

SANJEEVAN ENGINEERING AND TECHNOLOGY INSTITUTE Sanjeevan Knowledge City, Somwar Peth- Injole, Panhala, Tal. Panhala, Dist. Kolhapur Pin- 416 201. (Maharashtra) Phone : 0231 - 2686600, 21 Fax : 0231 - 2686629

EN 6315

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Department of civil engineering

SUBJECT	COURSE OUTCOMES
Mathematic III	CO 1: students will able to formulae and solve mathematical model of
(BTBS301)	civil engineering phenomenon in field of structure, fluid mechanic and
	soil mechanic
Mechanics of	CO 1: Perform the stress strain analysis
solids	CO 2: Draw force distribution diagram for members and determinate
(BTCVES 302)	beams
	CO 3: Visualize force deformation behaviour of bodies
	CO 4: Perform Failure analysis
	CO1: Understand types of masonry structures.
BUILDING	CO2: Understand composition of concrete and effect of various
CONSTRUCTION	parameters affecting strength.
(BTCVC 303)	CO3: Comprehend components of building and there purposes.
	CO4: Comprehend the precast and pre-engineered building construction
	techniques.
Hydraulics	CO 1: Calibrate the various flow measuring devices.
(BTCVC304)	CO 2: Determine the properties of fluid and pressure and their
	measurement.
	CO 3: Understand fundamentals of pipe flow, losses in pipe and analysis
	of pipe network.
	CO 4: Visualize fluid flow phenomena observed in Civil Engineering
	systems
Surveying	CO 1: Perform measurements in linear/angular methods.
(BTCVC305)	CO 2: Perform plane table surveying in general terrain.
	CO 3: Know the basics of leveling and Theodolite survey in elevation and
	angular measurements.



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SUBJECT	COURSE OUTCOMES
Building Planning and Drawing (BTCVC 401)	CO1: To plan buildings considering various principles of planning and bye laws of governing body.CO2: Comprehend various utility requirements in buildingsCO3: Understand various techniques for good acoustics
Environmental Engineering (BTCVC 402)	CO1: Apply the water treatment concept and methods.CO2: Prepare basic process designs of water and wastewater treatment plants.CO3: Apply the wastewater treatment concept and methods.CO4: Apply the solid waste management concepts.
Structural Mechanics– I (BTCVC 403)	 CO1: Describe the concept of structural analysis, degree of indeterminacy. CO2: Calculate slopes and deflection at various locations for different types of beams. CO3: Identify determinate and indeterminate trusses and calculate forces in the members of trusses Perform the distribution of the moments the in continuous beam and frame
Hydraulics II (BTCVC 405)	CO 1: Design open channel section in most economical way CO 2 : Know about the non-uniform flows in open channel and the characteristics of hydraulic jump CO 3: Understand application of momentum principle of impact of jets on plane
Engineering Geology (BTCVC 406)	 CO1 : Recognize different land forms which are formed by various geological agents CO 2: Identify origine texture and structure of various rocks and physical properties of minerals CO 3 : Emphasize distinct geological structure which have influence on civil engineering structure CO 4: understand how various geological conditions affect the design parameters of structure



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SUBJECT	COURSE OUTCOMES
Design of Steel	CO 1: Identify and compute the design loads and stresses developed in
Structure	steel member.
(BTCVC 501)	CO 2 : analyze and design various connections and identify the
	potential failure mode
	CO 3 : Analyze and design various tension, compression and flexure
	members.
	CO 4 : understand provision in relevant BIS codes
Structural	Course Outcomes: On completion of the course, the students will be
Mechanics-II	able to:
(BTCVC 502)	CO1: Have a basic understanding of matrix method of analysis and
	will be able to analyze the determinant structure.
	CO2: Have a basic understanding of the principles and concepts related
	to finite difference and finite element methods
	CO3: Have a basic understanding of concept of influence line
SOIL MECHANICS	CO1: Understand different soil properties and behaviour
(BTCVC 503)	CO2: Understand stresses in soil and permeability and seepage aspects.
	CO3: Develop ability to take up soil design of various foundations.
Transportation	CO 1: Comprehend various types of transportation systems and their
engineering	history of the development
(BTCVC 505)	CO2: Comprehend to various types of pavements
	CO3: Design the pavements by considering various aspects associated
	with traffic safety measures.



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Design of	CO1: Comprehend to the various design philosophies used for design of
Concrete	reinforced concrete.
Structures – I	CO2: Analyze and design the reinforced concrete slab using limit state and
(BTCVC 601)	working state method.
	CO2:Analyze and design the reinforced concrete beam using limit state and working state method.
	CO3:Analyze and design the reinforced concrete column using limit state and working state method
FOUNDATION	CO 1: To predict soil behaviour under the application of loads and come up
ENGINEERING	with appropriate solutions to foundation design queries.
(BTCVC 602)	CO2: Analyze the stability of slope by theoretical and graphical methods.
(,	CO3: Analyze the results of in-situ tests and transform measurements and
	associated uncertainties into relevant design parameters.
	CO4: Synthesize the concepts of allowable stress design, appropriate factors
	of safety, margin of safety, and reliability
Concrete	CO1: Understand the various types and properties of ingredients of concrete.
Technology	CO2: Understand effect of admixtures on the behavior of the fresh and
(BTCVC 603)	hardened concrete.
	CO3: Formulate concrete design mix for various grades of concrete.
Project	CO 1. Understand various steps in project Management, different types of
Management	charts.
(BTCVC604)	CO 2. Construct network by using CPM and PERT method.
	CO 3. Determine the optimum duration of project with the help of various
	time estimates.
	CO 4. Know the concept of engineering economics, economic comparisons,
	and linear break even analysis problems.
	CO 5. Understand the concept of total quality Management including Juran and Deming's philosophy
Waste Water	CO1: Determine the sewage characteristics and design various sewage
Treatments	treatment plants.
(BTCVE 605A)	CO2: Understand municipal water and wastewater treatment system design
	and operation.
	CO3: Apply environmental treatment technologies and design processes for
	treatment of industrial waste water.
	CO4: Understand the rural sanitation schemes.
BUILDING	CO1: To plan buildings considering various principles of planning and bye
PLANNING &	laws of governing body.
DESIGN	CO2: Comprehend various utility requirements in buildings
(BTCVC 606)	CO3: Understand various techniques for good acoustics.



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Design of Concrete	CO1: Able to identify the behavior, analyze and design of the beam
Structures II	sections subjected to torsion.
(BTCVC 701)	CO2: Able to analyze and design of axially and eccentrically loaded column and construct the interaction diagram for them.
	CO3: Understand various concepts, systems and losses in pre-
	stressing. CO4:Able to analyze and design the rectangular and symmetrical I-
	section pre-stressed beam/girders
Infrastructure	CO 1 : Know about the basics and design of various components of
Engineering	railway engineering
(BTCVC702)	CO 2 : Understand the types and functions of tracks, junctions and
	railway stations.
	CO 3 : Know about the aircraft characteristics, planning and
	components of airport
Water Resources	CO 4: Understand the types and components of docks and harbors.
Engineering	CO 1: Understand need of Irrigation in India and water requirement as per farming practice in India.
(BTCVC 703)	CO 2: Understand various irrigation structures and schemes.
	CO 3: Develop basis for design of irrigation schemes
Professional	CO 1: To discuss introduce methods of quantity surveying, costing, and
Practices	valuation.
(BTCVC 704)	CO 2: To facilitate students with concepts of costing involved in
	infrastructures.
	CO 3: To make students familiar with process involved during tendering & contracting.
Construction	CO 1: To study different methods of construction to successfully
Techniques	achieve the structural design with recommended specifications.
(BTCVE 705A)	CO 2: To involve the application of scientific and technological
	principles of planning, analysis, design and management to
	construction technology
Introduction to	CO1: Capture complexities in earthquake resistant design of structures
Earthquake	CO2: Grasp Nature of earthquake vibration and associated forces on
Engineering	structures
(BTCVC 706D)	CO3: Understand importance of designing the building to targeted
	seismic performance