

# GUJARAT TECHNOLOGICAL UNIVERSITY

B.E Semester: 4

**Electronics Engineering / Electronics & Telecommunication Engineering/**

**Electronics & Communication / Electrical & Electronics Engineering**

**Subject Name** Communication Engineering (Institute Elective-I)

<b>Sr.No</b>	<b>Course content</b>
1.	Introduction to Communication Systems
2.	Noise: External noise, internal noise, noise calculations, noise figure, noise temperature
3.	Amplitude modulation : AM Theory, generation of AM
4.	SSB techniques: Suppression of carrier, suppression of unwanted sideband
5.	Frequency modulation: FM Theory, noise and FM, generation of FM
6.	Radio receivers: types, AM receivers, Communication receivers, FM receivers, SSB receivers
7.	Pulse and digital communications: Information theory, PCM, Telegraphy, Telemetry, fundamentals of data communications systems, data sets and interconnection requirements
8.	Broadband communication systems: multiplexing, short and medium haul systems, long haul systems, elements of long distance telephony
9.	Television fundamentals: introduction, standards, color transmission and reception
10.	Introduction to Fiber optic technology: history, introduction to light, optical fiber cables, components and systems

## **Reference Books:**

Communication Systems by Kennedy and Davis –Tata McGraw Hill Edition