MOHAWK VALLEY COMMUNITY COLLEGE, UTICA-ROME, NY

Respiratory Care

COURSE OUTLINE

1. COURSE DESCRIPTION:

**RC103 Cardiopulmonary Pharmacology** C-3, Cr-3

This course presents the principles of pharmacology, drug actions, dosage calculations, and agents administered in cardiopulmonary care. It covers indications, side effects, hazards, and mechanisms of action, general categories, and classification of drugs. Respiratory, cardiovascular, neuromuscular, sedative-narcotic, and anti-infective agents are reviewed.

**Prerequisites:** An appropriate Mathematics Placement test results or MA089 Arithmetic (minimum grade of C)

1. STUDENT LEARNING OUTCOMES

**Upon completion of this course the student will be able to:**

1. The student will demonstrate an understanding of general pharmacologic principles.
2. The student will demonstrate an understanding of the factors involved in the safe administration of medications.
3. The student will demonstrate an understanding of performing drug calculations.
4. The student will demonstrate an understanding of the biochemical nature of bronchodilation medications.
5. The student will demonstrate an understanding of specific drug categories.
   1. Diluents and bland solutions
   2. Bronchodilators
   3. Mucolytics and proteolytic
   4. Expectorants
   5. Antitussives
   6. Anti-inflammatory agents
   7. Glucocorticosteroids (inhaled and systemic)
   8. Asthma preventives
   9. Anti-infective agents
      1. identify instances when antibiotics are aerosolized and identify hazards associated with this route of antibiotic therapy.
      2. identify the names, side effects, and actions of primary secondary and tertiary anti-tuberculosis medications.
      3. identify and discuss an antiviral and anti-protozoal drug commonly used to treat RSV and PCP infections and special precautions necessary when aerosolizing these drugs.
   10. Cardiac drugs
   11. Blood pressure and antithrombotic agents
   12. Neuromuscular, sedative, anesthetic and analgesic agents
6. MAJOR TOPICS:
7. General Pharmacologic Principles
8. Metric System and Dosage Calculations
9. Pharmacology of the Autonomic Nervous System
10. Medicated Aerosol Treatments
11. Bronchodilators
12. Mucokinetic and Surfactants
13. Anti-Inflammatory and Anti-asthmatic Agents
14. Anti-infective Agents
15. Cardiac Agents
16. Blood Pressure & Antithrombotic Agents
17. Neuromuscular, Anesthetic, Sedative, and Analgesic Agents
18. Review