

**MACOMB COMMUNITY COLLEGE
DIVISION OF ARTS AND SCIENCES**

COURSE SYLLABUS

- I. **DEPARTMENT/DISCIPLINE:** Health and Human Services/Respiratory Therapy
- II. **COURSE TITLE:** ADVANCED CONCEPTS IN RESPIRATORY CARE
- III. **CATALOG DESCRIPTION:** A forum for discussion of new and advanced applications in clinical practice. Topics covered will include pulmonary function testing, EKG's, myocardial infarction, chest tube drainage systems & hemodynamic monitoring. Each student will give an oral presentation on a topic of interest in Respiratory Care. Spring Semester only. (3 contact hours). Center Campus.
- IV. **PREREQUISITES:** RSPT 2260, 2330, 2340, and 2350
COREQUISITES: RSPT 2360, 2370, and 2430
- V. **COURSE NUMBER:** RSPT 2420
- VI. **SEMESTER CREDIT HOURS:** 3 CREDITS
CONTACT HOURS: 3 hours/week
- VII. **EFFECTIVE TERM:** Winter 2006
- VIII. **STUDENT ACADEMIC OUTCOMES:** Upon completion of the course, the student will
 - A. Perform a bedside pulmonary function test, interpret results and evaluate the need for further assessment.
 - 1. The student will demonstrate proper calibration of a bedside pulmonary function device.
 - 2. The student will instruct a patient on how to perform a Forced Vital Capacity (FVC), Flow-Volume Loop (FVL), and Mandatory Volume Ventilation (MVV)
 - 3. The student when given pulmonary function data will determine if a post-bronchodilator study is indicated and be able to calculate the percent change between pre- and post-bronchodilator measurements.
 - B. Assess and evaluate the patient for abnormal cardiac rhythms and describe a treatment plan using ACLS algorithms.
 - 1. Given an ECG tracing, the student will state the dysrhythmia present.
 - 2. Given an ECG tracing, the student will list the appropriate ACLS treatment options.
 - C. Correlate the information gathered during hemodynamic monitoring with the patient assessment data and incorporate this data into an effective protocol for care.
 - 1. Given hemodynamic data, the student will be able to calculate desired hemodynamic indices.
 - 2. Given hemodynamic data, the student will be able to differentiate the shock state present.
 - 3. Identify, troubleshoot and evaluate a pleural drainage system to effectively manage patients with a pneumothorax and/or pleural effusion.
 - 4. List the indications for chest tube drainage.
 - 5. Differentiate between the anatomic locations used for insertion of a chest tube.

6. Differentiate between the functions of each of the bottles/chambers used in a pleural drainage system.
 7. Given a problem with a pleural drainage system, identify and troubleshoot the the system.
- D. Demonstrate effective communication skills by preparing an oral class presentation, using current research data, on a topic of interest in Respiratory Care.
1. Given a topic, the student will research the topic and prepare both a written and a oral presentation on the topic as outlined by the instructor.
- E. Discuss and evaluate management strategies used in various health care institutions.
1. Describe the source of revenues within a Respiratory Care Department.
 2. Describe at least three positive and three negative personality traits and describe how to emphasize/de-emphasize these during an interview.
 3. Describe the benefits for implementing Therapist Driven Protocols in a RC department.
 4. Describe the primary goals of homecare.

IX. **COURSE ASSESSMENT**

- A. Comprehensive final exam in comparison to representative pre-course test.

X. **COURSE CONTENT OUTLINE**

- A. Pulmonary Function Studies
1. Spirometry
 2. Lung Volumes
 3. Diffusion Studies
 4. Bronchial Provocation
 5. Exercise Testing
 6. Metabolic Testing
 7. Pulmonary Function Equipment
 8. Quality Assurance
 9. ATS Standards
- B. Electrocardiography
1. Cardiac Anatomy and Physiology
 2. Electrocardiogram
 3. Axis Deviation
 4. Acute Coronary Syndromes
 5. Defibrillation
 6. ACLS Protocols
- C. Hemodynamics
1. Shock
 2. Hemodynamic Monitoring
- D. Chest Tubes
- E. Neurodiagnostics
- F. Home Care
- G. Management