



Course Outcome Summary

Required Program Core Course

RTH 212 – Advanced Cardiopulmonary Anatomy & Physiology

Course Information

Division	Health Sciences
Contact Hours	4
Theory	60
Total Credits	4

Prerequisites

RTH 120 – Respiratory Care Techniques III
RTH 121 – Respiratory Care Clinical Practice II
BIOL 258 – Anatomy & Physiology II

Co-requisites

RTH 211 – Respiratory Care Clinical Practice III
RTH 214 – Adult Critical Care Management
RTH 216 – Neonatal / Pediatric Management

Course Description

This course advances the student's knowledge of cardiopulmonary anatomy and physiology. The cardiac sections cover gross and histologic cardiovascular anatomy, neural/endocrine control of cardiac function, hemodynamics, microcirculatory disorders, and a review of common cardiac arrhythmias. The pulmonary section covers bronchopulmonary anatomy, gas diffusion, blood flow, ventilation/perfusion relationships, gas transport, mechanics and neural control of ventilation, and lung responses to changing environments and conditions.

This course is a required core course for students pursuing an Associate of Applied Science - Respiratory Therapy

Program Outcomes Addressed by this Course:

Upon successful completion of this course, students should be able to meet the program outcomes listed below:

- A. Demonstrate the ability to gather, comprehend, evaluate, apply, and problem solve using empirical information relevant to his/her role as a competent Registered Respiratory Therapist.

Course Outcomes

In order to evidence success in this course, the students will be able to:

1. Identify anatomic structures of the cardiopulmonary and other organ systems, and state their influence on respiratory function.
Applies To Program Outcome
 - A. Demonstrate the ability to gather, comprehend, evaluate, apply, and problem solve using empirical information relevant to his/her role as a competent Registered Respiratory Therapist.
2. State normal clinical hemodynamic values, and differentiate common cardiovascular disorders, signs, and symptoms when given abnormalities in these values.
Applies To Program Outcome
 - A. Demonstrate the ability to gather, comprehend, evaluate, apply, and problem solve using empirical information relevant to his/her role as a competent Registered Respiratory Therapist.
3. Describe cardiopulmonary circulation, and differentiate pulmonary versus bronchial perfusion.
Applies To Program Outcome
 - A. Demonstrate the ability to gather, comprehend, evaluate, apply, and problem solve using empirical information relevant to his/her role as a competent Registered Respiratory Therapist.



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4. Define ventilation in terms of dynamic and static properties, normal distribution of ventilation, airway resistance, and identify the components of gas exchange between intra-alveolar and intracellular environments.

Applies To Program Outcome

- A. Demonstrate the ability to gather, comprehend, evaluate, apply, and problem solve using empirical information relevant to his/her role as a competent Registered Respiratory Therapist.

5. Evaluate arterial blood gas results for acid-base and oxygenation disorders, including advanced interpretation.

Applies To Program Outcome

- A. Demonstrate the ability to gather, comprehend, evaluate, apply, and problem solve using empirical information relevant to his/her role as a competent Registered Respiratory Therapist.

6. Calculate and apply various mathematical formulae relating to hemodynamic values, pulmonary physiology, acid-base status, and mechanical ventilation.

Applies To Program Outcome

- A. Demonstrate the ability to gather, comprehend, evaluate, apply, and problem solve using empirical information relevant to his/her role as a competent Registered Respiratory Therapist.

Date Updated: 10.12.2023
By: H. Stripling