

**UNIVERSITY DEPARTMENTS , RTU, KOTA**

**LIST OF DEPARTMENTAL SPECIALIZATION WITH COURSES**

Department offering Specialiazation	Year/ Sem	Course Code	Paper Code	Subject Name	Type	CORE/ ELECTIVE	Group	Dep.Spec.	Max Marks Internal	Max Marks External	Credit/ Unit
Electrical Engineering	4 Sem.	EEL1DS11	EEL1DS11	Fundamentals of Electric Drives or its equivalent MOOC	TH	ELECTIVE	13	Electric Drives & Control	50	100	3
Electrical Engineering	4 Sem.	EEL1DS12	EEL1DS12	Industrial Drives - Power Electronics or its equivalent MOOC	TH	ELECTIVE	14	Electric Drives & Control	50	100	3
Electrical Engineering	5 Sem.	EEL1DS13	EEL1DS13	Advance Electric Drives or its equivalent MOOC	TH	ELECTIVE	15	Electric Drives & Control	50	100	3
Electrical Engineering	5 Sem.	EEL1DS14	EEL1DS14	Motors and Motor Circuits or its equivalent MOOC	TH	ELECTIVE	16	Electric Drives & Control	50	100	3
Electrical Engineering	6 Sem.	EEL1DS15	EEL1DS15	Electric Motor Control or its equivalent MOOC	TH	ELECTIVE	13	Electric Drives & Control	50	100	3
Electrical Engineering	6 Sem.	EEL1DS16	EEL1DS16	Drives & Control or its equivalent MOOC	TH	ELECTIVE	14	Electric Drives & Control	50	100	3
Electrical Engineering	7 Sem.	EEL1DS17	EEL1DS17	Fundamentals of Power Electronics or its equivalent MOOC	TH	ELECTIVE	12	Electric Drives & Control	50	100	3
Electrical Engineering	7 Sem.	EEL1DS18	EEL1DS18	Advance Power Electronics & Control or its equivalent MOOC	TH	ELECTIVE	13	Electric Drives & Control	50	100	3
Electrical Engineering	7 Sem.	EED415	EED415	Mini Project	PR	CORE	21	Electric Drives & Control	50	25	5
Electrical Engineering	4 Sem.	EEL1RS11	EEL1RS11	Technologies for Clean Renewable Energy Production or its equivalent MOOC	TH	ELECTIVE	17	Renewable Energy Technologies	50	100	3
Electrical Engineering	4 Sem.	EEL1RS12	EEL1RS12	Development or its equivalent MOOC	TH	ELECTIVE	18	Energy Technologies	50	100	4
Electrical Engineering	5 Sem.	EEL1RS13	EEL1RS13	Renewable Energy Engineering: Solar, Wind, and Biomass Energy Systems or its equivalent MOOC	TH	ELECTIVE	19	Renewable Energy Technologies	50	100	3

<b>Electrical Engineering</b>	5 Sem.	EEL1RS14	EEL1RS14	Photovoltaic System or its equivalent MOOC	TH	ELECTIVE	20	Energy Technologies	50	100	3
<b>Electrical Engineering</b>	6 Sem.	EEL1RS15	EEL1RS15	Wind Energy or its equivalent MOOC	TH	ELECTIVE	17	Energy Technologies	50	100	3
<b>Electrical Engineering</b>	6 Sem.	EEL1RS16	EEL1RS16	Renewable Energy: Fundamentals and Job Opportunities or its equivalent MOOC	TH	ELECTIVE	18	Renewable Energy Technologies	50	100	3
<b>Electrical Engineering</b>	7 Sem.	EEL1RS17	EEL1RS17	Global Energy and Climate Policy or its equivalent MOOC	TH	ELECTIVE	15	Energy Technologies	50	100	3
<b>Electrical Engineering</b>	7 Sem.	EEL1RS18	EEL1RS18	Renewable Power and Electricity System or its equivalent MOOC	TH	ELECTIVE	16	Energy Technologies	50	100	3
<b>Electrical Engineering</b>	7 Sem.	EED417	EED417	Mini Project	PR	CORE	23	Energy Technologies	50	25	5
<b>Electrical Engineering</b>	8 Sem.	EEL1RS19	EEL1RS19	Design of Photovoltaic Systems or its equivalent MOOC	TH	ELECTIVE	9	Energy Technologies	50	100	4
<b>Electrical Engineering</b>	4 Sem.	EEL1RAS1 1	EEL1RAS1 1	Industrial Automation and Control or its equivalent MOOC	TH	ELECTIVE	19	Robotics & Automation	50	100	4
<b>Electrical Engineering</b>	4 Sem.	EEL1RAS1 2	EEL1RAS1 2	Mechatronics or its equivalent MOOC	TH	ELECTIVE	20	Robotics & Automation	50	100	3
<b>Electrical Engineering</b>	5 Sem.	EEL1RAS1 3	EEL1RAS1 3	Industrial Automation with PLC & SCADA or its equivalent MOOC	TH	ELECTIVE	21	Robotics & Automation	50	100	3
<b>Electrical Engineering</b>	5 Sem.	EEL1RAS1 4	EEL1RAS1 4	Sensors and Actuators or its equivalent MOOC	TH	ELECTIVE	22	Robotics & Automation	50	100	4
<b>Electrical Engineering</b>	6 Sem.	EEL1RAS1 5	EEL1RAS1 5	Design of Mechatronic Systems or its equivalent MOOC	TH	ELECTIVE	19	Robotics & Automation	50	100	4
<b>Electrical Engineering</b>	6 Sem.	EEL1RAS1 6	EEL1RAS1 6	Introduction to Robotics or its equivalent MOOC	TH	ELECTIVE	20	Robotics & Automation	50	100	4
<b>Electrical Engineering</b>	7 Sem.	EEL1RAS1 7	EEL1RAS1 7	Fundamentals of Automotive Systems or its equivalent MOOC	TH	ELECTIVE	17	Robotics & Automation	50	100	4
<b>Electrical Engineering</b>	7 Sem.	EEL1RAS1 8	EEL1RAS1 8	Robotics and Control: Theory and Practice or its equivalent MOOC	TH	ELECTIVE	18	Robotics & Automation	50	100	3

<b>Electrical Engineering</b>	7 Sem.	EED418	EED418	Mini Project	PR	CORE	24	Robotics & Automation	50	25	5
<b>Electrical Engineering</b>	4 Sem.	EEL1SS11	EEL1SS11	Linear Systems Theory or its equivalent MOOC	TH	ELECTIVE	15	Systems & Control	50	100	4
<b>Electrical Engineering</b>	4 Sem.	EEL1SS12	EEL1SS12	Control & Tuning Methods in Switched Mode Power Converters or its equivalent MOOC	TH	ELECTIVE	16	Systems & Control	50	100	4
<b>Electrical Engineering</b>	5 Sem.	EEL1SS13	EEL1SS13	System Design Through VERILOG or its equivalent MOOC	TH	ELECTIVE	17	Systems & Control	50	100	3
<b>Electrical Engineering</b>	5 Sem.	EEL1SS14	EEL1SS14	Linear Dynamical Systems or its equivalent MOOC	TH	ELECTIVE	18	Systems & Control	50	100	3
<b>Electrical Engineering</b>	6 Sem.	EEL1SS15	EEL1SS15	Sensors and Actuators or its equivalent MOOC	TH	ELECTIVE	15	Systems & Control	50	100	4
<b>Electrical Engineering</b>	6 Sem.	EEL1SS16	EEL1SS16	Industrial Automation and Control or its equivalent MOOC	TH	ELECTIVE	16	Systems & Control	50	100	4
<b>Electrical Engineering</b>	7 Sem.	EEL1SS17	EEL1SS17	Intelligent Systems and Control or its equivalent MOOC	TH	ELECTIVE	14	Systems & Control	50	100	4
<b>Electrical Engineering</b>	7 Sem.	EED416	EED416	Mini Project	PR	CORE	22	Systems & Control	50	25	5
<b>Mechanical Engineering</b>	4 Sem.	MEL416	MEL416	Project Management / Equivalent MOOC	TH	CORE	13	BUSINESS ADMINISTRATION	50	100	3
<b>Mechanical Engineering</b>	4 Sem.	MEL417	MEL417	Marketing Management / Equivalent MOOC	TH	CORE	14	BUSINESS ADMINISTRATION	50	100	3
<b>Mechanical Engineering</b>	5 Sem.	MEL420	MEL420	Supply and Operations Management / Equivalent MOOC	TH	CORE	13	BUSINESS ADMINISTRATION	50	100	3

<b>Mechanical Engineering</b>	6 Sem.	MEL422	MEL422	Financial Management / Equivalent MOOC	TH	CORE	12	BUSINESS ADMINISTRATION	50	100	3
<b>Mechanical Engineering</b>	7 Sem.	MEL424	MEL424	Human Resource Management/ Equivalent MOOC	TH	CORE	10	BUSINESS ADMINISTRATION	50	100	3
<b>Mechanical Engineering</b>	7 Sem.	MED413	MED413	Minor Project	PR	CORE	15	BUSINESS ADMINISTRATION	50	25	5
<b>Mechanical Engineering</b>	4 Sem.	MEL433	MEL433	Design of Heat Exchanger / Equivalent MOOC	TH	CORE	19	THERMAL SYSTEMS	50	100	3
<b>Mechanical Engineering</b>	4 Sem.	MEL434	MEL434	Refrigeration System Design / Equivalent MOOC	TH	CORE	20	THERMAL SYSTEMS	50	100	3
<b>Mechanical Engineering</b>	5 Sem.	MEL435	MEL435	Air Conditioning System Design / Equivalent MOOC	TH	CORE	16	THERMAL SYSTEMS	50	100	3
<b>Mechanical Engineering</b>	6 Sem.	MEL437	MEL437	Thermal Systems / Equivalent MOOC	TH	CORE	15	THERMAL SYSTEMS	50	100	3
<b>Mechanical Engineering</b>	7 Sem.	MEL439	MEL439	Design and Analysis of Thermal Systems/ Equivalent MOOC	TH	CORE	13	THERMAL SYSTEMS	50	100	3
<b>Mechanical Engineering</b>	7 Sem.	MED416	MED416	Minor Project	PR	CORE	17	THERMAL SYSTEMS	50	25	5
<b>Electronics and Communication Engineering</b>	4 Sem.	EIL293	EIL293	Pattern Recognition & Machine Learning	TH	CORE	14	Control & Instrumentation	50	100	3
<b>Electronics and Communication Engineering</b>	4 Sem.	EIP293	EIP293	Pattern Recognition & Machine Learning Lab	PR	CORE	15	Control & Instrumentation	50	25	1

Electronics and Communication Engineering	5 Sem.	EIL395	EIL395	Analog Modeling and Simulation with SPICE	TH	CORE	14	Control & Instrumentation	50	100	3
Electronics and Communication Engineering	5 Sem.	EIP395	EIP395	Analog Modeling and Simulation Lab	PR	CORE	15	Control & Instrumentation	50	25	1
Electronics and Communication Engineering	6 Sem.	EIL396	EIL396	Introduction to IOT	TH	CORE	14	Control & Instrumentation	50	100	3
Electronics and Communication Engineering	6 Sem.	EIP396	EIP396	IOT Lab	PR	CORE	15	Control & Instrumentation	50	25	1
Electronics and Communication Engineering	7 Sem.	EIL496	EIL496	Control System Design	TH	CORE	11	Control & Instrumentation	50	100	3
Electronics and Communication Engineering	7 Sem.	EIP496	EIP496	Control System Design Lab	PR	CORE	12	Control & Instrumentation	50	25	1
Electronics and Communication Engineering	7 Sem.	EID413	EID413	Minor project	PR	CORE	13	Control & Instrumentation	50	25	4
Electronics and Communication Engineering	4 Sem.	ECL294	ECL294	Pattern Recognition & Machine Learning	TH	CORE	14	Digital Communication	50	100	3
Electronics and Communication Engineering	4 Sem.	ECP294	ECP294	Pattern Recognition & Machine Learning Lab	PR	CORE	15	Digital Communication	50	25	1
Electronics and Communication Engineering	5 Sem.	ECL395	ECL395	Analog Modeling and Simulation with SPICE	TH	CORE	14	Digital Communication	50	100	3

<b>Electronics and Communication Engineering</b>	5 Sem.	ECP395	ECP395	Analog Modeling and Simulation Lab	PR	CORE	15	Digital Communication	50	25	1
<b>Electronics and Communication Engineering</b>	6 Sem.	ECL396	ECL396	Antenna Theory & Techniques	TH	CORE	14	Digital Communication	50	100	3
<b>Electronics and Communication Engineering</b>	6 Sem.	ECP396	ECP396	Antennas and Radiating Systems lab	PR	CORE	15	Digital Communication	50	25	1
<b>Electronics and Communication Engineering</b>	7 Sem.	ECL494	ECL494	VLSI Physical Design	TH	CORE	10	Digital Communication	50	100	3
<b>Electronics and Communication Engineering</b>	7 Sem.	ECP494	ECP494	VLSI Physical Design Lab	PR	CORE	11	Digital Communication	50	25	1
<b>Electronics and Communication Engineering</b>	7 Sem.	ECD413	ECD413	Minor project	PR	CORE	16	Digital Communication	50	25	4
<b>Civil Engineering</b>	5 Sem.	CEL411	CEL411	Construction Equipments and its management	TH	CORE	15	CONSTRUCTION MANAGEMENT	50	100	3
<b>Civil Engineering</b>	6 Sem.	CEL412	CEL412	Materials Management	TH	CORE	13	CONSTRUCTION MANAGEMENT	50	100	4
<b>Civil Engineering</b>	7 Sem.	CEL413	CEL413	Contract Management and Labour Laws	TH	CORE	10	CONSTRUCTION MANAGEMENT	50	100	4
<b>Civil Engineering</b>	7 Sem.	CEL414	CEL414	Project Economics and Financial Management	TH	CORE	16	CONSTRUCTION MANAGEMENT	50	100	4
<b>Civil Engineering</b>	7 Sem.	CED413	CED413	Minor Project in Construction Management	PR	CORE	18	CONSTRUCTION MANAGEMENT	50	100	5
<b>Civil Engineering</b>	5 Sem.	CEL415	CEL415	Transportation Planning	TH	CORE	16	TRANSPORTATION ENGINEERING	50	100	3

<b>Civil Engineering</b>	6 Sem.	CEL416	CEL416	Traffic Engineering and Field Studies	TH	CORE	14	TRANSPORTATION ENGINEERING	50	100	4
<b>Civil Engineering</b>	7 Sem.	CEL417	CEL417	Advanced Highway Material Charecterization	TH	CORE	11	TRANSPORTATION ENGINEERING	50	100	3
<b>Civil Engineering</b>	7 Sem.	CEP417	CEP417	Advanced Highway Material Charecterization Lab	PR	CORE	12	TRANSPORTATION ENGINEERING	50	25	1
<b>Civil Engineering</b>	7 Sem.	CEL418	CEL418	Highway Pavement Maintenance	TH	CORE	17	TRANSPORTATION ENGINEERING	50	100	4
<b>Civil Engineering</b>	7 Sem.	CED414	CED414	Minor Project in Transportation Engineering	PR	CORE	19	TRANSPORTATION ENGINEERING	50	100	5