

**M.Tech. in Systems and Control Engineering**

**(Department of Electrical Engineering)**

**Course structure (Applicable to Aug. 2024 onwards)**

**Semester – I**

Course No.	Course Title	Credits
EE5480	Introduction to State Space	1
EE5590	State Estimation	2
EE5817	Random Variables and random processes	3
	Department AI elective basket	0-3
	Electives	3-6
LA5180 (SS)	Communication Skills: Advanced	1
	Total	13-16

**Semester – II**

Course No.	Course Title	Credits
EE5540	Optimal Control	3
EE5606	Convex Optimization	3
EE5221	Advanced Control Lab	2
	Department AI Elective basket	0-3
	Electives	2-4
SS 5901	EE Industrial Lecture (Life Skills)	1
	Total	13-10

**Semester – III**

Course No.	Course Title	Credits
EE6901	M.Tech. Stage-1	12
	Total	12

**Semester – IV**

Course No.	Course Title	Credits
EE6902	M.Tech. Stage-2	12
	Total	12

**Total Credits – 48 + 2**

**Summary:**

Course Type	Credits
Department Core	12
Department Electives	10
Labs	2
Thesis	24
Soft Skills	2
Total	48 + 2

**Department AI Elective basket (Students can pick any course or combination to courses to make 3 credits)**

EE5610 - Pattern Recognition & Machine learning

EE5609 - Matrix theory

AI5100 - Deep Learning

CS6230 - Optimisation Methods in Machine Learning

CS5500 - Reinforcement Learning (RL)

Any other course having AI/ML-related topics