

Shree Santkrupa Institute of Engineering and Technology

Department of Civil Engineering

Academic Year: 2018-19

Semester: III

Sr. No.	Course Code	Course Name	Lecture	Tutorial	Practical	Credit
1	BTBSC301	Mathematics – III	3	1	-	4
2	BTCVC302	Mechanics of Solids	3	1	-	4
3	BTCVC303	Hydraulics I	2	1	-	3
4	BTCVC304	Surveying I	2	1	-	3
5	BTCVC305	Building Construction	2	-	-	2
6	BTCVC306	Engineering Geology	2	-	-	2
7	BTHM303	Soft Skills Development	2	-	-	AU
8	BTCVL307	Hydraulics Laboratory I	-	-	2	1
9	BTCVL308	Surveying Laboratory I	-	-	2	1
10	BTCVL309	Building Construction - Drawings Laboratory	-	-	2	1
11	BTCVL310	Engineering Geology Lab	-	-	2	1
12	BTCVS311	Seminar on Topic of Field Visit to Foundation Work	-	-	1	AU
13	BTCVF312	Field Training / Internship/Industrial Training Evaluation (from semester II)	-	-	-	1

Semester: IV

Sr. No.	Course Code	Course Name	Lecture	Tutorial	Practical	Credit
1	BTCVC401	Hydraulics II	2	1	-	3
2	BTCVC402	Surveying – II	2	1	-	3
3	BTCVC403	Structural Mechanics-I	3	1	-	4
4	BTID405	Product Design Engineering	1	2	-	3
5	BTCVE404A	Numerical Methods in Engineering	3	-	-	3
6	BTCVC406	Engineering Management	1	-	-	AU
7	BTHM3401	Basic Human Rights	2	-	-	AU
8	BTCVL407	Hydraulics Laboratory II	-	-	2	1
9	BTCVL408	Surveying Laboratory II	-	-	4	2
10	BTCVL409	Mechanics of Solids Laboratory	-	-	2	1

11	BTCVM410	Mini Project	-	-	2	1
12	BTCVF411	Seminar on Topic of Field Visit to works involving Superstructure Construction	-	-	1	1

Course Outcomes

Semster : III						
1	Course Name		Engineering Mathematics – III			
	Course Code		BTBSC301			
	Course Outcome No	Course Outcome Statement	By the end of the course, students will be able to:			
	CO 1	Explain the application of the Laplace Transform to find solutions of system of linear equations arising in many engineering problem				
	CO 2	Demonstrate and apply the concept Laplace Transform				
	CO 3	Interpret Computation of Fourier Transform and their applications to engineering problems				
	CO 4	Identify Partial Differential Equations and Their Applications.				
CO 5	Evaluate Functions of Complex Variables.					
Semster : III						
2	Course Name		Mechanics of Solids			
	Course Code		BTCVC302			
	Course Outcome No	Course Outcome Statement	By the end of the course, the students will be able to:			
	CO 1	Explain the mechanical behaviour of engineering materials subjected to various types of stresses and compute the resulting strain and strain energy.				
	CO 2	Analyze the bending of various types of beams under static loading conditions and compute the shear stress distribution for different cross sections of beams.				
	CO 3	Show knowledge of principal planes, stresses and strains and analyse the elastic deformation of members and apply different theories of elastic failures				
	CO 4	Determine torsion for the circular shaft and analyse the crippling load and equivalent length for various types of columns of different end conditions.				
CO 5	Adapt failure analysis					
Semster : III						
3	Course Name		Hydraulics I			
	Course Code		BTCVC303			
	Course Outcome No	Course Outcome Statement	By the end of the course, the students will be able to:			
	CO 1	Illustrate the various flow measuring devices				
	CO 2	Determine the properties of fluid and pressure and their measurement				
	CO 3	Make use of different fluid kinematic and laminar flow equations to solve problems.				
	CO 4	Estimate the friction losses in laminar and turbulent flows				
CO 5	Explain fundamentals of pipe flow, losses in pipe and analysis of pipe network					

Semster : III		
4	Course Name	Surveying -I
	Course Code	BTCVC304
	Course Outcome No	Course Outcome Statement
		By the end of the course, the students will be able to:
	CO 1	Classify measurements in linear/angular methods.
	CO 2	Apply plane table surveying in general terrain.
	CO 3	Demonstrate the basics of leveling and Theodolite survey in elevation and angular measurements.
	CO 4	Justify field procedures in basic types of surveys, as part of a surveying team.
	CO 5	Examine drawing techniques in the development of a topographic map.
Semster : III		
5	Course Name	Building Construction
	Course Code	BTCVC305
	Course Outcome No	Course Outcome Statement
		By the end of the course, students will be able to :
	CO 1	Classify different types of masonry structures.
	CO 2	Explain the composition of concrete and effect of various parameters affecting strength.
	CO 3	Identify the components of building and there purposes.
	CO 4	Compare the types of flooring roofs.
	CO 5	Illustrate the precast & pre-engineered building construction techniques.
Semster : III		
6	Course Name	Engineering Geology
	Course Code	BTCVC 306
	Course Outcome No	Course Outcome Statement
		By the end of the course, the students will be able to:
	CO 1	Identify the different land forms which are formed by various geological agents.
	CO 2	Identify the origin ,texture and structure of various rocks and physical properties of minerals.
	CO 3	Illustrate distinct geological structures which have influence on the civil engineering structure.
	CO 4	Demonstrate how the various geological conditions affect the design parameters of structures.
	CO 5	Explain geological hazards, geohydrological characters of thr rocks, mass wasting process and good building stones.
Semster : III		
7	Course Name	Soft Skill Development
	Course Code	BTHM303
	Course Outcome No	Course Outcome Statement
		By the end of the course, student will be able to:

	CO 1	Demonstrates the skills to manage and express their emotions, thoughts, impulses and stress in effective ways.
	CO 2	Apply various time management techniques in productive manner.
	CO 3	Improve performance, personal growth, or a sense of purpose
	CO 4	Employ interpersonal communication skills to establish and enhance personal and work-based relationships.
	CO 5	Design an effective presentation and prepare participants to speak with greater control in front of others.
Semster : III		
8	Course Name	Hydraulics Laboratory I
	Course Code	BTCVL307
	Course Outcome No	Course Outcome Statement
		By the end of the course, the students will be able to:
	CO 1	Illustrate the various flow measuring devices
	CO 2	Determine the properties of fluid and pressure and their measurement
	CO 3	Explain Bernoulli's principles through simple illustrations.
	CO 4	Interpret hydrostatic law, principle of buoyancy and stability of a floating body
	CO 5	Illustrate of pipe flow, losses in pipe and analysis of pipe network
Semster : III		
9	Course Name	Surveying Laboratory I
	Course Code	BTCVL308
	Course Outcome No	Course Outcome Statement
		By the end of the course, the students will be able to:
	CO 1	Classify measurements in linear/angular methods.
	CO 2	Apply plane table surveying in general terrain.
	CO 3	Demonstrate the basics of leveling and Theodolite survey in elevation and angular measurements.
	CO 4	Justify field procedures in basic types of surveys, as part of a surveying team.
	CO 5	Examine drawing techniques in the development of a topographic map.
Semster : III		
10	Course Name	Building Construction - Drawings Laboratory
	Course Code	BTCVL309
	Course Outcome No	Course Outcome Statement
		By the end of the course, students will be able to :
	CO 1	Classify different types of masonry structures.
	CO 2	Identify the components of building and there purposes.
	CO 3	Compare the types of flooring roofs.
	CO 4	Illustrate the precast & pre-engineered building construction techniques.
	CO 5	Compare various building materials & their use.

Semster : III		
11	Course Name	Engineering Geology Laboratory
	Course Code	BTCVL310
	Course Outcome No	Course Outcome Statement
		By the end of the course, students will be able to :
	CO 1	Illustrate basic concept, common rocks, minerals, their significance and application in civil engineering.
	CO 2	Demonstrate tectonic effects, Geological structures and their significance in Civil Engineering.
	CO 3	Demonstrate topographical features and geological maps.
	CO 4	Illustrate the litholog subsurface.
	CO 5	Interpret Geological Structure Models.
Semster : III		
12	Course Name	Seminar on Topic of Field Visit to Foundation Work
	Course Code	BTCVS311
	Course Outcome No	Course Outcome Statement
		By the end of the course, students will be able to :
	CO 1	Establish the motive behind any topic of interest and create a technical presentation's methodology.
	CO 2	Comprehend concept of Foundation and methods.
	CO 3	Organize a detailed literature survey and bind a document with respect to technical publications
	CO 4	Constructive seminar presentation and improve soft skills.
Semster : IV		
1	Course Name	Hydraulics II
	Course Code	BTCVC401
	Course Outcome No	Course Outcome Statement
		By the end of the course, the students will be able to:
	CO 1	Design open channel sections in a most economical way.
	CO 2	Explain the non-uniform flows in open channel and the characteristics of hydraulic jump.
	CO 3	Illustrate the application of momentum principle of impact of jets on plane.
	CO 4	Solve the problems of gradually and rapidly varied flows in open channels under steady state condition
	CO 5	Illustrate the working principle of pumps and turbines
Semster : IV		
2	Course Name	Surveying – II
	Course Code	BTCVC402
	Course Outcome No	Course Outcome Statement
		By the end of the course, the students will be able to:
	CO 1	Clsssify different types of curves on roads and their preliminary survey.

CO 2	Demonstrate setting of curves, buildings, culverts and tunnels.
CO 3	Classify different geodetic methods of survey such as triangulation, trigonometric leveling.
CO 4	Explain modern advanced surveying techniques.
CO 5	Make use of sub tense bar for distance measurement.

Semster : IV

3 Course Name		Structural Mechanics - I
Course Code		BTCVC403
Course Outcome No	Course Outcome Statement	By the end of the course, students will be able to:
CO 1	Explain the concept of structural analysis, degree of indeterminacy.	
CO 2	Illustrate slopes and deflection at various locations for different types of beams.	
CO 3	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.	
CO 4	Assess the analysis of both sway and no-sway frame structures using the Slope-Deflection equations.	
CO 5	Apply the principle of virtual work to calculate the deflections of truss, beam and frame structures.	

Semster : IV

4 Course Name		Product Design Engineering
Course Code		BTID405
Course Outcome No	Course Outcome Statement	By the end of the course, students will be able to:
CO 1	Explain the product specification.	
CO 2	Classify the computer operation principles.	
CO 3	Utilize self-control to follow design guidelines in one's own work.	
CO 4	Develop design documentation for information exchange.	
CO 5	Design a system as a whole or a simple set of components.	

Semster : IV

5 Course Name		Numerical Methods in Engineering
Course Code		BTCVE404A
Course Outcome No	Course Outcome Statement	By the end of the course, students will be able to:
CO 1	Discuss the concept of Computation	
CO 2	Illustrate the concept of various Numerical Techniques	
CO 3	Evaluate the given Engineering problem using the suitable Numerical Technique	
CO 4	Develop the computer programming based on the Numerical Techniques	

Semster : IV

6 Course Name		Engineering Management
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Course Code		BTCVC406
Course Outcome No	Course Outcome Statement	By the end of the course, the students will be able to:
CO 1	Demonstrate the nuances of management functions.	
CO 2	Analyze the framework of a business organization.	
CO 3	Adapt an empirical approach toward business situations.	
CO 4	Apply various Management techniques.	
CO 5	Make a use of Material Management , inventory control for any construction site	
Semster : IV		
7	Course Name	Basic Human Rights
Course Code		BTHM3401
Course Outcome No	Course Outcome Statement	By the end of the course, the students will be able to:
CO 1	Expain the history of human rights.	
CO 2	Recall responsibilities of others caste, religion, region and culture.	
CO 3	Remember the importance of groups and communities in the society.	
CO 4	Analyse the philosophical and cultural basis and historical perspectives of human	
CO 5	Aware of their responsibilities towards the nation.	
Semster : IV		
8	Course Name	Hydraulics Laboratory II
Course Code		BTCVL407
Course Outcome No	Course Outcome Statement	By the end of the course, the students will be able to:
CO 1	Design open channel sections in a most economical way.	
CO 2	Design the different irrigation structures surplus weir	
CO 3	Explain the non-uniform flows in open channel and the characteristics of hydraulic jump.	
CO 4	Solve the problems of gradually and rapidly varied flows in open channels under steady state condition	
CO 5	Illustrate the working principle of pumps and turbines	
Semster : IV		
9	Course Name	Surveying Laboratory II
Course Code		BTCVL408
Course Outcome No	Course Outcome Statement	By the end of the course, the students will be able to:
CO 1	Clssify different types of curves on roads and their preliminary survey.	
CO 2	Demonstrate setting of curves, buildings, culverts and tunnels.	

	CO 3	Classify different geodetic methods of survey such as triangulation, trigonometric leveling.
	CO 4	Explain modern advanced surveying techniques.
	CO 5	Make use of sub tense bar for distance measurement.
Semster : IV		
10	Course Name	Mechanics of Solids Laboratory
	Course Code	BTCVL409
	Course Outcome No	Course Outcome Statement
		By the end of the course, the students will be able to:
	CO 1	Assess the young's modulus for ductile materials.
	CO 2	Analyze the various points on stress strain diagram.
	CO 3	Analyse the compression strength of different materials
	CO 4	Test the shear stress of different materials. .
	CO 5	Illustrate failure analysis
Semster : IV		
11	Course Name	MINI PROJECT
	Course Code	BTCVM410
	Course Outcome No	Course Outcome Statement
		By the end of the course, students will be able to :
	CO 1	Apply newly learned skills in the technical field chosen for project development.
	CO 2	Identify, discuss and justify the technical aspects of the chosen project with a comprehensive and systematic approach.
	CO 3	Replicate, enhance and refine technical aspects for engineering projects
	CO 4	Develop technological initiatives as an individual or as a team.
Semster : IV		
12	Course Name	Seminar on Topic of Field Visit to works involving Superstructure Construction
	Course Code	BTCVF411
	Course Outcome No	Course Outcome Statement
		By the end of the course, students will be able to :
	CO 1	Establish the motive behind any topic of interest and create a technical presentation's methodology.
	CO 2	Comprehend concept of Superstructure Construction
	CO 3	Organize a detailed literature survey and build a document with respect to technical publications
	CO 4	Constructive seminar presentation and improve soft skills.