



K J's EDUCATIONAL INSTITUTES

Trinity College of Engineering & Research,

Pune, Maharashtra, India

(Accredited by NAAC with 'A+' Grade in Cycle-II)

Approved by AICTE, Government of Maharashtra and

Affiliated to Savitribai Phule Pune University, Pune, Maharashtra, India

Faculty of Science and Technology

National Education Policy (NEP)-2020 Compliant Curriculum Structure

Master of Technology in Mechanical

Engineering (Design)

[2025 pattern]

(with effect from A.Y. 2025-26)

NEP 2020 Compliant Curriculum Structure

F. Y M. Tech (2025 Pattern) – Master of Technology Mechanical Engineering

(Design Engineering)

Semester-I

Course Code	Course Type	Course Name	Teaching Scheme (Hrs./week)		Examination Scheme and Marks					Credits		
			Theory	Practical	CIE*	End-Sem	Practical	Oral	Total	Theory	Oral	Total
MCCM4501	Major Core Course	Advanced Stress Analysis	4	-	50	50	-	-	100	4	-	4
MCCM4502	Major Core Course	Material Science and Mechanical Behavior of Materials	4	-	50	50	-	-	100	4	-	4
MCCM4503	Major Core Course	Advanced Mathematics	3		50	50			100	3		3
MCCM4504	Major Core Course	Laboratory Practice-I	-	4	-	-	-	50	50	-	2	2
MECM4521A	Major Elective	Elective-I A. Condition Monitoring										
MECM4521B		B. Design for Manufacturing and Assembly	4	-	50	50	-	-	100	4	-	4
MECM4521C		C. Fracture Mechanics										
HSMM4561	Humanities social science and Management (Mandatory Course)	Human Rights	1		-	50	-	-	50	1	-	1
ELM4541	Experiential learning	Research Methodology	4	-	50	50	-	-	100	4	-	4
Total			20	4	250	300	-	50	600	20	2	22

CIE*: Continuous Internal Evaluation

NEP 2020 Compliant Curriculum Structure

F. Y M. Tech (2025 Pattern) – Master of Technology Mechanical Engineering

(Design Engineering)

Semester-II

Course Code	Course Type	Course Name	Teaching Scheme (Hrs./week)		Examination Scheme and Marks					Credits		
			Theory	Practical	CIE*	End-Sem	Practical	Oral	Total	Theory	Oral	Total
MCCM4505	Major Core Course	Advanced Mechanical Vibration	4	-	50	50	-	-	100	4	-	4
MCCM4506	Major Core Course	Analysis and Synthesis of Mechanisms	4	-	50	50	-	-	100	4	-	4
MCCM4507	Major Core Course	Finite Element Method	3	-	50	50	-	-	100	3	-	3
MCCM4508	Major Core Course	Laboratory Practice-II	-	4	-	-	-	50	50	-	2	2
MECM4523A	Major Elective Course (Elective – II)	Elective - II A. Product Design and Development	4	-	50	50	-	-	100	4	-	4
MECM4523B		B. Tribology										
MECM4523C		C. Vehicle Dynamics										
HSSMM4562	Humanities social science and Management (Mandatory Course)	Universal Human values	1	-	-	50	-	-	50	1	-	1
ELM4542	Experiential learning	Seminar-I	-	8	50	-	-	50	100	-	4	4
Total			16	12	250	250	-	100	600	16	6	22

CIE*: Continuous Internal Evaluation

