

**NOVA COLLEGE-WIDE COURSE CONTENT SUMMARY  
BIO 142 - HUMAN ANATOMY AND PHYSIOLOGY II (4 CR.)**

**Course Description**

Integrates anatomy and physiology of cells, tissues, organs, and systems of the human body. This course is the second in a two part series. Lecture 3 hours. Recitation and laboratory 3 hours. Total 6 hours per week.

**General Course Purpose**

This course is an introductory college transfer level offering designed to meet the anatomy and physiology needs of the student pursuing programs in a medical or paramedical career, or a degree in physical education.

**Course Prerequisites/Corequisites**

Prerequisite: BIO 141, or division approval.

**Course Objectives**

Upon completion of this course, the student should be able to:

- describe the anatomy and physiology of the respiratory system of man and related clinical disorders
- discuss the composition of human blood and the functions of each of the individual constituents
- describe the anatomy and physiology of the cardiovascular system of man and related clinical disorders
- describe the anatomy and physiology of the male and female reproductive systems
- discuss the phases of the menstrual cycle and the hormones associated with each phase
- explain the sequence of events in protein synthesis
- solve genetic problems involving monohybrid and di-hybrid crosses, blood types, sex-linked traits and sex influenced traits
- describe the anatomy and physiology of the digestive system of man
- list the enzymes and hormones involved in digestion and state their functions
- describe the anatomy and physiology of the urinary system of man and related clinical disorders
- explain fluid and electrolyte balance in the human body and related clinical disorders
- explain the anatomy and physiology of the immune system
- discuss the organs of the endocrine system, their secretions, the functions of these secretions, the control of these secretions, and their target organs. Explain common related clinical disorders

**Major Topics to be Included**

- Anatomy and physiology of the respiratory system
- Anatomy and physiology of the circulatory system
- Hematology
- Anatomy and physiology of the reproductive system
- Protein synthesis
- Meiosis and Genetics
- Digestion
- Anatomy and physiology of the urinary system
- Fluid and electrolyte balance
- Acid – Base
- Immunity
- Anatomy and physiology of the lymphatic system
- Anatomy and physiology of the endocrine system