Centre for Health Care Technologies and Innovation

Internship Modules for Engineering students

This internship offers an in-depth understanding of biomedical signal acquisition and analysis, focusing on physiological signals such as ECG, EEG, EMG, and more. Interns will gain hands-on experience with state-of-the-art equipment and learn advanced techniques in signal processing.

Objectives:

- 1. To provide practical knowledge in the acquisition of physiological signals.
- 2. To teach methods for analyzing and interpreting biomedical data.
- 3. To develop skills in using biomedical equipment and software tools.

Modules Covered:

- 1. Introduction to Biomedical Signals:
 - A.Basics of physiological signals (ECG, EEG, EMG, etc.)
 - B.Importance of signal acquisition in healthcare.
- 2. Signal Acquisition Techniques:
 - A. Overview of equipment and sensors.
 - B. Methods for reducing noise and improving signal quality.
- 3. Signal Processing and Analysis:
 - A. Techniques in filtering, Fourier analysis, and wavelet transforms.
 - B. Interpretation of signal features for diagnostic purposes.
- 4. Hands-on Projects:
 - A. Real-world applications and case studies.
 - B. Projects using data from actual clinical settings.

Specialized Equipment's:

- A. Electronic Stethoscope.
- B. 12 Channel ECG Machine

Software

A. BioPACK

For Further Information Contact:

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