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 (COs): Upon successful completion of this course, the student will be able to:		**Blooms Level**
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	Relate various techniques for good acoustics.	**L2**
BTCVC401_5	Observe various techniques of green buildings.	**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**	**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	2
BTCVC401_5	2		2		2	2	3			2		2	2	3	2
Total	11	3	12	2	6	8	12	2		10		10	4	12	10
Average	2.2	3	2.4	2	2	2	2.4	2		2		2	2	2.4	2
BTCVC401	**2**	**3**	**2**	**2**	**2**	**2**	**2**	**2**		**2**		**2**	**2**	**2**	**2**

Prepared by
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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	PSO3
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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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 Outcomes (COs): After successful completion of this course, the student will be able to:		**Blooms Level**
BTCVC403_1	Describe the concept of structural analysis, degree of	**L2**
BTCVC403_2	Calculate slopes and deflection at various locations for different	**L3**
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 Outcomes	Program 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		2	2
BTCVC403_2	3	3	2	2	2					2		2		2	2
BTCVC403_3	3	3	2	2	2					2		2		3	2
BTCVC403_4	3	3	3	3	3					2		2		3	3
Total	12	11	9	9	9					8		8		10	9
Average	3	2.75	2.25	2.25	2.25					2		2		2.5	2.25
BTCVC403	3	3	2	2	2					2		2		3	2

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Department of Civil Engineering

Academic Year 2024-25

Semester- EVEN

Structure of Course

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 (COs): Upon successful completion 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 Outcomes	**Program 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		2	2		3	2	2	2
BTCVC404_3	3	3	2	2		3	3		2	2		3	2	2	2
BTCVC404_4	3	3	2	2		3	3		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**

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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
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**
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**	**2**
BTCVC405_3	**3**	**2**										**2**	**2**	**2**	**2**
BTCVC405_4	**3**	**2**	**2**									**3**	**2**	**2**	**2**
Total	12	8	4									10	8	8	8
Average	3	2	2									2.5	2	2	2
BTCVC405	**3**	**2**	**2**									**3**	**2**	**2**	**2**

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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 Outcomes (COs): Upon successful completion of this course, the student will be able to:		**Blooms Level**
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**	**2**	**2**
BTCVC406_3	**2**	**2**				**2**	**2**					**2**	**2**	**3**	**2**
BTCVC406_4	**2**	**2**				**2**	**2**					**2**	**3**	**2**	**2**
Total	8	8				8	8					8	8	9	8
Average	2	2				2	2					2	2	2.25	2
BTCVC406	**2**	**2**				**2**	**2**					**2**	**2**	**2.5**	**2**

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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 (COs): Upon successful completion of this course, the student will be able to:		**Blooms Level**
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**	**11**	**12**	**PSO 1**	**PSO 2**	**PSO3**
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	2	3	3
BTCVL407_4		2	2	2	2		2		2	3	2	3		2	2
Total	7	8	10	8	7	5	9		6	9	8	10	5	10	10
Average	2.3	2	2.5	2	2.3	2.5	2.3		2	2.25	2	2.5	2.5	2.5	2.5
BTCVL407	**2**	**2**	**3**	**2**	**2**	**3**	**2**		**2**	**2**	**2**	**3**	**3**	**3**	**3**

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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 Outcomes (COs): 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	2
BTCVL408 _2	2	1				2	2		2	2		2		2	2
BTCVL408 _3	2						2		2	2		2		2	2
Total	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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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 Outcomes (COs): 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**			**2**	**1**	**2**	**2**
Total	9							6	6			6	3	6	6
Average	3							2	2			2	1	2	2
BTCVC409	**3**							**2**	**2**			**2**	**1**	**2**	**2**

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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
Evaluation Scheme: ESE	50

Course Outcomes:

Course Outcomes (COs): Upon successful completion of this course, the student will be able to:		**Blooms Level**
BTCVP410_1	Observe the various construction activities and its significance.	**L2**
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	2
BTCVP410 _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
BTCVP410	**3**	**3**	**2**		**2**			**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**

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