



I. GENERAL COURSE INFORMATION

Subject and Number: Respiratory Care 170
Descriptive Title: Introduction to the Respiratory Care Sciences and the Profession
Course Disciplines: Respiratory Technologies
Division: Health Sciences and Athletics

Catalog Description:

This course provides students an opportunity to see if their attitudes, aptitudes and interests are matched to those needed by successful respiratory care practitioners. The course reviews all the requirements for successful completion of the program and entrance into the health care industry. The course will also provide the student with an introduction to the basic sciences as they apply in the Respiratory Care Profession.

Conditions of Enrollment: *You have no defined prerequisites.*

Course Length:	X Full Term	Other (Specify number of weeks):
Hours Lecture:	2.00 hours per week	TBA
Hours Laboratory:	0 hours per week	TBA
Course Units:	2.00	

Grading Method: Letter
Credit Status: Associate Degree Credit

Transfer CSU: Yes **Effective Date:** Pending
Transfer UC: No

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 FIO2 Management

Given an in-class patient care scenario during an oral examination based on assigned reading, demonstrate appropriate and competent FIO2 management using guidelines set in clinical competencies section of the Data Arc system for clinical practice.

SLO #2 Range of Respiratory Competency

During classes, 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 RC & Profession

Students who stay in the course until 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. Identify the aptitudes, attitudes and interests that are needed by respiratory care practitioners.
2. Match respiratory care problems with the appropriate science concept, law, formula or principle needed to understand or solve the problem.
3. Solve mathematical word and number problems that require the application of basic sciences in physics, chemistry, biochemistry, microbiology and physiology to new situations.
4. Select appropriate actions to take given a life-threatening emergency situation involving cardiopulmonary arrest according to BCLS protocol.
5. Identify course requirements and sequence for successful completion of the respiratory care program.
6. Identify the accuracy of statements concerning nosocomial infection and iatrogenic problems specific to respiratory care practitioners in the Health Care industry.
7. Identify rules and regulations of the California respiratory care Board Practice Act and how it affects the respiratory care profession in the state of California.

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	2	I	Introduction to Course A. Syllabus, grading, text, expectations
Lecture	2	II	Choosing a Career A. Freedom in life and your career B. The difference between a job and a career C. How to choose a career
Lecture	2	III	Attitudes, Aptitudes, and Interests A. Professional attitudes of health care professionals, high-touch, high-tech aspects of respiratory care B. Aptitudes that will help you enjoy a career in Respiratory Care C. Interests that serve you well as a Respiratory Care practitioner
Lecture	6	IV	Cardiopulmonary Resuscitation (CPR) A. Airway obstruction, breathing and cardiopulmonary arrest B. American Heart Association standards for Adult CPR performed by
Lecture	20	V	Application of Basic Sciences to Respiratory Care Competencies A. Oxygen therapy B. Humidity & aerosol therapy C. Sustained maximal inspiration D. Prolonged Life Support E. Charles', Henry's, Dalton's, and other gas laws and life science concepts as applied to: 1. Oxygen transportation to the cell and carbon dioxide production 2. Deep breathing therapy 3. Prolonged artificial ventilation 4. Arterial Blood gases
Lecture	4	VI	Overview of Nosocomial Infections A. Iatrogenic problems faced by respiratory care practitioners B. Microbiology overview application to hospital-based infections, AIDS, and respiratory care practitioners C. The rules and regulations protecting respiratory care practitioners as well as an introduction to the legal and moral responsibility of the respiratory care practitioner in the health care industry D. How do you prevent catching HIV or other deadly disease in and out of the hospital E. What makes Respiratory Care high-risk for Nosocomial infections

Total Lecture Hours	36
Total Laboratory Hours	0
Total Hours	36

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:

1. Fractured concentration of inspired oxygen (FIO₂) is 40, what will the patients' partial pressure of oxygen in the alveoli (PAO₂) be approximately? (use Alveolar Air Equation reviewed in class)
2. Partial pressure of oxygen in the Alveoli (PAO₂) = barometric pressure - water vapor pressure (PB-PH₂o) x fractured concentration of inspired oxygen (FIO₂) - partial pressure of carbon dioxide in arterial blood (PaCO₂)

C. COLLEGE-LEVEL CRITICAL THINKING ASSIGNMENTS:

1. Your grandmother passes out at a park and stops breathing. Based on your assessment, verbally explain what would you do next to save her life?
2. A mix-o-mask type O₂ device is delivering a high FIO₂, identify which gas law explains its operation best?

D. OTHER TYPICAL ASSESSMENT AND EVALUATION METHODS:

Performance exams

Other exams

Class Performance

Multiple Choice

Matching Items

True/False

Other (specify):

Patient management problems, case study multiple choice and clinical branching and linear logic computer simulations.

As per our state licensure exam, we primarily use multiple true false and multiple one best choice questions combined with patient or equipment situations on all tests and written problem-solving assignments.

V. INSTRUCTIONAL METHODS

Demonstration

Discussion

Group Activities

Guest Speakers

Lecture

Multimedia presentations

Role Play

Simulation

Other (please specify)

Alternate class site for Hospital observation may be utilized as appropriate.

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
- Required reading
- Problem solving activities
- Observation of or participation in an activity related to course content
- Other (specify)
- Web research

Estimated Independent Study Hours per Week: 4

VII. TEXTS AND MATERIALS

A. UP-TO-DATE REPRESENTATIVE TEXTBOOKS

William V. Wojciechowski. RESPIRATORY CARE SCIENCES: AN INTERGRATED APPROACH. 5th ed. Delmar Publishing, 2012. Discipline Standard

B. ALTERNATIVE TEXTBOOKS

C. REQUIRED SUPPLEMENTARY READINGS

Basic Cardiac Life Support Protocols, American Heart Association. Basic Anatomy and Physiology Text California Respiratory Care Board Practice Act.

a. **OTHER REQUIRED MATERIALS**

b.

VIII. CONDITIONS OF ENROLLMENT

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

Requisites	Category and Justification
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B. Requisite Skills

Requisite Skills

C. Recommended Preparations (Course and Non-Course)

Recommended Preparation	Category and Justification
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D. Recommended Skills

Recommended Skills

E. Enrollment Limitations

Enrollment Limitations and Category	Enrollment Limitations Impact
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Course created by Louis M. Sinopoli on 07/29/2015.

BOARD APPROVAL DATE:

LAST BOARD APPROVAL DATE:

Last Reviewed and/or Revised by: Roy Mekar

Date: March 2, 2020

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