

**School of Engineering & Technology****DEPARTMENT OF CIVIL ENGINEERING****B.Tech - Civil Engineering****Semester I**

Sl.No	Course Code	Course Name	Hours per week			Credits
			L	T	P	
1.	BPY23111T	Physics	3	1	0	4
2.	BPY23111P	Physics Laboratory	0	0	2	1
3.	BMA23111T	Mathematics - I	3	1	0	4
4.	BBI23101T	Biology for Engineers	2	0	0	2
5.	BEL23101T	Basic Electrical Engineering	3	1	0	4
6.	BEL23101P	Basic Electrical Engineering Laboratory	0	0	2	1
7.	BCE26101P	Civil Engineering Graphics And Building Planning	1	0	4	3
8	BME23103P	Design Thinking & Idea Lab	0	0	2	1
9	BME23101P	Manufacturing Practice Workshop-I	0	0	2	1
10	SYN23001P	Sports & Yoga or NSS/NCC	0	0	2	0
		Total	12	3	14	21



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Semester II

Sl.No	Course Code	Course Name	Hours per week			Credits
			L	T	P	
1.	BCH23111T	Chemistry	3	0	0	3
2.	BCH23111P	Chemistry Laboratory	0	0	2	1
3.	BMA23112T	Mathematics - II	3	1	0	4
4.	BCS23101T	Programming for Problem Solving	2	0	0	2
5.	BCS23101P	Programming for Problem Solving Laboratory	0	0	4	2
6.	BEN23102T	English for Technical Communication	2	0	2	3
7.	UHV23001T	Universal Human Values	2	1	0	3
8.	BME23101P	Manufacturing Practice Workshop II	0	0	2	1
9.	JPN23101P	Communicative Japanese/Russian	0	0	2	1
		Total	12	2	12	20

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Sl.No	Course Code	Course Name	Hours per week			Credits
			L	T	P	
1.	BCE26301T	Solid Mechanics	3	0	0	3
2.	BCE26311P	Solid Mechanics Lab	0	0	2	1
3.	BMA26113T	Mathematics to Civil Engineering	3	1	0	4
5.	BCE26302T	Engineering Survey -I	2	0	0	2
6.	BCE26312P	Engineering Survey -I Lab	0	0	2	1
4.	BCE26303T	Engineering Geology	2	0	0	2
7.	BCE26304T	Structural Analysis -I	3	0	0	3
8.	BCE26305T	Fluid Mechanics	3	0	0	3
9.	BCE26315P	Fluid Mechanics Lab	0	0	2	1
10.	IKS	https://iksindia.org/course-list.php https://www.ugc.gov.in/pdfnews/6436045_Guidelines-IKS-in-HE-Curricula.pdf	2	0	0	2
11.	MNC-AU-03	Disability, Accessibility and Universal Design (pg:95/pg:128, AICTE Model Curriculum for Undergraduate degree in Civil)	2	0	0	0
12.	BCE-SI-01	Summer Internship-1*	0	0	2	1
		Total	20	1	8	23
13.		Minor/Honours/Value Added Courses (Optional)	3	0	0	3

* summer internship during end of semester 2 to be evaluated in semester 3



MC/HC/VAC: From Track

Track No	Track	
I	Structural Engineering	Engineering Mechanics and Analysis of Structures
		Design of RC Structures
		Design of Steel Structures
		Structural Dynamics and Earthquake Engineering
II	Geotechnical Engineering	Soil Mechanics
		Advanced Soil Mechanics
		Design of Substructure
		Dynamics of Soil
III	Environmental Engineering	Water Supply Engineering
		Waste water Engineering
		Plumbing and Sanitation
		Environmental Impact Assessment
IV	Hydraulics & Water Resources Engineering	Introduction to Water Resource Engineering
		River Engineering
		Design of Hydraulic Structure
		Water Power Engineering

**School of Engineering & Technology****DEPARTMENT OF CIVIL ENGINEERING****B.Tech - Civil Engineering****Semester IV**

Sl.No	Course Code	Course Name	Hours per week			Credits
			L	T	P	
1.	BCE26401T	Construction Material and Concrete Technology	3	0	0	3
2.	BCE26411P	Construction Material and Concrete Technology Lab	0	0	2	1
3.	BCE26402T	Engineering Survey -II	3	0	0	3
4.	BCE26403T	Transportation Engineering-I	3	0	0	3
5.	BCE26413P	Transportation Engineering Lab	0	0	2	1
6.	BCE26404T	Structural Analysis-II	3	1	0	4
7.	BCE26405T	Hydraulic Engineering	3	0	0	3
8.	BCE26415P	Hydraulic Engineering Lab	0	0	2	1
9.	BCE26406T	Construction Engineering & Management	3	0	0	3
10.	MNC-AU-04	Civil Engineering-Societal & Global Impact	2	0	0	0
		Total	20	1	6	22
11.		Minor/Honours/Value Added Courses (Optional)	3	0	0	3

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Sl. No	Course Code	Course Name	Hours per week			Credits
			L	T	P	
1.	BCE26501T	Structural Design -I	3	1	0	4
2.	BCE26502T	Environmental Engineering -I	3	0	0	3
3.	BCE26512P	Environmental Engineering Lab	0	0	2	1
4.	BCE26503T	Transportation Engineering- II	3	0	0	3
5.	BCE26504T	Geotechnical Engineering	3	0	0	3
6.	BCE26514P	Geotechnical Engineering Lab	0	0	2	1
7.	BCE26505T	Hydrology & Irrigation Engineering	3	0	0	3
8.	MOPEC-01	<i>Multidisciplinary Open Electives Courses -I</i> Environmental Studies	3	0	0	3
9.	MNC-AU-05	Professional Practice, Law & Ethics	2	0	0	0
10.	BCE-SI-02	Summer Internship-2*	0	0	4	2
		Total	21	1	8	24
11.		Minor/Honours/Value Added Courses (Optional)	3	0	0	3

* summer internship during end of semester 4 to be evaluated in semester 5



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Semester VI

Sl.No	Course Code	Course Name	Hours per week			Credits
			L	T	P	
1.	BCE26601T	Structural Design -II	3	1	0	4
2.	BCE26602T	Environmental Engineering -II	3	0	0	3
3.	BCE26603T	Sustainable and Green construction	2	0	0	2
4.	BCE26604T	Estimation, Costing & Valuation	2	0	0	2
5.	BCE266PE**T	Program Elective Course -2	3	0	0	3
6.	BCE266PE**T	Program Elective Course -3	3	0	0	3
8.	BCE26605T	Engineering Economics	2	0	0	2
7.	MOPEC- 02	Multidisciplinary Open Electives Courses -2 <i>Principle of Management</i>	3	0	0	3
8.	MNC-AU-06	Instrumentation & Sensor Technologies for Civil Engineering Applications	3	0	0	0
		Total	24	1	0	22
9.		Minor/Honours/Value Added Courses (Optional)	3	0	0	3

Program Elective	VI Semester		
	Track	Course Code	Course Name
2	I	BCE266PE21T	Advanced Structural Analysis.
2	III	BCE266PE23T	Transport of Water and Wastewater
2	IV	BCE266PE24T	Open Channel flow
3	I	BCE266PE31T	Reliability Analysis of Structures
3	II	BCE266PE32T	Soil Mechanics II
3	III	BCE266PE33T	Environmental Impact Assessment and Life Cycle Analyses

TRACK I: Structural Engineering

TRACK II: Geotechnical Engineering

TRACK III: Environmental Engineering

TRACK IV: Water Resources Engineering

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Sl. No	Course Code	Course Name	Hours per week			Credits
			L	T	P	
1.	PCC	Robotics and Automation	2	0	0	2
2.	BCE267PE4**	Program Elective Course -4	3	0	0	3
3.	BCE267PE5**	Program Elective Course -5	3	0	0	3
4.	BCE267PE6**	Program Elective Course -6	3	0	0	3
5.	BCE267PE7**	Program Elective Course -7	3	0	0	3
6.	MOPEC-03	Multidisciplinary Open Elective Course	2	0	0	2
7.	BCE267PR1	Design Project	0	0	4	2
8.	BCE-SI-03	Summer Internship-03*	0	0	6	3
		Total	16	0	8	21
9.		Minor/Honours/Value Added Courses (Optional)	3	0	0	3

*Summer Internship should be undergone during the month of July every year (after 6th sem examination & before reopening 7th sem classes).



Program Elective Courses

TRACK I: Structural Engineering
TRACK II: Geotechnical Engineering
TRACK III: Environmental Engineering
TRACK IV: Water Resources Engineering
TRACK V: Transportation Engineering

Program Elective	VII Semester		
	Track	Course Code	Course Name
4	I	BCE237PE41T	Prestressed Concrete
4	II	BCE237PE42T	Ground Improvement Techniques
4	III	BCE237PE43T	Industrial Waste Water Management
4	IV	BCE237PE44T	Urban Water Infrastructure
4	V	BCE237PE45T	Airport Planning & Design
5	I	BCE237PE51T	Earthquake Engineering
5	II	BCE237PE52T	Geotechnical Design
5	III	BCE237PE53T	Water Quality Management
5	IV	BCE237PE54T	Watershed Conservation & Management
5	V	BCE237PE55T	Port & Harbour Engineering
6	I	BCE237PE61T	Rehabilitation/Restoration of Structures
6	II	BCE237PE62T	Tunnel Engineering
6	III	BCE237PE63T	Air & Noise Pollution Control
6	IV	BCE237PE64T	Flood Management and River Engineering.
6	V	BCE237PE65T	Traffic Engineering & Management
7	I	BCE237PE71T	Bridge Engineering
7	II	BCE237PE72T	Earth Retaining Structures
7	III	BCE237PE73T	Solid and Hazardous Waste Management
7	IV	BCE237PE74T	Ground Water Engineering
7	V	BCE237PE75T	Smart Cities

MOEC	Course Code	Course Name
		Bio mimicry in Architecture – NS
		Visual Sociology – S&SW
		Disaster Management – Civil
		Organisational Behaviour – MBA
		Utilization of Solar Energy in Everyday life – EEE
		Computational Thinking – CSE
		Renewable Energy - EE
		Any other from time to time



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Semester VIII

Sl.No	Course Code	Course Name	Hours per week			Credits
			L	T	P	
1.	BCE268PR2	Technical Project/Long term Internship (max. 6 month)	0	0	32	16
		Total	0	0	32	16
2.		Minor/Honours/Value Added Courses (Optional)	3	0	0	3