MOHAWK VALLEY COMMUNITY COLLEGE, UTICA-ROME, NY

Respiratory Care

COURSE OUTLINE

1. COURSE DESCRIPTION:

**RC213 Principles of Respiratory Care III**  C-1,P-3, Cr-2

This is the third course in the curriculum sequence to study the theory and practice of respiratory care. Topics include cardiopulmonary diagnostics and monitoring, special procedures (i.e., bronchoscopy and thoracentesis), critical care pharmacology, home care, and advanced management for the patient requiring mechanical ventilation.

**Prerequisites:** BI217 Human Anatomy & Physiology 2, RC112 Principles of Respiratory Care 2, RC115 Cardiopulmonary Diseases, and RC131 Clinical Practicum 1.

**Corequisites:** RC232 Clinical Practicum 2, or Program Coordinator consent. Minimum grade of “C” required.

1. STUDENT LEARNING OUTCOMES

**Upon completion of this course the student will be able to:**

1. The student will identify possible causes/corrections specific ventilator alarm activations by performing systematic patient/equipment assessments.
2. The student will identify/interpret ventilator graphics available and compare with patients’ current status.
3. The student will identify terminology, pressure tracings associated, indications for and institute/adjust with PEEP, CPAP, EPAP, and PEP therapies.
4. The student will perform the procedures, analyze the data, interpret results, determine pathological state, and perform quality assurance for simple and advanced pulmonary function spirometry/screening.
5. The student will define the key characteristics of a normal and abnormal adult, pediatric and neonatal chest x-rays and their clinical significance.
6. The student will identify the key components of the normal electric conduction system of the heart and the role of each component and explain the etiology and treatment associated with abnormal ECG’s.
7. The student will discuss the normal anatomy and physiology of the cranium as it relates to ICP monitoring and the indications for patients that would benefit from ICP and/or IABP.
8. The student will be able to explain the general principles associated with oxygen transport to the tissues and the use/monitoring of HR, SAP, PAP, CO, CI, SV, SI, EF, CVP, PCWP, SVR, PVR, etc.
9. The student will monitor/maintain, perform preventive maintenance & infection control measures, and provide patient education for respiratory care equipment used in the home environment including oxygen delivery appliances, oxygen conserving devices, apnea monitors, chest compression vests, peak flowmeters, and CPAP/BiPAP equipment.
10. The student will assist with tracheostomy, bronchoscopy, thoracentesis, and Hyperbaric Oxygen Therapy. The student will recommend and be able to trouble shoot Airway Pressure Relief Ventilation and Pleural Drainage Devices.
11. MAJOR TOPICS:
12. Basic Spirometry
13. Advanced Spirometry, Pulmonary Radiology
14. Ventilator Alarm Troubleshooting
15. Cardiac Diagnostics
16. ABG Puncture
17. PEEP
18. Critical Care Monitoring
19. Home Care
20. A-Line Insertion and Draw
21. Hemodynamic Monitoring
22. Special Procedures