



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.	BPY25111T	Physics (Introduction to Mechanics)	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
		Total	12	3	14	21

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

Sl.No	Course Code	Course Name	Hours per week			Credits
			L	T	P	
1.	BCH23111T	Chemistry for Engineering	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
10	SYN23001P	Sports & Yoga or NSS/NCC	0	0	2	0
		Total	12	2	12	20

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

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.	BMA23113T	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.	NPTEL course	Soft Skill Development	3	0	0	3
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	21	1	8	24
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
11.	IKS	https://iksindia.org/course-list.php https://www.ugc.gov.in/pdfnews/6436045/Guidelines-IKS-in-HE-Curricula.pdf	2	0	0	2
		Total	22	1	6	24
12.		Minor/Honours/Value Added Courses (Optional)	3	0	0	3

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

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.	NPTEL Course	ENTREPRENEUR SKILLS	3	0	0	3
10.	BCE-SI-02	Summer Internship-2*	0	0	4	2
		Total	23	1	8	26
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

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

Sl. No	NPTEL Course Code	Course Name	Hours per week			Credits
			L	T	P	
1.	noc26-cs183	Introduction to Application of Artificial Intelligence to Robotics**	2	0	0	2
2.	NPTEL	Program Elective Course -4**	3	0	0	3
3.	NPTEL	Program Elective Course -5**	3	0	0	3
4.	NPTEL	Program Elective Course -6**	3	0	0	3
5.	NPTEL	Program Elective Course -7**	3	0	0	3
6.	NPTEL	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 semester examination & before reopening 7th semester classes).

** Students need to complete the courses through NPTEL platform, mentor (faculty member) will be assigned from the department.



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	NPTEL Course ID	Course Name
4	I	noc26-ce85	Design of Steel-Concrete Composite Structures
4	II	noc26-ce139	Ground Improvement
4	III	noc26-ce140	Waste Water Treatment and Recycling
4	IV	noc26-ce145	Availability and Management of Groundwater Resources
4	V	noc26-ce157	Pavement Construction Technology
5	I	noc26-ce123	Advanced Reinforced Concrete Design
5	II	noc26-ce150/ noc26-ce103	Geotechnical Earthquake Engineering/ Earthquake Geotechnical Engineering
5	III	noc26-ce126	Indoor Air Pollution: Sources, Effects, Monitoring, Control and Modeling
5	IV	noc26-ge75	Rural Water Resources Management
5	V	noc26-ce109	Pavement Materials (Under Pavement Engineering)
6	I	noc26-ce102	Finite Element Method and Computational Structural Dynamics
6	II	noc26-ce134	Geotechniques of Dams, Tunnels and Underground Spaces
6	III	noc26-ce125	An Introduction to Climate Dynamics, Variability and Monitoring
6	IV	noc26-ce101	River Engineering.
6	V	noc26-ce107	Sustainable Transportation systems
7	I	noc26-ce136	Bridge Engineering
7	II	noc26-ce120	Geosynthetics and Reinforced Soil Structures
7	III	noc26-ce153	Municipal Solid Waste Management
7	IV	noc26-ce105	Ground Water Engineering
7	V	noc26-ce160	Remote Sensing for Natural Hazard Studies

MOEC	NPTEL Course ID	Course Name
	noc26-hs218	Sociology of Development
	noc26-mg112	Operations and Supply Chain Management – MBA
	noc26-ge91	Solar Energy Engineering and Technology
	noc26-ge98	Renewable Energy Sources: Fundamentals and Technologies
		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



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