

Elective course (Disciplinary)

EPH- 401: ELECTRONIC COMMUNICATION

UNIT- I:

Transmission lines and Waveguides:

Transmission lines: Equivalent circuit, primary constants, transmission line equations, infinite line, characteristic impedance, secondary constants, open and short circuited line, line with any termination
Waveguides: Rectangular waveguides, Modes, Properties of TE₁₀ mode, generating TE₁₀ mode from two TEM waves, fields patterns

UNIT-II

Digital and Satellite communication:

Digital communication, Shannon limit for information capacity, digital amplitude modulation, frequency shift keying, FSK transmitter and receiver.
Satellite communication, Orbital and geostationary satellites orbital patterns, look angles, satellite construction, radiation patterns, satellite system link models, transponder, satellite system parameters

References:

- (1) Electronic Communication Systems, Wyne Tomasi, Pearson Education Asia, IIEd. (2001).
- (2) Electronic Communication System : George Kennedy TMH.
- (3) Electronic Communications, Dennis Roddy & John Coolen, PHI
- (4) Modern Electronic Communication, Gray M. Miller & Jeffrey S. Beasley, PHI.
- (5) Hand Book of Electronics by Gupta and Kumar, Pragiti Prakashan Meerut.