

Human Anatomy & Physiology

BIOL1060/1060L



Arn Allemand

Meridian Medical Arts Charter High School
<https://www.meridianmedicalartscharter.org/teachers/arn-allemand/>

MMACHS Room 3
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Materials: #2 pencils, college-ruled paper/notebook, scientific calculator, colored pencil

Course Description: Students will investigate the major systems of the vertebrate body through laboratory experimentation, dissection, reading, and lecture. Emphasis is placed on human anatomy and physiology, and relevance is drawn to health-related occupations. Research based student led debates, research experiments, and a comparative fetal pig dissection are a major part of this course.

Optional Credit Hours: 4

Required Text: Essentials of Anatomy and Physiology: 5th Ed. McGraw Hill. 2005

Course Goals:

- Develop an understanding of the anatomy and function of integumentary, skeletal, muscular and nervous systems of the human body, and connect knowledge gained in lecture, with observations made in lab and in everyday life.
- Develop an awareness and sense of responsibility regarding the workings of the human body, and how this relates to personal, family and community health.
- Develop an appreciation and awe for the wonders and intricacies of the human body.

Course Objectives: To attain the course goals, students should be able to:

1. Discuss the major functions of each of the systems covered (integumentary, skeletal, muscular, nervous), and the role played by each organ in achieving those functions.
2. Identify gross anatomical structures in a variety of formats and contexts (i.e. images, human cadaver, dissected organs, specimens).
3. Systematically dissect various organisms and their parts and compare their form and function to humans.
4. Explain how a body system would react to the manipulation of a specified variable.
5. Recognize tissue types and various cell types making associations with their form as it pertains to their function.
6. Interpret medical and scientific terminology based on an understanding of Latin and Greek word parts.

Course Calendar/Schedule (tentative & subject to change):

Semester #1

Chapter 1 (~1wk)	Introduction to Anatomy & Physiology
Chapter 2 (~1wk)	Chemical Basis of Life
Chapter 3 (~2wk)	Cells <i>Lab: Stages of Cell Division</i> <i>Lab: Cheek Cell Microscope Lab</i> <i>(effect of hypo/hyper/isotonic soln. on cells)</i>
Chapter 4 (~2wk)	Tissues <i>Lab: Histology Slides</i>
Chapter 5 (~2wk)	Skin and Integumentary System <i>Lab: Receptors and Somatic Senses</i>
Chapter 10 (~2wk)	Endocrine System
Chapter 11, 14 (~3wk)	Blood, Lymphatics, Immunity
Chapter 12, 13 (~3wk)	Cardiovascular System <i>Lab: Pig-Pluck Dissection</i>
Review	Cumulative Semester Test (midterm for college credit)

Semester #2

Ch. 15 (~2wk)	Respiratory System
Chapter 6 (~2wk)	Skeletal System <i>Lab: Skeleton and Joints</i>
Chapter 7 (~3wk)	Muscular System <i>Lab: Kinesiology / Biomechanics</i> <i>Lab: Fetal Pig Dissection</i>
Chapter 16 (~3wk)	Digestion and Nutrition <i>Lab: Fetal Pig Dissection</i>
Chapter 10 (~2wk)	Somatic and Special Senses
Chapter 8 (~3wk)	Nervous System <i>Lab: Reflexes</i>
Review	Semester Exam

Grading Policy and Rubric:

- The MMACHS standard grading scale will apply to non-concurrent credit students, while students taking the course for college credit will be graded on the Northwest Nazarene University grading scale. Below you will find how the course is weighted:

Assessments.....	40%
Final.....	15%
Daily Work.....	45%

Assessments

- Assessments include unit tests, research projects, lab write-ups, and quizzes. All summative assignments will have prior notification of when the assignment is due. Formative assessments (more frequent checks of student progress) will also be given. Quizzes may be given without notification.

Course Policies:

Homework Assignments

Each type of problem or calculation is explained in class. Problem assignments, as listed in the course schedule, are the responsibility of the students to work out and review. Students will be expected to keep an organized notebook containing all the assigned problems from the textbook worked out in full. Proof of work completed will be submitted digitally on a periodic basis. Quizzes may contain problems directly from the assigned work.

Quizzes

There will be regular quizzes during the year. Quizzes are not always announced ahead of schedule and they may come directly from homework assignments and reading. Every effort is made to grade and return quizzes by the next class period. At the conclusion of each quiz, an answer key is distributed to the class and the quiz is reviewed. If a student has taken all the quizzes, the lowest quiz grade is dropped at the end of the semester.

Tests

Each unit will conclude with a summative assessment. These tests cover information discussed in class, classroom demonstrations, materials assigned and laboratory work. All problems will require proper organized set-ups and calculations. The lowest exam grade from each semester will be dropped for final grade calculation.

Semester Exams

At the end of the first semester, there will be a lab practical and cumulative final of semester one. This will require a formal lab report. The format and rubrics for the report will be provided at a later date. At the end of the year, there will be a final comprehensive examination. Failure to take the final exam will result in a grade of zero for the final examination.

Laboratory Notebook

Every laboratory activity is required and will be recorded in the laboratory notebook. A missed lab must be made up within a week from the scheduled time of completion. Labs that are not made up count as a zero. One lab grade from each semester will be dropped for final grade calculation. Laboratory make-ups may occur before school, after school, and during study hall.

Make-up Policy

Tests & quizzes may be made up only with pre arranged scheduling to take the test before school, during study hall, or after school.

*** Labs may not be made up during lunch hour. Labs may contain chemicals and biologic tissue that are not conducive to students or faculty eating food. It is important that I get lunch and likewise I expect all students to eat a healthy balanced lunch during their allowed time.**

Academic Integrity

Violations of scholastic ethics are considered serious offenses. Cheating on exams or quizzes will result in a grade of zero for that exam, test, or quiz. Any zero grade assigned for cheating will remain as part of your average and will not be dropped or discounted.

Use of AI

It is understood that the use of AI is, and will continue to be a burgeoning resource full of promise and pitfalls. It is my expectation that students will use AI platforms such as Google, Bing, Chat GPT etc. as resources to foster curiosity and understanding in this content area. I fully support students using these resources to “check” work, however, students should not use AI to “do” work. As an example, students should not type in a question simply to copy down an answer. There is no learning acquired through this process.

Attendance

Attending class is a major responsibility a student has in this course. Most of the important material that will be on tests and quizzes is discussed in class. Relevant information and applications of course material, as well as demonstrations, are also presented in class. If a student misses a class, he/she is responsible to get the notes from other students, Mr. Allemand, or through our class planner which will be presented at a later time

All laboratory experiments are expected to be completed. If a student is absent from class for an extended period due to illness, an accident or another valid reason, please contact the instructor.

Lateness

Lateness to class is disruptive to the other students. Please make every effort to get to class on time. If a student does arrive late to class, it is expected that the student will come into the room quietly, find a seat, and get organized for class quickly.