Anatomy & Physiology II  
Biology 2402.002  
Department of Life Sciences  
SPRING 2019

A. COURSE INFORMATION

Course number/section: Biology 2402.002  
Class meeting time: MW 2:00pm – 3:15pm  
Class location: Bay Hall 104  
Course Website: https://bb9.tamucc.edu/

B. INSTRUCTOR INFORMATION

Instructor: Dr. Annette R. Rodriguez  
Office location: CS 247  
Office hours: M: 9:30 – 10:30 am, W 9:30-10:30 am, T R 8:30-9:30 or by appointment  
Telephone: 361-825-5819  
e-mail: Annette.Rodriguez@tamucc.edu  

Appointments: A student may make an appointment to see me at times other than the scheduled office hours. I am available for consultation and extra help, but it is the student’s responsibility to request such help. If I am unavailable during office hours, I will post a note on my office door.

All communication with me via email must be through your school email address (youname@islander.tamucc.edu). I will communicate with you through this email, so you must set up your account and check it regularly. It is your responsibility to check email frequently for important course announcements and updates. Confidential information will not be shared to any non-TAMU-CC email addresses.

C. COURSE DESCRIPTION

Catalog Course Description  
BIOL 2402 – Anatomy and Physiology II

4 sem. Hrs. (3:2) Structure and function of the human body emphasizing blood, growth, development, genetics, and the endocrine, digestive, respiratory, cardiovascular, lymphatic, immune and urogenital systems. Not recommended for majors in the College of Science and Engineering. To count this course toward a major in the Department of Life Sciences, a student must demonstrate that it is required by professional schools in his or her career track and obtain approval for a substitution from his or her faculty mentor. Students may not receive credit for both this course and either BIOL 3425 or BIOL 3430 - Physiology. Prerequisite: BIOL 2401-Anatomy and Physiology I. Co requisite: Safety training given in SMTE 0091 – Biological Laboratory Safety Seminar is required for continued participation in this course.

Semester Credit Hours (SCH) from this course may count toward the 6 SCH in Life and Physical Sciences Foundational Component Area and/or the 6 SCH the Component Area Option of the University Core Curriculum. Not recommended for Biology or Biomedical Science majors. Offered fall, spring and summer semesters every year.

General Description of the Lab:  
Lecture and Lab combine to form your overall grade (Lecture=75%; Lab=25%)  
Labs are:
• **Complementary to the lecture** – meaning the material will relate to the lecture, but will not duplicate lecture material.

• **Hands on training** – labs provide an opportunity for you to interact more directly with anatomical structure and function than is possible in the lecture – you are required to participate.

• **Independent learning opportunities** – you will not receive “lectures” in lab. Your instructor or TA will not “give” you the answers. Your job is to use the lab guide and the guidance of your TA to explore the structures and systems that you have been assigned for the day.

Labs are NOT:

• **SI sessions for Lecture** – you have SI instructors that are there to help you with the lecture material. Your lab instructor’s job is to guide you through the lab and help you answer questions about the lab material, they are not there to explain lecture material.

• **Duplications of lecture material** – you should expect material in the lab to be different from that of lecture. Certain topics are better covered with three dimensional models and dissections than with lectures; those topics are left to the lab.

**PREREQUISITES AND COREQUISITES**

Prerequisites – BIOL 2401 and SMTE 0091

Corequisites - Each student must be registered for both lecture and laboratory sections and must attend the laboratory section for which he or she registered. Students **must** complete a no-cost, online course, Biological Laboratory Safety Seminar (SMTE 0091) as part of the safety instructions for the laboratory. Students who do not complete this instruction will not be allowed to remain in the laboratory.

**D. REQUIRED TEXTBOOK(S), READINGS AND SUPPLIES**

Required Textbook(s)


• Important: If purchasing the text from another source, be sure that you purchase an access code for Mastering A&P or that the text you purchase comes with an access code for Mastering A&P.

• Electronic version of the text. If you purchase an access code for Mastering A&P, including the access code in the above option from the publisher, you will be able to access the electronic version of the text on the Mastering A&P site (www.pearsonmylab.com)

• Please note that the electronic version of the text is NOT free. **You will need to purchase Mastering A&P** either with the paper copy of the text or by itself to be able to access the electronic version of the text. You will NOT be able to access the electronic version of the text unless you purchase Mastering A&P.

**REQUIRED LABORATORY MANUAL:**

• Biol 2402 Lab Guide – will be provided via blackboard


• **Laboratory Notebook:** you are required to have a lined notebook for prelab write ups and notes in lab. These will be checked by the instructor or TA at the beginning of every lab.
Note: to successfully complete the lab you will need a copy of the lab guide, the atlas and the textbook in lab every class period. You may want to coordinate with other students in the lab so that you do not all have to carry all three documents to lab every day.

You will not be allowed to participate in lab (including quizzes and other bonus points) until the pre-lab write up is complete and checked off by your TA. If you miss a quiz because you arrived unprepared for lab, you will NOT be allowed to take the quiz. You may NOT attend another lab later in the week because you did not complete the pre-lab write up in time for your scheduled lab.

RECOMMENDED:

Supplies: A laboratory coat is required for laboratory. Students may wish to buy a binder (in which to keep notes and assignments), and a set of colored pencils and/or pens. (Many students find it helpful to add color to their laboratory drawings and lecture notes.)

E. STUDENT LEARNING OUTCOMES AND ASSESSMENT

Assessment is a process used by instructors to help improve learning. Assessment is essential for effective learning because it provides feedback to both students and instructors. A critical step in this process is making clear the course’s student learning outcomes that describe what students are expected to learn to be successful in the course. The student learning outcomes for this course are listed below. By collecting data and sharing it with students on how well they are accomplishing these learning outcomes students can more efficiently and effectively focus their learning efforts. This information can also help instructors identify challenging areas for students and adjust their teaching approach to facilitate learning.

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:

1. Understand and correctly use scientific and clinical terminology.
2. Recognize and identify structures in the human body including their components.
3. Understand and explain how structures and their components interact to perform one or more functions.
4. Discuss homeostatic control mechanisms that regulate a particular structure and function, and what in turn that particular structure and function regulates.
5. 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.
6. Use critical thinking and skills to integrate and synthesize information.

F. INSTRUCTIONAL METHODS AND ACTIVITIES

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 is important. However, memorization is only one step (often 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. The instructor of this course will provide the students with: (1) information in the form of PowerPoint lecture notes posted on Blackboard, in-class lectures, films, handouts, in-class exercises, assigned readings, hands-on exercises, quizzes 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.

The Center for Academic Student Achievement:

At CASA, students work collaboratively with our staff to achieve success by setting educational goals, gaining an understanding of individual learning styles, and mastering learning strategies. Please visit https://casa.tamucc.edu/ for services that include the Writing Center, Supplemental Instruction and Tutoring.

G. MAJOR COURSE REQUIREMENTS AND GRADING

Your final letter grade is based on the following grade distribution.

* Lecture grade is worth 75% of your final BIOL 2402 grade; Lab grade is worth 25% of your final BIOL 2402 grade

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>% OF FINAL GRADE</th>
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<tbody>
<tr>
<td>Lecture Examinations</td>
<td>40%</td>
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<tr>
<td>Lecture Assignments (Including Mastering A&amp;P)</td>
<td>15%</td>
</tr>
<tr>
<td>Quizzes</td>
<td>10%</td>
</tr>
<tr>
<td>Final</td>
<td>10%</td>
</tr>
<tr>
<td>Lab Grade</td>
<td>25%</td>
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<tr>
<td>TOTAL</td>
<td>100%</td>
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Lecture Examinations: I will give four exams, taking questions for these tests primarily from material covered in the lectures, from handouts and other assignments. Exams may consist of multiple-choice, short-answer, compare-contrast, fill-in-the-blank, essay and/or matching. The four exams are sequential (i.e., each exam covers material from one specific section of the course). The final exam is comprehensive (i.e., covers material from the entire course); it can replace your lowest exam grade.

Blackboard - Technical Help - If you are having difficulties, contact the IT Help Desk at 361-825-2692 or submit a request via email ithelp@tamucc.edu.

Blackboard Mobile App - "Blackboard " - can be downloaded for free. Sign in with the university credentials. Blackboard Resources: https://iol.tamucc.edu/bb_resources_students.html

Lecture: Assignments and Quizzes will be assigned through Mastering A&P and in class.
Laboratory Practical Examinations: Laboratory activities and grading criteria will be explained via a separate laboratory syllabus provided to you by the Lab Instructor. The lab will account for 25% of your overall grade.

Letter Grades: Your final letter grade will be based on your average in lecture and laboratory:

\[
A \geq 90\% \quad B \geq 80\% \quad C \geq 70\% \quad D \geq 60\% \quad > F
\]

- You must notify me immediately of errors after an assignment, quiz or exam is returned.
- No extra credit. Take advantage of the resources offered. The reasons for receiving a grade of “I” (incomplete) are clearly defined in the University Catalog; this “grade” cannot be used simply to prevent a student from receiving an unwanted grade in a class.
- I only discuss grades in person (i.e., I do not discuss grades or matters relating to grades over the telephone or by e-mail). If you wish to know your final grade before the official grade report is available on Sail, please see me in person or provide me with a self-addressed, stamped envelope.

H. COURSE POLICIES

- Attendance/Tardiness
  Attendance is mandatory. All students are expected to attend all classes and labs. Should you miss a lecture or lab session, it is YOUR RESPONSIBILITY to find out what you missed, get notes, learn about changes in the syllabus, etc. There are no excused absences. Additionally, routinely being tardy to class is inconsiderate to me and to your classmates. Repeated lateness can result in dismissal from class. On time means being in your seat and being prepared to take notes, quizzes, or exams promptly at the starting time.

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

- Late Work and Make-up Exams
  You may always turn in assignments early. A missed grade due to absence or lateness will result in a score of ‘0’ for that assignment. Late work will not be accepted. There will be no make-ups for missed exams. If you know in advance that you will have an absence when an assignment is due, you must turn in that assignment before its due date.

  For some university approved, scheduled events (athletics, military duty, etc.), you may arrange to take a lecture examination before (but not after) its scheduled date. (You should take a test as close to its originally scheduled time as possible, but you may not take a test more than one week before its originally scheduled time. You must obtain your instructor’s approval at least one week before you wish to take the pre-test.) 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. Students who do not arrange to take examinations in advance will not be eligible for this special consideration. A written excuse from the university department involved or from the Office of Student Engagement and Success is required.

- Extra Credit
  No individual extra credit assignments will be available in this class. The grading scale is NOT subject
to discussion. There are ample opportunities for improving your grade throughout the course.

If you find yourself struggling with class, please come talk to me during office hours and we will review concepts that may be challenging. The sooner you see me, the better.

- **Cell Phone Use**
  - Cellular phones (including text messaging), pagers, and other “beepers” **must be silenced in the classroom and turned off in the laboratory**. You may use your cellphone for specific A&P assignments but you should NOT be using your phones for social reasons or taking pictures during lecture. You may NOT attend my class with headphones in your ears during lecture. **You will lose points if these rules are not respected.**

- **Laptop Use**
  - You may use your laptop to take notes. Any disruptive behavior on your computer (facebook, games, etc) will result in loss of points. You may use your laptop for A&P applications. You may NOT attend my class with headphones in your ears during lecture. **You will lose points if these rules are not respected.**

- **Food in Class**
  Please respect other students and limit your eating food in the class.

**GENERAL DISCLAIMER**

I reserve the right to modify the information, schedule, assignments, deadlines, and course policies in this syllabus if necessary. I will announce such changes in a timely manner during regularly scheduled lecture periods.

1. **Tentative Lecture Schedule**

<table>
<thead>
<tr>
<th>DAY</th>
<th>DATE</th>
<th>TOPIC</th>
<th>CHAPTER(S)*</th>
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<tbody>
<tr>
<td>Mon</td>
<td>Jan 14</td>
<td>Syllabus, BB, Mastering A&amp;P</td>
<td>18</td>
</tr>
<tr>
<td>Wed</td>
<td>Jan 16</td>
<td>The Endocrine System</td>
<td>18</td>
</tr>
<tr>
<td><strong>Mon</strong></td>
<td><strong>Jan 21</strong></td>
<td><strong>Martin Luther King Jr. Day – No Classes</strong></td>
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<tr>
<td>Wed</td>
<td>Jan 23</td>
<td>The Endocrine System</td>
<td>18</td>
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<tr>
<td>Mon</td>
<td>Jan 28</td>
<td>Blood</td>
<td>19</td>
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<tr>
<td>Wed</td>
<td>Jan 30</td>
<td>Heart Anatomy/Review</td>
<td>20</td>
</tr>
<tr>
<td><strong>Mon</strong></td>
<td><strong>Feb 4</strong></td>
<td><strong>Exam 1</strong></td>
<td><strong>18, 19, 20</strong></td>
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<tr>
<td>Wed</td>
<td>Feb 6</td>
<td>Heart</td>
<td>20</td>
</tr>
<tr>
<td>Mon</td>
<td>Feb 11</td>
<td>Cardiac Cycle/Blood vessels</td>
<td>20, 21</td>
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<tr>
<td>Wed</td>
<td>Feb 13</td>
<td>Blood vessels and circulation</td>
<td>21</td>
</tr>
<tr>
<td>Mon</td>
<td>Feb 18</td>
<td>Circulation</td>
<td>21</td>
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<tr>
<td>Wed</td>
<td>Feb 20</td>
<td>Lymphatic and Immunity</td>
<td>22</td>
</tr>
<tr>
<td>Mon</td>
<td>Feb 25</td>
<td>Immunity</td>
<td>22</td>
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<tr>
<td>Wed</td>
<td>Feb 27</td>
<td>Immunity/Review (Lab Practical)</td>
<td>22</td>
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<tr>
<td><strong>Mon</strong></td>
<td><strong>Mar 4</strong></td>
<td><strong>Exam 2</strong></td>
<td><strong>20–22</strong></td>
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<tr>
<td>Wed</td>
<td>Mar 6</td>
<td>Respiratory System</td>
<td>23</td>
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<tr>
<td>Mar 11-17</td>
<td>SPRING BREAK!!</td>
<td></td>
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<tr>
<td>Mon</td>
<td>Mar 18</td>
<td>Respiratory System and Gas Transport</td>
<td>23</td>
</tr>
<tr>
<td>Wed</td>
<td>Mar 20</td>
<td>Control of Respiration</td>
<td>23</td>
</tr>
</tbody>
</table>
Mon  Mar 25 | The Digestive System | 24
Wed  Mar 27 | The Digestive System | 24
Mon  Apr  1 | Digestion/ Metabolism and Nutrition | 24/25
Wed  Apr  3 | Metabolism and Nutrition/Review | 25
Mon  Apr  8 | Exam 3 | 23, 24, 25
Wed  Apr 10 | The Urinary System | 26
Mon  Apr 15 | The Urinary System | 26
Wed  Apr 17 | FLUID, ELECTROLYTE AND ACID-BASE BAL
Mon  April 22 | Reproduction and Meiosis | 27
Wed  Apr 23 | Meiosis and Genetic Diversity | 27, 28
Mon  Apr 29 | Exam 4 | 28
Wed  May  1 | Reading Day | 26-29
Wed  May  8 | FINAL 2-4PM | Comprehensive

*Chapters in Martini, Nath and Bartholomew (2018); reading these chapters is always a standing class assignment.

Note: Changes in this course schedule may be necessary and will be announced to the class by the Instructor. The assignments and exams shown are directly related to the Student Learning Outcomes described in Section F.

J. COLLEGE AND UNIVERSITY POLICIES

Academic Integrity:
Texas A&M University-Corpus Christi 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, which include but are not limited to illicit possession of examinations or examination materials, falsification, forgery, plagiarism or collusion in any of these behaviors.

Responsibility of the Student:
It is the responsibility of the student to become educated regarding University Rules, Regulations and Policies regarding academic misconduct. This includes, but is not limited to, seeking clarification from each instructor regarding acceptable behaviors and guidelines for completing individual assignments. A failure to become educated with the University Rules, Regulations and Policies or the instructors’ guidelines will not excuse the student from accountability for violations of such policies.

Student Code of Conduct:
Texas A&M University-Corpus Christi strives to protect its educational community and to maintain social discipline among its students and student organizations. All members of the University community are entitled to freedom from suffering deliberate hurt, injury, or loss regardless of race, color, sex, religion, national origin, age, disability, genetic information, veteran status, sexual orientation or gender identity. The University endeavors to foster the development of students who are ethically sensitive and responsible community members. The Student Code of Conduct is available online at studentconduct.tamucc.edu. Copies are available at the beginning of the Fall term for students to pick-up in the Office of the Associate Dean of Students (OADS), University Center, room 206.

Deadlines and Course Withdrawal:
My primary objective is to help students meet their educational goals. Please contact me and consult with your academic advisor before you decide to drop this course. Review the Academic
Calendar (http://www.tamucc.edu/academics/ calendar/) for important dates.

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 at 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.

Disability Services: “If you need disability accommodations in this class, please see me as soon as possible. Please have your accommodation letter from Texas A&M University–Corpus Christi Disability Services (DS) Office with you when you come see me. If you suspect that you may have a disability (physical impairment, learning disability, psychiatric disability, etc.), please contact the Disability Services Office (located in Corpus Christi Hall 116) at 361.825.5816.”

Statement of Academic Continuity
In the event of an unforeseen event such as a major hurricane, this course will continue through the use of Blackboard and messaging systems. TAMU-Corpus Christi’s Blackboard Learning Management System allows you to continue to participate in your course or courses in the event of a campus evacuation or closure. Your professor will make every effort to continue teaching your course by interacting with you using Blackboard. Please look for Announcements, Bb Messages, Emails, Chats, Discussions, Blogs, Journals, and/or Wikis in your courses.