

**Common Course Outline**  
**RESP 205**  
**Introduction to Mechanical Ventilation**  
**3 Credits**

**Community College of Baltimore County**

**Description**

**RESP 205 – Introduction to Mechanical Ventilation** explores comprehensive concepts of a variety of specialties within respiratory care. This course gives an overview of neonatal and pediatric respiratory care with emphasis placed on pathophysiology, patient assessment, and mechanical ventilation concepts. Other specialty topics introduced are pulmonary rehabilitation, home respiratory care, disaster management, respiratory care of the elderly, cardiopulmonary exercise assessment, polysomnography, pulmonary procedures, culture diversity, and ethics of healthcare.

**3 Credits**

**Prerequisite:** RESP 203

**Co-requisites:** RESP 204 and RESP 206

**Overall Course Objectives**

Upon completion of the Course students will be able to:

1. describe fetal anatomy and physiology and how neonates make the transition to extra-uterine life;
2. assess the risk of premature infants to develop respiratory complications;
3. identify the following for different respiratory diseases that can affect newborn infants: pathophysiology, clinical manifestations, management and treatment, and course prognosis;
4. construct a diagram to organize a visual representation of a neonatal disease;
5. differentiate between the various primary respiratory diseases that can affect children;
6. state the safe and effective management of mechanical ventilation of the neonatal and pediatric patient;
7. discuss the etiology, pathophysiology, clinical manifestations, and management of the cardiopulmonary disorders of the newborn;
8. support decisions made on pediatric and neonatal patient care based on research and evidence-based practice;
9. recommend appropriate therapeutic strategies for managing patients with respiratory compromise;
10. identify and interpret forms of ethical dilemmas in respiratory care specialties;
11. identify the concepts of disaster management protocol;
12. demonstrate awareness in culture and intercultural competency;

13. recognize the gerontology model and discuss the training needed in long-term and rehabilitation facilities; and
14. apply evidence-based research as a standard within the respiratory community

### **Major Topics**

- I. Neonatal Care
  - A. Pathophysiology
  - B. Clinical manifestations
  - C. Management
  - D. Treatment
  - E. Prognosis
- II. Pediatric Care
  - A. Pathophysiology
  - B. Clinical manifestations
  - C. Management
  - D. Treatment
  - E. Prognosis
- III. Pulmonary Rehabilitation
  - A. Respiratory therapies
  - B. Psychological therapies
  - C. Physical therapy
  - D. Nutritional counseling
  - E. Pharmacological therapies
- IV. Home Care
  - A. Role of home medical equipment
  - B. Home oxygen administration
  - C. Mechanical ventilation in the home
  - D. Safety considerations
  - E. Future
- V. Pulmonary Procedures
  - A. Bronchoscopy
  - B. Chest tubes
  - C. Thoracentesis
- VI. Polysomnography
  - A. Sleep stages
  - B. Sleep habits
  - C. Circadian factors
  - D. Sleep deprivation
  - E. Patient preparation
  - F. Basic analysis
- VII. Ethics
  - A. Case scenarios
  - B. Ethical theories
  - C. Role of professional organizations in ethics
  - D. Legal vs. Ethical
- VIII. Disaster Management

- A. Planning for mass casualty respiratory failure
- B. Triage
- C. Ventilators for mass casualty
- IX. Cardiopulmonary Exercise
  - A. Timed walked tests
  - B. Incremental exercise testing
  - C. Normal cardiopulmonary response to exercise
- X. Respiratory Therapy of the Elderly
  - A. Terminology
  - B. Communication
  - C. Geriatric patient assessment
  - D. Role of Respiratory Therapist in caring for elderly
- XI. Culture Competency
  - A. Diversity and healthcare
  - B. Cultural awareness
  - C. Cultural knowledge
  - D. Cultural encounters
  - E. Cultural skill
  - F. Cultural desire

### **Course Requirements**

Grading procedures will be determined by the individual faculty member but will include the following:

### **Grading/exams**

- Weekly quizzes and assignments
- A minimum of three exams
- A cumulative final exam
- A minimum of one group diversity assignment
- A minimum of one evidenced based article critique
- A minimum of one presentation
- Professionalism
- Participation

Written Assignments: Students are required to use appropriate academic resources and must use APA format.

### **Other Course Information**

This course is a Respiratory Therapy program core course. This course is part of a program sequence that requires admission to the program. This course is offered only in the spring semester.