



**Department of Electronics Engineering
MSc. Curriculum (2014-19)**

List of Courses	
CORE COURSES	
EN-5001	Mathematical Methods for Engineers & Scientists
EN-5002	Random Processes
EN-5003	Optimization Theory
EN-5004	Electromagnetic Field Theory
ELECTIVE COURSES	
Electronics System Design	
EN-5101	Advanced VLSI Design
EN-5102	ASIC Design Methodology
EN-5103	Mixed Signal Design
EN-5104	System-on-Chip Design
EN-5105	FPGA-based Design
EN-5106	Digital System Synthesis
EN-5107	Microprocessor-based System Design
EN-5108	Network-on-Chip Design
EN-5109	Integrated Circuit Design
EN-5110	System-on-Chip Testing and Verification
EN-5111	Special Topics in Electronics System Design
Research Thesis	
EN-5100	Research Thesis
Semiconductor Materials, Devices and Design	
EN-5201	Solid-State Electronics
EN-5202	Semiconductor Devices and Technology
EN-5203	Compound Semiconductor Devices
EN-5204	Optoelectronic Devices
EN-5205	Modelling and Simulation of Semiconductor Devices
EN-5206	Semiconductor Material Characterization
EN-5207	MEMS Designing and Micro-Machining
EN-5208	Nanotechnology
EN-5209	Nano-Fabrication and Characterization
EN-5210	Organic Electronic Devices
EN-5211	Special Topics in Semiconductor Materials and Devices
Research Thesis	
EN-5200	Research Thesis

Bio-Electronics	
EN-5301	Biomedical Materials and Sensors
EN-5302	Modelling and Simulation of Physiological Systems
EN-5303	Bio-Instrumentation Design
EN-5304	Bio-Electrical Signal Processing and Signal Modelling
EN-5305	Bio-Electric Signal Analysis and Interpretation
EN-5306	Diagnostic Imaging Systems
EN-5307	Medical Microsystem
EN-5308	Design of Medical Devices
EN-5309	Medical Informatics
EN-5310	Telemedicine
EN-5311	Pattern Recognition
EN-5312	Special Topics in Bio-Electronics
Research Thesis	
EN-5300	Research Thesis

Degree Requirements

1. Students are required to take at least three (03) core courses and five (05) elective courses to fulfill the course work requirement. Course EN-5001 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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