EL 455 - Biomedical Signal Processing

3 Credit Hours
This advanced course covers the description of the systems: x-ray, CT, MRI, and ultrasound. Types of electrophysiological measurements include electrocardiography (ECG), electroencephalography (EEG), and electromyography (EMG). An introduction to neuron dynamics encompassing dendrites, synapses, and their mathematics. A dive into models such as the Hodgkin Huxley model, generalized integrate and fire models as well as the dynamics of cognition. Importance of and evolution of medical applications of AI and introduction to biosensors.

Prerequisites

EL 410 EL 320