

# RSPT 53A: INTRODUCTION TO RESPIRATORY THERAPY PHARMACOLOGY

## Foothill College Course Outline of Record

Heading	Value
<b>Units:</b>	2
<b>Hours:</b>	2 lecture per week (24 total per quarter)
<b>Prerequisite:</b>	RSPT 50A.
<b>Degree &amp; Credit Status:</b>	Degree-Applicable Credit Course
<b>Foothill GE:</b>	Non-GE
<b>Transferable:</b>	CSU
<b>Grade Type:</b>	Letter Grade Only
<b>Repeatability:</b>	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

- Quizzes
- Midterm
- Final examination
- Problem solving exercises

## Method(s) of Instruction

- 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