



## SYLLABUS

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### CATALOG DESCRIPTION

The organization, metabolic processes and regulation of cells and tissues. Basic concepts of the physical and chemical operation of the organs and systems of the human body. System reviews to include integumentary, skeletal, muscular, nervous, endocrine, cardiovascular, lymphatic, immune, respiratory, digestive, urinary and reproductive systems. This course does not substitute for [BIOL 121](#), [BIOL 252](#), or [BIOL 253](#). Non-transferable. Course includes 1 credit hour lab component.

Prerequisites: RDNG 095 or 096 or appropriate Reading Accuplacer score

Semester Offered: Fall and Spring

#### **Common Student Learning Outcomes**

*Upon successful completion of San Juan College programs and degrees, the student will demonstrate competency in...*

##### **BROAD AND SPECIALIZED LEARNING**

Students will actively and independently acquire, apply, and adapt skills and knowledge with an awareness of global contexts.

##### **CRITICAL THINKING**

Students will think analytically and creatively to explore ideas, make connections, draw conclusions and solve problems.

##### **CULTURAL AND CIVIC ENGAGEMENT**

Students will act purposefully, reflectively, and ethically in diverse and complex environments.

##### **EFFECTIVE COMMUNICATION**

Students will exchange ideas and information with clarity in multiple contexts.

##### **INFORMATION LITERACY**

Students will be able to recognize when information is needed and have the ability to locate, evaluate, and use it effectively.

##### **INTEGRATING TECHNOLOGIES**

Students will demonstrate fluency in the application and use of technologies in multiple contexts.

*Student work from this class may be randomly selected and used anonymously for assessment of course, program, and/or institutional learning outcomes. For more information, please refer to the Dean of the appropriate School.*

### General Learning Outcomes

Upon successful completion of the course, the student will be able to...

1. The major body systems.
2. The chemistry of cells.
3. The basic structures in tissues, organs and organ systems of the human body.
4. The major functions (physiology) of these structures in the human body.
5. The basic pathologies that impact these structures in the human body.

# Specific Learning Outcomes

Upon successful completion of the course, the student will be able to...

- 1.1 Define the terms for body regions, planes, cavities and membranes.
- 1.2 Identify the organs and basic structures of all systems listed under the course description.
- 1.3 Locate all basic organs and structures, listed under the course description, on drawings, models or on the computer.
  
- 2.1 Describe homeostasis and its impact on all body organs.
- 2.2 Describe the processes involved in cellular respiration and ATP formation.
- 2.3 Define what an electrolyte is, and how they function in the body.
- 2.4 Define acids and bases, and know what is meant by pH values.
- 2.5 Describe the role of water in the human body and cellular reactions.
- 2.6 Describe the structure, formation and functions of lipids and phospholipids.
- 2.7 Describe the structure, formation and functions of carbohydrates.
- 2.8 Describe the structure, formation and functions of proteins.
- 2.9 Locate all organelles of a representative cell on drawings or models.
- 2.10 Describe the function of the organelles of a cell, especially mitochondria, endoplasmic reticulum and the nucleus.
- 2.11 Describe the structure and function of cellular membranes.
- 2.12 Diagram and explain the stages of mitosis.
  
- 3.1 Identify the four basic tissue types and describe their structure.
- 3.2 Describe the structure of the skin, cartilage and bone.
- 3.3 Describe and classify the three types of joints.
- 3.4 Identify the structures of a basic nerve.
- 3.5 Identify the structures in the central, peripheral and autonomic nervous systems.
- 3.6 Describe the special senses.
- 3.7 Identify the elements in blood and their function.
  
- 4.1 Describe the basic function of all organ systems listed under the course description.
- 4.2 Describe the basic process that produces muscle contractions.
- 4.3 Describe hormones and their basic function on homeostasis and the human body.
- 4.4 Describe the process of gas exchange in the lungs and tissues and their transport in blood.
- 4.5 Describe the enzymes and their actions in digestion.
- 4.6 Describe the balances of water, electrolytes and acidity in body fluids, and their regulation.
- 4.7 Describe the events in human development.
- 4.8 Describe the sources of variation in human genetics.
  
- 5.1 Describe the disease process and how it alters normal body function.