

BIRLA INSTITUTE OF TECHNOLOGY- MESRA, RANCHI
NEWCOURSE STRUCTURE - To be effective from academic session 2018- 19
Based on CBCS & OBE model
Recommended scheme of study for *B.Tech. (Civil Engineering)*

Semester/ Session of Study (Recommended)	LEVEL	Category of course	Course Code	Courses	Mode of delivery & credits <i>L-Lecture; T-Tutorial;P-Practicals</i>			Total Credits <i>C- Credits</i>
					L (Periods/ week)	T (Periods/ week)	P (Periods/ week)	C
GRAND TOTAL FOR FIRST YEAR								43.5
THIRD Monsoon	THEORY							
	SECOND	FS	MA203	Numerical Methods	2	0	0	2
	FIRST		CE101	Environmental Sciences	2	0	0	2
	SECOND	PC	CE201	Solid Mechanics	3	0	0	3
			CE202	Structural Analysis - I	3	0	0	3
			CE203	Fluid Mechanics	4	0	0	4
			CE204	Building Materials and Construction	3	0	0	3
	LABORATORIES							
	SECOND	GE	IT202	Basic IT Workshop	0	0	2	1
		FS	MA204	Numerical Methods Lab	0	0	2	1
		MC	MC201/202/203/204	Choice of : NCC/NSS/ PT & Games/ Creative Arts (CA)	0	0	2	1
		PC	CE205	Civil Engineering Drawing	0	0	4	2
	CE206		Fluid Mechanics Laboratory	0	0	2	1	
TOTAL								23
FOURTH Spring	THEORY							
	SECOND	GE	IT201	Basics of Intelligent Computing	3	0	0	3
	FIRST	FS	BE101	Biological Science for Engineers	2	0	0	2
	SECOND	PC	CE207	Structural Analysis - II	3	0	0	3
			CE208	Surveying	4	0	0	4
			CE209	Construction Engineering and Management	3	0	0	3
			CE210	Earthquake Engineering and Disaster Mangement	3	0	0	3
	LABORATORIES							
	FIRST	GE	EE102	Electrical Engineering Lab	0	0	3	1.5
	SECOND	MC	MC205/206/207/208	Choice of : NCC/NSS/ PT & Games/ Creative Arts (CA)	0	0	2	1
		PC	CE211	Structural Engineering Laboratory - I	0	0	2	1
CE212			Surveying Field Work	0	0	4	2	
CE213			Specifications Estimation and Costing	1	0	2	2	
TOTAL								25.5

FIFTH Monsoon	THEORY							
	FIRST	HSS	MT123	Business Communications	2	0	2	3
	THIRD	PC	CE301	Structural Design - I	4	0	0	4
			CE302	Water Resources Engineering	4	0	0	4
			CE303	Geotechnical Engineering	4	0	0	4
			CE304	Environmental Engineering	4	0	0	4
			CE305	Transportation Engineering	4	0	0	4
	LABORATORIES							
THIRD	PC	CE306	Water Resources Engineering Laboratory	0	0	2	1	
		CE307	Environmental Engineering Laboratory	0	0	2	1	
25								
SIXTH Spring	THEORY							
	THIRD	PC	CE308	Structural Design - II	4	0	0	4
	FOURTH	PE		Elective - I	3	0	0	3
				Elective - II	3	0	0	3
		OE		Open Elective - I	3	0	0	3
				Open Elective - II	3	0	0	3
	THIRD	MC	MC300	Summer Training-Mandatory	N/A			3
	LABORATORIES							
	THIRD	PC	CE309	Structural Engineering Laboratory – II	0	0	2	1
			CE310	Computer Aided Analysis and Design	0	0	2	1
CE311			Geotechnical Engineering Laboratory	0	0	2	1	
CE312			Transportation Engineering Laboratory	0	0	2	1	
23								
TOTAL								
SEVENTH Monsoon	THEORY							
	FOURTH	HSS	CE401	Professional Practice Law & Ethics	2	0	0	2
		PE		Elective – III	3	0	0	3
				Elective – IV	3	0	0	3
				Open Elective – III/MOOC I	3	0	0	3
		OE		Open Elective – IV/MOOC II	3	0	0	3
	SECOND	MC	MT204	Constitution of India	2	0	0	NC
LABORATORIES								
FOURTH	PC	CE402	Remote Sensing and GIS Laboratory	0	0	2	1	
15								
EIGHTH Spring	FOURTH	PC	CE400	Research Project / Industry Internship	Total			12
GRAND TOTAL								
167								

DEPARTMENT OF CIVIL AND ENVIRONMENTAL ENGINEERING
PROGRAMME ELECTIVES (PE)*
OFFERED FOR B.Tech. (Civil Engineering)

PE / LEVEL	Code no.	Name of the PE courses	Prerequisites courses with code	L	T	P	C
4	CE411	Advanced Structural Analysis	CE202 Structural Analysis – I and CE207 Structural Analysis - II	3	0	0	3
	CE412	Structural Dynamics	CE202 Structural Analysis – I and CE207 Structural Analysis - II	3	0	0	3
	CE413	Concrete Technology		3	0	0	3
	CE414	Pre-stressed Concrete	CE301 Structural Design - I	3	0	0	3
	CE415	Fluid Dynamics	CE203 Fluid Mechanics	3	0	0	3
	CE416	Open Channel Flow	CE203 Fluid Mechanics	3	0	0	3
	CE417	Design of Hydraulic Structures	CE203 Fluid Mechanics	3	0	0	3
	CE418	Groundwater Engineering	CE203 Fluid Mechanics	3	0	0	3
	CE419	Advanced Geotechnical Engineering	CE303 Geotechnical Engineering	3	0	0	3
	CE420	Air Pollution and Control	CE101 Environmental Science	3	0	0	3
	CE421	Solid Waste Management	CE101 Environmental Science	3	0	0	3
	CE422	ISO 14000 and Environmental Management system	NIL	3	0	0	3
	CE423	Harbour & Airport Engineering	NIL	3	0	0	3
	CE424	Advanced Surveying	CE208 Surveying	3	0	0	3
	CE425	Remote Sensing in Civil Engineering	NIL	3	0	0	3
	CE426	Application of Civil Engineering in Mining	NIL	3	0	0	3

* PROGRAMME ELECTIVES TO BE OPTED ONLY BY THE DEPARTMENT STUDENTS

DEPARTMENT OF CIVIL AND ENVIRONMENTAL ENGINEERING
OPEN ELECTIVES (OE)*
OFFERED FOR LEVEL 1-4

OE / LEVEL	Code no.	Name of the OE courses	Prerequisites courses with code	L	T	P	C
4	CE427	Building Construction	NIL	3	3	3	3
	CE428	Construction Management	NIL	3	3	3	3
	CE429	Disaster Management	NIL	3	3	3	3
	CE430	Environmental Management	NIL	3	3	3	3

* OPEN ELECTIVES TO BE OPTED ONLY BY OTHER DEPARTMENT STUDENTS