

Coconino Community College
SYLLABUS FOR Human Anatomy & Physiology II
Spring 2024
BIO 202-03 (4 credits)

Instructor: Thomas Lehman

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Student Office Hours:

- By appointment

COURSE DESCRIPTION: Design and function of the human body. Topics include body fluids, immune, cardiovascular, respiratory, digestive, urinary, and reproductive systems. **Prerequisite:** BIO 201 or Consent of Instructor. General Education: Lab Sciences.

COURSE GOALS: This course is the second 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 the physiological processes that constitute life.

COURSE OUTCOMES: Students will be able to:

1. perform various types of clinical laboratory evaluations of body fluids;
2. demonstrate an understanding of the homeostatic regulation of blood chemistry by citing examples from endocrine, cardiovascular, respiratory and renal physiology;
3. recognize in histological section selected tissues from the reproductive, digestive, respiratory and cardiovascular systems;
4. identify in anatomical models, diagrams, photographs or other media, the major anatomical features of the cardiovascular, respiratory, endocrine, lymphatic, digestive, excretory and reproductive systems of the human body;
5. state in written form the processes involved in development of the human body from fertilization to second trimester and in the production of gametes necessary for this process to occur;
6. construct written and graphic explanations of the physiological responses of the body to stress including examples from cardiovascular, endocrine, urinary and respiratory physiology;
7. explain the processes by which nutrient materials enter the body, are digested or otherwise manipulated and ultimately are converted into either body components or energy-rich molecules for body use.

COURSE CONTENT:

1. the endocrine system and the stress response;
2. the cardiovascular system:
 - a. the blood;
 - b. the heart and cardiac regulation;
 - c. the circulatory system and cardiovascular dynamics
3. the respiratory system:
 - a. anatomy of the upper and lower respiratory systems;
 - b. respiratory physiology;

4. the lymphatic system and immunity;
5. the digestive system and metabolism:
 - a. anatomy of the alimentary canal and accessory organs;
 - b. physiology of digestion and assimilation;
 - c. chemical processes of catabolic and anabolic reactions;
6. the urinary system and fluid/electrolytes:
 - a. anatomy of the kidney and associated structures;
 - b. physiological processes of urine formation;
 - c. water balance;
 - d. electrolyte balance and blood buffering;
7. the reproductive system and pregnancy:
 - a. anatomy of the male and female reproductive structures;
 - b. physiological regulation of gamete production;
 - c. fertilization, implantation and embryological development.

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 202 Course Guide*, 13th edition, Tom Lehman, CCC Bookstore, 2023 (ISBN 979-8-88672-045-7)

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. **Reading**: Students are expected to complete all the assigned reading for both lecture and laboratory before attempting the weekly assignments. This ensures the best use of everybody's time and hopefully alleviates confusion.

- b. **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.
 - c. **Professionalism:** The instructor will treat you as adults and will ask 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.
 - d. **Dress Code:** During lab activities, you are expected to wear clothing that is safe if you are near open flame or chemicals. Closed-toed footwear is a good idea when performing any type of lab activity.
 - e. **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).
 - f. **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 school 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
Discussions	15 @ 10 points	11% of the course grade
Lab Assignments	15 @ 30 points	24% of the course grade
Graded Quizzes	15 @ 50 points	55% of the course grade
Final Exam	1 @ 150 points	15% 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 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. Instructions and due dates will be listed in Canvas. Course content will be locked until these essays are completed and submitted. 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:

- Jan 15 (M) = Martin Luther King, Jr. Day (college is closed)
- Jan 22 (M) = last day to drop this class with 100% refund (without record)
- Feb 19 (M) = President's Day (college is closed)
- Mar 11-16 = Spring Break (college is closed)
- Apr 12 (F) = last day for student-initiated withdrawal
- May 6 (M) = Final Exam

Fall 2020 BIO 202-01 Schedule:

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

WEEKLY TOPICS

- Check Canvas for precise dates of each topic.

Week 1: Orientation and Endocrinology

Week 9: Digestive System

Week 2: Endocrinology

Week 10: Nutrients & Metabolism

Week 3: Circulatory System: Blood

Week 11: Urinary System

Week 4: Circulatory System: The Heart

Week 12: Water, Electrolyte & Acid-Base Balance

Week 5: Circulatory System: Blood Vessels & Hemodynamics

Week 13: Reproductive System: Male

Week 6: Lymphatic System

Week 14: Reproductive System: Female

Week 7: Immunity

Week 15: Development & Pregnancy

Week 8: Respiratory System

Week 16: Final Exam

WEEKLY SCHEDULE

- Check Canvas for precise times and dates of each assignment.

Online: Chapter videos to watch, textbook to read, notes to write, labs to review before completing the weekly assignments.

Mondays: New weekly module opens. Review the introduction page. Use the chapter resources to build a set of notes (read the textbook). Read the lab assignment and submit the lab assignment anytime (missed points can be made up before Friday evening).

Fridays: Discussion posts are due. You can post anytime throughout the week (no extension). Lab Assignments are due. You can complete anytime through the week (no extension).

Sundays: Online quiz over that week's materials. There are practice quizzes to help you prepare beforehand.