

**List of M.Sc. by Research / Ph.D. course work subjects that can be offered under Electrical Engineering Group from 2006 onwards**

Group I		Group II		Group III		Group IV	
Subject Code	Name of the subject	Subject Code	Name of the subject	Subject Code	Name of the subject	Subject Code	Name of the subject
05 ECD 142	Dynamics of analog & Discrete Time Systems	05 EEM 141	Computer modelling of Electrical Power Systems	05 EES 141	Power System Instrumentation	05 EPS 142	Dynamics of Linear Systems
05 ECD 143	VLSI Design	05 EEM 142	Switched Mode Power Conversion	05 EES 144	Alternate Energy Sources	05 EPS 151	Energy Management Systems
05 ECD 144	Advanced Network Analysis and synthesis	05 EEM 151	Bio-Mass Energy Resources	05 EES 151	Digital Power System Protection	05 EPS 152	Digital Signal Processing
05 ECD 152	Protection techniques for Electrical Machines	05 EEM 152	Engineering Economics and Management	05 EES 242	Power System Reliability Engineering	05 EPS 241	HVDC Power Transmission
05 ECD 243	Design of analog and Discrete Time Control Systems	05 EEM 241	AI Applications to energy Management	05 EES 243	HVDC/EHVAC Transmission and FACTS	05 EPS 243	Non linear Automatic Control Theory
05 ECD 244	Non Linear Systems	05 EEM 242	Environmental Engineering and Pollution Control	05 EES 251	Software Engineering	05 EPS 252	AI Applications in Power Systems
05 ECD 251	Discrete Control Systems & Multi Variable Control	05 EEM 243	Computer Aided power system operation and Alalysis	05 EES 252	Parallel Processing in Power Systems	05 EPS 253	Power System Reliability Engineering
05 ECD 252	Computer Based Industrial Drive Control	05 EEM 251	HVDC Transmission	05 EES 253	Environmental Aspects of Power Generation and Transmission	05 EMS 252	Computer based industrial control
05 EMS 11	Analysis of Linear Systems	05 SCN 13	Distributed Computing	05 SCN 251	Optical Communications & Fiber Optic Networks	05 SCN 152	Multimedia Networks
05 SCN 11	Advanced Digital Communication	05 SCE 142	Computer Graphics	05 SCE 143	Digital Image Processing & Computer Vision	05 SCE 11	Computer Architecture
05 SCN 253	Client Server Programming & Application	05 SCE 13	Database Management Systems	05 SCE 151	Object Oriented Analysis & Design	05 SCE 152	Pattern Classification
05 SCE 12	Data Structure & Algorithms	05 SCE 21	Operating Systems & Linux Internals	05 SSE 22	Product Engineering	05 SCE 252	Embedded & Real Time Systems
05 SCE 153	Digital Signal Processing	05 SCS 141	Theoretiacl Foundations of Computer Science	05 SCS 152	Artificial Intelligence & Expert Systems	05 SCS 242	Data Warehousing & Mining
05 SCE 253	Complier Design Tools & Techniques	05 SIT 141	System Simulation & Modeling	05 SSE 151	Advanced Algorithms	05 SSE 153	Multimedia Information Systems
05 SCS 23	Computer Networks	05 SSE 23	Software Architeture	05 SSE 242	Software Quality Assurance & Testing	05 SSE 243	Systems Performance & Evaluation

05 SCE 22	Software Engineering	05 SCN 22	Cryptography & Network Security	05 EC 052	Multimedia Communication	05 EC 097	High Performance Computing
05 SCN 21	Wireless & Mobile Networks	05 EC 056	Network Programming	05 EC 063	Power Semi-conductor devices	05 EC 035	Electrical machine dynamics
05 EC 023	Cryptography and Network Security	05 EC 0026	Design of Power Converters			05 EC 083	VLSI Technology
05 EC 036	Electromagnetic Compatibility	05 EC 078	Testing and verification of VLSI Circuits	05 EC 049	Micro computer control of electrical Drives	05 EC 062	Power electronics system Design with Ics
05 EC 002	Advanced Bio-medical Instrumentation	05 EC 042	HV- DC Power Transmission.	05 EC 051	Modeling and Simulation of Data networks	05 EC 091	Digital Switching Systems
05 EC 005	Advanced control systems	05 EC 039	Error Control Coding	05 EC 020	CMOS RF Circuit Design	05 EC 025	Design of Analog & Mixed mode VLSI Circuits
05 EC 006	Advanced Digital Communications	05 EC 012	ASIC Design	05 EC 068	Radar Systems	05 EC 086	Wireless Communications
05 EC 010	Algorithms for VLSI Design Automation	05 EC 028	Detection and Estimation	05 EC 053	Multirate Systems and Filter Banks	05 EC 079	Theory & Design of Bio-Medical Instruments
05 EC 011	Antenna Theory & Design	05 EC 038	Ergonomics	05 EC 041	Hardware - Software Co-design	05 EC 047	Low power VLSI Design
05 EC 017	Bio- medical Signal Processing	05 EC 037	Embedded System Design	05 EC 070	Real Time Embedded Systems	05 EC 077	Synthesis and Optimization of Digital Circuits
05 EC 027	Design of VLSI Systems	05 EC 032	Digital System Design Using VHDL	05 EC 060	Pattern Recognition	05 EC 075	Speech and Audio Processing
05 EC 029	Digital Circuits and Logic Design	05 EC 043	Image and Video Processing	05 EC 050	Mobile Computing	05 EC 055	.NET Technology
05 EC 030	Digital Signal Compression	05 EC 040	Ethernet Technology	05 EC 076	Statistical Signal Processing	05 EC 092	Parallel Systems
05 EC 033	Distributed Computing	05 EC 082	VLSI System and Architecture	05 EC 084	Web Services	05 EC 094	Advanced Data Networks
05 EC 046	Linear Algebra	05 EC 067	Protocal engineering	05 EC 093	High Speed VLSI Design	05 EC 059	Optical communication & Networking
05 EC 057	Network Protocal Design	05 EC 072	Soft Computing	EG-31*	RF & MMIC Design and Technology	-	-
05 EC 085	Wireless & ATM Networks	EG-21*	Vacuum and Thin film science and technology	EG-32*	Suggested Subject relevant to the chosen area Thin Film Instrumentation Technology.	-	-
EG-11*	Nanoelectronics	EG-22*	Suggested Subject relevant to the chosen area Senors & application	-	-	-	-
EG-12*	GaAs and Related devices and Technology	-	-	-	-	-	-
		EC-23	Numerical Techniques in Electromagnetic				

\* This are new courses