

**J. Sargeant Reynolds Community College
Course Content Summary**

Course Prefix and Number: RTH 222

Credits: 3

Course Title: Cardiopulmonary Science II

Course Description (including lecture hours, lab hours, total contacts)

Focuses on assessment, treatment, and evaluation of patients with cardiopulmonary disease. Explores cardiopulmonary, renal, and neuromuscular physiology, and pathophysiology. Prerequisite: Completion of all Respiratory Therapy courses taught during the first two Semesters of the AAS degree program. Lecture 3 hours per week.

General Course Purpose: The student will review and refine physical assessment of the adult, pediatric and neonatal patient. Additional topics include bronchoscopy, thoracentesis, chest tube management, calorimetry, cardioversion, defibrillation, basic ECG, CXR interpretation, pulse oximetry, capnography, and hemodynamics. Multiple case studies will help prepare the student for clinical intensive care rotations in the fall.

Course Prerequisites/Corequisites: Completion of all Respiratory Therapy courses taught during the first two Semesters of the AAS degree program

Course Objectives (Each item should complete the following sentence.)

Upon completing the course, the student will be able to:

- a. Perform a thorough physical assessment of the intensive care patient
- b. Know the role of the respiratory therapist in therapeutic bronchoscopy, thoracentesis and chest tube placement, to include set-up, monitoring, contraindications, adverse reactions and response actions
- c. Understand and be able to interpret Basic ECG and Chest X-rays, with particular recognition of immediate life-threatening arrhythmias
- d. Treat and respond to the specific cardiac emergencies requiring defibrillation or cardioversion
- e. Possess a more in-depth understanding of pulse oximetry and capnography, and how to utilize these parameters in managing the critically ill and/or ventilator dependent patient
- f. Recognize hemodynamic parameters and their clinical relevance in ventilator management

Major Topics to be Included

Physical assessment of the adult, pediatric and neonatal patient
Bronchoscopy
Thoracentesis
Chest tube management
Calorimetry
Cardioversion
Defibrillation
Basic ECG
CXR interpretation
Pulse Oximetry
Capnography
Hemodynamics.

Effective Date of Course Content Summary: October 20, 2008