Mohan Lal Sukhadia University
Udaipur

B. Tech. Program
(Effective from session 2021-2022)

Civil Engineering

Semesters III - VIII

Course structure

Teaching and Examination Scheme
Semester III

SN	Category	Course Code	Course Title	Contact Hours				Exam Hours	Max. Marks			Credit
				Total	L	T	P		IA	ETE	Total	
1	BSC	BT3CE01-CT01	Advance Engineering Mathematics -I	**3**	3	0	**0**	**3**	30	120	**150**	**3**
2	HSMC	BT3CE02-CT02	Technical Communication	**2**	2	0	**0**	**2**	20	80	**100**	**2**
3	ESC	BT3CE03-CT03	Engineering Mechanics	**2**	2	0	**0**	**2**	20	80	**100**	**2**
4	PCC	BT3CE04-CT04	Surveying	**3**	3	0	**0**	**3**	30	120	**150**	**3**
5		BT3CE05-CT05	Fluid Mechanics	**2**	2	0	**0**	**2**	20	80	**100**	**2**
6		BT3CE06-CT06	Building Materials and Construction	**3**	3	0	**0**	**3**	30	120	**150**	**3**
7		BT3CE07-CT07	Engineering Geology	**2**	2	0	**0**	**2**	20	80	**100**	**2**
8	PCC	BT3CE08-CP01	Surveying Lab	**4**	0	0	**4**	-	40	60	**100**	**2**
9		BT3CE09-CP02	Fluid Mechanics Lab	**2**	0	0	**2**	-	20	30	**50**	**1**
10		BT3CE10-CP03	Computer Aided Civil Engineering Drawing	**4**	0	0	**4**	-	40	60	**100**	**2**
11		BT3CE11-CP04	Civil Engineering Materials Lab	**2**	0	0	**2**	-	20	30	**50**	**1**
12		BT3CE12-CP05	Geology Lab	**2**	0	0	**2**	-	20	30	**50**	**1**
13	PSIT	BT3CE13-CP06	Industrial Training	**2**	0	0	**2**	-	20	30	**50**	**1**
Total				**33**	17	0	16		310	920	**1250**	**25**

L: *Lecture,* ***T:*** *Tutorial,* ***P:*** *Practical,* ***Cr:*** *Credits,* ***ETE:*** *End Term Exam,* ***IA:*** *Internal Assessment*

Teaching and Examination Scheme
Semester IV

SN	Category	Course Code	Course Title	Contact Hours				Exam Hours	Max. Marks			Credit
				Total	L	T	P		IA	ETE	Total	
1	BSC	BT4CE01-CT01	Advance Engineering Mathematics - II	**2**	2	0	0	**2**	20	80	**100**	**2**
2	HSMC	BT4CE02-CT02	Managerial Economics & Financial Accounting	**2**	2	0	0	**2**	20	80	**100**	**2**
3	ESC	BT4CE03-CT03	Basic Electronics for Civil Engineering Applications	**2**	2	0	0	**2**	20	80	**100**	**2**
4	PCC	BT4CE04-CT04	Strength of Materials	**3**	3	0	0	**3**	30	120	**150**	**3**
5		BT4CE05-CT05	Hydraulics Engineering	**3**	3	0	0	**3**	30	120	**150**	**3**
6		BT4CE06-CT06	Building Planning	**2**	2	0	0	**2**	20	80	**100**	**2**
7		BT4CE07-CT07	Concrete Technology	**3**	3	0	0	**3**	30	120	**150**	**3**
8	PCC	BT4CE08-CP01	Material Testing Lab	**2**	0	0	2	-	20	30	**50**	**1**
9		BT4CE09-CP02	Hydraulics Engineering	**2**	0	0	2	-	20	30	**50**	**1**
10		BT4CE10-CP03	Building Drawing	**4**	0	0	4	-	40	60	**100**	**2**
11		BT4CE11-CP04	Advanced Surveying	**2**	0	0	2	-	20	30	**50**	**1**
12		BT4CE12-CP05	Concrete Lab	**4**	0	0	4	-	40	60	**100**	**2**
Total				**31**	**17**	**0**	**14**		**310**	**890**	**1200**	**24**

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Teaching and Examination Scheme
Semester V

SN	Category	Course Code	Course Title	Contact Hours				Exam Hours	Max. Marks			Credit
				Total	L	T	P		IA	ETE	Total	
1	ESC	BT5CE01-CT01	Construction Technology & Equipments	**2**	**2**	**0**	**0**	**2**	**20**	**80**	**100**	**2**
2	PCC/PEC	BT5CE02-CT02	Structural Analysis-I	**2**	**2**	**0**	**0**	**2**	**20**	**80**	**100**	**2**
3		BT5CE03-CT03	Design of Concrete Structures	**3**	**3**	**0**	**0**	**3**	**30**	**120**	**150**	**3**
4		BT5CE04-CT04	Geotechnical Engineering	**3**	**3**	**0**	**0**	**3**	**30**	**120**	**150**	**3**
5		BT5CE05-CT05	Water Resource Engineering	**2**	**2**	**0**	**0**	**2**	**20**	**80**	**100**	**2**
6		**Departmental Elective-I:**		**2**	**2**	**0**	**0**	**2**	**20**	**80**	**100**	**2**
		BT5CE06-CT06 (A)	Air & Noise Pollution and Control									
		BT5CE06-CT06 (B)	Disaster Management									
		BT5CE06-CT06 (C)	Town Planning									
7		**Departmental Elective-II:**		**2**	**2**	**0**	**0**	**2**	**20**	**80**	**100**	**2**
		BT5CE07-CT07 (A)	Repair and Rehabilitation of structures									
		BT5CE07-CT07 (B)	Energy Science & Engineering									
		BT5CE07-CT07 (C)	Ground Improvement Techniques									
8	PCC	BT5CE08-CP01	Concrete Structures Design	**4**	**0**	**0**	**4**	**-**	**40**	**60**	**100**	**2**
9		BT5CE09-CP02	Geotechnical Engineering Lab	**4**	**0**	**0**	**4**	**-**	**40**	**60**	**100**	**2**
10		BT5CE10-CP03	Water Resource Engineering Design Lab	**4**	**0**	**0**	**4**	**-**	**40**	**60**	**100**	**2**
11	PSIT	BT5CE11-CP04	Industrial Training	**6**	**0**	**0**	**6**	**-**	**60**	**90**	**150**	**3**
Total				**34**	**16**	**0**	**18**		**340**	**910**	**1250**	**25**

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Teaching and Examination Scheme
Semester VI

SN	Category	Course Code	Course Title	Contact Hours				Exam Hours	Max. Marks			Credit
				Total	L	T	P		IA	ETE	Total	
1	ESC	BT6CE01-CT01	Wind & Seismic Analysis	**2**	**2**	**0**	**0**	**2**	**20**	**80**	**100**	**2**
2	PCC/PEC	BT6CE02-CT02	Structural Analysis-II	**3**	**3**	**0**	**0**	**3**	**30**	**120**	**150**	**3**
3		BT6CE03-CT03	Environmental Engineering	**3**	**3**	**0**	**0**	**3**	**30**	**120**	**150**	**3**
4		BT6CE04-CT04	Design of Steel Structures	**3**	**3**	**0**	**0**	**3**	**30**	**120**	**150**	**3**
5		BT6CE05-CT05	Estimating & Costing	**2**	**2**	**0**	**0**	**2**	**20**	**80**	**100**	**2**
6		**Departmental Elective-III:**		**2**	**2**	**0**	**0**	**2**	**20**	**80**	**100**	**2**
		BT6CE06-CT06 (A)	Pre-stressed Concrete									
		BT6CE06-CT06 (B)	Solid and Hazardous Waste Management									
		BT6CE06-CT06 (C)	Traffic Engineering and Management									
7		**Departmental Elective-IV:**		**2**	**2**	**0**	**0**	**2**	**20**	**80**	**100**	**2**
		BT6CE07-CT07 (A)	Bridge Engineering									
		BT6CE07-CT07 (B)	Rock Engineering									
		BT6CE07-CT07 (C)	Geographic Information System &									
8	PCC	BT6CE08-CP01	Environmental Engineering Design and Lab	**4**	**0**	**0**	**4**		**40**	**60**	**100**	**2**
9		BT6CE09-CP02	Steel Structure Design	**4**	**0**	**0**	**4**		**40**	**60**	**100**	**2**
10		BT6CE10-CP03	Quantity Surveying and Valuation	**2**	**0**	**0**	**2**		**20**	**30**	**50**	**1**

11		BT6CE11-CP04	Water and Earth Retaining Structures Design	**2**	**0**	**0**	**2**		**20**	**30**	**50**	**1**
12		BT6CE12-CP05	Foundation Design	**2**	**0**	**0**	**2**		**20**	**30**	**50**	**1**
Total				**31**	**17**	**0**	**14**		**310**	**890**	**1200**	**24**

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Teaching and Examination Scheme
Semester VII

SN	Category	Course Code	Course Title	Contact Hours				Exam Hours	Max. Marks			Credit
				Total	L	T	P		IA	ETE	Total	
1	PCC	BT7CE01-CT01	Transportation Engineering	**3**	**3**	**0**	**0**	**3**	**30**	**120**	**150**	**3**
2	OE	BT7CE02-CE	Open Elective-I	**3**	**3**	**0**	**0**	**3**	**30**	**120**	**150**	**3**
3	PCC	BT7CE03-CP01	Road Material Testing Lab	**2**	**0**	**0**	**2**	**-**	**20**	**30**	**50**	**1**
4		BT7CE04-CP02	Professional Practices & Field Engineering Lab	**2**	**0**	**0**	**2**	**-**	**20**	**30**	**50**	**1**
5		BT7CE05-CP03	Soft Skills Lab	**2**	**0**	**0**	**2**	**-**	**20**	**30**	**50**	**1**
6		BT7CE06-CP04	Environmental Monitoring and Design Lab	**2**	**0**	**0**	**2**	**-**	**20**	**30**	**50**	**1**
7	PSIT	BT7CE07-CP05	Practical Training	**6**		**0**	**6**	**-**	**60**	**90**	**150**	**3**
8		BT7CE08-CP06	Seminar	**4**	**0**	**0**	**4**	**-**	**40**	**60**	**100**	**2**
Total				**24**	**6**	**0**	**18**		**240**	**510**	**750**	**15**

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Teaching and Examination Scheme
Semester VIII

SN	Category	Course Code	Course Title	Contact Hours				Exam Hours	Max. Marks			Credit
				Total	L	T	P		IA	ETE	Total	
1	PCC	BT8CE01-CT01	Project Planning and Construction management	**3**	**3**	**0**	**0**	**3**	**30**	**120**	**150**	**3**
2	OE	BT8CE02-CE	Open Elective-II	**3**	**3**	**0**	**0**	**3**	**30**	**120**	**150**	**3**
3	PCC	BT8CE03-CP01	Project Planning & Construction Management Lab	**2**	**0**	**0**	**2**	**-**	**20**	**30**	**50**	**1**
4		BT8CE04-CP02	Pavement Design	**2**	**0**	**0**	**2**	**-**	**20**	**30**	**50**	**1**
7	PSIT	BT8CE05-CP03	Project	**6**		**0**	**6**	**-**	**140**	**210**	**350**	**7**
Total				**24**	**6**	**0**	**18**		**240**	**510**	**750**	**15**

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List of Open Electives

Elective-I

BT7CE02-CE01	Human Engineering and Safety
BT7CE02-CE02	Environmental Engineering and Disaster Management
BT7CE02-CE03	Aircraft Avionic System
BT7CE02-CE04	Non-Destructive Testing
BT7CE02-CE05	Optimization Techniques
BT7CE02-CE06	Sustainable Engineering
BT7CE02-CE07	Introduction to Ceramic Science & Technology
BT7CE02-CE08	Plant, Equipment and Furnace Design
BT7CE02-CE06	Environmental Impact Analysis
BT7CE02-CE07	Disaster Management
BT7CE02-CE09	Electrical Machines and Drives
BT7CE02-CE10	Power Generation Sources.
BT7CE02-CE11	Principle of Electronic communication
BT7CE02-CE12	Micro and Smart System Technology
BT7CE02-CE13	Finite Element Analysis
BT7CE02-CE14	Quality Management
BT7CE02-CE15	Rock Engineering
BT7CE02-CE16	Mineral Processing
BT7CE02-CE17	Pipeline Engineering
BT7CE02-CE18	Water Pollution control Engineering
BT7CE02-CE19	Technical Textiles
BT7CE02-CE20	Garment Manufacturing Technology
BT7CE02-CE21	Human Engineering and Safety
BT7CE02-CE22	Environmental Engineering and Disaster Management

Elective-II

BT8CE02-CE01	Energy Management
BT8CE02-CE02	Waste and By-product Utilization
BT8CE02-CE03	Finite Element Methods
BT8CE02-CE04	Factor of Human Interactions
BT8CE02-CE05	Refinery Engineering Design
BT8CE02-CE06	Fertilizer Technology
BT8CE02-CE07	Electrical and Electronic Ceramics
BT8CE02-CE08	Biomaterials
BT8CE02-CE09	Composite Materials
BT8CE02-CE10	Fire and Safety Engineering
BT8CE02-CE11	Energy Audit and Demand side Management
BT8CE02-CE12	Soft Computing
BT8CE02-CE13	Industrial and Biomedical applications of RF Energy
BT8CE02-CE14	Robotics and control
BT8CE02-CE15	Operations Research
BT8CE02-CE16	Simulation Modeling and Analysis
BT8CE02-CE17	Experimental Stress Analysis
BT8CE02-CE18	Maintenance Management
BT8CE02-CE19	Unconventional Hydrocarbon Resources
BT8CE02-CE20	Energy Management & Policy
BT8CE02-CE21	Material and Human Resource Management
BT8CE02-CE22	Disaster Management