

A List of Potential Term Projects for BME 687 Spring 2010

1. An Opto-Coupler Isolation Stage for Biological Signals
2. Microphone Amplifier for Amplification of Heart Sounds (electronic stethoscope)
3. Moving Averager for EMG signals (Full-Wave Small Signal Rectifier followed by low-pass filter)
4. QRS Waveform detector circuit from ECG
5. Matlab analysis for detection of QRS peaks in ECG
6. Body thermometer using LM335
7. Instrumentation amplifier to measure force with a strain-gauge load beam
8. Humidity detector
9. Displacement measurement circuit using LVDT
10. Extraction of Respiration Rate from ECG using Matlab
11. Any other project with instructor's consent

Group size depends on the project size. Maximum group size is three students.