# Course Outcome Summary

**Required Program Core Course**

**RTH 212 – Advanced Cardiopulmonary Anatomy & Physiology**

## Course Information

<table>
<thead>
<tr>
<th>Division</th>
<th>Health Sciences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contact Hours</td>
<td>4</td>
</tr>
<tr>
<td>Theory</td>
<td>60</td>
</tr>
<tr>
<td>Total Credits</td>
<td>4</td>
</tr>
</tbody>
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## 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.
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