

BIRLA INSTITUTE OF TECHNOLOGY- MESRA, RANCHI
NEWCOURSE STRUCTURE - To be effective from academic session 2018- 19
Based on CBCS & OBE model
M.Tech. (Environmental Science and Engineering)

SEMESTER / Session of Study (Recommended)	Course Level	Category of course	Course Code	Courses	Mode of delivery & credits <i>L-Lecture; T-Tutorial; P- Practical</i>			Total Credits <i>C- Credits</i>
					L (Periods/ week)	T (Periods /week)	P (Periods /week)	C
				THEORY				
FIRST / Monsoon	FIFTH	PC	CE 527	Ecology and Environment	3	0	0	3
			CE 528	Environmental Chemistry and Microbiology	3	0	0	3
			CE 529	Water Supply Engineering	3	0	0	3
		PE		Programme Elective – I	3	0	0	3
		OE		Open Elective – I	3	0	0	3
				LABORATORY				
	FIFTH	PC	CE 530	Environmental Engineering Laboratory – I	0	0	4	2
			CE 531	Ecology and Microbiology Lab	0	0	4	2
				TOTAL				19
				THEORY				
SECOND/ Spring	FIFTH	PC	CE 532	Wastewater Engineering	3	0	0	3
			CE 533	Air Pollution and Control Technology	3	0	0	3
			CE534	Solid Waste Management	3	0	0	3
		PE		Programme Elective – II	3	0	0	3
		OE		Open Elective – II	3	0	0	3
				LABORATORY				
	FIFTH	PC	CE535	Environmental Engineering Laboratory – II	0	0	4	2
			CE536	Design of Water and Wastewater System	0	0	4	2
				TOTAL				19
				TOTAL FOR FIRST YEAR				38
	FIFTH	PE	CE537	Environmental Impact Assessment and Legislation	3	0	0	3
				Programme Elective - III	3	0	0	3
				LABORATORY				
	FIFTH	PC	CE538	System Engineering Sessional	0	0	4	2
			CE600	Thesis Part 1				8
				TOTAL				16
	FIFTH	PC	CE 650	Thesis Part 2				16
				TOTAL				16
				TOTAL FOR SECOND YEAR				32
				GRAND TOTAL FOR M.TECH PROGRAMME (38 + 32)				70

DEPARTMENT OF CIVIL AND ENVIRONMENTAL ENGINEERING
PROGRAMME ELECTIVES (PE)
OFFERED FOR M.Tech. (Environmental Science and Engineering)

PE / LEVEL	Code no.	Name of the PE courses	Prerequisites course with code	L	T	P	C
5	CE563	Climate Change and Adaptation	NIL	3	0	0	3
	CE564	Instruments for Environmental Engineering	NIL	3	0	0	3
	CE565	Earth Sciences	NIL	3	0	0	3
	CE566	Environmental Economics	NIL	3	0	0	3
	CE567	Environmental Statistics	NIL	3	0	0	3
	CE568	Environmental Toxicology	NIL	3	0	0	3
	CE569	Environmental Biotechnology	NIL	3	0	0	3
	CE570	Environment and Energy Management	NIL	3	0	0	3
	CE571	Advanced Wastewater Engineering	NIL	3	0	0	3
	CE572	Occupational health and Industrial Safety	NIL	3	0	0	3
	CE573	Ecosystem Health and Eco-restoration	NIL	3	0	0	3
	CE574	Renewable Energy Resources	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 5-6

OE / LEVEL	Code no.	Name of the OE courses	Prerequisites courses with code	L	T	P	C
5	CE575	Environmental and Natural Resource Management	NIL	3	0	0	3
	CE576	Environmental Science and Management	NIL	3	0	0	3
	CE577	Industrial Pollution Control	NIL	3	0	0	3
	CE578	Waste Management	NIL	3	0	0	3

* OPEN ELECTIVES TO BE OPTED ONLY BY OTHER DEPARTMENT STUDENTS