

**Course discipline/number/title: BIOL 1215: Anatomy and Physiology of the Cardiovascular Lymphatic and Immune Systems**

**A. CATALOG DESCRIPTION**

1. **Credits:** 1
2. **Hours/Week:** 12 hours total lecture and 8 hours total lab
3. **Prerequisites (Course discipline/number):** By instructor permission only
4. **Other requirements:** None
5. **MnTC Goals (if any):** NA

**B. COURSE DESCRIPTION.** This course covers the anatomy and physiology of the cardiovascular, lymphatic, and immune systems. This course is designed for transfer students whose previous coursework has met some, but not all, of the content areas for BIOL 1217.

**C. DATE LAST REVISED (Month, year):** May, 2020

**D. OUTLINE OF MAJOR CONTENT AREAS:**

1. Cardiovascular System:
  - a) Heart Anatomy
  - b) Coronary Circulation
  - c) Heart Physiology
  - d) Maintenance and Control of Blood Pressure
  - e) Blood Vessel structure
  - f) Pulmonary circulation
  - g) Systemic circulation
    - i. Blood flow to the brain
  - h) Blood Composition and Histology
  - i) Blood cell production and destruction/recycling
  - j) Hemostasis
  - k) Blood Typing and Transfusion
2. Lymphatic System:
  - a) Lymphatic organs, tissue, and vessels
  - b) Flow of lymph
  - c) Homeostatic imbalances
3. Immune System:
  - a) Non-specific resistance mechanisms
  - b) Humoral immune response - antibody mediated
  - c) Cell-mediated immune response
  - d) Homeostatic imbalances

**E. LEARNING OUTCOMES (GENERAL):** The student will be able to:

1. Demonstrate the ability to use vocabulary/terminology appropriately both orally and in writing.
2. Relate the structure of major organs/glands of the cardiovascular, lymphatic and immune system with their function.
3. Explain physiological principles specific to the organ systems listed above.
4. Apply knowledge to predict how homeostatic imbalances(s) can lead to disease.

**F. LEARNING OUTCOMES (MNTC):** NA

**G. METHODS FOR EVALUATION OF STUDENT LEARNING:** Methods may include but are not limited to:

1. Laboratory quizzes
2. Objective and/or subjective tests
3. Laboratory practical tests

- G. METHODS FOR EVALUATION OF STUDENT LEARNING:** Methods may include but are not limited to:  
**Continued. . .**  
4. Assignments  
5. Attendance (especially laboratory attendance)
- H. RCTC CORE OUTCOME(S).** This course contributes to meeting the following RCTC Core Outcome(s).  
None
- I. SPECIAL INFORMATION (if any):** None