

## Biology 201.07

## Anatomy & Physiology I Syllabus

Fall 2022

**Prerequisites** - None

**Instructor** - Dr. Engle

Office - 211 Pierce Hall

Phone - (814) 886-6552

Email - JEngle@mtaloy.edu

Office hours - MW 12:30-2, T 12-2, R 1-2, F 1-3

**Credit Hours** - 4 (Lecture 3 hrs/wk, Lab 2 hrs/wk)

Lecture MW 4:00-5:15 Room 003 Pierce Hall

Lab R 11:00-12:50, Room 118 Pierce Hall

Final Day 3; W 14 Dec.; 5:00 pm

Web page - <http://DrEngle.net>

**Texts** - OpenStax Anatomy & Physiology (free online available through Canvas)

- MacMillan Achieve access code

- Human Anatomy & Physiology Laboratory Manual: cat version. 13<sup>th</sup> ed. Marieb ISBN: 978-0-13-463233-9

**Course description** - An introduction to the organization of the human body at its molecular, cellular, and tissue levels. The structure and functioning of the integumentary, skeletal, central, peripheral, and autonomic nervous systems and the endocrine system are examined.

### Grading Policy:

**Lecture Exams** consisting of multiple choice, short answer, and diagram labeling will be administered at the end of each section. Check my web site for a more complete breakdown. Exams will be based primarily on lecture notes. Exams are about 50 questions in length.

**Lab Quizzes** will be administered at the beginning of each lab except the first lab. Quizzes will be 10 points each and mostly consist of labeling body parts. (120 points total)

On Canvas you will find to following: (Beware of the due dates.)

**Self-Assessment quizzes** worth 5 points each (20 points total).

**Achieve Homework sets** worth 10 points each (140 points total).

The grade you receive will be based solely on your performance on these exams.

### Grading Scale:

A=100-90% B+=89-87% B=86-80% C+=79-77% C=76-70% D=69-60% F=59-0%

Grades are NOT curved and there is no extra credit available. Grades are based on the total amount of points accumulated. To calculate your grade add the number of questions you answered correctly and divide by the number of total points possible. Multiply by 100 to obtain your percent score.

### Additional Resources:

#### Bibliography

Kapit, 2000. The physiology coloring book (2E). Pearson. QP36.K24 2000

Muscolino, 2011. Kinesiology: the skeletal system and muscle function (2E). Mosby/Elsevier Press. QP303.M87 2011

Scalon, 2007. Essentials of anatomy and physiology (5E). FA Davis Co. QP34.5.S2882007

Thibodeau, 2003. Anatomy & physiology (5E). Mosby/Elsevier Press. QP34.5.T492003

Tortora, 2003. Principles of anatomy and physiology (10E). Mosby/Elsevier Press. QP34.5.T672003

#### Web Resources

Crosset, Ben. 2008-2012. Anatomy Arcade Games. <http://www.anatomyarcade.com/games/games.html>

Heithaus, P. 1999. Cat Anatomy Tutorial. <http://biology.kenyon.edu/heithaus/cat-tutorial/welcome.htm>

InnerBody.Com. 1999-2012. Howtomedica, inc. <http://www.innerbody.com/>

Kelly, K.M. 1998-2012. The Biological Anthropology Web. <http://www.bioanth.org/default.htm>

Muscle functions: <http://biology.kenyon.edu/heithaus/cat-tutorial/function/function.htm>

MAC library guide: <https://libguides.mtaloy.edu/anatomy>

Petersen, K. 2010. Comparative Anatomy Website. University of Washington. This site has several nice resources including some photos of dissections. I suggest taking some time to examine the resources

Dr. Petersen has compiled: [http://courses.washington.edu/chordate/453labs/453lab\\_notes.htm](http://courses.washington.edu/chordate/453labs/453lab_notes.htm)

Ross, James. 2008. Mastering Human Anatomy. <http://www.youtube.com/watch?v=8d-RBe8JBVs>

Sheffield, S. 2010. Get Body Smart. <http://www.getbodysmart.com>

**Course Outline:**

<u>Topics and Learning Objectives</u>	<u>Chapters</u>
Introduction Characteristics of life & Body architecture Describe the levels of organization of the human body and functional processes common to all living organisms.	1 <b>Exam 1</b>
Chemistry Describe the atomic basis of matter and relate the concepts to physiological processes. Relate the properties of chemical bonding. Biochemistry I Define acid and base. Explain the pH scale.	2 <b>Exam 2</b>
Biochemistry II Describe the structure/function of the four cellular macromolecules. Cell Membrane State the structure and mechanisms used by cells to transport materials through their membranes.	2 3 <b>Exam 3</b>
Cell Organelles Identify the structure and organelles of the human cell. Explain the function of each cellular organelle. Transcription and Translation Describe the mechanism of cell division. Identify each phase of mitosis.	3 <b>Exam 4</b>
Tissues of the body Detail the organization of the body at the tissue level.	4 <b>Exam 5</b>
The Integumentary system Describe the structure and function of skin. Describe the structure of glands.	5 <b>Exam 6</b>
Bone Structure & Development Describe the structure and development of bone tissue. Joints & Movement Relate the structures of the articulations and their movements.	6 9 <b>Exam 7</b>
Skeleton (bone identification) will be covered in lab over several lab sessions. Identify the bones of the skeleton and selected markings.	7 & 8
Nervous tissue Detail the organization of the nervous system and the role of the neuron. Central Nervous System Identify the major structural components of the central nervous system and their function.	12 13 <b>Exam 8</b>
Peripheral Nervous System Identify the major structural components of the peripheral nervous system. Autonomic Nervous System Detail the role of the parasympathetic vs. sympathetic div.	14 15 <b>Exam 9</b>
Endocrine System List the organs of the endocrine system and what hormones are released from each.	17 <b>Final Exam</b>

## **MAC Policies**

### Weather Delays and Compressed Schedule

In the event of a delayed opening, MAC will follow a compressed schedule. This will provide students with the opportunity to attend all scheduled classes on delay days with each class meeting for a shorter than usual session. For the Compressed Schedule for delay days, go to the following link:  
<http://www.mtaloy.edu/delays-cancelations>

### Technology and Communication Assistance Statement

All students are expected to regularly log in to the Canvas course website. The site contains the syllabus and assignments, and supplementary materials will be placed there on a regular basis. Furthermore, important announcements will be posted on the site (especially if a class period is canceled due to weather, illness, etc.). For assistance in using Canvas, please contact the Canvas administrator at (Canvas@mtaloy.edu).

College offices and instructors often communicate important information through the MAC email system. Students should check their school email account regularly. For technical or log-in credential questions, please contact the help desk at (helpdesk@mtaloy.edu or (814) 886-6502).

### College Academic Integrity Statement

Mount Aloysius College is committed to the academic integrity of the entire community. All share responsibility for maintaining high standards of academic integrity, and no forms of academic dishonesty are tolerated. Forms of academic dishonesty include but are not restricted to: giving or receiving unauthorized assistance on an examination, project, or assignment; using unauthorized forms of assistance such as crib notes or cell phones on an examination; falsification of data or plagiarism (using another person's ideas or words as your own); and lying or falsifying reasons for missing examinations or class.

A student found guilty of lying, cheating, or plagiarism, depending on the nature of the offense and the history of the student, is usually subject to one or both of the following: a grade of zero on the assignment, project, or examination or a grade of F in the course. All cases of lying, cheating, or plagiarism where a punishment is incurred are reported to the Senior Vice President of Academic Affairs, who maintains a record of all offenses. Serial offenders may be subject to suspension or dismissal.

### College Accommodations Statement

Accommodations Statement: Mount Aloysius College is committed to providing reasonable accommodations to students with disabilities. Students with disabilities who wish to request accommodation are required to contact Ms. Shannon Grove, MSN, RN, Director of Health and Wellness to formally request accommodations and provide supporting documentation. Her office is located in St. Joseph Hall, Room 102, (814) 886-6391. If you receive approval for accommodations, it is important that you stop by the office at the start of the semester so necessary arrangements can be made.

### Attendance Policy

Attendance at all lecture and lab sessions is mandatory. It is your responsibility to notify the instructor **prior** to missing an exam or laboratory and you must have a valid reason. The instructor reserves the right to judge the validity of the excuse. If you miss an exam, you are responsible for taking the exam within one week of your return. There are no makeup labs unless you are able to come to another section during the same week and obtain instructor permission. *Failure of the student to follow the steps outlined above will result in a grade of "0" for the missed exam or lab!*

### Conflict Resolution

Should a student encounter difficulty with course content or other aspects of the course, the first action should be to make an appointment to speak with the instructor. The instructor may suggest resources on campus or other tips to assist student learning. If a student has concerns with their instructor, then the best course of action is to seek out a meeting with the Science and Math Department Chair, Dr. John Whitlock, 814-886-6536, JWhitlock@mtaloy.edu. to discuss the difficulties. If an agreeable decision is not reached, the student should then request a meeting with the Dean, Dr. Chris Lovett, 814-886-6458, clovett@mtaloy.edu. The Faculty, Department Chairs, and Deans are committed to treating all students with respect and fairness. Additional information is outlined in the academic grievance policy in the College catalog.

## Lab Schedule

<u>Week</u>	<u>Lab Exercise</u>	<u>Quiz</u>
1	Ex. 1 - Anatomical landmarks	
2	Ex. 2 - Organ systems	Quiz on ex. 1
3	Ex. 3 - Microscopic images Ex. 4 - Cell models and mitosis	Quiz on ex. 2
4	Ex. 6 - Tissues	Quiz on ex. 4
5	Ex. 7 - Integumentary system	Quiz on ex. 6
6	Ex. 9 - Skeleton overview	Quiz on ex. 7
7	Ex. 10 - Axial skeleton	Quiz on ex. 9
8	Ex. 11 - Appendicular skeleton	Quiz on ex. 10
9	Ex. 13 - Joints and movements	Quiz on ex. 11
10	Ex. 17 - Nervous tissue histology	Quiz on ex. 13
11	Ex. 19 - Brain anatomy & Cranial nerves	Quiz on ex. 17
12	Ex. 21 - Spinal cord & spinal nerves	Quiz on ex. 19
13	Ex. 22 - Human reflex physiology	Quiz on ex. 21
14	Ex. 27 - Endocrine system	

## Laboratory Safety Contract

Every laboratory user should observe the following rules:

1. Know the potential hazards and appropriate safety precautions before beginning work.
2. Know the location and use of emergency equipment, including safety showers, eyewash stations and safety kits.
3. Know the types of personal protective equipment available and how to use it for each procedure. Goggles must be used when there is a risk of splash, when working with Bunsen burners or when doing dissections. Disposable gloves must be used when doing dissections and must be supplied by the student. **Closed-toed shoes** should be worn at all times when using any Pierce Hall laboratory. Loose and torn clothing may pose a hazard in the laboratory. For your protection you must use clothing that is at least knee length when seated during laboratories. Wear clothing that, if damaged, would not be a serious loss, or use aprons or laboratory coats because chemicals may damage fabric.
4. Never block safety equipment or doors and keep aisles clear and free from tripping hazards.
5. Familiarize yourself with the emergency response procedures, alarms and building evacuation routes.
6. Familiarize yourself with the equipment you will be using. Pay extra care when working with glass and when using dissecting equipment, whether cutting or assisting. Take good care of equipment and report any damage to your instructor.
7. Prevent pollution by following waste disposal procedures. Chemical reactions may require traps to prevent the release of toxic substances to the laboratory or to the environment. Use fume hoods if necessary.
8. Combine reagents in the appropriate order and avoid adding solids to hot liquids.
9. Do not prepare, store or consume food or beverages in any Pierce Hall laboratory. Microwaves and refrigerators are for laboratory use only, not to heat or store food.
10. Do not smoke in any Pierce Hall laboratory.
11. Do not apply cosmetics when in the laboratory.
12. Use a pipette bulb or a mechanical pipetting device to provide a vacuum. Never use mouth suction to pipette chemicals or to start a siphon.
13. Be alert to unsafe conditions and actions and bring them to the attention of your supervisor or lab manager immediately so that corrections can be made as soon as possible. Report any injury to your instructor immediately. After dealing with the incident, instructors should fill out an incident report.

In addition to the above policies and procedures, the instructor reserves the right to alter, augment, or delete from existing policies if in so doing the proper atmosphere for teaching and learning is maintained. All such policy changes will be announced.