

Coconino Community College
SYLLABUS FOR *Human Anatomy & Physiology I*
Fall 2023
BIO 201-01 (4 credits)
Mon/Wed 11:30 am – 2:15 pm (Lab 507)

Instructor: Thomas Lehman

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Student Office Hours:

- 2:30-3:30 Mon/Wed
- 10:00-11:00 am Tue/Thu
- 5:00-5:30 pm Tue/Thu

COURSE DESCRIPTION: Design and function of the human body. Topics include cells, tissues, integumentary, muscular, skeletal, nervous, and sensory systems. **Prerequisite:** BIO 181 or Consent of Instructor. General Education: Physical and Biological Sciences.

COURSE GOALS: This course is the first semester of a two-semester sequence designed primarily to provide students preparing for careers in health-related professions with a basic knowledge of the structure of the human body and a fundamental understanding of processes that constitute life.

COURSE OUTCOMES: Students will be able to:

1. identify in anatomical models, diagrams, photos or other media, the major anatomical features of the skeletal, muscular, nervous, and integumentary systems;
2. describe the physiological processes involved in the contraction of muscle, the generation of a nerve impulse and the propagation of nerve impulses in the nervous system;
3. list and construct in models the basic organic molecules present in the human body;
4. state in written form the relationships between physiological dysfunction and homeostatic response citing examples from the nervous systems;
5. recognize in histological section selected samples of human body;
6. demonstrate the function of the articulations in human body;
7. identify in anatomical models the major features of the human nervous system;
8. describe reflexive behavior; and
9. explain how the human nervous systems integrates sensory information and provides appropriate output.

COURSE CONTENT:

1. review of organic chemistry;
2. basic cell biology
 - a. anatomy and physiology of the plasma membrane;
 - b. protein synthesis; and
 - c. basic cell structure;
3. homeostasis and basic body organization;
4. histology of human tissue;
5. the skeletal system and the articulations;
6. the muscular system:
 - a. physiology of muscle contraction;

7. organization of the nervous system:
 - a. characteristics of excitable cells;
 - b. physiology of nerve impulse generation and propagation;
8. the central nervous system:
 - a. anatomy of the brain and spinal cord;
 - b. physiology of sensory and motor information processing;
 - c. reflexive information processing;
9. the special senses
 - a. olfaction and gustation;
 - b. the visual system; and
 - c. the auditory system.

COURSE REQUIREMENTS:

1. Required:

- Lecture Text: *Anatomy & Physiology: The Unity of Form and Function*, 9th edition, Ken Saladin, McGraw-Hill Publishers, 2020 (ISBN 978-1-30780-766-0 for soft cover purchase, ISBN 978-1-26025-600-0 for hard cover rental, or ISBN 978-1-26079-156-3 for eBook)
- Laboratory Manual: *A Photographic Atlas for the Anatomy and Physiology Laboratory*, 9th edition, Van De Graaff, Morton, & Crawley, Morton Publishing Company, 2019 (ISBN 978-1-61731-915-0)
- Course Guide: *BIO 201 Course Guide*, 14th edition, Tom Lehman, CCC Bookstore, 2023 (ISBN 979-8-88672-044-0)

2. Recommended:

- *Taber's Cyclopedic Medical Dictionary (indexed)*, 24rd edition, F.A. Davis Co. Publishers, 2019 (ISBN 978-1719642859)
- *Anatomy Coloring Book*, 4th edition, Kapit & Elson, Harper Collins Publishers, 2013 (ISBN 978-0321832016)

3. Access to CANVAS:

- Canvas is the online course management system for CCC. There will be online assignments throughout the semester. Students are expected to access their Canvas shell daily.
- Course announcement and schedule changes will be posted through Canvas. Send course-related communications to the instructor through Canvas. The instructor plans to respond to student Canvas emails within 24 hours of receipt.
- Go to <http://coconino.instructure.com>; It will ask for your email address and password (our IT department can assist you with this step), then take you to your classes for the semester.

COURSE POLICIES:

1. Classroom Etiquette/Standards of Conduct:

- a. **Recording Lectures:** Audio recording or video recording of lecture is permitted. Recordings cannot be posted online or shared with anyone outside this class (it becomes a copyright violation). This type of recording can be a useful supplement to attending lecture, but research shows that it is not as effective if used in place of attending lecture.
- b. **Reading:** Students are expected to complete all the assigned reading for both lecture and laboratory before that session. This ensures the best use of everybody's time and hopefully

alleviates confusion. If it appears that most students are not adequately reading the assignments in advance, pop quizzes may be instituted to encourage this activity.

- c. **Sensitive Topics:** We will be covering a few topics that may be sensitive to certain individuals (i.e., death, dissection, disease). No disrespect is meant in covering these topics, but they are integral to this course. If you have concerns about any of these topics, please contact the instructor. If you do not wish to participate in certain activities (i.e., dissection), you must inform the instructor of this at least one week before the activity so that an appropriate alternative exercise can be provided.
 - d. **Professionalism:** The instructor will treat you as adults and asks that you act as adults. Respect and consideration for your classmates during lectures, labs, and exams will be expected. Plagiarism on any assignments will not be tolerated.
 - e. **Dress Code:** The most important part of a dress code (from a laboratory perspective) is footwear. You must always wear footwear in the lab. It may be boots, shoes, or whatever, but your feet must be always protected from anything on the floor. The rest of the dress code is described in more detail in the College Catalog.
 - f. **Food, Drink, Tobacco:** The use of tobacco products of any kind is prohibited in all lectures and laboratory sessions. Drinks are to be kept in the designated locations away from laboratory work areas (in compliance with state and federal regulations).
 - g. **Special Assistance:** Professional disability specialists are available at Disability Resources to facilitate a range of academic support services and accommodations for students with disabilities. If you have a documented disability, you can request assistance by contacting Disability Resources at disability.resources@coconino.edu (e-mail), 928-226-4377, or 928-226-4342. Students may begin the accommodation process by submitting a self-identification form online at <https://www.coconino.edu/disability-resources> (click on Request for Support).
 - h. **Animals and Guests:** No animal is allowed in lecture or lab unless it is a registered aid-animal. Guests may be allowed to visit during certain lectures or lab exercises, with prior approval by the instructor.
 - i. **College Information:** There is a link to the syllabus statement within Canvas – College Information tab on the left – with details and contact information for college services.
2. **Academic Dishonesty Procedure:**
- a. **College Policy:** Academic dishonesty is a violation of the Student Code of Conduct as defined in Procedure 503-01. When a student commits an act of academic dishonesty, the instructor is responsible for determining the grade for the course or assignments. Incidents of academic dishonesty are reported to the Dean of Student development and Community Engagement for adjudication and follow up.
 - b. **Instructor Policy:** The instructor does not tolerate cheating at all. If you are suspected of cheating, the instructor will contact you and discuss the situation. If the instructor has evidence of your cheating, an administrative drop will be initiated immediately, and you will be removed from the course. Simply put, don't even try to cheat.
 - c. **Online AI tools:** AI content generation tools, including ChatGPT, are not allowed in this course. Their use could hinder your development as an independent thinker and compromise the course learning outcomes. Utilizing these tools will be deemed academically dishonest, violating our Academic Integrity Policy.

3. **Attendance:**

- a. **College Policy:** Students must attend their classes the first week of the term or a grade of NS (“no show”) will be recorded by their instructor and the student will be dropped from the roster. Students will not receive refunds for classes in which they have received an NS grade. Students are financially and academically responsible for all courses that they do not drop by published deadlines. Students must drop or withdraw from any class that they do not wish to complete. The Office of Registration and Enrollment Services publishes instructions for students to follow when dropping or withdrawing from classes.
- b. **Exam Policy:** During exams, personal communication devices (such as cell phones) will be turned off. If your electronic device goes off during an exam, you forfeit that exam.

4. **Assignments:**

- a. **Missed Assignments:** If you know that you will miss an assignment (such as an exam or checkpoint), coordinate with the instructor beforehand to schedule completing the assignment. Any assignment missed without prior coordination (at least 48 hours’ notice) will be graded “0”. There will be no “make up” assignments or extra credit assignments.
- b. **Spelling & Grammar:** You will be learning a new language of terminology and concepts throughout this course and will need to demonstrate a working knowledge of these terms and concepts. In most instances, partial points may be deducted for errors. In certain instances, full points may be deducted (these will be pointed out in the course). This is an important skill that you will want to master early on in this course.

COURSE EVALUATION: Dates and descriptions of these assignments will be posted on Canvas. It will be your responsibility to complete these assignments on time.

Activity	Point Allotment	Total
Lecture Quizzes	8 @ 50 points	38% of the course grade
Laboratory Practical Exams	4 @ 50 points	16% of the course grade
Lab Worksheets	14 @ 20 points	25% of the course grade
Checkpoint Quizzes	4 @ 16 points	4% of the course grade
Reflection Essays	3 @ 10 points	4% of the course grade
Final Exam	1 @ 150 points	13% of the course grade

Lecture Quizzes

- These will cover the material from the readings, lectures, and group discussions. The exams will have a mixture of multiple-choice, fill-in-the-blank, and essay questions. They will be in-person, closed-book, and closed-notes.
- The score from the lowest quiz/practical will be dropped. These exams cannot be made up if missed.

Laboratory Practical Exams

- These will cover the material from the laboratory exercises, course guide reading, and lab worksheets. The exams will involve identification of structures, proper use and spelling of terms, and understanding of how these concepts relate to the lecture material. They will be in-person, closed-book, and closed-notes.

Lab Worksheets

- These will cover the material from the course guide labs for that module. The assignment will include a paragraph to explain a concept asked and a labeled image of a structure constructed by the student (these will be uploaded to Canvas each week).

- The score from the lowest lab worksheet will be dropped. There will be no extensions of deadlines or makeups allowed.

Checkpoint Quizzes

- These will cover structures studied in the lab exercises. Students will work in groups but will earn individual quiz scores.
- These assignments can be made up if missed but must be completed before the next lab practical exam.

Reflection Essays

- These will assess your knowledge of the requirements for the course and what you will need to successfully complete them. The first will be due before the third week of the semester, the second will be due before the seventh week, and the third will be due before the twelfth week.

Final Exam

- This comprehensive exam will cover material from all sources in this course (both lecture and lab). It will have a mixture of multiple-choice, fill-in-the-blank, and essay questions. It will be in-person, closed-book, and closed-notes.

These are the instructor's expectations for each letter grade:

A – Exceptionally good performance, demonstrating a superior understanding of the subject matter, a foundation of extensive knowledge, and a skillful use of concepts and/or materials. This student will exhibit an interest in the material beyond that which is presented in the classroom.

B – Good performance, demonstrating capacity to use the appropriate concepts, a good understanding of the subject matter, and an ability to handle the problems and materials encountered in the subject.

C – Adequate performance, demonstrating an adequate understanding of the subject matter, an ability to handle relatively simple problems, and adequate preparation for moving on to more advanced work in the field. This grade is earned by the student who fulfills all the minimum requirements but little else.

D – Minimally acceptable performance, demonstrating at least partial familiarity with the subject matter and some capacity to deal with relatively simple problems, but also demonstrating deficiencies serious enough to make it inadvisable to proceed further in the field without additional work.

FINAL EXAM POLICY: The final exam is scheduled for the start of the last week of the semester. The second day of the week is reserved if delays (i.e., snow days) require rescheduling of the final exam.

SEMESTER CALENDAR: All assignments will be posted in Canvas. Changes to these assignments will be posted in Canvas. Here are a few of the more important dates as pertaining to this course:

- Sep 4 (M) = Labor Day (college is closed)
- Sep 5 (T) = last day to drop this class with 100% refund
- Sep 5 (T) = last day to drop without record
- Nov 10 (F) = Veterans Day (college is closed)
- Nov 23-24 = Thanksgiving holiday (college is closed)
- Dec 1 (F) = last day for student-initiated withdrawal
- Dec 11 (M) = Final Exam

Fall 2023 BIO 201-01 Schedule:

(Please note that this is a tentative schedule and is subject to change)

Mon	Monday	Tuesday	Wednesday	Thursday	Friday
8/28	1. Major Themes / <i>Lab 1: Language</i>		2. Chemistry <i>Lab 2: Microscopy</i>		
9/4	<i>Labor Day (college closed)</i>		3. Cell & Membrane <i>Lab 3: Cell Structures</i>		
9/11	Quiz #1 (1-3) 5. Histology <i>Lab 5: Tissue Types</i>		6. Integumentary System / <i>Lab 6</i>		
9/18	PRACTICAL #1 7. Bone Tissue <i>Lab 7: Skeletal Histo.</i>		8. Axial Skeleton / <i>Lab 8</i>		
9/25	Quiz #2 (5-7) 8. Appendicular Skeleton / <i>Lab 8</i>		9. Joints & Movements / <i>Lab 9: Articulations</i>		
10/2	Quiz #3 (8-9) <i>Skeletal System review</i>		12. Nervous Tissue <i>Lab 12: Nervous Histology</i>		
10/9	PRACTICAL #2 Continue Ch. 12		13. Spinal Cord & Spinal Nerves <i>Lab 13: Spinal Cord</i>		
10/16	Quiz #4 (12-13) 11. Muscle Tissue <i>Lab 11: Clay</i>		Continue Ch. 11 <i>Lab 11: Muscular Histology</i>		
10/23	10. Muscular System <i>Lab 10: Clay Muscles</i>		Continue Ch. 10		
10/30	Quiz #5 (10-11) <i>Muscle review</i>		14. Brain & Cranial Nerves / <i>Lab 14: Clay brain</i>		
11/6	PRACTICAL #3 Continue Ch. 14 / <i>Lab 14: dissection</i>		Continue Ch. 14 / <i>Lab 14: Cranial nerves</i>		<i>Veterans Day (college closed)</i>
11/13	Quiz #6 (14) 15. Autonomic Nervous System / <i>Lab</i>		16. Sense Organs <i>Lab 16A: General Senses</i>		
11/20	Quiz #7 (15-16A) 16. Sense Organs <i>Lab 16B: dissection</i>		Continue Ch. 16 <i>Lab 16B: Vision</i>	<i>Thanksgiving (college closed)</i>	
11/27	Continue Ch. 16 / <i>Lab 16C: Hearing & Equilibrium</i>		Continue Ch. 16 / <i>Lab 16D: Olfaction and Taste</i>		
12/4	Quiz #8 (16B-D) <i>Round Robin Review</i>		PRACTICAL #4 Course evaluations Review for Final		
12/11	FINAL EXAM		<i>(extra day)</i>		

The Instructor reserves the right to add, delete, or modify the syllabus with reasonable written notification