

**Northwest Arkansas Community College  
Health Professions Division  
Respiratory Therapy Program Course Outline**

**Course Number and Title**

RESP 2501 Dysrhythmia for Respiratory Therapists

**Catalog Description**

This is an introductory course designed for respiratory therapy students. It covers the recognition and interpretation of cardiac dysrhythmias. The course also covers basic cardiac anatomy, normal cardiac cell functions and properties, electrical activity of the heart and ECG waveforms followed by discussions of the mechanisms of cardiac dysrhythmias by their site of origin, e.g., atria, junctional, etc. Recognition and interpretation are facilitated by the use of actual ECG strips in class and as part of homework assignments. The recognition of rhythm changes during respiratory therapy procedures is stressed.

**Prerequisites**

- RESP 2102 Concepts in Respiratory Care
- RESP 2103 Cardiopulmonary Anatomy and Physiology
- RESP 2104 Respiratory Care Sciences
- RESP 2204 Cardiopulmonary Assessments and Diagnostics
- RESP 2123 Pulmonary Diseases
- RESP 2214 Equipment and Procedures
- RESP 2222 Pharmacology for Respiratory Care

**Credit Hours/Contact Hours/Load Hours**

1 credit hour  
8 contact hours  
1 load hour

**Target Audience and Transfer**

Second semester students admitted into the Respiratory Therapy Program.  
May transfer to other respiratory therapy programs.

**Student Learning Outcomes**

- Compare the anatomy and physiology of the heart, including blood flows and electrical impulse flows to the ECG tracing
- Interpret the ECG using a systematic process.

- Evaluate ECG findings to determine: normal sinus rhythm and abnormal sinus, atrial, ventricular, AV junctional and heart block arrhythmias.
- Troubleshoot ECG waveforms to find electrical interference, baseline wander, or muscle tremors
- Perform a 12 lead ECG.

## Topics

- Cardiac Crash Course
  - Cardiac anatomy and electrophysiology
  - Signal Acquisition and the tracing
  - Analyzing waves, P, QRS, T, segments, intervals, & rate
- Sinus Arrhythmias
  - Normal Sinus Rhythm
  - Sinus Tachycardia
  - Sinus Bradycardia
  - Sinus Arrest or Pause
  - Sinus Arrhythmia
- Atrial Arrhythmias
  - Atrial Fibrillation
  - Atrial Flutter
  - Supraventricular Tachycardia /PSVT
  - Premature Atrial Contraction
- Ventricular Arrhythmias
  - Premature Ventricular Contraction
  - Ventricular Tachycardia
  - Ventricular Fibrillation
  - Asystole
- Atrioventricular Blocks and Junctional Rhythms
  - First Degree AV Block
  - Second Degree AV Block
  - Type I or Mobitz I (Wenckebach)
  - Type II or Mobitz II
  - Third Degree AV Block
  - Bundle Branch Block
  - Junctional Rhythm
  - Junctional Escape Rhythm
  - Premature Junctional Contraction

## Format

Online, Required personal computer with web camera, microphone, internet access, and Microsoft Office applications.

## **Forms of Assessment**

- Written examinations
- Homework
- Participation
- Discussions
- Must obtain a cumulative score of 75.5% to pass the course