

Program Structure

Course Title	Credit Hours
Semester 1	
Physics I	3
Arabic Language I	2
English Language I	2
Religious Studies I	2
Chemistry I	3
Calculus I	3
Semester 2	
Calculus II	3
Arabic Language II	2
English Language II	2
Religious Studies II	2
Semester 3	

Course Title	Credit Hou
Material Science	3
Human Organizations	3
Arabic Language III	2
English Language III	2
Religious Studies III	2
Sudanese Studies	2
Semester 4	
Biochemistry	3
Differential Equations	3
Discrete Mathematics	3
Circuit Theory II	3
Bio-fluid mechanics	3
Semester 5	
Biophysics	3
Anatomy and Physiology I	3
Statistics and Probability	3
Electronics 1	3

Course Title	Credit Hour
Digital System I	3
Semester 6	
Biomaterials	3
Anatomy and Physiology II	3
Electronics II	3
Digital System II	3
Nano 1: Introduction to Nanoscience and Nanofabrication	3
Computer System & Assembly Language	3
Semester 7	
Transport Phenomena	3
Microprocessor and Interfacing	3
Biomedical Signals and Systems	3
Digital Signal Processing	3
Biomedical Electronics	3
Biomedical Sensors and Optics	3
Biomechanics	3
Thermodynamics of Biomolecular System	3

Course Title	Credit Hour
Semester 8	
Environmental Studies	2
Biomedical Informatics	3
Bioinstrumentation & Biomeasurements	2
Principles & Analysis of Biological Control Systems	3
Clinical Engineering	3
Semester 9	
Cell and Tissue Engineering	3
Design Project	3
Basic Training	3
Industrial Training (Field trip)	2
Health Resource System and Design	3
Virtual Instrumentation Design for Medical Systems	3
Biomedical Imaging System	3
Semester 10	
Bioalgorithm and Artificial Intelligence	3
Rehabilitation Engineering	3

Course Title	Credit Hour
Biomedical Nanotechnology(Nano electronics &Moletronics)	3
Biomedical Ethics	2
Engineering Economics	2
Total Credit Hour 156	