

Course Code	STRENGTH OF MATERIALS – BCV301
CO1	Evaluate the simple stresses, strains and compound stresses
CO2	Calculate the Bending moments, shear force and draw BMD, SFD for various types of beams and loadings
CO3	Calculate the Bending moments, shear force and draw BMD, SFD for various types of beams and loadings
CO4	Calculate the Bending moments, shear force and draw BMD, SFD for various types of beams and loadings
CO5	Evaluate the behaviour and strength of structural elements under the action of compound stresses and stresses in thin and thick cylinders.
Course Code	ENGINEERING SURVEY- BCV302
CO1	Summarize various types of surveying and carry out distance measurement using various equipment's
CO2	Illustrate the use and applications of levelling and theodolite
CO3	Plot contours, longitudinal and cross sections for construction projects.
CO4	Set curves for construction works and carry out estimation of areas and volumes.
CO5	Demonstrate the necessary skills to carry out GPS and DRONE Surveying
Course Code	ENGINEERING GEOLOGY– BCV303
CO1	Apply geological knowledge in different civil engineering practice.
CO2	Acquire knowledge on durability and competence of foundation rocks, and will be able to use the best building materials.
CO3	Students will become competent enough for the safety, stability, economy and life of the structures that they construct
CO4	Able to solve various issues related to ground water exploration, build up dams, bridges, tunnels which are often confronted with ground water problems
CO5	Students will become Intelligent enough to apply GIS, GPS and remote sensing as a latest tool in different civil engineering for safe and solid construction.
Course Code	WATER SUPPLY AND WASTEWATER ENGINEERING– BCV304
CO1	Estimate the average and peak water demand for a community
CO2	Evaluate water quality and environmental significance of various parameters and plan suitable treatment system.
CO3	Design the different units of water treatment plant
CO4	Design the various units of wastewater treatment plant.
CO5	Design of various AOPs and low cost treatment units.
Course Code	COMPUTER-AIDED BUILDING PLANNING AND DRAWING – BCV305
CO1	Prepare, read and interpret the drawings in a professional set up.
CO2	Know the procedures of submission of drawings and Develop working and submission drawings for building.
CO3	Plan and design of residential or public building as per the given requirements.
Course Code	RURAL, URBAN PLANNING AND ARCHITECTURE – BCV306A
CO1	Understand importance of architecture in rural and urban planning
CO2	Understand Influence of architecture
CO3	Design infrastructure for rural and urban region

CO4	Plan and design rural and urban roads
Course Code	GEOSPATIAL TECHNIQUES IN PRACTICE– BCV306B
CO1	Comprehend different geospatial techniques in the Construction Industry.
CO2	Understand the application of geospatial equipment like Total Station, GNSS, LIDAR, UAV (Drones), etc.,
CO3	Evaluate the various spatial analysis operations by using GIS Environment
CO4	Create a map layout with all essential cartographic elements in GIS Environment.
CO5	Illustrate the various geospatial emerging trends of GIS in Industry
Course Code	SUSTAINABLE DESIGN CONCEPT FOR BUILDING SERVICES– BCV306C
CO1	Comprehend sustainable design, climatology, shading system and analyze heat transfer mechanism in buildings.
CO2	Assess the design considerations and parameters for thermal comfort, visual comfort, indoor air quality and acoustics.
CO3	Develop solutions for energy efficiency, water efficiency and waste management in buildings
CO4	Adopt green project management methodology and evaluate building life cycle assessment.
CO5	Implement green practices during construction and operation phase of the buildings for achieving green rating.
Course Code	FIRE SAFETY IN BUILDINGS – BCV306D
CO1	Understand types of fire, combustion process and fire resistance
CO2	Plan for fire safety and design of lifts
CO3	Design flow network in buildings
CO4	Design of electrical systems and maintenance
CO5	Perform health evaluation of buildings and suggest remedies
Course Code	SOCIAL CONNECT AND RESPONSIBILITY– BCV307
CO1	The course will introduce social context and various players in the social space, and present approaches to discovering and understanding social needs. Social immersion and inspiring conversational will culminate in developing an actual, idea for problem-based intervention, based on an in-depth understanding of a key social problem.

Course Code	DATA ANALYTICS WITH EXCEL– BCV358A
CO1	Prepare the data sets and perform the analysis.
CO2	Analyse and perform repetitive calculations using several functions
CO3	Design and apply solutions to verify the data sets
Course Code	SMART URBAN INFRASTRUCTURE– BCV358B
CO1	Understand the concept of smart city
CO2	Play the role of a civil engineer in providing smart infrastructure
CO3	Design efficient energy system for smart city
CO4	Analyse and design efficient transport system
Course Code	PROBLEM SOLVING WITH PYTHON – BCV358C
CO1	Understand Python syntax and semantics and be fluent in the use of Python flow control and functions
CO2	Demonstrate proficiency in handling Strings and File Systems.
CO3	Represent compound data using Python lists, tuples, Strings, dictionaries.
CO4	Read and write data from/to files in Python Programs
Course Code	PERSONALITY DEVELOPMENT FOR CIVIL ENGINEERS – BCV358D
CO1	Use English as a medium of communication in interviews and in any professional working environment proficiently
CO2	Develop necessary skills to Answer common interview questions, express confidence in body language and present with clarity
Course Code	ANALYSIS OF STRUCTURES- BCV401
CO1	identify the different forms of structural systems and analyse the trusses
CO2	Evaluate the slope and deflections in beams, frames and trusses by using moment area method and energy principle
CO3	Analyse and determine the stress resultants in arches and cables
CO3	Analyse the indeterminate structures and construct BMD AND SFD using slope deflection methods.
CO3	Analyse the indeterminate structures and construct BMD AND SFD using Moment Distribution Method.
Course Code	FLUID MECHANICS AND HYDRAULICS – BCV402
CO1	Explain the fundamental properties of fluids and solve problems on fluid pressure and hydrostatics.
CO2	Apply the principles of kinematics and dynamics of fluid flow to solve problems on velocity and pressure.
CO3	Compute the discharge through pipes, notches and weirs.
CO4	Design the turbines and open channels of different sections and to estimate the energy loss in hydraulic jump.
CO5	Able to interpret the experimental results of discharge, efficiency based on the test conducted in the laboratory.
Course Code	TRANSPORTATION ENGINEERING– BCV403
CO1	Explain the basic principles of geometric design in the context of transportation engineering and planning
CO2	Select the appropriate pavement materials for construction and design the pavement as per standard practices.
CO3	Conduct traffic studies and analyse traffic data for practical applications.
CO4	. Identify the Components parts of Railway Track and design the suitable runway for an Airport

CO5	Able to interpret the experimental results of highway materials based on laboratory tests and design the pavement as per IRC guidelines.
Course Code	BUILDING MATERIALS LABORATORY- BCV404
CO1	Analyze the physical characteristics, and behavior of common building materials.
CO2	Reproduce the basic knowledge of mathematics and engineering in finding the strength in tension, compression, shear and torsion for steel
CO3	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.
CO4	Recognize the importance of ethical conduct, integrity, and accuracy in materials testing and reporting..
Course Code	FINANCE FOR PROFESSIONALS- BCV405A
CO1	Understand how their work and effort contribute to organizational financial performance
CO2	Comprehend financial acumen and tools to optimize outcomes
Course Code	CONSTRUCTION EQUIPMENT, PLANTS AND MACHINERY - BCV405B
CO1	Evaluate equipment and techniques required during construction
CO2	Understand the operation of a batching plant.
CO3	Analyze the equipment life cycle management
CO4	Comprehend mechanization and digitalization in construction
Course Code	CONCRETING TECHNIQUES AND PRACTICES- BCV405C
CO1	Evaluate the properties of concrete by conducting test on cement, aggregate and concrete (with & without admixtures) for using the data for Mix design procedures.
CO2	Understand to Select and proportionate different materials used in a concrete mix including admixtures
CO3	Design a concrete mix as per requirement of construction project
CO4	Apply the best practices in concrete construction from industry's requirement, thumb rules, mitigation of concreting issues at Sites
Course Code	WATERSHED MANAGEMENT- BCV405D
CO1	Discuss surface and ground water resources system and, human influences.
CO2	Integrate water resources system in arid and semi-arid regions and explain watershed aquifer for management.
CO3	Analyse water resources related issues for conservation and synthesize augmentation of water resources.
CO4	Design integrated watershed management system.
CO5	Apply modern tools in watershed management.
Course Code	WATERSHED MANAGEMENT- BCV405D
CO1	Discuss surface and ground water resources system and, human influences.
CO2	Integrate water resources system in arid and semi-arid regions and explain watershed aquifer for management.
CO3	Analyse water resources related issues for conservation and synthesize augmentation of water resources.

CO4	Design integrated watershed management system.
CO5	Apply modern tools in watershed management.
Course Code	BUILDING INFORMATION MODELLING IN CIVIL ENGINEERING – B CVL456A
CO1	Interpret the basic principles of BIM evolution and concept of BIM in lifecycle of project
CO2	Understand the workflows of Design authoring followed in industry during creation of 3D model
CO3	Analyze the engineering analysis and the process followed in industry to check and resolve clashes
CO4	Evaluate the integration of schedule and cost in 3D model using 4D and 5D BIM
CO5	Illustrate the various emerging trends of BIM & concept of digital twin
Course Code	GIS WITH QUANTUM GIS– B CV456B
CO1	Use open source software for civil engineering applications
CO2	Various tools in QGIS software
CO3	Create thematic layers with attribute data
CO4	Generate maps for decision making
Course code	ELECTRONIC WASTE MANAGEMENT - ISSUES AND CHALLENGES - B CV456C
CO1	Explain the concept of e-waste and its significance in the context of environmental sustainability. 2.
CO2	Identify and classify different types of e-waste and describe their components.
CO3	Recognize the potential health and environmental hazards associated with improper e-waste management.
CO4	Evaluate and apply appropriate methods for the collection, recycling, and disposal of e-waste.
CO5	Demonstrate knowledge of the existing policies, regulations, and frameworks for e-waste management in India
Course code	Technical Writing Skills- B CVL456D
CO1	Effectively communicate in technical matters.
CO2	Practice preparation of gist, abstract and notes from a technical article.
CO3	Prepare a business proposals and reports.
CO4	Write and respond in social media and write blogs.
Course Code	CONSTRUCTION MANAGEMENT AND ENTERPRENUERSHIP-BCV501
CO1	Construction of Project formulation and develop work breakdown structure for the Project.
CO2	Estimate the resource requirement for the project and analyze the cost.
CO3	Explain construction contract, statutory, legal requirements of construction and plan for the procurement of resources
CO4	Discusses the quality, safety and Risk management of Project
	Explain the concept of entrepreneurship and business planning
Course Code	Geotechnical Engineering– BCV502
CO1	Comprehend the fundamentals of Soil mechanics and identify and classify the soil
CO2	Apply the knowledge to determine MDD and OMC and compute consolidation properties and shear parameters of soil and compute the settlement and bearing capacity of soil
CO3	Apply the knowledge to determine shear parameters of soil and compute the settlement and bearing capacity of soil.
CO4	Carry out experiments to assess the index properties of soil and determine Compaction, Permeability and Shear Strength characteristics of soil

Course Code	Concrete Technology– BCV503
CO1	Relate material characteristics and their influence on microstructure of concrete
CO2	Distinguish concrete behaviour based on its fresh and hardened properties.
CO3	Illustrate proportioning of different types of concrete mixes for required fresh and hardened properties using professional codes.
CO4	Select a suitable type of concrete based on specific application
Course Code	Environmental Engineering Lab – BCV504
CO1	Acquire capability to conduct experiments and estimate the concentration of different parameters
CO2	Compare the result with standards and discuss based on the purpose of analysis
CO3	Determine type of treatment, degree of treatment for water and waste water
CO4	Identify the parameter to be analyzed for the student project work in environmental stream.
Course Code	NUMERICAL METHODS IN CIVIL ENGINEERING - BCV515A
CO1	To learn various numerical techniques.
CO2	To solve Numerical differentiation and integration problems.
CO3	Apply numerical techniques to solve civil engineering problems.
Course Code	OCCUPATIONAL SAFETY AND HEALTH MONITORING- BCV515B
CO1	Identify hazards in the workplace that pose a danger or threat to their safety or health.
CO2	Control unsafe or unhealthy hazards and propose methods to eliminate the hazard.
CO3	Present a coherent analysis of a potential safety or health hazard
CO4	Discuss the role of health and safety in the workplace pertaining to the responsibilities of workers, managers, supervisors.
CO5	Identify the decisions required to maintain protection of the environment, workplace as well as personal health and safety.
Course Code	SOLID WASTE MANAGEMENT– BCV5015C
CO1	Articulate the elements of solid waste management and categorize the waste based on physical, chemical, and biological characteristics
CO2	Design a waste collection system for onsite collection, storage and demonstrate waste transfer and transport operations.
CO3	Evaluate and develop waste processing and treatment methods for solid and hazardous waste with sustainable practices.
CO4	Select appropriate disposal methods such as landfills, waste to energy plants and its handling in an efficient way.
CO5	Develop reduce, reuse
Course Code	REMOTE SENSING AND GIS - BCV5015C
CO1	Understand and remember the principle of Remote Sensing (RS) and Geographical Information Systems (GIS) data acquisition and its applications
CO2	Apply RS and GIS technologies in various fields of engineering and social needs
CO3	Analyse and evaluate the information obtained by applying RS and GIS technologies.
CO4	Create a feasible solution in the different fields of application of RS and GIS
Course Code	Mini Project/extensive Survey Project– BCV586
CO1	Apply Surveying knowledge and tools effectively for the projects.
CO2	Learn data download from total station, generation of contours, block leveling, longitudinal and cross sectional diagrams, and capacity volume calculation by using relevant softwares.
CO3	Apply the principles of hydrology, hydraulics and irrigation, highway and environmental engineering.
CO4	Develop town-layout indicating the components such as roads, residential areas, commercial areas,

	recreational areas as per the regulations of the town planning department
CO5	Apply the skills in team or individual and organizational context, goal setting, time management, communication and presentation skills.
Course Code	Design of RCC Structures– BCV601
CO1	Understand the design philosophy and principles.
CO2	Solve problems of RC elements subjected to flexure, shear and torsion.
CO3	Demonstrate the procedure in designs of RC structural elements such as slabs, columns and footings.
CO4	Owens professional and ethical responsibility.
Course Code	IRRIGATION ENGINEERING AND HYDRAULIC STRUCTURES– BCV602
CO1	Know types of water retaining structures for multiple purposes and its key parameters considered for planning and designing
CO2	Understand details in any Irrigation System and its requirements
CO3	Analyze and Design of a irrigation system components
Course Code	DESIGN OF BRIDGES – BCV613A
CO1	Select the type of the bridge based on the site investigation inputs and be able to compute design discharge, linear water way , economic span and depth of scour
CO2	Design pipe culverts.
CO3	Design deck slabs for critical loads
CO4	Analyse the stability of bridge piers and abutments
CO5	Recommend suitable bearings for the given type of bridge and support condition
Course Code	DESIGN OF FORMWORK AND SCAFFOLDING– BCV613B
CO1	Analyse the project, and decide appropriate formwork materials and suitable formwork system
CO2	Design formwork systems as per Industrial requirement
CO3	Estimate the bill of quantity and optimize the formwork cost
CO4	Prepare the layout and detailed drawing for the formwork system
Course Code	APPLIED GEOTECHNICAL ENGINEERING– BCV613C
CO1	Ability to plan and execute geotechnical site investigation program for different civil engineering projects
CO2	Understanding of stress distribution and resulting settlement beneath the loaded footings on sand and clayey soils
CO3	Ability to estimate factor of safety against failure of slopes and to compute lateral pressure distribution behind earth retaining structures
CO4	Ability to determine settlement in footing.
Course Code	DESIGN AND CONSTRUCTION OF HIGHWAY PAVEMENTS– BCV613D
CO1	Develop an understanding of the fundamentals of pavement layer behaviour
CO2	Comprehend the material specifications by interpreting the relationship between material properties and pavement behaviour.
CO3	Conduct different tests on road construction materials to evaluate their characteristics
CO4	Carry out the design of flexible and rigid pavements
CO5	Acquire skillful knowledge of pavement construction practices, plant and machinery selection and quality control
Course Code	WATER CONSERVATION AND RAIN WATER HARVESTING– BCV654A
CO1	Understand the significance of water, its issues & current status.
CO2	Aquire knowledge on principles of water harvesting & challenges.
CO3	Calcuate and prepare design rain harvesting structures.
CO4	Identify various geophysical methods, water management laws and sustainability assessment process.

Course Code	GEOGRAPHIC INFORMATION SYSTEM-BCV654B
CO1	Have basic idea about the fundamentals of GIS.
CO2	Understand the types of data models.
CO3	Get knowledge about data input and topology.
CO4	Gain knowledge on data quality and standards.
CO5	Understand data management functions and data output
Course Code	INTEGRATED WASTE MANAGEMENT FOR A SMART CITY -BCV654C
CO1	Understand basic idea about Sustainable Development.
CO2	Get knowledge about Sustainable Cities.
CO3	Gain knowledge on Saving Biodiversity.
CO4	Understand Sustainable Development Goals.
Course Code	SUSTAINABLE DEVELOPMENT GOALS-BCV654D
CO1	Understand basic idea about Sustainable Development.
CO2	Get knowledge about Sustainable Cities.
CO3	Gain knowledge on Saving Biodiversity.
CO4	Understand Sustainable Development Goals
Course Code	SOFTWARE APPLICATION LAB -BCV613C
CO1	Use software for analysis and design of structural elements.
CO2	Design using excel spread sheet
CO3	Modeling of structural elements of buildings
Course Code	BUILDING INFORMATION MODELLING-BCV657A
CO1	Prepare, read, and interpret BIM-based structural models.
CO2	Coordinate architectural and structural models for construction workflows.
CO3	Develop detailed cost estimation and create detailed documentation.
CO4	Identify and resolve clashes in BIM models using clash detection tools.
Course Code	STRUCTURAL HEALTH MONITORING USING SENSORS- BCV657B
CO1	Understand the concept of structural health monitoring and various methods applied for monitoring of structures and structural safety
CO2	Analyze the sensor systems in structural health monitoring.
CO3	Design and implement a sensor-based monitoring system for a civil engineering structure.
CO4	Apply the application of SHM in the assessment of engineering structures
Course Code	QUALITY CONTROL AND QUALITY ASSURANCE- BCV657D
CO1	Realize the importance of quality in construction
CO2	Apply SQC techniques in different aspects of construction
CO3	Implement QMS programs at different levels of construction
Course Code	DESIGN OF STEEL STRUCTURE – BCV701
CO1	Explain: the engineering properties and the behaviour of steel structural elements according to the guidelines.
CO2	Analyze and design: Structural connection of Steel Elements.
CO3	Analyze and design: the steel structural elements of different forms under different stresses.
Course Code	ESTIMATION AND CONTRACT MANAGEMENT-BCV702
CO1	Taking out quantities and work out the cost and preparation of abstract for the estimated cost for various civil engineering works.

CO2	Prepare detailed and abstract estimates for various road works, structural works and water supply and sanitary works
CO3	Prepare the specifications and analyze the rates for various items of work.
CO4	Assess contract and tender documents for various construction works.
CO5	Prepare valuation reports of buildings.
Course code	INTELLIGENT TRANSPORTATION SYSTEMS -BCV714A
CO1	Understand the sensor and communication technologies
CO2	Apply the various ITS methodologies
CO3	Define the significance of ITS under Indian conditions
Course code	EARTHQUAKE RESISTANT STRUCTURES-BCV714B
CO1	To formulate the solution for damped and undamped SDOF systems.
CO2	To describe basic principles of engineering seismology
CO3	To describe various irregularities and their limits for earthquake resistant structure as per Indian standard code books.
CO4	Analyze the structure for seismic forces using Equivalent static lateral force method and response spectrum method
CO5	To perform ductile Design of RC members and to describe behavior of masonry under seismic loads
Course code	DESIGN AND EXECUTION OF PILE FOUNDATIONS- BCV714C
CO1	Comprehend Basic design concepts, of pile foundations
CO2	Compute capacity of piles and select suitable type of pile foundation based on soil conditions
CO3	Apply different construction procedures of pile foundation
CO4	Design and execute different load testing on piles
CO5	Compute bill of quantities for pile foundations
Course code	BUILDING SERVICES-HVAC,ACOUSTICS AND FIRE SAFETY- BCV714D
CO1	UnderstandElectricalSystemalongwithsubstationforabuildinginfrastructure
CO2	Comprehend the basics of acoustics and ELV systems in building.
CO3	Design and implementation of HVAC System
CO4	Implement Fire Alarm System(PAS) for building
CO5	Understand the importance of water supply and sanitary plumbing system for a building
Course code	ROAD SAFETY ENGINEERING- BCV755A
CO1	Analyze road safety data, identify hazardous locations, and assess safety risks on roadways
CO2	Evaluate the effectiveness of road safety interventions and conduct post-implementation analysis.
CO3	Utilize modelling and simulation techniques to predict and assess the impact of road safety measures.
CO4	Demonstrate knowledge of traffic control devices, traffic management strategies, and their role in enhancing road safety.
CO5	Comprehend the legal and policy framework related to road safety engineering and contribute to policy development.
Course code	CONSERVATION OF NATURAL RESOURCES- BCV755B
CO1	Apprehend various components of land as a natural resource and land use planning.
CO2	Know availability and demand for water resources as applied to India
CO3	Analyze the components of air as resource and its pollution
CO4	Discuss biodiversity & its role in ecosystem functioning.
CO5	Critically appreciate the environmental concerns of today.
Course code	ENERGY EFFICIENCY, ACOUSTICS AND DAYLIGHTING IN BUILDING- BCV755C
CO1	Comprehend climatology, shading system and analyze heat transfer mechanism in buildings.
CO2	Assess the design considerations and parameters for lighting, acoustics and indoor air quality.

CO3	Develop solutions for energy efficiency, water efficiency and waste management in buildings.
CO4	Calculate energy savings and CO2 mitigation using web tools such as ECONIWAS and Solar rooftop calculator.
CO5	Adopt green project management methodology and evaluate building life cycle assessment.
CO6	Understand energy efficiency measures in a building.
Course code	PRECAST MEMBERS – SYSTEMS & CONSTRUCTION - BCV755D
CO1	Comprehend the necessity of precast construction
CO2	Adopt the appropriate mould and method for casting, transportation, and erection.
CO3	Compute loads (Dead, Superimposed, Live, Wind, Seismic) of various elements & services and select appropriate vertical & lateral load resisting systems for the various loads acting on the building
CO4	Create and analyze a precast building model using ETABS software
CO5	Design of precast building including connections, adhering to the code requirements & functional aspects
Course code	DEEP EXCAVATION AND TUNNELS- BCV801A
CO1	Comprehend the different soil investigation techniques, rock mass classifications, components of different underground structures and their functions.
CO2	Design and apply different construction methodologies for tunnels, Caverns and shafts in different soil and rock conditions
CO3	Evaluate the suitability of different excavation supports such as sheet piles, soldier piles, diaphragm walls and tunnel support for different soil and rock conditions
CO4	Create an instrumentation monitoring plan for tunnel construction
CO5	Comprehend the use of different software tools in deep excavations and apply code provisions for mitigating water ingress and seepage in excavations and tunnels
Course code	ADVANCED DESIGN OF RC STRUCTURES - BCV801B
CO1	Achieve Knowledge of design and development of problem-solving skills
CO2	Understand the principles of Structural Design.
CO3	Design and develop analytical skills.
CO4	Summarize the principles of Structural Design and detailing
CO5	Understands the structural performance
Course code	PROJECT MANAGEMNET AND FINANACE- BCV801C
CO1	Ability to study the current market trends and choose projects.
CO2	Ability to prepare project feasibility reports.
CO3	Ability to implement the project effectively meeting government norms and conditions.
CO4	Ability to understand the role and responsibility of the Professional Engineer.
CO5	Be able to assess social, health, safety issues based on the reasoning received from the contextual knowledge. 6. Ability to choose projects which benefit the society and organization
Course code	METROS AND SEAPORTS ENGINEERING- BCV801D
CO1	Create the basic layout of elevated and underground metro stations as per laid down codes and regulations
CO2	Interpret design recommendations and Codes of Practice for Elevated and Underground Metros and select suitable construction practices
CO3	Design the earth retaining systems for the excavations of underground stations
CO4	Comprehend the different permanent and enabling structures of seaports and harbors
CO5	Design Enabling structures of Ports and Harbors
Course code	ENERGY CONSERVATION IN BUILDINGS- BCV802A
CO1	Comprehend climatology, shading system and analyze heat transfer mechanism in buildings.
CO2	Assess the design considerations and parameters for lighting, acoustics and indoor air quality.
CO3	Develop solutions for energy efficiency, water efficiency and waste management in buildings.
CO4	Calculate energy savings and CO2 mitigation using web tools such as ECONIWAS and Solar rooftop calculator.

CO5	Adopt green project management methodology and evaluate building life cycle assessment.
CO6	Implement energy conservation measures in buildings.
Course code	OCCUPATIONAL HEALTH AND SAFETY- BCV802B
CO1	Identify hazards in the workplace that pose a danger or threat to their safety or health, or that of others.
CO2	Control unsafe or unhealthy hazards and propose methods to eliminate the hazard
CO3	Present a coherent analysis of a potential safety or health hazard both verbally and in writing, citing the occupational Health and Safety Regulations as well as supported legislation.
CO4	Discuss the role of health and safety in the workplace pertaining to the responsibilities of workers, managers, supervisors.
CO5	Identify the decisions required to maintain protection of the environment, workplace as well as personal health and safety
Course code	GREEN BUILDINGS - BCV802C
CO1	Understand cost effective building materials
CO2	Choose environment friendly construction procedure
CO3	Design eco-friendly buildings to reduce global warming
CO4	Understand the different green rating of buildings
CO5	Estimate energy saving in construction
Course code	INTEGRATED BUILDING SERVICES- BCV802D
CO1	Understand Electrical System along with substation for a building infrastructure
CO2	Learn ELV System and its interface with other allied services.
CO3	Design and implement HVAC Systems
CO4	Learn and implement Fire Alarm System (PAS)
CO5	Understand and implement importance of Public Health Services