

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

Course Number and Title

RESP 2104 Respiratory Care Sciences

Catalog Description

Lecture/laboratory course that is designed to provide the student with an understanding of the sciences of Respiratory Care (applied physics, chemistry, biochemistry, microbiology, mathematics, statistics, research, communication and critical thinking). Emphasis will be placed on basic math principles and the metric system; basic chemical principles and a general knowledge of organic and biochemistry; basic physics principles, including gas laws, flow dynamics, and the relationship between flow, time, pressure, and volume. Labs are conducted as the science applies to the practice of Respiratory Care.

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

4 credit hours
64 contact hours
4 load hours

Target Audience and Transfer

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

Student Learning Outcomes

- Evaluate microbiological tests for organism, transmission, drug resistance, and infection control practices.
- Apply appropriate infection control procedures correctly.
- Evaluate cleaning methods for Respiratory Care equipment.
- Relate physical principles of energy, matter, and fluid dynamics to the function of the cardiopulmonary system.
- Perform calculations common to the practice of respiratory care.
- Understand the chemical processes occurring within the body their contribution to the overall cardiopulmonary status of the patient.
- Evaluate medical research critically to practice evidence based respiratory care.
- Communicate effectively as a member of the health care team.

Topics

- Microbiology, Infection Control
- Self-study Medical Terminology Refresher
- Physical Principles of Respiratory Care
- Chemistry, Blood Chemistry & Hematology
- Statistics, Research, Evidence Based Care
- Patient Safety, Communication, and Recordkeeping
- Critical Thinking

Format

Hybrid/Laboratory, Required personal computer with web camera, microphone, internet access, and Microsoft Office applications.

Forms of Assessment

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