

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 Superhetrodyne Receiver (SystemView) (3 Lab sessions)