

## **RESP-120 CARDIOPULMONARY PATHOPHYSIOLOGY**

5 CREDITS

### **SYLLABUS**

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#### **CATALOG DESCRIPTION**

This course presents a study of cardiopulmonary diseases, the etiology, clinical manifestations, clinical laboratory testing, respiratory laboratory testing, and respiratory care management of the disease.

Prerequisites: RESP 110, 112, 114, 118, 236

Co-Requisites: RESP 116, 126, 128

Semester Offered: Spring Semester

#### ***COMMON STUDENT LEARNING OUTCOMES***

*Upon successful completion of San Juan College programs and degrees, the student will demonstrate competency in...*

##### **BROAD AND SPECIALIZED LEARNING**

Students will actively and independently acquire, apply, and adapt skills and knowledge with an awareness of global contexts.

##### **CRITICAL THINKING**

Students will think analytically and creatively to explore ideas, make connections, draw conclusions and solve problems.

##### **CULTURAL AND CIVIC ENGAGEMENT**

Students will act purposefully, reflectively, and ethically in diverse and complex environments.

##### **EFFECTIVE COMMUNICATION**

Students will exchange ideas and information with clarity in multiple contexts.

##### **INFORMATION LITERACY**

Students will be able to recognize when information is needed and have the ability to locate, evaluate, and use it effectively.

##### **INTEGRATING TECHNOLOGIES**

Students will demonstrate fluency in the application and use of technologies in multiple contexts.

Student work from this class may be randomly selected and used anonymously for assessment of course, program, and/or institutional learning outcomes. For more information, please refer to the Dean of the appropriate School.

#### **COURSE LEARNING OUTCOMES**

*Upon successful completion of the course, the student will be able to:*

##### **GENERAL LEARNING OBJECTIVES**

1. Describe the role of the respiratory therapist in patient assessment.
2. Identify the different laboratory tests used in cardiopulmonary assessment.
3. Discuss the various aspects of respiratory failure.
4. Discuss chest trauma and postoperative atelectasis.
5. Explain the pathophysiology of asthma, COPD and cystic fibrosis.
6. Describe the pathophysiology of heart failure.
7. Discuss the pathophysiology of pulmonary edema and ARDS.
8. Describe near drowning, smoke inhalation injury and burns.
9. Discuss bacterial pneumonia, tuberculosis, HIV, lung abscess, and interstitial lung disease.
10. Explain the pathophysiology of neuromuscular diseases and sleep apnea

#### SPECIFIC LEARNING OBJECTIVES

*Upon successful completion of the course, the student will be able to:*

1. Describe the role of the respiratory therapist in patient assessment:
  - A. Identify the role of the respiratory therapist in patient assessment.
  - B. Identify the most common symptoms associated with cardiopulmonary disease.
  - C. Discuss the common physical examination procedure performed to evaluate patients with cardiopulmonary disease.
2. Identify the different laboratory tests used in cardiopulmonary assessment:
  - A. Identify and interpret clinical laboratory data.
  - B. Discuss blood gas and pulmonary function testing values observed in cardiopulmonary diseases.
  - C. Describe chest x-ray abnormalities in cardiopulmonary diseases.
  - D. Identify common cardiac arrhythmias observed in cardiopulmonary diseases.
3. Discuss the various aspects of respiratory failure:
  - A. Explain respiratory failure, ventilator failure and oxygenation failure.
  - B. Identify the causes of respiratory failure.
  - C. Identify the effects of respiratory failure on the lung, heart and other organs.
  - D. Identify the clinical features associated with respiratory failure and the general treatment.
4. Discuss chest trauma and postoperative atelectasis:
  - A. Etiology
  - B. Clinical manifestations
  - C. Clinical laboratory tests
  - D. Respiratory laboratory tests
  - E. Management
5. Discuss asthma, COPD and cystic fibrosis:
  - A. Etiology
  - B. Clinical manifestations
  - C. Clinical laboratory tests
  - D. Respiratory laboratory tests
  - E. Management
6. Describe the pathophysiology of heart failure:
  - A. Etiology
  - B. Clinical manifestations
  - C. Clinical laboratory tests
  - D. Respiratory laboratory tests
  - E. Management

7. Discuss the pathophysiology of pulmonary edema and acute respiratory distress syndrome (ARDS):
  - A. Etiology
  - B. Clinical manifestations
  - C. Clinical laboratory tests
  - D. Respiratory laboratory tests
  - E. Management
8. Describe near drowning, smoke inhalation injury and burns:
  - A. Etiology
  - B. Clinical manifestations
  - C. Clinical laboratory tests
  - D. Respiratory laboratory tests
  - E. Management
9. Discuss bacterial pneumonia, tuberculosis, HIV, lung abscess, and interstitial lung disease:
  - A. Etiology
  - B. Clinical manifestations
  - C. Clinical laboratory tests
  - D. Respiratory laboratory tests
  - E. Management
10. Explain the pathophysiology of neuromuscular diseases and sleep apnea:
  - A. Etiology
  - B. Clinical manifestations
  - C. Clinical laboratory tests
  - D. Respiratory laboratory tests
  - E. Management

#### ASSESSMENT TECHNIQUES

1. Quizzes
2. Homework/Project
3. Mid-term Exam
4. Final Exam

#### ACCOMMODATIONS STATEMENT

Students who need accommodations (i.e., note-taker, interpreter, special seating, etc.) need to provide accommodation notices to the instructor. Students can contact the Students with Disabilities on Campus (SDOC) Coordinator in the Counseling Center, located in the Administration Building, to make arrangements and provide documentation in accordance with the Americans with Disabilities Act of 1990.

#### ACADEMIC HONESTY RULES

San Juan College expects all students to adhere to the Academic Honesty Rules as posted on our website, <http://www.sanjuancollege.edu/academichonesty>. All Health Sciences Programs have a responsibility to ensure enrolled students and graduates are safe, ethical and competent practitioners. To ensure professionalism, students and faculty must uphold and abide by college and program accreditation specific policies.

SYLLABUS DEVELOPED AND/OR REVIEWED BY:

Dean of Health Sciences: \_\_\_\_\_ Date: \_\_\_\_\_

Director of Respiratory Therapy: \_\_\_\_\_ Date: \_\_\_\_\_

Clinical Coordinator of RT: \_\_\_\_\_ Date: \_\_\_\_\_