Sinclair Community College
444 E. Third St.
Dayton, OH 45402

Master Syllabus

RET 1125 - Respiratory Care Sciences

Division: Health Sciences

Department: Respiratory Care

Credit Hour Total: 3.0 **Lecture Hrs:** 3.0

Prerequisite(s): BIO 1107

Date Revised: June 2015

Course Description:

Advanced study of adult lung, heart and renal anatomy and physiology, including: ventilation, pulmonary mechanics, diffusion, gas transport, cardiac function and pulmonary perfusion, acid-base balance and interpretation, control mechanisms and physiological stressors; microbiology and infection control methods; emphasis on application/integration of respiratory sciences to patient scenarios.

General Education Outcomes:

- Critical Thinking/Problem Solving Competency
- Information Literacy Competency
- Written Communication Competency

Course Outcomes:

Diffusion, gas transport, and ventilation-perfusion relationships
Compare and contrast the diffusion and transport of oxygen and carbon dioxide and the balance of each in ventilation-perfusion relationships.

Assessment Method: Locally developed exams
Performance Criteria:

Minimum of a 75% passing score.

Control of ventilation, perfusion, and renal function
Describe the interactions of the mechanisms involved in the control of ventilation, perfusion, and renal function.

Assessment Method: Locally developed exams
Performance Criteria:

Minimum of a 75% passing score.

Microbiology and infection control methods
Identify common infectious microorganisms and apply appropriate infection control methods.

Assessment Method: Locally developed exams
Performance Criteria:

Minimum of a 75% passing score.

Ventilation
Explain the mechanisms and components of normal and abnormal ventilation patterns and apply respiratory care calculations to identify disease entitites.

Assessment Method: Locally developed exams
Performance Criteria:

Minimum of a 75% passing score.

Acid-base balance and interpretation of arterial blood gases
Demonstrate proficiency in interpretation of arterial blood gases and discuss common causes of the identified acid-base imbalances.

Assessment Method: Locally developed exams
Performance Criteria:

Minimum of a 75% passing score.

Effects of normal and abnormal physiological stressors on the cardiopulmonary system
Discuss the physiological changes to the cardiopulmonary system in response to aging, exercise, smoking, ascent to high altitude, and high pressure environments.

Assessment Method: Locally developed exams
Performance Criteria:

Minimum of a 75% passing score.

Respiratory, cardovascular, and renal systems
Describe the anatomy of the respiratory, cardiovascular, and renal systems and discuss the physiological interactions of the three systems.

Assessment Method: Locally developed exams
Performance Criteria:

Minimum of a 75% passing score.

Outline:

Anatomy and physiology of the respiratory, cardiovascular, and renal systems
Ventilation
Diffusion, gas transport, and ventilation-perfusion relationships
Acid-base balance and interpretation of arterial blood gases
Control of ventilation, perfusion, and renal function
Effects of normal and abnormal physiological stressors on the cardiopulmonary system
Microbiology and infection control methods