

**J. Sargeant Reynolds Community College  
Course Content Summary**

**Course Prefix and Number:** BIO 142

**Credits:** 4

**Course Title:** Human Anatomy and Physiology II

**Course Description:** Integrates anatomy and physiology of cells, tissues, organs, and systems of the human body. Integrates concepts of chemistry, physics, and pathology. Part II of II. Prerequisite: BIO 141. Lecture 3 hours. Laboratory 3 hours. Total: 6 contact hours per week.

**General Course Purpose:** To prepare health science and beginning science students with a basic understanding of anatomy and physiology through the lecture and practical (laboratory) approach. The course is primarily designed for health science students and science majors.

**Course Prerequisites and Co-requisites:**

Prerequisite: BIO 141

**Course Objectives:**

Upon completing the course, the student will be able to

- a. Demonstrate scientific writing and speaking;
- b. Identify and describe the pathogenicity and control of microbes, as well as the Gram stain procedure;
- c. Discuss the anatomy of major endocrine organs, their secretions, and the functions of the hormones that are secreted in addition to selected endocrine disorders;
- d. Identify the anatomy and physiology of the circulatory system, to include the blood, heart, and blood vessels;
- e. Describe the anatomy and physiology of the respiratory system;
- f. Discuss the anatomy and physiology of the urinary system, to include fluid, electrolyte, and acid-base balance;
- g. Describe and analyze the anatomy and physiology of the digestive system, to include nutrition and metabolism; and
- h. Identify and describe the anatomy and physiology of the reproductive system, to include human development.

**Major Topics to Be Included:**

- a. Histology
- b. Human systems analysis (e.g., circulatory, digestive, respiratory, nervous, musculoskeletal, endocrine, reproductive)
- c. Pathological concepts and clinical applications to human systems
- d. Disease etiology

**Effective Date of Course Content Summary:** August 16, 2011