

Common Course Outline
RESP 204
Advanced Principles & Practice of Respiratory Care
4 Credits

Community College of Baltimore County

Description

RESP 204 – Advanced Principles & Practice of Respiratory Care covers pulmonary function testing and interpretation of results, arterial blood gas monitoring equipment, and respiratory pathology and treatment. The Situation/ Background/ Assessment/ Recommendation (SBAR) model is used to examine various respiratory pathologies to enhance critical thinking skills. Additionally, quality control and calibration of patient monitoring systems such as capnography, oximetry, and transcutaneous monitoring is discussed.

4 Credits

Prerequisite: RESP 203

Co-requisites: RESP 205 and RESP 206

Overall Course Objectives

Upon completion of this course students will be able to:

1. explain the process of calibration and quality control for blood gas analyzers;
2. interpret arterial blood gases;
3. discuss non-invasive patient monitoring systems utilized in the clinical setting;
4. identify various respiratory diseases based on patient findings and diagnostic tests;
5. describe treatment modalities for various respiratory diseases;
6. evaluate current research surrounding smoking cessation and its effectiveness;
7. distinguish between normal and abnormal pulmonary function tests;
8. list all lung volumes measured or calculated during a pulmonary function test;
9. identify equipment utilized in pulmonary function testing;
10. describe the different types of spirometry tests;
11. differentiate between obstructive and restrictive respiratory diseases utilizing lung volumes; and
12. identify normal and abnormal electrolytes, lab tests, and blood chemistries.

Major Topics

- I. Arterial Blood Gases
 - A. Acid/ Base balance
 - B. Ventilation
 - C. Oxygenation status
- II. Blood Gas Analyzers
 - A. Calibration of analyzer

- B. Quality control
- C. Point of care (POC) analyzers
- III. Pulmonary Function Tests
 - A. Application of gas laws to pulmonary function testing
 - B. Lung volumes
 - C. Spirometry tests and equipment
 - D. Diffusion capacity and airway resistance
- IV. Major Respiratory Diseases
 - A. Signs and symptoms
 - B. Diagnostic testing
 - C. Treatment
 - D. Patient case studies
- V. Electrolyte, Lab Tests, and Blood Chemistries
 - A. Patient case studies
 - B. Normal vs. abnormal results

Course Requirements

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

Grading/exams

- A minimum of three lecture exams
- Weekly quizzes and assignments
- Graded group project presentation
- A cumulative program final exam
- Professionalism
- Participation

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

Other Course Information

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

Date revised: 11/12/2018