The instructor of record is Dr. David J. Grisé who is assisted by Trevor Brue and Megan Arnold (SI leaders).

Office ST 311, e-mail david.grise@tamucc.edu, phone 825 3477  
**class web site: Please see Blackboard**  
Office hours will be posted on Blackboard, other hours by appointment

**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.

**Exemplary education objectives for core courses met by bio 1407**

-To understand and apply method and appropriate technology to the study of natural sciences.
-To recognize scientific and quantitative methods and the differences between these approaches and other methods of inquiry and to communicate findings, analyses, and interpretation both orally and in writing.
-To identify and recognize the differences among competing scientific theories.
-To demonstrate knowledge of the major issues and problems facing modern science, including issues that touch upon ethics, values, and public policies.
-To demonstrate knowledge of the interdependence of science and technology and their influence on, and contribution to, modern culture.

**Specific learning outcomes for these sections of bio 1407**

-To recognize scientific and quantitative methods and the differences between these approaches and other methods of inquiry.
-Be able to formulate testable hypotheses and predications from these hypotheses.
-Have a functional knowledge of the theory of evolution and understand its importance as the unifying theme in biology.
-Understand how the modern synthesis combines evolutionary theory with Mendelian genetics and advances in other fields
- Have a working knowledge of the Hardy-Weinberg Law or Equilibrium. Understand that this is the basis of comparison and it is the as the expectation when no evolutionary forces at work in a population
-Understand how evolutionary forces (gene flow, genetic drift, mutation) act in populations and how these forces can lead to speciation or prevent speciation.
-Understand how the fundamental differences in animal and plant life cycles influence inheritance of mutations and speciation.
-Understand how natural selection can lead to a loss of genetic diversity in populations or can lead to maintenance of genetic diversity in populations
-Understand the mechanisms that can lead to speciation.
-Have an understanding of phylogeny and systematics.
-Understand a portion of the vast biological diversity on our planet
-Have a working knowledge of ecological concepts in population and community ecology
-Understand aspects of physiology including animal and plant body organization, transport in both groups and homeostasis.
-Understand that this is an important part of the syllabus to read because it summarizes what you should take away from the course.

A community of learners. You are part the community of learners at Texas A&M University-Corpus Christi. I hope you are, or will become, an active member of this 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 1407.
-Supplemental Instruction (SI) sessions
Trevor Brue is the SI leader for this section of bio 1407. Please see the course Blackboard site for a schedule of Trevor’s SI sessions. Please take advantage of Trevor’s expertise. 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 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. At these sessions, Trevor can go over any questions on the exam you had difficulty answering correctly. Asking questions about the questions you did not answer correctly on the exam will help you answer the question correctly on the comprehensive final.

STUDENT-CENTERED LEARNING
-Team Learning: We will use a team learning approach in this class. Permanent team learning groups will be established at the start of the course. Students will answer questions on their own then team learning groups will answer the SAME questions. Team learning groups will submit group consensus answers to questions. Research examining team learning assignments show that the group score is HIGHER than individual scores and that students understand concepts much better as a result of discussing questions and course material in groups. 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 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 submit a group 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 group’s answers to the questions. 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.

Team learning exams. We use team learning techniques for exams. On Wednesday, groups will answer the team learning exam questions. On Friday, individuals will answer different exam questions. I hope the team learning exams help you to prepare for the individual portion of the exam.

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 or during group exams. If a student is found to be using a cell phone or computer the cell phone or computer will be taken and put on the desk up front so the student can pick up their phone or computer after class.

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.

Peer evaluation: Students will evaluate all the members of their group. The scores on these evaluations will be based on the contribution group members make to team learning assignments and exams.

Any group member receiving a score of 7 or less from two or more group members on the peer evaluation for group work given towards the end of the semester, will have all of their team learning assignment scores for group work reduced. The way these group scores will be reduced is that a zero will be assigned for the grade for the group portion of the 9th and 10th team learning assignments.

Any student who does not turn in a complete evaluation of group members with ALL group members names on the evaluation will be assigned a zero for the grade for the group portion of the 9th and 10th team learning assignments.

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 and University sponsored events. In the case that you have a scheduled medical appointment 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. Please note that we WILL have class 22 April and we will have the 9th Team Learning Assignment during this class meeting. The above mentioned policy will be strictly enforced for this Team Learning Assignment.

-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 and University sponsored events. In the case that you have a scheduled medical appointment 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. Note: Because somebody walked off with one of my responders and the battery trading thing didn’t work last semester we will require students to give us their ID to get a responder or batteries. They will give us back the responder or batteries at the end of the class.

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.** 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 Dr. Grisé immediately. Dr. Grisé 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.

The CPR assignments are a significant amount of work for both you and me. I only use teaching techniques and technology that improve student understanding and skills. One important skill to have as a scientist is the skill to review other people’s work. The analysis below indicates that students become more competent reviewers over the course of the semester. These data are the reason I continue to use the CPR system. Please put time and effort into the CPR assignments. Doing so will help you gain a valuable and useful skill that will be useful in your career.

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>
<tr>
<th>source</th>
<th>Degrees of freedom</th>
<th>Sum of squares</th>
<th>F</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student reviewer competency over time</td>
<td>3</td>
<td>25.9</td>
<td>5.28</td>
<td>0.0014</td>
</tr>
<tr>
<td>Program 1</td>
<td>2</td>
<td>3.6</td>
<td>0.71</td>
<td>0.4955</td>
</tr>
<tr>
<td>Reviewer competency over time*program</td>
<td>6</td>
<td>7.0</td>
<td>0.72</td>
<td>0.6372</td>
</tr>
<tr>
<td>Error for program</td>
<td>132</td>
<td>332.2</td>
<td>2.5</td>
<td></td>
</tr>
<tr>
<td>Error (time)</td>
<td>396</td>
<td>646.7</td>
<td>1.6</td>
<td></td>
</tr>
</tbody>
</table>

**RESOURCES REQUIRED FOR BIO 1407**

- **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-heal 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](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.


All or part of the following chapters in the text will be covered in this course: 22, 23, 24, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 40, 41, 42, 44, 45, 46,

**UNIVERSITY AND CLASS POLICIES**

**Class attendance**
My attendance policy is the same as the University’s. Please read the University’s attendance policy on page 33 in the 2007-2008 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 21 January and 1 April, you will be assigned a grade of W. Please be sure you read and understand the University’s drop policy found on page 32 of the catalog before you drop any class.

Academic Honesty
All students are expected to be familiar with TAMU-CC's Academic Honesty Statement found on page 38 of the 2007-2008 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](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.
-**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.

---

-**Evaluation students**

<table>
<thead>
<tr>
<th>non-learning community</th>
<th>points</th>
<th>% of grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>individual exams</td>
<td>500</td>
<td>31.4</td>
</tr>
<tr>
<td>team learning exams</td>
<td>100</td>
<td>6.3</td>
</tr>
<tr>
<td>team learning assignments</td>
<td>300</td>
<td>18.9</td>
</tr>
<tr>
<td>daily in-class questions</td>
<td>150</td>
<td>9.4</td>
</tr>
<tr>
<td>CPR</td>
<td>100</td>
<td>6.3</td>
</tr>
<tr>
<td>lab</td>
<td>440</td>
<td>27.7</td>
</tr>
<tr>
<td>total</td>
<td>1590</td>
<td>100</td>
</tr>
</tbody>
</table>

**Assignment of course grades.**

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.

**Exams**

There are a total of five individual exams (three individual exams given during a lecture period and a two part final). The three individual exams given during a lecture period 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 fourth individual exam). The second 100 points of the final covers material from the first three 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. **THERE IS NO EXTRA CREDIT!** For dates of the exams, CPR assignments and due dates for the team learning assignments, please see the calendar on Blackboard.

**Exam dates are Friday 10 February, Friday 3 March, and Friday 7 April.**

**The final exam is Monday, 8 May 11:00 to 13:30**
ALL students MUST take the final exam at the assigned time. If you have three finals on the same day, please contact me as soon as possible.