ESP 124-SPECIAL PROCEDURES IN RESPIRATORY CARE 2 CREDITS

SYLLABUS

CATALOG DESCRIPTION

This course discusses chest tube and drainage systems, hemodynamic monitoring, sleep studies, bronchoscopy, Holter monitoring, exercise testing, and metabolic studies.

Prerequisites: RESP 116, 120, 126, 128

Co-Requisites: RESP 122, 220, 226, 228

Semester Offered: Summer 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

GENERAL LEARNING OBJECTIVES

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

1. Describe chest tubes and chest drainage systems.
2. Discuss hemodynamic monitoring.
3. Identify the requirements for bronchoscopy.
4. Describe Holter monitoring.
5. Describe the common sleep disorders and polysomnography.
6. Identify the requirements for exercise testing.

7. Describe nutritional assessment and indirect calorimetry.

SPECIFIC LEARNING OBJECTIVES

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

1. Describe chest tubes and chest drainage systems:
   A. Discus the pathophysiology, symptoms, hazards, and treatment of a tension pneumothorax.
   B. List 5 indications for chest tubes.
   C. Indicate the 3major components of a simple, closed-chest drainage system.
   D. Indicate the components, advantages and disadvantages of the one-bottle, two-bottle, and 3 bottle systems.
   E. Discuss the operations and troubleshooting of chest drainage systems.
   F. Describe patient care during and after chest drainage and removal of chest tube.

2. Discuss hemodynamic monitoring:
   A. Describe the set up and maintenance of hemodynamic monitoring equipment.
   B. Discuss monitoring of cardiac output, central venous pressure, pulmonary artery pressure, pulmonary capillary wedge pressure, and arterial pressure.
   C. Compare systemic and pulmonary vascular resistance.
   D. Interpret hemodynamic tracings.

3. Identify the requirements for bronchoscopy:
   A. State the purpose and requirements for bronchoscopy.
   B. Compare the different bronchoscopes.
   C. Describe the equipment and patient preparations for bronchoscopy.

4. Describe Holter monitoring:
   A. State the purpose and requirements for Holter monitoring.
   B. Describe the set up for Holter monitoring.

5. Describe the common sleep disorders and polysomnography:
   A. Identify 4 common sleep disorders.
   B. List 2 primary reasons for performing polysomnography.
   C. List the criteria for identifying the 5 stages of sleep.
   D. Describe the recording and monitoring during sleep.
   E. Describe the use of positive airway pressure for sleep disorders.

6. Identify the requirements for exercise testing:
   A. List and describe the indications and contra-indications for exercise testing.
   B. Compare and contrast the progressive workload and steady state exercise protocols.
   C. Compare and contrast the use of treadmill and bicycle ergometer in exercise testing.
   D. Indicate the kinds of monitoring equipment used in exercise testing.

7. Describe nutritional assessment and indirect calorimetry:
   A. Describe the effects of malnutrition on the respiratory system.
   B. Explain how a nutritional assessment is conducted.
   C. Identify patients at high risk for malnutrition.
   D. Identify the nutritional status changes affecting the respiratory system.
   E. Describe indirect calorimetry and patient preparation.

ASSESSMENT TECHNIQUES

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

ACCOMODATIONS STATEMENT

Students who need accommodations (i.e., notetaker, 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: _____