RESP 160 - Respiratory Care Pharmacology Course Outline

Approval Date: 04/08/2010
Effective Date: 08/10/2010

SECTION A

Unique ID Number	CCC000285113
Discipline(s)	Respiratory Technologies
Division	Health Occupations
Subject Area	Respiratory Care
Subject Code	RESP
Course Number	160
Course Title	Respiratory Care Pharmacology
TOP Code/SAM Code	1210.00 - Respiratory Care Therapy/Therapist* / C - Occupational
Rationale for adding this course to the curriculum	This course was revised 2009.
Units	3
Cross List	*N/A*
Typical Course Weeks	
Total Instructional Hours	

	Contact Hours
Lecture	54.00
Lab	0.00
Activity	0.00
Work Experience	0.00
Outside of Class Hours	108.00

Total Contact Hours	54
Total Student Hours	162
Open Entry/Open Exit	No
Maximum Enrollment	30
Grading Option	Letter Grade Only
Distance Education Mode of Instruction	Hybrid

SECTION B

General Education Information:

SECTION C

Course Description

Repeatability May be repeated 0 times

Catalog Description Students will receive instruction in the pharmacology of respiratory care. The course will cover medication calculations, inhaled bronchodilators, steroids and aerosolized antimicrobials.

Schedule Description

SECTION D

Condition on Enrollment

1a. Prerequisite(s)

- RESP 130

1b. Corequisite(s): *None*

1c. Recommended: *None*

1d. Limitation on Enrollment: *None*

SECTION E

Course Outline Information

1. Student Learning Outcomes:

A. Compare and contrast medications used for asthma.
B. Accurately calculate medication dosages.

2. Course Objectives: Upon completion of this course, the student will be able to:

A. Calculate dosages of medications.
B. Categorize aerosol delivery equipment and techniques.
C. Explain the mechanism of action, indications, and hazards of the sympathomimetic bronchodilators.
D. Discuss the recommended use for the parasympatholytic bronchodilators.
E. Discuss the reason why the methylxanthines bronchodilators are rarely used for asthma.
F. Compare and contrast the two FDA-approved mucus controlling agents.
G. Describe the uses and hazards associated with administration of corticosteroids.
H. Compare and contrast the surfactant replacement agents used in neonatal care.
I. Explain the indications, mechanism of action, and hazards associated with the administration of antimicrobials.
J.

3. Course Content

A. Drug Calculations
B. Aerosol Delivery Devices
C. Review of the Nervous System
D. Sympathomimetic bronchodilators
E. Parasympatholytic bronchodilators
F. Methylxanthines bronchodilators
G. Mucus controlling agents
H. Surfactant replacement agents
I. Corticosteroids
J. Nonsteroidal anti-inflammatory agents
K. Aerosolized Anti-microbial drugs

L.

4. Methods of Instruction:

Activity:

Distance Education:

Lecture:

Other: Lecture ? Instructor relays information on a given subject. Group activities ? Students collaborate to solve simulated patient problems.

5. Methods of Evaluation: Describe the general types of evaluations for this course and provide at least two, specific examples.

Typical classroom assessment techniques

Exams/Tests -- Completion of all work at 77% = C grade as required and approved by the Respiratory Care Board and Committee on Accreditation for Respiratory Care (CoARC).

Quizzes -- Quizzes:Examples of quiz questions would be: 1. If albuterol is a 0.5% solution, how many milliliters will you give for a 2.5 milligram dose?2. Long-term desensitization of beta receptors to 2 agonists, is caused by a reduction in the number of _____ .

Final Exam -- Final exam, to include both multiple choice and essay questions.

Mid Term -- (to included both multiple choice and essay questions). Examples of midterm questions are: 1. Racemic epinephrine would be the drug of choice for a child admitted to the hospital with:a. Asthmab. A congenital heart defectc. Croupd. Pneumoniae. Diarrhea and vomiting 2. Explain how the Nucleotide producing the opposite effect of cAMP causes bronchoconstriction?

Additional assessment information:

Homework:

An example of homework assignments would be the following:

1. Discuss the proposed theories of activity for xanthines.
2. Describe the medications approved for the therapy of mucus clearance disorders and their approved indications.

Letter Grade Only

6. Assignments: State the general types of assignments for this course under the following categories and provide at least two specific examples for each section.

A. Reading Assignments
   1. Read chapter four in Respiratory Care Pharmacology on Calculating Drug Doses and answer the self assessment questions at the end of the chapter.
   2. Read the article New Treatments for Status Asthmaticus and discuss the conclusions with your group.
B. Writing Assignments
   Examples of writing assignments are:
   1. List five commonly used antimycobacterial and include the mechanisms of action of antibacterials.
   2. List all available exogenous surfactant agents used in respiratory therapy and explain the clincal application of each.
C. Other Assignments
   None

7. Required Materials

A. EXAMPLES of typical college-level textbooks (for degree-applicable courses) or other print materials.

Book #1:

Author:	Gardenhire, Douglas S.
Title:	Rau's Respiratory Care Pharmacology
Publisher:	Mosby
Date of Publication:	2011
Edition:	eighth

B. Other required materials/supplies.

- 5 X 8 Index cards