DEPARTMENT OF CIVIL

2019-20

COURSE OUTCOMES

YEAR / SEM: I / I HS8151-TECHNICAL ENGLISH-1

No.	Course Outcomes
C101.1	Ability to speak/write clearly, confidently, comprehensively and communicate with one or many using appropriate communicative strategies.
C101.2	Ability to write cohesively and coherently avoiding grammatical errors, using a wide range of vocabulary and organizing the ideas logivally on a given topic.
C101.3	Interpret different genres of texts adopting various reading strategies and to write comprehensively.
C101.4	Ability to listen/view and comprehend different spoken discourses/excerpts different accents and to write clearly in simple language.
C101.5	Demonstrate the role of a variety of technologies in communicating information elaborately on the ideas and opinions relevant in different situations .

YEAR / SEM: I / I MA8151-ENGINEERING MATHEMATICS – I

No.	Course Outcomes
C102.1	Ability to use both the limit definition and rules of differentiation to differentiate functions.
C102.2	Ability to summarize partial differentiation to solve maxima and minima problems.
C102.3	Ability to apply integration to calculate multiple integrals, area, volume, integrals in polar coordinates, in addition to change of order and change of variables.
C102.4	Ability to Evaluate integrals using techniques of integration, such as substitution, partial fractions and integration by parts.
C102.5	Ability to solve various techniques in solving differential equations of higher order

YEAR / SEM: I / I PH8151 -ENGINEERING PHYSICS-1

No.	Course Outcomes
C103.1	Ability to gain knowledge on the basics of properties of matter and its applications.
C103.2	Ability to summarize concepts of waves and optical devices and their applications in fiber optics.
C103.3	Ability to assess the concepts of thermal properties of materials and their applications in expansion joints and heat exchangers.

C103.4	Ability to generalize the advanced physics concepts of quantum theory and its applications in tunneling microscopes.
C103.5	Ability to schematize the basics of crystals, their structures and different crystal growth techniques.

YEAR / SEM: I / I CY8151-ENGINEERING CHEMISTRY-1

No.	Course Outcomes
C104.1	Ability to define the boiler feed water requirements, list out the related problems and label the water treatment techniques.
C104.2	Ability to analyze the basic concepts of phase rule and its applications for single and two component systems and to illustrate the purpose and significance of alloys
C104.3	Ability to summarize the preparation, properties and applications of engineering materials
C104.4	Ability to classify the Types of fuels, investigate the calorific value calculations, manufacture of solid, liquid and gaseous fuels
C104.5	Ability to demonstrate the Principles and generation of energy in batteries, nuclear reactors, solar cells, wind mills and fuel cells

YEAR / SEM: I / I GE8151-PROBLEM SOLVING AND PYTHON PROGRAMMING

No.	Course Outcomes
C105.1	Identify algorithmic solutions to simple computational problems.
C105.2	Analyze the basics of python programming and to devlop simple python programs
C105.3	Apply control, looping structures and functions to solve problems.
C105.4	Illustrate compound data using python lists, tuples, and dictionaries.
C105.5	Summarize various file operations and handling exceptions with sample file programs

YEAR / SEM: I / I GE8152-ENGINEERING GRAPHICS

No.	Course Outcomes
C106.1	Familiarize with the fundamentals and standards of Engineering graphics.
C106.2	Perform freehand sketching of basic geometrical constructions and multiple views of objects
C106.3	Project orthographic projections of lines and plane surfaces
C106.4	Draw projections and section of solids and development of surfaces.
C106.5	Design isometric and perspective sections of simple solids.

YEAR / SEM: I / I GE8161-PROBLEM SOLVING AND PYTHON PROGRAMMING

LABORATORY

No.	Course Outcomes
C107.1	Experiment with simple Python programs.
C107.2	Implement Python programs with conditionals and loops.
C107.3	Develop Python programs step-wise by defining functions and calling them.
C107.4	Demonstrate the use Python lists, tuples, and dictionaries for representing compound data.
C107.5	Illustrate the concepts of read and write data from/to files in Python.

YEAR / SEM: I / I BS8161-PHYSICS AND CHEMISTRY LABORATORY

No.	Course Outcomes
C108.1	Ability to determine the wavelength of laser diode and particle size of given material using laser diode and also to determine the acceptance angle and numerical aperture of optical fiber.
C108.2	Ability to determine the wavelengths of prominent spectral lines of the mercury spectrum using grating.
C108.3	Ability to determine the water quality parameters through volumetric and instrumental analysis.
C108.4	Ability to determine dissolved oxygen level in the water sample
C108.5	Ability to determine the amount of chloride presents the water sample

YEAR / SEM: I / II HS8251-TECHNICAL ENGLISH

No.	Course Outcomes
C111.1	Ability to speak/write convincingly express opinions clearly, initiate discussions, negotiate, argue using appropriate communicative strategies.
C111.2	Write cohesively and coherently and flawlessly avoiding grammatical errors, using a wide vocabulary range, organizing their ideas logically on a topic.
C111.3	Interpret different genres of texts, infer implied meanings and evaluate it for ideas as well as for method of presentation.
C111.4	Ability to listen/view and comprehend different spoken excerpts critically and infer unspoken and implied meanings and write reports and winning job applications.
C111.5	Ability to identify, define and express the different components of grammar and Speak appropriately and effectively in varied formal and informal contexts.

YEAR / SEM: I / II MA8251-ENGINEERING MATHEMATICS – II

No.	Course Outcomes

C112.1	Ability to evaluate Eigenvalues and eigenvectors, diagonalization of a matrix, Symmetric matrices, Positive definite matrices and similar matrices
C112.2	Ability to solve Gradient, divergence and curl of a vector point function and related identities to apply concept of line, surface and volume integrals using Gauss, Stokes and Green's theorems and their verification
C112.3	Ability to discuss the Analytic functions, conformal mapping
C112.4	Ability to discuss complex integration and application of residue theorem
C112.5	Ability to explain the concepts of Laplace transform and inverse transform of simple functions, properties, various related theorems and application to differential equations with constant coefficients

YEAR / SEM: I / II PH8201 PHYSICS FOR CIVIL ENGINEERING

No.	Course Outcomes
CO1	the students will have knowledge on the thermal performance of buildings,
CO2	the students will acquire knowledge on the acoustic properties of buildings,
CO3	the students will get knowledge on various lighting designs for buildings,
CO4	the students will gain knowledge on the properties and performance of engineering materials,
CO5	the students will understand the hazards of buildings.

YEAR / SEM: I / II BE8252- BASIC CIVIL AND MECHANICAL ENGINEERING

No.	Course Outcomes
CO1	Will be able to appreciate the Civil and Mechanical Engineering components of Projects.
CO2	Will be able to explain the usage of construction material and proper selection of construction materials
CO3	Will be able to measure distances and area by surveying
CO4	Will be able to identify the components used in power plant cycle.
CO5	Will be able to demonstrate working principles of petrol and diesel engine and elaborate the components of refrigeration and Air conditioning cycle.

YEAR / SEM: I / II GE8291 ENVIRONMENTAL SCIENCE AND ENGINEERING

No.	Course Outcomes
CO1	Ability to possess public awareness of environmental is at infant stage
CO2	Ability to understand the problem posed by Environmental Pollution which cannot be solved by mere laws
CO3	Ability to comprehend the natural resources available to us

CO4	Ability to analyze and provide judgmental solutions to prevailing social issues in the environment
CO5	Ability to develop and improve standard of living

YEAR / SEM: I / II GE8292 ENGINEERING MECHANICS

No.	Course Outcomes
CO1	Ability to explain the differential principles applies to solve engineering problems dealing with force, displacement, velocity and acceleration.
CO2	Ability to analyse the forces in any structures.
CO3	Ability to solve rigid body subjected to dynamic forces.
CO4	Determine the equilibrium of a particle in space using principle of laws of mechanics
CO5	Solve the problems using equation of motions and analyze impact of elastic bodies on collision

YEAR / SEM: I / II GE8261-ENGINEERING PRACTICES LABORATORY

No.	Course Outcomes
CO1	Experiment with carpentry and plumbing works to create pipeline connections for industrial and residential buildings
CO2	Make use of shielded metal arc welding and gas welding to prepare butt joints, lap joints and T- joints
CO3	Demonstrate basic Machining, Sheet Metal Work, Machine assembly, centrifugal pump, Air conditioner, operations of smithy, foundary and fittings
CO4	Experiment with wiring and to measure electrical quantities, energies and resistance
CO5	Elaborate on the study electrical components, logic gates and soldering practice

YEAR / SEM: I / II CE8211 COMPUTER AIDED BUILDING DRAWING

No.	Course Outcomes
CO1	Will be able to draft the plan, elevation and sectional views of the load bearing wall buildings using computer softwares.
CO2	Will be able to draft the plan, elevation and sectional views of buildings in accordance with development and control rules satisfying orientation and functional requirements as per National Building Code.
CO3	Will be able to draft the plan elevation and sectional views of framed building using computer software.
CO4	Will be able to draft the plan elevation and sectional views of the industrial structures using computer software.
CO5	Will acquire sufficient knowledge of AutoCAD to allow them to prepare drawing skills with

	the aid of the computer.

YEAR / SEM: II /III MA8353 TRANSFORMS AND PARTIAL DIFFERENTIAL EQUATIONS

No.	Course Outcomes
CO1	To introduce the basic concepts of PDE for solving standard partial differential equations
CO2	To introduce Fourier series analysis which is central to many applications in engineering apart from its use in solving boundary value problems
CO3	To acquaint the student with Fourier series techniques in solving heat flow problems used in various situations.
CO4	To acquaint the student with Fourier transform techniques used in wide variety of situations
CO5	To introduce the effective mathematical tools for the solutions of partial differential equations that model several physical processes and to develop Z transform techniques for discrete time systems

YEAR / SEM: II / III CE8301 STRENGTH OF MATERIALS I

No	Course Outcomes
CO1	Understand the concepts of stress and strain, principal stresses and principal planes
CO2	Determine Shear force and bending moment in beams and understand concept of theory of simple bending
CO3	Calculate the deflection of beams by different methods and selection of method for determining slope or deflection
CO4	Apply basic equation of torsion in design of circular shafts and helical springs, .
CO5	Analyze the pin jointed plane and space trusses Course Code

YEAR / SEM: II / III CE 8302 FLUID MECHANICS

No	Course Outcomes
CO1	Get a basic knowledge of fluids in static, kinematic and dynamic equilibrium
CO2	Understand and solve the problems related to equation of motion.
CO3	Gain knowledge about dimensional and model analysis
CO4	Learn types of flow and losses of flow in pipes.
CO5	Understand and solve the boundary layer problems.

YEAR / SEM: II / III CE 8351 SURVEYING

No	Course Outcomes
CO1	The use of various surveying instruments and mapping
CO2	Measuring Horizontal angle and vertical angle using different instruments
CO3	Methods of Leveling and setting Levels with different instruments

CO4	Concepts of astronomical surveying and methods to determine time, longitude, latitude and azimuth
CO5	Concept and principle of modern surveying.

YEAR / SEM: II / III CE 8391 CONSTRUCTION MATERIALS

No	Course Outcomes
CO1	Compare the properties of most common and advanced building materials
CO2	Understand the typical and potential applications of lime, cement and aggregates
CO3	Know the production of concrete and also the method of placing and making of concrete elements
CO4	Understand the applications of timbers and other materials
CO5	Understand the importance of modern material for construction.

YEAR / SEM: II / III CE8392 Engineering Geology

No	Course Outcomes
CO1	Will be able to understand the importance of geological knowledge such as earth, earthquake, volcanism and the action of various geological agencies.
CO2	Will realize the importance of this knowledge in projects such as dams, tunnels, bridges, roads, airport and harbor
CO3	Gain knowledge about types of rocks, their distribution and uses.
CO4	Will get basics knowledge on properties of minerals.
CO5	Will understand the methods of study on geological structure

YEAR / SEM: II / III CE 8311 CONSTRUCTION MATERIALS LABORATORY

No	Course Outcomes
CO1	Conduct Quality Control tests on Fine Aggregates
CO2	Conduct Quality Control tests on Coarse Aggregates
CO3	Conduct Quality Control tests on fresh concrete
CO4	Determine the strength properties of hardened concrete
CO5	Perform Quality Control tests on Bricks, blocks and tiles

YEAR / SEM: II / III CE 8361 SURVEYING LABORATORY

No	Course Outcomes
CO1	Gain practical knowledge on handling basic survey instruments
CO2	Gain practical knowledge on handling Theodolite, Tacheometry
CO3	Gain practical knowledge on handling Total Station and GPS
CO4	Gain adequate knowledge to carryout Triangulation and Astronomical surveying
CO5	Gain adequate knowledge on general field marking for various engineering projects and Location of site

YEAR / SEM: II / IV MA8491 NUMERICAL METHODS

No	Course Outcomes
CO1	able to Understand the basic concepts and techniques of solving algebraic and transcendental equations
CO2	able to Appreciate the numerical techniques of interpolation and error approximations in various intervals in real life situations
CO3	able to Apply the numerical techniques of differentiation and integration for engineering problems
CO4	able to Understand the knowledge of various techniques and methods for solving first and second order ordinary differential equations
CO5	able to Solve the partial and ordinary differential equations with initial and boundary conditions by using certain techniques with engineering applications

YEAR / SEM: II /IV CE8401 CONSTRUCTION TECHNIQUES AND PRACTICES

No	Course Outcomes
CO1	Know the different construction techniques and structural systems
CO2	Understand various techniques and practices on masonry construction, flooring, and roofing.
CO3	Plan the requirements for substructure construction
CO4	Know the methods and techniques involved in the construction of various types of super structures
CO5	Select, maintain and operate hand and power tools and equipment used in the building construction sites.

YEAR / SEM: II / IV CE8402 STRENGTH OF MATERIALS II

No	Course Outcomes
CO1	Determine the strain energy and compute the deflection of determinate beams, frames and trusses using energy principles.
CO2	Analyze propped cantilever, fixed beams and continuous beams using theorem of three moment equation for external loadings and support settlements
CO3	Find the load carrying capacity of columns and stresses induced in columns and cylinders
CO4	Determine principal stresses and planes for an element in three dimensional state of stress and study various theories of failure
CO5	Determine the stresses due to Unsymmetrical bending of beams, locate the shear center, and find the stresses in curved beams.

YEAR / SEM: II / IV CE8403 APPLIED HYDRAULIC ENGINEERING

No	Course Outcomes
CO1	Apply their knowledge of fluid mechanics in addressing problems in open channels
CO2	Able to identify a effective section for flow in different cross sections

CO3	To solve problems in uniform, gradually and rapidly varied flows in steady state conditions.
CO4	Understand the principles, working and application of turbines
CO5	Understand the principles, working and application of pumps.

YEAR / SEM: II / IV CE8404 CONCRETE TECHNOLOGY

No	Course Outcomes
CO1	The various requirements of cement, aggregates and water for making concrete
CO2	The effect of admixtures on properties of concrete
CO3	The concept and procedure of mix design as per IS method
CO4	The properties of concrete at fresh and hardened state
CO5	The importance and application of special concretes.

YEAR / SEM: II / IV CE 8491 SOLID MECHANICS

No	Course Outcomes
CO1	Classify the soil and assess the engineering properties, based on index properties
CO2	Understand the stress concepts in soils
CO3	Understand and identify the settlement in soils.
CO4	Determine the shear strength of soil
CO5	Analyze both finite and infinite slopes

YEAR / SEM: II / IV CE8481 STRENGTH OF MATERIALS LABORATORY

No	Course Outcomes
CO1	Acquire required knowledge in the area of testing steel rod
CO2	Acquire required knowledge in the area of testing wood
CO3	Acquire required knowledge in the area of testing metal
CO4	Acquire required knowledge in the area of testing components of structural elements
CO5	Learn deflection and compression test

YEAR / SEM: II / IV CE8461 HYDRAULIC ENGINEERING LABORATORY

No	Course Outcomes
CO1	The students will be able to study the Characteristics of pumps
CO2	The students will be able to study the Characteristics of turbine
CO3	The students will be able to measure flow in pipes and determine frictional losses.
CO4	The students will be able to verify the principles studied in theory by performing the experiments in lab.
CO5	The students will be able to develop characteristics of pumps and turbines

YEAR / SEM: II / IV HS8461 ADVANCED READING AND WRITING

No	Course Outcomes
CO1	Strengthen the reading skills of students of engineering.
CO2	Enhance their writing skills with specific reference to technical writing.
CO3	Develop students' critical thinking skills.
CO4	Provide more opportunities to develop their project and proposal writing skills.
CO5	The students will be able to develop soft skills

YEAR / SEM: III/V CE 8501 DESIGN OF REINFORCED CEMENT CONCRETE ELEMENTS

No	Course Outcomes
CO1	Understand the various design methodologies for the design of RCelements.
CO2	Know the analysis and design of flanged beams by limit state method and sign ofbeams for shear, bond andtorsion
CO3	Design the various types of slabs and staircase by limit state method.
CO4	Design columns for axial, uniaxial and biaxial eccentric loadings
CO5	Design of footing by limit state method.

YEAR / SEM: III / V CE 8502 STRUCTURAL ANALYSIS I

No	Course Outcomes
CO1	Analyze continuous beams, pin-jointed indeterminate plane frames and rigid plane frames by strain energy method
CO2	Analyse the continuous beams and rigid frames by slope defection method
CO3	Understand the concept of moment distribution and analysis of continuous beams and rigid frames with and without sway.
CO4	Analyse the indeterminate pin jointed plane frames continuous beams and rigid frames using matrix flexibility method.
CO5	Understand the concept of matrix stiffness method and analysis of continuous beams, pin jointed trusses and rigid plane frames

YEAR / SEM: III / V EN 8491 WATER SUPPLY ENGINEERING

No	Course Outcomes
CO1	an insight into the structure of drinking water supply systems, including water transport, treatment anddistribution
CO2	the knowledge in various unit operations and processes in watertreatment
CO3	an ability to design the various functional units in watertreatment
CO4	an understanding of water quality criteria and standards, and their relation to public health
CO5	the ability to design and evaluate water supply project alternatives on basis ofchosen

YEAR / SEM: III / V CE8591 FOUNDATION ENGINEERING

No	Course Outcomes
CO1	Understand the site investigation, methods andsampling.
CO2	Get knowledge on bearing capacity and testingmethods.
CO3	Design shallowfootings.
CO4	Determine the load carrying capacity, settlement of pilefoundation.
CO5	Determine the earth pressure on retaining walls and analysis forstability

YEAR / SEM: III / V GI8014 GEOGRAPHIC INFORMATION SYSTEM

No	Course Outcomes
CO1	Have basic idea about the fundamentals ofGIS.
CO2	Understand the types of datamodels.
CO3	Get knowledge about data input andtopology.
CO4	Gain knowledge on data quality andstandards.
CO5	Understand data management functions and dataoutput

YEAR / SEM: III / V OAI551 ENVIRONMENT AND AGRICULTURE

No	Course Outcomes
CO1	will appreciate the role of environment in the current practice of agriculture.
CO2	Understand the concerns of sustainability, especially in the context of climate change and emerging global issues
CO3	Ecological context of agriculture and its concerns will be understood
CO4	Gain knowledge on the importance of environment and agriculture on changing global scenario
CO5	Will understand the impacts of environment and climate changes

YEAR / SEM: III / V CE8511 SOIL MECHANICS LABORATORY

No	Course Outcomes
CO1	Able to find index properties of soils
CO2	Able to learn and acquire knowledge to classify soils
CO3	Able to determine insitu test for soil density
CO4	Able to determine the moisture density relationship
CO5	Able to determine the permeability and shear strength of soil

YEAR / SEM: III / V CE 8512 WATER AND WASTE WATER ANALYSIS LABORATORY

No	Course Outcomes
CO1	Quantify the pollutant concentration in water andwastewater
CO2	Suggest the type of treatment required and amount of dosage required for thetreatment
CO3	Examine the conditions for the growth ofmicro-organisms
CO4	Able to understand the physical, chemical and biological characteristics of water and wastewater

CO5	Able to quantify thesludge

YEAR / SEM: III / V CE8513 SURVEY CAMP

No	Course Outcomes
CO1	Able to select the advanced surveying technique which is best suited for a work
CO2	Able to create the contour map of various field
CO3	Able to find the RL of inaccessible points
CO4	Able to understand the concept of astronomical surveying
CO5	Able to do the total station and EDM in distance measurement and traversing

YEAR / SEM: III / VI CE8601 DESIGN OF STEEL STRUCTURAL ELEMENTS

No	Course Outcomes
CO1	Would have knowledge on the design of structural steel members subjected to compressive, tensile and bending forces, as per current code
CO2	Able to design structural systems such as roof trusses and gantry girders.
CO3	able to design bolt and welded connections for steel structures
CO4	able to design steel beams and plate girders
CO5	able to design of purlin and elements of truss

YEAR / SEM: III / VI CE8602 STRUCTURAL ANALYSIS II

No	Course Outcomes
CO1	able to analyze Space Truss using tension Coefficient method
CO2	able to analyze cable suspension bridges
CO3	able to perform plastic analysis of indeterminate beams and frames
CO4	able to analyze structures by using matrix flexibility and stiffness methods
CO5	able to implement basic concepts of finite element analysis

YEAR / SEM: III / VI CE8603 IRRIGATION ENGINEERING

No	Course Outcomes
CO1	Would have knowledge on understand the need and mode of irrigation
CO2	Able to know the irrigation management practices of the past, present and future.
CO3	able to design structures involved the elementary hydraulic design of different structures
CO4	able toknow the concepts ofmaintenance shall also form part
CO5	Would have be in a position to conceive and planany type of irrigation project.

YEAR / SEM: III / VI CE8604 HIGHWAY ENGINEERING

No	Course Outcomes
CO1	Able to prepare the plan for highways as per IRC standards.
CO2	Able to perform geometric design of urban and rural roads

CO3	Able to design flexible and rigid pavements using IRC methods
CO4	Able to suggest modern materials and methods of highway construction.
CO5	Able to evaluate, carry out maintenance and strengthening of existing pavements.

YEAR / SEM: III / VI EN8592 WASTEWATER ENGINEERING

No	Course Outcomes
CO1	Ability to estimate sewage generation and design sewer system including sewage pumping stations
CO2	Understanding on the characteristics and composition of sewage, self purification of streams
CO3	Ability to perform basic design of the unit operations and processes that are used in sewage treatment
CO4	Able to design the sludge treatment and disposal methods
CO5	Able to design the various unit operations for waste water treatment

YEAR / SEM: III / VI CE8001 GROUND IMPROVEMENT TECHNIQUES

No	Course Outcomes
CO1	Gain knowledge on methods and selection of ground improvementtechniques.
CO2	Understand dewatering techniques and design for simplecases.
CO3	Get knowledge on insitu treatment of cohesionless and cohesivesoils.
CO4	Understand the concept of earth renforcement and design of reinforcedearth.
CO5	Get to know types of grouts and groutingtechnique

YEAR / SEM: III / VI CE8611 HIGHWAY ENGINEERING LABORATORY

No	Course Outcomes
CO1	To impart the knowledge of material testing for use in bituminous pavement
CO2	To understand the mix design for concrete for rigid pavement
CO3	Able to determine the properties of bituminous concrete
CO4	Able to determine the properties of bitumen
CO5	Able to know the techniques to characterize various pavement materials through relevant tests

YEAR / SEM: III / VI CE 8612 IRRIGATION AND ENVIRONMENTAL ENGINEERING DRAWING

No	Course Outcomes
CO1	Able to understand , design and draw the irrigation engineering structures
CO2	will be able to design and draw various units of Municipal water treatment plants
CO3	To understand environmental engineering structures
CO4	will be able to design and draw various units ofsewage treatment plants

CO5	Able to draw the impounding structures in detail showing the plan, elevation and Sections.

YEAR / SEM: IV/VII CE6701 STRUCTURAL DYNAMICS AND EARTHQUAKE ENGINEERING

No	Course Outcomes
CO1	Able to learn the basics of various dynamic forces and its effects on the structure.
CO2	Able to enhance the ability to identify the mode shapes of the structure under dynamic loading
CO3	Able to understand the theory of vibrations and determine response of structures.
CO4	able to calculate the magnitude and interpret the intensity of earthquake
CO5	Able to design an earthquake resistant structure as per IS codal provisons.

YEAR / SEM: IV/VII CE6702 PRESTRESSED CONCRETE STRUCTURES

No	Course Outcomes
CO1	Will be able to describe the systems and methods of prestressing.
CO2	Will be able to obtain the internal forces due to prestressing, being able to identify the primary and secondary components of the total internal forces.
CO3	able to propose an appropriate system to prestress a particular structure and to design the prestressed concrete elements and end blocks as per the codal provisions
CO4	Can evaluate the initial and time dependent losses and deflection of prestressed elements.
CO5	Can determine the resultant stresses of prestressed concrete composite section.

YEAR / SEM: IV/VII CE6703 WATER RESOURCES AND IRRIGATION ENGINEERING

No	Course Outcomes
CO1	The students will have knowledge and skills on Planning, design, operation and management of reservoir system
CO2	The student will gain knowledge on different methods of irrigation including canal irrigation
CO3	The student will obtained knowledge on the needs and methods of irrigation system
CO4	Will be able to prepare irrigation scheduling and water distribution for various crops.
CO5	Will be able to estimate consumptive use of water for irrigation

YEAR / SEM: IV / VII CE6704 ESTIAMTION AND QUALITY SURVEYING

No	Course Outcomes
CO1	Will be able to prepare various types of estimation and find out the quantity of works involved.
CO2	Will be able to carry out analysis of rates and bill preparation.
CO3	Will be able to prepare specifications for various items of construction works
CO4	Will be able to estimate the quantity of works involved in road works, water supply and sanitary works

CO5	Will be able to estimate the value of buildings.

YEAR / SEM: IV / VII CE6007 HOUSING PLANNING AND MANAGEMENT

No	Course Outcomes
CO1	The students should have a comprehensive knowledge of planning, design, evaluation, construction and financing of housing projects
CO2	Ability to design as per the law and rules and regulations
CO3	Understand different housing programmes available from individual houses, apartments to special buildings
CO4	Develop understanding about plan drawings.
CO5	The students should have the knowledge to analyze the slum clearance project, to prepare plan to map cost flow

YEAR / SEM: IV/VII EN 66501 MUNICIPAL SOLID WASTE MANAGEMENT

No	Course Outcomes
CO1	An understanding of the nature and characteristics of municipal solid wastes and the regulatory requirements regarding municipal solid waste management
CO2	Ability to plan waste minimisation and design storage, collection, transport, processing and disposal of municipal solid waste
CO3	Will be able to apply sampling techniques to collect municipal solid wastes from an area
CO4	Will be able to select shortest route for effective municipal solid waste collection
CO5	Will be able to select suitable equipment , process for handling and disposal of municipal solid waste

YEAR / SEM: IV / VII-CE6711 COMPUTER AIDED DESIGN AND DRAFTING LABORATORY

No	Course Outcomes
CO1	Able to understand the design and detailing of retaining wall
CO2	Able to know about the importance of detailing
CO3	Able to learn different types of concrete structures design
CO4	Able to learn the design and detailing of water tank structures
CO5	Able to learn the design and detailing of girder

YEAR / SEM: IV / VII CE6712 DESIGN PROJECT

No	Course Outcomes
CO1	Will get experience in designing various design problems related to civil Engineering
CO2	Able to understand the meaning of team work
CO3	To impart and improve the design capability of the student
CO4	Analysis and design of structure to meet desired needs within realistic constraints

CO5	Able to improve the design of an RC structure

YEAR / SEM: IV / VIII –MG6851 PRINCIPLES OF MANAGEMENT

No	Course Outcomes
CO1	Describe the basic of management and its types, skills, management roles, types of business organization and current trends in business.
CO2	Explain the nature and purpose of planning, types, objectives of planning and decision process.
CO3	Compare the different organization structures, authorities and responsibilities, human resource management and training and development.
CO4	Estimate the individual and group behavior, motivation, job satisfaction types and theories of leadership, communication and IT.
CO5	Apply the knowledge using the various system and process of controlling, budgetary and non-budgetary control techniques, use of computer and IT in management control, reporting.

YEAR / SEM: IV / VIII – CE6016 PREFABRICATED STRUCTURES

No	Course Outcomes
CO1	Able to understand the principles and concept of prefabricated structure
CO2	Able to understand all components and its procedure of construction
CO3	Able to follow the techniques for all types of units
CO4	Able to understand connections for all joints in structural members
CO5	Able to relate the concept to abnormal loads relating progressive collapse

YEAR / SEM: IV / VIII –CE6021 REPAIR AND REHABILITATION OF STRUCTURES

No	Course Outcomes
CO1	To gain the knowledge on quality of concrete, durability aspects, causes of deterioration
CO2	To gain the knowledge on assessment of distressed structure
CO3	To gain the knowledge on repairing methodology of structure
CO4	To get to know about special concrete
CO5	To obtain more knowledge about retrofitting

YEAR / SEM: IV / VIII –CE 6811 PROJECT WORK

NO	Course Outcomes

CO1	Able to understand work methodology adopted in industry
CO2	Able to find solution for the difficulty during construction
CO3	Able to understand the meaning of teamwork
CO4	Able to give practical knowledge regarding projects
CO5	Able to give the idea to finish work on time