

Major/Faculty Requirement for S6 Entrants

Required Courses

Elective Courses Group A

Elective Courses Group B

ERG1010  
Engineering Electronics

PHY1001  
General Physics I

MAT1110  
University Mathematics  
for Engineering

ELE1110  
Basic Circuit Theory

CSC1111  
Introduction to  
Computing Using C++

ERG1810  
Engineering Laboratory I

ERG2810  
Engineering Laboratory II

Faculty Language Requirement

CHI1510/ 1520/ 1586/  
1814

ELE2120  
Digital Circuits and  
Systems

ELE2110  
Electronic Circuits

ERG2030  
Signals and Systems

ERG2310  
Principles of  
Communication Systems

ERG2011  
Advanced Engineering  
Mathematics (Syllabus A)

ERG2012  
Advanced Engineering  
Mathematics (Syllabus B)

ELE2510  
Microelectronic Devices

ELT1111  
Technical  
Communications

ELE2860  
Professional  
Engineering Practice

CSC2120  
Introduction to Software  
Engineering

ERG3810  
Product Development  
Project

ELE3820  
Electronic Engineering  
Laboratory

ELT2456  
Expository Writing  
(ERG/MED/SCI)

ELE3230  
Microprocessors and  
Computer Systems

ELE3210  
Analog Integrated  
Circuits

ELE3310  
Basic Electromagnetic  
Theory

ERG4910, 4920  
Thesis I, II

ELT1004/ 2201/ 2392/  
2500/ 3103/ 3112/  
3402/ 3501

ELE2240  
Control and Electrical  
Technology

Enrichment Scheme

ERG2900  
Engineering Colloquium

ELE3240  
Medical Instrumentation  
and Sensors

ELE3520  
Computer-Aided Circuit  
Analysis and Hardware  
Description Languages

ELE3410  
Random Processes and  
Digital Signal Processing

ELE3340  
Analog and Digital  
Communications

ELE3330  
Wireless Transmission  
Systems

ELE3320  
Introduction to Optical  
Communications

ELE3510  
Solid State Electronics

ELE3010  
Introduction to Lasers  
and Photonics

IEG3310  
Computer Networks

CSC2100  
Data Structures

SEG2440  
Engineering Economics

ERG3910  
Research Methodology

ERG3920  
Undergraduate Research

ELE4190  
Biomedical Modelling

ELE4110  
Bioelectronics

ELE4120  
Bioinformatics

ELE4430  
Digital Image  
Processing

ELE4410  
Advanced Digital Signal  
Processing and Applications

ELE4310  
Modern Communication  
Systems

IEG4100  
Wireless Communication  
Systems

ELE4320  
Microwave Electronics

ELE4550  
Application Specific  
IC Technologies

ELE4530  
Integrated Circuits  
Fabrication Technology

ELE4510  
Physics and Technology  
of Semiconductor Devices

ELE4520  
Integrated Optics

ELE4560  
Electronic Thin Film  
Science

ELE4580  
Microoptics

MSE4210  
Electronic Packaging

ELE5110  
Advanced Medical  
Instrumentation and  
Biosensors

ELE5140  
Biomedical Information  
Engineering

ELE5420  
Digital Coding of  
Speech Signals

ELE5431  
Advanced Techniques  
for Video Coding

ELE5350  
Advanced  
Electromagnetism

ELE5310  
Advanced Microwave  
Engineering

ELE5380  
RF Integrated Circuits  
and Systems

ELE5210  
CMOS Analog  
Integrated Circuits

ELE5280  
Analog-Digital ASIC  
Design

ELE5260  
CMOS Integrated  
Circuits

Pre-Requisite: →

Streams of Specialization:

- BI: Biomedical Engineering Stream
- DM: DSP and Multimedia Technology Stream
- MW: Microwave and Wireless Engineering Stream
- IC: Integrated Circuit Technology Stream
- MP: Microelectronics and Photonics Stream

Compulsory Courses: in red and *italic*

Elective Courses: in blue