



**DEPARTMENT OF ELECTRICAL ENGINEERING  
INDIAN INSTITUTE OF TECHNOLOGY ROORKEE**

Program Code: **28**    **M.Tech. (Systems & Control)**  
 Department: **EE**    **Department of Electrical Engineering**  
 Year: **II II**

Teaching Scheme					Contact Hours/Week			Exam Duration		Relative Weight (%)				
S. No.	Subject Code	Course Title	Subject Area	Credits	L	T	P	Theory	Practical	CWS	PRS	MTE	ETE	PRE
<b>Semester-I (Autumn)</b>														
1.	EEN-701A	Dissertation Stage-I (to be continued next semester)	DIS	12	-	-	-	-	-	-	-	-	100	-
		Total		12										
<b>Note: Students can take 1 or 2 audit courses as advised by the supervisor, if required.</b>														
<b>Semester-II (Spring)</b>														
1.	EEN-701B	Dissertation –II (contd. From III semester)	DIS	18	-	-	-	-	-	-	-	-	100	-
		Total		18										

<b>Summary</b>				
Semester	1	2	3	4
<b>Semester-wise Total Credits</b>	<b>20</b>	<b>18</b>	<b>12</b>	<b>18</b>
<b>Total Credits</b>	<b>68</b>			

**Program Elective Courses (S&C)**

Teaching Scheme					Contact Hours/Week			Exam Duration		Relative Weight (%)				
S. No.	Subject Code	Course Title	Subject Area	Credits	L	T	P	Theory	Practical	CWS	PRS	MTE	ETE	PRE
1.	EEN-680	Machine Learning	PEC	4	3	1	0	3	-	20-35	-	20-30	40-50	-
2.	EEN-681	Wide Area System Monitoring Control	PEC	4	3	1	0	3	-	20-35	-	20-30	40-50	-
3.	EEN-682	Advanced Digital System Design	PEC	4	3	0	2	3	-	10-25	25	15-25	30-40	-
4.	EEN-683	Introduction to Robotics	PEC	4	3	1	0	3	-	20-35	-	20-30	40-50	-
5.	EEN-684	System Reliability	PEC	4	3	1	0	3	-	20-35	-	20-30	40-50	-
6.	EEN-685	Stochastic Systems	PEC	4	3	1	0	3	-	20-35	-	20-30	40-50	-
7.	EEN-686	Optimal Control	PEC	4	3	1	0	3	-	20-35	-	20-30	40-50	-
8.	EEN-687	Operations Research	PEC	4	3	1	0	3	-	20-35	-	20-30	40-50	-
9.	EEN-688	Interval Control Systems	PEC	4	3	1	0	3	-	20-35	-	20-30	40-50	-
10.	EEN-689	Modeling and Simulation	PEC	4	3	1	0	3	-	20-35	-	20-30	40-50	-
11.	EEN-690	Advanced Computer Controlled Systems	PEC	4	3	1	0	3	-	20-35	-	20-30	40-50	-
12.	EEN-691	Data Structures	PEC	4	3	0	2	3	-	10-25	25	15-25	30-40	-
13.	EEN-692	Graph Theory and Applications	PEC	4	3	1	0	3	-	20-35	-	20-30	40-50	-
14.	EEN-693	Advanced Microprocessor and Applications	PEC	4	3	0	2	3	-	10-25	25	15-25	30-40	-
15.	EEN-694	Advances in Model Order Reduction Techniques	PEC	4	3	1	0	3	-	20-35	-	20-30	40-50	-
16.	EEN-561	Power System Operation and Control	PEC	4	3	1	0	3	-	20-35	-	20-30	40-50	-
17.	EEN-667	Power System Reliability	PEC	4	3	1	0	3	-	20-35	-	20-30	40-50	-
18.	EEN-669	Power System Dynamics	PEC	4	3	1	0	3	-	20-35	-	20-30	40-50	-

19.	EEN-521	Digital Signal and Image Processing	PEC	4	3	0	2	3	-	10-25	25	15-25	30-40	-
20.	EEN-620	Process Instrumentation and Control	PEC	4	3	1	0	3	-	20-35	-	20-30	40-50	-
21.	EEN-624	Telemetry and SCADA	PEC	4	3	1	0	3	-	20-35	-	20-30	40-50	-
22.	EEN-626	Advances in Signal and Image Processing	PEC	4	3	1	0	3	-	20-35	-	20-30	40-50	-
23.	EEN-611	FPGA Implementation of Signal Processing Systems	PEC	4	3	1	0	3	-	20-35	-	20-30	40-50	-
24.	EEN-612	Electrical Transients in Power Systems	PEC	4	3	1	0	3	-	20-35	-	20-30	40-50	-
25.	EEN-613	Sliding Mode Control and Observation	PEC	4	3	1	0	3	-	20-35	-	20-30	40-50	-