

EEE 546 Telecommunication System Engineering II

Types of telecommunication systems and their basic engineering features. Voice frequency (VF) and coaxial cable system, submarine system, transmission hierarchies.

Characteristics of radio transmitters and receivers. Frequency spectrum (VLF, LF, MF, HF, VHF, UHF, SHF, EHF)

Radio-wave propagation mechanisms for ground waves, sky and tropospheric waves and ionospheric waves. Propagation characteristics at microwave frequencies. Design of radio transmitters and receivers. Design of microwave line-of-sight radio link systems.

Radar system: nature of radar and radar equations, composition of a radar system application of different types of radars.

General Broadcasting. Principle of Television Engineering: Black and white television broadcasting, colour television systems (NTSC, PAL, SECAM). Special features of TV transmitter and receivers. Cable television systems. Closed Circuit Television (CCTV) systems. Design of TV antennas.