

Ph.D Electrical Engineering

Shift :	Evening
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 60% marks or CGPA 3.00/4.00 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
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-113	Applied Calculus-I	3
PHY-102	Applied Physics	3
PHY-102(L)	Applied Physics	1

3rd Semester

Course	Course Title	Credit Hours
CSC-201(3)	Digital Logic Design	3
CSC-201(L)	Digital Logic Design	1
ET-212	Communication Systems	3
ET-213	Control Technology	3
ENG-208	Communication Skills & Technical Report Writing	3

5th Semester

Course	Course Title	Credit Hours
CSC-317	Data Communication & computer N/W	3
CSC-317(L)	Data Communication & computer N/W	1
ET-311	VLSI Technology	3
ET-312	Micro Processors & Micro Controllers	3
ET-313	Signals & Systems	3
ET-313(L)	Signals & Systems	1

7th Semester

Course	Course Title	Credit Hours
HUM-402	Occupational Health Safety Environment	2
MG-415	Industrial Management	3
ET-499	Mini Project- II	3

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-212	Instruments & Measurement	3
HUM-102	Pakistan Studies	2
HUM-108	Professional Ethics	2
MTS-114	Applied Calculus-II	3

4th Semester

Course	Course Title	Credit Hours
ET-221	Electrical Circuits Analysis	3
ET-222	Electromagnetic Field Theory	3
ET-223	Probability & Random Signals	2
ET-224	Industrial Electronics	3
MTS-214	Linear Algebra	3

6th Semester

Course	Course Title	Credit Hours
ET-321	FPGA Based System Design	3
ET-322	Automation & Robotics	3
ET-323	Antenna & Wave Propagation	3
ET-499	Mini Project- I	3

8th Semester

Course	Course Title	Credit Hours
ET-401	Supervise Industrial Training	36