GRAYSON COLLEGE

BIOL2301
ANATOMY AND PHYSIOLOGY 1
LECTURE SYLLABUS

Please Note: Due to extenuating circumstances, including public health issues, course and testing delivery methods, instructional schedules, housing contracts, campus procedures and/or operating hours may be altered, interrupted and/or ceased for a limited or extended period of time. Such changes will be posted on the College website.

Course Information

BIOL 2301
Human Anatomy & Physiology I
Section: B01NT and B02NT
Internet course, Lecture "meets" 3 hours/ week & testing conducted on line. Lab "meets" 3 hours/week. This course uses free Open Educational Resources so there is no textbook cost

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Professor Contact Information

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Professor name: Michael Dill
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Email: dillm@grayson.edu
Office location: Science 105F
Office hours: During the pandemic by appointment and/or virtual
Science Department Program Assistant: 903-463-8797 (Karen Sheffield)

Course Pre-requisites, Co-requisites, and/or Other Restrictions
Although students must register for a separate course number for lab and lecture, the two components are in fact part of the same course and are separated for scheduling and reporting reasons. Final grades are derived from the combination of both lecture and laboratory grades (60%/40% respectively). Together the lecture and laboratory components satisfy the state learning objectives (CS1, CT2, CT3, EQS2, and TW1) and therefore must be taken concurrently.

Prerequisite: College Readiness in reading required. Students must have passed the reading portion of the THEA (score of at least 230)

Concurrent enrollment in BIOL 2101 is required.

Prior completion of General Biology I (BIOL1306/1106), or Survey A&P (BIOL2404) is strongly recommended.

Course Description

BIOL 2301. Anatomy and Physiology I. (3-0-3). Anatomy and Physiology I is the first part of a two-course sequence. It is a study of the structure and function of the human body including cells, tissues and organs of the following systems: integumentary, skeletal, muscular, nervous and special senses. Emphasis is on interrelationships among systems and regulation of physiological functions involved in maintaining homeostasis.

Student Learning Outcomes

State Core Objectives Met in this Combined Lecture and Lab Course:

1. Communication Skills, CS1 – Students will develop, interpret, and express ideas through written communication.
2. Critical Thinking Skills, CT2 – Gather and assess information relevant to a question.
3. Critical Thinking Skills, CT3 – Analyze, Evaluate, and Synthesize Information.
4. Empirical and Quantitative Skills, EQS2 – Students will describe, explain, and predict natural phenomena using the scientific method.
5. Teamwork, TW1 – Students will work cooperatively with their pears and leaders to more effectively solve problems by utilizing insights from multiple perspectives.

Student Learning Outcomes Met in this Combined Lecture and Lab Course:

1. Students will be able to locate and identify the various regions of the human body as well as the organs and their associated functions.
2. Students will be able to demonstrate an understanding of the integumentary, skeletal, muscular, and nervous systems and their interrelatedness.
3. Students will be able to identify the structures of the human cell and their related functions, including metabolism and cellular respiration.
4. Students will be able to demonstrate working knowledge of the chemical process of the human body as well as the physical properties that govern them.

State Learning Outcomes Met in this Combined Lecture and Lab Course:

<u>Lab component</u>

Upon successful completion of this course, students will:

1. Apply appropriate safety and ethical standards.
2. Locate and identify anatomical structures.
3. Appropriately utilize laboratory equipment, such as microscopes, dissection tools, general labware, physiology data acquisition systems, and virtual simulations.
4. Work collaboratively to perform experiments.
5. Demonstrate the steps involved in the scientific method.
6. Communicate results of scientific investigations, analyze data and formulate conclusions.
7. Use critical thinking and scientific problem-solving skills, including, but not limited to, inferring, integrating, synthesizing, and summarizing, to make decisions, recommendations and predictions.

Lecture component

Upon successful completion of this course, students will:

1. Use anatomical terminology to identify and describe locations of major organs of each system covered.
2. Explain interrelationships among molecular, cellular, tissue, and organ functions in each system.
3. Describe the interdependency and interactions of the systems.
4. Explain contributions of organs and systems to the maintenance of homeostasis.
5. Identify causes and effects of homeostatic imbalances.
6. Describe modern technology and tools used to study anatomy and physiology.

Course Competencies:
A student completing this course can expect lectures covering the following topics in detail, and will be tested over each section as announced by the instructor. Within each section of Anatomy and Physiology I, content may or may not be covered in the sequence presented here. Content topics need not be taught in single blocks, yet may be integrated. Unifying themes, such as homeostasis, are emphasized throughout.

Body Plan and Organization-Students who have completed this section of the course should understand the scope of studies in anatomy and physiology and be able to use and understand descriptive anatomical and directive terminology.

Homeostasis-Upon completion of this section of the course, students should be able to explain the basic concept of homeostasis and how homeostatic mechanisms apply to the body systems.

Chemistry and Cell Biology Overview-Students who have completed this section of the course should be able to identify cellular structures and explain their respective functions.

Histology-Completion of this section of the course should enable the student to be able to describe the basic tissues of the body, indicate their location, and explain their functions.

Integumentary System-Students who have completed this section of the course should be able to identify and describe the major gross and microscopic anatomical components of the integumentary system and describe the functions of the system.

Skeletal System-Completion of this section of the course should enable a student to be able to identify and describe the major gross and microscopic anatomical components of the skeletal system and describe the functions of the system.

Muscular System-Students who have completed this section of the course should be able to identify and describe the major gross and microscopic anatomical components of the muscular system and explain their functional roles in body movement, maintenance of posture, and heat production.

Nervous System-Students who have completed this section of the course should be able to identify and describe the major gross and microscopic anatomical components of the nervous system and explain their functional roles in communication, control, and integration.

Special Senses-Completion of this section of the course should enable a student to be able to identify and describe the major gross and microscopic anatomical components of the eye and ear, and explain their functional roles in vision, hearing, and equilibrium. Students should also be able to identify and locate the receptors responsible for olfaction and gustation and briefly describe the physiology of smell and taste.

Required Textbooks (ISBN # included) and Materials

LECTURE (**REQUIRED FREE TEXTBOOK**)
Anatomy and Physiology, 1st edition, OpenStax College, 1st edition (January 1, 2013). **ISBN-13:** 978-1938168130
This is a FREE download with options to order print copies. Go to: https://openstax.org/details/anatomy-and-physiology , select how you want to access the book. I will provide pdfs of the chapters in your Canvas modules.

LAB (**REQUIRED**)
Exploring Anatomy & Physiology in the Laboratory, 3rd Edition by Erin C. Amerman, Morton Publishing Company, ISBN 9781617316203. This is CHEAPER and better than the McGraw-Hill manual

Suggested Course Materials

Required Assignments & Academic Calendar

In case of inclement weather, emergency closings, or other unforeseen disruptions to scheduled classes, student must log onto their Canvas accounts for directions on where or how to continue their coursework.

Important Dates:
First day of classes
Labor day (no classes)
Last day to withdraw from classes:
Lecture Final Exams:

SEQUENCE OF INSTRUCTION

Week	Date	Topics, Readings, Assignments, Deadlines
1		**Chapter 1 – An Introduction to the Human Body**
2		**Chapter 2 – The Chemical Level of Organization**
3		**Chapter 3 – The Cellular Level of Organization**
4		**Chapter 3 – The Cellular Level of Organization, continued** **LECTURE TEST 1: Chapters 1, 2, and 3**
5		**Chapter 4 – The Tissue Level of Organization**
6		**Chapter 5 The Integumentary System**
7		**Chapter 6 Bone Tissue & Skeletal System**
8		**LECTURE TEST 2: Chapters 4, 5, and 6** **Chapter 7 Axial Skeleton** **Chapter 8 Appendicular Skeleton**
9		**Chapter 9 Joints**
10		**Chapter 10 Muscle Tissue**
11		**LECTURE TEST 3 covers chapters 7, 8, 9, 10 and 11 but MOSTLY 9 and 10 with some gross anatomy** **Chapter 12 The Nervous System and Nervous Tissue**
		DROP DATE
12		**Chapter 13 Anatomy of the Nervous System**

Week	Date	Topics, Readings, Assignments, Deadlines
13		**Chapter 12 The Nervous System and Nervous Tissue, continued**
14		**Chapter 14 The Somatic Nervous System** **Chapter 15 The Autonomic Nervous System ONLY parts!**
15		**LECTURE TEST 4: Chapters 12, 13, and 14**
16		**Lecture Final Test is COMPREHENSIVE & OPTIONAL** **Lab Final Practical is COMPREHENSIVE & OPTIONAL**

Methods of Evaluation

Anatomy and Physiology I is a composite course, composed of a Biology 2301 lecture section and a Biology 2101 laboratory section. 60% of the composite course grade will come from the student's performance in the lecture section. The remaining 40% of the composite course grade will come from the student's performance in the laboratory section. The student's final composite course grade will be calculated by their lecture professor at the end of the semester. **The resulting letter grade will be reported to the registrar as the final grade for both the laboratory and lecture sections.**

LECTURE COMPONENT

Daily work, which may consist of chapter quizzes, study questions, post tests, or on-line activities, may be required of students. **Daily work may constitute up to 20% of the lecture grade.** Four major examinations will be given at scheduled times throughout the semester. Dates of the examinations will be announced in class. There will be no make-ups taken after an exam has been returned to the students. Students not taking the exam will receive a "0". Exams may be taken early as scheduled with the instructor for special circumstances. Exams may consist of multiple choice, matching, short answer, fill-in-the-blank, true and false and/or discussion questions. Graded exams will be returned to the students. After the student examines the test, it will be returned to the instructor. **The exams will constitute the remaining 100% of the lecture grade (ex. if daily work is worth 20%, then the exams will be worth 80%).**

A student may have the ability to earn up to 10 extra credit points during the semester. The extra credit points will be added to the total number of points before dividing by five to derive the lecture average.

An optional comprehensive final will be given at the time scheduled by the college. Students who have not taken all four exams must take the final. Students who have taken all four exams have the option of taking the final to replace the lowest exam grade. **The final cannot be used to replace the daily work average.**

Lecture performance will be calculated in the following manner:
Add the daily grade average (if applicable), four highest test grades, and the extra credit (if applicable), then divide by five to get the lecture average.

Course Grading

Your final grade will be determined by both lecture and laboratory scores. **Sixty percent (60%) of the final grade will be based on your lecture grade and 40% will be based on your laboratory grade. You will receive the SAME grade in lecture and lab.**

To calculate a final grade in lecture and lab: You take the lecture grade and multiply by 0.60 and the laboratory grade multiplied by 0.40. You add the two resulting numbers together and get the final grade. e.g., you make a 72% average in lecture and an 86% in the laboratory. So you do the following: (0.72*0.60) + (0.86 * 0.40) = final grade. If you perform this equation, you calculate 0.43 + 0.34 = 0.77 or 77% as a final course grade, because your lecture grade contributes more to the final grade than your laboratory grade. This calculated grade will then be reported for BOTH lecture and lab sections to the registrar.

At the end of the semester, the laboratory instructor will communicate students' laboratory grades to the students' lecture professor for calculation of the students' final A&P1 course grades.

Lab reports, quizzes, and exam grades will be posted on Canvas.

Composite grades will be rounded up or down. For example, an average of 89.5 will be rounded up to a 90 and 89.4 will be rounded down to an 89.

Letter grades will be assigned as follows:

100 - 89.5	= A
89.4 - 79.5	= B
79.4 - 69.5	= C
69.4 - 59.5	= D
Below 59.4	= F

Daily work and exam grades to be posted on Canvas

Methods of Instruction

Instruction will be performed via lecture (either face to face, live stream, and/or pre-recorded videos/presentations), graded and/or ungraded exercises, and other web materials as determined by the professor. Students should use all provided materials and resources to be successful.

Computer Hardware and Software Requirements

For best performance, Canvas should be used on the current or first previous major release of Chrome, Firefox, Edge, or Safari. Because it's built using web standards, Canvas runs on Windows, Mac, Linux, iOS, Android, or any other device with a modern web browser.

Canvas only requires an operating system that can run the latest compatible web browsers. Your computer operating system should be kept up to date with the latest recommended security updates and upgrades.

Course & Instructor Policies

There will be no make-ups taken after an exam has been returned to the students or closed online. Students not taking the exam will receive a "0". Exams may be taken early as scheduled with the instructor for special circumstances. Likewise, no daily work will be accepted once the instructor has returned or otherwise gone over the material with the students.

Class Attendance and Participation

Attendance and Participation Academic success is closely associated with regular class attendance and course participation. All successful students, whether on campus or online, are expected to be highly self-motivated. All students are required to participate in courses regularly and are obliged to participate in class activities and complete and submit assignments following their faculty' instructions. Students taking courses during compressed semester timeframes such as mini-mester, summer sessions, and 8-week courses should plan to spend significantly more time per week on the course. Responsibility for work missed because of illness or school business is placed upon the student. Instructors are required to include in their syllabi the attendance policy for the courses(s) they teach. The college considers absences equal to or greater than 15% of the course's requirements to be excessive.

In order for students to be counted as having attended a class before the census date, the following guidelines are to be used: • Physical attendance in class with an opportunity for instructor and student interaction • Submission of an academic assignment • Completion of an exam, interactive tutorial, or computer-assisted instruction • Attendance at a study group assigned by the faculty • Participation in an online discussion in the class • Contact with a faculty member to ask a question. **These are also the methods an instructor may use to determine attendance on a daily/weekly basis.**

Student Conduct & Discipline

Classroom Behavior

Students are expected to maintain classroom decorum that includes respect for other students and the instructor, prompt and regular attendance and an attitude that seeks to take full advantage of the educational opportunity.

Defacing College Property
Anyone caught defacing property in the lab will be responsible for cleaning, repairing or replacing the defaced property. The individual will also receive a zero (0) for the current lab assignment. Defacing property includes, but is not limited to, writing, marking or scratching on the tables, tabletops, chairs, cabinets, counter tops, shelving or walls.

Cell Phone Policy
All cell phones and other electronic devices must be turned off before entering the classroom. Text messaging is not permitted during class. If you have an emergency and need to take a call during class, you must inform the instructor before the beginning of class. Turn your ringer to vibrate, and when your call comes in, pick up all of your belongings and leave the classroom. You may return to class the next time the class meets.

Most instructor student contact for the course will be via email and announcements. Students may schedule a meeting by appointment, but most meetings will be virtual.

Students will receive instructions on how to complete and turn in daily assignments.

Exams will typically be conducted online.

Academic Integrity
The faculty expects from its students a high level of responsibility and academic honesty. Because the value of an academic degree depends upon the absolute integrity of the work done by the student for that degree, it is imperative that a student demonstrate a high standard of individual honor in his or her scholastic work.

Scholastic dishonesty includes but is not limited to cheating, plagiarism, collusion, and the submission for credit of any work or materials that are attributable in whole or in part to another person, taking an examination for another person, any act designed to give unfair advantage to a student or the attempt to commit such acts. Plagiarism, especially from the web, from portions

of papers for other classes, and from any other source is unacceptable and will be dealt with under the college's policy on plagiarism (see GC Student Handbook for details). Grayson College subscribes to turnitin.com, which allows faculty to search the web and identify plagiarized material.

Plagiarism is a form of scholastic dishonesty involving the theft of or fraudulent representation of someone else's ideas or words as the student's original work. Plagiarism can be intentional/deliberate or unintentional/accidental. Unintentional/Accidental plagiarism may include minor instances where an attempt to acknowledge the source exists but is incorrect or insufficient. Deliberate/Intentional plagiarism violates a student's academic integrity and exists in the following forms:

- Turning in someone else's work as the student's own (such as buying a paper and submitting it, exchanging papers or collaborating on a paper with someone else without permission, or paying someone else to write or translate a paper)
- Recycling in whole or in part previously submitted or published work or concurrently submitting the same written work where the expectation for current original work exists, including agreeing to write or sell one's own work to someone else
- Quoting or copy/pasting phrases of three words or more from someone else without citation, • Paraphrasing ideas without citation or paraphrasing incompletely, with or without correct citation, where the material too closely matches the wording or structure of the original
- Submitting an assignment with a majority of quoted or paraphrased material from other sources
- Copying images or media and inserting them into a presentation or video without citation,
- Using copyrighted soundtracks or video and inserting them into a presentation or video without citation
- Giving incorrect or nonexistent source information or inventing source information
- Performing a copyrighted piece of music in a public setting without permission
- Composing music based heavily on someone else's musical composition.

The policy of the Science Department: Any instance of a) plagiarism, b) collusion, c) cheating, or d) falsifying records, will result in a "0" for the assignment. The "0" assigned for cheating cannot be dropped or replaced by another grade when calculating the laboratory average.

Student Responsibility

You have already made the decision to go to college; now the follow-up decisions on whether to commit to doing the work could very well determine whether you end up working at a good paying job in a field you enjoy or working at minimum wage for the rest of your life. Education involves a partnership that requires both students and instructors to do their parts. By entering into this partnership, you have a responsibility to show up for class, do the assignments and reading, be engaged and pay attention in class, follow directions, and put your best effort into it. You will get out of your experience here exactly what you put into it – nothing more and nothing less.

The instructor reserves the right to modify and alter the syllabus as necessary. When this occurs the students will be notified in writing (announcement or email typically).

TITLE IX

GC policy prohibits discrimination on the basis of age, ancestry, color, disability, gender identity, genetic information, national origin, race, religion, retaliation, serious medical condition, sex, sexual orientation, spousal affiliation and protected veterans status.

Furthermore, Title IX prohibits sex discrimination to include sexual misconduct: sexual violence (sexual assault, rape), sexual harassment and retaliation.

For more information on Title IX, please contact:

- Dr. Molly M. Harris, Title IX Coordinator (903)463-8714
- Ms. Logan Maxwell, Title IX Deputy Coordinator - South Campus (903) 415-2646
- Mr. Mike McBrayer, Title IX Deputy Coordinator - Main Campus (903) 463-8753
- Website: http://www.grayson.edu/campus-life/campus-police/title-ix-policies.html
- GC Police Department: (903) 463-8777- Main Campus) (903-415-2501 - South Campus)
- GC Counseling Center: (903) 463-8730
- For Any On-campus Emergencies: 911

**Grayson College is not responsible for illness/injury that occurs during the normal course of classroom/lab/clinical experiences.

**These descriptions and timelines are subject to change at the discretion of the Professor.

** Grayson College campus-wide student policies may be found at the following URL on the College website: https://www.grayson.edu/currentstudents/Academic%20Resources/index.html