



# SRI KRISHNA INSTITUTE OF TECHNOLOGY

(Accredited by NAAC Approved by A.I.C.T.E. New Delhi, Recognized by Govt. of Karnataka & Affiliated to V.T U., Belagavi)

#29, Chimney Hills, Hesaraghatta Main Road, Chikkabanavara Post, Bengaluru- 560090

## Department of Civil Engineering

**SEM: 3**

**SCHEME: 2022**

**AY: 2023-24**

### COURSE OUTCOMES

**Course: STRENGTH OF MATERIALS**

**Course Code: BCV301**

SI No	Course Outcomes
1	Evaluate the simple stresses, strains and compound stresses
2	Calculate the Bending moments, shear force and draw BMD, SFD for various types of beams and loadings
3	Analyse the bending stress, shear stress and torsional stress in beams and shafts with different cross sections
4	Evaluate the deflection in beams and determine the stability of the columns.
5	Evaluate the behaviour and strength of structural elements under the action of compound stresses and stresses in thin and thick cylinders

**Course: Engineering Survey**

**Course Code: BCV302**

SI No	Course Outcomes
1	Summarize various types of surveying and carry out distance measurement using various equipment's
2	Illustrate the use and applications of levelling and theodolite
3	Plot contours, longitudinal and cross sections for construction projects.
4	Set curves for construction works and carry out estimation of areas and volumes.
5	Demonstrate the necessary skills to carry out GPS and DRONE Surveying

**Course: ENGINEERING GEOLOGY**

**Course Code: BCV303**

SI No	Course Outcomes
1	Apply geological knowledge in different civil engineering practice.
2	Acquire knowledge on durability and competence of foundation rocks, and will be able to use the best building materials.
3	Students will become competent enough for the safety, stability, economy and life of the structures that they construct
4	Able to solve various issues related to ground water exploration, build up dams, bridges,



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	tunnels which are often confronted with ground water problems
5	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: WATER SUPPLY AND WASTEWATER ENGINEERING

Course Code: BCV304

SI No	Course Outcomes
1	Estimate the average and peak water demand for a community
2	Evaluate water quality and environmental significance of various parameters and plan suitable treatment system.
3	Design the different units of water treatment plant.
4	Design the various units of wastewater treatment plant.
5	Design of various AOPs and low cost treatment units.

## Course: COMPUTER AIDED BUILDING PLANNING AND DRAWING

Course Code: BCV305

SI No	Course Outcomes
1	Prepare, read and interpret the drawings in a professional set up.
2	Know the procedures of submission of drawings and Develop working and submission drawings for building.
3	Plan of residential or public building as per the given requirements..

## Course: Rural, Urban Planning and Architecture

Course Code: BCV306A

SI No	Course Outcomes
1	Understand importance of architecture in rural and urban planning
2	Understand Influence of architecture
3	Design infrastructure for rural and urban region
4	Plan and design rural and urban roads



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## Course: Geospatial Techniques in Practice

Course Code: BCV306B

SI No	Course Outcomes
1	Comprehend different geospatial techniques in the Construction Industry
2	Understand the application of geospatial equipment like Total Station, GNSS, LIDAR, UAV (Drones), etc.,
3	Evaluate the various spatial analysis operations by using GIS Environment
4	Create a map layout with all essential cartographic elements in GIS Environment
5	Illustrate the various geospatial emerging trends of GIS in Industry.

## Course: Sustainable Design Concept for Building Services

Course Code: BCV306C

SI No	Course Outcomes
1	Comprehend sustainable design, climatology, shading system and analyze heat transfer mechanism in buildings.
2	Assess the design considerations and parameters for thermal comfort, visual comfort, indoor air quality and acoustics.
3	Develop solutions for energy efficiency, water efficiency and waste management in buildings.
4	Adopt green project management methodology and evaluate building life cycle assessment
5	Implement green practices during construction and operation phase of the buildings for achieving green rating.

## Course: BCV306D

Course Code: Fire Safety in Buildings

SI No	Course Outcomes
1	Understand types of fire, combustion process and fire resistance
2	Plan for fire safety and design of lifts
3	Design flow network in buildings
4	Design of electrical systems and maintenance
5	Perform health evaluation of buildings and suggest remedies



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## Course: Data analytics with Excel

Course Code: BCV358A

SI No	Course Outcomes
1	Prepare the data sets and perform the analysis.
2	Analyse and perform repetitive calculations using several functions
3	Design and apply solutions to verify the data sets

## Course: Smart Urban Infrastructure

Course Code: BCV358B

SI No	Course Outcomes
1	Understand the concept of smart city
2	Play the role of a civil engineer in providing smart infrastructure
3	Design efficient energy system for smart city
4	Analyse and design efficient transport system

## Course: Problem Solving with PYTHON

Course Code: BCV358C

SI No	Course Outcomes
1	Understand Python syntax and semantics and be fluent in the use of Python flow control and functions.
2	Demonstrate proficiency in handling Strings and File Systems
3	Represent compound data using Python lists, tuples, Strings, dictionaries
4	Read and write data from/to files in Python Programs

## Course: Personality Development for Civil Engineers

Course Code: BCV358D

SI No	Course Outcomes
1	Use English as a medium of communication in interviews and in any professional working environment proficiently
2	Develop necessary skills to Answer common interview questions, express confidence in body language and present with clarity



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## Course: Analysis of Structures

Course Code: BCV401

SI No	Course Outcomes
1	Identify the different forms of structural systems and analyse the trusses.
2	Evaluate the slope and deflections in beams, frames and trusses by using moment area method and energy principle
3	Analyse and determine the stress resultants in arches and cables
4	Analyse the indeterminate structures and construct BMD AND SFD using slope deflection methods
5	Analyse the indeterminate structures and construct BMD AND SFD using Moment Distribution Method

## Course: FLUID MECHANICS AND HYDRAULICS

Course Code: BCV402

SI No	Course Outcomes
1	Explain the fundamental properties of fluids and solve problems on fluid pressure and hydrostatics.
2	Apply the principles of kinematics and dynamics of fluid flow to solve problems on velocity and pressure.
3	Compute the discharge through pipes, notches and weirs.
4	Design the turbines and open channels of different sections and to estimate the energy loss in hydraulic jump
5	Able to interpret the experimental results of discharge, efficiency based on the test conducted in the laboratory.

## Course: TRANSPORTATION ENGINEERING

Course Code: BCV403

SI No	Course Outcomes
1	Explain the basic principles of geometric design in the context of transportation engineering and planning
2	Select the appropriate pavement materials for construction and design the pavement as per standard practices.
3	Conduct traffic studies and analyse traffic data for practical applications
4	Identify the Components parts of Railway Track and design the suitable runway for an Airport.
5	Able to interpret the experimental results of highway materials based on laboratory tests and design the pavement as per IRC guidelines.



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## Course: BUILDING MATERIALS TESTING LABORATORY

Course Code: BCVL404

SI No	Course Outcomes
1	Analyze the physical characteristics, and behavior of common building materials
2	Reproduce the basic knowledge of mathematics and engineering in finding the strength in tension, compression, shear and torsion for steel
3	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.
4	Recognize the importance of ethical conduct, integrity, and accuracy in materials testing and reporting.

## Course: Finance for Professionals

Course Code: BCV405A

SI No	Course Outcomes
1	Understand how their work and effort contribute to organizational financial performance
2	Comprehend financial acumen and tools to optimize outcomes

## Course: Construction Equipment, Plants and Machinery

Course Code: BCV405B

SI No	Course Outcomes
1	Evaluate equipment and techniques required during construction
2	Understand the operation of a batching plant
3	Analyse the equipment life cycle management
4	Comprehend mechanization and digitalisation in construction

## Course: Concreting Techniques and Practices

Course Code: BCV405C

SI No	Course Outcomes
1	Evaluate the properties of concrete by conducting test on cement, aggregate and concrete (with & without admixtures) for using the data for Mix design procedures
2	Understand to Select and proportionate different materials used in a concrete mix including admixtures
3	Design a concrete mix as per requirement of construction project
4	Apply the best practices in concrete construction from industry's requirement, thumb rules, mitigation of concreting issues at Sites



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## Course: Watershed Management

Course Code: BCV405D

SI No	Course Outcomes
1	Discuss surface and ground water resources system and, human influences
2	Integrate water resources system in arid and semi-arid regions and explain watershed aquifer for management.
3	Analyse water resources related issues for conservation and synthesize augmentation of water resources.
4	Design integrated watershed management system
5	Apply modern tools in watershed management

## Course: Building Information Modelling In Civil Engineering - Basic

Course Code: BCVL456A

SI No	Course Outcomes
1	Prepare, read and interpret the drawings in a professional set up.
2	Know the procedures of submission of drawings and Develop working and submission drawings for building.
3	Plan of residential or public building as per the given requirements with details

## Course: GIS with Quantum GIS

Course Code: BCV456B

SI No	Course Outcomes
1	Use open source software for civil engineering applications
2	Various tools in QGIS software
3	Create thematic layers with attribute data
4	Generate maps for decision making



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## Course: Electronic Waste Management - Issues and Challenges

Course Code: BCV456C

SI No	Course Outcomes
1	Explain the concept of e-waste and its significance in the context of environmental sustainability
2	Identify and classify different types of e-waste and describe their components.
3	Recognize the potential health and environmental hazards associated with improper e-waste management.
4	Evaluate and apply appropriate methods for the collection, recycling, and disposal of e-waste.
5	Demonstrate knowledge of the existing policies, regulations, and frameworks for e-waste management in India

## Course: Technical Writing Skills

Course Code: BCV456D

SI No	Course Outcomes
1	Effectively communicate in technical matters.
2	Practice preparation of gist, abstract and notes from a technical article.
3	Prepare a business proposals and reports.
4	Write and respond in social media and write blogs.