

**NOVA COLLEGE-WIDE COURSE CONTENT SUMMARY  
NAS 161-162 - HEALTH SCIENCE I-II (4 CR.) (4 CR.)**

**Course Description**

Presents an integrated approach to human anatomy and physiology, microbiology, and pathology. Includes chemistry and physics as related to health sciences. Lecture 3 hours per week. Recitation and laboratory 3 hours per week. Total 6 hours per week.

**General Course Purpose**

NAS 161-162 is a college transfer-level course designed to meet the needs of students pursuing programs in various health technology fields. The course consists of formal lectures, demonstrations and laboratory activities which examine the microscope and gross anatomy of the systems of the human body and their physiology. Microbiology and pathology are integrated and emphasis throughout is on integrated operation of the body systems. This course is a requirement of many of the health technology curricula and may be completed prior to entry into the curriculum of choice.

**Course Prerequisites/Corequisites**

Prerequisite: placement into ENG 111 and either BIO 101, NAS 150 or high school biology within the last 10 years or division approval. Prerequisite for NAS 162 is NAS 161 or division approval.

**Course Objectives**

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

- Gain the background knowledge needed to perform adequately in a selected health technology field.
- Demonstrate through examinations that he has acquired a sound understanding of the structure and functioning of the normal human body and the disturbances to be expected from the more common pathological conditions.
- Acquire a general familiarity with the principles of microbiology in order to understand the role of microorganisms in pathology.
- Provide the foundation for sound knowledge of sterile techniques.
- Individual objectives applicable to each topic and system support these basic objectives.
- Evaluation will be through major exams, quizzes, and laboratory practical.

**Major Topics to be Included**

**NAS 161**

**Lecture Topics**

- Introduction to Anatomy & Physiology
- Chemical Level of Organization
- Cellular Level of Organizations
- Tissue Level of Organizations
- Integumentary System
- Principles of Microbiology
- Microbiology - The Bacteria
- Microbiology - The Viruses
- Microbiology - Medical Mycology
- Microbiology - Medical Parasitology
- Skeletal System
- Muscular System

### **Laboratory Topics**

- Introduction to Basic Anatomy & the Metric System
- The Microscope & Mitosis
- Chemistry of Life
- Cytology
- Histology & Integumentary System
- You & Disease I - Introduction to Bacteriology & Mycology
- You & Disease II - Microbiological Technique
- You & Disease III - Parasitology
- Skeletal System and Articulations
- Muscular System

### **NAS 162**

#### **Lecture Topics**

- Respiratory System
- Urinary System
- Fluids and Electrolytes
- Circulatory System
- Hematology
- Lymphatic System
- Immunology
- Digestive System/Nutrition
- Reproductive System
- Medical Genetics
- Nervous System
- Special Senses
- Endocrine System

#### **Laboratory Topics**

- Respiratory System
- Urinary System
- Circulatory System - Anatomy
- Circulatory System - Physiology
- Digestive System - Anatomy
- Digestive System - Physiology
- Reproductive System
- Development
- Human Genetics
- Nervous System & Senses