



## Department Courses for Honours Degree and Minor Degree Specialization

### Honours Degree Specialization 1: Control & Automation

S. No	Course No.	Course Name	Course Type	Semester	Credits	Periods per week			Hours per week	Examination Scheme (Distribution of Marks)			
						L	T	P		CCA	MSE	ES E	Total
1.	EEH-411	Special Electrical Machines	HDC	IV	3	3	-	3	3	8	22	45	75
2.	EEH -511	Electric Vehicle & EMS	HDC	V	3	3	-	3	3	8	22	45	75
3.	EEH -611	Robotics and Automation	HDC	VI	3	3	-	3	3	8	22	45	75
i	EEL-621	Robotics and Automation Lab	HDC-L	VI	1	-	-	2	2	15	-	10	25
4.	EEH -711	IoT & Transducer Technology	HDC	VII	3	3	-	3	3	8	22	45	75
ii	EEP-713	Project	PROJ	VII	2	-	-	4	4	30	-	20	50
5.	EEH-811	Advanced Robotics/ (SWAYAM/ NPTEL/MOOCs)	HDC	VIII	3	3	-	3	3	8	22	45	75
					<b>Total</b>	<b>18</b>			<b>21</b>				

### Honours Degree Specialization 2: AI & Cyber Security

S. No	Course No.	Course Name	Course Type	Semester	Credits	Periods per week			Hours per week	Examination Scheme (Distribution of Marks)			
						L	T	P		CCA	MSE	ES E	Total
1.	EEH-412	Introduction to Computer Networks & Cyber Security	HDC	IV	3	3	-	3	3	8	22	45	75
2.	EEH -512	Introduction to AI & Machine Learning	HDC	V	3	3	-	3	3	8	22	45	75
3.	EEH -612	Deep Learning & ANN	HDC	VI	3	3	-	3	3	8	22	45	75
i	EEL-622	Deep Learning Lab	HDC-L	VI	1	-	-	2	2	15	-	10	25
4.	EEH -712	Cryptography & Network Security	HDC	VII	3	3	-	3	3	8	22	45	75
ii	EEP-713	Project	PROJ	VII	2	-	-	4	4	30	-	20	50
5.	EEH-81x	EEH-812: Natural Language Processing EEH-813: Deep Learning for Computer Vision/ (SWAYAM/ NPTEL/MOOCs)	HDC	VIII	3	3	-	3	3	8	22	45	75
					<b>Total</b>	<b>18</b>			<b>21</b>				



### Honours Degree Specialization 3: Energy and Grid Technology

S. No	Course No.	Course Name	Course Type	Semester	Credits	Periods per week			Hours per week	Examination Scheme (Distribution of Marks)			
						L	T	P		CCA	MSE	ES E	Total
1.	EEH-413	Energy Conservation and Management	HDC	IV	3	3	-	3	3	8	22	45	75
2.	EEH -513	Energy Economics and Auditing	HDC	V	3	3	-	3	3	8	22	45	75
3.	EEH -613	Renewable Energy Resource Characteristics	HDC	VI	3	3	-	3	3	8	22	45	75
i	EEL-623	Grid Technology Lab	HDC-L	VI	1	-	-	2	2	15	-	10	25
4.	EEH -713	Grid Integration of Renewable Energy	HDC	VII	3	3	-	3	3	8	22	45	75
ii.	EEP-713	Project	PROJ	VII	2	-	-	4	4	30	-	20	50
5.	EEH-814	Distributed Generation and Microgrid Technologies/ (SWAYAM/ NPTEL/MOOCs)	HDC	VIII	3	3	-	3	3	8	22	45	75
<b>Total</b>					<b>18</b>				<b>21</b>				

### Minor Degree Specialization in Electric Vehicle and Automation

S. No	Course No.	Course Name	Course Type	Semester	Credits	Periods per week			Hours per week	Examination Scheme (Distribution of Marks)			
						L	T	P		CCA	MSE	ES E	Total
1.	EED-411	Power Electronics for Electric Vehicles	MDC	IV	3	3	-	3	3	8	22	45	75
2.	EED -511	Electric Vehicle Control Systems	MDC	V	3	3	-	3	3	8	22	45	75
3.	EED -611	Electric Vehicle Energy Systems	MDC	VI	3	3	-	3	3	8	22	45	75
i	EEL-624	Electric Vehicle Lab	MDC-L	VI	1	-	-	2	2	15	-	10	25
4.	EED -711	Electric Vehicle Drives	MDC	VII	3	3	-	3	3	8	22	45	75
ii.	EEP-713	Project	PROJ	VII	2	-	-	4	4	30	-	20	50
5.	EED-81x	EED-811: AI and ML Application in EV/ EED-812: Electric Vehicle Advance Technologies and Economics/ (SWAYAM NPTEL/MOOCs)	MDC	VIII	3	3	-	3	3	8	22	45	75
<b>Total</b>					<b>18</b>				<b>21</b>				