3rd Year Odd Semester

EEE 3100 Electronic Shop Practice
Contact hours/week: 3 Credits: 1.5
Introduction to formal procedures of preventive maintenance. Circuit tracing, trouble shooting, fault repairing, soldering and de-soldering of electronic circuits. Design of PCB layout, etching. Radio receivers: Principles of operations, circuit tracing, fault finding by signal injection alignment. TV camera,
B/W TV, color TV. CD and VCD player.

EEE 3101 Signals and Linear Systems
Contact hours/week: 3 Credits:3
Analogous system, Response to non-sinusoidal voltage, L-system. Transform methods, Purpose and nature of transform, Fourier and Laplace transforms. Impulse function. Convolution integral and their application to network and system analysis. Filter equations, modern filters.

EEE 3105 Control Systems
Contact hours/week: 3 Credits: 3
Introductory Concepts: Open loop versus closed loop feedback system. Input output relationship. Transfer function. DC machine dynamics, performance criteria, sensitivity and accuracy. Analysis of control systems time and frequency domain error constants. Stability of control system : Routh-Hurwitz criterion, bode plot, polar plot. Nyquist method. Root locus techniques. Frequency response analysis. Nicholes chart, compensation. Introduction to non-linear control system. State variable characterization of systems, transition matrix, canonical forms. Controllability and observability.

EEE 3106 Control Systems Sessional
Contact hours/week: 3/2 Credits: 0.75
Sessional based on the theory of course EEE 3105.

EEE 3107 Electromagnetic Fields & Waves
Contact hours/week: 3 Credits:3
Electrostatics and Magnetostatics using vector methods. Fields in dielectrics and conductors. Boundary conditions of Electric and Magnetic fields. Time Varying Fields; Maxwell's equation and poynting vector. Uniform plane wave and its transmission and reflection. Skin effect and Surface resistance. Wave guides. Introduction to radiation system.

EEE 3109 Computational Methods in Electrical Engineering
Contact hours/week: 3 Credits:3
Computer algorithm Mathematical modeling of physical systems. Iterative Techniques, Solution of simultaneous equations, Interpolation, Curve fitting, Solution of Differential Equations. Numerical solution of Integration. Application of the above techniques in Electrical & Electronic Engineering through computer program.

EEE 3110 Computational Methods in Electrical Engineering Sessional
Contact hours/week: 3 Credits:1.5
Sessional based on the theory of course EEE 3109.

EEE 3117 Communication Engineering I
Contact hours/week: 3 Credits:3
Introduction: Principle, evolution, networks, exchange and international regulatory bodies. Telephone apparatus: Microphone, speakers, ringer, pulse tone dialing mechanism, side-tone mechanism, local and central batteries and
advanced features. Switching system: Introduction to analog system, digital switching systems – space division switching, blocking probability and multistage switching, time division switching and two dimensional switching.
Traffic analysis: Traffic characterization, grades of service, network blocking probabilities, delay system and queuing. Modern telephone services and network: Internet telephony, facsimile, integrated services digital network, asynchronous transfer mode and intelligent networks.

EEE 3118 Communication Engineering I Sessional
Contact hours/week: 3/2 Credits:0.75
Sessional based on the theory of course EEE 3117.