(078-E&E-02-02) ELECTRONICS AND COMMUNICATION ENGINEERING (INDUSTRY INTEGRATED)

Significance of the Program:

The surge and expansion of technological progress across diverse industries have intensified the competition among working professionals. Industries are actively seeking individuals with specialised learning and skills in electronics and communication engineering, recognizing their value in enhancing overall industry performance. Practical industry knowledge and a solid understanding of effective methodologies are pivotal in this context.

The significance of B.Tech. in Electronics and Communication Engineering with industry integration lies in its capacity to furnish not only academic foundation but also to provide students with practical skills, industry-specific expertise, and a professional network essential for a prosperous career in the field. The objective of the program is to foster greater interest among students, motivate them to nurture a strong passion and build a successful career in the dynamic and rapidly growing field of Electronics and Communication through industry interaction.

Career Options:

Pursuing a professional course in Electronics and Communication Engineering, students can explore the following opportunities:

- Telecommunication Engineer
- Radio systems Engineer
- Network Engineer
- Electronics Engineer
- Software Developer
- Embedded Systems Engineer
- VLSI Design Engineer

Program Objectives:

1. Graduates will be able to pursue successful careers or higher studies in Electronics and Communication engineering with morals and ethics through their strong foundation in mathematics, science and engineering.

2. Graduates will be able to apply their knowledge to identify, formulate, and solve engineering problems in the domain of electronics and communication
3. Graduates will be able to analyze and design appropriate solutions for socially relevant problems by using current engineering techniques and tools.
4. Graduates will be able to engage in professional development through effective communication, team work and lifelong learning.

Outcomes of the Program:

The student will be able to

- design and analyze complex electronic systems, demonstrate proficiency in circuit design, signal processing, and integrated circuit implementation.
- possess in-depth knowledge of communication systems, including analog and digital communication, wireless communication, and networking, and will be able to apply this knowledge to solve real-world problems.
- proficient in the design and integrating hardware & software components for IoT applications.
- apply signal processing techniques to analyze and interpret data, enabling them to work on tasks such as image and speech processing, and the enhancement of signal quality.
- design and implement digital electronic circuits and microprocessor-based systems, by understanding the architecture and programming of microcontrollers.
- engage in research and development activities, contribute to the advancement of knowledge in the field of Electronics and Communications Engineering.

Major Course Outlines:

1. VLSI Design
2. Embedded systems
3. Signal and Image Processing
4. Communications
5. Wifi Networking