

R-23 COURSE STRUCTURE

M TECH (Machine Design)

DEPT. OF MECHANICAL ENGINEERING: ANITS

I Year – I Semester

Course Code	Title of the Course	Category	Periods per week			Max. marks		Total Marks	Credits
			L	T	P	Sess.	End Exam		
23MD111	Theory of Elasticity & Plasticity	PC	3	0	0	40	60	100	3
23MD112	Mechanics of Machinery	PC	3	0	0	40	60	100	3
23MD113	Professional Elective – I	PE	3	0	0	40	60	100	3
23MD114	Professional Elective - II	PE	3	0	0	40	60	100	3
23MD115	Research Methodology & IPR	MC	3	0	0	40	60	100	3
23MD116	CAD Lab	PC	0	0	4	50	—	50	2
23MD117	Seminar-I	SC	0	0	2	50	—	50	1
23MD118	Constitution of India	Audit	2	0	0	50	—	50	0
Total			17	0	6	350	300	650	18

I Year – II Semester

Course Code	Title of the Course	Category	Periods per week			Max. marks		Total Marks	Credits
			L	T	P	Sess.	End Exam		
23MD121	Mechanical Vibrations	PC	3	0	0	40	60	100	3
23MD122	Instrumentation & Experimental Stress Analysis	PC	3	0	0	40	60	100	3
23MD123	Advanced Finite Element Analysis	PC	3	0	0	40	60	100	3
23MD124	Professional Elective – III	PE	3	0	0	40	60	100	3
23MD125	Professional Elective – IV	PE	3	0	0	40	60	100	3
23MD126	Instrumentation & Experimental Stress Analysis Lab	PC	0	0	4	50	—	50	2
23MD127	Seminar-II	SC	0	0	2	50	—	50	1
23MD128	English for Research Paper Writing	Audit	2	0	0	50	—	50	0
Total			17	0	6	350	300	650	18

Professional Elective-I: A. Integrated Computer Aided Design
C. Fatigue, Creep & Fracture Mechanics

B. Pressure Vessel Design
D. Design Engineering

Professional Elective-II: A. Robotics
C. Advanced Optimization Techniques

B. Computational Methods in Engg.
D. Vehicle Dynamics

Professional Elective-III: A. Advanced Mechanics of Solids
C. Computational Fluid Dynamics

B. Mechatronics
D. Tribology

Professional Elective – IV: A. Gear Engineering
C. Condition Monitoring & Signal analysis

B. Reliability Engineering
D. Composite Materials

II Year – I Semester

Course Code	Title of the Course	Category	Periods per week			Total	Max. marks		Total Marks	Credits
			L	T	P		Sess.	End Exam		
23MD211	MOOCs-I	OE	0	0	0	0	100	—	100	3
23MD212	MOOCs-II	OE	0	0	0	0	100	—	100	3
23MD213	Dissertation Phase-I	PR	0	0	20	20	100	—	100	10
Total			0	0	20	20	300	—	300	16

II Year – II Semester

Course Code	Title of the course	Category	Periods per week			Total	Max. Marks		Total Marks	Credits
			L	T	P		Sess.	End Exam		
23MD221	Dissertation Phase-II	PR	0	0	32	32	100	100	200	16
Total			0	0	32	32	100	100	200	16

The prerequisite for submission of the M Tech thesis is that one should communicate his/her work to any referred journal or Publication in a conference/journal.