

UNIVERSITY OF ENGINEERING AND TECHNOLOGY, TAXILA



Department of Electronics Engineering MSc. Curriculum (2020)

(All courses carry 3-Credit Hours and Research Thesis carries 6-Credit Hours)

List of Courses	
CORE COURSES- Common for all specializations	
EN-6001	Mathematical Methods for Engineers & Scientists
EN-6002	Stochastic Processes
EN-6003	Linear System Theory
EN-6004	Solid-State Electronic Devices
ELECTIVE COURSES	
Electronics System Design	
EN-6101	Advanced VLSI Design
EN-6102	Mixed Signal Design
EN-6103	System-on-Chip Design
EN-6104	System-on-Chip Testing and Verification
EN-6105	Network-on-Chip Design
EN-6106	FPGA-based System Design
EN-6107	Integrated Circuit Design
EN-6108	Digital System Design
EN-6109	Microprocessor-based System Design
EN-6110	Computer Architecture
EN-6111	Embedded System Design
EN-6112	RF and Microwave System Design
EN-6113	Power Electronic Systems
EN-6114	Optimization Theory
EN-6115	Special Topics in Electronics System Design
Research Thesis	
EN-6100	Research Thesis
Microelectronic Materials and Devices	
EN-6201	Microelectronic Process Technology
EN-6202	Compound Electronic Devices
EN-6203	Optoelectronic Devices
EN-6204	Modelling and Simulation of Semiconductor Devices
EN-6205	Semiconductor Material Characterizations
EN-6206	MEMS Designing and Micro-Machining
EN-6207	Nanotechnology
EN-6208	Nano-Fabrication and Characterizations
EN-6209	Organic Electronic Devices

EN-6210	Electronic Sensors & Actuators
EN-6211	Quantum Electronics
EN-6212	Theory of Solid Materials
EN-6213	Electromagnetics Field Theory
EN-6214	Computational Methods in Electronics
EN-6215	Special Topics in Microelectronic Materials and Devices
Research Thesis	
EN-6200	Research Thesis
Biomedical Electronics	
EN-6301	Biomedical Microsystems
EN-6302	Pattern Matching and Recognition
EN-6303	Biomedical Electronics
EN-6304	Biomedical Materials and Sensors
EN-6305	Organic Bioelectronics
EN-6306	Bio-Signal Processing
EN-6307	Biomedical Image Processing
EN-6308	Biomimetic Materials
EN-6309	Robotics for Medical Applications
EN-6310	Biomedical Instrumentation
EN-6311	Special Topics in Biomedical Electronics
Research Thesis	
EN-6300	Research Thesis

Degree Requirements

1. Students are required to take 3 core courses and 4 to 6 area of specialization courses and 0 to 2 courses from other specializations to fulfill the course work requirement. Course EN-6001 is compulsory.
 2. Students are required to take 06 credit hours of research thesis to fulfill degree requirement.
 3. The minimum duration for MSc Degree would be 2 years.
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