

Manav Rachna International Institute of Research and Studies
Faculty of Engineering and Technology
Department of Civil Engineering
B.TECH(Civil Engineering)/
B.TECH(Civil Engineering with specialisation in Green Technology and Sustainability Engineering)/
B.TECH(Civil Engineering with specialisation in Smart Cities)
2022-26 BATCH

SEMESTER-I														
Course Type	Course Code	Title of Course	Pre-requisite Course, if any		Periods/Week				Marks			Duration of Exam	Credits	
			Title	Code	L	T	P	Total	Int./Continuou s	End Sem.	Total			
BSC	BPH-106	Physics for Engineers (Group A)	None		3+1#	0	0	4						3
BSC	BCH-106	Chemistry for Engineers (Group B)	None		2+1 #	0	0	3	100	100	200	3 hrs		2
BSC	BMA-101/ BMA-102/ BMA-103	Mathematics-1(For CSE only)/ Mathematics- 1(All Branches except CSE & BT)/ Mathematics for Biotechnology-1 (For BT only)	None		3+1#	1	0	5	100	100	200	3 hrs		4
ESC	BEE-101	Basic Electrical Engineering (Group A)	None		3	0	0	3	100	100	200	3 hrs		3
ESC	BCS-101	Programming for Problem Solving(Group B)	None		3	0	0	3	100	100	200	3 hrs		3
ESC	BCS-100A	AI For Engineering	None		2	0	0	2	100	100	200	3 hrs		2
ESC	BME-101A/ BME-102A	Engg Graphics & Design(Group A)/ Workshop/Manufacturing Practices(Group B)	None		0	0	4	4	100	100	200	3 hrs		2
BSC	BPH-151A/ BCH-151A	Physics lab (Group A)/ Chemistry lab (Group B)	None		0	0	2	2	50	50	100	2 hrs		1
ESC	BEE-151A/ BCS-151	Basic Electrical Engg lab(Gp A)/ Programming for Problem Solving lab (Group B)	None		0	0	2	2	50	50	100	2 hrs		1
HSMC	BHM-201	English	None		2	0	0	2	50	50	100	2 hrs		2
HSMC	BHM-MC-001/ BCH-MC-002	Constitution of India* (Group A)/ EVS** (Group B)	None		1*	1**	0	1	50	50	100	2 hrs		AP
Total (Group A/ Group B)													18/17	

SEMESTER-II														
Course Type	Course Code	Title of Course	Pre-requisite Course, if any		Periods/Week				Marks			Duration of Exam	Credits	
			Title	Code	L	T	P	Total	Int./Continuou s	End Sem.	Total			
BSC	BPH-106	Physics for Engineers (Group B)	None		3+1#	0	0	4						3
BSC	BCH-106	Chemistry (Group A)	None		2+1 #	0	0	3	100	100	200	3 hrs		2
BSC	BMA-201/ BMA-202/ BMA-203	Mathematics-2(For CSE only) / Mathematics- 2(All Branches except CSE & BT) / Mathematics for Biotechnology-II (For BT only)	None		3	1	0	4	100	100	200	3 hrs		4
ESC	BEE-101	Basic Electrical Engineering (Group B)	None		3	0	0	3	100	100	200	3 hrs		3
ESC	BCS-101	Programming for Problem Solving (Group A)	None		3	0	0	3	100	100	200	3 hrs		3
ESC	BME-101A/ BME-102	Engg Graphics & Design(Group B)/ Workshop/Manufacturing Practices(Group A)	None		0	0	4	4	100	100	200	3 hrs		2
BSC	BBT-100	Biology for Engineers	None		2	0	0	2	100	100	200	3 hrs		2
BSC	BCH-151A/ BPH-151A	Chemistry lab (Group A)/ Physics lab (Group B)	None		0	0	2	2	50	50	100	2 hrs		1
ESC	CS-151 /BEE-151A	Programming for Problem Solving lab (Group A)/ Basic Electrical Engg lab(Group B)	None		0	0	2	2	50	50	100	2 hrs		1
HSMC	BHM-151	English lab	None		0	0	2	2	50	50	100	2 hrs		1
HSMC	BCH-MC-002/BHM-MC-001	EVS** (Group A)/Constitution of India* (Group B)	None		1*	1**	0	1	50	50	100	2 hrs		AP
Total (Group A/ Group B)													16/17	

* NOTE: Contact hours per week have been increased due to bridge course.

Open Elective Courses shall also be offered, which shall be notified well before start of the semester. The student shall be required and allowed to opt the courses out of offered courses as per prescribed limit for maximum credits(28) in a semester and for the category of Elective Courses under University Rules.

SEMESTER III														
Course Type	Course Code	Title of Course	Pre-requisite Course, if any		Periods/Week				Marks			Duration of Exam	Credits	
			Title	Code	L	T	P	Total	Int./Cont. Evaluation	End Semester Exam	Total			
Compulsory Subjects														
PROJ	Proj-CE-300A	Summer Internship-I	None		2 Weeks				50		50			1
CORE	BCE-DS-302A	Engineering Mechanics for Civil Engineers	None		2	1	0	3	100	100	200	3 hours		3
CORE	BCE-DS-303	Disaster Preparedness & Planning	None		2	0	0	2	100	100	200	3 hours		2
CORE	BCE-DS-305	Engineering Geology	None		1	0	0	1	100	100	200	3 hours		1
ESC	BCE-DS-312/BCE-DS-306	Basic Electronics/Material Science	None		1	0	0	1	100	100	200	3 hours		1
CORE	BCE-DS-403	Surveying & Geomatics	None		2	1	0	3	100	100	200	3 hours		3
CORE	BCE-DS-351A	Computer-aided Civil Engineering Drawing Lab	None		0	0	4	4	100	100	200	2 hours		2
CORE	BCE-DS-352	Engineering Geology Lab	None		0	0	2	2	50	50	100	2 hours		1
CORE	BCE-DS-453	Surveying & Geomatics Lab	None		0	0	2	2	50	50	100	2 hours		1
PROJ	DTI-300	Design, Thinking and Innovation-1	None		0	1	0	1	50	0	50			1

HSMC	BHM-MC-004	Quantitative Aptitude	None		0	0	2	2	50	50	100	2 hours	AP
HSMC	BHM-320	Universal Human Values	None		1	1	0	2	50	50	100	2 hours	2
HSMC	BHM-MC-002	Sports and Yoga	None		2	0	0	2	100	0	100	1 hour	AP
		TOTAL			11	4	10	25	1000	800	1800		18

*Refer to the aforementioned list of choice-based course-basket offered at the Department level. Further, under the elective courses, besides the Interdisciplinary/ Generic papers, on-line courses (MOOCs etc) and other approved courses shall be offered, which shall be notified well before start of the semester at University. Student shall be required and allowed to opt for such offered courses as per limit of maximum credits and for the category of elective courses as per the University Rules.

SEMESTER IV													
Course Type	Course Code	Title of Course	Pre-requisite Course, if any		Periods/Week				Marks			Duration of Exam	Credits
			Title	Code	L	T	P	Total	Int./ Cont. Evaluation	End Semester Exam	Total		
Compulsory Courses													
CORE	BCE-DS-401	Introduction to Fluid Mechanics	Engineering Mechanics	BCE-DS-302	2	0	0	2	100	100	200	3 hours	2
CORE	BCE-DS-402	Introduction to Solid Mechanics	Engineering Mechanics	BCE-DS-302	2	0	0	2	100	100	200	3 hours	2
CORE	BCE-DS-404A	Materials, Testing & Evaluation	None		1	1	0	2	100	100	200	3 hours	2
ESC	BCE-DS-405/BCE-DS-407	Energy Science & Engineering/Building Construction	None		1	1	0	2	100	100	200	3 hours	2
CORE	BCE-DS-406	Transportation Engineering	None		3	0	0	3	100	100	200	3 hours	3
CORE	BCE-DS-451	Introduction to Fluid Mechanics Lab	None		0	0	2	2	50	50	100	2 hours	1
CORE	BCE-DS-452	Solid Mechanics Lab	None		0	0	2	2	50	50	100	2 hours	1
CORE	BCE-DS-454	Materials, Testing & Evaluation Lab	None		0	0	2	2	50	50	100	2 hours	1
CORE	BCE-DS-455	Transportation Engineering Lab	None		0	0	2	2	50	50	100	2 hours	1
PROJ	DTI-400	Design, Thinking and Innovation-II	None		0	1	0	1	50		50		1
HSMC	BHM-MC-006	QAPD-I	None		0	0	2	2	50	50	100	2 hours	AP
		TOTAL			9	3	10	22	800	750	1550		16

*Refer to the aforementioned list of choice-based course-basket offered at the Department level, further, under the elective courses, besides the Program/Interdisciplinary/ Open/Generic papers, on-line courses (MOOCs etc) and other approved courses shall be offered, which shall be notified well before start of the semester at University. Student shall be required and allowed to opt for such offered courses as per limit of maximum credits and for the category of elective courses as per the University Rules.

Note: A student may register for courses leading to a minimum of 16 credits and a maximum of 28 credits.

Discipline Elective Courses*													
Domain Specific	BCE-DS-421	Smart Materials	None		3	0	0	3	100	100	200	3 hours	3
Domain Specific	BCE-DS-422	Introduction to Sustainable development	None		3	0	0	3	100	100	200	3 hours	3
Domain Specific	BCE-DS-423	Transformation to Green Buildings	None		3	0	0	3	100	100	200	3 hours	3
Domain Specific	BCE-DS-424	Introduction to Smart Cities	None		3	0	0	3	100	100	200	3 hours	3

SEMESTER V													
Course Type	Course Code	Title of Course	Pre-requisite Course, if any		Periods/Week				Marks			Duration of Exam	Credits
			Title	Code	L	T	P	Total	Int./ Cont. Evaluation	End Semester Exam	Total		
Compulsory Courses													
PROJ	Proj-CE-500	Summer Internship-II	None		4-6 weeks				100		100		2
CORE	BCE-DS-502	Geotechnical Engineering	None		2	0	0	2	100	100	200	3 hours	2
CORE	BCE-DS-503A	Structural Engineering	Engineering Mechanics for Civil Engineers	BCE-DS-302	1	1	0	2	100	100	200	3 hours	2
CORE	BCE-DS-505A	Structural Analysis-I	None		1	0	2	3	100	100	200	3 hrs	2
CORE	BCE-DS-506A	Concrete Technology	None		2	0	0	2	100	100	200	3 hours	2
CORE	BCE-DS-507	Environmental Engineering - I	None		2	0	0	2	100	100	200	3 hours	2
CORE	BCE-DS-552	Geotechnical Engineering Lab	None		0	0	2	2	50	50	100	2 hours	1
CORE	BCE-DS-553	Structural Engineering Lab			0	0	2	2	50	50	100	2 hours	1
CORE	BCE-DS-557	Environmental Engineering Lab			0	0	2	2	50	50	100	2 hours	1
CORE	DTI-500	Design, Thinking and Innovation-III	None		0	2	0	2	50	0	50	2 hours	2
HSMC	BHM-MC-008	QAPD-II	None		0	0	2	2	50	50	100	2 hours	AP
		Total			8	3	10	21	850	700	1550		17

Discipline Elective Courses*													
Domain Specific	BCE-DS-501	Hydraulic Engineering	Introduction to Fluid Mechanics	BCE-DS-401	3	0	0	3	100	100	200	3 hours	3
Domain Specific	BCE-DS-521	Pavement Materials	Transportation Engineering	BCE-DS-406	3	0	0	3	100	100	200	3 hrs	3
Domain Specific	BCE-DS-522	Design of hydraulic structures	Introduction to Fluid Mechanics	BCE-DS-401	3	0	0	3	100	100	200	3 hrs	3

Domain Specific	BCE-DS-523	Engineering Materials for Sustainability	None		3	0	0	3	100	100	200	3 hrs	3
Domain Specific	BCE-DS-524	Green and Renewable Energy	None		3	0	0	3	100	100	200	3 hrs	3
Domain Specific	BCE-DS-525	Sustainable Architecture	None		2	0	2	3	100	100	200	3 hrs	3
Domain Specific	BCE-DS-526	Planning and Design of Sustainable Transport Systems	None		3	0	0	3	100	100	200	3 hrs	3
Generic Elective-I	HM-506	French-I	None		2	0	0	2	50	50	100	1.5 hrs	2
Generic Elective-I	HM-507	German-I	None		2	0	0	2	50	50	100	1.5 hrs	2
Generic Elective-I	HM-508	Spanish-I	None		2	0	0	2	50	50	100	1.5 hrs	2

\$The LTP distribution, Evaluation Scheme and pre-requisite(s) for Elective courses are given above. The course code will depend upon the elective(s) chosen by the student.

@The weekly load will depend upon the electives chosen by the student .

*Refer to the aforementioned list of choice-based course-basket offered at the Department level. Further, under the elective courses, besides the Interdisciplinary/ Generic papers, on-line courses (MOOCs etc) and other approved courses shall be offered, which shall be notified well before start of the semester at University. Student shall be required and allowed to opt for such offered courses as per limit of maximum credits and for the category of elective courses as per the University Rules.

Note:A student may register for courses leading to a minimum of 18 credits and a maximum of 28 credits.

SEMESTER VI													
Course Type	Course Code	Title of Course	Pre-requisite Course, if any		Periods/Week				Marks			Duration of Exam	Credits
			Title	Code	L	T	P	Total	Int./ Cont. Evaluation	End Semest	Total		
Compulsory Courses													
PROJ	PROJ-CE-600A	Project Phase-I	None		0	0	2	2	100	-	100	2 hrs	1
CORE	BCE-DS-601A	Estimation & Costing and Valuation	None		1	0	2	3	100	100	200	3 hours	2
CORE	BCE-DS-603	Hydrology & Water Resources Engineering	None		2	1	0	3	100	100	200	3 hours	3
CORE	BCE-DS-604A	Construction Engineering & Management	None		2	0	2	4	100	100	200	3 hours	3
CORE	BCE-DS-605A	Design of Concrete Structures	None		2	0	2	4	100	100	200	3 hours	3
CORE	BCE-DS-606	Environmental Engineering - II	None		2	0	0	2	100	100	200	3 hours	2
HSMC	BHM-MC-009	QAPD-III	None		0	0	2	2	50	50	100	2 hours	AP
HSMC	BHM-520	Entrepreneurship and Startups	None		2	0	0	2	100	100	200	3 hours	2
	TOTAL				11	1	10	22	750	650	1400		16

Discipline Elective Courses*													
Domain Specific	BCE-DS-621A	Traffic Engineering and Management	Transportation Engineering	BCE-DS-406	2	0	2	4	100	100	200	3 hrs	3
Domain Specific	BCE-DS-622	Geotechnical Design	Geotechnical Engineering	BCE-DS-502	3	0	0	3	100	100	200	3 hrs	3
Domain Specific	BCE-DS-623A	Construction Project Planning & Systems	None		2	0	2	4	100	100	200	3 hrs	3
Domain Specific	BCE-DS-624	Environmental Systems	None		3	0	0	3	100	100	200	3 hrs	3
Domain Specific	BCE-DS-625	Open Channel flow	Introduction to Fluid Mechanics	BCE-DS-401	3	0	0	3	100	100	200	3 hrs	3
Domain Specific	BCE-DS-626	Railway Engineering	None		3	0	0	3	100	100	200	3 hrs	3
Domain Specific	BCE-DS-627A	Design of Steel Structures	Engineering Mechanics for Civil Engineers	BCE-DS-302	2	0	2	4	100	100	200	3 hrs	3
Domain Specific	BCE-DS-628	Soil Mechanics	None		3	0	0	3	100	100	200	3 hrs	3
Domain Specific	BCE-DS-629	Prefabricated Structures	Design of Concrete Structures	BCE-DS-605	3	0	0	3	100	100	200	3 hrs	3
Domain Specific	BCE-DS-630	Building Information Modelling	None		3	0	0	3	100	100	200	3 hrs	3
Generic Elective-II	HM-606	French- II	French- I	HM-506	2	0	0	2	50	50	100	1.5 hrs	2
Generic Elective-II	HM-607	German-II	German-I	HM-507	2	0	0	2	50	50	100	1.5 hrs	2
Generic Elective-II	HM-608	Spanish-II	Spanish-I	HM-508	2	0	0	2	50	50	100	1.5 hrs	2

\$The LTP distribution, Evaluation Scheme and pre-requisite(s) for Elective courses are given above. The course code will depend upon the elective(s) chosen by the student.

@The weekly load will depend upon the electives chosen by the student .

Note:A student may register for courses leading to a minimum of 16 credits and a maximum of 28 credits.

*Refer to the aforementioned list of choice-based course-basket offered at the Department level. Further, under the elective courses, besides the Interdisciplinary/ Generic papers, on-line courses (MOOCs etc) and other approved courses shall be offered, which shall be notified well before start of the semester at University. Student shall be required and allowed to opt for such offered courses as per limit of maximum credits and for the category of elective courses as per the University Rules.

SEMESTER VII													
Course Type	Course Code	Title of Course	Pre-requisite Course, if any		Periods/Week				Marks			Duration of Exam	Credits
			Title	Code	L	T	P	Total	Int./ Cont. Evaluation	End Semest	Total		
Compulsory Courses													
PROJ	Proj-CE-710	Summer Internship-III	None		4-6 weeks				100		100		2
PROJ	Proj-CE-700A	Project Phase-II	Project Phase-I	Proj-CE-600	0	0	8	8	200	100	300	2 hrs	5
Core	GP-CE-700	General Proficiency											AP
Core	BCE-DS-702A	Structural Analysis-II	None		2	0	2	4	100	100	200	3 hrs	3
Core	BCE-DS-703A	Foundation Engineering	None		2	0	2	4	100	100	200	3 hrs	3

DE/OE/GE	\$	Electives	None						0										
TOTAL					4	0	12	16	400	300	700								13

Discipline Elective Courses*																			
Domain Specific	BCE-DS-721	Masonry Structures	Materials, Testing & Evaluation	BCE-DS-404	3	0	0	3	100	100	200	3 hrs	3						
Domain Specific	BCE-DS-722A	Highway Construction and Management	Transportation Engineering	BCE-DS-406	3	0	0	3	100	100	200	3 hrs	3						
Domain Specific	BCE-DS-723	Urban Transportation Planning.	Transportation Engineering	BCE-DS-406	3	0	0	3	100	100	200	3 hrs	3						
Domain Specific	BCE-DS-724	Environmental Laws and Policy	Environmental Engineering	BCE-DS-602	3	0	0	3	100	100	200	3 hrs	3						
Domain Specific	BCE-DS-725	Physico-Chemical Processes for Water and Wastewater Treatment	Environmental Engineering	BCE-DS-602	3	0	0	3	100	100	200	3 hrs	3						
Domain Specific	BCE-DS-726	Engineering Risk & Uncertainty	None		3	0	0	3	100	100	200	3 hrs	3						
Domain Specific	BCE-DS-728A	Bridge Engineering	None		2	0	2	4	100	100	200	3 hrs	3						
Domain Specific	BCE-DS-729	Disaster Risk Reduction	None		3	0	0	3	100	100	200	3 hrs	3						
Domain Specific	BCE-DS-730	Advanced Design of Concrete Structures	Design of Concrete Structures	BCE-DS-607	2	0	2	4	100	100	200	3 hrs	3						
Domain Specific	BCE-DS-731	Metro Systems & Engineering (BCE-DS-731)	None		3	0	0	3	100	100	200	3 hrs	3						
Domain Specific	BCE-DS-732	Construction Safety	None		3	0	0	3	100	100	200	3 hrs	3						

\$The LTP distribution, Evaluation Scheme and pre-requisite(s) for Elective courses are given above. The course code will depend upon the elective(s) chosen by the student.

@The weekly load will depend upon the electives chosen by the student .

Note: A student may register for courses leading to a minimum of credits 13 and a maximum of 28 credits.

*Refer to the aforementioned list of choice-based course-basket offered at the Department level. Further, under the elective courses, besides the Interdisciplinary/ Generic papers, on-line courses (MOOCs etc) and other approved courses shall be offered, which shall be notified well before start of the semester at University. Student shall be required and allowed to opt for such offered courses as per limit of maximum credits and for the category of elective courses as per the University Rules.

SEMESTER VIII														
Course Type	Course Code	Title of Course	Pre-requisite Course, if any		Periods/Week				Marks			Duration of Exam	Credits	
			Title	Code	L	T	P	Total	Int./ Cont. Evaluation	End Semest er Exam	Total			
PROJ	Proj-CE-800A*	Summer Internship-IV			Minimum 20 weeks				200	100	300	2 HOURS	10	

OR																			
DE/OE/ME	\$	Elective(s)																	
Total										200	100	300		10					

Discipline Elective Courses*																			
Domain Specific	BCE-DS-821	Airport Planning and Design	Transportation Engineering	BCE-DS-406	3	0	0	3	100	100	200	3 hrs	3						
Domain Specific	BCE-DS-822	Construction Equipment& Automation	Construction Project Planning & Systems	BCE-DS-603	3	0	0	3	100	100	200	3 hrs	3						
Domain Specific	BCE-DS-823	Air, Noise Pollution and Control	Environmental Engineering	BCE-DS-602	3	0	0	3	100	100	200	3 hrs	3						
Domain Specific	BCE-DS-824A	Environmental Geo-technology	None		2	0	2	4	100	100	200	3 hrs	3						
Domain Specific	BCE-DS-825A	Intelligent Transportation Systems	Transportation Engineering	BCE-DS-406	2	0	2	4	100	100	200	3 hrs	3						
Domain Specific	BCE-DS-826	Port and Harbour Engineering	None		3	0	0	3	100	100	200	3 hrs	3						
Domain Specific	BCE-DS-827	Construction Productivity	None		3	0	0	3	100	100	200	3 hrs	3						
Domain Specific	BCE-DS-828	Sustainable Construction Methods	None		3	0	0	3	100	100	200	3 hrs	3						
Domain Specific	BCE-DS-829	Solid and Hazardous Waste Management	Environmental Engineering	BCE-DS-602	3	0	0	3	100	100	200	3 hrs	3						
Domain Specific	BCE-DS-830	Prestressed Concrete	None		3	0	0	3	100	100	200	3 hrs	3						
Domain Specific	BCE-DS-831A	Repairs & Rehabilitation of Structures	Concrete Technology	BCE-DS-506	2	0	2	4	100	100	200	3 hrs	3						
Domain Specific	BCE-DS-832	Environmental Impact Assessment and Life Cycle Analyses	Environmental Engineering	BCE-DS-602	3	0	0	3	100	100	200	3 hrs	3						
Domain Specific	BCE-DS-833	Earthquake Engineering	Engineering Mechanics for Civil Engineers	BCE-DS-302	3	0	0	3	100	100	200	3 hrs	3						
Domain Specific	BCE-DS-834	Geographic Information Systems and Science	Surveying & Geomatics	BCE-DS-403	2	0	2	4	100	100	200	3 hrs	3						
Domain Specific	BCE-DS-835	Fire Resistant construction	None		3	0	0	3	100	100	200	3 hrs	3						
Domain Specific	BCE-DS-836	Heritage Conservation	None		3	0	0	3	100	100	200	3 hrs	3						
Domain Specific	BCE-DS-837	Water Auditing	None		3	0	0	3	100	100	200	3 hrs	3						

\$The LTP distribution, Evaluation Scheme and pre-requisite(s) for Elective courses are given above. The course code will depend upon the elective(s) chosen by the student.

@The weekly load will depend upon the electives chosen by the student .

*Refer to the aforementioned list of choice-based course-basket offered at the Department level. Further, under the elective courses, besides the Interdisciplinary/ Generic papers, on-line courses (MOOCs etc) and other approved courses shall be offered, which shall be notified well before start of the semester at University. Student shall be required and allowed to opt for such offered courses as per limit of maximum credits and for the category of elective courses as per the University Rules.

Semester Wise Credits Distribution

Semester	BSC/ ESC/ HSMC Courses	Core Courses/ Project/ Internship	Program Electives	Multi-disciplinary Electives/Open / Generic Elective	Total
I	18				18
II	16				16
III	3	15			18
IV	2	14			16
V		17		2	19
VI	2	14		2	18
VII		13			#REF!
VIII		10			#REF!
	41	83	12	24	160

\$The LTP distribution, Evaluation Scheme and pre-requisite(s) for Elective courses are given above. The course code will depend upon the elective(s) chosen by the student.

@The weekly load will depend upon the electives chosen by the student.

*Refer to the aforementioned list of choice-based course-basket offered at the Department level. Further, under the elective courses, besides the Multi-disciplinary/ Generic papers, on-line courses (MOOCs etc) and other approved courses shall be offered, which shall be notified well before start of the semester at University. Student shall be required and allowed to opt for such offered courses as per limit of maximum credits and for the category of elective courses as per the University Rules.

Minimum Credits to earn Degree in B.Tech Civil Engineering will be 160

To get a Degree in B. Tech (Civil Engineering with specialisation in Smart Cities/Green Technology and Sustainability Engineering) with Honours, a student has to earn additional 18 - 20 Credits.

Project Phase-I will be the initial phase of the B.Tech Project that is extended to 7th semester as Project Phase-II. Also it can be extended experimental work of the research undertaken in DTI-I, DTI-II and DTI-III.

A student will earn minimum 180 credits to get Honours degree in the specializations. The additional 18-20 credits should be earned from the following courses included in the curriculum as core courses or Discipline/Multidisciplinary/Open Electives.

B. Tech (Civil Engineering with specialisation in Smart Cities)		
S.No	Title of the Course	Course Code
1.	Smart Materials	BCE-DS-421
2.	An Introduction to Smart Cities	BCE-DS-424
3.	IoT Enabled Smart Cities	ECE Department
4.	Sustainable Architecture	BCE-DS-525
5.	Cyber Security	CSE Department
6.	Green Chemistry and Sustainability	BCH-OE-021:
7.	SCADA Systems	EEE Department
8.	Planning and Design of Sustainable Transport Systems	BCE-DS-526
9.	Building Information Modelling	BCE-DS-630
10.	Smart Waste Management	BCE-OE-025
11.	Sensor Technology	ECE Department
12.	Repairs & Rehabilitation of Structures	BCE-DS-831
13.	Geographic Information Systems and Science	BCE-DS-834
14.	Heritage Conservation	BCE-DS-836

B. Tech (Civil Engineering with specialisation in Green Technology and Sustainability Engineering)		
S.No	Title of the Course	Course Code
1.	An Introduction to Sustainable Development	BCE-DS-422
2.	Transformation to Green Buildings	BCE-DS-423
3.	Sustainable Architecture	BCE-DS-525
4.	Engineering Materials for Sustainability	BCE-DS-523
5.	Green Chemistry and Sustainability	BCH-OE-021:
6.	Planning and Design of Sustainable Transport Systems	BCE-DS-526
7.	Building Information Modelling	BCE-DS-630
8.	Smart Waste Management	BCE-OE-025
9.	Disaster Risk Reduction	BCE-DS-729
10.	E - Waste Management	BCE-OE-032
11.	Smart Irrigation System	BCE-OE-033
12.	Water Auditing	BCE-DS-837