

Department of Electrical Engineering

Ph.D Electrical Engineering

Shift : Afternoon
 Duration : 3 years, 6 semesters, 30 credit hours
 Eligibility : MS. Electrical Engineering with research thesis in the relevant field or equivalent qualification with at least CGPA 3.00/4.00 or equivalent from any HEC recognized University and ETS-GRE (Subject) passed with 50 percent percentile or NTS-GAT(Subject) with 60% marks.

Research Opportunities (Power & Control)

- Renewable Energy sources & integration to grid.
- Advance Control Methods and its application to facts devices, DC/DC converters, wind energy, smart energy buildings & fuel cells Process.
- Fault tolerant power system & solution using embedded and FPGA.
- High Voltage insulation, reliability and life cycle for each

Electronics & Communication

- Fault tolerant digital systems.
- Reconfigurable real time systems.
- Software defined radio & defined networks.
- VLSI testing
- Electronic design automation for reliability and reconfigurability.
- Adaptive signal image processing system.
- Wireless sensor networks.

0242 B.Tech Electrical / Electronics

Shift : Morning/Afternoon
 Duration : 4 years, 8 semesters, 135 credit hours
 Eligibility : DAE (Electrical) or equivalent with at least 50% marks from any recognized Board

1st Semester

Course	Course Title	Credit Hours
CSC-109	Computer Fundamentals	2
CSC-109(L)	Computer Fundamentals	1
ET-111	Electronic Devices & Circuits	3
ENG-112	English Grammar	3
HUM-101	Islamic Studies	2
MTS-118	Mathematics-I	3
PHY-102	Applied Physics	3
PHY-102(L)	Applied Physics	1

2nd Semester

Course	Course Title	Credit Hours
CSC-113(2)	Computer programming	2
CSC-113(L)	Computer programming	1
ET-112	Electrical Technology	3
ET-114	Engineering Drawing	2
ET-114(L)	Engineering Drawing	1
HUM-102	Pakistan Studies	2
HUM-108	Professional Ethics	2
MTS-119	Mathematics-II	3

3rd Semester

Course	Course Title	Credit Hours
CSC-201(3)	Digital Logic Design	3
CSC-201(L)	Digital Logic Design	1
ET-217	Electromagnetic Field Theory	3
ET-212	Instrumentation and Measurement	3
ENG-208	Communication Skills & Technical Report Writing	3

4th Semester

Course	Course Title	Credit Hours
ET-214	Communication Technology	2
ET-214(L)	Communication Technology	1
ET-218	Electrical Machine-I	3
ET-218(L)	Electrical Machine-I	1
ET-313	Power Generation & Utilization	3
ET-314	Basic Mechanical Technology	3
ET-314(L)	Basic Mechanical Technology	1
MGT-404	Total Quality Management	3

5th Semester

Course	Course Title	Credit Hours
CSC-317	Data Communication & Computer Network	3
CSC-317(L)	Data Communication & Computer Network	1
ET-311	Signal & Systems	3
ET-311(L)	Signal & Systems	1
ET-216(L)	Industrial Training	6
ET-317	Power Electronics	3
ET-317(L)	Power Electronics	1
ET-318	Electronic Devices & Circuits-II	3

6th Semester

Course	Course Title	Credit Hours
ET-215	Micro Processor Theory & Interfacing	2
ET-215(L)	Micro Processor Theory & Interfacing	1
ET-316	Control Technology	2
ET-316(L)	Control Technology	1
ET-319	Power Transmission & Distribution	2
ET-319(L)	Power Transmission & Distribution	1
ET-320	Electrical Machines-II	3
ET-320(L)	Electrical Machines-II	1
ET-413	High Voltage Technologies	3

7th Semester

Course	Course Title	Credit Hours
ET-412(L)	Industrial Training II	14
MTS-xxx	Probability & Random Signal	3
ET-499	Project Phase-I	3

8th Semester

Course	Course Title	Credit Hours
HUM-402	Occupational Health Safety Environment	2
ET-412(L)	Industrial Training II	12
ET-499	Project Phase-II	3