ANATOMY AND PHYSIOLOGY I

Biology 2401.001
Center for Instruction (CI) 113
MW 2:00-3:15 PM

Instructor: Manuela Gardner, PhD.
Office: EN -314E
Phone: 361-825-3959
E-mail: Manuela.Gardner@tamucc.edu
Office hours: TBA

COURSE DESCRIPTION: This course emphasizes on the structure and function of the human body. Anatomy and Physiology I (BIOL 2401) is the first of a lower-division, lecture-laboratory series that introduces students to gross anatomy and physiology. In lecture, we will focus on the functional physiology of the human systems. We will focus on the physiology of cells, tissues and organ systems. In the laboratory, you will perform physiological tests and study descriptive anatomy, drawing parallels between experiments, laboratory models of human structures, animals for dissection and the human condition. Anatomy and Physiology serves students pursuing a wide variety of careers, but it is primarily designed for those in nursing and kinesiology. Students, in consultation with their academic advisors, must determine whether this course is appropriate for their academic and/or career plans.

The instructor of this course will provide the students with: (1) information in the form of lectures, films, handouts, assigned readings, and supplemental readings; (2) specimens and models for hands-on examination in the laboratory; and (3) advice, supervision and guidance. The laboratories are designed to augment and promote the overall learning process. However, topics currently being covered in lecture may not always coincide with the topics currently being covered in laboratory.

PREREQUISITE: BIOL 1406 is required. CHEM 1311/1111 is strongly recommended. Not recommended for Biology or Biomedical Sciences majors.


REQUIRED LABORATORY MATERIALS: A laboratory coat is required.

SUGGESTED BOOKS: Any of the various anatomy and/or physiology coloring books that are available in bookstores, such as: Kapit, W. and Elson, L.M. (2002). The Anatomy Coloring Book. 3rd ed. Benjamin Cummings, San Francisco, CA. Any of the various atlases of anatomy and/or physiology that are

**REQUIRED E-MAIL:** All students must have a Texas A&M University-Corpus Christi e-mail account. Make sure that you can access and use it because, for students in my classes, it is the only e-mail address to which I will reply. Please go to http://www.tamucc.edu/ise.html to obtain a new islander account.

**TENTATIVE LECTURE SCHEDULE:**

<table>
<thead>
<tr>
<th>Week</th>
<th>Content</th>
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<tbody>
<tr>
<td>1 (August 27)</td>
<td>Introduction</td>
</tr>
<tr>
<td>2 (September 3)</td>
<td>Levels of Organization: Chapters 1, 2</td>
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<tr>
<td>3 (September 8, 10)</td>
<td>Levels of organization cont. Chapters 3</td>
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<tr>
<td>4 (September 15, 17)</td>
<td>Levels of organization cont. Chapter 4; Chapter 5</td>
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<tr>
<td>5 (September 22, 24)</td>
<td>Support and movement: Chapter 6; <strong>review for Test 1</strong></td>
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<tr>
<td>6 (September 29, October 1)</td>
<td><strong>Test 1 (9/29)</strong>; Support and movement: Chapter 6</td>
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<tr>
<td>7 (October 6, 8)</td>
<td>Chapter 9; Muscles: Chapter 10</td>
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<tr>
<td>8 (October 13, 15)</td>
<td>Muscles: Chapters 10; Muscular System: Chapters 10, 11</td>
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<tr>
<td>9 (October 20, 22)</td>
<td>Neural Tissue: Chapter 12</td>
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<tr>
<td>10 (October 27, 29)</td>
<td><strong>review for Test 2; Test 2 (10/29)</strong></td>
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<tr>
<td>12 (November 3, 5)</td>
<td>Chapters 15, 16</td>
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<tr>
<td>13 (November 10, 12)</td>
<td>Neural integration: Chapters 15, 16;</td>
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<tr>
<td>14 (November 17, 19)</td>
<td>Chapters 15, 16; <strong>review for test 3</strong></td>
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<tr>
<td>15 (November 24, 26)</td>
<td><strong>Test 3 (11/24)</strong>; Special senses: Chapter 17;</td>
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<tr>
<td>16 (December 1)</td>
<td>Last day of classes; review for final</td>
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<tr>
<td><strong>December 8: 1:45-4:15 PM</strong></td>
<td>Final exam (Comprehensive)</td>
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*Chapters in Tortora, Derrickson (2009). Reading these chapters is a standing class assignment.

**GRADING:** Your final letter grade will be based on the points you earn in lecture and laboratory. The final grading scale will also be determined at the end of the semester, but the cut-off for each grade will be no higher than the following:

\[ A \geq 90\% > B \geq 80\% > C \geq 70\% > D \geq 60\% > F \]
This course is designed so that lecture contributes 75% of your grade, and laboratory contributes 25% of your grade. The laboratory grade is part of your final grade; it does NOT stand on its own:

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<tbody>
<tr>
<td>Lecture</td>
<td>75 %</td>
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<tr>
<td>Laboratory</td>
<td>25 %</td>
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<tr>
<td>TOTAL PERCENTAGE POSSIBLE:</td>
<td>100 %</td>
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LECTURE EXAMINATIONS: I will give three examinations and one final during the course. I will be taking questions for these tests primarily from material covered in the lectures. Examinations will be multiple-choice, labeling, short answer questions and/or drawings. The three lecture examinations are sequential (i.e., each examination covers material from one specific section of the course). The final examination is comprehensive (i.e., covers material from the entire course).

- If your average grade from the three lecture exams is a B or higher, you can skip the final.
  You must take the final if your average grade from the three lecture exams is a C or lower. This average does NOT include your laboratory %. Only lecture exams are counted towards this rule. *If you do not take the final with a C or lower in lecture (i.e. as stated in the previous sentence), I will count the final as a zero and it will be part of your grade for the course ie in this case it will not be redemptive.*

- The final is redemptive. In other words, if you earn a higher score on the final than on one of your lecture exams, it will be doubled to replace your lowest examination grade: The average of the two highest non-final examinations plus double (2x) the final examination. Taking the final will not hurt you, it can only benefit you. Exception see “*” above.

Sample calculations: T = Tests in lecture; F = Final

- \((T1 + T2 + T3)/3 = \% \) in lecture. If that \% is 79 or lower, you must take the final.
- Taking the final: \((T + T + F + F)/4 = \% \) in lecture after final. This gives the final a lot of power as it counts twice and replaces lowest lecture test grade.
- Not taking the final with a 79% or lower in lecture = 0 for final: \((T1 + T2 + T3 + 0)/4 = \% \) in lecture after final. In this case, your \% in lecture will decrease as you did not take the final as required by the rules.

Because of this flexibility, however, no make-up examinations are allowed, except in extreme emergency situations.

LABORATORY POINTS: In the laboratory, you will receive total points. Your \% will be calculated from these points. Specific laboratory grading, policies, and rules will be discussed separately and again
thoroughly in laboratory. In general, you will earn points in laboratory from quizzes, video, in-lab assignments and practical examinations (timed laboratory examinations with short answer questions). In the laboratory, students sometimes work individually and sometimes with one or more partners. **Only those individuals actually present and participating in the laboratory will receive credit for the assignments.** Assignments have due dates/times and will only be accepted on the due date/time. **Teaching Assistants will not give extra points to students, unless specified by Dr. Gardner and given to all students.**

**BONUS POINTS:** No individual extra credit assignments will be available in this class. I may provide opportunities for the *entire class* to earn additional bonus points (e.g., attendance, video assignments, written reports, library or web exercises, un-announced quizzes, etc.). Such opportunities may be offered or announced only once, so be in class, be on time and stay for the entire period. Extra points are also built into all examinations (as extra questions). **Bonus points (from quizzes, exercises, etc.) cannot be made up—period.**

**Miscellaneous:** Bring two #2 pencils to each lecture examination (including the final examination); I neither provide nor sell pencils. I will provide Scantron sheets for you. After an examination is returned, you have one (1) week to notify me of clerical, mathematical, and/or other errors. I will rectify any such errors, but I will not change a legitimate grade just because you “need” it. I am available for consultation and extra help, but it is the student’s responsibility to request help.

**Spelling and Legibility:** Spelling counts—in both lecture and in laboratory. To be considered for partial credit, your answer must phonetically sound like the word that you are trying to spell. Examples of answers that are incorrect:

- Grossly misspelled words (e.g., “crevurfian pleat” for “cribriform plate”).
- Ambiguous answers (e.g., “tibula”—could be “tibia,” could be “fibula”).
- Illegible answers (e.g., “ep-squiggle-squiggle-squiggle” for “epididymis”).

**STUDENT LEARNING OUTCOMES:** This course seeks to give students an understanding of the human organism by examining its components and their interactions. Broadly, students will study the structure and function of the human body emphasizing on biological chemistry, cell biology, tissues level and organ systems. The lectures we will cover topics that range from transport across membranes, passive membrane properties, as well as neuron structure and function and muscle structure and functions.

Although the main emphasis of this course is an understanding of the structure and function of the normal human body, we will also discuss how abnormal conditions serve as natural experiments that help to elucidate normal structure and function. **To do well in the course, students must attend and participate in lectures and laboratories, read the assigned material and mentally organize**
information from their instructors, their readings and their laboratory work. For all components that are examined within each topic in the schedule, the student will be expected to:

- Understand and correctly use scientific and clinical terminology.
- Recognize and identify structures in the human body including their components.
- Understand and explain how structures and their components interact to perform one or more functions.
- Discuss homeostatic control mechanisms that regulate a particular structure/function, and what in turn that particular structure/function regulates.
- Explain the structural and/or functional bases of selected clinical conditions, dysfunctions and disease states that help to explain the normal structure and function of the body by perturbing it.

ATTENDANCE POLICIES: Attendance is the student’s responsibility and students are expected to attend every class and laboratory. Practical Examinations require extensive set-up, and neither time nor space is available for make-up practical examinations. Missing laboratories will result in loss of points.

ABSENCES: You are responsible for the material covered and assignments made in every lecture and laboratory regardless of whether you attend it. “I came in late and didn’t hear about the assignment,” is never an acceptable excuse. It is always your responsibility to determine what happened in class or laboratory during your absence. You must obtain class or laboratory notes from other students (i.e., I do not “share” my notes).

Points missed because of an unexcused absence (including tardiness and leaving early) cannot be recovered. An excused absence is emergency allows us to make alternative arrangements if necessary. The documentation required for an absence to be excused must be:

- from an appropriate source (e.g., doctor, dentist, funeral director) who states the nature of the event that caused (or will cause) your absence. Also must state appropriate date(s).
- in writing, on official stationery, and signed. (I do not return excuses to you.) Telephone calls, Faxes, and e-mails are not acceptable.
- presented prior to the absence for a scheduled event (e.g., university-sponsored activity, recognized religious holiday, military service).
- presented no more than one week after the date of an unexpected absence.
- Approved by Dr. Gardner. These rules apply to both lecture and laboratory. Your teaching Assistant cannot approve any such absences or make arrangements without Dr. Gardner’s
approval. If these rules are not followed, you will not receive credit for assignments or tests.

UNACCEPTABLE EXCUSES: Only unavoidable absences are excused, so you should schedule routine personal events (e.g., vacations, weddings, reunions, non-emergency medical or dental visits, parent-teacher conferences, household or auto repairs) to avoid conflicts with your classes. Oversleeping is never an acceptable excuse. Employment conflicts are not acceptable excuses for absences, tardiness, or leaving class early. (Once enrolled in a class, it is the student’s responsibility to arrange his or her work schedule so that no regularly scheduled class, laboratory, or examination time is missed). Texas waives jury duty for students, so jury duty is not an acceptable excuse.

With a legitimate excuse, you may (in rare cases) attend a different laboratory section (including a practical examination) during the same workweek, if—and only if—(1) there is room for you, and (2) you obtain permission from the instructor ie Dr. Gardner. If you arrange to take any test at an alternate time and do not show for that appointment, then you forfeit the opportunity to take the test except at its originally scheduled time. Special circumstances that may warrant giving an individual a make-up test will be referred to Student Affairs.

LATE ASSIGNMENTS: You may always turn in assignments early. Except for excused absences, late assignments will not be accepted. If you know that you will have an excused absence when an assignment is due, you must turn in that assignment before its due date. You should turn in assignments that were missed because of an unexpected, excused absence as soon as possible, and the deadline for accepting this type of late assignment is one (1) week after the original due date.

Any situations for which you cannot provide an acceptable excuse as outlined above (e.g., “I have an excuse, but it is too personal to discuss with you”) will be referred Student Affairs.

EXPECTATIONS: You are adult University students. I will treat you as such, and I will expect you to act as such. Texas A&M University-Corpus Christi, as an academic community, requires that each individual respect the needs of others to study and learn in a peaceful atmosphere. Under Article III of the Student Code of Conduct, classroom behavior that interferes with either (a) the instructor’s ability to conduct the class or (b) the ability of other students to profit from the instructional program may be considered a breach of the peace and is subject to disciplinary sanction outlined in article VII of the Student Code of Conduct. Students engaging in unacceptable behavior may be instructed to leave the classroom. This prohibition applies to all instructional forums, including classrooms, electronic classrooms, labs,
discussion groups, field trips, etc. **I will not tolerate disruptive, disrespectful, or abusive behavior/language directed toward anyone in this class** (i.e., student or instructor). Violations range from talking during class to outright insubordination, and will result in penalties that range from the student being asked to stop to the student being “escorted” from the class - permanently.

Cellular phones (including text messaging), pagers, and other “beepers” **must be turned off in the classroom and laboratory.** (I will make exceptions for certain “emergency” personnel, but you must see me to obtain this). **I will also remove points if the rules are not respected.** Children are not allowed in the rooms during lecture or laboratory periods, or when the child’s guardian is working or studying “after hours.”

**LEARNING:** Learning is more than just reading, taking notes and memorizing. Reading and taking notes puts information in short-term memory where it is forgotten quickly unless you do something with it. Memorizing, though important, is but the first step in the learning process. As university students, you should be able to link, combine and synthesize the bits of data that you memorize into useful concepts.

**SCHOLASTIC DISHONESTY WILL NOT BE TOLERATED.** University students are expected to conduct themselves in accordance with the highest standards of academic honesty. Academic misconduct for which a student is subject to penalty includes all forms of cheating, such as illicit possession of examinations or examination materials, falsification, forgery, complicity or plagiarism. (Plagiarism is the presentation of the work of another as one’s own work.) In this class (lecture and laboratory), academic misconduct or complicity in an act of academic misconduct on an assignment or tests (including laboratory tests) will result in an F in the course, if it is the student’s first offense.

- You must be prepared to present a photo ID at all examinations.
- Different test forms may be prepared for a single examination. To ensure that the appropriate key will be used to grade your answer sheet, always follow instructions on the test or answer sheet, or given orally by the instructor.
- If you leave an examination room—for any reason—you must hand in your answer sheet and you will not be allowed to resume the examination. Attend to personal matters (e.g., rest room visits) before the examination.
- Be on time! **Anyone arriving after someone has completed an examination and left the room will not be allowed to take that examination and will receive a 0 for that exam.**
GRADE APPEALS: As stated in University Procedure 13.02.99.C2.01, Student Grade Appeal Procedures, a student who believes that he or she has not been held to appropriate academic standards as outlined in the class syllabus, equitable evaluation procedures, or appropriate grading, may appeal the final grade given in the course. The burden of proof is upon the student to demonstrate the appropriateness of the appeal. A student with a complaint about a grade is encouraged to first discuss the matter with the instructor. For complete details, including the responsibilities of the parties involved in the process and the number of days allowed for completing the steps in the process, see University Procedure 13.02.99.C2.01, Student Grade Appeal Procedures. These documents are accessible through the University Rules website at http://www.tamucc.edu/provost/university_rules/index.html, and the College of Science and Engineering Grade Appeals webpage (http://sci.tamucc.edu/students/GradeAppeal.html). For assistance and/or guidance in the grade appeal process, students may contact the chair or director of the appropriate department or school, the Office of the College of Science and Engineering Dean, or the Office of the Provost.

DISABILITIES ACCOMMODATIONS: The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please call or visit Disability Services at (361) 825-5816 in Corpus Christi Hall 116.

If you are a returning veteran and are experiencing cognitive and/or physical access issues in the classroom or on campus, please contact the Disability Services office for assistance at (361) 825-5816.

Statement of Academic Continuity: In the event of an unforeseen adverse event, such as a major hurricane and classes could not be held on the campus of Texas A&M University–Corpus Christi; this course would continue through the use of Blackboard and/or email. In addition, the syllabus and class activities may be modified to allow continuation of the course. Ideally, University facilities (i.e., emails, web sites, and Blackboard) will be operational within two days of the closing of the physical campus. However, students need to make certain that the course instructor has a primary and a secondary means of contacting each student.

RELIGIOUS HOLIDAYS: Any student who will miss class and/or test days because of recognized religious holidays should notify me as soon as possible so we can make alternative arrangements. Prior notification is required for such absences to be excused.

Academic Advising: The College of Science and Technology requires that students meet with an Academic Advisor as soon as they are ready to declare a major. The Academic Advisor will set up a degree plan, which must be signed by the student, a faculty mentor, and the department chair. The College’s Academic Advising Center is located in the Center for Instruction (CI), Suite 360, and can be reached at 825-6094.
SUPPLEMENTAL INSTRUCTION (SI), TUTORING AND OTHER SERVICES: To be successful in this course, and most others, you must cultivate good note-taking skills, organization skills, study habits, and test-taking strategies from the very beginning. Your lecture and laboratory instructors are always available for help, but don’t wait until it is too late! Students who have done well in this class in the past may have been hired to lead Supplemental Instruction (SI) sessions outside of class meeting times. You will receive a schedule of SI sessions separately from this syllabus. Please take advantage of your SI leader’s expertise. Attend SI sessions on a regular basis; don’t wait until the session before an examination to start attending SI sessions. A great way to prepare for the comprehensive final is to attend the SI session just after an examination. At these sessions, your SI leader can review any questions you had difficulty answering correctly. Asking questions about the questions you did not answer correctly will help you answer other questions about that concept correctly if they appear on the comprehensive final.

The Center for Academic Student Achievement (CASA) (825-5933) provides free tutoring, test-taking strategies, and extra help. Take advantage of this service! The center has copies of the text and CD-ROM and is an invaluable source for help. In addition, tutors may be set up for this class specifically and a schedule with times and location will be placed on the website at the beginning of the semester. Should you have test anxiety, stress problems or need help with study skills, the University Counseling Center (University Center, 825-2703) also provides a free service.

DROPPING THE COURSE (OR NOT): I hope that you never find it necessary to drop this or any other class. However, events can sometimes occur that make dropping a course necessary or wise. Please consult with me before you decide to drop to be sure it is the best thing to do. Should dropping the course be the best course of action, you must initiate the process to drop the course by going to the Student Services Center and filling out a course drop form. Just stopping attendance and participation WILL NOT automatically result in your being dropped from the class. If you drop the class before the “drop date”, you will be assigned a grade of “W.” There are consequences for dropping a class, so read the drop policy in the University Catalog (better still, see your academic advisor and someone in the financial aid office) before you drop any class. In the middle of the semester, you are likely to receive midterm grade reports (either on S.A.I.L. or through some other means). If you have a lower mid-term grade than you wish, it should concern you, but not frighten you. (Remember that there are more opportunities to earn points and boost your grades in the last half of most courses than in the first half.) Talk to your instructors (not to other students) to explore your options. Also note that the mid-term grades posted on S.A.I.L. are not official, not a guarantee and are never updated; once they are posted they cannot be changed even if your grade in the class does change.
GENERAL DISCLAIMER: We reserve the right to modify the information, schedules, assignments, deadlines, and policies in this syllabus if and when necessary. Whenever possible, we will announce such changes in a timely manner during regularly scheduled lecture or laboratory periods. We will not attempt to contact students who were absent when an announcement was made. Nevertheless, all students are responsible for abiding by all announced changes, and it is a student's responsibility to obtain this information. In rare cases, some modifications may be implemented without prior warning.