

Faculty of Engineering and Technology

Program Name: -Bachelor of Technology (Electrical Engineering)

Semester :- I

Program Code: ET109

With Effect from: 2023-24

Course code	Course Name	Course Type	Credit	Hours per week				Theory (Marks)				Practical (Marks)				Total (Marks)
				L	T	P	Total	SEE		CCA		SEE		CCA		
								Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	
2ET1000101T	Engineering Mathematics-I with Computing Tools	BSC	3	3	-	-	3	24	60	16	40	-	-	-	-	100
2ET1000101P	Engineering Mathematics-I with Computing Tools Practical	BSC	1	-	-	2	2	-	-	-	-	10	25	10	25	50
2ET1000105T	Communication Skill	HSMC	2	2	-	-	2	24	60	16	40	-	-	-	-	100
2ET1000105P	Communication Skill Practical	HSMC	1	-	-	2	2	-	-	-	-	10	25	10	25	50
2ET1000109T	Elements of Electrical and Electronics Engineering	ESC	3	3	-	-	3	24	60	16	40	-	-	-	-	100
2ET1000109P	Elements of Electrical and Electronics Engineering Practical	ESC	1	-	-	2	2	-	-	-	-	10	25	10	25	50
2ET1000113T	Elements of Civil Engineering	ESC	3	3	-	-	3	24	60	16	40	-	-	-	-	100
2ET1000113P	Elements of Civil Engineering Practical	ESC	1	-	-	2	2	-	-	-	-	10	25	10	25	50
2ET1000114T	Elements of Mechanical Engineering	ESC	3	3	-	-	3	24	60	16	40	-	-	-	-	100
2ET1000114P	Elements of Mechanical Engineering Practical	ESC	1	-	-	2	2	-	-	-	-	10	25	10	25	50
2ET1000115P	Manufacturing Practice Workshop	ESC	1	-	-	2	2	-	-	-	-	10	25	10	25	50
2ET1000116P	Yoga and Spirituality *		-	-	-	2	2	-	-	-	-	-	-	-	-	-
Total			20	14	0	14	28	120	300	80	200	60	150	60	150	800

L=Lecture, T=Tutorial, P=Practical

Note (if any):-

Faculty of Engineering and Technology

Program Name: - Bachelor of Technology (Electrical Engineering)

Program Code: ET109

Semester:- II

With Effect from: 2023-24

Course code	Course Name	Course Type	Credit	Hours per Week				Theory (Marks)				Practical (Marks)				Total (Marks)
				L	T	P	Total	SEE		CCA		SEE		CCA		
								Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	
2ET1000102T	Engineering Mathematics-II with Computing Tools	BSC	3	3	-	-	3	24	60	16	40	-	-	-	-	100
2ET1000102P	Engineering Mathematics-II with Computing Tools Practical	BSC	1	-	-	2	2	-	-	-	-	10	25	10	25	50
2ET1000104T	Engineering Physics	BSC	3	3	-	-	3	24	60	16	40	-	-	-	-	100
2ET1000104P	Engineering Physics Practical	BSC	1	-	-	2	2	-	-	-	-	10	25	10	25	50
2ET1000107T	Problem Solving with Computational Thinking	ESC	3	3	-	-	3	24	60	16	40	-	-	-	-	100
2ET1000107P	Problem Solving with Computational Thinking Practical	ESC	1	-	-	2	2	-	-	-	-	10	25	10	25	50
2ET1000108T	Engineering Graphics and Design	ESC	3	3	-	-	3	24	60	16	40	-	-	-	-	100
2ET1000108P	Engineering Graphics and Design Practical	ESC	1	-	-	2	2	-	-	-	-	10	25	10	25	50
2ET1000111T	Universal Human Value - II : Understanding Harmony and Ethical Human Conduct	HSMC	3	3	-	-	3	24	60	16	40	-	-	-	-	100
2ET1000112P	IT Workshop	ESC	1	-	-	2	2	-	-	-	-	10	25	10	25	50
2ET1000117T	Environmental Studies *		-	2	-	-	2	-	-	-	-	-	-	-	-	-
Total			20	17	0	10	27	120	300	80	200	50	125	50	125	750

L=Lecture, T=Tutorial, P=Practical

Note (if any):- * Subject is Non-Credit

BSC = Basic Science Course

PCC = Professional Core Course

SEE = Semester End Evaluation

ESC = Engineering Science Course

HSMC= Humanities & Social Science including Mangament Course

CCA = Continuous & Comprehensive Assessment

Program Name:- Bachelor of Technology (Electrical Engineering)

Program Code:- ET109

Semester:- III

Effect from Academic Year:- 2023-24

Course code	Course Name	Course Type	Credit	Hours per week				Theory (Marks)				Practical(Marks)				Total Marks
				L	T	P	Total	SEE		CCA		SEE		CCA		
								Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	
2ET1000305T	Engineering Mathematics-III	BSC	5	3	2	-	5	24	60	16	40	-	-	-	-	100
2ET1090301T	Electrical Circuit & Network Analysis	PCC	3	3	-	-	3	24	60	16	40	-	-	-	-	100
2ET1090302T	Electrical Machine-I	PCC	3	3	-	-	3	24	60	16	40	-	-	-	-	100
2ET1090302P	Electrical Machine-I Practical	PCC	1	-	-	2	2	-	-	-	-	10	25	10	25	50
2ET1090303T	Electrical Measurement and Measuring Instruments	PCC	3	3	-	-	3	24	60	16	40	-	-	-	-	100
2ET1090303P	Electrical Measurement and Measuring Instruments Practical	PCC	1	-	-	2	2	-	-	-	-	10	25	10	25	50
2ET1090304T	Analog & Digital Electronics	PCC	3	3	-	-	3	24	60	16	40	-	-	-	-	100
2ET1090304P	Analog & Digital Electronics Practical	PCC	1	-	-	2	2	-	-	-	-	10	25	10	25	50
2ET1000302P	Design Thinking	HSMC	1	-	-	2	2	-	-	-	-	10	25	10	25	50
2ET1000303T	Indian Constitution	MC	-	1	-	-	1	-	-	-	-	-	-	-	-	-
Total:			21	16	02	08	26	120	300	80	200	40	100	40	100	700

SEE= Semester End Evaluation,

CCA= Continuous & Comprehensive Assessment,

L=Lecture, T=Tutorial, P=Practical

BSC=Basic Science Courses, PCC= Professional Core Courses, ESE=Engineering Science Courses, MC=Mandatory Courses. HSMC=Humanities and Social Science including Management Courses

Program Name:- Bachelor of Technology (Electrical Engineering)

Program Code:- ET109

Semester:- IV

Effect from Academic Year:- 2023-24

Course code	Course Name	Course Type	Credit	Hours per week				Theory (Marks)				Practical(Marks)				Total Marks
				L	T	P	Total	SEE		CCA		SEE		CCA		
								Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	
2ET1090401T	Electrical Machine-II	PCC	4	4	-	-	4	24	60	16	40	-	-	-	-	100
2ET1090401P	Electrical Machine-II Practical	PCC	1	-	-	2	2	-	-	-	-	10	25	10	25	50
2ET1090402T	Power Electronics-I	PCC	3	3	-	-	3	24	60	16	40	-	-	-	-	100
2ET1090402P	Power Electronics-I Practical	PCC	1	-	-	2	2	-	-	-	-	10	25	10	25	50
2ET1090403T	Control System Engineering	PCC	4	4	-	-	4	24	60	16	40	-	-	-	-	100
2ET1090403P	Control System Engineering Practical	PCC	1	-	-	2	2	-	-	-	-	10	25	10	25	50
2ET1090404T	Microprocessor and Interfacing	PCC	3	3	-	-	3	24	60	16	40	-	-	-	-	100
2ET1090404P	Microprocessor and Interfacing Practical	PCC	1	-	-	2	2	-	-	-	-	10	25	10	25	50
2ET1090405T	Thermal and Hydraulic Prime Movers	ESC	3	3	-	-	3	24	60	16	40	-	-	-	-	100
2ET1000402T	Integrated Personality Development Course-I	MC	-	2	-	-	2	-	-	-	-	-	-	-	-	-
Total:			21	19	-	08	27	120	300	80	200	40	100	40	100	700

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PCC= Professional Core Courses, ESE=Engineering Science Courses, HSMC=Humanities and Social Science including Management Courses. MC=Mandatory Courses

Program Name:- Bachelor of Technology (Electrical Engineering)

Program Code:- ET109

Semester / Year :- Semester-V/ Third Year

Effect from Academic Year:- 2023-24

Course code	Course Name	Course Type	Credit	Hours per week				Theory (Marks)				Practical(Marks)				Total Marks
				L	T	P	Total	SEE		CCA		SEE		CCA		
								Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	
2ET1090501T	Electrical Power System-I	PCC	3	3	-	-	3	24	60	16	40	-	-	-	-	100
2ET1090501P	Electrical Power System-I Practical	PCC	1	-	-	2	2	-	-	-	-	10	25	10	25	50
2ET1090502T	Power Electronics-II	PCC	3	3	-	-	3	24	60	16	40	-	-	-	-	100
2ET1090502P	Power Electronics-II Practical	PCC	1	-	-	2	2	-	-	-	-	10	25	10	25	50
2ET1090503T	Elements of Electrical Design	PCC	3	3	-	-	3	24	60	16	40	-	-	-	-	100
2ET1090503P	Elements of Electrical Design Practical	PCC	1	-	-	2	2	-	-	-	-	10	25	10	25	50
2ET1090504T	Signals and Systems	PCC	3	3	-	-	3	24	60	16	40	-	-	-	-	100
	Professional Elective-I	PEC	3	3	-	-	3	24	60	16	40	-	-	-	-	100
	Management Elective-I	HSMC	3	3	-	-	3	24	60	16	40	-	-	-	-	100
2ET1000503T	Integrated Personality Development Course-II	MC	-	2	-	-	2	-	-	-	-	-	-	-	-	-
Total:			21	20	-	06	26	144	360	96	240	30	75	30	75	750

Professional Elective-I:

Course Code	Course Name
2ET1090505T	Electrical Power Utilization and Traction
2ET1090506T	Electromagnetic Fields
2ET1090507T	Industrial Automation
2ET1090508T	Artificial Intelligence
2ET1090509T	Automobile Electrical System and Mechanisms

Management Elective-I:

Course Code	Course Name
2ET1000501T	Industrial Psychology
2ET1000502T	Project Management

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Program Name:- Bachelor of Technology (Electrical Engineering)

Program Code:- ET109

Semester / Year :- Semester-VI/ Third Year

Effect from Academic Year:- 2023-24

Course code	Course Name	Course Type	Credit	Hours per week				Theory (Marks)				Practical(Marks)				Total Marks
				L	T	P	Total	SEE		CCA		SEE		CCA		
								Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	
2ET1090601T	Electrical Power System-II	PCC	3	3	-	-	3	24	60	16	40	-	-	-	-	100
2ET1090601P	Electrical Power System-II Practical	PCC	1	-	-	2	2	-	-	-	-	10	25	10	25	50
2ET1090602T	Microcontroller and Interfacing	PCC	3	3	-	-	3	24	60	16	40	-	-	-	-	100
2ET1090602P	Microcontroller and Interfacing Practical	PCC	1	-	-	2	2	-	-	-	-	10	25	10	25	50
2ET1090603P	Simulation Lab	PCC	2	-	-	4	4	-	-	-	-	10	25	10	25	50
2ET1000601P	Engineering Project-I	PROJ	2	-	-	4	4	-	-	-	-	10	25	10	25	50
	Professional Elective-II	PEC	3	3	-	-	3	24	60	16	40	-	-	-	-	100
	Management Elective-II	HSMC	3	3	-	-	3	24	60	16	40	-	-	-	-	100
	Open Elective-I	OEC	3	3	-	-	3	24	60	16	40	-	-	-	-	100
Total:			21	15	-	12	27	120	300	80	200	40	100	40	100	700

Professional Elective-II:

Course Code	Course Name
2ET1090604T	Electrical Machine Design
2ET1090605T	Electrical Energy Conservation and Auditing
2ET1090606T	Advanced Power Electronics
2ET1090607T	Special Electrical Machines
2ET1090608T	Architecture of Electrical and Hybrid vehicles

Management Elective-II:

Course Code	Course Name
2ET1000602T	Operation Research
2ET1000603T	Finance and Accounting

Open Elective-I:

Course Code	Course Name	Subject Offered By
2ET1010681T	Fundamentals of Robotics	Mechanical Engineering
2ET1060681T	Disaster Management	Civil Engineering
2ET1090681T	Electrical & Hybrid Vehicles	Electrical Engineering
2ET1030681T	Cryptography and Computer Security	Computer Engineering / Information Technology
2ET1080681T	Artificial Intelligence and Machine Learning	Artificial Intelligence and Data Science
2ET1070681T	Wireless Communication	Information Communication Technology

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Program Name:- Bachelor of Technology (Electrical Engineering)

Program Code:- ET109

Semester / Year :- Semester-VII/ Final Year

Effect from Academic Year:- 2023-24

Course code	Course Name	Course Type	Credit	Hours per week				Theory (Marks)				Practical(Marks)				Total Marks
				L	T	P	Total	SEE		CCA		SEE		CCA		
								Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	
2ET1090701T	Commissioning, Testing and Maintenance of Electrical Equipment	PCC	3	3	-	-	3	24	60	16	40	-	-	-	-	100
2ET1090701P	Commissioning, Testing and Maintenance of Electrical Equipment Practical	PCC	1	-	-	2	2	-	-	-	-	10	25	10	25	50
2ET1090702T	Power System Protection and Switchgear	PCC	3	3	-	-	3	24	60	16	40	-	-	-	-	100
2ET1090702P	Power System Protection and Switchgear Practical	PCC	1	-	-	2	2	-	-	-	-	10	25	10	25	50
2ET1000701P	Engineering Project-II	PROJ	6	-	-	12	12	-	-	-	-	30	75	30	75	150
	Professional Elective-III	PEC	3	3	-	-	3	24	60	16	40	-	-	-	-	100
	Open Elective-II	OEC	3	3	-	-	3	24	60	16	40	-	-	-	-	100
Total:			20	12	-	16	28	96	240	64	160	50	125	50	125	650

Professional Elective-III:

Course Code	Course Name
2ET1090703T	High Voltage Engineering
2ET1090704T	HVDC and FACTS
2ET1090705T	Wind and Solar Energy System
2ET1090706T	Power System Operation & Control
2ET1090707T	EV Dynamics and control

Open Elective-II:

Course Code	Course Name	Subject Offered By
2ET1010781T	Quality Management	Mechanical Engineering
2ET1060781T	Waste Management	Civil Engineering
2ET1090781T	Wind and Solar Energy Systems	Electrical Engineering
2ET1030781T	Data Handling and Visualization	Computer Engineering / Information Technology
2ET1080781T	Deep Learning	Artificial Intelligence and Data Science
2ET1070781T	Industrial IoT	Information Communication Technology

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PCC= Professional Core Courses, PEC=Professional Elective Courses, OEC=Open Elective Courses, PROJ= Project.

Program Name:- Bachelor of Technology (Electrical Engineering)

Program Code:- ET109

Semester / Year :- Semester-VIII/ Final Year

Effect from Academic Year:- 2023-24

Course code	Course Name	Course Type	Credit	Hours per week				Theory (Marks)				Practical(Marks)				Total Marks
				L	T	P	Total	SEE		CCA		SEE		CCA		
								Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	
2ET1000801P	Engineering Project - III: Internship / Project	PROJ	14	-	-	28	28	-	-	-	-	70	175	70	175	350
	Open Elective-III	OEC	3	3	-	-	3	24	60	16	40	-	-	-	-	100
Total:			17	03	-	28	31	24	60	16	40	70	175	70	175	450

Open Elective-III:

Course Code	Course Name	Subject Offered By
2ET1010881T	Optimization Methods in Engineering	Mechanical Engineering
2ET1060881T	Smart Cities	Civil Engineering
2ET1090881T	Energy Conservation and Audit	Electrical Engineering
2ET1030881T	Block Chain Technology	Computer Engineering / Information Technology
2ET1080881T	Speech Processing	Artificial Intelligence and Data Science
2ET1070881T	Cloud Computing	Information Communication Technology

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OEC=Open Elective Courses, PROJ= Project.