

**Bossier Parish Community College
Master Syllabus**

Course Prefix and Number: RSTH 203

Credit hours: 3

Course Title: Cardiopulmonary Physiology I

Course Prerequisites: Admission to the Respiratory Therapy Clinical Program.

Textbook: Des Jardins, T. (2013). Cardiopulmonary Anatomy and Physiology (latest edition). Clifton Park, NY: Delmar.

Course Description:

An in depth survey of cardiopulmonary physiology with emphasis on structure and function. Clinical implications are introduced to enhance the understanding of the normal cardiopulmonary system as well as a means of reference for pathological conditions. Enrollment in Respiratory Therapy courses is limited to students who have applied, been interviewed and have been selected for the Respiratory Therapy Clinical Program.

Learning Outcomes:

At the end of this course the student will be able to:

- A. appreciate normal anatomy and physiology in order to recognize general pathophysiology of common cardiopulmonary diseases;
- B. critically analyze cardiopulmonary anatomy and physiology in order to anticipate physiological responses to generic respiratory care procedures routinely performed in an acute care setting;
- C. appreciate various pertinent anatomical structures and function as it relates to spontaneous breathing; and
- D. demonstrate the ability to send and receive digital correspondence.

To achieve the learning outcomes, the student will:

- 1. identify the anatomical structure of the upper and lower respiratory tract, thoracic cavity, muscular abdominal wall, and cardiovascular system. (A, B, C)
- 2. describe the role of the diaphragm during ventilation to include the pressure gradients present during various stages of breathing. (B, C)
- 3. define, calculate and evaluate numerous pertinent respiratory calculations and formulas. (B, C)
- 4. define and discuss the various ventilatory patterns. (B, C)
- 5. define and calculate certain metrics based on the ideal gas laws. (B, C)
- 6. define and evaluate basic pulmonary function results. (B, C)
- 7. describe the function of blood components. (B)

8. identify and describe the function of the components of heart, major blood vessels, conduction system of the heart, and components of the pulmonary and systemic vasculature. (A, B)
9. define and discuss the importance of common hemodynamic values or measurements. (B)
10. discuss the dynamics of pulmonary circulation. (B, C)
11. discuss various factors that can alter hemodynamic status. (B)
12. discuss the physiology gas transport and how it varies from normal to disease states. (B, C)
13. interpret and analyze blood gas samples. (B, C)
14. discuss the controls of ventilation. (B, C)

Course Requirements: To earn a grade of “C” or higher the student must earn 70% of the total points for the course and meet all of the following course requirements.

- minimum overall average of 70% in the course
- minimum average of 80% on assignments

Course Grading Scale:

- A- 90% or more of total possible points and a minimum average of 80% on assignments
- B- 80% or more of total possible points and a minimum average of 80% on assignments
- C- 70% or more of total possible points and a minimum average of 80% on assignments
- D- 60% or more of total possible points or less than 80% on assignments
- F- less than 60% of total possible points and less than 80% on assignments

Attendance Policy: The college attendance policy, which is available at <http://www.bpcc.edu/catalog/current/academicpolicies.html>, allows that “more restrictive attendance requirements may apply to some specialized classes such as laboratory, activity, and clinical courses because of the nature of those courses.” The attendance policy of the Respiratory Therapy program is described in the Respiratory Therapy Clinical Handbook.

Course Fees: This course may be accompanied with an additional non-refundable fee for supplemental materials, laboratory supplies, certification exams and/or clinical fees.

Nondiscrimination Statement

Bossier Parish Community College does not discriminate on the basis of race, color, national origin, gender, age, religion, qualified disability, marital status, veteran's status, or sexual orientation in admission to its programs, services, or activities, in access to them, in treatment of individuals, or in any aspect of its operations. Bossier Parish Community College does not discriminate in its hiring or employment practices.

COORDINATOR FOR SECTION 504 AND ADA

Angie Cao, Student and Disability Services Specialist

Disability Services, F254, 6220 East Texas Street, Bossier City, LA 71111

318-678-6511

acao@bpcc.edu

Hours: 8:00 a.m.-4:30 p.m. Monday - Friday, excluding holidays and weekends.

Equity/Compliance Coordinator

Teri Bashara, Director of Human Resources

Human Resources Office, A-105

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Bossier City, LA 71111

Phone: 318-678-6056

Hours: 8:00 a.m.-4:30 p.m. Monday - Friday, excluding holidays and weekends.

Reviewed by T. Gilmore, March 2019