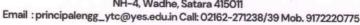




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Faculty of Engineering

### **Department of Civil Engineering**

Academic Year 2024-25

Semester- EVEN

Structure of Course

Class	SY. Sem. – I								
Course Code and Course Title	BTCVC401, Building Planning and Drawing								
Prerequisite/s	Basic Civil Engineering,								
Teaching Scheme: Lecture	02								
Credits	2								
Evaluation Scheme: CA/MSE/ESE	20/20/60								

#### **Course Outcomes:**

Course Outcomes (Outcomes	COs): pletion of this course, the student will be able to:	Blooms				
BTCVC401_1	Discuss a building plan considering various principles of building plannings.	L2				
BTCVC401_2	Analyse building plan considering various byelaws of concern governing body.	L4				
BTCVC401_3	Discuss various utility requirements in buildings.	L2				
BTCVC401_4	BTCVC401_4 Relate various techniques for good acoustics.					
BTCVC401_5 Observe various techniques of green buildings.						

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

Course Outcomes		Program Outcomes														
Course Outcomes	1	2	3	4	5	6	7	8	9	10	11	12	PSO 1	PSO 2	PS O3	
BTCVC401_1	2		3				2			2		2	-	2	2	
BTCVC401_2	3	3	3	2	2	2	3	2		2		2	2	3	2	
BTCVC401_3	2		2			2	2			2		2		2	2	
BTCVC401_4	2		2		2	2	2			2		2		2		
BTCVC401_5	2		2		2	2	3			2		2	2	3	2	
Total	11	3	12	2	6	8	12	2		10					2	
Average	2.2	3	2.4	2	2	2	2.4	2				10	4	12	10	
BTCVC401	2	3	2	2	2	2	2.4	2		2		2	2	2.4	2	

Prepared by Course Coordinator

Verified by Academic Coordinator Faculty of

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Faculty of Engineering

#### DEPARTMENT OF CIVIL ENGINEERING

#### Academic Year 2024-25

Semester-ODD

#### Structure of Course

Class	SY Civil semester III
Course Code and Course Title	BTCVC402 Environmental Engineering
Prerequisite/s	Basic Civil Engineering, Engineering Chemistry
Teaching Scheme: Lecture	02
Credits	2
Evaluation Scheme: CA/MSE/ESE	20/20/60

#### **Course Outcomes:**

Course Outcomes (	COs):	Blooms
BTCVC402_1	Apply the water treatment concepts & methods.	L3
BTCVC402_2	Discuss basic process design of water & waste water treatment plants.	L2
BTCVC402_3	Explain the Waste water treatment concepts & methods.	L3
BTCVC402_4	Discuss the solid waste management concepts.	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	PSOS	
BTCVC402_1	2	1	1			2	2					1		2	2	
BTCVC402_2	2	2	1			2	2					1		2	_	
BTCVC402_3	2	2				2	2					2		2	2	
BTCVC402_4	2	¥-				2	2					1	1	2	2	
Total	8	5	2			8	8					5	1	8	6	
Average	2	1.67	1			2	2					1.25	1	2	2	
BTCVC402	2	2	1			2	2					1	1	2	2	

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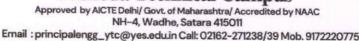
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Faculty of Engineering

#### DEPARTMENT OF CIVIL ENGINEERING

#### Academic Year 2024-25

Semester- EVEN

#### Structure of Course

Class	SY Civil semester IV
Course Code and Course Title	BTCVC403, Structural Mechanics I
Prerequisite/s	Mechanics of Solid
Teaching Scheme: Lecture/Tutorial	02/01
Credits	3
Evaluation Scheme: CA/MSE/ESE	20/20/60

#### **Course Outcomes:**

Course Outcome After successful of	es (COs): completion of this course, the student will be able to:	Blooms Level					
	Describe the concept of structural analysis, degree of	L2					
BTCVC403_2	VC403_2 Calculate slopes and deflection at various locations for different						
BTCVC403_3	Compute determinate and indeterminate trusses and calculate forces in the members of trusses	L3					
BTCVC403_4	Compute the distribution of the moments the in continuous beam	L3					

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

Course		Program Outcomes														
Outcomes	1	2	3	4	5	6	7	8	9	10	11	12	PSO1	PSO2	PSO3	
BTCVC403_1	3	2	2	2	2					2		2	1501	2	1505	
BTCVC403_2	3	3	2	2	2					2		2		2	2	
BTCVC403_3	3	3	2	2	2					2				2	2	
BTCVC403_4	3	3	3	3	3					2		2		3	2	
Total	12	11	9	9	9			-	-	2				3	3	
Average	3	2.75	2.25				-	_	_	8		8		10	9	
BTCVC403	3	3	2.25	2.25 <b>2</b>	2.25					2		2		2.5	2.25	
		3			2					2		2		3	2	

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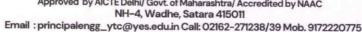
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Faculty of Engineering

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

Semester- EVEN

Class	SY. Sem. – IV
Course Code and Course Title	BTCVC404, Water Resources Engineering
Prerequisite/s	Hydraulics
Teaching Scheme: Lecture	03
Credits	3
Evaluation Scheme: CA/MSE/ESE	20/20/60

#### **Course Outcomes:**

Course Outcomes Upon successful c	ompletion of this course, the student will be able to:	Blooms Level
BTCVC404_1	Explain need of Irrigation in India and water requirement as per farming practice in India.	L2
BTCVC404_2	Describe various irrigation structures and schemes.	L2
BTCVC404_3	Illustrate basis for design of irrigation schemes.	L3
BTCVC404_4	Illustrate techniques of Water Resources Planning and Management.	L3

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

Course	Program Outcomes														
Outcomes	1	2	3	4	5	6	7	8	9	10	11	12	PSO 1	PSO 2	PS O3
BTCVC404_1	3	3	2	2		3	3		2	2		3	2	2	2
BTCVC404_2	3	3	2	2		3	3	П	2	2		3	2	2	2
BTCVC404_3	3	3	2	2		3	3	П	2	2		3	2	2	2
BTCVC404_4	3	3	2	2		3	3	П	2	2		3	2	2	2
Total	12	12	8	8		12	12		8	8		12	8	8	8
Average	3	3	2	2		3	3		2	2		3	2	2	2
BTCVC404	3	3	2	2		3	3		2	2		3	2	2	2

**Course Coordinator** 

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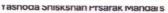
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Faculty of Engineering

### **Department of Civil Engineering**

Academic Year 2024-25

Semester- EVEN

#### **Structure of Course**

Class	SY. Sem. –IV
Course Code and Course Title	BTCVC405 Hydraulics II
Prerequisite/s	BTCVC304
Teaching Scheme: Lecture/Tutorial	02/01
Credits	03
<b>Evaluation Scheme: CA/MSE/ESE</b>	20/20/60

#### **Course Outcomes:**

	pon successful completion of this course, the student will be able to:						
BTCVC405_1	Calculate open channel sections in a most economical way.	L3					
BTCVC405_2	Illustrate about the non-uniform flows in open channel and the characteristics of hydraulic jump.	L3					
BTCVC405_3	Apply momentum principle of impact of jets on plane.	L3					
BTCVC405_4	Classify pumps and turbines as per requirements.	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	PSO 2	PSO 3
BTCVC405_1	3	2	2									3	2	2	2
BTCVC405_2	3	2										2	2		2
BTCVC405 3	3	2											2	2	2
BTCVC405_4	3	2	2									3	2	2	2
Total	12	8	4									10	4		2
Average	3	2	2										8	8	8
BTCVC405	3	2	2									2.5 3	2	2	2

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Faculty of Engineering

# **Department of Civil Engineering**

Academic Year 2024-25

Semester- EVEN

#### **Structure of Course**

Class	SY. Sem. –IV
Course Code and Course Title	BTCVC406 Engineering Geology
Prerequisite/s	Basic Civil Engineering
Teaching Scheme: Lecture/Tutorial	02/01
Credits	03
Evaluation Scheme: CA / MSE / ESE	20/20/60

#### **Course Outcomes:**

Course Outcor Upon successf	mes (COs): ul completion of this course, the student will be able to:	Blooms
BTCVC406_1	Identify the different land forms which are formed by various geological agents.	L3
BTCVC406_2	Identify the origin, texture and structure of various rocks and physical properties of mineral.	L3
BTCVC406_3	Categorize distinct geological structures which have influence on the civil engineering structure.	L4
BTCVC406_4	Explain how the various geological conditions affect the design parameters of structures.	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	PSO 2	PSO 3
BTCVC406_1	2	2				2	2					2	2	2	2
BTCVC406_2	2	2				2	2					2	1		
BTCVC406_3	2	2				2	2						1	2	2
BTCVC406_4	2	2				2	2					2	2	3	2
Total	8	8										2	3	2	2
		-				8	8					8	8	9	8
Average	2	2				2	2					2	2	2.25	2
BTCVC406	2	2				2	2					2	2	2.25	2

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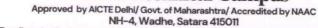
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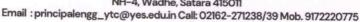
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Faculty of Engineering

### **Department of Civil Engineering**

Academic Year 2024-25

Semester- EVEN

#### **Structure of Course**

Class	SY. Sem. – I
Course Code and Course Title	BTCVL407 Building Planning and CAD Lab
Prerequisite/s	Basic Civil Engineering,
Teaching Scheme: Practical	02
Credits	2
Evaluation Scheme: CA/ESE	20/30

#### **Course Outcomes:**

Course Outcomes (O Upon successful com	COs): pletion of this course, the student will be able to:	Blooms
BTCVL407_1	Prepare a plan, elevation and section of framed structures.	L3
BTCVL407_2	Describe concept of rain water harvesting.	L2
BTCVL407_3	Apply knowledge of usage of modern tools.	L3
BTCVL407_4	Develop report writing skill	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	1	12	PSO 1	PSO 2	PS O3	
BTCVL407_1	3	2	3	2	2		2		2	2	2	2		3	3	
BTCVL407_2	2	2	3	2		3	3			2	2	2	3	2	2	
BTCVL407_3	2	2	2	2	3	2	2		2	2	2	3				
BTCVL407_4		2	2	2	2		2		2	3	2	3	2	3	3	
Total	7	8	10	8	7	5	9		6	9	8	10	5	2	2	
Average	2.3	2	2.5	2	2.3	2.5	2.3		2	2.25	2	2.5		10	10	
BTCVL407	2	2	3	2	2	3	2		2	2.23	2	3	2.5 <b>3</b>	2.5 <b>3</b>	2.5	

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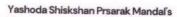
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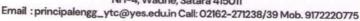
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**Faculty of Engineering** 

### DEPARTMENT OF CIVIL ENGINEERING

#### Academic Year 2024-25

#### Semester- EVEN

### **Structure of Course**

Class	SY. Sem. –IV
Course Code and Course Title	BTCVL408 Environmental Engineering Lab
Prerequisite/s	Environmental Engineering, Engg. Chemistry Lab
Teaching Scheme: Practical	02
Credits	01
Evaluation Scheme: CA / ESE	20/30

#### **Course Outcomes:**

Course Outcom Upon successful	completion of this course, the student will be able to:	Blooms Level
BTCVL408_1	Determine the pollutant concentration in water.	L3
BTCVL408_2	Determine the pollutant concentration in wastewater.	L3
BTCVL408_3	Illustrate the working of water treatment units.	L3

## 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	PSO 1	PS O2	PS O3
BTCVL408 1	2	1				2	2		2	2		2		2	_
BTCVL408 2	2	1				2	2		2	_		2			
BTCVL408 3	2	+-					2	-	2	2		2		2	2
Total		1					4			2		2		2	2
	6	2				4	6		6	6		6		6	6
Average	2	1				2	2		2	2		2		2	2
BTCVL408	2	1				2	2		2	2		2		2	2

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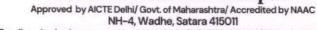
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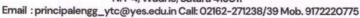
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Faculty of Engineering

### **Department of Civil Engineering**

Academic Year 2024-25

Semester- EVEN

#### Structure of Course

Class	SY. Sem. –IV
Course Code and Course Title	BTCVL409 Hydraulics II LAB
Prerequisite/s	BTCVL308
Teaching Scheme: Practical	02
Credits	01
Evaluation Scheme: CA / ESE	20/30

#### **Course Outcomes:**

Course Outcom Upon successful	completion of this course, the student will be able to:	Blooms Level
BTCVL409_1	Describe various properties of fluids and measurement techniques.	L3
BTCVL409_2	Explain calibrations of various flow measuring devices.	L3
BTCVL409_3	Observe mechanism of hydraulic jump, various jets and pumps.	L4

### 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	PSO 2	PSO 3	
BTCVL409_1	3							2	2			2	1	2	2	
BTCVL409_2	3							2	2			2	1	2	2	
BTCVL409_3	3							2	2				1			
Total	9							6	6			2	2	2	2	
Average	3							2	2			6	3	6	6	
BTCVC409	3							2					1	2	2	
21010407	3							2	2			2	1	2	2	

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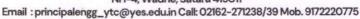
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Faculty of Engineering

#### **Department of Civil Engineering** Academic Year 2024-25

Semester- EVEN

#### Structure of Course

Class	SY. Sem. – IV							
Course Code and Course Title	BTCVP410 Field Training							
Prerequisite/s	Site/Industrial Visit							
Teaching Scheme: Lecture/Tutorial/Practical	00/00/00							
Credits	Audit							
<b>Evaluation Scheme: ESE</b>	50							

#### Course Outcomes:

Course Outcomes (COs): Upon successful completion of this course, the student will be able to:								
BTCVP410_1 Observe the various construction activities and its significance.								
BTCVP410 _2	Identify the various construction materials and its properties on construction site.	L2						
BTCVP410_3	Practice as an individual or as a team member to complete the construction projects.	L3						
BTCVP410_4	Analyse essential technical information, working drawings, material quantity and method to complete the construction work.	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
BTCVP410_1	3	3	2		2			2	2	2	2	2	2	2	2
BTCVP410_2	3	3	2		2			2	2	2	2	2	2	2	2
BTCVP410_3	3	3	2		2			2	2	2	2	2	2	2	
BTCVP410_4	3	3	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
BTCVP410	3	3	2		2			2	2	2	2	2	2	2	2

**Course Coordinator** 

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