

Honors Anatomy – Course Syllabus – Notre Dame High School

Mrs. Fenton

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Course Introduction

Welcome to Honors Anatomy at Notre Dame High School. You are about to begin a unique experience where you will have the opportunity to learn cutting edge science and perform experiments and protocols you will find challenging and interesting. Honors anatomy and physiology is an intensive study of the structure and function of the human body. This will include a review of introductory biology, cytology, histology, integumentary, skeletal, muscular, nervous, circulatory, and digestive systems and the special senses.

Learning will take place through teacher-class discussion, reading the textbook and taking notes, laboratory investigations, videos, computer activities, supplemental reading, and of course homework, quizzes and tests. Laboratory experiments and dissections will be an integral part of this course.

I am looking forward to getting to know each of you and providing you with a challenging but rewarding science experience this year.

Course Objectives: Upon completion of this course, successful students will be able to:

- Name the major organ systems, list the organs associated with each, and explain their functions.
- Describe how the components of a cell's membrane and cellular organelles provide function.
- Explain how the study of living material depends on cell function.
- Describe how skeletal muscles are arranged, where they are located, and how muscles produce movement.
- Describe the location of all bones in skeletal system.
- Explain how a nerve impulse is transmitted from one neuron to another.
- Describe the general characteristics of the central, peripheral, somatic, autonomic, parasympathetic, and sympathetic nervous systems.
- Describe the pathway of blood through the body.
- Follow the route of food through the alimentary canals.

Lab Course Objectives: Upon completion of this course, successful students will be able to:

- Use correct anatomical terminology when referring to the human body and directions.
- Understand proper use of the compound light microscope
- Identify the major organelles in a plant and an animal cell
- Draw the phases of mitosis
- Correctly identify epithelial, connective, muscle, and nervous tissues
- Identify bones and bone part parts found in the human body
- Identify the superficial muscles found in the human body
- Locate the cerebrum, cerebellum, and brainstem parts on a sheep brain
- Identify the eye and ear parts & discuss their functions
- Locate the major parts of the heart and main vessels connected to the sheep heart and identify their functions.

Goals of the Course

1. To introduce students to the concepts and principles of anatomy and physiology.
2. To share with students our sensed of excitement about modern medicine.
3. To impact an understanding and appreciation of the human body.
4. To promote critical thinking by requiring students to evaluate a body of evidence, separate assumptions from observations, and reach some conclusion based on evidence.
5. To have laboratories that emphasize observation and hands-on, discovery-based activities that lead to formulating and testing hypotheses.
6. To start every class with an attempt to explain why the topic for the day is interesting and important. Relevance is important because it builds learning connections to students' experiences, and motivates students by appealing to their curiosity.

Method of Evaluation

3 Tests

Quizzes (announced)

Midterm Exam / Final Exam

Labs

Homework Assignments

Projects

Course Tools

Notebook

3 ring binder

Colored pencils

Textbook: *Human Anatomy and Physiology* by Marieb/Hoehn

Course Outline

The Human Body: An Orientation

Chemistry Alive

Cells: The Living Units

Tissues: The Living Fabric

Blood

The Cardiovascular System: The Heart

Course Outline (Continued)

The Digestive System

The Reproductive System

Heredity

The Skeletal System

The Muscular System

The Nervous System (Central Nervous System)

The Endocrine System

The Urinary System

The Respiratory System

Homework Assignments

Homework packets will be handed out for each chapter. Packets are not due until the day of the test. This will afford all students the opportunity to use their packets as a study guide for each test.

Packets will be returned to students for midterm exam and final exam.

Please note that each student will be assigned a numbered textbook in the beginning of the year. Students will be given time to exam textbooks for any issues and document on textbook form. Students are expected, to hand in at the end of the school year, the same numbered textbook, in the same condition as received.

Please feel free to reach out to me at any time with questions or concerns.

Mrs. Cheryl Fenton