

Bergen Community College  
Division of Health Professions  
Department of Respiratory Therapy

**RSP-210, CardioPulmonary Diseases & Disorders**

Semester: Spring

Course and Section Number: RSP-210-001, CardioPulmonary Diseases & Disorders

Meeting Times and Locations:

Instructor:

Office Location:

Phone:

Departmental Secretary:

Office Hours:

**Course Description**

**3 lecture hours; 3 credits**

**Pre-requisite: RSP 110; RSP 119; RSP 121; Co-Requisite: RSP 220, RSP 222, RSP-225**

**Course Description:** This course covers essential information regarding common respiratory diseases. This course will provide the student with a description of the anatomic alterations of the lungs, etiology of the disease process, an overview of the cardiopulmonary clinical manifestations associated with the disorder, and management of the respiratory system. In addition, the course is designed to provide students with the opportunity to develop informational gathering and decision-making skills in the diagnosis and treatment of patients with cardiopulmonary or related disorders.

**Student Learning Objectives:** As a result of meeting the requirements in this course:

State definitions of chronic obstructive pulmonary disease (COPD), emphysema, and chronic bronchitis.

Describe the (GOLD) definition of COPD.

Explain the anatomic alterations of the lungs associated with chronic bronchitis and emphysema.

Describe the role of the national and international guidelines in the management of asthma.

Describe the anatomic alterations of the lungs associated with asthma.

Describe the etiology and epidemiology of asthma.

Describe the general management of asthma.

Describe the anatomic alterations of the lungs associated with bronchiectasis.

Describe the cardiopulmonary clinical manifestations associated with bronchiectasis.

Describe the respiratory care modalities used in the treatment of bronchiectasis.

Describe the anatomic alterations of the lungs associated with cystic fibrosis.

Describe the etiology and epidemiology of cystic fibrosis.

Describe the general management of cystic fibrosis.

Describe how the respiratory therapist aids in diagnosis and management of patients with pneumonia.

Organize and distinguish between the entities grouped as interstitial lung diseases (ILDs). Interpret symptoms, signs, and pulmonary function testing in ILD.

List pathophysiologic characteristics associated with ILDs.

Describe how to manage and treat specific ILDs.

Describe anatomic landmarks and physiologic function of the visceral and parietal pleural membranes.

Identify common causes of transudative vs. exudative pleural effusions.

State the purpose of chest radiograph in recognizing pleural effusions.

State the purpose of thoracentesis and the potential complications.

Describe the diagnosis and treatment of pneumothorax.

Describe how pulmonary emboli alter lung and cardiac function.

Describe how and where thromboemboli originate.

Describe how pulmonary embolism is diagnosed and managed.

Describe the procedures: Thoracentesis; Video-Assisted Thoracoscopy Surgery (VATS); Lung Biopsy; and Pleurodesis.

State the risk factors associated with the onset of ARDS.

List the anatomic alterations of the lungs associated with acute respiratory distress syndrome.

Describe the causes of acute respiratory distress syndrome.

Describe how the normal lung prevents fluid from collecting in the lung tissue and how these mechanisms can fail and cause pulmonary edema.

Describe the effect pulmonary edema has on lung function, including gas exchange and lung compliance.

Identify the histopathology associated with the exudative phase and the fibro proliferative phase of ARDS.

State the approaches to the management of patient's with ARDS and multi organ dysfunction syndrome (MODS).

Describe the use of mechanical ventilation strategies in the support of patients with ARDS.

Identify the potential respiratory complications associated with neuromuscular disease.

Identify the clinical signs and symptoms associated with respiratory muscle weakness.

Describe techniques for monitoring patients with respiratory muscle weakness.

Describe general respiratory care management of patients with respiratory muscle weakness

Describe the causes of fungal disease.

Describe the general management of fungal disease.

Define obstructive sleep apnea (OSA)

State how a diagnosis of OSA is made

Identify why airway closure only occurs during sleep.

State what treatments are available for patients with OSA

Describe how continuous positive airway pressure (CPAP) works.

Determine when bilevel pressure is useful in treating OSA.

State the surgical alternatives for patients with severe OSA.

List the anatomic alterations of the lungs associated with near drowning/wet drowning.

Describe the causes of near drowning.

Describe the general management of near drowning.

List the anatomic alterations of the lungs associated with smoke inhalation and thermal injuries.

Describe the general management of smoke inhalation, thermal injuries, and carbon monoxide intoxication.

List the anatomic alterations of the lungs associated with atelectasis.

Describe the general management of atelectasis.

## Course Content

Course content comprises of critical aspects of the most commonly encountered cardiopulmonary disorders: incidence or epidemiology; etiology; clinical findings; diagnosis; pathophysiology; treatment/management; and prognosis.

### **Special Features of the Course**

MoodleRoom is used to enhance the interaction between the professor and the student.

### **Course Texts and/or Other Study Materials**

*Egan's Fundamentals of Respiratory Care, 11<sup>th</sup> Ed., Kacmarek, ISBN- 978-0-323-34136-3*  
*Egan's Fundamentals of Respiratory Care Workbook, 11<sup>th</sup> Ed., and Elsevier Evolve online.*  
Adjunct Textbook:  
*Clinical Manifestations and Assessment of Respiratory Disease, 7<sup>th</sup> Ed., Des Jardins, T. ISBN: 978-0-323-24479-4*

### **Research, Writing, and/or Examination Requirement(s)**

**Student Assignment:** Each student will prepare a respiratory care plan based on a patient they are taking care of in the clinical setting (RSP-225). The student is expected to interview the patient using the **SOAP** analysis, review the patient's chart, and devise a care plan based on the patient's medical diagnosis. The patient must have a respiratory disease/complication in order to devise a care plan. The care plan must include: Goals of therapy; Device or procedure to be used; Medications to be given; Gas source or oxygen concentration; Device pressure, volume, and/or liter flow; and Frequency of administration and duration of therapy.  
The student is responsible for researching the current therapy/medication goals of the patient in the clinical setting. Based on information the student has obtained, the student will apply it to a new care plan of their own. Examples of care plans are posted on Moodle.

### **Attendance Policy**

Attendance and punctuality at all class sessions is required and will be factored into the student's overall final grade. Attendance for classroom lecture and lab will be factored into the total grade for the course. For every absence from classroom lecture or lab, 1 point will be deducted from the total grade for the course. If the student is late by 10 minutes for a lecture or lab, 0.5 points will be deducted from the total grade.

## Grading Policy

Grade Determinations:

<b>Exams (5)</b>	<b>80%</b>
<b>Quizzes (4)</b>	<b>10%</b>
<b>Student Assignment</b>	<b>10%</b>

Each student will create a respiratory care plan for a patient they take care of in the clinical setting.

A	Student must show superior work, excel in knowledge of academic material and contribute positively to class discussions.	93 - 100
B+	Student exceeds acceptable standards in classroom work and in practical exercises.	88 - 92.9
B	Student must show above average work and standard of achievement in classwork and laboratory skills.	83 – 87.9
C+	Student must meet and attain the standard of achievement with reasonable theoretical knowledge and academic material.	78 – 82.9
F	Student fails to meet acceptable standards in classroom.	<78 performance
N	Incomplete. Failure to submit all reports will in an incomplete (N) grade.	

### Class Participation

This area strongly considers class attendance and punctuality; especially when student's grades are in jeopardy of failing.

Quality questions and comments relating to class discussions, assigned readings and reflection of relevant professional and personal experiences is valued.

\*\*Class disruptions such as; use of cell phones, and other electronic devices not intended for classroom research or note taking, will result in dismissal from class for the day.

### Late Work/Assignments

Late work and make-up examinations will be penalized with a grade being no greater than 78%. Late work must be submitted as soon as possible. 10% will be deducted from total grade for every day assignment is not turned in.

Make-up examinations will be completed during the last week of the semester, or at the discretion of the professor.

### Departmental Policy Statements

1. Acceptable quality of work and mature behavior is 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. The student 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 (please refer to the **Absenteeism Policy**). 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. Cell phones are not to be used during this class.
7. During scheduled exams, cell phones and electronic/smart watches must be left at the proctors table, or in the student's personal bag at the front of the classroom. No personal belongings are permitted with the student during an examination.
8. Student's must be in clinical uniform at all times when in the Health Professions Building and any Respiratory Care functions at the college.
9. Students must wear full uniform and lab coat when in the laboratory and simulation center. Proper shoes must also be worn with uniform, especially in the lab.
10. Additional department policies are located in the **Student Policies and Procedures Manual**.

### Student and Faculty Support Services

1. The program faculty maintain office hours for counseling and are 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 and Procedures in the *Bergen Community College Student Code of Conduct*
7. Academic Integrity
  - a. Refer to the *Bergen Community College Student Code of Conduct*.
8. Other possible College, Divisional, and/or Departmental Policy Statements to be referenced
  - a. **Disability Services (Office of Specialized Services OSS)**
  - b. Sexual Harassment
  - c. Social Media Policy and usage as a student of a Health Profession- please refer to the program's Policy and Procedure Manual.
  - d. Acceptable use of Bergen Community College Technology- found in the *Student Code of Conduct*
9. Student and Faculty Support Services

- a. Refer to the College Catalog for Academic and Student Support Services, ie., Center for Health, Wellness, and Personal Counseling; Office of Specialized Services; Tutoring Center, etc.

10. Bergen Community College 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.