Biology I – Learning Community
Biology 1406.710/711/722
Department of Life Sciences
Spring 2019

A. COURSE INFORMATION

Course number/section: Biology 1406.710/711/722
Class meeting time: MWF 9:00am – 9:50am
(Lab: various times; must attend assigned labs)
Class location: Lecture: IH 267
Labs meet in CI 206 or 207
Course Website: https://bb9.tamucc.edu/

B. INSTRUCTOR INFORMATION

Instructor: Dr. Judy Metcalf
Office location: EN 309
Office hours: WF: 10:00 – 11:30, TR 12:30 – 1:30pm, or by appointment
NOTE: From May 2 – May 9, office hours are by appointment only
Telephone: 361-825-3959
e-mail: judy.metcalf@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 (yourname@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
Presentation of basic biological concepts including scientific method, cytology, energetics, nucleic acids and genetics. This course is suitable for all majors. This course counts toward the natural science component of the University Core Curriculum. Safety training given during a laboratory meeting early in the semester is required for continued participation in this course.

SMTE 0091 is a co-requisite for this course. Documented completion of this safety training is required early in the semester for continued participation in this course. Safety training given during a laboratory meeting early in the semester is required for continued participation in this course.

Extended Course Description
Even if you never have a position in a biology-related field, this course and your experience at TAMUCC will be beneficial to you. This course covers many topics that have a biological basis that are important issues in our society. I hope that this course gives you the skills to follow the debate about these issues and make an informed choice on these issues. This course provides you with the basic skills required to do well in other biology courses that you will take as part of your degree plan.
PREREQUISITES AND COREQUISITES

Prerequisites - MATH-1314 and ENGL-1301 or ACT English score of 21 and ACT Math score of 21

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, and will irrecoverably lose all points associated with the laboratory until they complete the safety instruction.

D. REQUIRED TEXTBOOK(S), READINGS AND SUPPLIES

Required Textbook:

- Important: If purchasing the text from another source, be sure that you purchase an access code for MasteringBiology or that the text you purchase comes with an access code for MasteringBiology.
- Electronic version of the text. If you purchase an access code for MasteringBiology, 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 MasteringBiology site (www.pearsonmylab.com)
- Please note that the electronic version of the text is NOT free. You have to purchase MasteringBiology 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 MasteringBiology.
- We will be using Learning catalytics (a component of mastering biology) in the lecture classroom. Learning catalytics is included in the copy of Mastering Biology that includes the E-text (which is the version sold in the bundle), or can be purchased separately if you prefer to purchase the copy without the E-Text.

Laboratory Manual for Biology 1406, Fall 2017. The lab manual will be available on Blackboard. You do NOT have to purchase the lab manual at the University Bookstore

Supplies and Equipment:
- You will need access to a smartphone, laptop or tablet every day in class for the learning catalytics software.
- All students are required to have a lab coat when entering the labs for any reason. In addition, to the lab coat, students must be wearing long pants and closed-toe, close-heel shoes to enter the labs at any time (refer to lab syllabus for more details)
- Students must bring their school ID to exams. A calculator will be needed.
E. STUDENT LEARNING OUTCOMES AND ASSESSMENT

F. 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.

By the end of this course, students should be able to:

SLO 1. Discuss the basic concepts of chemistry as they relate to living organisms.
SLO 2. Describe how a living cell is constructed, and recognize the relationships among its components.
SLO 3. Explain the physical and chemical bases for the activities of living cells and elucidate how these activities are controlled.
SLO 4. Demonstrate familiarity with the cellular and molecular processes involved in inheritance.
SLO 5. Identify examples of recent advances in applied cellular and molecular biology and evaluate their impacts on society.

Student’s abilities to complete these tasks will be evaluated through:
1. Four exams (three regular exams and one final)
2. Laboratory activities (see separate syllabus)
3. Possible (TBD) additional activities, which may include quizzes, group in-class activities or other activities.

G. INSTRUCTIONAL METHODS AND ACTIVITIES

Instructional methods may include PowerPoint lectures, videos, group activities, quizzes, supplemental questions and homework, and weekly review sessions via supplemental instruction.

H. MAJOR COURSE REQUIREMENTS AND GRADING

Student learning outcomes are assessed by in-class activities and questions, assignments on MasteringBiology and questions on exams. The above student learning outcomes will be assessed as described below:

SLO 1. On the exam, students are given a diagram of an animal or plant cell and asked to label the organelles
SLO 2. Questions during class and on the exam require students to diagram the processes of cellular respiration and photosynthesis and compare and contrast the processes of cellular respiration and photosynthesis
SLO 3. On the exam, students are given a diagram of a cell with two pair of chromosomes and asked to diagram the process of meiosis with a crossover event between two loci. Also, students are asked to develop a hypothesis for a chi square test to determine if two traits are linked or unlinked.
### Lecture Examinations

I will give four examinations, taking questions for these tests primarily from material covered in the lectures, from handouts and other assignments, and from readings in Krebs. Examinations may consist of essay, short-answer, compare-contrast, fill-in-the-blank, multiple-choice, matching, making and/or labeling drawings, and/or various types of “flex” questions (i.e., anything is fair game). The first three 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), accounts for 10% of your overall grade and is redemptive (i.e., it can replace single examination; or it can be your entire Lecture examination grade). Thus, your examination grade can come from a percentage derived from…

1) the final examination alone…

or 2) the average of the three examinations…

or 3) the average of the two highest examinations with the final used to replace the lowest examination…

… whichever method gives you the highest percentage.

### Lecture

Assignments and Quizzes will be assigned through Mastering A&P, blackboard and in class. All lecture assignments and quizzes combine to form a Quiz and Assignment grade that will account for 15% of your overall grade.

### Letter Grades

Your final letter grade is based on your average in lecture and laboratory. Statistical manipulations (e.g., curving) may be performed once—at the end of the semester—**not** for each examination. 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 ≥ 90% > B ≥ 80% > C ≥ 70% > D ≥ 60% > F

- I will rectify any clerical, mathematical, and/or other errors. However, **you have one (1) week to notify me of such errors after an assignment, quiz or examination is returned.**
- I will not change a legitimate course grade just because you “need” it (for financial aid, to get into professional school, etc.). The grading section of this syllabus describes how I assign grades. Please be sure you earn enough points to get the grade you want. There will always be someone who just missed a D, or a C, or a B, or an A. Although I reserve the right to curve, doing so is usually not necessary. (Curves are based on statistical analysis of the entire class’s performance, not on the needs of individual students.) I have to draw lines between grades, and no matter where I draw them, someone is on the wrong side. Don’t let that someone be you. You have plenty of help in my class. Take advantage of the resources I offer. 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.

I. 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. In other words, begging for points or last minute extra credit will get you nowhere. 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 to respond to learning catalytics questions but you should **NOT** be using your phones for social reasons 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.

• **Food in Class**
  Please respect other students and limit your eating food in the class. I reserve the right to restrict food in the classroom if it becomes a distraction, items are left behind or the room is left unclean.

• **Missed Exam**
  See section H.

• **Classroom/Professional Behavior**
  *You are responsible adult university students. I will treat you as such, and I will expect you to act as such.*

Scholastic dishonesty will **not** be tolerated. It will be prosecuted to the full extent of university regulations. In addition, the following procedures will be enforced:

• 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 the first test-taker has completed an examination and left the room will not be allowed to take that examination.*

• Cheating and plagiarism are unacceptable behaviors.

• Students are not to give or receive help during testing.

• Students are not to submit any work that is not their own product.

• You will act with courtesy and common sense. I will not tolerate disruptive, disrespectful, or abusive behavior/language (including comments made on class assignments) 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. Children are **not** allowed in the rooms during lecture periods, or when the child’s guardian is working or studying “after hours.” Use of tobacco products (of any kind) is forbidden in lecture.

• *You are responsible for your own education. You should not expect an instructor to take you by the hand, show you everything you need to know, and then have you regurgitate this information on an examination. This is not an effective way for self-motivated adults to learn. Students are responsible for all class and lecture notes; required assignments in the textbook and any additional handouts or*
assignments given by an instructor. This includes (but is not limited to)…

- Knowing and meeting university-imposed deadlines (e.g., withdrawal dates of various types). This information is found in the online University Catalog, Course Schedule or elsewhere on the University website.
- Knowing and meeting assignment dates and times—including any changes that may occur during the semester.
- Checking your answers against a key as soon as possible. By all means check for any clerical errors, but a test score is not the end of the learning process. Always review your tests to determine why you missed questions. Making—and correcting—mistakes is an effective, natural way to learn material. Educators have a fancy term, reflective learning, for this simple process.
- Keeping track of your progress (i.e., your grades, points you earn, and averages).
- Asking for help. Instructors are available for consultation and extra help, but it is the student’s responsibility to request help.

J. COLLEGE AND UNIVERSITY POLICIES

- **Academic Integrity/Plagiarism.**
  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, academic misconduct or complicity in an act of academic misconduct on an assignment or test will result in a grade of 0 for all involved on the first instance, subsequent issues could result in an automatic failing grade and reporting to appropriate university officials.

- **Dropping a Class**
  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 your academic advisor, the Financial Aid Office, and me, before you decide to drop this course.** 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. **November 9, 2018** is the last day to drop a class with an automatic grade of “W” this term.

- **Classroom/professional behavior**
  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.

- **Statement of Civility**
  Texas A&M University-Corpus Christi has a diverse student population that represents the population of the state. Our goal is to provide you with a high quality educational experience that is
free from repression. You are responsible for following the rules of the University, city, state and federal government. We expect that you will behave in a manner that is dignified, respectful and courteous to all people, regardless of sex, ethnic/racial origin, religious background, sexual orientation or disability. Behaviors that infringe on the rights of another individual will not be tolerated.

- **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 Web site at [http://www.tamucc.edu/provost/university_rules/index.html](http://www.tamucc.edu/provost/university_rules/index.html). For assistance and/or guidance in the grade appeal process, students may contact the Dean’s office in the college in which the course is taught 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.

  [http://disabilityservices.tamucc.edu/](http://disabilityservices.tamucc.edu/)

- **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.

**K. OTHER INFORMATION**

- 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 is an invaluable source for help. 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.

• Academic Advising: The College of Science & Engineering 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. Meetings are by appointment only; advisors do not take walk-ins. Please call or stop by the Advising Center to check availability and schedule an appointment. The College’s Academic Advising Center is located in Center for Instruction 350 or can be reached at (361) 825-3928.

• Follow instructions! The most common mistakes that cost students points result from failure to follow instructions.

• 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.)
GENERAL DISCLAIMER
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.

I. TENTATIVE LECTURE SCHEDULE

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<tr>
<th>WEEK</th>
<th>DATES</th>
<th>TOPIC</th>
<th>CHAPTER(S)*</th>
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<tr>
<td>1</td>
<td>January 14</td>
<td>Syllabus, BB, Introduction</td>
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<td>January 16</td>
<td>Mastering and Learning Catalytics / Intro Biology</td>
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<td>January 18</td>
<td>Intro to Biology</td>
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<td>2</td>
<td>January 21</td>
<td>Martin Luther King Holiday – No Class</td>
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<td>January 23</td>
<td>Intro to Biology / Chemistry</td>
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<td>January 15</td>
<td>Chemistry</td>
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<td>Chemistry</td>
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<td>January 30</td>
<td>Biological Molecules</td>
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<td>February 1</td>
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<td>February 6</td>
<td>Biological Molecules</td>
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<td>February 8</td>
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<td>March 11-15</td>
<td>Spring Break</td>
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<td>March 18</td>
<td>C3/C4/Cam adaptations &amp; Mitosis</td>
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<td>March 20</td>
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<td>April 3</td>
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<td>April 5</td>
<td>Chromosome Basis of inheritance</td>
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<td>April 12</td>
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<td>April 15</td>
<td>Molecular Basis of Inheritance</td>
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<td>9</td>
<td>April 22</td>
<td>Gene Expression – From Gene to protein</td>
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<td>April 24</td>
<td>Gene Expression – From Gene to protein</td>
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<td>April 26</td>
<td>Gene Expression – From Gene to protein</td>
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<td>10</td>
<td>April 29</td>
<td>Regulation of gene expression</td>
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<td></td>
<td>May 1</td>
<td>Regulation of gene expression</td>
<td>15</td>
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<tr>
<td>11</td>
<td>May 8</td>
<td>FINAL LECTURE EXAMINATION (8:00am – 10:30am)</td>
<td>(Comprehensive)</td>
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