

**13. Courses of Study and Scheme of Assessment
ME CONTROL SYSTEMS**

**(2021 REGULATIONS)
(Minimum No. of credits to be earned: 70*)**

Course Code	Course Title	Hours / Week			Credits	Maximum Marks			CAT
		Lecture	Tutorial	Practical		CA	FE	Total	
III SEMESTER									
21UC__	Professional Elective – IV	3	0	0	3	50	50	100	PE
21____	Open Elective	3	0	0	3	50	50	100	OE
21UC71	Project Work I	0	0	12	6	50	50	100	EEC
Total 18 hrs		6	0	12	12	150	150	300	
IV SEMESTER									
21UC81	Project Work II	0	0	24	12	50	50	100	EEC
Total 24 hrs		0	0	24	12	50	50	100	
PROFESSIONAL ELECTIVE COURSES (Four to be opted)									
21UC21	Nonlinear Control	3	0	0	3	50	50	100	PE
21UC22	Optimal Control	3	0	0	3	50	50	100	PE
21UC23	Adaptive Control	3	0	0	3	50	50	100	PE
21UC24	Robust Control	3	0	0	3	50	50	100	PE
21UC25	Industrial Drives and Control	3	0	0	3	50	50	100	PE
21UC26	Sliding Mode Control	3	0	0	3	50	50	100	PE
21UC27	Fault Diagnosis and Control	3	0	0	3	50	50	100	PE
21UC28	Multivariable Control	3	0	0	3	50	50	100	PE
21UC29	Model Predictive Control	3	0	0	3	50	50	100	PE
21UC30	Advanced PID Controllers	3	0	0	3	50	50	100	PE
21UC31	State Estimation	3	0	0	3	50	50	100	PE
21UC32	Optimization Techniques	3	0	0	3	50	50	100	PE
21UC33	Applied Machine Learning for Control	3	0	0	3	50	50	100	PE
21UC34	Mathematical Methods for Process Data Analytics	3	0	0	3	50	50	100	PE
21UC35	Automotive Control	3	0	0	3	50	50	100	PE
21UC36	Flight Control	3	0	0	3	50	50	100	PE
21UC37	Control of Unmanned Aerial Vehicle	3	0	0	3	50	50	100	PE
21UC38	Electric Vehicle Control	3	0	0	3	50	50	100	PE
21UC39	Robotic Systems	3	0	0	3	50	50	100	PE
21UC40	Machine Vision	3	0	0	3	50	50	100	PE
21UC41	Industrial Cyber Physical Systems	3	0	0	3	50	50	100	PE
21UC42	Industrial Cyber security	3	0	0	3	50	50	100	PE

OPEN ELECTIVE COURSES (One to be opted)									
21UC91	Energy Management Systems	3	0	0	3	50	50	100	OE
21UC92	Mathematics for Signal Analysis	3	0	0	3	50	50	100	OE

* Indicated is the minimum number of credits to be earned by a student.

CAT – Category; PC – Professional Core; PE - Professional Elective; RMC - Research Methodology and IPR; EEC – Employability Enhancement Course; MC - Mandatory Course; Grade – Completed / Not Completed; OE – Open Elective.