Common Course Outline
RESP 102
Basic Respiratory Care
4 Credits

Community College of Baltimore County

Description

RESP 102 – Basic Respiratory Care introduces fundamental principles of respiratory care and covers patient assessment, medical gas therapy, respiratory pharmacology, medical terminology, sterilization, and microbiology. Students are introduced to cultural diversity relating to patient assessment and therapeutic modalities. Laboratory practice with equipment necessary to develop basic techniques in respiratory care is included.

4 Credits: *3 lecture hours; 3 laboratory hours*

Prerequisite: Permission from the Program Director

Overall Course Objectives

Upon completion of this course students will be able to:

1. explain the regulation of breathing;
2. describe the structure and function of the respiratory system;
3. explain the mechanics of breathing;
4. design a treatment plan utilizing the SBAR (situation, background, assessment, and recommendation) method;
5. apply the treatment plan based on patient assessment;
6. demonstrate bedside assessment techniques utilized in respiratory care;
7. explain indications and hazards for respiratory therapy medications;
8. describe mechanism of action for each respiratory therapy medication;
9. complete drug calculations based on dosages and drug concentration for respiratory therapy medications;
10. define medical terminology;
11. differentiate between aerosol therapy and humidity therapy;
12. choose appropriate respiratory therapy equipment based on clinical guidelines and patient assessment;
13. identify indications and hazards for each aerosol and humidity delivery device;
14. analyze microbiology and immunology in regards to the respiratory system;
15. explain the various sterilization and disinfecting techniques/equipment;
16. demonstrate use of an incentive spirometer;
17. apply the principles and use of medical gas therapy and related equipment;
18. identify the appropriateness and effectiveness of the medical gas therapy;
19. describe the principles of physics involved in respiratory care; and

20. apply the Purnell model of cultural diversity to differentiate cultural needs of various populations.

Major Topics

I. Anatomy and Physiology
   A. Nervous Systems
   B. Ventilatory Muscles
   C. Regulation of Breathing

II. Patient Assessment
   A. Vital Signs
   B. Auscultation
   C. Inspection
   D. Palpation
   E. Percussion
   F. Clinical Lab Values

III. Respiratory Pharmacology
   A. Bronchodilators
   B. Anti-asthmatics
   C. Anti-inflammatory
   D. Mucolytics
   E. Anti-infective

IV. Drug Calculations
   A. Metric System
   B. Percent Solution
   C. Ratio Solutions

V. Physical Principles in Respiratory Care
   A. Gas Laws
   B. Water Vapor
   C. Turbulent Flow
   D. Pressure Gradients

VI. Medical Gas Therapy
   A. Tanks and Regulators
   B. Oxygen Therapy
   C. Helium-Oxygen Therapy
   D. Nitric/Oxygen Therapy

VII. Basic Bronchial Hygiene
   A. Aerosol Therapy
   B. Hyperinflation Therapy
   C. Humidity Therapy

VIII. Infection Control
   A. Strategies for Infection Control
   B. Techniques for Infection Control
   C. Universal Precautions

IX. Microbiology and Immunology
   A. Common Respiratory Infections
   B. Isolation Procedures

C. Techniques to Identify Pathogens

X. Medical Terminology

Course Requirements

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

Grading/exams

- A minimum of three examinations
- A minimum of one activity requiring student collaboration
- A final comprehensive examination
- A minimum of seven laboratory skills tests
- Weekly laboratory assignments
- Professionalism
- Participation

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

Other Course Information

This course is a Respiratory Care Therapy Program core course. This course is offered during the fall semester only. A minimum grade of 75% is required for successful completion of this course.

Revised 5/8/2020