Course Acronym:	RC
Course Number:	295
Descriptive Title:	Pharmacology in Advanced Respiratory Care
Division:	Health Sciences and Athletics
Department:	Respiratory Care
Course Disciplines:	Respiratory Technologies
Catalog Description:	This course provides instruction in pharmacology associated with advanced respiratory care. Topics include current trends in respiratory pharmacology; the use of sedatives, analgesics, antibiotics and paralytic agents in various delivery forms during advanced therapeutic modalities; as well as other pharmacological agents used during specialized testing regimens.
Prerequisite:	
Co-requisite:	
Recommended Preparation:	
Enrollment Limitation:	Students must be admitted to the El Camino College Respiratory Care Program or be graduated from an accredited respiratory care program.
Hours Lecture (per week):	3
Hours Laboratory (per week):	0
Outside Study Hours:	6
Total Course Hours:	54
Course Units:	3
Grading Method:	Letter Grade only
Credit Status:	Credit, degree applicable
Transfer CSU:	Yes
Effective Date:	Pending
Transfer UC:	Yes
Effective Date:	
General Education: ECC	
Term:	
Other:	
CSU GE:	
Term:	
Other:	
IGETC:	
Term:	

Other:	
Student Learning Outcomes:	**SLO #1 Explain & Demo Delivery of Respiratory Care Medications** Students will be able to answer written questions, oral questions and perform procedures that demonstrate knowledge and ability to deliver all respiratory care medications used on patients with various pulmonary disorders. **SLO #2 Demonstrate Cognitive Knowledge of Advanced Pharmacology in RC** Students who stay in the course till the end of semester will take a comprehensive final multiple choice examination on conducting, using and interpreting Advanced PFT in RC and 80% will obtain a grade of 70% or better. **SLO #3 Explain How to Apply Pharmacology Knowledge** During classes students will be able to participate in Pharmacology mini simulations applying their knowledge of different RC drugs to patients with various pulmonary conditions requiring medication.
Course Objectives:	1. Identify indications, contraindications, adverse reactions, dosages, frequencies, and other relevant facts for various advanced respiratory care pharmacological agents. 2. Evaluate usage of pharmacological agents during advanced respiratory therapeutic modalities. 3. Analyze pharmacological usage and recommend alterations when indicated. 4. Interpret patients' responses to pharmacological agents during therapy.
Major Topics:	**I. Pharmacological Agents Used During Specialized Pulmonary Function Testing (4 hours, lecture)** A. Indications B. Contraindications and adverse reactions C. Dosages and frequencies **II. Paralytic Agents (8 hours, lecture)** A. Indications B. Contraindications and Adverse Reactions C. Dosages and Frequencies **III. Antibiotics (14 hours, lecture)** A. Indications B. Contraindications and Adverse Reactions C. Dosages and Frequencies **IV. Sedatives (8 hours, lecture)** A. Indications B. Contraindications and Adverse Reactions C. Dosages and Frequencies **V. Analgesics (8 hours, lecture)** A. Indications B. Contraindications and Adverse Reactions C. Dosages and Frequencies **VI. Current Trends in Respiratory Pharmacology such as asthma treatment and steroids with patients with emphysema (12 hours, lecture)**
Total Lecture Hours:	54
Total Laboratory Hours:	0
Total Hours:	54

Primary Method of Evaluation:	2) Problem solving demonstrations (computational or non-computational)
Typical Assignment Using Primary Method of Evaluation:	The patient is a 25-year-old male with myasthenia gravis. The patient is on a ventilator with a tracheostomy tube. His care plan identifies him on a ventilator for at least 6 weeks. Medications ordered for him are Pavulon and Ativan. Evaluate the choice of these two medications and make any recommendations for this patient's medications.
Critical Thinking Assignment 1:	The doctor is using Anectine during a difficult intubation of an alert and combative patient. The patient suddenly has huge alterations in his blood pressure and starts apparently seizing. Describe in a one-page paper how much of this is due to medication rather than an allergic reaction to the medication. What should you do to help treat this patient?
Critical Thinking Assignment 2:	A 15-year-old patient presents in the Emergency Department with status asthmaticus. Current hospital protocol requires maximum usage of bronchodilators as the first line of treatment. Explain to the instructor whether this is in agreement with the current trend for treatment of asthmatics. If so, what would be the logic behind this and if not, what is the current protocol and the logic behind it?
Other Evaluation Methods:	Class Performance, Homework Problems, Other Exams, Quizzes, True/False, Written Homework
Instructional Methods:	Discussion, Group Activities, Lecture, Multimedia presentations, Role play/simulation
If other:	
Work Outside of Class:	Answer questions, Problem solving activity, Required reading, Study, Written work (such as essay/composition/report/analysis/research)
If Other:	
Up-To-Date Representative Texts:	James Stoller. Fundamentals of Respiratory Care. 13th ed. Elsevier, 2024.
Alternative Texts:	
Required Supplementary Readings:	
Other Required Materials:	
Requisite:	
Category:	
Requisite course(s): List both prerequisites and corequisites in this box.	
Requisite and Matching skill(s):Bold the requisite skill. List the corresponding course objective under each skill(s).	
Requisite Skill:	
Requisite Skill and Matching Skill(s): Bold the requisite skill(s). If applicable	

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Enrollment Limitations and Category:	Students must be admitted to the El Camino College Respiratory Care Program or be graduated from an accredited respiratory care program.
Enrollment Limitations Impact:	Students begin the clinical phase (A.S. degree requirements) of the Respiratory Care program after being accepted into the program.
Course Created by:	Roy Mekaru
Date:	08/12/2015
Original Board Approval Date:	07/19/2010
Last Reviewed and/or Revised by:	Roy Mekaru
Date:	03/22/2024
Last Board Approval Date:	06/17/2024
Effective Term:	FA 2025