Sr. No.	Department of Civil Engineering	
	Third Semester	
1	BECVE301T	Mathematics-III
2	BECVE302T	Strength of Materials
3	BECVE302P	Strength of Materials
4	BECVE303T	Environmental Engineering-I
5	BECVE303P	Environmental Engineering.-I
6	BECVE304T	Engineering Geology
7	BECVE304P	Engineering Geology
8	BECVE305T	Concrete Technology
9	BECVE305P	Concrete Technology
	Fourth Semester	
1	BECVE401T	Structural Analysis-I
2	BECVE401P	Structural Analysis-I
3	BECVE402T	Geotechnical Engineering-I
4	BECVE402P	Geotechnical Engineering-I
5	BECVE403T	Transportation Engineering-I
6	BECVE404T	Surveying-I
7	BECVE404P	Surveying-I
8	BECVE405 T	Building Construction and Materials
	Fifth Semester	
1	BECVE501T	Structural Analysis – II
2	BECVE501P	Structural Analysis – II
3	BECVE502T	RCC Structures
4	BECVE502P	RCC Structures
5	BECVE503T	Fluid Mechanics-I
6	BECVE503P	Fluid Mechanics-I
7	BECVE504T	Geotechnical Engineering-II
8	BECVE 505 T	Hydrology and Water Resources
9	BECVE506P	Communication English & Technical Writing
	Sixth Semester	
1	BECVE601T	Steel Structures
2	BECVE601P	Steel Structures
3	BECVE602T	Surveying-II
4	BECVE602P	Surveying-II
5	BECVE603T	Fluid Mechanics-II
6	BECVE603P	Fluid Mechanics-II
7	BECVE604T	Building Design and drawing
8	BECVE 605T	Environmental Engineering-II
9	BECVE606P	Site Visit & Mini Project
	Seventh Semester	
1	BECVE701T	Advance Concrete Structures
2	BECVE701P	Advance Concrete Structures
3	BECVE702T	Estimating and Costing
4	BECVE702P	Estimating and Costing
5	BECVE703T	Earthquake Resistant Design (Elective-I)
6	BECVE704 T	Construction Management and Law

7	BECVE 705T	Transportation Engineering-II
8	BECVE706P	Industrial Case Study
	Eighth Semester	
1	BECVE801T	Irrigation Engineering
2	BECVE802T	Water Transmission and Distribution System Elective-II
3	BECVE803T	Applied Remote Sensing and GIS (Elective-III)
4	BECVE803P	Applied Remote Sensing And GIS (Elective-III)
5	BECVE804T	Construction Management and materials
6	BECVE805P	Project

Department of Civil Engineering

The Civil Engineering program subscribes to the following Program Specific Outcomes (PSOS):

PSO1	To Apply the basic knowledge of construction aspect in civil engineering for
PSO2	To Design a system in Civil Engineering considering safety, economy, sustainability
PSO3	To Understand the basic concept of economics and leadership through consultancy
PSO4	To Develop entrepreneurship for the services to the community and to pursue higher

BE Civil Engineering Third Semester	
	Mathematics-III (BECVE301T)
CO301.1	Will understand the concept of periodic function, even and odd function, half
CO301.2	Will have knowledge in the technique, methodology of solving partial differential equation and basic understanding in the transforms which are useful in
CO301.3	Will be able to formulate vibrational problems and analyze them to deduce key
CO301.4	Will be able to aware of mathematical background for different numerical methods such as to solve algebraic and transcendental equations, ordinary differential equations. Using these knowledge students may work on multidisciplinary projects.
CO301.5	Will be able to simplify the power of matrices, system of linear equations,
CO301.6	Will gain proficiency with tools for optimization Technique (i.e. linear programming problems) including fundamental applications of those tools
	Strength of Materials (BECVE302T)
CO302.1	Students will able to understand the fundamental concepts of stress strain at a point and formulate relationship between elastic moduli for homogenous, isotropic materials. Provide knowledge of ductile and brittle material. Also
CO302.2	Students will able to understand the fundamental concepts of shear force and bending moment. Students will use their knowledge to draw shear force and bending moment diagram which will be lifelong learning for them. Also
CO302.3	Students will apply knowledge of stress and strain to draw bending stress diagram, shear stress distribution diagram by applying proper technique
CO302.4	By applying basic knowledge of stress and strain, circular solid and hollow shaft can be design and analyzed. Students can design shaft for various condition of power transmission and rotational speed.

CO302.5	Students will able to understand and determine the deflections, rotations of simple beam produced by the fundamental types of loads for the safety by
CO302.6	Students will able to understand and calculate principal stress, strain maximum shear stress under various combination of bending, torsion and axial load
	Strength of Material (BECVE302P)
CO302.1	Students will able to test steel specimens to evaluate different physical
CO302.2	Students will able to test wooden material as per IS code to evaluate its
CO302.3	Students will able to understand the behavior of mechanical properties and
	Environmental Engineering-I (BECVE303T)
CO303.1	To identify the need of water supply scheme, type of water demand, quantity of water demand depending on estimated design population using different population forecasting method, type of water source and its suitability, different
CO303.2	To plan and design the conveyance system components like type, size and slope
CO303.3	To have knowledge about the various drinking water characteristics and test to determine their limit according to standards, various components conventional water treatment process, type and design of aerators, significance of coagulation
CO303.4	To have knowledge of principle of sedimentation, types, design simple sedimentation tank, principle and working of clariflocculator,
CO303.5	To have knowledge about disinfection process purpose, disinfection methods, types chlorination and dosages, distribution systems, types of storage
CO303.6	To understand engineering application to know briefly about solid waste
	Environmental Engineering-I (BECVE303P)
CO303.1	To determine the certain physical, chemical characteristics of drinking water and
CO303.2	To determine the optimum alum dose to remove turbid in given water sample and
CO303.3	To have knowledge about the test for bacteriological characteristics of given
	Engineering Geology (BECVE304T)
CO304.1	The students would have the knowledge of plate tectonics and landforms and this
CO304.2	Study of minerals and rocks will give knowledge of natural science which will help the students to select a suitable rock for construction work as well as
CO304.3	The knowledge of various geological structures developed in the rock masses will

	various civil engineering projects.
CO304.4	The knowledge of groundwater will be helpful to select the best construction sites
CO304.5	The knowledge of site investigation for civil engineering projects will help the
CO304.6	The knowledge of geological science will be helpful to the student to overcome
	Engineering Geology (BECVE304P)
CO304.1	Students will be able to identify various rock-forming minerals.
CO304.2	Students will be able to identify various types of rock.
CO304.3	Students learn to draw the engineering geological sections to solve the field
	Concrete Technology (BECVE305T)
CO305.1	Identify the functional role of ingredients of concrete including their sources, production and different properties, is utilized for the mix design which is
CO305.2	The method of manufacture of concrete and apply fundamental knowledge in fresh properties of concrete in multidisciplinary design teams and deliver
CO305.3	To understand different properties of concrete in hardened state. It gives a better knowledge about concrete and users can able to understand the comparative
CO305.4	To know the fundamental application of admixture and its properties which affects the quality of concrete and the design of concrete mix this fulfills
CO305.5	To develop research base knowledge for the awareness of the utilization of smart
CO305.6	Able to understand various environmental factors which affect durability of concrete and the analysis of concrete component with the suggestion for prevention measure for deterioration of structure by using Non
	Concrete Technology (BECVE305P)
CO305.1	The student will be able to test all the concrete material as per IS code.
CO305.2	Design the concrete mix using IS code method.
CO305.3	Determine the properties of fresh and hardened of concrete.
BE Civil Engineering Fourth Semester	
	Structural Analysis-I (BECVE401T)
CO401.1	The student would be able to apply knowledge to analyse concept of deflection, bending moment and shear force diagram in beams, frames, trusses and
CO401.2	The student would be able to apply knowledge to determine forces in
CO401.3	The students would be able to perform ILD analysis of determinate beams and

CO401.4	The students would be able to know the behaviors of a Buckling of columns by
CO401.5	The students would be able to analyze the Multistory Frame by Portal, Cantilever
CO401.6	The students would be able to apply the concept of Flexibility and
	Structural Analysis-I (BECVE401P)
CO401.1	The students would be able to study the behavior of different types of columns
CO401.2	The students would be able to measure the strain in cantilever beam with the help
CO401.3	The students would be able to find horizontal Trust and to draw the influence line
	Geotechnical Engineering-I (BECVE402T)
CO402.1	Students would be able to determine the Density of soil and engineering
CO402.2	Students would be able to find Index properties and their determination in the
CO402.3	Students would be able to understand the Permeability and seepage condition of
CO402.4	Students would be able to evaluate the stress Distribution using Newmarks
CO402.5	Students would be able to know the mechanism of compaction and consolidation
CO402.6	Students would be able to know the measurement of shear strength by direct shear
	Geotechnical Engineering-I (BECVE402P)
CO402.1	Students would be able to understand the Liquid Limit, Plastic limit and
CO402.2	Students would be able to find out the Bulk density and dry Density of soil using
CO402.3	Students would be able to find out the Load Displacement Relationship curve
	Transportation Engineering-I (BECVE 403T)
CO403.1	Students should able to understand the various components of high way engineering, bridge engineering, classification of roads, network
CO403.2	Able to understand the cross section elements, sight distances, super elevations,
CO403.3	Able to understand the types of pavements, design parameters, axle load, ESWL
CO403.4	Students should able to understand the traffic studies (road user, driver, vehicle
CO403.5	Students will be able to understand classification of bridges, site selection, flood
CO403.6	Students will be able to understand the various types of bridge foundations,

	bridges.
	Transportation Engineering-I (BECVE403P)
CO403.1	The student will be able to understand the importance of shape (length, width,
CO403.2	The student will be able to know as per I.S. code, impact test, crushing value test,
CO403.3	The student will be able to know the bitumen properties as per I.S. code and case
	Surveying-I (BECVE404T)
CO404.1	Students will able to understand the basic principal of surveying. They should able to apply this knowledge for the linear measurement using basic
CO404.2	Students will able to understand the basic concepts of leveling. They should able
CO404.3	Students should able to understand the principles, operation, handling and
CO404.4	Students will able to use the theodolite to find the angular measurement for the
CO404.5	Students will able to measure area and volume for any project. They should able
CO404.6	Students will able to understand the basic concepts of different kinds of Surveying such as Hydrographic Survey and Underground Survey. They should able to apply this knowledge for solving different issues related to water
	Surveying-I (BECVE404P)
CO404.1	Able to understand the principles operation, handling and uses of various
CO404.2	Able to apply the knowledge of the subject for the practical problems.
CO404.3	Can carry surveying for any civil engineering project.
	Building Construction and Materials (BECVE405T)
CO405.1	The students would have the knowledge of various types of foundation, so that they can select and design the suitable foundation which will be beneficial
CO405.2	The students would understand the various building materials which are necessary
CO405.3	The students would have the knowledge of different modern techniques for
CO405.4	The students can understand the various modern flooring and roofing materials
CO405.5	The students would know the types, pattern and choice of materials for staircase,
CO405.6	They can select the various elements to enhance the life and strength of building

BE Civil Engineering Fifth Semester	
	Structural Analysis – II (BECVE501T)
CO501.1	The student would have the knowledge of applying Kanis method for analyzing
CO501.2	The student would able to solve problem of analyzing the frames in practical
CO501.3	The knowledge of stiffness method and apply the concept of stiffness method for
CO501.4	Formulation of stiffness matrix, transformation matrix load matrix for analyzing
CO501.5	Evaluation of stiffness matrix of frame and solve frame analysis by stiffness
CO501.6	Learn the basic knowledge of finite element method. Define and study the
	Structural Analysis – II (BECVE501P)
CO501.1	The student would have the knowledge of solving analysis problem by Kanis
CO501.2	The student would able to do modeling and solve above problem by STADPRO
CO501.3	The student would able to solve stiffness method problem by MDM software and
	RCC Structures (BECVE502T)
CO202.1	Develop the concepts of working stress method based on classical elastic theory using knowledge of general science. He shall be able to analyze and
CO202.2	Understand the concepts of prestress concrete and modern anchorage systems. Student shall be able to design prestress members for various engineering
CO202.3	Use probability and reliability knowledge to develop concepts of limit state method. Student shall be able to analyze and design singly and doubly
CO202.4	Analyse and design T and L beam section. He shall be able to formulate and analyse complex structural problems. He shall also be able to analyse
CO202.5	Analyze members subjected to torsion and shear action. He shall be able to analyse complex engineering problems and members subjected to combined nature of stress. Student shall also be able to design economic, serviceable
CO202.6	Design one way, two way and cantilever slabs and be able to use engineering concepts and modern tools to develop economic and public building for the society having knowledge of project management and economics. He shall further be involved in consultancy, research work and lifelong learning. He shall refer literature and research work and shall continue learning.

	RCC Structures (BECVE502P)
CO202.1	Design singly reinforced, doubly reinforced and flanged beam and draw structural
CO202.2	Design columns subjected to axial load with and without bending moment and
CO202.3	Design one way, two way slab and isolated footing foundation and draw structural
	Fluid Mechanics-I (BECVE503T)
CO503.1	To know the importance of fluid fundamentals which are useful in engineering
CO503.2	To study the principles and methodology to evaluate forces exerted on submerged body and to evaluate mathematical procedure to check stability of floating
CO503.3	To know the fundamentals of fluid behavior with practical example and its
CO503.4	Apply continuity equation, Bernoulli's equation and momentum equation to solve Engineering problems in fluid mechanics in mathematical form for various
CO503.5	Discuss Engineering application of flow measuring devices such as notches and weir to measure rate of flow through the canal system which is useful for
CO503.6	Engineering application of dimensional analysis for designing of models and
	Fluid Mechanics-I (BECVE503P)
CO503.1	Verification of Bernoulli's theorem along with its practical application in solving
CO503.2	Calibration and engineering application of various flow measuring devices
CO503.3	Demonstration of some phenomenon in flow measuring devices and understand
	Geotechnical Engineering-II (BECVE504T)
CO504.1	The students shall be able to use the knowledge of different soil exploration
CO504.2	The students shall be able to analyze the stability of natural slopes, safety and
CO504.3	The students shall be able to apply the concept of Lateral Earth Pressure for
CO504.4	The students shall be able to practice Ground Improvement Techniques to
CO504.5	The students shall be able to Design the shallow foundation for different Bearing
CO504.6	The students shall be able to Design the Deep foundation by static, Dynamic and

	Hydrology and Water Resources (BECVE 505 T)
CO505.1	The students would have the knowledge of the fundamentals of hydrology and hydrological cycle in water resource engineering. Study the various instruments which are used to measure the precipitation which will be useful to the study
CO505.2	Students would have the knowledge of water infiltration and evaporation which
CO505.3	The students would be able to understand the hydrograph theory in the analysis of
CO505.4	The students would be able to exhibit the various statistical methods used in
CO505.5	The students can apply the knowledge of ground water hydrology in terms of assessment and computing the ground water yield, which will be useful to
CO505.6	The knowledge of geo-hydrology the students can plan for artificial recharging of ground water by using various techniques. This may be useful for the society
	Communication English and Technical Writing (BECVE506P)
CO506.1	Student will become adept in using Grammar for communicating in English.
CO506.2	Student would be able to write at workplaces
CO506.3	Student will be able to draft technical report and write the proposal
CO506.4	Student will be dexterous in presentation skills.
CO506.5	Student will become well prepared to face job interviews.
CO506.6	Student will be able to plan and carry out the research projects
BE Civil Engineering Sixth Semester	
	Steel Structures (BECVE601T)
CO601.1	Apply knowledge of basic science and mathematics to understand various material properties of hot rolled and cold drawn steel sections. He shall be able
CO601.2	Refer various texts, theories and research literatures to understand tension and compression analysis and design. Based on this learning he shall be able to assess loads on roof trusses for various environmental conditions. And be able to design
CO601.3	Use fasteners like rivet, bolts and weld. He shall be able to analyse and design simple, semi-rigid and rigid joints. He shall be able to suggest design for complex engineering problem. To enhance knowledge, he shall involve in site visits and visits to resource persons.
CO601.4	Design simple and built up beam, laterally restrained and unrestrained based on IS code, texts and research literature. He shall be able to understand complex plate behavior and design of plate girder. He shall also be able to provide
CO601.5	Understand complex behavior of members subjected to combined nature of loading like beam column. He shall be able to design structural members
CO601.6	Student shall be able to design economic built up column members and column

	structures like communication and transmission towers, different bracing systems. He shall get involved in continuous learning, design and consultancy to
	Steel Structures (BECVE601P)
CO601.1	Design tension member, compression members in roof trusses and draw structural
CO601.2	Design rolled and built up beams, rolled and built up column and draw structural
CO601.3	Design plate girder, beam to beam, beam to column connection and draw
	Surveying-II (BECVE602T)
CO602.1	The students shall be able to carry forward the concepts of basic surveying
CO602.2	The students shall be able to setting out the different types Simple, Compound,
CO602.3	The students shall be able to setting out the different types Vertical and Transition
CO602.4	The students shall be able to apply the concepts of modern surveying techniques
CO602.5	The students shall be able to Take – up mini project using different photographic
CO602.6	The students shall be able to apply the knowledge of GIS and GPS Techniques in
	Surveying-II (BECVE602P)
CO602.1	Students would be able to Setting out the Simple Curve, Compound and Reverse
CO602.2	Students would be able to study the Topography Sheet using GIS and GPS
CO602.3	Students would be able to do the Road Project or Irrigation Project for in the
	Fluid Mechanics-II (BECVE603T)
CO603.1	Understand the concept and significance of boundary layer theory, drag and lift, and their formulation with mathematical approach to understand their
CO603.2	Analysis of flow through pipe system, formulation of expression, analysis and
CO603.3	Use of concept and computation of uniform flow, design of most efficient section,
CO603.4	To know the importance and basic principles of Hydraulic jump and gradually varied flow with mathematical formulation and discuss their practical utility
CO603.5	Understanding the technique of dimensional analysis, concept of model testing
CO603.6	Understand the basic design principle of turbine and pumps with the study of their performance characteristics, so that their efficient functioning is obtained for

	Fluid Mechanics-II (BECVE603P)
CO603.1	Determination and verification of loss of energy in flow measuring devices.
CO603.2	Performance characteristics of various hydraulic machines and check their
CO603.3	Calibration of various structures, which are used in the actual field of fluid
	Building Design and drawing (BECVE604T)
CO604.1	The student would able to understand building byelaws and building code useful in planning of civil engineering structure, which will be useful in
CO604.2	The student would able to apply the principal of planning for planning of residential building to minimize wastage of space and pleasant appearance
CO604.3	Knowledge of submission drawing and able to draw manually and by using
CO604.4	To make use of knowledge to give the layout on field as per given plan
CO604.5	To visualize and draw prospective view of building to understand prospective
CO604.6	To know and draw detailing of building services for professional practice and
	Environmental Engineering-II (BECVE605T)
CO605.1	To know the general concepts about sewage, sewer and sewerage system and their components this will be useful in Engineering problem and beneficial
CO605.2	To have complete knowledge about the design of sewer analytically to compute
CO605.3	To understand the philosophy and procedure for the construction of sewer, its
CO605.4	To analyze the characteristics of sewage through experimental studies and to design various units of conventional sewage treatment plant through
CO605.5	To study different methods of disposal of sewage and to discuss their practical utility for engineers and users in society by sewage farming in safe environmental conditions. Also to plan various provisions of sanitation for the community in rural areas.
CO605.6	To study and understand the basic principles, significance of Industrial Wastewater Treatment. Also to understand Air Pollution, its sources and effect
	Site visit and Mini Project (BECVE606P)
CO606.1	Get an idea of various project details such as contracts, layout, planning, drawing,
CO606.2	Get an idea of various construction equipment, manpower and techniques used at
CO606.3	Techniques of batching, mixing, transportation, and placement of different
CO606.4	Get an overview on safety measures, basic amenities to provide,

	control.
CO606.5	Write a legible, correct and technically sound report after the visit
CO606.6	Ascertain the provisions and execution as per the working drawing
BE Civil Engineering Seventh Semester	
	Advance Concrete Structures (BECVE701T)
CO701.1	Students will able to apply the basic knowledge of mathematic, engineering and IS code recommendations for planning, analysis and design of safe and economical water tanks resting on ground
CO701.2	Students would able to understand the structural behavior of structural members
CO701.3	Student will able to understand the effect of backfill and select suitable type of retaining wall for the safety and convenience of society and carry out analysis, design and detailing of retaining wall as per IS Code provisions.
CO701.4	Students will be able to plan the building and design the structural elements such as building frame and staircase as per the requirement of society.
CO701.5	Students will able to interpret the soil - structural interaction and design suitable type of combined foundation using modern tools and techniques for the benefit
CO701.6	Students will able to interpret the soil - structural interaction and design suitable type of combined foundation using modern tools and techniques for the benefit
	Advance Concrete Structures (BECVE701P)
CO701.1	Students would able to understand the design concept of various RCC members.
CO701.2	Students will able to apply the theoretical knowledge to design the RCC member
CO701.3	Students will able to use advance software for design of building
	Estimating and Costing (BECVE702T)
CO702.1	To understand basic fundamentals of Estimates. Also to prepare preliminary estimates using different methods without much mathematical computations. Also to understand various approvals to be taken for the execution of project to understand their practical utility.
CO702.2	To compute the quantities of various items of work of building using
CO702.3	To know the basic principles and importance of earthwork in road estimate and to compute the quantities of earthwork in roads and canals and to discuss
CO702.4	To have detailed knowledge about execution process of carrying out works in Govt. Departments for its practical utility. Also to know types of
CO702.5	To know an importance and necessity of specification and draft detailed specification of items which are useful for Engineers on site and others. Also to calculate rate per unit item through mathematical computation and to include them in CSR which is useful to Engineers as well as owners in the society
CO702.6	To discuss the various methods of valuation through mathematical representation so that it would be beneficial to the people in the society. Also to calculate

	know the various types of cost and cost accounting useful for the community.
	Estimating and Costing (BECVE702P)
CO702.1	To prepare preliminary estimates without much computations the quantities of various items of work using mathematical approach and formulations for
CO702.2	To compute the quantities of earthwork in roads and canals for the practical utility
CO702.3	To have detailed knowledge about execution process in Govt. departments for its practical utility and to calculate rate per unit item valuation and cost
	Earthquake Resistant Design (Elective-I) (BECVE703T)
CO703.1	Idea on Engineering Seismology , Response Spectra, Strong Ground motion
CO703.2	Earthquake Analysis of Multistoried Building by Equivalent Lateral Load
CO703.3	Meaning of Single Degree of Freedom and Multi-degree of Freedom. What is Mathematical Modeling. Modeling of 2D and3D frameand with effect of
CO703.4	Idea on soil structure interaction. Winkler Model. What is Soft Storey? Shear
CO703.5	Idea on Ductility. Types of ductility. What is beam to beam connection and beam
CO703.6	Introduction to Retrofitting. Methods of Retrofitting. Need of Retrofitting. Introduction to base isolation. Types of base isolation. Working principle. IS
	Construction Management and Law (BECVE704T)
CO704.1	Demonstrate the understanding of various types of projects, Modern Construction
CO704.2	To analyze network analysis CPM and PERT, resource allocation leveling and resource smoothing construction planning. Crashing and time cost optimization
CO704.3	To achieve the knowledge of various types of equipments used in the construction and to apply the principle of management for various types organization, organizational charts, duties and responsibilities of personal manager. To know various modern techniques used for material management quality checks, inventory control etc.
CO704.4	To know the quality control aspects in quality management, safety provisions as
CO704.5	To know the town planning requirements and knowledge of acts and codes of regional town planning, housing development act, highway act, and local
CO804.6	To know different laws, environmental (protection) act, forest conservation act water and air pollution act, transfer of property act, understand the social

	Transportation Engineering-II (BECVE705T)
CO705.1	To understand the classification of railways, traction and tractive resistances, tractive efforts of locomotives, high speed track to apply the knowledge
CO705.2	To conduct studies on rail functions, different rail fixtures, to design geometric
CO705.3	Planning and designing of points and crossing, turnouts modern technology used
CO705.4	To know airport planning, zoning laws, imaginary surfaces, analyze wind direction runway orientation geometric design of runway taxiway,
CO705.5	To plan and design terminal area, aircrafts parking hangers, and to study international airport layouts, visual aids, airport markings and air traffic
CO705.6	To plan and design tunnels, ventilation economic transport by using tunnels. To know the classification of harbors, types of break waters, wharves, quays
	Industrial Case Study (BECVE706P)
CO706.1	An ability to design and conduct experiments, as well as to analyze and interpret
CO706.2	An ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political,
CO706.3	An ability to function on multidisciplinary teams.
CO706.4	An ability to identify, formulates, and solves engineering problems
CO706.5	An ability to use the techniques, skills, and modern engineering tools necessary
CO706.6	An understanding of the elements of Project Management, Construction and asset
BE Civil Engineering Eighth Semester	
	Irrigation Engineering (BECVE801T)
CO801.1	Understanding the methods, efficiency and application of Irrigation as an Engineering concept for the proper growth of crops to enhance the
CO801.2	Complete knowledge of planning, design and operational approach of storage
CO801.3	Understanding of philosophy of large and small dams and engineering concept for analysis and design of such structures with consideration of economic and
CO801.4	Use of mathematical approach to check the stability, analysis and design of spillways with their engineering approaches to be adopted for energy
CO801.5	Allocation of analysis and design approaches for various hydraulic structures with
CO801.6	Understanding design methodology for unlined and lined canal, selection of lining

	use of water for the benefit of water user communities.
	Water Transmission and Distribution System Elective-II (BECVE802T)
CO802.1	To know the purpose of various appurtenances used in distribution system and analysis, design consideration, working mechanics and engineering applications of such appurtenances.
CO802.2	To do the planning of various distribution system and to analyze and design of such system by using various mathematical technique by formulating
CO802.3	To know the concept and fundamentals of node flow analysis and design the
CO802.4	Use of concepts of distribution reservoir to use of mathematical approach to calculate the capacity of reservoir by analytical and graphical solution and
CO802.5	To understand the design of single source balancing network using CPM, number
CO802.6	To understand linear programming technique, non linear programming technique
	Applied Remote Sensing and GIS (Elective-III) (BECVE803T)
CO803.1	To know the fundamentals of remote sensing as a modern technique for
CO803.2	To understand fundamental knowledge of Aerial photography which may solve
CO803.3	To understand the appropriate techniques of interpretation of satellite images and
CO803.4	The knowledge of remote sensing and GIS for mapping and monitoring land
CO803.5	To apply knowledge of remote sensing and GIS in environmental studies.
CO803.6	Use of satellite images as a new technique for site selection for civil engineering projects to overcome the complex civil engineering problems in
	Applied Remote Sensing and GIS (Elective-III) (BECVE803P)
CO803.1	Students will understand the basic concepts of stereoscopes to create three-D
CO803.2	Students will be able to interpret the aerial photographs and satellite images.
CO803.3	Students will be able to interpret the digital satellite images on software.
	Construction Management and materials (BECVE804T)
CO804.1	Acquaint with various economic and financial aspects of construction industry
CO804.2	Understand the tools and techniques of economic analysis for improving their
CO804.3	Understand the knowledge of economic analysis for improving their decision making skills
CO804.4	Understand the Concept of IRR, Turnkey Construction Projects.
CO804.5	Apply Knowledge of Inflation , Recession , Financial Ratios
CO804.6	Idea on Working Capital. Structure of Working capital. Economic Analysis.

	Project (BECVE805P)
CO805.1	Engaged in professional practices, such as construction, environmental, geotechnical, structural, transportation, or water resources engineering by
CO805.2	Overseen the design and/or construction of a civil engineering project.
CO805.3	Registered as a professional engineer or developed a strong ability leading to
CO805.4	Demonstrated a commitment to continuing professional development by pursuing formal education in an advanced degree program or by maintaining
CO805.5	Served in a leadership position in any professional or community organization, or
CO805.6	The broad education necessary to understand the impact of engineering solutions