

RSPT 53A: INTRODUCTION TO RESPIRATORY THERAPY PHARMACOLOGY

Foothill College Course Outline of Record

Heading	Value
Units:	2
Hours:	2 lecture per week (24 total per quarter)
Prerequisite:	RSPT 50A.
Degree & Credit Status:	Degree-Applicable Credit Course
Foothill GE:	Non-GE
Transferable:	CSU
Grade Type:	Letter Grade Only
Repeatability:	Not Repeatable

Student Learning Outcomes

- Describe the mechanism of bronchospasm and differentiate the pharmacologic effects of sympathomimetic bronchodilators, parasympatholytics, xanthine bronchodilators, mucus-controlling agents, surface-active agents, cold and cough agents, corticosteroids, and mediator antagonists.
- Describe the principles of drug action.

Description

An in-depth study of drug groups commonly used in the treatment of respiratory diseases. Intended for students in the Respiratory Therapy Program; enrollment is limited to students accepted in the program.

Course Objectives

The student will be able to:

- calculate drug dosages from prepared-strength liquids.
- solve percentage and solution problems.
- describe the principles of drug action.
- compare and contrast the autonomic effects in the cardiopulmonary system.
- describe the mechanism of bronchospasm.
- differentiate the pharmacologic effects of sympathomimetic bronchodilators, parasympatholytics, xanthine bronchodilators, mucus-controlling agents, surface-active agents, cold and cough agents, corticosteroids, and mediator antagonists.
- based upon patient's condition, select the appropriate respiratory pharmacologic agent.

Course Content

- drug dosage calculations
 - concentrations
 - volumes
 - nebulization duration
- percentage and solution problems
 - by body weight
 - by duration
 - for reconstituted drugs
- principles of drug action

- general principles
- principles related to respiratory therapy drugs, especially nebulized drugs
 - autonomic effects in the cardiopulmonary system
 - sympathetic nervous system
 - parasympathetic nervous system
 - the mechanism of bronchospasm
 - constriction of the smooth bronchial muscles
 - airway inflammation
- bronchodilators and specialized agents
 - sympathomimetics
 - parasympatholytics
 - xanthines
 - mucus controlling agents
 - surface active agents
 - cold and cough agents
 - corticosteroids
 - mediator antagonists
- selection of the appropriate respiratory pharmacologic agent
 - rescue drugs
 - maintenance drugs

Lab Content

Not applicable.

Special Facilities and/or Equipment

None.

Method(s) of Evaluation

Methods of Evaluation may include but are not limited to the following:

- Quizzes
- Midterm
- Final examination
- Problem solving exercises

Method(s) of Instruction

Methods of Instruction may include but are not limited to the following:

- Lecture
- Demonstrations
- Group exercises

Representative Text(s) and Other Materials

Gardenhire. *Rau's Respiratory Care Pharmacology*. 9th ed. Chicago: Year Book Medical Publishers, Inc., 2016. ISBN: 978-0323299688

Types and/or Examples of Required Reading, Writing, and Outside of Class Assignments

- Assigned reading from textbook, approximately one chapter per week.

Discipline(s)

Respiratory Technologies