EMBRYOLOGY
BIOL 4301
Department of Life Sciences
Fall 2017

A. COURSE INFORMATION

<table>
<thead>
<tr>
<th>Course number/section:</th>
<th>BIMS 4301.001</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class meeting time:</td>
<td>Monday, Wednesday and Friday 11:00 – 11:50 AM</td>
</tr>
<tr>
<td>Class location:</td>
<td>O’Connor Building (OCNR) 115</td>
</tr>
<tr>
<td>Course Website:</td>
<td>(Island Online/Blackboard Portal) <a href="https://bb9.tamucc.edu/">https://bb9.tamucc.edu/</a></td>
</tr>
</tbody>
</table>

B. INSTRUCTOR INFORMATION

Instructor: Dr. David Moury (Ph.D.)
Office location: Engineering Building (EN) 314C
Office hours: Mon., Wed. and Fri. 2:00 – 3:00 PM; Thurs. 10:00 AM – 12:00 PM
Telephone: (361) 825-3259
e-mail: david.moury@tamucc.edu

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

C. COURSE DESCRIPTION

Catalog Course Description
BIOL 4301 – Embryology. 3 sem. hrs. (3:0). Studies the events that occur just prior to and during gestation. Includes gametogenesis, chromosomal and single gene aberrations, teratology, and the development of the body systems. Offered fall semester every year.

Extended Course Description
Embryology (BIOL 4301) is an upper-division, lecture course that examines aspects of animal development from the “gamete to the grave,” placing particular emphasis on the period from gametogenesis through birth. Students—in consultation with their academic advisors—must determine whether this course is appropriate for their academic and/or career plans. This course will focus on two major themes:

- Changes in anatomy and physiology during development.
- The physical, genetic, and chemical controls underlying these changes.

Familiarity with adult anatomy and/or physiology provides an understanding of the “end product” of development. The anatomy/physiology covered in Biology II, plus additional information given during this course, should provide sufficient background. (Students who have had a college-level course in anatomy/physiology, however, will find that it helps them...
in this course.) Knowledge of genetics, cell biology, or molecular biology is also helpful—hence the Genetics prerequisite. (In other words, I hope you didn’t do a “data dump” after Genetics!) The emphasis of this course is normal animal development (based on studies of selected model organisms). However, we can also examine teratology (conditions resulting from abnormal development). These abnormal conditions often serve as “natural experiments” that help to elucidate normal development by perturbing it.

This course seeks to give students an understanding of animal development at several levels of organization (see the traditional hierarchical organization shown at the right) by examining three major areas:

1. **Central Themes and Questions** introduces the student to basic embryological terminology, concepts and experimental methods;
2. **Early Animal Development** (and its regulation) uses the previous concepts to explore establishing axes, setting up basic body plans and “local” aspects of continued development and growth; and
3. **Vertebrate Organogenesis** (and its regulation) focuses on more global changes in which cells and tissues take their proper place as members of recognizable organs and organ systems.

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### D. PREREQUISITES AND COREQUISITES

**Prerequisites**
BIOL 2416 - Genetics.

**Corequisites**
None.

### E. REQUIRED TEXTBOOK(S), READINGS AND SUPPLIES

**Required Textbook(s)**

**Optional Textbooks or Other References**
Any of the various “Embryology/Development” books or coloring books. Good anatomy and cell/genetics textbooks are also helpful as references for this course, as are the online “Wikibooks” on these and related topics.

### F. 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.

The division of topics in the schedule (p. 2) is based on the three major areas listed above. For each topic in the schedule, the student will be expected to…

1. Use scientific and clinical terminology correctly.
2. Recognize and identify developmental stages, structures, and their components. Simple naming of stages and parts, and listing of the time spent in these stages, though necessary, is a minor, component of this course.
3. Discuss physical, genetic, and chemical control mechanisms in terms of what regulates a particular developmental change, and what—in turn—the effects of that particular change will be.
4. Explain how the interactions of structures and chemical systems change during development.
5. Evaluate our current understanding of developmental mechanisms using evidence from experimental embryology (with non-human organisms) or teratology supports their arguments.

Each of these outcomes will be assessed in all examinations and in the group presentation.

Two skills-related outcomes will be measured only in the group presentation. Students will be expected to:
6. Demonstrate creativity, scientific accuracy and professionalism in the preparation and oral presentation of an overview of a scientific topic.
7. Synthesize a brief, concise written summary of their topic using and citing appropriate sources.

G. INSTRUCTIONAL METHODS AND ACTIVITIES

Learning is more than just reading, taking notes, and memorizing. Reading and taking notes puts information in short-term memory where it is forgotten quickly unless you do something with it. Memorizing is important. However, memorization is only one step (often the first step) in the learning process. As university students, you should be able to link, combine, and synthesize the bits of data that you memorize into useful concepts. The instructor of this course will provide the students with: 1) information in the form of lectures, audio/visual information (including online information), handouts, assigned readings, and supplemental readings; and 2) advice, supervision and guidance.
H. MAJOR COURSE REQUIREMENTS AND GRADING

Your final grade will be based on the final percentage that you earn out of a possible 1000 points, which are distributed as follows:

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>POINTS</th>
<th>% of FINAL GRADE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lecture Examinations and/or Final</td>
<td>900</td>
<td>90%</td>
</tr>
<tr>
<td>Group Presentation</td>
<td>100</td>
<td>10%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>1000</td>
<td>100%</td>
</tr>
</tbody>
</table>

**Examinations:** I will give four examinations (100 percentage points each), taking questions for these tests primarily from material covered in the lectures, from handouts and other assignments, and from readings in Slack (2013). 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), and redemptive (i.e., it can count as nothing; it can replace single examination; or it can be your entire 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. (Multiply your highest percentage by 3 to determine how many points you earned out of the 900 examination points.)

**Student Group Presentations:** Students will work in groups (usually of 3-5 members) to present short (about 10-15 minute) PowerPoint presentations on selected topics. In addition to the oral presentation, each group should prepare a two-page written description of their topic that will be distributed to the entire class. The description will include a summary and an annotated reference list including at least three references (types listed below). The description plus the references (together) must fit on two pages—no bleeding onto a third page—so that the entire summary will fit (“front-and-back”) on a single sheet of 8½ × 11” paper. To be readable, the summary should be printed in a font size between 10 and 12 points. An annotated reference list means that each citation includes a brief (one or two sentences) description or summary of its contents. Students will receive more information about the group presentations after the later in the semester. Points are distributed as follows:
ITEM FROM PRESENTATION | POINTS
--- | ---
Oral PowerPoint Presentation (including graphics, appropriate dress, etc.) | 60
Written Description | 30
Annotated References:
1. Primary Research Article (in a peer-reviewed journal)—at least 1
2. Primary Research Article (a second one) or Review (in a peer-reviewed journal)—at least 1
3. Secondary Reference (web site, textbook, government pamphlet, popular science magazine, newspaper, etc.)—at least 1 | 10

TOTAL POINTS POSSIBLE | 100

Reminders: All paperwork for the presentations is due at the beginning of the class period on Monday 20 November. (Yes, that is also the date for Examination III; do not put this paperwork off until the last minute!)

- Check your presentation on the projection hardware before D-day!
- The primary research article and the review must be from peer-reviewed journals.
- Each group must provide me with a hard copy of all reference sources.
- The annotation is similar to an abstract, but do not just copy or paraphrase the abstract from the paper. You will get no credit if you do!

Letter Grade: Your final letter grade will be based on your average in lecture. 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 either (for financial aid, to get into professional school or program, 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 mailed to you, please see me in person or provide me with a self-addressed, stamped envelope.

I. COURSE CONTENT/SCHEDULE

<table>
<thead>
<tr>
<th>DAY</th>
<th>DATE</th>
<th>TOPIC</th>
<th>CHAPTER(S)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mon.</td>
<td>28 Aug.</td>
<td>Introduction and Overview</td>
<td>1</td>
</tr>
<tr>
<td>Wed.</td>
<td>30 Aug.</td>
<td>Central Theme: Cell Differentiation</td>
<td>4 &amp; 5</td>
</tr>
<tr>
<td>Fri.</td>
<td>1 Sept.</td>
<td>Concepts: Genomic equivalence, …</td>
<td></td>
</tr>
<tr>
<td>Mon.</td>
<td>4 Sept.</td>
<td>Labor Day Holiday—No Classes</td>
<td></td>
</tr>
<tr>
<td>Wed.</td>
<td>6 Sept.</td>
<td>… commitment vs. potency, localization</td>
<td></td>
</tr>
<tr>
<td>Fri.</td>
<td>8 Sept.</td>
<td>and induction. Techniques: Fate mapping</td>
<td></td>
</tr>
<tr>
<td>Mon.</td>
<td>11 Sept.</td>
<td>and potency mapping, cell marking</td>
<td></td>
</tr>
<tr>
<td>Wed.</td>
<td>13 Sept.</td>
<td>Central Theme: Cell Signals and Movements 2 (part) &amp; 3</td>
<td></td>
</tr>
<tr>
<td>Fri.</td>
<td>15 Sept.</td>
<td>Gene expression, internal &amp; external</td>
<td></td>
</tr>
<tr>
<td>Mon.</td>
<td>18 Sept.</td>
<td>signal systems, ECM, movement,</td>
<td></td>
</tr>
<tr>
<td>Wed.</td>
<td>20 Sept.</td>
<td>genetic analyses, signal detection</td>
<td></td>
</tr>
<tr>
<td>Fri.</td>
<td>22 Sept.</td>
<td>Pattern Formation in Drosophila</td>
<td>11</td>
</tr>
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| Mon.   | 25 Sept.| EXAMINATION I (1-5 & 11)                       |             |
| Wed.   | 27 Sept.| Gametogenesis (Mainly in Mammals)              | 2 & 15 (parts of each) |
| Fri.   | 29 Sept.| Fertilization                                  | 2 & 10 (parts of each) |
| Mon.   | 2 Oct.  | Cleavage Stages and Blastula                   | 2, 7, 9 & 10 (parts of each) |
| Wed.   | 4 Oct.  | Gastrulation and Germ Layers                   | 2, 7 & 10 (parts of each) |
| Fri.   | 6 Oct.  | continued                                      |             |
| Mon.   | 9 Oct.  | Establishing Axes (Mainly in Amphibians)       | 2 & 7 (parts of each) |
| Wed.   | 11 Oct. | continued                                      |             |
| Fri.   | 13 Oct. | Neurulation                                    | 2, 7 & 10 (parts of each) |
| Mon.   | 16 Oct. | continued                                      |             |
| Wed.   | 18 Oct. | Stem Cells, Tissues and Growth                 | 18 & 19 (part) |
| Fri.   | 20 Oct. | continued                                      |             |

| Mon.   | 23 Oct.| EXAMINATION II (2, 7, 9, 10, 15, 18 & 19)      |             |
| Fri.   | 27 Oct.| continued                                      |             |
| Mon.   | 30 Oct.| continued                                      |             |
| Wed.   | 1 Nov. | continued                                      |             |
| Fri.   | 3 Nov. | Organogenesis: Mesodermal Derivatives          | 15          |
| Mon.   | 6 Nov. | continued                                      |             |
| Wed.   | 8 Nov. | continued                                      |             |
| Fri.   | 10 Nov.| continued                                      |             |
| Mon.   | 13 Nov.| Organogenesis: Endodermal Derivatives          | 16          |
| Wed.   | 15 Nov.| continued                                      |             |
| Fri.   | 17 Nov.| continued                                      |             |

| Mon.   | 20 Nov.| EXAMINATION III (14-16)                        |             |
| Wed.   | 22 Nov.| Reading Day—No Classes                         |             |
| Fri.   | 24 Nov.| Thanksgiving Holiday—No Classes                |             |
| Mon.   | 27 Nov.| Student Presentations                          |             |
| Wed.   | 29 Nov.| Student Presentations                          |             |
Fri., 1 Dec.  Student Presentations
Mon., 4 Dec.  Student Presentations
Wed., 6 Dec.  Student Presentations
Fri., 8 Dec.  FINAL EXAMINATION (11:00 AM-1:30 PM) (Comprehensive)

*Chapters in Slack (2013). Reading these chapters before class is always a good idea. However, I tend to “tell the story of development” in my own way, rather than adhering strictly to the order of topics in the textbook. As upper-division science students you should be able to synthesize the author’s story and my story into a single coherent story that is logical and makes sense to you. Use the textbook as a reference source and consult chapters other than those I mention to fill in gaps in your knowledge. (I do this when making lectures.) Barring a natural disaster, examination dates will not change. Plan accordingly!

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

J. COURSE POLICIES

Attendance/Tardiness

My attendance policy is the same as that stated in the University Catalog. Attendance is the student’s responsibility, and students are expected to attend, be on time for and remain the entire period in every class. Attendance is not used to determine grades. In lecture, even when I take roll, I do not give—per se—a bonus for attendance, nor a penalty for absence (except for missing an examination, bonus points, or an assignment). (Note that I may choose to have “pop” quizzes, and/or “attendance” quizzes as part of the bonus points.) Coming to lecture on a regular basis should result in a higher grade, and if you come to class often, it will help you do well in this course.

You are responsible for the material covered and assignments made in every lecture regardless of whether you attend it. “I came in late and didn’t hear about the assignment,” is never an acceptable excuse. It is always your responsibility to determine what happened in class during your absence. If you are absent, tardy, or leave early, I will provide you with copies of assignments (including “bonus point” assignments) and handouts if—and only if—you ask for them. (In other words, I will not, “track down” absentees to make sure that they know about assignments.) You must obtain class notes from other students.

Points missed because of an unexcused absence (including tardiness and leaving early) cannot be recovered. An excused absence allows us to make alternative arrangements for completing assignments. The documentation required for an absence to be excused must be...

- from an appropriate source (e.g., doctor, dentist, funeral director) who states the nature of the event that caused (or will cause) your absence.
- in writing, on official stationery, and signed. (I do not return excuses to you.) Telephone calls, FAXes, and e-mails are not acceptable.
• presented prior to the absence for a scheduled event (e.g., university-sponsored activity, recognized religious holiday, military service).
• presented no more than one week after the date of an unexpected absence.

Any situations for which you cannot provide an acceptable excuse as outlined above (e.g., “I have an excuse, but it is too personal to discuss with you”) will be referred to the Vice President for Student Engagement and Success.

Once enrolled in a class, it is the student’s responsibility to arrange his or her schedule (academic, work and personal) so that no regularly scheduled class, laboratory or examination time is missed. Only unavoidable absences are excused, so routine personal events (e.g., vacations, trips, celebrations, reunions, non-emergency medical or dental visits, parent-teacher conferences, business/legal consultations, 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. Except for excused absences, late assignments will not be accepted. If you know in advance that you will have an excused absence when an assignment is due, you must turn in that assignment before its due date. You should turn in assignments that were missed because of an unexpected, excused absence as soon as possible.

In general, there are NO individual make-up examinations! The grading formulas above give you three chances to earn points from lecture examinations: method 1 or 3 if you miss one lecture examination; method 1 if you miss more than one lecture examination; method 2 if you miss the final examination. The instructor—in consultation with the Vice President for Student Engagement and Success—will determine if circumstances warrant giving an individual a make-up test after the original test. A make-up test given after the original test will be all written (i.e., no multiple choice or matching), and it will be administered on the “Reading Day” for the semester.

Extra Credit
Individual extra credit is not possible, but extra points are built into all examinations (as extra questions). I reserve the right to add additional opportunities for the entire class to earn extra bonus points (e.g., attendance at a special event, written reports, library searches, web searches, quizzes [announced or un-announced]). Such opportunities may be offered or announced only once, so be in class, be on time, and stay for the entire period. Bonus points cannot be made up—period.
Cell Phone Use
Cellular phones, pagers, and other “beepers” must be silenced BEFORE you enter the classroom.

Food, Drink and Tobacco in Class
Eating, drinking and the use of tobacco products (of any kind, including “smokeless”) is forbidden in lecture.

Missed Exam for University-Excused Events
For some 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. “University-excused absences” are given mainly for University-sponsored events; and not all “legitimate” excuses are University-excused. A written excuse from the Athletics Office and/or Office of Student Engagement and Success (not from a teacher, student organization, etc.) is required for an absence to be “University-excused.”

Classroom/Professional Behavior
You are 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. All students are expected to be familiar with the Academic Honesty Statement found in the University Catalog. 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.”

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).

K. 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, and the College of Science and Engineering Grade Appeals webpage at http://sci.tamucc.edu/students/GradeAppeal.html. For assistance and/or guidance in the grade appeal process, students may contact the chair or director of the appropriate department or school, the Office of the College of Science and Engineering Dean, or the Office of the Provost.

- **Disability Services**
  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/

• **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 may 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.

L. **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.

• 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.)

• Bring paper and a writing implement to each class period. Handwritten assignments will be accepted only if they are written in pencil, blue ink, or black ink. (You will get a permanent “zero” on the assignment if you write with anything else.)

• Grammar counts—period! Poor grammar will cost you points—especially on assignments and presentations.

• Spelling counts! To even be considered for partial credit, your answer must phonetically sound like the word that you are trying to spell. Examples of answers that are incorrect:
  • Grossly misspelled words (e.g., “crevurfian pleat” for “cribriform plate”).
  • Ambiguous answers (e.g., “tibula”—could be “tibia,” could be “fibula”).
  • Illegible answers (e.g., “ep-squiggle-squiggle-squiggle” for “epididymis”)

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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.