M.TECH (WORKING PROFESSIONAL)
ELECTRICAL ENGINEERING
SCHEME OF STUDIES

Semester-wise Course Structure

Semester I

Course Code	Course Title	Type	Periods	Credits
PWEE-101	Power Systems Analysis	Theory	4	4
PWRM-102	Research Methodology & IPR	Theory	4	4
PWEE-103	Power Systems Lab	Practical	4	2
PWEE-104	Electrical Machines Lab	Practical	4	2
PWEE-105	Technical Seminar I (Literature Review)	Seminar	4	2
PWEE-106	Mini Project I (Problem Identification)	Project	4	2
PWEE-10X	Elective I	Elective	4	4
TOTAL		**Theory: 12 | Practical/Project: 18**		**20 Credits**

Semester II

Course Code	Course Title	Type	Periods	Credits
PWEE-201	Control Systems & Applications	Theory	4	4
PWEE-202	Power Electronics & Drives	Theory	4	4
PWEE-203	Control Systems Lab (MATLAB/Simulink)	Practical	4	2
PWEE-204	Power Electronics Lab	Practical	4	2
PWEE-205	Technical Seminar II (State-of-the-Art Review)	Seminar	4	2
PWEE-206	Mini Project II (Design & Simulation)	Project	8	4
PWEE-20X	Elective II	Elective	4	4
TOTAL		**Theory: 12 | Practical/Project: 20**		**22 Credits**

Semester III

Course Code	Course Title	Type	Periods	Credits
PWEE-301	Advanced Electrical Machines	Theory	4	4
PWEE-302	Electrical Machines & Smart Grid Lab	Practical	4	2
PWEE-303	Industry Internship	Practical	8	4
PWEE-304	Seminar III (Thesis Proposal Presentation)	Seminar	4	2
PWEE-305	Pre Thesis / Dissertation	Thesis	8	4
PWEE-30X	Elective III	Elective	4	4
TOTAL		**Theory: 8 | Practical/Project: 24**		**20 Credits**

Semester IV

Course Code	Course Title	Type	Periods	Credits
PWEE-401	Thesis / Dissertation	Thesis	24	12
PWEE-402	Seminar IV (Final Presentation)	Seminar	16	8
TOTAL		**Theory: 0 | Practical/Project: 40**		**20 Credits**

List of Elective Courses

Elective	Course Code	Course Title	Domain	Offered In
I	PWEE-108	High Voltage Engineering	Power Systems	Sem I
I	PWEE-109	Embedded Systems & Microcontrollers	Electronics / Control	Sem I
I	PWEE-110	Electrical Safety & Standards	Industrial Electrical	Sem I
II	PWEE-208	Electric Vehicles & Charging Infrastructure	EV Technology	Sem II
II	PWEE-209	Industrial Automation & PLC/SCADA	Automation	Sem II
II	PWEE-210	Wireless Power Transfer & Applications	Modern Power Electronics	Sem II
III	PWEE-307	AI & Machine Learning in Power Systems	Smart Grid / AI	Sem III
III	PWEE-308	Robotics & Motion Control	Automation / Robotics	Sem III
III	PWEE-309	IoT in Electrical Engineering	Industry 4.0	Sem III

Elective	Course Code	Course Title	Domain	Offered In
IV	PWEE-XXX	Energy Audit & Management	Energy / Sustainability	
IV	PWEE-XXX	Advanced Protection & Relay Systems	Power Systems	
IV	PWEE-XXX	Flexible AC Transmission Systems (FACTS)	Power Electronics	