RCP 112
PATIENT MANAGEMENT

COURSE DESCRIPTION:

Prerequisites: RCP 111, RCP 115
Corequisites: RCP 153, RCP 222

This course provides entry-level skills in adult and pediatric mechanical ventilation as well as respiratory care procedures in traditional and alternative settings. Emphasis is on therapeutic modalities and physiological effects of cardiopulmonary rehabilitation, home care, mechanical ventilation, and monitoring. Upon completion, students should be able to demonstrate competence in concepts and procedures through written and laboratory evaluations. Course Hours Per Week: Class, 3. Lab, 3. Semester Hours Credit: 4.

LEARNING OUTCOMES:

At the completion of the course requirements, the student should understand:

I. Positive and negative pressure ventilation
II. Noninvasive positive pressure ventilation
III. Bedside pulmonary physiologic calculations
IV. Weaning and extubating a patient from pressure ventilation

OUTLINE OF INSTRUCTION:

I. Positive and negative pressure ventilation
   a. Indications for mechanical ventilation
   b. The ‘ideal’ mechanical ventilator
   c. Mechanical ventilator classification
   d. Elements and controls of mechanical ventilators
   e. Set-up of circuits and their maintenance
   f. Ventilator patient
   g. Trouble-shooting mechanical ventilators

II. Noninvasive positive pressure ventilation (NPPV)
   a. Indications for NPPV
   b. Elements and controls of NPPV
   c. Set-up and maintenance
   d. Trouble-shooting NPPV
   e. Selection of appropriate interface devices

III. Bedside pulmonary physiologic calculations
   a. Deadspace
   b. Shunt
c. Cardiac output
d. Corrected tidal volume
e. Resistance
f. Dynamic and static compliance
g. New rate
h. New oxygen percentage
i. Bedside pulmonary function maneuvers
   i. VC
   ii. FEF
   iii. Vt
   iv. Minute ventilation
   v. MVV
   vi. MIP
   vii. Peak flowrates

IV. Weaning and extubating a patient from pressure ventilation
   a. Function assessment of the patient’s organ systems
   b. Spontaneous function assessment of the ventilatory system
   c. Implementation of weaning parameters appropriately

REQUIRED TEXTBOOKS AND MATERIALS:

Textbook to be selected by the 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 919-536-7207, ext. 1413 or by visiting the Student Development Office in the Phail Wynn Jr. Student Services Center, room 1209.