First Year Learning Community. Biology 1406, Introductory Biology I, Fall 2013
Lectures: CI 113 MWF 11:00 or 1:00
Labs: CI 207 or CI 208

Sections meeting at 11:00: 732 (3S), 733 (4S), 735 (6S), 736 (7S), 801 (1V), 802 (2V), and 803 (3V)

Sections meeting at 1:00: 730 (1S), 731 (2S), 734 (5S), 851 (1W), 852 (2W), 853 (3W), 855 (4W), and 856 (5W)

The course is jointly taught by David J. Grisé, Abigail M. Johnson, and Cori J. Speights.

Dr. Grisé is the instructor of record. Abbie and Cori are senior Supplemental Instruction leaders.

The schedule of SI sessions will be posted on Blackboard.
Dr. Grisé’s office is EN 311, e-mail david.grise@tamucc.edu, phone 825 3477
Office hours will be posted on Blackboard. Other hours by appointment

Please note that class will meet as scheduled on Wednesday, 27 November and Monday, 2 December. Should you have a conflict and not be able to attend class on either of these days please let me know at least a week in advance. Decisions to excuse a student from the in-class assignments for these days will be made in accordance with University policies.

Students do not read the syllabus so I will put the important information about exam dates here. The complete course calendar is posted on Blackboard.
Exam dates: 13 September, 27 September, 11 October, 1 November, 27 November, 13 December 11:00 to 1:30 for final exam for MWF 11:00 or 18 December 11:00 to 1:30 for final exam for MWF 1:00.

Points in learning community sections of bio 1406 fall 2013

<table>
<thead>
<tr>
<th>assignment</th>
<th>points</th>
<th>% of grade</th>
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</thead>
<tbody>
<tr>
<td>individual exams</td>
<td>610</td>
<td>36.0</td>
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<tr>
<td>team learning assignments</td>
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<td>graded Meiosis Explored questions</td>
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<tr>
<td>Scientific Skills Exercises</td>
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<td>5.9</td>
</tr>
<tr>
<td>calibrated peer review</td>
<td>50</td>
<td>2.9</td>
</tr>
</tbody>
</table>
Interdisciplinary experience | 100 | 5.9
Lab | 400 | 23.6
Total | 1695 | 100.0

Assignment of course grades, all sections.
Grades for students in all sections of the course will be assigned as follows:

A= 89.5-100 % of the total points
B= 79.5-89.4 % of the total points
C= 69.5-79.4 % of the total points
D= 59.5-69.4 % of the total points

I use the above percentages to assign grades. After reading this section, you should know how I am going to assign grades. Please be sure you get 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. I have to draw lines between grades. No matter where I draw the line, someone is on the wrong side of the line. Don't let that someone be you. You have plenty of help in my class. Take advantage of the resources I offer.

-Text and required equipment:

Paper copy of the text: Campbell Focus on Biology. 1st edition. Lisa A. Urry, Michael L. Cain, Steven A. Wasserman, Peter V. Minorsky, Robert B. Jackson and Jane B. Reece. ISBN 0321955226. A loose leaf version of the text and MasteringBiology can be purchased from the publisher www.mypearsonstore.com with free shipping for $95.33 plus tax. PLEASE NOTE THAT THIS VERSION OF THE TEXT IS OUT OF STOCK UNTIL 9 AUGUST. I suggest you wait until 9 August and then on 9 August that you order this version of the text.

**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.

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.

Qwizdom student responder with batteries  (**Required for every lecture**). http://www.qwizdom.com/education/q4.php

Laboratory Manual for Biology 1406, Fall 2013. All are available at the University Bookstore.

**THERE IS NO EXTRA CREDIT!**
Our goal is to help students to succeed in this class and start the journey to the career they desire to have. Being successful in this class will not happen without a large effort on your part. We are very willing to assist but we cannot help you if you don’t seek our assistance and most importantly do things to help yourself.

Congratulations if you read this far. The rest of the syllabus contains details about the course and information about course and university policies. Read on if you are interested in these details.

OVERALL CONTEXT

Course description: This course is an overview of the major concepts in biological diversity and plant and animal biology. Laboratory work will include individual/team activities as well as technology-related assignments. This course counts toward the natural science component of the University Core Curriculum.

-The Texas Higher Education Coordinating Board course objectives for courses such as bio 1406 that fulfill the core curriculum.
-All core courses address critical thinking and communications.
-Each core course addresses an additional two core objectives. Objectives addressed by bio 1406 are teamwork and Empirical and Quantitative reasoning.

-For the critical thinking objective, students will gather and assess information relevant to a question. In lab and lecture students will gather data about a situation, graph those data, interpret these data and explain to others what these data tell us about the situation.

-For the communication skills objective, students will develop, interpret, and express ideas through written communication in lecture, on Calibrated Peer Review assignments and on exams.

-For the empirical and quantitative reasoning objective, in lecture and lab students will manipulate and analyze numerical data and arrive at an informed conclusion. This objective will be linked to the communication skills objective because students will report their conclusions on lab reports, classroom assignments and exams.

-For the teamwork objective, students will integrate different viewpoints as a member of a team during group work in lecture and in lab. Because science is a group endeavor and interdisciplinary groups are increasing important in many fields within biology, assignments done in your team learning groups make up a large percentage of your grade in the course.

A community of learners. You are part of the first year learning community at Texas A&M University-Corpus Christi. I hope you are, or will become, an active member of this learning community. Each time I teach a course, I learn from students. I hope to establish an atmosphere in which students learn from each other. As a result of taking my class and working with your fellow students, I hope you learn how to learn about issues that have a biological basis. We should all be learning from each other and learning how to learn from each other. As a result of our collective efforts, I hope I continue to improve as an instructor and that you benefit from taking my course.
RESOURCES TO ASSIST YOU IN BIO 1406.

-Supplemental Instruction (SI) leaders
SI sessions are student driven. SI sessions provide a structured setting for you to ask questions about the material covered in lecture or the material in the readings from the text that will not be covered in lecture. SI sessions give you an opportunity for active learning. There is abundant research indicating that listening to material does not help students understand that material. Asking questions you have about the material for the TLAs during office hours or SI sessions is an efficient way to better understand the material covered in class and the material from the text for the Team Learning Assignments.

Please consider attending SI sessions regardless of your grade in the course. Students doing well in the course and students who are not doing so well in the course will benefit from attending SI sessions. Also, don’t wait until the session before the exam to start attending SI sessions. I have data that indicates that attending SI sessions on a regular basis increases your grade in the course. A great way to prepare for the comprehensive final is to attend the SI session just after an exam. Asking questions about the questions you did not answer correctly on the exam will help you answer the question correctly on the comprehensive final.

-Captivating and Engaging Leaders in Life Sciences (CELS) mentoring program.
All first-year biology majors will be assigned a CELLS mentor. CELLS mentors are sophomore, junior, or senior level students who have done well in my 1406 and 1407 classes. Your CELLS mentor will regularly visit your seminar class to answer questions and provide perspective on how to do well in my class and your future biology classes. They will also be able to answer questions about core classes and instructors for those classes. Please contact your CELLS mentor if you have questions about anything at the University. Because they are students, they have had to contact many of the University offices that you will deal with during your time at TAMUCC. Your CELLS mentor will be able to direct you the proper University resource. Take advantage of their experience for both class-related and University-related issues.

I am extremely grateful that so many students are volunteering their time to be a CELLS mentor. Their willingness to take time out of their busy schedule to assist students in this class is evidence of their commitment to the University, the Department of Life Sciences and to this class. Please take advantage of their willingness to help you succeed during your first year.

STUDENT-CENTERED LEARNING

-Lecture: This is not an instructor-based class. If you do not start making the transition to become an active, independent, self-directed learner you will not do well in this class. You have assistance in making the transition to become an active, independent, self-directed learner. The instructor is not the only person in the room with information about the topics covered in lecture. The lectures are structured so that students can interact with other students during the class. If you have questions about what is being covered in class, ask questions of other students during the time allotted to discuss in-class Qwizdom questions. Also, during class, feel free to ask the instructor or one of the SI leaders questions about the material we are covering in class.

-Team Learning Assignments: We will use a team learning approach in this class. The goal of a team learning approach is to assist students in their development as independent learners. Students will read material in the text. The material for Team Learning Assignments will NOT be
covered in lecture. Rather than lecturing on this material students can ask other students questions about the material or ask questions during SI sessions or office hours. Students are expected to better understand the material as a result of discussing the material during the group portion of the team learning assignments.

Permanent team learning groups will be established at the start of the course. Students will answer questions on their own then answer the SAME questions after discussing the question with their team learning group members. We will use the team learning approach on in-class team learning assignments as described below.

In-class team learning assignments: Students will come to class having read the assigned portion of the text. These readings will be announced in lecture in advance of the in-class team learning assignment. These readings will also be listed on the calendar on Blackboard. On Friday, using the Qwizdom responders, students will INDIVIDUALLY submit their own answers to questions about the text reading. Then, each team learning group will discuss the same questions and each member of the group will submit an answer to the questions.

Each in-class team learning assignment is worth 30 points. Your individual answers to these questions count for 40% of your score (12 points) for the in-class team learning assignment. The other 60% of the score (18 points) for each in-class team learning assignment will be based on your answer to the questions after consulting your group members. You are not permitted to use the text or notes about the readings for either portion of the assignment. After the group portion of the exam is completed, you may use the text to better understand the answers to the questions or to appeal questions.

Appeals: Students may not use the text, notes, or other resources during either the individual or group portions of in-class team learning assignments or team learning exams. However, once the assignment or exam has been completed, students may use any resource they wish to appeal any question for which the group feels the answer is incorrect or the question or answer choices are unclear. All appeals must be in writing, must fully explain why the group feels there is a problem with the question and must be agreed to by the entire group. All appeals must be to me before I leave the classroom. If the group’s appeal is granted, the scores of all group members will be adjusted.

Cell/smart phones and computers: Use of devices that can connect to the internet will not be allowed during the individual or group portion of team learning assignments. If a student is found to be using a cell phone, smart phone, or computer the device will be taken and put on the desk up front so the student can pick up their device after class.

Absences: You MUST be present in class to receive points for the group portion of the team learning assignments. The only exceptions are medical appointments, religious obligations as described in the University catalog, and University sponsored events. In the case that you have a scheduled medical appointment, a religious obligation or University sponsored event that prevents you from attending lecture, please let me know in advance of lecture. Should you not be able to attend lecture due to a medical emergency, please let me know about the situation as soon as possible.
-**Daily in-class assignments:** For almost every lecture, there will be a question worth a small amount of points to start lecture. Also, during lecture there will be questions for points. Students are encouraged to discuss these questions with other members of their team learning group. In addition, there will be a few times when groups will work on questions related to course material. These questions are designed to help students understand how to answer questions on the exams.

-**Qwizdom responders.** You are required to bring your functioning Qwizdom responder to each class meeting. You MUST be present to receive credit for in-class assignments. The only exceptions are medical appointments, religious obligations as described in the University catalog, and University sponsored events. In the case that you have a scheduled medical appointment, religious obligation or University sponsored event that prevents you from attending lecture, please let me know in **advance** of lecture. Should you not be able to attend lecture due to a medical emergency, please let me know about the situation as soon as possible.

You are not permitted to use another student’s responder. Answering questions for another student not present in lecture is cheating and will not be tolerated. If you are seen using two responders, both will be confiscated and we will all sort it out later.

Answers to any type of Qwizdom question that are written on paper will NOT be accepted. There are no exceptions to this policy. I have a few responders that you can sign out should you forget your responder. I have extra batteries that you can sign out if your batteries go low. If you forget your responder and all my extra responders are signed out, you will not be able to answer the Qwizdom questions. To obtain a Qwizdom responder or batteries, we will require students to give us their ID or something of value to get a responder or batteries. Your ID or something of value will be returned after class when you return the responder or batteries.

I will NOT check the results of a Qwizdom assignment for ANY student. When you take an assignment using Qwizdom, the Qwizdom responder shows you the answer you selected. Be sure you see the answer you intended to select. Since I have been using the Qwizdom system, I have checked answers at the request of students well over one hundred times. I have never found a problem with the Qwizdom system. Most of the time, a student mistakenly selected an incorrect answer or didn’t answer the question at all.

-**Calibrated Peer Review (CPR) assignments.**

Being able to review other’s work is a critical skill for a scientist to have. I use the CPR system because I have data that indicates that students become better reviewers over the course of the semester.

Results of repeated measures Analysis of Variance (ANOVA) where the student is the repeated unit indicate that students become more competent reviewers over the course of the semester.

<table>
<thead>
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<th>source</th>
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<th>Sum of squares</th>
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<td>Reviewer competency over time*program</td>
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Using guiding questions, you will summarize parts of chapters containing material covered in the course. Doing these assignments should help you to better understand the material and better understand the process of scientific writing. Questions on exams will ask you about material covered in these assignments. The link to access the CPR system is on Blackboard. All students are expected to be able to access this system, submit their summaries and complete the assignments on time.

Be sure you access the system for the first time well in advance of the deadline for submission of your summary for the first assignment. Report any problems to me immediately. I will NOT submit summaries for any student. If a student misses the deadline for text entry, they will not be able to complete the remaining portions of the assignment and will receive a zero out of 25 points for the assignment. Should a student submit their summary but fail to complete the assignment, it is likely that their score for the assignment will be about 4 points out of 25 points. Missing a CPR deadline may drop in your grade in the course down by a whole letter grade. Don’t let this happen to you! Because you have several weeks to complete these assignments, there will be no exceptions to this policy. Please do not allow these assignments to negatively affect your grade in the course. Take time to write your summary, complete the calibrations and review other students work. Be sure you complete the assignments in a timely manner. Remember that the material on these assignments is very important and may not also be covered in lecture. However, exam questions will be based on this material.

Because I have a lot of students in my intro biology sections, I cannot review grades on CPR assignments. I have to trust that students will carefully and fairly review other student’s work.

INTERDISCIPLINARY ASSIGNMENT FOR FALL SEMESTER
Please see the material for your seminar class for details on this assignment. The grade on this assignment is used in all your other learning community courses. In my class, the grade on the project will account for a total of 100 points.

CHAPTERS/ASSIGNMENTS FROM THE TEXT AND/OR MASTERINGBIOLOGY
All or part of the following chapters in the text will be covered in this course.
Chapter 1, Introduction: Evolution and the Foundations of Biology.
Chapter 2, The Chemical Context of Life.
Chapter 3, Carbon and the Molecular Diversity of Life.
Chapter 4, A Tour of the Cell.
Chapter 5, Membrane Transport and Cell Signaling.
Chapter 6, An Introduction to Metabolism.
Chapter 7, Cellular Respiration and Fermentation.
Chapter 8, Photosynthesis.
Chapter 9, The Cell Cycle.
Chapter 10, Meiosis and Sexual Life Cycles.
Chapter 11, Mendel and the Gene Idea.
Chapter 12, The Chromosomal Basis of Inheritance.
Chapter 13, The Molecular Basis of Inheritance.
The following Scientific Skills Exercises will be assigned for points. Each exercise is 10 points. Students will complete these exercises on MasteringBiology.

Chapter 1. Interpreting a pair of bar graphs.
Chapter 2. Interpreting a scatter plot with a regression line.
Chapter 4. Using a scale bar to calculate volume and surface area of a cell.
Chapter 6. Making a line graph and calculating a slope.
Chapter 7. Making a bar graph and evaluating a hypothesis.
Chapter 8. Making scatter plots with regression lines.
Chapter 11. Making a histogram and analyzing a distribution pattern.
Chapter 12. Using the chi square test.
Chapter 13. Working with data in a table.
Chapter 15. Analyzing DNA deletion experiments.

EXAMS
Exams, all sections
There are a total of individual six exams (five exams given during a lecture period and an exam given during the time scheduled for the final exam). The first exam is a 10 point “early exam”. The remaining five exams are 100 points each. The final is a two part exam for a total of 200 points. The first 100 points of the final covers the last block of material (it is the sixth individual exam). The second 100 points of the final covers material from the previous blocks of material. You may use calculators during all exams. However, use of cell phone calculators is NOT permitted. The use of i-pods or other electronic devices is NOT permitted.

I do not assign a curve to each exam.

Unless they make prior arrangements, ALL students MUST take the final exam at the assigned time. Please note that arrangements to take the exam at a different time require approval of the instructor.

-Make-up exams
I will follow University policy should you miss an exam due to a University-related event or religious obligations. For students missing exams for other reasons such as family events or illness, please contact me.

RESOURCES REQUIRED FOR BIO 1406
- Lab coats. 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.

- All students must have a TAMU-CC e-mail account
All students must have a TAMU-CC e-mail account (your islander account). I e-mail your grades to your islander e-mail account. Grades will NOT be posted anywhere! Please go to http://www.tamucc.edu/ise.html to obtain a new islander account. Either check your islander e-mail
account on a regular basis or forward your islander e-mail to your hotmail, yahoo, etc. e-mail account.

UNIVERSITY AND CLASS POLICIES

Class attendance
My attendance policy is the same as the University's. Please read the University’s attendance policy in the catalog. I expect students to attend every scheduled class meeting including labs. Attendance is not used to determine grades. If you come to class often, you should do well in my course. In addition, there will be in-class assignments during most lectures, so coming to lecture on a regular basis should result in a higher grade.

-Scores sent by e-mail
Please check your scores I send to your Islander e-mail account! It is your responsibility to be sure that I have correctly recorded your scores. From the time I e-mail grades for an assignment or exam, you have five class days to inform me there might be a problem with your score. After five class days, I will assume that scores for that assignment or exam are correctly recorded.

-Dropping the course
If you drop the class between the dates specified on the university calendar, you will be assigned a grade of W. Please be sure you read and understand the University’s drop policy found in the university catalog before you drop any class.

Academic Honesty
All students are expected to be familiar with TAMU-CC's Academic Honesty Statement found in university catalog.

-Students with Disabilities and Veterans
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 Driftwood 101.

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.

-Grade Appeal Process. As stated in University Rule 13.02.99.C2, Student Grade Appeals, 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 Rule 13.02.99.C2, Student Grade Appeals, and 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. For assistance and/or guidance in the grade appeal process, students may contact the Office of Student Affairs.

-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 Faculty Center 178, and can be reached at 825-6094.