

## STANDARD COURSE OUTLINE

**RESP 2533**

**Critical Care**

**PREREQUISITE:**

Admission into the Respiratory Therapy (RT) Program.

**COURSE  
DESCRIPTION:**

This course focuses on cardiopulmonary critical care. Emphasis will be placed on physical assessment, acting as an assistant to the physician, troubleshooting airway emergencies, and hemodynamics.

**CREDIT HOURS:**

3 credit hours / may transfer to other respiratory therapy programs.

**TARGET  
AUDIENCE:**

Students admitted to the RT Program.

**INSTRUCTIONAL  
MATERIALS:**

Egan's Fundamentals of Respiratory Care  
Wilkins, 8<sup>th</sup> Edition, 2003, Mosby

Clinical Assessment in Respiratory Care  
Wilkins; 4<sup>th</sup> Edition, 2000, Mosby

**COURSE OBJECTIVES:**

Upon successful completion of this course, the student will

1. Perform a physical assessment of a critically ill patient.
2. Understand the procedures required to act as an assistant to the physician in performing a bronchoscopy, thoracentesis, tracheotomy, cardioversion, and endotracheal intubation.
3. Troubleshoot airway emergencies and respond appropriately.
4. Identify normal hemodynamics values and identify cardiogenic vs. non-cardiogenic pulmonary edema.
5. Recognize the clinical presentation of angina pectoris, acute myocardial infarction, congestive heart failure, and pulmonary edema.
6. Recognize the clinical presentation of shock and define *septic shock*.
7. Describe a systems approach to trauma care.

8. Identify mechanisms of traumatic injury commonly seen in the critical care setting.
9. Discuss prehospital care, emergency care, and resuscitation of the trauma patient.
10. Describe assessment and management of common traumatic injuries.

**TOPICAL OUTLINE:**

This course includes (but is not limited to) the following topics:

- Module 1: Physical Assessment and monitoring of the critically ill patient
  - A. Exhaled carbon dioxide
  - B. Dead space to tidal volume ratio
  - C. Oxygen transport
  - D. Monitoring tissue oxygen delivery and utilization
  - E. Transcutaneous monitoring in adults
- Module 2: Act as an Assistant to the Physician in Performing Special Procedures
  - A. Bronchoscopy
  - B. Thoracentesis
  - C. Tracheotomy
  - D. Cardioversion
  - E. Endotracheal intubation
- Module 4: Troubleshooting Airway Emergencies
  - A. Tube obstruction
  - B. Cuff leaks
  - C. Accidental extubation
  - D. Pneumothorax
  - E. Upper airway obstruction
- Module 5: Cardiac Output Assessment and Hemodynamics
  - A. Cardiac output and venous return
  - B. Measures of cardiac output and pump function
  - C. Determinants of pump function
  - D. Methods of measuring cardiac output
- Module 6: Respiratory Care in the Coronary Care Unit
  - A. Clinical aspects of coronary artery disease
  - B. Management of acute myocardial ischemia
  - C. Cardiopulmonary interactions
  - D. Shock
  - E. Trauma