EEL 4512L Communication Systems Lab

Credits: 1

Text book, title, author, and year:  None
Supplemental materials:  Laboratory Manuals

Specific course information

Catalog description:  Introduction to Communications Lab, to familiarize students with the basic principles concerning modern electrical communication systems via practical experiments
Prerequisites:  EEL4512 Communication systems
Required, elective, or selected elective:  Selected elective

Specific goals for the course

Specific outcomes of instruction:
The students will know about:
(a) Electrical communication signal
(b) Various modulation and demodulation techniques
(c) Details on signal characteristics such as bandwidth, noise, power spectrum, power budget etc.
(d) Differences between AM and FM radio.
(e) Concept of pulse communication

Brief list of topics to be covered:
A. Introduction to Communications Lab  (1 Lab session)
B. Lab #1: Introduction to TIMS and SystemView Software  (2 Lab sessions)
C. Lab #2: AM Modulation and Demodulation (TIMS)  (3 Lab sessions)
D. Lab #3: FM and Frequency Division Multiplexing (TIMS)  (3 Lab sessions)
E. Lab #4: Basic Digital Communication (TIMS)  (3 Lab sessions)
F. Lab #5: AM System with Superheterodyne Receiver  (SystemView)  (3 Lab sessions)