



Shiksha Mandal's
Bajaj Institute of Technology, Wardha
(Affiliated to DBATU, Lonere, Raigad, Maharashtra)

Academic Session: 2022-23

Doc. No.: BITACAD/Structure/
Branch/Even Sem/22-23

Date: 01/03/2023

Department of Civil Engineering

B. Tech. Civil Engineering

Course Structure for Semester III [Second Year] w.e.f. 2021-2022

Regular Structure (DBATU)

Course Code	Type of Course	Course Title	Weekly Teaching Scheme			Evaluation Scheme				Credits
			L	T	P	CA	MSE	ESE	Total	
BTBS301	BSC 5	Mathematics – III	3	1	-	20	20	60	100	4
BTCVES302	ESC 8	Mechanics of Solids	3	1	-	20	20	60	100	4
BTCVC303	PCC 1	Building Construction & Drawing	2	1	-	20	20	60	100	3
BTCVC304	PCC 2	Hydraulics -I	3	1	-	20	20	60	100	4
BTCVC305	PCC 3	Surveying	2	1	-	20	20	60	100	3
BTHM306	HSSM C2	Soft Skill Development	2	-	-	50	-	-	50	Audit
BTCVL 307	LC 1	Solid Mechanics Laboratory	-	-	2	20	-	30	50	1
BTCVL 308	LC 2	Hydraulics-I Laboratory	-	-	2	20	-	30	50	1
BTCVL 309	LC 3	Surveying Laboratory	-	-	2	20	-	30	50	1
BTES210P	Internship	Internship –I Evaluation (From Sem II)	-	-	-	-	-	50	50	Audit

VAP/Add-on Course/s (A BIT Initiative)

Course Code	Course Title	Weekly Teaching Scheme		Evaluation Scheme (Marks)			
		L	P	TEST-1	TEST-2	Final Exam	Total
CIV7-A 2022-23	Add-on Course on – REVIT (Structure), SAFE, NAVISWORK	--	48	--	--	50	50
CIV3-A	VAP on – Hands on Training Session on Total Station	--	2	--	--	50	50

Academic Coordinator

**Head of the Department
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Department of Civil Engineering
Bajaj Institute of Technology, WARDHA

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Department of Civil Engineering

B. Tech. Civil Engineering

Course Structure for Semester IV [Second Year] w.e.f. 2021-2022

Regular Structure (DBATU)

Course Code	Type of Course	Course Title	Weekly Teaching Scheme			Evaluation Scheme				Credits
			L	T	P	CA	MSE	ESE	Total	
BTCVC401	PCC 4	Building Planning and Drawing	2	-	-	20	20	60	100	2
BTCVC402	PCC 5	Environmental Engineering	2	-	-	20	20	60	100	2
BTCVC403	PCC 6	Structural Mechanics - I	2	1	-	20	20	60	100	3
BTCVC404	PCC 7	Water Resources Engineering	3	-	-	20	20	60	100	3
BTCVC405	PCC 8	Hydraulics - II	2	1	-	20	20	60	100	3
BTCVC406	PCC 9	Engineering Geology	2	1	-	20	20	60	100	3
BTCVL407	LC 4	Building Planning and CAD Lab.	-	-	2	20	-	30	50	1
BTCVL408	LC 5	Environmental Engineering Lab.	-	-	2	20	-	30	50	1
BTCVL409	LC 6	HE-II Lab.	-	-	2	20	-	30	50	1
BTCVP410	Internship	Field Training / Internship / Industrial Training (minimum of 4 weeks training in Summer Vacation after Semester IV and appear at examination in Semester V)	-	-	-	-	-	-	-	To be evaluated in V Sem.

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VAP/Add-on Course/s (A BIT Initiative)

Course Code	Course Title	Weekly Teaching Scheme		Evaluation Scheme (Marks)			
		L	P	TEST-1	TEST-2	Final Exam	Total
CIV4-A 2022-23	Add-on Course on – Introduction to MATLAB	--	3	--	--	50	50
CIV4-B 2022-23	Add-on Course on – AUTOCAD	--	3	--	--	50	50
2020-21	Add-on Course on – Introduction to Structural Analysis Software (SAP2000)	--	3	--	--	50	50
2021-22	Add-on Course on – REVIT (Architecture)	--	56	--	--	50	50
2021-22	Add-on Course on – Hands on Session on Total Session	--	2	--	--	50	50

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Department of Civil Engineering

B. Tech. Civil Engineering

Course Structure for Semester V [Third Year] w.e.f. 2022-2023

Regular Structure (DBATU)

Course Code	Type of Course	Course Title	Weekly Teaching Scheme			Evaluation Scheme				Credits
			L	T	P	CA	MSE	ESE	Total	
BTCVC 501	PCC 10	Design of Steel Structures	2	1	-	20	20	60	100	3
BTCVC 502	PCC 11	Geotechnical Engineering	3	1	-	20	20	60	100	4
BTCVC 503	PCC 12	Structural Mechanics -II	2	1	-	20	20	60	100	3
BTCVC 504	PCC 13	Concrete Technology	2	-	-	20	20	60	100	2
BTHM 505	HSSMC3	Project Management	3	-	-	20	20	60	100	3
BTCVP E506	PEC 1	A. Advanced Environmental Engineering B. Applied Geology C. Hydraulic Engineering Design D. Advanced Water Resources E. Geomatics F. Town and Urban Planning G. Material, Testing and Evaluation H. Construction Economics & Finance	3	-	-	20	20	60	100	3
BTCVES 507	ESC10	Software applications in Civil Engineering	2	-	-	50	-	-	50	Audit
BTCVL 508	LC 7	SDD of Steel Structures Lab.	-	-	2	20	-	30	50	1
BTCVL 509	LC 8	Geotechnical Engineering Lab.	-	-	2	20	-	30	50	1
BTCVL 510	LC 9	Concrete Technology Lab.	-	-	2	20	-	30	50	1

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VAP/Add-on Course/s (A BIT Initiative)

Course Code	Course Title	Weekly Teaching Scheme		Evaluation Scheme (Marks)			
		L	P	TEST-1	TEST-2	Final Exam	Total
CIV5-A 2022-23	Add-on Course on – Introduction to MATLAB	--	3	--	--	50	50
CIV7-A 2022-23	Add-on Course on – REVIT (Structure), SAFE, NAVISWORK	--	48	--	--	50	50
2021-22	Add-on Course on - Introduction to Structural Analysis Software (SAP2000)	--	3	--	--	50	50
2021-22	VAP on – PADEL	--	2	--	--	50	50
2019-20	Add-on Course on Introduction to REVIT software	--	3.5	--	--	50	50

Academic Coordinator

S.M. Mahajan

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Department of Civil Engineering

B. Tech. Civil Engineering

Course Structure for Semester VI [Third Year] w.e.f. 2022-2023

Regular Structure (DBATU)

Course Code	Type of Course	Course Title	Weekly Teaching Scheme			Evaluation Scheme				Credits
			L	T	P	CA	MSE	ESE	Total	
BTCVC 601	PCC 14	Design of RC Structures	3	1	-	20	20	60	100	4
BTCVC 602	PCC 15	Foundation Engineering	3	1	-	20	20	60	100	4
BTCVC 603	PCC 16	Transportation Engineering	3	-	-	20	20	60	100	3
BTCVPE 604	PEC 2	<ul style="list-style-type: none">• Industrial Waste Treatment• Managerial Techniques• Open Channel Flow• Water Power Engineering• Ground Improvement Techniques• Structural Audit• Intelligent Transportation Systems• Plastic Analysis of Structures• Numerical Methods in Civil Engineering• Engineering Management	3	-	-	20	20	60	100	3
BTCVOE 605	OEC 1	<ul style="list-style-type: none">• Environmental Impact Assessment• Basic Human Rights• Business Communication and Presentation Skills• Composite Materials• Experimental Stress Analysis	3	-	-	20	20	60	100	3

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Date: 01/03/2023

		<ul style="list-style-type: none"> • Python Programming • Operation Research • Applications of Remote Sensing and Geographic Information Systems • Civionics: Instrumentation & Sensor Technologies for Civil Engineering • Planning for Sustainable Development • Development Engineering 								
BTHM 606	HSSMC4	Indian Constitution	2	-	-	50	-	-	50	Audit
BTCVL 607	LC 10	SDD of RC Structures Lab.	-	-	2	20	-	30	50	1
BTCVL 608	LC 11	Transportation Engineering Lab	-	-	2	20	-	30	50	1
BTCVM 609	Project	Mini Project	-	-	2	20	-	30	50	1
	Internship	Mandatory (BTCVP610) Field Training/ Internship/Industrial Training (Minimum of 4 weeks training in Summer Vacation after Semester VI and appear at examination in Semester VII.)	-	-	-	-	-	-	-	Credits to be evaluated in VII Sem

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VAP/Add-on Course/s (A BIT Initiative)

Course Code	Course Title	Weekly Teaching Scheme		Evaluation Scheme (Marks)			
		L	P	TEST-1	TEST-2	Final Exam	Total
CIV6-A 2022-23	Add-on Course on – Introduction to Structural Analysis and Design Software - Etabs	--	3	--	--	50	50
CIV6-B 2022-23	Add-on Course on – Valuation of Immovable Properties	--	3	--	--	50	50
CIV6-C 2022-23	VAP on – PADEL	1	2	--	--	50	50
2021-22	Add-on Course on - Introduction to Structural Analysis Software (ETABS)	1	2	--	--	50	50
2021-22	Add-on Course on – REVIT (Architecture)	--	56	--	--	50	50
2021-22	Add-on Course on - Introduction to Structural Analysis Software (ETABS)	1	2	--	--	50	50

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Department of Civil Engineering

B. Tech. Civil Engineering

Course Structure for Semester VII [Fourth Year] w.e.f. 2023-2024

Regular Structure (DBATU)

Course Code	Type of Course	Course Title	Weekly Teaching Scheme			Evaluation Scheme				Credits
			L	T	P	CA	MSE	ESE	Total	
BTCVC 701	Core	Design of Reinforced & Prestressed Concrete Structures	3	1	--	20	20	60	100	4
BTCVC 702	Core	Infrastructure Engineering	3	--	--	20	20	60	100	3
BTCVC 703	Core	Construction Techniques	3	--	--	20	20	60	100	3
BTCVC 704	Core	Professional Practices	3	1	--	20	20	60	100	4
BTCVE 705A	Elective IV	Engineering Economics	3	--	--	20	20	60	100	3
BTCVE 705B		Finite Element Method								
BTCVE 705C		Limit State Design of Steel Structures								
BTCVE 705D		Rock Mechanics								
BTCVE 705E		Applications of Drone Technology								
BTCVE 705F		Advanced RC Design								
BTCVE 705G		Applied Hydrology & Flood Control								
BTCVE 705H		Legal Aspects in Civil Engineering Contracts								
BTCVE 705I		Bridge Engineering								
BTCVOE 706A		Open Elective V								
BTCVOE 706B	Air Pollution Control									
BTCVOE 706C	Applications of AI and ML in Civil Engineering									
BTCVOE 706D	Introduction to Earthquake Engineering									
BTCVOE 706E	Internet of Things									

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BTCVOE 706F		Tunneling and Underground Excavations								
BTCVOE 706G		Bamboo Construction Technology								
BTHM 707A		Essence of Indian Traditional Knowledge	3	--	--	--	--	--	--	Audit
BTHM 707B		Foreign language								
BTCVL 708	Lab.	Design & Drawing of Prestressed Concrete Structures	2	30	--	20	50	1	2	30
BTCVL 709	Lab.	Professional Practices	2	30	--	20	50	1	2	30
BTCVP 610	Training	Field Training / Internship / Industrial Evaluation	--	--	--	--	--	50	50	1
BTCVS 710	BTS	Seminar	--	--	2	--	--	50	50	1
BTCVP 711	BTP	Project Stage-I**	--	--	4	--	50	50	100	3

VAP/Add-on Course/s (A BIT Initiative)

Course Code	Course Title	Weekly Teaching Scheme		Evaluation Scheme (Marks)			
		L	P	TEST-1	TEST-2	Final Exam	Total
CIV7-A 2022-23	Add-on Course on – REVIT (Structure), SAFE, NAVISWORK	--	48	--	--	50	50
2021-22	Add-on Course on - Introduction to Structural Analysis Software (SAP2000)	--	3	--	--	50	50

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B. Tech. Civil Engineering

Course Structure for Semester VIII [Fourth Year] w.e.f. 2023-2024

Regular Structure (DBATU)

Course Code	Type of Course	Course Title	Weekly Teaching Scheme			Evaluation Scheme				Credits
			L	T	P	CA	MSE	ESE	Total	
BTCVSS 801A	Self-Study Course	Characterization of Construction Materials	02			20	20	60	100	3
BTCVSS 801B		Geo synthetics and Reinforced Soil Structures								
BTCVSS 801C		Higher Surveying								
BTCVSS 801D		Maintenance and Repair of Concrete Structures								
BTCVSS 801E		Structural Dynamics								
BTCVSS 801F		Engineering Systems & Development								
BTCVSS 801G		Sustainable River Basin Management								
BTCVSS 801H		Modern Construction Materials								
BTCVSS 801J		Advanced Town & Urban Planning								
BTCVSS 802A		Self-Study Course								
BTCVSS 802B	Environmental Remediation of Contaminated Sites									
BTCVSS 802C	Remote Sensing Essentials									
BTCVSS 802D	Mechanical Characterization of Bituminous Materials									

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BTCVSS 802E		Soil Structure Interaction							
BTCVSS 802F		Design of Water Supply Systems							
BTCVP 803	Project Stage-II	Project Stage II or Internship	24		100	--	100	200	12

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