NorthWest Arkansas Community College
Division of Allied Health

Course Number and Title

RESP 2222 Pharmacology for Respiratory Care

Catalog Description

This is a laboratory course that is designed to provide the student with an understanding of the function, maintenance, and use of respiratory equipment. Emphasis will be placed on administration of therapeutic gases, humidity and aerosol therapy, lung expansion therapy, and bedside ventilatory therapy

Prerequisites

- Anatomy and Physiology I
- Anatomy and Physiology II
- Introduction to Computer Information
- College Algebra **OR** Math for AAS
- English Composition I
- English Composition II **OR** Technical Writing
- Medical Terminology
- Microbiology
- General Psychology
- Concepts in Respiratory Care
- Pulmonary Diseases
- Cardiopulmonary A & P
- Cardiopulmonary Diagnostics
- Respiratory Care Sciences

Admission into the Respiratory Therapy Program.

Credit hours/Contact hours/Load hours

2 credit hours
32 contact hours
2 load hours

Target Audience and Transfer

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

Student Learning Outcomes

- Explain the basic concepts and principles in pharmacology
- Interpret drug information
- Discuss the drugs used in respiratory care; their mechanism of action, indications, contraindications, potential hazards, and conventional dosages.
- Discuss the drugs used in critical and cardiovascular care; their mechanism of action, indications, contraindications, potential hazards, and conventional dosages.
- State the routes of administration
- Explain the mechanism and significance of the receptor theory of pharmacology.
- Describe the sympathetic and parasympathetic nervous systems and their importance in pharmacology.
- Describe the role of the renal system as it relates to pharmacology

Topics

- Basic Concepts and Principles in Pharmacology
- Introduction to Respiratory Care Pharmacology
- Principles of Drug Action
- Administration of Aerosolized Agents
- Calculating Drug Doses
- The Central and Peripheral Nervous System
- Drugs Used to Treat the Respiratory System
    - Adrenergic (Sympathomimetic) Bronchodilators
    - Anticholinergic (Parasympatholytic) Bronchodilators
    - Xanthines
    - Mucus-Controlling Drug Therapy
    - Surfactant Agents
    - Corticosteroids in Respiratory Care
    - Nonsteroidal Antiasthma Agents
    - Aerosolized Antiinfective Agents
    - Antimicrobial Agents
- Cold and Cough Agents
- Selected Agents Used in Respiratory Disease
- Neonatal and Pediatric Aerosolized Drug Therapy
- Critical Care and Cardiovascular Drug Classes
    - Skeletal Muscle Relaxants (Neuromuscular Blocking Agents)
    - Vasopressors, Inotropes, and Antiarrhythmic Agents
    - Drugs Affecting Circulation: Antihypertensives, Antianginals, Antithrombotics
- Diuretic Agents
- Drugs Affecting the Central Nervous System
- The Renal System as it Applies to Pharmacology

Forms of Assessment

- Written examinations
- Homework