

**DEPARTMENT OF CIVIL ENGINEERING****Academic Year 2024-25****Semester- ODD**Structure of Course

Class	TY Civil semester V
Course Code and Course Title	BTCVC501, Design of Steel Structures
Prerequisite/s	Basic Civil Engineering, Mechanics of Solid
Teaching Scheme: Lecture/Tutorial	02/01
Credits	3
Evaluation Scheme: CA/MSE/ESE	20/20/60

Course Outcomes:

Course Outcomes (COs): After successful completion of this course, the student will be able to:		Blooms Level
BTCVC501_1	Compute the design loads and the stresses developed in the steel member.	L3
BTCVC501_2	Analyze and design the various connections and identify the potential failure modes.	L4
BTCVC501_3	Analyze and design various tension, compression and flexural members.	L4
BTCVC501_4	Discuss provisions in relevant BIS Codes.	L2

Mapping of CO's with PO's and PSO's:

Course Outcomes	Program Outcomes														
	1	2	3	4	5	6	7	8	9	10	11	12	PSO1	PSO2	PSO3
BTCVC501_1	3	2	2						2	2		2	2	3	2
BTCVC501_2	3	2	2					1	2	2		2	2	2	2
BTCVC501_3	3	3	3					2	2	2		2	2	2	2
BTCVC501_4	2	2	2					2		2		3		2	1
Total	11	9	7					5	6	8		9	6	9	7
Average	2.75	2.25	2.33					1.67	2.00	2.00		2.25	2.00	2.25	1.75
BTCVC501	2	2	2					2	2	2		2	2	2	2

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Course CoordinatorVerified by
Academic CoordinatorApproved by
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Civil Engineering

Yashoda Technical Campus, Satara

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**Department of Civil Engineering****Academic Year 2024-25****Semester- ODD****Structure of Course**

Class	TY. Sem. – V
Course Code and Course Title	BTCVC502 , Geotechnical Engineering
Prerequisite/s	Engineering Geology
Teaching Scheme: Lecture/Tutorial	03/01
Credits	4
Evaluation Scheme: CA/MSE/ESE	20/20/60

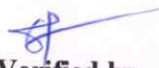
Course Outcomes:

Course Outcomes (COs): Upon successful completion of this course, the student will be able to:		Blooms Level
BTCVC502_1	Explain different soil properties and behavior.	L3
BTCVC502_2	Discuss stresses in soil and permeability and seepage aspects.	L2
BTCVC502_3	Develop ability to take up soil design of various foundations.	L3
BTCVC502_4	Apply Earth Pressure and Consolidation aspects for design of various foundations.	L3

Mapping of CO's with PO's and PSO's:

Course Outcomes	Program Outcomes												PSO 1	PSO 2	PS O3
	1	2	3	4	5	6	7	8	9	10	11	12			
BTCVC502_1	3	3	2	2			2		2			3	2	2	2
BTCVC502_2	3	3	2	2			2		2			3	2	2	2
BTCVC502_3	3	3	2	2			2		2			3	2	2	2
BTCVC502_4	3	3	2	2			2		2			3	2	2	2
Total	12	12	8	8			8		8			12	8	8	8
Average	3	3	2	2			2		2			3	2	2	2
BTCVC502	3	3	2	2			2		2			3	2	2	2


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Yashoda Technical Campus

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Faculty of Engineering

DEPARTMENT OF CIVIL ENGINEERING

Academic Year 2024-25

Semester- ODD

Structure of Course

Class	TY. Sem. – V
Course Code and Course Title	BTCVC503, Structural mechanics II
Prerequisite/s	Strength of Material and Structural Mechanics I
Teaching Scheme: Lecture/Tutorial	02/01
Credits	3
Evaluation Scheme: CA/MSE/ESE	20/20/60

Course Outcomes:

Course Outcomes (COs):		Blooms Level
Upon successful completion of this course, the student will be able to:		
BTCVC503_1	Analyze the determinant structure by matrix method.	L4
BTCVC503_2	Explain the principles and concepts related to finite element methods.	L2
BTCVC503_3	Analyze the determinant structure by influence line diagram.	L4
BTCVC503_4	Analyze cables, arches and suspension bridges	L4

Mapping of CO's with PO's and PSO's:

Course Outcomes	Program Outcomes														
	1	2	3	4	5	6	7	8	9	10	11	12	PSO1	PSO2	PSO3
BTCVC503_1	3	3	2	2	3					2		2		3	2
BTCVC503_2	3	2	2	2	3					2		2		2	2
BTCVC503_3	3	3	2	3	3					2		2		3	2
BTCVC503_4	3	3	3	3	3		2			2		2	2	3	3
Total	12	11	9	10	12		2			8		8	2	11	9
Average	3	2.75	2.25	2.5	3		2			2		2	2	2.75	2.25
BTCVC503	3	3	2	2	3		2			2		2	2	3	2

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**DEPARTMENT OF CIVIL ENGINEERING****Academic Year 2024-25****Semester- ODD****Structure of Course**

Class	T.Y. Sem. – V
Course Code and Course Title	BTCVC504 Concrete Technology
Prerequisite/s	Basic Civil Engineering
Teaching Scheme: Lecture/Tutorial	02/00
Credits	2
Evaluation Scheme: CA/MSE/ESE	20/20/60

Course Outcomes:

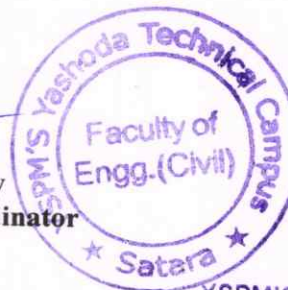
Course Outcomes (COs): Upon successful completion of this course, the student will be able to:		Blooms Level
BTCVC504_1	Discuss the various types and properties of ingredients of concrete.	L3
BTCVC504_2	Explain the effect of admixtures on the behavior of the concrete.	L3
BTCVC504_3	Prepare concrete design mix for various grades of concrete.	L3
BTCVC504_4	Describe the procedure of determining the properties of fresh and hardened concrete.	L3

Mapping of CO's with PO's and PSO's:

Course Outcomes	Program Outcomes														
	1	2	3	4	5	6	7	8	9	10	11	12	PSO1	PSO2	PSO3
BTCVC504_1	2	1							2	2		2		2	2
BTCVC504_2	2	2					2		2	2		2		1	1
BTCVC504_3	2	2			2		2		2	2		2	1	2	2
BTCVC504_4	2				2				2	2		2	1	2	2
Total	8	5			4		4		8	8		8	2	7	7
Average	2	1.67			2		2		2	2		2	1.33	1.75	1.75
BTCVC504	2	2			2		2		2	2		2	1	2	2

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Department of Civil Engineering

Academic Year 2024-25

Semester- ODD

Structure of Course

Class	T.Y. Sem. -V
Course Code and Course Title	BTHM 505 Project management
Prerequisite/s	Mathematics
Teaching Scheme: Lecture	03
Credits	03
Evaluation Scheme: CA / MSE / ESE	20/20/60

Course Outcomes:

Course Outcomes (COs):		Blooms Level
Upon successful completion of this course, the student will be able to:		
BTHM 505_1	Explain various steps in project Management with different types of charts.	L3
BTHM 505_2	Construct network by using CPM and PERT method.	L3
BTHM 505_3	Determine the optimum duration of project with the help of various time estimates,	L3
BTHM 505_4	Explain the concept of engineering economics, economic comparisons, and linear break-even analysis problems.	L2
BTHM 505_5	Explain the concept of total quality Management including Juran and Deming's philosophy.	L2

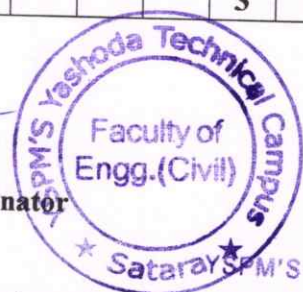
Mapping of CO's with PO's and PSO's:

Course Outcomes	Programme Outcomes														
	1	2	3	4	5	6	7	8	9	10	11	12	PSO1	PSO2	PSO3
BTHM 505_1	3	2									3	3	2	2	2
BTHM 505_2	3	2									3	2	2	3	2
BTHM 505_3	3	2									3	2	2	3	2
BTHM 505_4	2										3	2	2	2	2
BTHM 505_5	2										3	2	2	2	2
Total	13	6									15	10	10	12	10
Average	2.6	2									3	2	2	2.4	2
BTHM 505	3	2									3	2	2	3	2

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**DEPARTMENT OF CIVIL ENGINEERING****Academic Year 2024-25****Semester- ODD****Structure of Course**


Class	T.Y. Sem. – V
Course Code and Course Title	BTCVPE506G Material Testing & Evaluation
Prerequisite/s	Basic Civil Engineering, Building Construction Drawing
Teaching Scheme: Lecture	3
Credits	3
Evaluation Scheme: CA/MSE/ESE	20/20/60

Course Outcomes:

Course Outcomes (COs): Upon successful completion of this course, the student will be able to:		Blooms Level
BTCVPE506G_1	Explain various types, uses, advantages and disadvantages of basic construction materials.	L3
BTCVPE506G_2	Describe the concrete materials as per IS standards.	L2
BTCVPE506G_3	Discuss various composite materials used in construction.	L2
BTCVPE506G_4	Explain various types of construction techniques, admixtures, epoxy, in various types of concretes.	L3
BTCVPE506G_5	Interpret various concrete testing techniques used in construction.	L3

Mapping of CO's with PO's and PSO's:

Course Outcomes	Program Outcomes														
	1	2	3	4	5	6	7	8	9	10	11	12	PSO1	PSO2	PSO3
BTCVPE506G_1	2					1	1	1			1	2	1	2	2
BTCVPE506G_2	2					1	1	1				2	1	2	1
BTCVPE506G_3	2					1	12				1	2	1	2	2
BTCVPE506G_4	2					1	12				1	2	1	2	2
BTCVPE506G_5	2					1	12				1	2	1	2	2
Total	10					5	4	2				8	5	8	7
Average	2					1	2	1			1	2	1	2	1.75
BTCVPE506G	2					1	2	1			1	2	1	2	2


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**Department of Civil Engineering**
Academic Year 2024-25**Semester-ODD****Structure of Course**


Class	TY. Sem. – V
Course Code and Course Title	BTCVES507 Software Applications in Civil Engineering
Prerequisite/s	--
Teaching Scheme: Lecture	02
Credits	Audit
Evaluation Scheme: CA	50

Course Outcomes:

Course Outcomes (COs): Upon successful completion of this course, the student will be able to:		Blooms Level
BTCVES507_1	Analyze and design RCC structure components.	L4
BTCVES507_2	Explain several software's used in civil engineering.	L3
BTCVES507_3	Apply different software's for various issues in civil engineering	L3

Mapping of CO's with PO's and PSO's:

Course Outcomes	Program Outcomes															
	1	2	3	4	5	6	7	8	9	10	11	12	PSO 1	PSO 2	PS O3	
BTCVES507_1	3	3	2	2	2			2	2	2	2	2	2	2	2	2
BTCVES507_2	3	3	2	2	2			2	2	2	2	2	2	2	2	2
BTCVES507_3	3	3	2	2	2			2	2	2	2	2	2	2	2	2
Total	9	9	6	6	6			6	6	6	6	6	6	6	6	6
Average	3	3	2	2	2			2	2	2	2	2	2	2	2	2
BTCVP610	3	3	2	2	2			2	2	2	2	2	2	2	2	2


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DEPARTMENT OF CIVIL ENGINEERING

Academic Year 2024-25

Semester- ODD

Structure of Course

Class	TY Civil semester V
Course Code and Course Title	BTCVC508, SDD of Steel Structures Lab
Prerequisite/s	Mechanics of Solid, Design of Steel Structures
Teaching Scheme: Practical	02
Credits	1
Evaluation Scheme: CA/ESE	20/30

Course Outcomes:

Course Outcomes (COs): After successful completion of this course, the student will be able to:		Blooms Level
BTCVL508_1	Calculate different loads and perform load combination analysis for different Steel Structures as per codal provisions.	L3
BTCVL508_2	Apply the principles, procedures and current code requirements for the design of Compression, Tension members	L3
BTCVL508_3	Practice in a group for design-oriented task related to project.	L3
BTCVL508_4	Develop skills of technical report writing and comprehension of results.	L3

Mapping of CO's with PO's and PSO's:

Course	Program Outcomes														
	1	2	3	4	5	6	7	8	9	10	11	12	PSO1	PSO2	PSO3
BTCVL508_1	2	2	2	2		1	1	2	2			2	1	2	2
BTCVL508_2	2	2	2					2				2	2	2	
BTCVL508_3	3	3							3	2	2	3		2	2
BTCVL508_4										3	2	3		2	2
Total	7	7	4	2		1	1	4	5	5	4	10	3	8	6
Average	2.33	2.33	2.00	2.00		1	1	2.00	2.50	2.50	2.00	2.50	1.50	2.00	2.00
BTCVC508	2	2	2	2		1	1	1	3	3	2	3	2	2	2

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**Department of Civil Engineering**
Academic Year 2024-25**Semester- ODD****Structure of Course**

Class	TY. Sem. – V
Course Code and Course Title	BTCVL509 , Geotechnical Engineering Lab
Prerequisite/s	Engineering Geology
Teaching Scheme: Practical	02
Credits	1
Evaluation Scheme: CA/ESE	20/30


Course Outcomes:

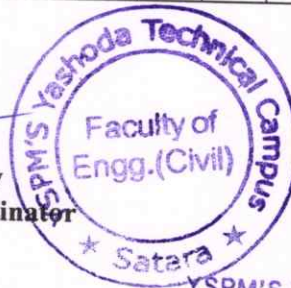
Course Outcomes (COs): Upon successful completion of this course, the student will be able to:		Blooms Level
BTCVL509_1	Examine different engineering properties of soil.	L3
BTCVL509_2	Classify soils based on standard geotechnical engineering practices.	L4
BTCVL509_3	Demonstrate Laboratory compaction and in-place density tests.	L4
BTCVL509_4	Perform and interpret direct shear tests and estimate shear strength parameters.	L4

Mapping of CO's with PO's and PSO's:

Course Outcomes	Program Outcomes														
	1	2	3	4	5	6	7	8	9	10	11	12	PSO 1	PSO 2	PSO 3
BTCVL509_1	3	3	2	2			2		2	2		2	2	2	2
BTCVL509_2	3	3	2	2			2		2	2		2	2	2	2
BTCVL509_3	3	3	2	2			2		2	2		2	2	2	2
BTCVL509_4	3	3	2	2			2		2	2		2	2	2	2
Total	12	12	8	8			8		8	8		8	8	8	8
Average	3	3	2	2			2		2	2		2	2	2	2
BTCVL509	3	3	2	2			2		2	2		2	2	2	2


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Class	T.Y. Sem. – V
Course Code and Course Title	BTCVL510 Concrete Technology Lab.
Prerequisite/s	Basic Civil Engineering
Teaching Scheme: Practical	02
Credits	1
Evaluation Scheme: CA/ESE	20/30

Course Outcomes:

Course Outcomes (COs): Upon successful completion of this course, the student will be able to:		Blooms Level
BTCVL510	Examine tests on ingredients of concrete.	L3
BTCVL510	Examine tests on fresh and hardened concrete.	L3
BTCVL510	Practice trial concrete mixes by various methods.	L3
BTCVL510	Compute Non-Destructive Test on concrete structural members.	L3

Mapping of CO's with PO's and PSO's:

Course Outcomes	Program Outcomes														
	1	2	3	4	5	6	7	8	9	10	11	12	PSO1	PSO2	PSO3
BTCVL510	3	2						2	2	2		2		2	2
BTCVL510	2	2			2	2		2	3	2		2	2	2	2
BTCVL510	3	2				2	2	2	2	2		2		2	2
BTCVL510	2	2			2	2		2	2	2		2		2	2
Total	10	8			4	6	2	8	9	8		8	2	8	8
Average	2.5	2			2	2	2	2	2.25	2		2	2	2	2
BTCVL510	3	2			2	2	2	2	2	2		2	2	2	2

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