

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

Class	Final Year Civil semester VII
Course Code and Course Title	BTCVC701, Design of RC & PSC Structures
Prerequisite/s	Mechanics of Solid, Design of RC Structures
Teaching Scheme: Lecture/Tutorial	03/01
Credits	3
Evaluation Scheme: CA/MSE/ESE	20/20/60

Course Outcomes:

Course Outcomes (COs):		Blooms Level
After successful completion of this course, the student will be able to:		
BTCVC701_1	Analyse and design of the beam sections subjected to torsion.	L4
BTCVC701_2	Analyse and design of axially and eccentrically loaded column and construct the interaction diagram for them.	L4
BTCVC701_3	Discuss various concepts, systems and losses in pre-stressing.	L2
BTCVC701_4	Analyse and design the rectangular and symmetrical I-section pre-stressed beam / girders.	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
BTCVC701_1	2	2	2					2	2	2		2		2	2
BTCVC701_2	2	2	2					2	2	2		2	1	2	2
BTCVC701_3	2	2						2	2	2		2	2	2	2
BTCVC701_4	3	2	2					2	2	2		2	1	2	2
Total	9	8	6					8	8	8		8	4	8	8
Average	2.25	2.00	2.00					2.00	2	2.00		2.00	1.33	2.00	2.00
BTCVC701	2	2	2					1	2	2		2	1	2	2

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Civil Engineering
YSPM'S Yashoda Technical Campus, Satara**Vision:** To become centre of excellence by producing Civil engineers having research and development activity, sound technical knowledge, professional skills and social awareness to serve society.**Mission:**

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

Class	Final Year Sem. – VII
Course Code and Course Title	BTCVC702 Infrastructure Engineering
Prerequisite/s	Basic Civil Engineering
Teaching Scheme: Lecture	03
Credits	3
Evaluation Scheme: CA/MSE/ESE	20/20/60

Course Outcomes:

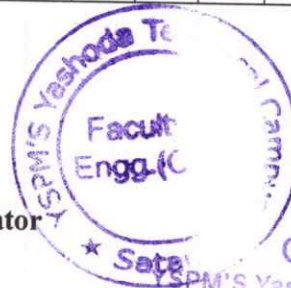
Course Outcomes (COs): Upon successful completion of this course, the student will be able to:		Blooms Level
BTCVC702_1	Discuss about the basics and design of various components of railway engineering, mass rapid transit system.	L2
BTCVC702_2	Explain the types and functions of tracks, junctions and railway stations.	L3
BTCVC702_3	Describe the aircraft characteristics, planning and components of airport engineering.	L2
BTCVC702_4	Explain the types and components of docks and harbors.	L3
BTCVC702_5	Review the tunnel engineering.	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
BTCVC702_1	2								2	2		2		2	2
BTCVC702_2	2	2	2						2	2		2		2	2
BTCVC702_3	1													2	1
BTCVC702_4	1											1		2	1
BTCVC702_5	2		2				2					1		2	1
Total	8	2	4				2		4	4		6		10	7
Average	1.6	2	2				2		2	2		1.5		2	1.4
BTCVC702	2	2	2				2		2	2		1		2	1

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

Class	B. Tech. Sem. -VI
Course Code and Course Title	BTCVC703 Construction Techniques
Prerequisite/s	Engineering Geology, Geotechnical Engineering, Concrete Technology
Teaching Scheme: Lecture	03
Credits	03
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
BTCVC703_1	Discuss the planning of new project with site accessibility and services required.	L2
BTCVC703_2	Choose the various civil construction equipment's.	L3
BTCVC703_3	Explain with layout of RMC plant, production, capacity and operation process.	L2
BTCVC703_4	Identify various aspect of road construction, construction of diaphragm walls, railway track construction etc.	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	PSO 3	
BTCVC703_1	2							2				2	2		3	2
BTCVC703_2	3							2				2	2	2	3	2
BTCVC703_3	2							2				2			3	2
BTCVC703_4	2							2				2	2	3	3	2
Total	9							8				4	8	4	12	8
Average	2.5							2				2	2	2	3	2
BTCVC703	3							2				2	2	2	3	2


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

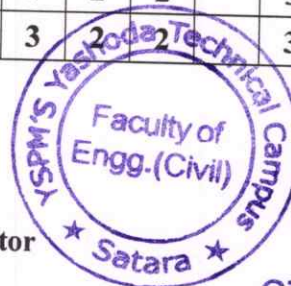
Class	B Tech Sem. – VII
Course Code and Course Title	BTCVC704 Professional Practices
Prerequisite/s	Quantity Surveying
Teaching Scheme: Lecture/Tutorial	03/01
Credits	4
Evaluation Scheme: CA/ESE	20/20/60

Course Outcomes:

Course Outcomes (COs): Upon successful completion of this course, the student will be able to:		Blooms Level
BTCVC704_1	Prepare estimate for various structures considering rates analysis.	L3
BTCVC704_2	Calculate quantities of various item work as per specifications and prepare bills.	L3
BTCVC704_3	Discuss various types of contracts, accounts and methods in PWD.	L3
BTCVC704_4	Prepare and discuss tender and tender documents.	L3
BTCVC704_5	Compare various methods of valuation and factors affecting for valuation.	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	PS O3
BTCVC704_1	3	3	2					3	2	2		3	2	2	2
BTCVC704_2	3	3	2					3	2	2		3	2	2	2
BTCVC704_3	3	3	2					3	2	2		3	2	2	2
BTCVC704_4	3	3	2					3	2	2		3	2	2	2
BTCVC704_5	3	3	2					3	2	2		3	2	2	2
Total	15	15	10					15	10	10		15	10	10	10
Average	3	3	2					3	2	2		3	2	2	2
BTCVC704	3	3	2					3	2	2		3	2	2	2

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Faculty of Engineering

DEPARTMENT OF CIVIL ENGINEERING

Academic Year 2024-25

Semester- ODD

Structure of Course

Class	B. Tech. Sem. – VII
Course Code and Course Title	BTCVE705I., Bridge Engineering
Prerequisite/s	Steel Structure Design, Design of Reinforced Concrete Structures, Transportation Engineering
Teaching Scheme: Lecture	3
Credits	3
Evaluation Scheme: CA/MSE/ESE	20/20/60

Course Outcomes:

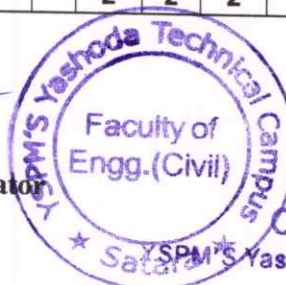
Course Outcomes (COs):		Blooms Level
Upon successful completion of this course, the student will be able to:		
BTCVE705I_1	Explain various components of bridges and its types.	L3
BTCVE705I_2	Discuss site selection criteria for construction of bridge.	L2
BTCVE705I_3	Calculate various forces acting on bridges	L3
BTCVE705I_4	Analyze bridge super structures using different analysis techniques.	L4
BTCVE705I_5	Describe importance of different types of bridge bearings.	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
BTCVE705I_1	3	2	2		2		2			2		2	2	3	2
BTCVE705I_2	2	3	2	2	2		3			2	2	2	3	3	2
BTCVE705I_3	3	3	2	2	3		2			2	2	2	2	3	2
BTCVE705I_4	3	3	3	3	3		2			3	2	3	2	3	3
BTCVE705I_5	2	2	2	2	2		2			2		2	2	2	2
Total	13	13	11	9	12		11			11	6	11	11	14	11
Average	2.6	2.6	2.2	2.25	2.4		2.2			2.2	2	2.2	2.2	2.8	2.2
BTCVE705I	3	3	2	2	2		2			2	2	2	2	3	2

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

Class	B Tech. Sem. – VII
Course Code and Course Title	BTCVOE706G , Bamboo Construction Technology
Prerequisite/s	Material Testing and Evaluation
Teaching Scheme: Lecture	03
Credits	Audit

Course Outcomes:

Course Outcomes (COs): Upon successful completion of this course, the student will be able to:		Blooms Level
BTCVOE706G _1	Explain need of Bamboo in construction.	L3
BTCVOE706G _2	Discuss bamboo as a construction material.	L2
BTCVOE706G _3	Develop construction techniques in bamboo	L3
BTCVOE706G _4	Apply knowledge of Bamboo anatomy and Properties in Practical design of Bamboo Projects.	L3

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

Course Outcomes	Program Outcomes												PSO 1	PSO 2	PSO 3
	1	2	3	4	5	6	7	8	9	10	11	12			
BTCVOE706G _1	3	3	2		2	3	3		2			3	2	2	2
BTCVOE706G _2	3	3	2		2	3	3		2			3	2	2	2
BTCVOE706G _3	3	3	2		2	3	3		2			3	2	2	2
BTCVOE706G _4	3	3	2		2	3	3		2			3	2	2	2
Total	12	12	8		8	12	12		8			12	8	8	8
Average	3	3	2		2	3	3		2			3	2	2	2
BTCVOE706G	3	3	2		2	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	B Tech. Sem. – VII
Course Code and Course Title	BTHM707A Essence of Indian Traditional Knowledge
Prerequisite/s	--
Teaching Scheme: Lecture	02
Credits	Audit
Evaluation Scheme: CA/ESE	-

Course Outcomes:

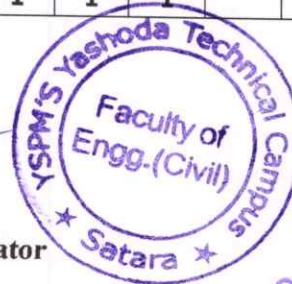
Course Outcomes (COs):		Blooms Level
Upon successful completion of this course, the student will be able to:		
BTHM707A_1	Discuss the concept of an education system, protecting traditional knowledge, Artistic Traditions and its importance.	L2
BTHM707A_2	Explain Indian Linguistic Tradition and Holistic Health care activities.	L3
BTHM707A_3	Observe Philosophical Traditions in ancient India.	L2
BTHM707A_4	Explain the concept of ancient Indian science and technology in different sectors.	L3
BTHM707A_5	Analyze the case studies of development of engineering services.	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
BTHM707A_1						1		1	1	1		2			
BTHM707A_2						1		1	1	1		2		1	
BTHM707A_3						1		1	1	1		1		1	
BTHM707A_4						1		1	1	1		1			
BTHM707A_5						1		1	1	1		1			
Total						5		5	5	5		7		2	
Average						1		1	1	1		1.4		1	
BTHM707A						1		1	1	1		1		1	


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Faculty of Engineering

DEPARTMENT OF CIVIL ENGINEERING

Academic Year 2024-25

Semester- ODD

Structure of Course

Class	Final Year Civil semester VII
Course Code and Course Title	BTCVC708, Design & Drawing of Pre-stressed Concrete
Prerequisite/s	Mechanics of Solid, Design of RC & PSC Structures
Teaching Scheme: Practical	02
Credits	1
Evaluation Scheme: CA/ESE	30/20

Course Outcomes:

Course Outcomes (COs):		Blooms Level
After successful completion of this course, the student will be able to:		
BTCVL708_1	Classify different types of losses.	L2
BTCVL708_2	Explain various concepts, systems and in pre-stressing.	L3
BTCVL708_3	Compute the behaviour of the beam sections subjected to torsion.	L3
BTCVL708_4	Design and drawing of slab and girders.	L4
BTCVL708_5	Discuss technical information by means of report and presentation.	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
BTCVL708_1	2	1							2	2		2	1	2	2
BTCVL708_2	2	2						2	2	2		2		2	
BTCVL708_3	3	2	2						2	2		2		2	2
BTCVL708_4	2	2	2						2	2		2		2	
BTCVL708_5									2	3		2		2	
Total	9	7	4					2	10	11		10	2	10	4
Average	2.25	1.75	2.00					2.00	2.00	2.20		2.00	1.00	2.00	2.00
BTCVL708	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	B Tech Sem. – VII
Course Code and Course Title	BTCVL709 Professional Practices Laboratory
Prerequisite/s	Quantity Surveying
Teaching Scheme: Practical	02
Credits	1
Evaluation Scheme: CA/ESE	30/20

Course Outcomes:

Course Outcomes (COs):		Blooms Level
After successful completion of this course, the student will be able to:		
BTCVL709	Calculate estimates for different types of structure.	L3
BTCVL709	Prepare the rate analysis as per specification of task.	L3
BTCVL709	Prepare different various types of contract and tender documents.	L3
BTCVL709	Calculate land & building valuation.	L3
BTCVL709	Calculate estimates for different types of structure.	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	PSO 3
BTCVL709_1	3	3	2		2	3	3	3	2			3	2	2	2
BTCVL709_2	3	3	2		2	3	3	3	2			3	2	2	2
BTCVL709_3	3	3	2		2	3	3	3	2			3	2	2	2
BTCVL709_4	3	3	2		2	3	3	3	2			3	2	2	2
Total	12	12	8		8	12	12	12	8			12	8	8	8
Average	3	3	2		2	3	3	3	2			3	2	2	2
BTCVL709	3	3	2		2	3	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	B tech. Sem. – VII
Course Code and Course Title	BTCVS710 Seminar
Prerequisite/s	Internship
Teaching Scheme: Practical	02
Credits	01
Evaluation Scheme: ESE	50

Course Outcomes:

Course Outcomes (COs): Upon successful completion of this course, the student will be able to:		Blooms Level
BTCVS710_1	Discuss road components and materials.	L2
BTCVS710_2	Identify construction machinery and their functions.	L2
BTCVS710_3	Explain road construction phases and their purpose.	L3
BTCVS710_4	Apply road construction knowledge to site visits.	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	PSO 3
BTCVS710_1	3	3	2		2			2	2	2	2	2	2	2	2
BTCVS710_2	3	3	2		2			2	2	2	2	2	2	2	2
BTCVS710_3	3	3	2		2			2	2	2	2	2	2	2	2
BTCVS710_4	3	3	2		2			2	2	2	2	2	2	2	2
Total	12	12	8		8			8	8	8	8	8	8	8	8
Average	3	3	2		2			2	2	2	2	2	2	2	2
BTCVS710	3	3	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	Final Year Civil semester VII
Course Code and Course Title	BTCVP711, Project Stage I
Prerequisite/s	Basic Civil Engineering, Mini Project, Seminar
Teaching Scheme: Practical	4
Credits	3
Evaluation Scheme: ESE	50

Course Outcomes:

Course Outcomes (COs): After successful completion of this course, the student will be able to:		Blooms Level
BTCVP711_1	Identify thrust area in civil engineering and finalize problem statement.	L2
BTCVP711_2	Explain the literature to search for technical information from various resources on selected problem.	L3
BTCVP711_3	Practice work as an individual or in a team in development of technical projects.	L3
BTCVP711_4	Apply project management skills.	L3
BTCVP711_5	Summarize technical information by means of report and presentation.	L5

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	PS	PS	PS
BTCVP71	3	2	2	2	1	2	2	2	2	2		2	2	2	3
BTCVP71	1	2	2	2	2			2	2	2	1	2	1	2	2
BTCVP71								2	3	2	2	2	2	2	2
BTCVP71	1				2	2	1	2	2	2	3	2	2		2
BTCVP71					2	2	1		3	3		2			2
Total	5	4	4	4	7	6	4	8	12	11	6	10	7	6	11
Average	1.6	2.0	2.0	2.0	1.7	2.0	1.3	2.0	2.4	2.2	2.0	2.0	1.75	2.00	2.20
BTCVP71	2	2	2	2	2	2	1	2	2	2	2	2	2	2	2

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