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

Course Number and Title

RESP 2103 Cardiopulmonary Anatomy and Physiology

Catalog Description

Focuses on the anatomy and physiology of the cardiopulmonary system. Emphasis on the mechanics of ventilation, acid-base balance, gas exchange and transport, ventilation-perfusion, and control of the cardiovascular system

Prerequisites

- Anatomy and Physiology I
- Anatomy and Physiology II
- Introduction to Computer Information or Electronic Health Records HIM 1123
- College Algebra or Survey of Technical Math MATH 1003
- English Composition I
- Medical Terminology
- Microbiology
- Admission into the Respiratory Therapy Program

Credit Hours/Contact Hours/Load Hours

- 3 credit hours
- 48 contact hours
- 3 load hours

Target Audience and Transfer

Students admitted into the Respiratory Therapy Program. May transfer to other respiratory therapy programs.

Student Learning Outcomes

- Understand normal anatomy and physiology of the respiratory, cardiovascular and renal systems.
- Understand and appreciate the relationship existing between the respiratory, cardiovascular and renal systems during normal and abnormal physiological function.
- Collect and interpret clinical data as it pertains to the physiology of both the respiratory and cardiovascular systems.

- Be able to apply the knowledge of these systems in the clinical care setting.
- Identify and understand the normal function of specific structures of the respiratory, cardiovascular and renal systems.

Topics

- Anatomy & Physiology of the Respiratory System
- Ventilation
- Diffusion of Pulmonary Gases
- Anatomy & Physiology of the Circulatory System
- Oxygen and Carbon Dioxide Transportation
- Control of Ventilation
- Ventilation-Perfusion (V/Q) Relationships
- Renal Failure and Its Effects on the Cardiopulmonary System
- Aging and the Cardiopulmonary System

Format

Hybrid, 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