

COURSE TITLE	TE142466: Biomedical Signal Analysis Credits: 2 ELECTIVE COURSE
LEARNING OBJECTIVES	To have a skill of designing of a system of biomedical signal analysis.
COMPETENCY	<ul style="list-style-type: none"> • To have an understanding of physiological basis and signal generation of a biological system • To have a skill of processing biological signal to extract features of the biomedical signals. • To have a skill to use mathematical tools for developing a system of biomedical signal analysis.
SUBJECTS	<ul style="list-style-type: none"> • Electrophysiology of heart • ECG analysis • Myoelectric signals • Electroneurography (ENG) • Electrooculography (EOG), digital filter for biomedical signal processing and analysis, processing and analysis of human movements signals, frequency-based analysis, time-frequency analysis, assesments of selected topics from journal papers.
MAIN REFERENCES	<ul style="list-style-type: none"> • JL Semlow, <u>Biosignal and Biomedical Image Processing</u>, Marcell Dekker Inc., 2004. • J Bronzino (Ed), <u>Biomedical Engineering Handbook</u>, IEEE Press. • Metin Akay (Ed), <u>Biomedical Signal Detection</u>, IEEE Press.
OPTIONAL REFERENCES	Journals: Ann of BME, IEEE Trans BME, IEEE Trans Rehabil Eng, etc.
PREREQUISITE	-