RCP 110
INTRODUCTION TO RESPIRATORY CARE

COURSE DESCRIPTION:

Prerequisites: Enrollment in the Respiratory Therapy program
Corequisites: RCP 132

This course introduces the respiratory care profession. Topics include the role of the respiratory care practitioner, medical gas administration, basic patient assessment, infection control, and medical terminology. Upon completion, students should be able to demonstrate competence in concepts and procedures through written and laboratory evaluations. Introductory concepts in respiratory anatomy and physiology are covered. Course Hours Per Week: Class, 3. Lab, 3. Semester Hours Credit, 4.

LEARNING OUTCOMES:

At the completion of the course requirements, the student will be able to:

a. Describe anatomy and physiology of the respiratory system.
b. Determine acid base status.
c. Obtain medical asepsis.
d. Perform initial assessment and diagnosis.
e. Describe objectives and hazards of oxygen administration.
f. Use oxygen delivery devices and equipment.
g. Describe objectives and hazards of humidity and aerosol therapy administration.
h. Use humidity and aerosol therapy devices.

OUTLINE OF INSTRUCTION:

I. Anatomy and physiology of the respiratory system
   A. Functional respiratory anatomy
   B. Functional circulatory anatomy
   C. Introduction to pulmonary function testing
   D. Physiologic math conversion and algebra manipulation
   E. Physiologic calculation
   F. Use of physiologic graphs and nomograms
   G. Oxygen transport

II. Acid base status

A. Concepts of acid base homeostatis
B. Principle chemical reactions governing acid base regulation
C. Carbon Dioxide transport
D. Obtain an ABG
E. Use an ABG in patient assessment

III. Medical asepsis
A. Overview of pathogens
B. Nosocomial infections
C. Methods of obtaining sterility
D. Proper hand washing techniques.
E. Universal precautions and the rationale for isolation techniques

IV. Initial assessment and diagnosis
A. Elements of a physician's order
B. Respiratory care plans
C. Use of PFT assessment in patient care
D. Use of the chest x-ray
E. Bedside techniques to gather data
F. Use of palpation, percussion, observation, and auscultation
G. Restriction versus obstruction lung disease

V. Objectives and hazards of oxygen administration
A. Objectives of oxygen therapy
B. Assessment of oxygen need and response
C. Application of high flow and low flow devices
D. Dangers of oxygen administration
E. Proper bed positioning
F. Helium/oxygen therapy

VI. Oxygen delivery devices and equipment
A. Use of cylinders
B. Use of regulators/flowmeters
C. Use of oxygen delivery devices
D. Use of pulse oximeters
E. Use of Peep, CPAP, BiPAP devices

VII. Objectives/hazards of humidity and aerosol therapy administration
A. Indications for humidity therapy
B. Theory of deposition of aerosol particles
C. Techniques to mobile secretions
D. Calculation of humidity deficits
E. Evaluation of aerosol effectiveness

VIII. Humidity and aerosol therapy devices and equipment
A. Use of large-volume nebulizers

B. Use of MDI
C. Use of medication small-volume nebulizers
D. Obsolete aerosol devices still on the national exam
E. Use of HME

REQUIRED TEXTBOOKS AND MATERIALS:

Textbook to be selected by instructor.

STATEMENT FOR STUDENTS WITH DISABILITIES:

Students who require academic accommodations due to any physical, psychological, or learning disability are encouraged to request assistance from a disability services counselor within the first two weeks of class. Likewise, students who potentially require emergency medical attention due to any chronic health condition are encouraged to disclose this information to a disability services counselor within the first two weeks of class. Counselors can be contacted by calling 686-3652 or by visiting the Student Development Office in the Phail Wynn Jr. Student Services Center, room 1309.