Analog and Digital Communications Laboratory

The **Analog and Digital Communication Laboratory** provides Electronics and Communication Engineering (ECE) students with practical exposure to the fundamental concepts and techniques of communication systems. The laboratory enables students to understand the generation, transmission, and reception of analog and digital signals through hands-on experiments. Students perform experiments on amplitude modulation (AM), frequency modulation (FM), pulse modulation techniques, sampling, quantization, and coding processes. They also study digital communication techniques such as ASK, FSK, PSK, PCM, and Delta Modulation. The laboratory helps students analyze signal characteristics, bandwidth requirements, noise effects, and system performance using modern communication trainers and measuring instruments. Through experimentation, students gain practical skills in signal generation, modulation, demodulation, encoding, decoding, and waveform analysis.

This laboratory enhances their understanding of communication principles and strengthens analytical and troubleshooting abilities. It serves as a foundation for advanced subjects such as wireless communication, satellite communication, optical communication, mobile communication, and digital signal processing. Overall, the Analog and Digital Communication Laboratory plays a crucial role in developing the technical knowledge and practical competence required for modern communication engineering applications.



Figure -Analog and Digital Communications Lab