Course Description

List lecture hours and credits: 2 lectures, 2 credits

List prerequisites and co-requisites: Co-requisites: RSP-119 and RSP-121

Course Description: This course introduces the student to the medications utilized in the treatment of patients with acute and chronic cardiopulmonary disorders.

Student Learning Objectives: As a result of meeting the requirements in this course, the student will:

1. Implement terminology associated with pharmacology in respiratory care
2. Identify basic concepts and principles in drug development and administration
3. Identify drugs used to treat the respiratory system by understanding the mechanism of action, indications, contraindications, hazards and potential side effects of drugs administered to patients with pulmonary disorders:
   a. Adrenergic (sympathomimetic) bronchodilators
   b. Anticholinergic (parasympatholytic) bronchodilators
   c. Xanthines
   d. Mucus-controlling drug therapy
   e. Surfactant agents
   f. Corticosteroids in respiratory care
   g. Non-steroidal antiasthma agents
   h. Aerosolized anti-infective agents
   i. Antimicrobial agents
   j. Cold and cough agents
4. Vaccinations
   a. Identify the vaccines used in prevention of pulmonary disorders
   b. Describe the mechanism of action for the vaccines used
5. Neuromuscular Blocking Agents
   a. Define terms that pertain to skeletal muscle relaxants
   b. Define neuromuscular blocking agents (NMBAs)
   c. Define the uses of NMBAs
d. Describe uses of NMBAs and mechanical ventilation

e. Identify methods of monitoring neuromuscular blockade

6. Diuretic Agents
   a. Define terms pertaining to diuretic agents
   b. Describe the various groups of diuretics
   c. Define the indications for diuretic therapy
   d. Identify the most common adverse effects associated with the use of diuretics

7. Analgesic, Sedatives and Hypnotics
   a. Compare and contrast physiologic and psychological bases of pain and the classes of
      analgesics used to treat pain
   b. Define indications for the use of both local and general anesthesia
   c. Describe the concept of conscious sedation and indications and guidelines for use
   d. Distinguish drugs that stimulate the CNS and respiratory system, and describe the
      indications for application

8. Cardiovascular
   a. Define terms that pertain to vasopressors, inotropes, and antiarrhythmic drugs
   b. Compare and contrast the mechanism of action of inotropes and vasopressors
   c. Describe the various drug interactions that may occur with the use of vasopressors
      and inotropes
   d. Compare the routes of administering medications during cardiac arrest
   e. Define terms that pertain to drugs affecting circulation: antihypertensive, antianginal,
      and antithrombotic
   f. Compare and contrast the clinical pharmacology of the agents used for hypertensive
      pharmacotherapy
   g. List the indications and contraindication of thrombolytic agents

Course Content

This course has been designed to provide the respiratory care student with an understanding and
appreciation for how the body utilizes, reacts, and functions when exposed to various chemical agents
(medications) in an effort to maintain homeostasis.

Special Features of the Course

MoodleRooms is used to enhance the interaction with the student. PowerPoint presentation will be
posted online prior to the day the topic will be discussed. The student is to review the PowerPoint,
develop questions in preparation for the class.

Course Texts

Required
  9780132568722

Recommended
  978-0-323-08203-7

Writing and Examination Requirements

Quizzes: Consists of multiple choice questions, short answer, fill-in, or true-false questions based on
select unit's readings and class presentations. Quizzes will be given during the first hour of class
unless otherwise specified. Spelling of medical terms and medication names count heavily.

Egan Module Quizzes:
Students can utilize the online Egan's Fundamentals of Respiratory Care chapters related to the
topics in discussion. The quizzes and other material are not required but will enhance the
understanding of the material presented.
Medication Group Presentation: The students will present, as a group, their assigned medication category. Each medication will be a brief usage overview. Grading will be in the following categories: Preparedness, Materials, Content, Enthusiasm, and Presentation. The grading rubric will be posted on Moodle. The presentations will be due on the day the medication category is scheduled.

Means of Assessment

Students will be assessed in the following methods: Quizzes consisting of multiple choice questions, short answer, fill-in, or true-false questions based on select unit’s readings. Class presentations: each student will present a brief discussion on the use of cardiopulmonary medications.

Grading Policy

<table>
<thead>
<tr>
<th>Evaluation</th>
<th>Percentage</th>
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</thead>
<tbody>
<tr>
<td>Quizzes (6)</td>
<td>75%</td>
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<tr>
<td>Drug presentation</td>
<td>25%</td>
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</tbody>
</table>

Grading:

- **A**: Student must show superior work and contribute positively to class discussions.
- **B+**: Student must merit superior classroom work
- **B**: Student must show above average work
- **C+**: Student must meet and attain the standard of achievement with reasonable theoretical knowledge
- **F**: Student fails to meet acceptable standards in classroom
- **N**: Incomplete – Student has not completed course requirements

Late work or Assignments:
Late work and make-up examinations will be penalized with a grade being no greater than 75%. Late work and examinations must be completed before the last scheduled class day.

Attendance / Academic Integrity Policy

BCC Attendance Policy:
All students are expected to attend punctually every scheduled meeting of each course in which they are registered. Attendance and lateness policies and sanctions are to be determined by the instructor or program policy. The instructor will keep attendance for administrative and counseling purposes. Class attendance and student participation are essential to successful completion of this course.

Academic dishonesty is a serious violation of BCC policy and personal ethics, and will be treated as such if reason for suspicion should arise. Students should be careful to avoid plagiarism, falsification, and compliance. Academic dishonesty also includes cheating on examinations. Refer to the BCC college catalog for additional information.

Course Attendance Policy:
It is expected that students will attend all class meetings. Poor attendance will affect your grade. If a student misses four or more classes throughout the semester, the student will not earn a grade higher than a ‘B’ in the course. Four lateness’s equal one absence; class days when tests are held are included as classes. Illness, accidents, family, and business emergencies occur; therefore, it befits everyone to anticipate these emergencies by being in class routinely. (If you are late, be sure to see the Professor that class so as not the lateness be counted as an absence.)

Departmental Policy Statements

1. Acceptable quality of work and mature behavior are expected from every student at all times. Students are regarded as professionals and are expected to conduct themselves accordingly.
2. High standards of professional performance demand that students maintain good academic progress throughout their course of study in the program.
3. Students demonstrating chronic tardiness or absenteeism will be placed on academic warning or probation, and may be subjected to termination from the program.
4. Absence from a class during a scheduled exam will be subject to the policy of the instructor for that specific course. If the student is going to miss a scheduled exam, it is expected that the student will contact the instructor ahead of time by e-mail or phone to the department office.
5. All students are required to adhere to the policies and procedures of the school as outlined in the college catalogue.
6. Additional department policies are located in the Student Policies and Procedures Manual.

Student and Faculty Support Services

1. The program faculty maintains office hours for counseling and is available to provide tutorial assistance to students.
2. Students must make appointments in advance to meet with the respective instructors.
3. Students may also obtain assistance from the College Tutoring Center. Appointments must be made in advance through this center.
4. The College has a personal counseling center for those students who may need personal assistance. Appointments are made directly through this center.
5. Any problems, concerns, or questions should be directed to the course instructor or the student’s advisor.
6. Statement on Civility
   a. Refer to the Standards of Conduct Subsection found in the Student Judicial Affairs Policies & Procedures Section found in the Student Handbook.
7. Academic Integrity
   a. Refer to the Academic Integrity Subsection; found in the Academic Regulations, Academic Policies Section found in the Academic Policies & Regulations Area of the College Catalog
8. Other possible College, Divisional, and/or Departmental Policy Statements to be referenced
   a. ADA statement.
   b. Sexual Harassment statement.
   c. Statement on acceptable use of BCC technology.
   d. Statement on the purpose and value of faculty office hours.
9. Student and Faculty Support Services
   a. List support services, e.g., the Writing Center, the Math Lab, the Tutorial Center, Online Writing Lab (OWL), Office of Specialized Services, etc.
10. BCC Library
    a. The Sidney Silverman Library is committed to providing a quiet, welcoming, respectful atmosphere conducive to study and research in an environment that is comfortable, clean, and safe. The use of the library will be beneficial in providing resources on researching topic information, citation styles, finding current articles among many other media services available.

Weekly Schedule

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
<th>Reading</th>
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<tbody>
<tr>
<td>Sept 3</td>
<td>• Basic Concepts and Principles in Pharmacology</td>
<td>• General Pharmacologic Principles</td>
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<tr>
<td>Sept 10</td>
<td>• Calculating drug doses</td>
<td>• The Metric System and Drug Dosage Calculations</td>
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<td></td>
<td>• Administration of Aerosolized Agents</td>
<td>• Medicated Aerosol Treatments</td>
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<tr>
<td>Date</td>
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<tr>
<td>Sept 17</td>
<td>Quiz 1</td>
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<td>Sept 24</td>
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<td>• Adrenergic bronchodilators</td>
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<td>• Anticholinergic bronchodilators</td>
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<td>Oct 1</td>
<td>Quiz 2</td>
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<td>Oct 8</td>
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<td>• Mucus-controlling drug therapy</td>
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<td>• Surfactant agents</td>
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<td>• Cold and cough agents</td>
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<td>Oct 15</td>
<td>Quiz 3</td>
<td>• Clinical preparation</td>
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<td>Oct 22</td>
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<td>• Corticosteroids</td>
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<td>• Xanthines</td>
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<td>• Non-steroidal antiasthma agents</td>
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<td>Oct 29</td>
<td>Quiz 4</td>
<td>• First half review</td>
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<td>Nov 5</td>
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<td>• Aerosolized anti-infective agents</td>
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<td>• Antimicrobial agents</td>
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<td></td>
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<td>• Vaccine</td>
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<td>Nov 12</td>
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<td>Health Care in Suburbia – special program</td>
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<td>Nov 19</td>
<td>Quiz 5</td>
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<td>Nov 26</td>
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<td>No School – Thanksgiving Break</td>
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<tr>
<td>Dec 3</td>
<td></td>
<td>• Skeletal muscle relaxants</td>
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<td>• Drugs affecting the central nervous system</td>
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<tr>
<td>Dec 10</td>
<td></td>
<td>• Vasopressors, inotropes, and antiarrhythmic agents</td>
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<td></td>
<td>• Diuretic agents</td>
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<tr>
<td>Dec 17</td>
<td>Quiz 6</td>
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Note to Students: This Course Outline and Calendar is tentative and subject to change, depending upon the progress of the class.