**< Principles of Communications I > Course Description**

Course: Principles of Communications I

Course No.: 3112100140

Credit / Course Hours: 4/64

Preparatory Course: Signal and System, Probability Theory and Stochastic Processes

Course Description: This course mainly focuses on the general concepts, principles, knowledge and analyzing of the physical layer of a point-point communication system. The content of the course covers analyzing of signal and noise, analog modulations including DSB-SC, AM, SSB, PM/FM, digital baseband transmission including PAM signals, power spectral density, inter-symbol interference, Nyquist criterion for ISI-free transmission and etc., signal space and optimum receiver, typical digital modulations including OOK, 2FSK, BPSK/DPSK, QPSK/OQPSK and M-ary modulations, sampling and quantization of analog signals.