A. COURSE INFORMATION

Course number/section: BIOL 4292
Class meeting time: MW: 10:00 am – 10:50am
Class location: CA 228
Course Websites: bb9.tamucc.edu

B. INSTRUCTOR INFORMATION

Instructor: Xavier F. Gonzales, PhD, MSPH
Office location: Engineering 310C
Office hours: MW 11:00am-1:30pm
Telephone: 361-825-3824
e-mail: Xavier.Gonzales@tamucc.edu
Email me at any time but my responses will be limited after 5pm weekdays and all weekend.
Appointments: email me to set up appointments

C. COURSE DESCRIPTION

Catalog Course Description
Application of scientific literature research skills including a review of library services pertinent to science. Student oral seminar presentation in a science-oriented format and with visual aid support on an approved biological topic. Students enrolled in this course must take a Major Field Test in Biology.

Extended Course Description
A seminar represents one means whereby knowledge can be exchanged between biologists. Although this undergraduate seminar will be held in an informal manner, each student is expected to conduct themselves as a professional. A strong emphasis will be made on the critical reading of research articles and the oral and written explanation of one’s interpretations.

D. REQUIRED TEXTBOOK(S), READINGS AND SUPPLIES

1. Students are responsible to read all handouts provided on Blackboard.

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.

By the end of this course, students should be able to:
1. Interpret data from Primary research literature
2. Critically analyze scientific information and develop defendable conclusions
3. Develop Oral Scientific Communication skills
4. Develop Scientific Writing Skills

F. INSTRUCTIONAL METHODS AND ACTIVITIES

Learner-Centered Teaching: Collaborative work, control of content selection, personal reflection, learning skill demonstration

G. MAJOR COURSE REQUIREMENTS AND GRADING

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>% of FINAL GRADE</th>
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<tbody>
<tr>
<td>Presentation 1</td>
<td>30%</td>
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<tr>
<td>Presentation 2</td>
<td>30%</td>
</tr>
<tr>
<td>Written Summaries (Draft &amp; Final)</td>
<td>30%</td>
</tr>
<tr>
<td>Attendance/Participation</td>
<td>10%</td>
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</tbody>
</table>

Grading scale: A>90%  B=80-89.9%  C=70-79.9%  D=60-69%  F<60%

Nature of Assignments:

*Oral Presentations:* Each student will give two oral presentations on the same topic from two separate primary research journals. Each presentation will last 15 minutes plus 5 minutes for questions and should provide a general background to the scientific paper without going into the details of the paper. The second presentation should incorporate suggested comments from the peer critiques of the first presentation.

Required criteria for selecting a paper to present:

1. It must be a primary research paper, published in a good scientific journal – the journal should have impact factor of 3 or more. Example: Virology has Impact Factor of 3.321 ([http://www.journals.elsevier.com/virology/](http://www.journals.elsevier.com/virology/)) Read about impact factors at: http://wokinfo.com/essays/impact-factor
2. It must be on a biological topic that interest you.
3. It must be fairly recent – nothing older than 2015.
4. The paper you selected must have the following sections: Title, Authors, Abstract, Introduction, Methods, Results, Discussion, and Literature Cited (or some variation thereof).

Outline of your presentation:

1. Introduction/Background – give background information on your topic sufficient to allow students to understand: what was the goal and the objectives of the study; why the experiments described in your chosen article(s) were done, the experimental system, and the significance of the results you will show. Make it clear why we should be interested in this topic.

2. Results/Methods – present the data and describe the techniques used to obtain the data. This is the most challenging section of a presentation for most students. You want to present the results in such a way that the audience can understand and interpret the data. As you present this section, keep in mind your level of understanding when you first read the article.

   A good way of presenting data in the results section is, for each graph/table/figure:
   - Indicate what question the authors want to answer;
   - Describe the plan and methodology they chose to answer the question;
   - Describe the data they anticipate obtaining;
   - Show the data (describe any headings/axis coordinates; allow time for the audience to assimilate the data, and give the author’s conclusion;
   - State what next question the data led the author’s to ask

3. Discussion/Conclusion – this is where you tie everything together, where you communicate what the results mean, what conclusions can be drawn from the results, how the results further our understanding of biology, whether the goals of the study were met, and whether there were any problems in the study. Provide your own critique of the study

Written paper: Before the next class period after having given your 1st presentation you must submit (both an email and hard copy) a draft of a summary on your topic using the first paper as your source of information. The draft should be at least 2 pages; 1.5 line spacing; 1 inch margins; 12 point Times New Roman font. On the next class period after your 2nd presentation you must submit (both an email and hard copy) a final summary on your topic that incorporates information from both of your journals.

The following should be covered in your summary:

- Background: What were questions posed in these studies? How do these studies fit together and in the overall literature on the topic?
Hypothesis: Develop a hypothesis that is addressed by both journals
Experimental design: What are experimental strategies in the studies pertinent for addressing the hypothesis?
Statistical analysis: How were the data analyzed? Why were the tests chosen and are they appropriate?
Results: Summarize the findings succinctly. Explain why the authors did particular experiments. What results led them to do the next experiment? Pose an additional experiment?
Interpretation and conclusions: How do the authors interpret the results? What conclusions were drawn? Do you agree to the conclusions?

Class Participation: Attendance and class participation are mandatory. Participation will be evaluated on the following four criteria

- Attendance
- Asking a question
- Answering a question
- Making comments on presentation

H. COURSE CONTENT/SCHEDULE

<table>
<thead>
<tr>
<th>Date</th>
<th>Activity</th>
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<tbody>
<tr>
<td>08/28</td>
<td>Course Introduction</td>
</tr>
<tr>
<td>08/30</td>
<td>How to find and read a primary journal</td>
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<tr>
<td>09/04</td>
<td>How to give an oral presentation</td>
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<tr>
<td>09/06</td>
<td>Critical assessment of journal results and presented material</td>
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<tr>
<td>09/11</td>
<td>Students 1 &amp; 2</td>
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<tr>
<td>09/13</td>
<td>Students 3 &amp; 4</td>
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<tr>
<td>09/18</td>
<td>Students 5 &amp; 6</td>
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<td>09/20</td>
<td>Students 7 &amp; 8</td>
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<tr>
<td>Date</td>
<td>Event</td>
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<tr>
<td>09/25</td>
<td>Students 9 &amp; 10</td>
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<tr>
<td>09/27</td>
<td>Students 11 &amp; 12</td>
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<tr>
<td>10/02</td>
<td>Students 13 &amp; 14</td>
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<tr>
<td>10/04</td>
<td>Students 15 &amp; 16</td>
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<tr>
<td>10/09</td>
<td>Students 17 &amp; 18</td>
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<tr>
<td>10/11</td>
<td>Students 19 &amp; 20</td>
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<tr>
<td>10/16</td>
<td>Students 21 &amp; 22</td>
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<tr>
<td>10/18</td>
<td>Students 23 &amp; 24</td>
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<tr>
<td>10/23</td>
<td>Fine tuning your journal assessment &amp; presentation skills</td>
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<tr>
<td>10/25</td>
<td>Students 10 &amp; 12</td>
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<tr>
<td>10/30</td>
<td>Students 2 &amp; 4</td>
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<tr>
<td>11/01</td>
<td>Students 14 &amp; 16</td>
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<tr>
<td>11/06</td>
<td>Students 6 &amp; 8</td>
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<tr>
<td>11/08</td>
<td>Students 18 &amp; 20</td>
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<tr>
<td>11/13</td>
<td>Students 1 &amp; 3</td>
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<tr>
<td>11/15</td>
<td>Students 11 &amp; 13</td>
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<tr>
<td>11/20</td>
<td>Students 5 &amp; 7</td>
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<tr>
<td>11/22</td>
<td>Reading Day – No Class</td>
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<tr>
<td>11/27</td>
<td>Students 15 &amp; 17</td>
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<tr>
<td>Date</td>
<td>Notes</td>
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<tr>
<td>11/29</td>
<td>Students 9 &amp; 19</td>
</tr>
<tr>
<td>12/04</td>
<td>Students 21 &amp; 23</td>
</tr>
<tr>
<td>12/06</td>
<td>Reading Day - No Class</td>
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<tr>
<td>12/13</td>
<td>Be sure to have set up your major field test prior to completion of course</td>
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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. **COURSE POLICIES**

**Attendance/Tardiness**
Attendance: Students are expected to attend every scheduled class meeting. It is the responsibility of the student to obtain any material missed during an absence from his/her classmates. Power Points are not placed in the library, and only Power Points from certain sections will be placed on Blackboard, or on a website. Tardiness: Students may enter when late but be respectful of your peers and do not disrupt the class as you enter.

**Late Work**
No late work will be accepted. You must refer to Blackboard to identify when items will be due. It is your responsibility to get it turned in through the appropriate outlet on the designated day. I will not remind you.

**Extra Credit**
Missed extra credit opportunities--Instructor is not obligated to give make-up assignments for extra credit opportunities, whether excused or unexcused.

**Cell Phone Use**
Lecture: Students may NOT utilize their cell phone; therefore keep them on silent and put away.

**Laptop Use**
Lecture: Students may utilize their laptops as long as it does not disrupt others in class.

**Food in Class**
Lecture: Students may eat food as long as it does not disrupt others in class. It is the student’s responsibility to clean up after themselves. If you fail to do so, you will no longer be allowed to have food in class.

**Missed Exam**
No exams in this course.
Participation
Lecture: Students are required to participate in all group activities. Peer evaluations will be given with each activity to determine your final assessment.

J. COLLEGE AND UNIVERSITY POLICIES

- Academic Integrity (University)
  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 failing grade.

- 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.

- Deadline for Dropping a Course with a Grade of W (University)
  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. Please consult the Academic Calendar (http://www.tamucc.edu/academics/calendar/) for the last
day to drop a course.

- **Grade Appeals (College of Science and Engineering)**
  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](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](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**
  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 (361) 825-5816 or visit Disability Services 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

- 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.

GENERAL DISCLAIMER

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