Digital Circuit Design Laboratory

The Digital Circuit Design Laboratory provides students with practical knowledge of digital electronics and logic circuit design. It enables them to understand the operation and implementation of basic and advanced digital circuits through hands-on experimentation. Students perform experiments using logic gates, combinational circuits, sequential circuits, multiplexers, demultiplexers, encoders, decoders, counters, registers, and flip-flops. The laboratory helps in verifying theoretical concepts related to Boolean algebra, logic minimization, and digital system design. Students gain experience in circuit implementation, simulation, testing, and troubleshooting using digital ICs and design tools. The laboratory is equipped with digital trainer kits, power supplies, logic probes, and simulation software to facilitate effective learning. It enhances analytical thinking, problem-solving abilities, and design skills required for developing digital systems.

The practical exposure gained in this laboratory forms a strong foundation for advanced courses such as microprocessors, embedded systems, VLSI design, computer architecture, and digital signal processing. Overall, the Digital Circuit Design Laboratory plays a vital role in developing the technical competence and practical skills necessary for modern Electronics and Communication Engineering applications



Figure - Digital Circuit Design Laboratory