

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

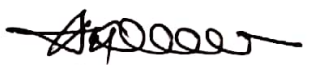
Semester/ Session of Study (Recommended)	LEVEL	Category of course	Course Code	Subjects	Mode of delivery & credits <i>L-Lecture; T-Tutorial; P-Practicals</i>			Total Credits <i>C- Credits</i>	
					L <i>(Periods/week)</i>	T <i>(Periods/week)</i>	P <i>(Periods/week)</i>	C	
FIRST Monsoon	THEORY								
	FIRST	FS <i>Foundation Sciences</i>	MA103	Mathematics - I	3	1	0	4	
			PH113	Physics	3	1	0	4	
		GE <i>General Engineering</i>	EE101	Basics of Electrical Engineering	3	1	0	4	
			CS101	Programming for Problem Solving	3	1	0	4	
	LABORATORIES								
	FIRST	FS	PH114	Physics Lab	0	0	3	1.5	
		GE	CS102	Programming for Problem Solving Lab	0	0	3	1.5	
		GE	PE101	Workshop Practice	0	0	3	1.5	
		MC Mandatory Course	MC101/102/103/104	Choice of: NCC/NSS/ PT & Games/ Creative Arts (CA)	0	0	2	1	
	TOTAL								21.5
	SECOND Spring	THEORY							
FIRST		FS	MA107	Mathematics - II	3	1	0	4	
			CH101	Chemistry	3	1	0	4	
		GE	ME101	Basics of Mechanical Engineering	3	1	0	4	
			EC101	Basics of Electronics & Communication Engineering	3	1	0	4	
LABORATORIES									
FIRST		FS	CH102	Chemistry Lab	0	0	3	1.5	
		GE	EC102	Electronics & Communication Lab	0	0	3	1.5	
			ME102	Engineering Graphics	0	0	4	2	
		MC	MC105/106/107/108	Choice of: NCC/NSS/ PT & Games/ Creative Arts (CA)	0	0	2	1	
TOTAL								22	
GRAND TOTAL FOR FIRST YEAR								43.5	

Approved
23.5.2019

		THEORY						
THIRD Monsoon	SECOND	FS	MA203	Numerical Methods	2	0	0	2
	FIRST		CE101	Environmental Science	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
		THEORY						
FOURTH Spring	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 Management	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


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THEORY									
FIFTH Monsoon	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	
	TOTAL								25
THEORY									
SIXTH Spring	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	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		
TOTAL								23	
THEORY									
SEVENTH Monsoon	FOURTH	HSS	CE401	Professional Practice Law & Ethics	2	0	0	2	
		PE		Elective - III	3	0	0	3	
				Elective - IV	3	0	0	3	
		OE		Open Elective - III	3	0	0	3	
			Open Elective - IV	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		
TOTAL								15	
EIGHT Spring	FOURTH	PC	CE403	Research Project / Industry Internship	Total			12	
GRAND TOTAL <i>Minimum requirement for Degree award</i>								167	


23.5.2019

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

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

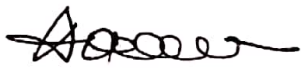
* PROGRAMME ELECTIVES TO BE OPTED ONLY BY THE DEPARTMENT STUDENTS

A. R. Ramesh
23.5.2019

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

OE / LEVEL	Code no.	Name of the OE subjects	Prerequisites Subjects with code	L	T	P	C
4	CE427	Building Construction		3	0	0	3
4	CE428	Construction Management		3	0	0	3
4	CE429	Disaster Management		3	0	0	3
4	CE430	Environmental Management		3	0	0	3

*** OPEN ELECTIVES TO BE OPTED ONLY BY OTHER DEPARTMENT STUDENTS**


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