

Hillcrest High School
Anatomy and Physiology Syllabus 2011-2012
Dr. Barklund
Mrs. Reichelt

** Check out the website at:
www.reicheltscience.com

Description:

Anatomy and Physiology is a one-year dual enrolment course with NNU that is designed as a 4 credit human biology course (3 lecture, 1 lab). The emphasis is on integration of form and function of human body as well as genetics and ethics. Student will be developing inquiry skills and problem-solving techniques which will provide the student with the basis for making wise career and personal choices in areas related to the biological sciences. The course will also familiarize the student with the influences and interrelated nature of science and technology in contemporary society. Students will investigate the major systems of the vertebrate body through laboratory experimentation, dissection, and reading/lecture. Emphasis is placed on human anatomy and physiology, and relevance is drawn to health-related occupations. This course does not apply toward major requirements in biology.

Course Objectives: By end of course student will be able to:

1. Recognize that the body is a unit, made up of many parts that work together to form the physical basis of life
2. Explain the major theories of biology as they apply to humans (chemical, cell, homeostasis, gene, and body systems)
3. Systematically dissect various organisms and their parts to compare their form and functions to humans
4. Research and perform an experiment of their own design, collect and analyze data, and draw conclusions based on their findings.

Learning and Preparation:

1. Lecture
2. Homework
3. Case studies
4. Reading
5. Project
6. Lab

Grading policy: Grades will be determined as follows.

Homework/assignments	= 20%	100-90 = A	72-70 = C-
Labs	= 10%	89-87 = B+	69-67 = D+
Tests	= 20%	86-83 = B	66-63 = D
Semester exam	= 20%	82-80 = B-	62-60 = D-
Weekly written quizzes	= 10%	79-77 = C+	59 and below F
Projects	= 20%	76-73 = C	

Total= 100% of grade per semester

Textbook: Essentials of Human Anatomy and Physiology by Elaine N Marieb

Course Schedule: (tentative)

Week	Semester 1	Week	Semester 2
1-2	Chapter 1 Introduction to A&P <ul style="list-style-type: none"> • Anatomy lab • Body Systems Activity 	1-3	Chapter 7 Nervous system <ul style="list-style-type: none"> • Reflex lab • Project
3	Chapter 2 Basic Chemistry <ul style="list-style-type: none"> • pH, Electrolyte lab • Macromolecule lab 	4	Chapter 8 Special Sense Organs <ul style="list-style-type: none"> • Cow eye dissection
4-5	Chapter 3 Cells and Tissues <ul style="list-style-type: none"> • Scaling lab • Cell division lab • Histology slides/ analogy lab 	5-6	Chapter 9 Endocrine system <ul style="list-style-type: none"> • Homeostasis lab
6-7	Chapter 4 Skin and Membranes <ul style="list-style-type: none"> • Project • Senses lab • UV light sunscreen lab • Dermatologist speaker 	7-10	Chapter 10, 11, 12 Pt. Blood, Cardiovascular, Lymphatic Vessels <ul style="list-style-type: none"> • Heart dissection • Blood pressure lab • Exercise physiology lab
8-10	Chapter 5 Skeletal system <ul style="list-style-type: none"> • Skeleton and joint lab 	11	Chapter 13 Respiratory System <ul style="list-style-type: none"> • Lung Model lab
11-15	Chapter 6 Muscular system <ul style="list-style-type: none"> • Movement analysis project • Sliding filament theory lab • Muscular lab 	12-14	Chapter 14, 15 Digestive, Metabolism and Urinary system <ul style="list-style-type: none"> • Digestive system lab • Metabolism lab
16	Chapter 7 Neuron, Action Potential and Motor Unit <ul style="list-style-type: none"> • Action Potential Lab 	14-15	Chapter 16 Reproductive system <ul style="list-style-type: none"> • Midwife Guest Speaker • Fetal Development Computer Lab
		16	Chapter 12 Part 2 Lymphatic system, and immunology
17	Review week	17	Review
18	Finals week	18	Finals week

Plagiarism

When doing a research project, it is normal to look at other person's work for information. When using another person's work, the researcher must give credit (cite) the original author. If the researcher does not give credit to the original writer, it is considered *plagiarism*. *Plagiarism* is using someone else's work directly or paraphrased without giving the original writer credit. (You are expected to do your own work. Failure to do so will result in an automatic zero for the assignment, quiz or exam.)

Miscellaneous:

- A. Throughout this course students will be using computers to aid them in their class assignments. The computers will be available for graphing, word processing, research, science programs and presentations. Students and Parents must sign and (students must) obey the Hillcrest High School computer usage agreement.
- B. Students are expected to abide by the Hillcrest High School Science **Safety Contract**. This contract must be signed by both the parent and the student before the student is permitted to perform any laboratory experiment. Persistent, blatant use of unsafe procedures will result in student being removed from the laboratory area, receiving 'book work' and participation reduction. Continued unacceptable behavior will result in a dean's referral.
- C. I am, as you are, looking forward to your success in Anatomy and Physiology. Your success is up to you. What you put into your learning is what you will take away. I am willing to facilitate your learning, but please, take responsibility upon yourself to do the assignments carefully and toughly, study for tests, and ask questions if you don't understand the information.

Miss School, Miss Out!

I have read and understand all parts of this syllabus and will abide by rules and expectations. Please remember to initial in appropriate areas of syllabus- Thank you! *Please note the syllabus is subject to change.*

Student name printed _____

Parent name printed _____

Student signature _____

Parent signature _____