Outline of Instruction

Division: Health Sciences  Area: Respiratory Therapy
Course Number: RTH 214  Course Name: Adult Critical Care Management
Prerequisite: RTH 120 Respiratory Care Techniques III
Corequisite: RTH 211 Respiratory Care Clinical Practice III
Hours Required: Class: 45  Lab: 30  Credits: 4

Course Description/Purpose

This classroom and laboratory course covers the cardiopulmonary equipment, techniques, and management theory for the adult patient in an intensive care unit. Topics include critical care patient assessment, review of fundamental concepts in ventilation techniques, and management of adult patients in surgical, medical, pulmonary, cardiothoracic, and neuro intensive care settings.

Major Units

1. Fundamentals of mechanical ventilation of the adult patient
2. Assessment of the mechanically ventilated adult patient
3. Frequently used equipment and monitoring devices for the mechanically ventilated adult patient
4. Pulmonary management of patients in surgical, medical, pulmonary, cardiothoracic and neuro intensive care units
5. Pulmonary management of chronic ventilator dependent patients

Laboratory Assignments:

1. Ventilation Modes
2. Ventilator Alarm Troubleshooting
3. PB840 Ventilator
4. Ventilator Graphics; Esophageal Balloon
5. Capnography, Pulse Oximetry
6. Pulmonary artery catheter
7. ACLS protocols
8. ACLS protocols
9. ACLS protocols
10. Chest tubes
11. Metabolic studies
12. BiPAP, noninvasive ventilators
13. Home Care ventilators
14. Long-term Airway Care
Educational/Course Outcomes RTH 214

Student learning will be assessed by a variety of methods, including, but not limited to, quizzes and tests, laboratory/clinical exercises and examinations, presentations, computerized clinical simulations, homework assignments, and instructor observations.

Cognitive Each student will be expected to:

- describe and differentiate common diagnostic techniques used in the adult intensive care settings;
- given appropriate information, describe the selection and monitoring of ventilation techniques necessary to manage an adult ventilator patient in the acute and alternate site setting;
- given appropriate information, describe how ventilation techniques can be altered for an adult patient experiencing a change in his/her cardiopulmonary status;
- describe and differentiate the cardiopulmonary management principles associated with adult patients in surgical, medical, respiratory, cardiothoracic, and neuro intensive care settings.

Performance Each student will be expected to:

- given appropriate information, set-up a mechanical ventilator on a mock patient including alarm settings;
- adjust ventilator and alarm settings in response to patient assessment and ventilator graphics data;
- identify sources and correct conditions which activate ventilator alarms;
- demonstrate a basic familiarity with devices including set-up and problem troubleshooting for a variety of equipment used in the intensive care setting including capnometers, pulse oximeters, arterial lines, pulmonary artery catheters, esophageal balloon catheters, metabolic cart, chest tubes, and airway care devices;
- demonstrate the ability to follow ACLS protocol guidelines in the care of patients.