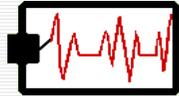


## HTEC 91

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Medical Office Diagnostic Tests



## Introduction to course

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- Introduction of instructors and TAs



## Introduction to course

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- Course Objectives
- What to Expect / Review of Greensheet
- Flow of the Class

## Course Objectives

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- Define common terms used in electrocardiography, physical therapy, radiology, and procedures.
- Differentiate the structure and electrical conduction of the heart.
- Measure and assess heart rhythms using an electrocardiograph.

## Course Objectives

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- Analyze normal and abnormal electrocardiograms.
- Compare the major modalities used in the office's physical therapy department.
- Examine the role of the health technology provider during X-ray examinations.

## Course Objectives

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- Compare the purposes and describe the patient preparation required for a barium meal, barium enema, cholecystogram, intravenous pyelogram.
- Differentiate the routine diagnostic procedures involved in the patient's diagnosis.

### What to Expect

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- Review of greensheet




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### What to Expect (continued)

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- You must be enrolled in HTEC 101F (the lab portion).
- The first 2 weeks of both theory class and lab class are mandatory

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### Flow of each class period

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- Students submit assignments
- Theory presentation / discussion
- Small group activities
- Selected videos (ECG)



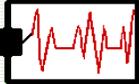
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### Basic ECG Interpretation

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- ECG = electrocardiogram
- a graphic representation of the electrical activity of the heart

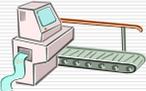



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### Electrocardiograph vs. Electrocardiogram

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- **Electrocardiograph:** the machine that records the heart's electrical activity.
- **Electrocardiogram:** the record of electrical activity.





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### With the ECG, We Can...

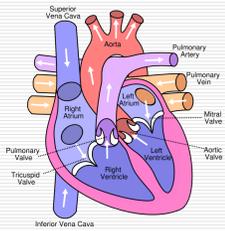
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- Monitor the amount of electrical activity.
- Monitor the time it takes for the electrical activity to travel through the heart.
- Detect abnormal conduction (dysrhythmias)
- Determine extent and damage from a myocardial infarction (MI).
- Assess the effect of certain medications.

\*ECG usually used in conjunction with other cardiac tests

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## Structure of the Heart



□ [http://en.wikipedia.org/wiki/Image:Diagram\\_of\\_the\\_human\\_heart\\_%28cropped%29.svg](http://en.wikipedia.org/wiki/Image:Diagram_of_the_human_heart_%28cropped%29.svg)

## Conduction System of the Heart

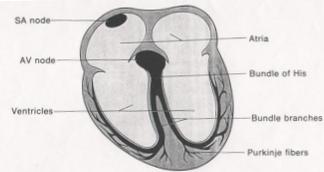
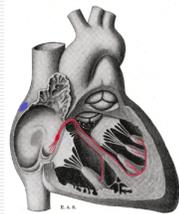


FIGURE 15-2. Diagram of the heart, identifying the structures involved with the conduction of an electrical impulse through the heart.

## ...another view



□ SA Node: blue; AV Node: red  
 □ [http://en.wikipedia.org/wiki/Cardiac\\_pacemaker](http://en.wikipedia.org/wiki/Cardiac_pacemaker)