I. GENERAL COURSE INFORMATION

Subject and Number: Respiratory Care 284
Descriptive Title: Respiratory Care of the Critically Ill Patient III
Course Disciplines: Respiratory Technologies
Division: Health Sciences and Athletics

Catalog Description:
This course continues with the treatment and management of adult patients that are critically ill. The course provides the student with the opportunity to develop more complex reasoning and patient care skills. A disease directed approach is used with emphasis on respiratory failure, chronic obstructive pulmonary disease and related respiratory conditions and deadspace problems. The course reviews the problems of nosocomial infections in Respiratory Care and systematic methods for identifying and correcting patient-therapist equipment contamination. Communication skills are introduced that will help the therapist relay suggestions and information to other members of the health care team.

Conditions of Enrollment:
Prerequisite: Respiratory Care 280 with a minimum grade of C

Course Length:	**X Full Term**		**Other (Specify number of weeks):**
Hours Lecture:	**4.00 hours per week**		**TBA**
Hours Laboratory:	**15.00 hours per week**	**X**	**TBA**
Course Units:	**9.00**		

Grading Method: Letter
Credit Status: Associate Degree Credit

Transfer CSU: X Effective Date:
Transfer UC: X Effective Date:

General Education:

El Camino College:

CSU GE:

IGETC:

II. OUTCOMES AND OBJECTIVES

A. COURSE STUDENT LEARNING OUTCOMES (The course student learning outcomes are listed below, along with a representative assessment method for each. Student learning outcomes are not subject to review, revision or approval by the College Curriculum Committee)

SLO #1 Appropriate and Competent FI02 Management
Given an in-class patient care scenario during an oral examination based on assigned reading, demonstrate appropriate and competent FI02 management using guidelines set in clinical competencies section of the Data Arc system for clinical practice.
SLO #2 Explain Diseases & Therapies for RC Patients
During classes & labs, students will demonstrate and explain appropriate respiratory care competencies such as FIO2 monitoring and managing patients receiving prolonged artificial ventilation, pulmonary rehabilitation, life support procedures, bronchial hygiene and oxygen therapy.
SLO #3 Comprehensive Final Exam on Diseases & Therapies for RC Patients
Students who stay in the course till the end of semester will take a comprehensive final multiple choice examination and 80% will obtain a grade of 70% or better.

B. Course Student Learning Objectives (The major learning objective for students enrolled in this course are listed below, along with a representative assessment method for each)

1. Interpret and classify arterial blood gases and deadspace to tidal volume ratios using clinical terms common to the management of patients with acute and chronic respiratory failure.
2. Terminate, recommend changes and/or modify the respiratory care plan based on the patient's disease and response to bronchial hygiene, artificial airways, deep breathing techniques, artificial ventilation & weaning, emergency resuscitation procedures.
3. Communicate information regarding patient's clinical status to other members of the health care team with reference to the coordination of patient's care and discharge planning using basic transactional analysis techniques.
4. Perform and interpret bedside pulmonary function measures for the purpose of determining if the patient has normal, obstructive and/or restrictive defects.
5. Conduct therapeutic procedures to achieve adequate arterial and tissue oxygenation, maintain a patent airway, remove bronchopulmonary secretions and provide adequate spontaneous and artificial ventilation.
6. Protect patient from nosocomial infections by adherence to infection control policies and procedures in all clinical and non-clinical settings the student is assigned as appropriate.

III. OUTLINE OF SUBJECT MATTER (Topics are detailed enough to enable a qualified instructor to determine the major areas that should be covered as well as ensure consistency from instructor to instructor and semester to semester.)

Lecture or Lab	Approximate Hours	Topic Number	Major Topic
Lecture	12	I	The determination of the two types of respiratory failure to include use of: A. Arterial blood gas results B. Respiratory deadspace ratios C. Patient signs and symptoms such as tidal volume, respiratory rate, heartrate, minute volume, and exhaled gas or application of deadspace formulas.

Lecture	12	II	Eric Berne and the application of Transactional analysis as a communication tool in health care with: A. Physicians B. Respiratory therapists C. Nurses D. Other health care professionals
Lecture	8	III	Bedside and health fair pulmonary function testing and screening for the purpose of: A. Education and anti-smoking counseling B. Determine if obstructive or restrictive defects are present C. Counseling patients and the public about their Pulmonary Function Testing (PFT) numbers
Lecture	8	IV	Obstructive and restrictive lung disease to include: A. X-ray results B. PFT values C. Physical exam signs and symptoms D. Respiratory care parameters at rest and during exercise
Lecture	12	V	Nosocomial infections and respiratory care (RC) equipment quality assurance to include: A. Monitoring and analyzing infection control procedures in respiratory care B. Performing disinfection and sterilization procedures on RC equipment C. Determine appropriate technique to obtain samples from RC equipment for lab analysis D. Response to infectious control committee inquires about RC quality control procedures
Lecture	20	VI	Management of common respiratory diseases during prolonged artificial ventilation to include but not limited to: A. Occupational diseases B. Restrictive and obstructive diseases C. Neuromuscular diseases D. Chronic obstructive pulmonary diseases (COPD)
Lab	270	VII	TO BE ARRANGED HOURS Alternative learning settings to provide patient care under supervision to patients receiving respiratory care who may have the following: A. COPD B. Restrictive lung diseases C. Neuromuscular diseases D. Adult and infant respiratory distress syndrome (RDS) E. Other diseases, trauma and conditions that may present themselves
Total Lecture Hours		72	
Total Laboratory Hours		270	
Total Hours		342	

IV. PRIMARY METHOD OF EVALUATION AND SAMPLE ASSIGNMENTS

A. PRIMARY METHOD OF EVALUATION:

Problem solving demonstrations (computational or non-computational)

B. TYPICAL ASSIGNMENT USING PRIMARY METHOD OF EVALUATION:

Patient's expired CO2 is reported by expired CO2 monitor at 25mmHg. Patient's minute alveolar ventilation is measured at 8.2 liters, PaCO2 40. Using the modified Bohr equation discussed in class, calculate the patient's physiological deadspace. (Vd/Vt = PaCO2 - PACO2/ PaCO2)

C. COLLEGE-LEVEL CRITICAL THINKING ASSIGNMENTS:

1. Given access to respiratory care equipment microbiology data from patients receiving ventilatory and/or oxygen support, verbalize or identify if this equipment or personnel are the possible cause of a nosocomial infection and the appropriate actions to take.
2. Demonstrate and explain how and why we perform bedside pulmonary function testing and verbalize or identify appropriate actions based on the patient's results.

D. OTHER TYPICAL ASSESSMENT AND EVALUATION METHODS:

Performance exams
Objective Exams
Quizzes
Reading reports
Written homework
Laboratory reports
Field work
Class Performance
Homework Problems
Term or other papers
Multiple Choice
Completion
Matching Items
True/False
Other (specify):

Case study workup on patients and reporting in writing and orally the information gathering and decision-making in managing the patient's care.
Clinical performance at the patient's bedside in our clinical affiliate hospitals, clinics, health fairs and elementary schools.
Multiple true/false, Patient Management Problems, and branching logic computer-assisted clinical simulations.

V. INSTRUCTIONAL METHODS

Demonstration
Discussion
Group Activities
Guest Speakers
Laboratory
Lecture
Multimedia presentations
Role Play
Simulation
Other (please specify)

Alternate learning environments such as hospitals, clinics, health fairs, schools and other appropriate environments to provide supervised clinical and educational opportunities to students in class.

Note: In compliance with Board Policies 1600 and 3410, Title 5 California Code of Regulations, the Rehabilitation Act of 1973, and Sections 504 and 508 of the Americans with Disabilities Act, instruction delivery shall provide access, full inclusion, and effective communication for students with disabilities.

VI. WORK OUTSIDE OF CLASS

Study
Answer questions
Skill practice
Required reading
Problem solving activities
Written work
Observation of or participation in an activity related to course content
Other (specify)
Group active learning assignments simulating clinical situations that require information collection and decision making in order to solve patient problem and determine course of therapy.

Estimated Independent Study Hours per Week: 8

VII. TEXTS AND MATERIALS

A. UP-TO-DATE REPRESENTATIVE TEXTBOOKS

Robert L. Wilkins. Fundamentals of Respiratory Care. 10th ed. Elsevier, 2013. Discipline Standard

B. ALTERNATIVE TEXTBOOKS

C. REQUIRED SUPPLEMENTARY READINGS

D. OTHER REQUIRED MATERIALS

VIII. CONDITIONS OF ENROLLMENT

A. Requisites (Course and Non-Course Prerequisites and Corequisites)

Requisites	Category and Justification
Course Prerequisite Respiratory Care-280	Sequential

B. Requisite Skills

Requisite Skills
Identify subjective and objective indicators of effectiveness for each therapeutic modality they are providing Respiratory Care for a critically-ill adult patient. RC 280 - Identify subjective and objective indicators of effective therapeutic modalities while providing respiratory care for critically ill adult patients.
Based on patient's response to oxygen therapy identify and/or verbalize the pulmonary defect causing the response and appropriate therapy. RC 280 - Based on patient's response to oxygen therapy, identify and/or verbalize the pulmonary defect causing the response and appropriate therapy.

Given access to appropriate patient information and a single or series of x-rays, identify and/or verbalize an interpretation of the patient's condition and appropriate treatment. RC 280 - Given access to appropriate patient information and a single or series of xrays, identify and/or verbalize an interpretation of the patient's condition and appropriate treatment.
Provided with inspiratory, identify and/or verbalize peak and plateau pressures, the type of pulmonary resistance to ventilation present and appropriate treatment. RC 280 - Provided with inspiratory values, identify and/or verbalize peak and plateau pressures, the type of pulmonary resistance to ventilation present and appropriate treatment.

C. Recommended Preparations (Course and Non-Course)

Recommended Preparation	Category and Justification

D. Recommended Skills

Recommended Skills

E. Enrollment Limitations

Enrollment Limitations and Category	Enrollment Limitations Impact

Course created by Louis M. Sinopoli on 07/01/1990

BOARD APPROVAL DATE:

LAST BOARD APPROVAL DATE: 05/18/2020

Last Reviewed and/or Revised by: Roy Mekaru **Date: 02/02/2020**

20225