UNIVERSITY OF ENGINEERING AND TECHNOLOGY, TAXILA

Department of Electronics Engineering

MSc. Curriculum (2025)

List of Courses		
CORE COURSES: Common for all specializations		**CHr.**
EN-5001	Mathematical Methods for Engineers & Scientists	3
EN-5002	Random Variables and Stochastic Processes	3
EN-5003	Research Methodology	3
EN-5004	Understanding of Holy Quran-I	1
EN-5005	Understanding of Holy Quran-II	1
ELECTIVE COURSES		
Electronics System Design		
EN-5101	Advanced VLSI Design	3
EN-5102	Mixed Signal Design	3
EN-5103	System-on-Chip Design	3
EN-5104	System-on-Chip Testing and Verification	3
EN-5105	Network-on-Chip Design	3
EN-5106	FPGA-based System Design	3
EN-5107	Integrated Circuit Design	3
EN-5108	Digital System Design	3
EN-5109	Microprocessor-based System Design	3
EN-5110	Computer Architecture	3
EN-5111	Embedded System Design	3
EN-5112	RF IC Design	3
EN-5113	Microwave Engineering	3
EN-114	Foundation of Robotics	3
EN-5115	Nonlinear Systems	3
EN-5116	Machine Learning	3
EN-5117	Power Electronic Systems	3
EN-5118	Optimization Theory	3
EN-5119	Linear System Theory	
EN-5120	Special Topics in Electronics System Design	3
EN-5100	Research Thesis	6
Microelectronic Materials and Devices		
EN-5201	Solid-State Electronic Devices	3
EN-5202	Microelectronic Process Technology	3
EN-5203	Compound Electronic Devices	3
EN-5204	Optoelectronic Devices	3
EN-5205	Modelling and Simulation of Semiconductor Devices	3
EN-5206	Semiconductor Material Characterizations	3
EN-5207	MEMS Designing and Micro-Machining	3
EN-5208	Nanotechnology	3
EN-5209	Nano-Fabrication and Characterizations	3
EN-5210	Organic Electronic Devices	3
EN-5211	Electronic Sensors & Actuators	3

EN-5212	Quantum Electronics	3
EN-5213	Theory of Solid Materials	3
EN-5214	Electromagnetics Field Theory	3
EN-5215	Computational Methods in Electronics	3
EN-5216	Special Topics in Microelectronic Materials and Devices	3
EN-5200	Research Thesis	6
Biomedical Electronics		
EN-5301	Biomedical Microsystems	3
EN-5302	Pattern Matching and Recognition	3
EN-5303	Biomedical Electronics	3
EN-5304	Biomedical Materials and Sensors	3
EN-5305	Organic Bioelectronics	3
EN-5306	Bio-Signal Processing	3
EN-5307	Biomedical Image Processing	3
EN-5308	Biomimetic Materials	3
EN-5309	Robotics for Medical Applications	3
EN-5310	Biomedical Instrumentation	3
EN-5311	Special Topics in Biomedical Electronics	3
EN-5300	Research Thesis	6
Student are required to take minimum 3 elective courses from area of specialization and maximum 2 elective courses from other specializations.		