

ENGR-384
HW#7

As stated in class, read in chapter 6 pages 333-351.

In the early sections of chapter 6 diagnostic electrocardiograms are presented, i.e. using data from various combinations of patient leads and attachment points to examine the cardiac vector from different effective angles throughout the cardiac cycle. When a patient is in a cardiac or intensive care situation a particular lead configuration is chosen for continuous monitoring and the waveform from that one configuration displayed at the bedside and possibly the nurses station and may also be evaluated by software looking for arrhythmias that indicate heart malfunction.

A few terms used in this chapter to review. See pages 47-49

- differential amplifier
- common-mode signal
- common-mode gain
- common-mode rejection

As you read, find answers to the following questions and submit as HW#7

- 1) What is the nominal (approximate) voltage picked up between a pair of ECG leads?
- 2) What range of frequencies are found in an ECG signal?
- 3) What should the input impedance of an amplifier be that is used to amplify an ECG signal?
- 4) What is a Wilson central terminal?
- 5) How much amplification (gain) is typical for an ECG amplifier?