



**MIT ART, DESIGN AND TECHNOLOGY
UNIVERSITY, PUNE**

MIT SCHOOL OF ENGINEERING, PUNE

STRUCTURE and SYLLABUS

FOR

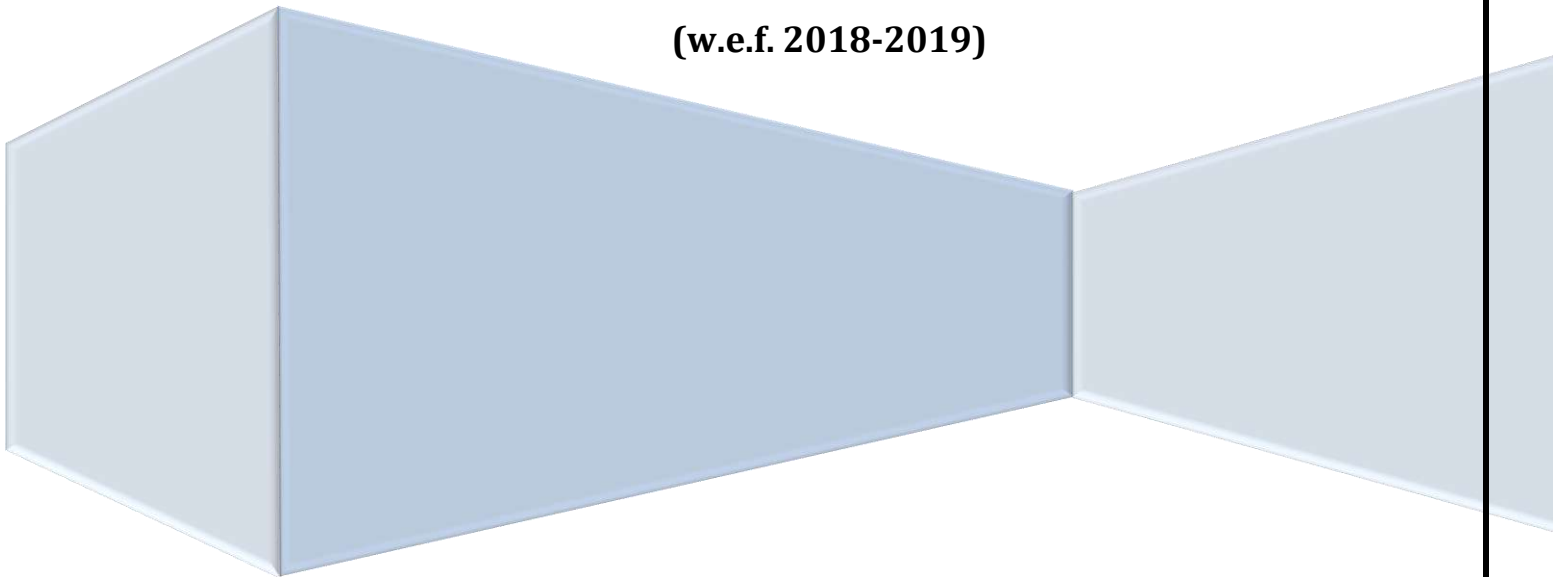
B. Tech. Mechanical Engineering

(160 Credits)

2018-19 pattern

UNDER FACULTY OF TECHNOLOGY

(w.e.f. 2018-2019)



B. Tech. (Mechanical Engineering)
(2018 Regulations)

(Credits: 160)

Course Code	Course Name	Hours/week				Maximum Marks		
		Lecture	Tutorial	Practical	Credits	CA	FE	Total
18BTMT101	Linear Algebra and Calculus	3	1	0	4	40	60	100
18BTCH003	Engineering Chemistry	3	0	0	3	40	60	100
18BTCS006	Programming for Problem Solving	2	0	0	2	40	60	100
18BTEG104	English communication for engineers	2	0	0	2	50	0	50
18BTCH013	Chemistry Laboratory	0	0	2	1	40	60	100
18BTCS016	Programming Lab	0	0	4	2	40	60	100
18BTEG114	English communication Lab	0	0	2	1	50	0	50
18BTME017	Engineering Workshop	0	0	4	2	50	0	50
Total		10	1	12	17	350	300	650
18BTMT201	Differential Equations and Advanced Calculus	3	1	0	4	40	60	100
18BTPY002	Engineering Physics	3	0	0	3	40	60	100
18BTEC005	Basics of Electrical and Electronics Engineering	3	0	0	3	40	60	100
18BTME011	Engineering Graphics	1	0	4	3	50	50	100
18BTME202	Basics of Mechanical Engineering	3	0	0	3	40	60	100
18BTPY012	Physics Laboratory	0	0	2	1	40	60	100
18BTEC015	Basics of Electrical and Electronics Engineering Lab	0	0	2	1	40	60	100
18BTME212	Engineering Graphics Lab	0	0	2	1	40	60	100
Total		13	1	10	19	330	470	800

The course Environmental Science is conducted during the Induction program of the First year

MIT SCHOOL OF ENGINEERING, Department of Mechanical Engineering.

SEMESTER III								
Course Code	Course Name	Hours/week				Maximum Marks		
		Lecture	Tutorial	Practical	Credits	CA	FE	Total
18BTME301	Thermodynamics	3	0	0	3	40	60	100
18BTME302	Differential Equations and Transform Techniques	3	1	0	4	40	60	100
18BTME303	Mechanics of Solid	3	1	0	4	40	60	100
18BTME304	Manufacturing Processes	3	0	2	4	40	60	100
18BTME305	Engineering Metallurgy	3	0	2	4	40	60	100
18BTME311	Thermodynamics Lab	0	0	2	1	40	60	100
18BTME312	Geometric Modeling Lab	0	0	2	1	25	25	50
18BTME321	Mini Project-I	0	0	4	2	100	--	100
Total		15	2	12	23	365	385	750
SEMESTER IV								
18BTME401	Applied Thermodynamics	3	0	0	3	40	60	100
18BTME402	Fluid Mechanics	3	0	0	3	40	60	100
18BTME403	Advanced Manufacturing Processes and Tooling	3	1	0	4	40	60	100
18BTME404	Theory of Machines-I	3	0	2	4	40	60	100
18BTME405	Electrical Machines	3	1	0	4	40	60	100
18BTME411	Applied Thermodynamics Lab	0	0	2	1	25	50	75
18BTME412	Fluid Mechanics Lab	0	0	2	1	25	50	75
18BTME421	Mini Project-II	0	0	4	2	100	--	100
Total		15	2	10	22	350	400	750

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SEMESTER V								
Course Code	Course Name	Hours/week				Maximum Marks		
		Lecture	Tutorial	Practical	Credits	CA	FE	Total
18BTME501	Heat Transfer	3	0	0	3	40	60	100
18BTME502	Computational Science	3	0	2	4	40	60	100
18BTME503	Design of Machine Elements -I	3	0	2	4	40	60	100
18BTME504	Financial Management	3	0	0	3	40	60	100
18BTME505	Theory of Machines-II	3	0	0	3	40	60	100
18BTME511	Heat Transfer Lab	0	0	2	1	40	60	100
18BTME512	Theory of Machines-II Lab	0	0	2	1	40	60	100
18BTME521	Mini Project –III	0	0	4	2	100	--	100
Total		15	0	12	21	380	420	800
SEMESTER VI								
18BTME601	Turbo Machines	3	0	2	4	40	60	100
18BTME602	Design of Machine Elements - II	3	0	0	3	40	60	100
18BTME603	Metrology and Quality Control	3	0	2	4	40	60	100
18BTME604	Refrigeration and Air Conditioning	3	0	0	3	40	60	100
18BTME__	Elective-I	3	1	0	4	40	60	100
18BTME611	Design of Machine Elements – II Lab	0	0	2	1	40	60	100
18BTME612	Refrigeration and Air Conditioning Lab	0	0	2	1	40	60	100
18BTME621	Mini Project-IV	0	0	4	2	100	--	100
Total		15	1	12	22	380	420	800

SEMESTER VII								
Course Code	Course Name	Hours/week				Maximum Marks		
		Lecture	Tutorial	Practical	Credits	CA	FE	Total
18BTME701	Mechanical System Design	3	0	2	4	40	60	100
18BTME702	Power Plant	3	0	0	3	40	60	100
18BTME703	Mechanical Vibrations	3	0	0	3	40	60	100
18BTME__	Elective-II	3	1	0	4	40	60	100
18BTME__	Elective-III	3	0	0	3	40	60	100
18BTME711	Power Plant Lab	0	0	2	1	40	60	100
18BTME712	Mechanical Vibrations Lab	0	0	2	1	40	60	100
18BTME721	Project Phase-I	0	0	4	2	100	--	100
Total		15	1	10	21	380	420	800
SEMESTER VIII								
18BTME__	Open Elective	3	0	0	3	40	60	100
18BTME821	Project Phase-II	0	0	24	12	200	200	400
Total		3	0	24	15	240	260	500

ELECTIVES

	Course Code	Course
Elective-I	18BTME631	Machine Learning
	18BTME632	Hydraulics and Pneumatics
	18BTME633	Non-Conventional Energy sources
	18BTME634	Tribology
	18BTME635	Finite Element Method
	18BTME636	Enterprise Resource Planning
Elective-II	18BTME731	Artificial Intelligence
	18BTME732	Mechatronics System
	18BTME733	Energy Audit and Management
	18BTME734	Machine Tool Design
	18BTME735	CAD/CAM
	18BTME736	Cryogenic engineering
	18BTME737	Reliability Engineering
Elective-III	18BTME738	Robotics & Automation
	18BTME739	Computational Fluid Dynamics
	18BTME740	Automobile Engineering
	18BTME741	Product Design and Development
	18BTME742	Supply Chain Management
	18BTME743	Operations Research
Open Elective	18BTME831	Open Elective Digital Manufacturing Entrepreneurship Autotronics