representative loads on structural elements.
CO4	Student will be able to evaluate slope and deflections of beams.
CO5	Student will be able to evaluate the behaviour of torsion members, columns and struts.

Branch : Civil Engineering Semester : 3 Scheme : 2018

Course: Fluid Mechanics (18CV33) Year: 2019-20

CO1	Student will be able to possess a sound knowledge of fundamental properties of fluids and fluid continuum
CO2	Student will be able to compute and solve problems on hydrostatics including practical applications
CO3	Student will be able to apply principles of mathematics to represent kinematic concepts related to fluid flow
CO4	Student will be able to apply fundamental laws of fluid mechanics and the bernoulli's principle for practical applications
CO5	Student will be able to compute the discharge through pipes and over notches and weirs



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**COURSE OUTCOMES**

Branch : Civil Engineering Semester : 3 Scheme : 2018  
Course: BUILDING MATERIALS AND CONSTRUCTION(18CV34) Year: 2019-20

CO1	Student will be able to select suitable materials for buildings and adopt suitable construction techniques.
CO2	Student will be able to decide suitable type of foundation based on soil parameters
CO3	Student will be able to supervise the construction of different building elements based on suitability
CO4	Student will be able to exhibit the knowledge of building finishes and form work requirements

Branch : Civil Engineering Semester : 3 Scheme : 2018  
Course: Basic Surveying (18CV35) Year: 2021-22

CO1	Student will be able to possess a sound knowledge of fundamental principles of geodesy
CO2	Student will be able to measure vertical and horizontal plane, linear and angular dimensions to arrive at solutions to basic surveying problems.
CO3	Student will be able to capture geodetic data to process and perform analysis for survey problems
CO4	Student will be able to analyse the obtained spatial data and compute areas and volumes. represent 3d data on plane figures as contours
CO5	Student will be able to analyze and apply the plane table surveying to characteristics of contours

Branch : Civil Engineering Semester : 3 Scheme : 2018  
Course: ENGINEERING GEOLOGY(18CV36) Year: 2019-20

CO1	Student will be able to apply geological knowledge in different civil engineering practice.
CO2	Student will be able to acquire knowledge on durability and competence of foundation rocks, and confidence enough to use the best building materials.
CO3	Student will be able to be competent enough for the safety, stability, economy and life of the structures that they construct.
CO4	Student will be able to solve various issues related to ground water exploration, build up dams, bridges, tunnels which are often confronted with ground water problems.
CO5	Student will be able to be intelligent enough to apply GIS, GPS and remote sensing as a latest tool in different civil engineering construction.



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**COURSE OUTCOMES**

Branch : Civil Engineering Semester : 3 Scheme : 2018

Course: COMPUTER AIDED BUILDING PLANNING AND DRAWING(18CVL37) Year: 2019-20

CO1	Student will be able to prepare, read and interpret the drawings in a professional set up.
CO2	Student will be able to know the eprocedures of submission of drawings and develop working and submission drawings for building.
CO3	Student will be able to plan and design a residentia or public building as per the given requirements.

Branch : Civil Engineering Semester : 3 Scheme : 2018

Course: MATERIALS TESTING LAB(18CVL38) Year: 2019-20

CO1	Student will be able to reproduce the basic knowledge of mathematics and engineering in finding the strength in tension, compression, shear and torsion
CO2	Student will be able to identify, formulate and solve engineering problems of structural elements subjected to flexure.
CO3	Student will be able to 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.

Branch : Computer Science & Engineering Semester : 3 Scheme : 2018

Course: Constitution of India, Professional Ethics and Cyber Law(18CPC39) Year: 2019-20

CO1	Student will be able to know constitutional knowledge and legal literacy.
CO2	Student will be able to understand engineering and professional ethics and responsibilities of engineers.
CO3	Student will be able to understand the the cybercrimes and cyber laws for cyber safety measures.



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**COURSE OUTCOMES**

Branch : Civil Engineering Semester : 3 Scheme : 2018

Course: Additionqal Mathematics-1(18MATDIP31) Year: 2019-20

CO1	Student will be able to apply concepts of complex numbers and vector algebra to analyze the problems arising in related area.
CO2	Student will be able to use derivatives and partial derivatives to calculate rate of change of multivariate functions.
CO3	Student will be able to analyze position, velocity and acceleration in two and three dimensions of vector valued functions.
CO4	Student will be able to learn techniques of integration including the evaluation of double and triple integrals.
CO5	Student will be able to identify and solve first order ordinary differential equations.

Branch : Civil Engineering Semester : 4 Scheme : 2018

Course: COMPLEX ANALYSIS, PROBABILITY & STASTICAL METHODS(18MAT41) Year: 2019-20

CO1	Student will be able to describe the design process, choose materials. apply the codes and standards in design process. analyze the behavior of machine components under static loading
CO2	Student will be able to analyze the behavior of machine components under impact, fatigue loading using failure theories
CO3	Student will be able to design shafts, joints, couplings.
CO4	Student will be able to design of riveted and welded joints.
CO5	Student will be able to design of threaded fasteners and power screws

Branch : Civil Engineering Semester : 4 Scheme : 2018

Course: ANALYSIS OF DETERMINATE STRUCTURES(18CV42) Year: 2019-20

CO1	Student will be able to identify different forms of structural systems
CO2	Student will be able to construct and analyse the beams and trusses subjected to moving loads
CO3	Student will be able to understand the energy principles and energy theorems and its applications to determine the deflections of trusses and beams.
CO4	Student will be able to determine the stress resultants in arches and cables.



COURSE OUTCOMES DEPARTMENT OF CIVIL ENGINEERING

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**COURSE OUTCOMES**

Branch : Civil Engineering Semester : 4 Scheme : 2018

Course: APPLIED HYDRAULICS(18CV43) Year: 2019-20

CO1	Student will be able to apply dimensional analysis to develop mathematical modeling and compute the parametric values in prototype by analyzing the corresponding model parameters
CO2	Student will be able to design the open channels of various cross sections including economical channel sections
CO3	Student will be able to apply energy concepts to flow in open channel sections, calculate energy dissipation,
CO4	Student will be able to compute water surface profiles at different conditions
CO5	Student will be able to design turbines for the given data, and to know their operation characteristics under different operating conditions

Branch : Civil Engineering Semester : 4 Scheme : 2018

Course: CONCRETE TECHNOLOGY(18CV44) Year: 2019-20

CO1	Student will be able to relate material characteristics and their influence on microstructure of concrete.
CO2	Student will be able to distinguish concrete behavior based on its fresh and hardened properties.
CO3	Student will be able to illustrate proportioning of different types of concrete mixes for required fresh and hardened properties using professional codes.
CO4	Student will be able to adopt suitable concreting methods to place the concrete based on requirement.
CO5	Student will be able to select a suitable type of concrete based on specific application

Branch : Civil Engineering Semester : 4 Scheme : 2018

Course: ADVANCED SURVEYING(18CV45) Year: 2019-20

CO1	Student will be able to apply the knowledge of geometric principles to arrive at surveying problems
CO2	Student will be able to use modern instruments to obtain geo-spatial data and analyse the same to appropriate engineering problems.
CO3	Student will be able to capture geodetic data to process and perform analysis for survey problems with the use of electronic instruments
CO4	Student will be able to design and implement the different types of curves for deviating type of alignments.



COURSE COORDINATOR CIVIL ENGINEERING

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**COURSE OUTCOMES**

Branch : Civil Engineering Semester : 4 Scheme : 2018

Course: WATER SUPPLY & TREATMENT ENGINEERING(18CV46) Year: 2019-20

CO1	Student will be able to estimate average and peak water demand for a community.
CO2	Student will be able to evaluate available sources of water, quantitatively and qualitatively and make appropriate choice for a community.
CO3	Student will be able to evaluate water quality and environmental significance of various parameters and plan suitable treatment system.
CO4	Student will be able to evaluate the sources and conveyance systems for raw and treated water.
CO5	Student will be able to design a comprehensive water treatment and distribution system to purify and distribute water to the required quality standards.

Branch : Civil Engineering Semester : 4 Scheme : 2018

Course: ENGINEERING GEOLOGY LABORATORY(18CVL47) Year: 2019-20

CO1	Student will be able to identify the minerals, rocks and utilize them effectively in civil engineering practices.
CO2	Student will be able to interpret and understand the geological conditions of the area for implementation of civil engineering projects.
CO3	Student will be able to interpret subsurface information such as thickness of soil, weathered zone, depth of hard rock and saturated zone by using geophysical methods.
CO4	Student will be able to learn the techniques in the interpretation of landsat imageries to find out the lineaments and other structural features for the given area.
CO5	Student will be able to identify the different structures in the field.

Branch : Civil Engineering Semester : 4 Scheme : 2018

Course: FLUID MECHANICS AND HYDRAULIC MACHINES LABORATORY(18CVL48) Year: 2019-20

CO1	Student will be able to develop understanding of properties of fluids and the use of various instruments for fluid flow measurement.
CO2	Student will be able to develop understanding of working of hydraulic machines under various conditions of working and their characteristics



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**COURSE OUTCOMES**

Branch : Mechanical Engineering Semester : 4 Scheme : 2018

Course: Aadalitha Kannada (Kannada for Administration) (18KVK49) Year: 2019-20

CO1	Student will be able to understand, speak, read and write kannada language and communicate (converse) in kannada language in their daily life with kannada speakers.
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Branch : Civil Engineering Semester : 4 Scheme : 2018

Course: Additional Mathematics-2(18MATDIP41) Year: 2019-20

CO1	Student will be able to solve systems of linear equations using matrix algebra.
CO2	Student will be able to apply the knowledge of numerical methods in modelling and solving engineering problems.
CO3	Student will be able to make use of analytical methods to solve higher order differential equations.
CO4	Student will be able to classify partial differential equations and solve them by exact methods.
CO5	Student will be able to apply elementary probability theory and solve related problems

Branch : Civil Engineering Semester : 5 Scheme : 2018

Course: CONSTRUCTION MANAGEMENT AND ENTREPRENEURSHIP(18CV51) Year: 2020-21

CO1	Student will be able to prepare a project plan based on requirements and prepare schedule of a project by understanding the activities and their sequence.
CO2	Student will be able to understand labour output, equipment efficiency to allocate resources required for an activity / project to achieve desired quality and safety.
CO3	Student will be able to analyze the economics of alternatives and evaluate benefits and profits of a construction activity based on monetary value and time value.
CO4	Student will be able to establish as an ethical entrepreneur and establish an enterprise utilizing the provisions offered by the federal agencies.



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**COURSE OUTCOMES**

Branch : Civil Engineering Semester : 5 Scheme : 2018

Course: Analysis of Indeterminate Structure (18CV52) Year: 2020-21

CO1	Student will be able to analyze the indeterminate structures like continuous beams and frames with $k_i \leq 3$ using slope deflection method
CO2	Student will be able to analyze the indeterminate structures like continuous beams and frames with $k_i \leq 3$ using moment distribution method
CO3	Student will be able to analyze the indeterminate structures like continuous beams and frames with $k_i \leq 3$ using kani's method
CO4	Student will be able to analyze the indeterminate structures like continuous beams and frames with $k_i \leq 3$ using flexibility matrix method
CO5	Student will be able to analyze the indeterminate structures like continuous beams and frames with $k_i \leq 3$ using stiffness matrix method

Branch : Civil Engineering Semester : 5 Scheme : 2018

Course: Design of RC Structural Elements(18CV53) Year: 2020-21

CO1	Student will be able to summarize the various design philosophies and enumerate the serviceability, collapse and deflection criteria for rc structural components.
CO2	Student will be able to analyze singly reinforced, doubly reinforced and flanged beams for flexure and shear requirements.
CO3	Student will be able to design singly and doubly reinforced rectangular and flanged beams.
CO4	Student will be able to identify based on dimensions and design one way slab, two way slab and staircase slabs.
CO5	Student will be able to design columns for pure axial, uni axial and bi axial loading cases and design footings.

Branch : Civil Engineering Semester : 5 Scheme : 2018

Course: BASIC GEOTECHNICAL ENGINEERING(18CV54) Year: 2020-21

CO1	Student will be able to acquire an understanding of the procedures to determine index properties of any type of soil, classify the soil based on its index properties.
CO2	Student will be able to ability to determine compaction characteristics of soil and apply that knowledge to assess field compaction procedures.
CO3	Student will be able to ability 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
CO4	Student will be able to ability to estimate shear strength parameters of different types of soils using the data of different shear tests and comprehend mohr-coulomb failure theory



COURSE OUTCOMES, CIVIL ENGINEERING

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**COURSE OUTCOMES**

COS	Student will be able to ability to solve practical problems related to estimation of consolidation settlement of soil deposits also time required for the same
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COURSE OUTCOMES FOR CIVIL ENGINEERING



  
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**COURSE OUTCOMES**

Branch : Civil Engineering Semester : 5 Scheme : 2018

Course: MUNICIPAL WASTEWATER ENGINEERING(18CV55) Year: 2020-21

CO1	Student will be able to select the appropriate sewer appurtenances and materials in sewer network.
CO2	Student will be able to design the sewers network and understand the self-purification process in flowing water.
CO3	Student will be able to design the varies physic-chemical treatment units.
CO4	Student will be able to design the various biological treatment units.
CO5	Student will be able to design various aops and low cost treatment units.

Branch : Civil Engineering Semester : 5 Scheme : 2018

Course: HIGHWAY ENGINEERING(18CV56) Year: 2020-21

CO1	Student will be able to acquire the capability of proposing a new alignment or re-alignment of existing roads, conduct necessary field investigation for generation of required data.
CO2	Student will be able to evaluate the engineering properties of the materials and suggest the suitability of the same for pavement construction.
CO3	Student will be able to design road geometrics, structural components of pavement and drainage
CO4	Student will be able to understand pavement and its components, pavement construction activities and its requirements
CO5	Student will be able to evaluate the highway economics by few select methods and also will have a basic knowledge of various highway financing concepts.

Branch : Civil Engineering Semester : 5 Scheme : 2018

Course: CONCRETE AND HIGHWAY MATERIALS LABORATORY(18CVL58) Year: 2020-21

CO1	Student will be able to determine the quality and suitability of cement
CO2	Student will be able to design appropriate concrete mix using professional codes and determine strength and quality of concrete
CO3	Student will be able to evaluate the strength of structural elements using ndt techniques
CO4	Student will be able to able to interpret the experimental results of highway materials based on laboratory tests
CO5	Student will be able to test the soil for its suitability as sub grade soil for pavements



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**COURSE OUTCOMES**

Branch : CIVIL Engineering Semester : 5 Scheme : 2018

Course: ENVIRONMENTAL STUDIES(18CIV59) Year: 2020-21

CO1	Student will be able to understand the principles of ecology and environmental issues that apply to air, land, and water issues on a global scale,
CO2	Student will be able to develop critical thinking and/or observation skills, and apply them to the analysis of a problem or question related to the environment.s
CO3	Student will be able to demonstrate ecology knowledge of a complex relationship between biotic and abiotic components.
CO4	Student will be able to apply their ecological knowledge to illustrate and graph a problem and describe the realities that managers face when dealing with complex issues.



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**COURSE OUTCOMES**

Branch : Civil Engineering Semester : 6 Scheme : 2018

Course: Design of Steel Structural Elements(18CV61) Year: 2020-21

CO1	Student will be able to appraise the advantages and disadvantages of steel structures, steel code provisions, and plastic behavior of structural steel.
CO2	Student will be able to illustrate limit state design methodology for steel structures involving bolted and welded connections
CO3	Student will be able to summarize the concepts of compression members, built-up columns and columns splices
CO4	Student will be able to design tension members, simple slab base and gusseted base.
CO5	Student will be able to design laterally supported and un-supported steel beams.

Branch : Civil Engineering Semester : 6 Scheme : 2018

Course: Applied Geotechnical Engineering (18CV62) Year: 2020-21

CO1	Student will be able to ability to plan and execute geotechnical site investigation program for different civil engineering projects
CO2	Student will be able to understanding of stress distribution and resulting settlement beneath the loaded footings on sand and clayey soils
CO3	Student will be able to ability to estimate factor of safety against failure of slopes and to compute lateral pressure distribution
CO4	Student will be able to ability to determine bearing capacity of soil and achieve proficiency in proportioning shallow isolated and combined footings for uniform bearing pressure
CO5	Student will be able to capable of estimating load carrying capacity of single and group of piles

Branch : Civil Engineering Semester : 6 Scheme : 2018

Course: Hydrology and Irrigation Engineering(18CV63) Year: 2020-21

CO1	Student will be able to understand the importance of hydrology and its components.
CO2	Student will be able to measure precipitation and analyze the data and analyze the losses in precipitation
CO3	Student will be able to estimate runoff and develop unit hydrographs.
CO4	Student will be able to find the benefits and ill-effects of irrigation.
CO5	Student will be able to find the quantity of irrigation water and frequency of irrigation for various crops



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Branch : Civil Engineering Semester : 6 Scheme : 2018

Course: GROUND IMPROVEMENT TECHNIQUES(18CV644) Year: 2020-21

CO1	Student will be able to understand the soil profile and formation and the concept of compaction
CO2	Student will be able to ability to undersatnd the concept of drainage for different soil condition
CO3	Student will be able to understand the concepts of chemical compaction.
CO4	Student will be able to understand the concept of vibration and grouting.
CO5	Student will be able to impart the knowledge of geosynthetics

Branch : Civil Engineering Semester : 6 Scheme : 2018

Course: TRAFFIC ENGINEERING(18CV652) Year: 2020-21

CO1	Student will be able to understand the human factors and vehicular factors in traffic engineering design.
CO2	Student will be able to conduct different types of traffic surveys and analysis of collected data using statistical concepts.
CO3	Student will be able to use an appropriate traffic flow theory and to comprehend the capacity & signalized intersection analysis.
CO4	Student will be able to understand the basic knowledge of intelligent transportation system

Branch : Civil Engineering Semester : 6 Scheme : 2018

Course: software application lab(18CVL66) Year: 2020-21

CO1	Student will be able to apply the knowledge of rcc and structural analysis & execute the analysis of plane trusses, continuous beams, portalframe using staad pro.
CO2	Student will be able to use of msp & excel software in a professional set up to automate the work and thereby reduce time for completion of the work



COURSE OUTCOMES CIVIL ENGINEERING

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RURAL ENGINEERING COLLEGE  
HULKOTI - 582 205



R.T.E. SOCIETY'S  
**RURAL ENGINEERING COLLEGE,**  
**HULKOTI-582 205.**

(Approved by A.I.C.T.E.(New Delhi) Affiliated to V. T. U. Belagavi)

Ph No. 08372-289097  
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Dist. Gadag

E-mail: [principalrechkt@rediffmail.com](mailto:principalrechkt@rediffmail.com)  
(ESTD-1980)

State: Karnataka

**DEPARTMENT OF CIVIL ENGINEERING**

**COURSE OUTCOMES**

Branch : Civil Engineering Semester : 6 Scheme : 2018

Course: ENVIRONMENTAL ENGINEERING LAB(18CVL67) Year: 2020-21

CO1	Student will be able to acquire capability to conduct experiments and estimate the concentration of different parameters.
CO2	Student will be able to compare the result with standards and discuss based on the purpose of analysis.
CO3	Student will be able to determine type of treatment, degree of treatment for water and waste water.
CO4	Student will be able to identify the parameter to be analyzed for the student project work in environmental stream.

Branch : Civil Engineering Semester : 6 Scheme : 2018

Course: EXTENSIVE SURVEY PROJECT(18CVEP68) Year: 2020-21

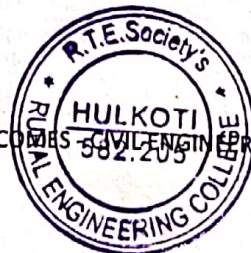
CO1	Student will be able to apply surveying knowledge and tools effectively for the projects
CO2	Student will be able to understand task environment, goals, responsibilities, task focus, working in teams towards common goals, organizational performance expectations, technical and behavioral competencies.
CO3	Student will be able to apply individual effectiveness skills in team and organizational context, goal setting, time management, communication and presentation skills.
CO4	Student will be able to understand professional etiquettes at workplace, meeting and general
CO5	Student will be able to establish trust based relationships in teams & organizational environment

Branch : Civil Engineering Semester : 7 Scheme : 2018

Course: QUANTITY SURVEYING AND CONTRACT MANAGEMENT(18CV71) Year: 2021-22

CO1	Student will be able to take out quantities and work out the cost and prepare abstract for the estimated cost for various civil engineering works.
CO2	Student will be able to prepare detailed and abstract estimates for various road works, structural works and water supply and sanitary works.
CO3	Student will be able to prepare the specifications and analyze the rates for various items of work.
CO4	Student will be able to assess contract and tender documents for various construction works.
CO5	Student will be able to prepare valuation reports of buildings

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## DEPARTMENT OF CIVIL ENGINEERING

### COURSE OUTCOMES

Branch : Civil Engineering Semester : 7 Scheme : 2018

Course: Design of RCC and steel Structures(18CV72) Year: 2021-22

CO1	Student will be able to assessing the knowledge in the areas of limit state method & implementing the same for the design of cantilever retaining walls and counterfort retaining wall.
CO2	Student will be able to assessing the knowledge in the areas of limit state method & implementing the same for the design of rectangular combined footing.
CO3	Student will be able to assessing the knowledge in the areas of limit state method & implementing the same for the design of portal frames
CO4	Student will be able to evaluating the collapse & serviceability requirements for design of roof trusses.
CO5	Student will be able to appraise the design procedures to arrive at structurally safe steel designs for plate girder and gantry girder suiting various serviceability requirements.

Branch : Civil Engineering Semester : 7 Scheme : 2018

Course: GROUND WATER HYDRAULICS(18CV734) Year: 2021-22

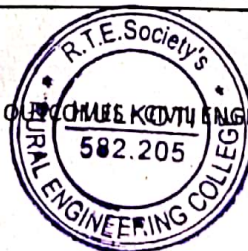
CO1	Student will be able to illustrate the characteristics of an aquifers
CO2	Student will be able to identify the influence of physical parameters of an aquifer, groundwater existence
CO3	Student will be able to estimate the quantity of groundwater by various technical equations and assumptions by researchers
CO4	Student will be able to locate the zones of ground water resources by adopting suitable geo-physical techniques.
CO5	Student will be able to adopt suitable design for a well and augment groundwater storage both by natural and artificial groundwater recharge techniques.

Branch : Civil Engineering Semester : 7 Scheme : 2018

Course: Urban Transportation and Planning (18CV745) Year: 2021-22

CO1.	Student will be able to understand urbanization; identify transportation problems and different modeling techniques encountered in transportation planning process.
CO2	Student will be able to design, conduct and administer surveys to provide the data required for transportation planning.
CO3	Student will be able to supervise the process of data collection about travel behavior and analyze the data for use in transport planning
CO4	Student will be able to develop and calibrate models associated with trip generation and trip distribution.
CO5	Student will be able to develop and calibrate modal split, synthetic models of trip distribution for specific types of land use developments.

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Branch : Civil Engineering Semester : 7 Scheme : 2018

Course: ENVIRONMENTAL PROTECTION AND MANAGEMENT(18CV753) Year: 2021-22

CO1	Student will be able to appreciate the elements of corporate environmental management systems complying to international environmental management system standards.
CO2	Student will be able to lead pollution prevention assessment team and implement waste minimization options.
CO3	Student will be able to develop, implement, maintain and audit environmental management systems for organizations.

Branch : Civil Engineering Semester : 7 Scheme : 2018

Course: COMPUTER AIDED DETAILING OF STRUCTURES(18CVL76) Year: 2021-22

CO1	Student will be able to apply the knowledge of rcc and execute the drawing and detailing of beams and slabs using cad.
CO2	Student will be able to apply the basic knowledge of rcc and execute the drawing and detailing of staircase – doglegged, cantilever retaining wall, counter fort retaining wall, circular water tank, rectangular water tank using cad.
CO3	Student will be able to apply the basic knowledge of steel structures and execute the drawing of – beam to beam, beam to column by bolted and welded connections using cad.
CO4	Student will be able to apply the basic knowledge of steel structures and execute the drawing of built up columns ,column bases and gantry girders.

Branch : Civil Engineering Semester : 7 Scheme : 2018

Course: GEOTECHNICAL ENGINEERING LAB(18CVL77) Year: 2021-22

CO1	Student will be able to physical and index properties of the soil
CO2	Student will be able to classify based on index properties and field identification
CO3	Student will be able to to determine omc and mdd, plan and assess field compaction program
CO4	Student will be able to shear strength and consolidation parameters to assess strength and deformation
CO5	Student will be able to in-situ shear strength characteristics (spt- demonstration)



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**COURSE OUTCOMES**

Branch : Civil Engineering Semester : 7 Scheme : 2018

Course: PROJECT WORK PHASE-I(18CVP78) Year: 2021-22

CO1	Student will be able to describe the project and be able to defend it.
CO2	Student will be able to learn to use modern tools and techniques.
CO3	Student will be able to communicate effectively and to present ideas clearly and coherently both in written and oral forms.
CO4	Student will be able to develop skills to work in a team to achieve common goal and develop skills of project management and finance and also develop skills of self-learning, evaluate their learning and take appropriate actions to improve it.
CO5	Student will be able to prepare them for life-long learning to face the challenges and support the technological changes to meet the societal needs

Branch : Civil Engineering Semester : 8 Scheme : 2018

Course: DESIGN OF PRE-STRESSEDCONCRETE(18CV81) Year: 2021-22

CO1	Student will be able to understand the requirement of psc members for present scenario.
CO2	Student will be able to analyse the stresses encountered in psc element during transfer and at working.
CO3	Student will be able to understand the effectiveness of the design of psc after studying losses
CO4	Student will be able to capable of analyzing the psc element and finding its efficiency.
CO5	Student will be able to design psc beam for different requirements.

Branch : Civil Engineering Semester : 8 Scheme : 2018

Course: PAVEMENT DESIGN(18CV825) Year: 2021-22

CO1	Student will be able to systematically generate and compile required data's for design of pavement (highway & airfield).
CO2	Student will be able to analyse stress, strain and deflection by boussinesq's, burmister's and westergaard's theory.
CO3	Student will be able to design rigid pavement and flexible pavement conforming to irc58-2002 and irc37-2001.
CO4	Student will be able to evaluate the performance of the pavement and also develops maintenance statement based on site specific requirements.



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**COURSE OUTCOMES**

Branch : Civil Engineering Semester : 8 Scheme : 2018

Course: PROJECT WORK PHASE 2(18CVP83) Year: 2021-22

CO1	Student will be able to describe the project and be able to defend it.
CO2	Student will be able to develop critical thinking and problem solving skills and learn to use modern tools and techniques
CO3	Student will be able to communicate effectively and to present ideas clearly and coherently both in written and oral forms.
CO4	Student will be able to develop skills to work in a team to achieve common goal and develop skills of project management and finance and also develop skills of self-learning, evaluate their learning and take appropriate actions to improve it.
CO5	Student will be able to prepare them for life-long learning to face the challenges and support the technological changes to meet the societal needs

Branch : Civil Engineering Semester : 8 Scheme : 2018

Course: TECHNICAL SEMINAR(18CVS84) Year: 2021-22

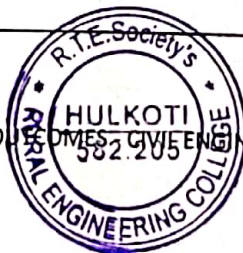
CO1	Student will be able to develop interest towards research oriented field with ability to search the literature and brief report preparation.(literature work & report)
CO2	Student will be able to develop the skills,competencies and points of view needed by professionals in the field most closely related to the course(topic coverage)
CO3	Student will be able to discuss and critical thinking about topics of current intellectual practice(topic selection)
CO4	Student will be able to improve the interpersonal and communication skills and awareness about the industrial environment(questionnaire)
CO5	Student will be able to develop of presentation skills (body language and presentation skill)

Branch : Civil Engineering Semester : 8 Scheme : 2018

Course: INTERNSHIP(18CVI85) Year: 2021-22

CO1	Student will be able to gain hands-on professional work experience prior to their graduation.
CO2	Student will be able to get opportunities to learn, understand and sharpen the real-time technical, managerial and life skills required at the job.
CO3	Student will be able to contextualise the value of industry and professional networks and their importance to independent practice, lifelong learning and career progression
CO4	Student will be able to demonstrate employability skills and attributes, linking them to industry expectations.
CO5	Student will be able to expose students to the engineer's responsibilities and ethics.

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