Course Prefix and Number:  RSTH 204  
Credit Hours: 3

Course Title:  Cardiopulmonary Pharmacology

Course Prerequisites:  Admission to clinical program

Textbook:  Colbert, B.; Integrated Cardiopulmonary Pharmacology; 3rd edition

Course Description:

This 16-week course is an introduction to pharmacokinetics and pharmacodynamics of drug agents used in the care of patients with cardiopulmonary diseases and drugs used in critically-ill patients with cardiopulmonary conditions.

Learning Outcomes:

At the end of this course the student will be able to:

A. compute proper drug dosages for medications commonly administered by respiratory care practitioners;
B. recognize classifications of medications commonly used in respiratory care, identifying indications, side-effects, and potential hazards, recommending and modifying pharmacologic interventions as indicated; and
C. demonstrate the ability to properly recognize and utilize pharmacologic terminology such as frequency of administration nomenclature and ordering medication dosing regimen.

To achieve the learning outcomes, the student will:

1. Define key terms and processes related to general pharmacologic principles. (B, C)
2. Perform drug calculations using English and metric units of measurement. (A, C)
3. Distinguish between the anatomy, neurotransmitters, receptors, and functions of the two divisions of the autonomic nervous systems (ANS). (B, C)
4. Distinguish among the four ANS drug groups. (B, C)
5. Discuss the various methods of delivery of aerosol medications to treat pulmonary conditions. (B, C)
6. Discriminate between the three main drug groups used for the treatment of bronchospasm. (B, C)
7. State the indications, contraindications, adverse reactions, onset of action and dosage range for bronchodilator drugs commonly used in respiratory therapy. (B, C)
8. Describe the action of the various mucokinetic, antitussives and expectorant drug agents. (B, C)
9. Describe the role and importance of the various surfactant replacement agents. (B, C)
10. Describe the pharmacotherapy of the various anti-inflammatory and anti-asthmatic agents. (B, C)
11. Understand the basic concepts of anti-infective therapy. (B, C)
12. Identify the basic classifications of antibiotic, antiviral, and antifungal drugs. (B, C)
13. Describe indications and pharmacologic effects of anti-arrhythmics, anti-hypertensives, anti-lipidemics, and vasodilators. (B, C)
14. Discuss the action and clinical use of neuromuscular blockers, sedatives, hypnotics, anxiolytic and anesthetic agents in respiratory therapy. (B, C)
15. Discuss the role of the various therapeutic medical gases in respiratory therapy. (B, C)
16. Discuss the pharmacologic management of COPD, asthma, CF, and respiratory infectious diseases. (B, C)
17. Describe the classification, clinical indication, side effects, and dosage of the commonly used current ACLS drugs. (B, C)

**Course Requirements:** To earn a grade of “C” or higher the student must earn 70% of the total points for the course and meet all of the following course requirements.

- minimum average of 70% overall in the course

**Course Grading Scale:**

A- 90-100% of total possible points  
B- 80-89% of total possible points  
C- 70-79% of total possible points  
D- 60-69% of total possible points  
F- less than 60% of total possible points

**Attendance Policy:** The college attendance policy, which is available at http://www.bpcc.edu/catalog/current/academicpolicies.html, allows that “more restrictive attendance requirements may apply to some specialized classes such as laboratory, activity, and clinical courses because of the nature of those courses.” The attendance policy of the Respiratory Therapy program is described in the Respiratory Therapy Clinical Handbook.

**Nondiscrimination Statement**

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