

BIRLA INSTITUTE OF TECHNOLOGY- MESRA, RANCHI
NEWCOURSE STRUCTURE - To be effective from academic
session 2019- 20 Based on CBCS & OBE Model
Recommended scheme of study
(For Mechanical Engineering Branch)

Semester/ Session of Study (Recommended)	Course Level	Categ ory of course	Course Code	Courses	Mode of delivery & credits L- Lecture; T- Tutorial; P- Practicals			Total Credits C- Credits	
					L (Perio ds/ week)	T (Perio ds/ week)	P (Perio ds/ week)	C	
THEORY									
FIRST Monsoon	FIRST	FS Foundat ion Sciences	MA1 03	Mathematics - I	3	1	0	4	
			PH11 3	Physics	3	1	0	4	
		GE General Enginee ring	EE10 1	Basics of Electrical Engineering	3	1	0	4	
			CS10 1	Programming for Problem Solving	3	1	0	4	
	LABORATORIES								
	FIRST	FS	PH11 4	Physics Lab	0	0	3	1.5	
			GE	CS10 2	Programming for Problem Solving Lab	0	0	3	1.5
			GE	PE10 1	Workshop Practice	0	0	3	1.5
			MC Mandat ory Course	MC101/102 /103/ 104	Choice of : NCC/NSS/ PT & Games/ Creative Arts (CA)	0	0	2	1
	TOTAL								21.5
THEORY									
SECOND Spring	FIRST	FS	MA1 07	Mathematics - II	3	1	0	4	
			CH10 1	Chemistry	3	1	0	4	
		GE	ME1 01	Basics of Mechanical Engineering	3	1	0	4	
			EC10 1	Basics of Electronics & Communication Engineering	3	1	0	4	
LABORATORIES									

FIRST	FS	CH10 2	Chemistry Lab	0	0	3	1.5
	GE	EC10 2	Electronics & Communication Lab	0	0	3	1.5
		ME1 02	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

Semester/ Session of Study (Recommended)	Course 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 <i>(Periods/ week)</i>	T <i>(Periods/ week)</i>	P <i>(Periods/ week)</i>	C
					THEORY			
THIRD Monsoon	SECOND	FS	MA203	Numerical Methods	2	0	0	2
	FIRST		CE101	Environmental Sciences	2	0	0	2
	SECOND	PC	ME201	Thermodynamics	3	0	0	3
			ME203	Fluid Mechanics & Hydraulic Machines	3	0	0	3
			PE213	Manufacturing Processes	3	0	0	3
			ME205	Strength of Materials	3	1	0	4
	LABORATORIES							
	SECOND	GE	IT202	Basic IT Workshop	0	0	2	1
		FS	MA204	Numerical Methods Lab	0	0	2	1
		MC	MC201/2 02/203/2 04	Choice of : NCC/NSS/ PT & Games/ Creative Arts (CA)	0	0	2	1

		PC	ME202	Fluid Mechanics & Hydraulic Machines Lab	0	0	3	1.5
			ME204	Mechanical Engineering Lab I	0	0	3	1.5
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	ME207	Kinematics & Dynamics of Machines	3	0	0	3
			ME209	Energy Conversion Systems	3	0	0	3
			ME211	Machine Design	3	0	0	3
	SECOND	PE		Program Elective I	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	ME208	Dynamics of Machine Lab	0	0	3	1.5
PE205			Manufacturing Processes Lab	0	0	3	1.5	
TOTAL								22.5
	THEORY							
	FIRST	HSS	MT123	Business Communications	2	0	2	3
	THIRD	PC	ME301	I C Engines & Gas Turbines	3	0	0	3
			ME303	Mechanical Vibration	3	0	0	3
			ME315	Heat & Mass Transfer	3	0	0	3

FIFTH Monsoon		PE		Program Elective 2	3	0	0	3	
		OE		Open Elective 1	3	0	0	3	
	LABORATORIES								
	THIRD	PC	ME302		Heat Transfer Lab	0	0	3	1.5
ME304				Internal Combustion Engine Lab	0	0	3	1.5	
ME 306				Mechanical Engineering Lab II	0	0	2	1	
TOTAL								22	
SIXTH Spring	THEORY								
	THIRD	PC	ME305		Automobile Engineering	3	0	0	3
			ME307		Robotics Engineering	3	0	0	3
		PE			Program Elective 3	3	0	0	3
					Program Elective 4	3	0	0	3
		OE			Open Elective 2	3	0	0	3
					Open Elective 3/MOOC I	3	0	0	3
		MC	MC300		Summer Training- Mandatory	N/A			2
	LABORATORIES								
	THIRD	PC	ME308		Robotics & Automation Lab	0	0	3	1.5
			ME310		Automobile Engineering Lab	0	0	3	1.5
TOTAL								23	
THEORY									
		HSS	ME413	Professional Practice, Law and Ethics	2	0	0	2	

SEVENTH Monsoon	FOURTH	PC	ME401	Refrigeration & Air Conditioning	3	0	0	3
			ME403	Hydraulic & Pneumatic Control	3	0	0	3
			ME409	Industrial Management	3	0	0	3
			ME411	Computer Aided Design	3	0	0	3
		OE		Open Elective 4/MOOC II	3	0	0	3
	SECOND	MC	MT204	Constitution of India	2	0	0	NC
	LABORATORIES							
	FOURTH	PC	ME404	Refrigeration & Air Conditioning Lab	0	0	3	1.5
			ME406	Computer Aided Design & Drafting Lab	0	0	3	1.5
		PROJ	ME400 M	Minor Project	0	0	6	3
TOTAL								23
EIGHTH Spring	FOURTH	PROJ	ME400	Research Project / Industry Internship	Total			10
GRAND TOTAL <i>Minimum requirement for Degree award</i>								167