"Communication Theory and Communication Theory Lab" course guidance

1. Registration requirement

Communication Theory and Communication Theory Lab must be taken concurrently. Student cannot take either of the above two courses separately.

2. Objectives

"Communication Theory" together with "Communication Theory Laboratory" discusses in depth how digital communication systems work in the presence of noise. Behavior of analog systems in the presence of noise is also included for comparison. The basic tools used here are probability theory.

3. Outline of Class and Contents

Topics covered in this course are,

(1) Random Processes,

(2) Behavior of Analog Systems in the Presence of Noise,

(3) Behavior of Digital Communication Systems in the Presence of noise,

(4) Optimum signal detection,

(5) Shannon's information theory,

(6) Relationship between bit error rate and Eb/No.

(7) Experiment on S/N for various carrier to noise ratios in digital systems.

4. Assessment Policy

Attendance rate (10%), Scores in Lab class (10%), Midterms (20%), and Final examination (60).