

**STUDY & EVALUATION SCHEME**  
**B.TECH: CIVIL ENGINEERING**  
**I YEAR: I SEMESTER**

S. NO.	SUBJECT CODE	SUBJECT	HOURS PER WEEK			CREDIT
			L	T	P	
1	-----/ BCY1701	Physics / Chemistry	3	1	3	5.5
	BPH1701-CS	Physics (for CS)				
	BPH1701-EC	Physics (for EC)				
	BPH1701-EE	Physics (for EE)				
	BPH1701-CE	Physics (for CE)				
	BPH1701-ME	Physics (for ME)				
2	BMA1001-CS	Mathematics-I (for CS)	3	1	0	4
	BMA1001-EC	Mathematics-I (for EC)				
	BMA1001-EE	Mathematics-I (for EE)				
	BMA1001-CE	Mathematics-I (for CE)				
	BMA1001-ME	Mathematics-I (for ME)				
3	BEE1701/  BCS1701	Basic Electrical Engineering  / Programming for Problem Solving	3	1	2	5
4	BME1701/ BME1702	Engineering Graphics and Design / Workshop Practices	1	0	4	3
5	XESX601/ BHU1701	Environmental Science* / English	2/2	0/0	0/2	0/3
		<b>TOTAL</b>	<b>12/12</b>	<b>3/3</b>	<b>9/11</b>	<b>17.5/20.5</b>

\* -Mandatory Non-Credit Course

L - Lecture

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**I YEAR: II SEMESTER**

S. NO.	SUBJECT CODE	SUBJECT	HOURS PER WEEK			CREDIT
			L	T	P	
1	BCY2701/ -----	Chemistry/ Physics	3	1	3	5.5
	BPH2701-CS	Physics (for CS)				
	BPH2701-EC	Physics (for EC)				
	BPH2701-EE	Physics (for EE)				
	BPH2701-CE	Physics (for CE)				
	BPH2701-ME	Physics (for ME)				
2	BMA2001-CS	Mathematics-II (for CS)	3	1	0	4
	BMA2001-EC	Mathematics-II (for EC)				
	BMA2001-EE	Mathematics-II (for EE)				
	BMA2001-CE	Mathematics-II (for CE)				
	BMA2001-ME	Mathematics-II (for ME)				
3	BCS2701/ BEE2701	Programming for Problem Solving / Basic Electrical Engineering	3	1	2	5
4	BME2702/ BME2701	Workshop Practices / Engineering Graphics and Design	1	0	4	3
5	BHU2701/ XESX601	English / Environmental Science*	2/2	0/0	2/0	3/0
		<b>TOTAL</b>	<b>12/12</b>	<b>3/3</b>	<b>11/9</b>	<b>20.5/17.5</b>

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**II YEAR: III SEMESTER**

S. NO.	SUBJECT CODE	SUBJECT	L	T	P	CIE	ESE	TOTAL	C
<b>THEORY</b>									
1	BCE3006	Computer-Aided Civil Engineering Drawing	1	0	0	40	60	100	1
2	BCE3007	Introduction to Civil Engineering	2	0	0	40	60	100	2
3	BEC3019	Basic Electronics	1	0	0	40	60	100	1
4	BCE3010	Engineering Mechanics	3	1	0	40	60	100	4
5	BCE3011	Surveying	3	1	0	40	60	100	4
6	BME3007	Mechanical Engineering	2	0	0	40	60	100	2
7	BMA3010-CE	Mathematics-III (Transform and Discrete Mathematics)	2	0	0	40	60	100	2
8	BSS3001	Open Elective-I (Soft Skills and Inter-Personal Communication)	2	0	0	100	0	100	2
<b>PRACTICAL/ TRAINING/PROJECT</b>									
9	BCE3503	Building Planning and Drawing Lab	0	0	2	80	20	100	1
10	BEC3505	Electronics Lab	0	0	2	80	20	100	1
11	BCE3507	Survey Lab	0	0	2	80	20	100	1
<b>TOTAL</b>			<b>16</b>	<b>2</b>	<b>6</b>	<b>620</b>	<b>480</b>	<b>1100</b>	<b>19</b>

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**B.TECH: CIVIL ENGINEERING**  
**II YEAR: IV SEMESTER**

S. NO.	SUBJECT CODE	SUBJECT	L	T	P	CIE	ESE	TOTAL	C
<b>THEORY</b>									
1	BCE4004	Engineering Geology	2	0	0	40	60	100	2
2	BCE4006	Disaster Preparedness and Planning	2	0	0	40	60	100	2
3	BCE4007	Introduction to Fluid Mechanics	2	1	0	40	60	100	3
4	BCE4011	Introduction to Solid Mechanics	3	0	0	40	60	100	3
5	BCE4003	Geoinformatics	3	1	0	40	60	100	3
6	BCE4009	Materials, Testing and Evaluation	3	0	0	40	60	100	3
7	BCE4012	Environmental Engineering-I	3	1	0	40	60	100	3
8	BCE4010	Civil Engineering- Societal and Global Impact	2	0	0	40	60	100	2
<b>PRACTICAL/ TRAINING/PROJECT</b>									
9	BCE4505	Fluid Mechanics Lab	0	0	2	80	20	100	1
10	BCE4508	Solid Mechanics Lab	0	0	2	80	20	100	1
11	BCE4507	Material Testing Lab	0	0	2	80	20	100	1
12	BCE4509	Environmental Engineering-Lab	0	0	2	80	20	100	1
<b>TOTAL</b>			<b>21</b>	<b>4</b>	<b>8</b>	<b>640</b>	<b>560</b>	<b>1200</b>	<b>25</b>

**Note: Survey Camp will be held at the end of 4<sup>th</sup> Semester**

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**III YEAR: V SEMESTER**

S. NO.	SUBJECT CODE	SUBJECT	L	T	P	CIE	ESE	TOTAL	C
<b>THEORY</b>									
1	BCE5014	Hydraulic Engineering	3	0	0	40	60	100	3
2	BCE5017	Structural Analysis-I	3	1	0	40	60	100	3
3	BCE5015	Geotechnical Engineering	3	1	0	40	60	100	3
4	BCE5010	Hydrology and Water Resource Engineering	3	1	0	40	60	100	3
5	BCE5018	Environmental Engineering-II	3	1	0	40	60	100	3
6	BCE5016	Transportation Engineering-I	3	1	0	40	60	100	3
<b>PRACTICAL/ TRAINING/PROJECT</b>									
7	BCE5507	Hydraulic Engineering Lab	0	0	2	80	20	100	1
8	BCE5501	Geotechnical Engineering Lab	0	0	2	80	20	100	1
9	BCE5508	Transportation Engineering Lab	0	0	2	80	20	100	1
10	BCE5505	Survey Camp#	0	0	2	100	0	100	1
11	XCEX601	Industrial Visit	0	0	2	100	0	100	1
12	BAP5501	Aptitude & Reasoning and Online Test	0	0	2	100	0	100	1
<b>TOTAL</b>			<b>18</b>	<b>6</b>	<b>12</b>	<b>780</b>	<b>420</b>	<b>1200</b>	<b>24</b>

# Based on Survey Camp after the end of 4<sup>th</sup> semester

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**III YEAR: VI SEMESTER**

S. NO.	SUBJECT CODE	SUBJECT	L	T	P	CIE	ESE	TOTAL	C
<b>THEORY</b>									
1	BCE6007	Estimation and Construction Management	3	0	0	40	60	100	3
2	BCE6008	Structure Analysis-II	3	1	0	40	60	100	3
3	BCE6009	Design of Concrete Structures-I	3	1	0	40	60	100	3
4	-----	Elective-I	3	0	0	40	60	100	3
5	-----	Elective-II	3	0	0	40	60	100	3
6	BHU6024	Effective Technical Communication	3	0	0	40	60	100	3
<b>PRACTICAL/ TRAINING/PROJECT</b>									
7	BCE6507	Estimation and Costing Lab	0	0	4	80	20	100	2
8	BCE6503	Concrete Lab	0	0	2	80	20	100	1
9	BAP6501	Aptitude & Reasoning and Online Test	0	0	2	100	0	100	1
10	BCE6504	Seminar	0	0	2	100	0	100	1
<b>TOTAL</b>			<b>18</b>	<b>2</b>	<b>10</b>	<b>600</b>	<b>400</b>	<b>1000</b>	<b>23</b>
11	BCE6001EV	*Environmental Laws and Policy	3	1	0	40	60	100	4
	BCE6001SE	**Concrete Technology	3	0	0	40	60	100	3
	BCE6502SE	**Structural Engineering Lab	0	0	2	80	20	100	1
	BCE6001GE	***Structural Geology	3	0	0	40	60	100	3
	BCE6001TE	****Urban Transportation Planning	3	1	0	40	60	100	4
	BCE6001WR	*****Water Quality Engineering	3	0	0	40	60	100	3
	BCE6501WR	*****Water Quality Testing Lab	0	0	2	80	20	100	1

**Specialization Streams-** \*Environmental Engineering; \*\* Structural Engineering; \*\*\* Geotechnical Engineering; \*\*\*\* Transportation Engineering; \*\*\*\*\* Water Resource Engineering

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**IV YEAR: VII SEMESTER**

S. NO.	SUBJECT CODE	SUBJECT	L	T	P	CIE	ESE	TOTAL	C
<b>THEORY</b>									
1	BCE7004	Design of Concrete Structures-II	3	0	0	40	60	100	3
2	BCE7005	Steel Structures	3	1	0	40	60	100	3
3		Elective-III	3	0	0	40	60	100	3
4	BCE7305	Open Elective-II(Non-Conventional Energy Resources/Operations Management)	2	0	0	40	60	100	2
<b>PRACTICAL/ TRAINING/PROJECT</b>									
5	BCE7505	Project-I(Project work, seminar and internship in industry or at appropriate work place )	0	0	8	100	-	100	4
6	BCE7501	Summer Training	0	0	2	100	-	100	1
<b>TOTAL</b>			<b>11</b>	<b>1</b>	<b>10</b>	<b>360</b>	<b>240</b>	<b>600</b>	<b>16</b>
7	BCE7001EV	* Rural Water Supply and Online Sanitation Systems	3	0	0	40	60	100	3
	BCE7001SE	** Structural Analysis by Matrix Methods	3	1	0	40	60	100	4
	BCE7001GE	*** Soil Mechanics-I	3	1	0	40	60	100	4
	BCE7501GE	*** Soil Mechanics Lab	0	0	2	80	20	100	1
	BCE7001TE	**** Geometric Design of Highways	3	1	0	40	60	100	4
	BCE7501TE	**** Geometric Design of Highways Lab	0	0	2	80	20	100	1
	BCE7001WR	***** Water Resources Field Methods	3	1	0	40	60	100	4
8	BCE7002EV	* Physio-Chemical Processes for Water and Wastewater Treatment	3	1	0	40	60	100	4
	BCE7502EV	* Physio-Chemical Processes for Water and Wastewater Treatment Lab	0	0	2	80	20	100	1
	BCE7002SE	** Structural Dynamics	3	1	0	40	60	100	4
	BCE7002GE	*** Soil Mechanics-II	3	1	0	40	60	100	4

	BCE7002TE	**** Highway Construction and Management	3	1	0	40	60	100	4
	BCE7002WR	***** Surface Hydrology	3	1	0	40	60	100	4

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**IV YEAR: VIII SEMESTER**

S. NO.	SUBJECT CODE	SUBJECT	L	T	P	CIE	ESE	TOTAL	C
<b>THEORY</b>									
1	-----	Elective-IV	3	0	0	40	60	100	3
2	-----	Elective-V	3	0	0	40	60	100	3
3	BCE8501	Project-II (Continued from VII semester, seminar and internship in industry or at appropriate work place)	0	0	12	80	20	100	6
4	BMG8001	Human Resource Development and Organizational Behavior	3	0	0	40	60	100	3
<b>TOTAL</b>			<b>9</b>	<b>0</b>	<b>12</b>	<b>200</b>	<b>200</b>	<b>400</b>	<b>15</b>
5	BCE8001EV	* Biological Processes for Contaminant Removal	3	1	0	40	60	100	4
	BCE8501EV	* Biological Processes for Contaminant Removal Lab	0	0	2	80	20	100	1
	BCE8001SE	** Pre-stressed Concrete	3	1	0	40	60	100	4
	BCE8001GE	*** Environmental Geo-technology	3	1	0	40	60	100	4
	BCE8001TE	**** Intelligent Transportation Systems	3	0	0	40	60	100	3
	BCE8001WR	***** River Engineering	3	1	0	40	60	100	4
6	BCE8002EV	* Sustainable Engineering and Technology	3	0	0	40	60	100	3
	BCE8002SE	** Bridge Engineering	3	1	0	40	60	100	4
	BCE8002GE	*** Geotechnical Design	3	1	0	40	60	100	4
	BCE8002TE	**** Transportation Economics	3	1	0	40	60	100	4
	BCE8002WR	***** Urban Hydrology and Hydraulics	3	1	0	40	60	100	4

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**LIST OF ELECTIVES**

**Electives-I**

<b>S. No.</b>	<b>Subject Code</b>	<b>Subject Name</b>	<b>Semester</b>
1	BCE6005-DE1	Irrigation Engineering	VI
2	BCE6002-DE1	Transport of Water and Wastewater	VI
3	BCE6006-DE1	Concrete Materials	VI
4	BCE6007-DE1	MOOC: Earth Sciences for Civil Engineering(NPTEL)	VI

**Electives-II**

<b>S. No.</b>	<b>Subject Code</b>	<b>Subject Name</b>	<b>Semester</b>
1	BCE6005-DE2	Foundation Engineering	VI
2	BCE6006-DE2	Air and Noise Pollution Control	VI
3	BCE6007-DE2	Pipeline Engineering	VI
4	BCE6008-DE2	MOOC: Sustainable Materials and Green Buildings(NPTEL)	VI

**Electives-III**

<b>S. No.</b>	<b>Subject Code</b>	<b>Subject Name</b>	<b>Semester</b>
1	BCE7001-DE3	Transportation Engineering	VII
2	BCE7002-DE3	Environmental Impact Assessment	VII
3	BCE7003-DE3	Repair and rehabilitation of Structures	VII
4	BCE7004-DE3	MOOC: Plastic Waste Management (NPTEL)	VII

**Electives-IV**

<b>S. No.</b>	<b>Subject Code</b>	<b>Subject Name</b>	<b>Semester</b>
1	BCE8001-DE4	Solid and Hazardous Waste Management	VIII
2	BCE8002-DE4	Ground Water	VIII
3	BCE8003-DE4	Advanced Transportation Engineering	VIII
4	BCE8004-DE4	MOOC: Energy Efficiency, acoustics and daylighting in Building(NPTEL)	VIII

**Electives-V**

<b>S. No.</b>	<b>Subject Code</b>	<b>Subject Name</b>	<b>Semester</b>
1	BCE8001-DE5	Earthquake Engineering	VIII
2	BCE8002-DE5	Traffic Engineering and Management	VIII
3	BCE8003-DE5	Rock Mechanics	VIII
4	BCE8004-DE5	MOOC: Infrastructure Planning and Management (NPTEL)	VIII