Foundations of Life Science – SMTE 3316.001/101
Department of Life Sciences
Summer II 2018

A. COURSE INFORMATION

Course number/section: SMTE 3316.001/101
Class meeting time: MTWR 10:00 am-12:55 pm
Class location: EN 201
Course Website: Blackboard 9@tamucc.edu

B. INSTRUCTOR INFORMATION

Instructor: Larissa M. Dias
Office location: NRC 3504, #5
Office hours: MW 9-10 am
Telephone: 817.881.9849
Email: Larissa.Dias@tamucc.edu
Appointments: Please call, text, or email me to make an appointment.

C. COURSE DESCRIPTION

Catalog Course Description: Emphasis on teaching biological concepts including cells, plants, vertebrate and invertebrate structural systems, cell biology, ecology, and other concepts relevant for K-8 science classrooms and associated with the Texas Essential Knowledge and Skills (TEKS). Instruction regarding pedagogical foundations are those that are contained in the Science Content Standards and Science Teaching Standards as prescribed by the National Science Education Standards, the National Science Teachers Association and the Texas Education Agency.

D. PREREQUISITES AND COREQUISITES

Prerequisites
none

Corequisites
Students in SMTE 3316 are expected to register for Laboratory Safety Seminar – SMTE 0091. Students must complete this web-based course during the first week of the semester to be allowed to attend and complete SMTE 3316.

E. REQUIRED TEXTBOOK(S), READINGS AND SUPPLIES

Required Textbook(s)
1. SMTE 3316 Foundations of Biological Sciences by C. McCollough course packet (available in Barnes & Nobles TAMUCC Bookstore)
Optional Textbook(s) or Other References
TAKS Reader: Reading Essentials (Biology: The Dynamics of Life) – McGraw-Hill
Glencoe ISBN# 0-07-861-205-5+
Supplies – none required

F. STUDENT LEARNING OUTCOMES AND ASSESSMENT
By the end of this course, students should be able to:

1. compare and contrast plant and animal cells and tissues
2. demonstrate ability to use the microscope
3. classify organisms as bacteria, protists or fungi
4. identify basic plant structures
5. outline a variety of plant life processes
6. describe the basic life processes of animals
7. discuss the scientific foundation of evolutionary processes.
8. describe general classification of animals
9. demonstrate the use of the scientific method in problem solving
10. describe/demonstrate/discuss the theoretical and pedagogical methods in teaching
    the above material to elementary and middle school students. Such methods are
    according to the NSES, NSTA, TEA and other professional organizations that
    prescribes methods that are based on scientific research.
11. Learn the importance of culturally relevant teaching and use family learning
    events as an example of culturally relevant teaching; participate in a family learning
    event.

G. INSTRUCTIONAL METHODS AND ACTIVITIES
The student will be expected to:

- attend and participate in classroom and laboratory activities
- read textbook assignments prior to class
- take examinations
- participate in developing presentations and projects while working both
  collaboratively and alone.
- correlate laboratory and other activities with the Texas Essential Knowledge and
  Skills (TEKS).
- write original, research-driven, learner-centered classroom and laboratory
  exercises based on units of instruction that follow guidelines of the No Child Left
  Behind Act of 2001, as well as TEKS or other state guidelines.
- design, write, and direct (as an individual) lesson plans on a scientific topic of
  his/her own choosing as approved by the instructor, and revise the lesson plans
  based on instructor and peer comments.
- model appropriate and approved practices in managing a laboratory setting,
  including basic laboratory skills.
- create a presentation and participate in Family Learning Events.
H. MAJOR COURSE REQUIREMENTS AND GRADING

EVALUATION

Points will be awarded for the following. Please refer to handouts for rubrics, criteria, and examples of completed assignments and examinations in order to identify expectations for these assignments. **Every student should have a clear idea of expectations prior to completion of the following assignments/test administration. Any and all questions regarding expectations should be immediately referred to the instructor. Please do not wait until the day before the assignment is due to ask questions!**

**NO E-MAILED ASSIGNMENTS WILL BE ACCEPTED! HARD COPIES MUST BE SUBMITTED WHEN DUE TO RECEIVE CREDIT!**

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Points</th>
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<tbody>
<tr>
<td>1. Three examinations @ 200 points each</td>
<td>600 points**</td>
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<tr>
<td>2. Family Science Reflection (1@ 100 points)</td>
<td>100 points</td>
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<tr>
<td>(Attendance at 3 family science events is expected – if absent and not able to make-up work, 100 points will be missing from your final grade! Only absences that involve classes where you cannot be excused will be allowed to make up work and this is decided on a case-by-case basis with professor.)</td>
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<tr>
<td>3. Family Science Project Peer Evaluation</td>
<td>50 points</td>
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<td>4. Candle Lab/Lord of Nature/Evolution paper</td>
<td>75 points</td>
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<td>25 points each</td>
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<tr>
<td>5. Family Science Lesson Plan</td>
<td>200 points</td>
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**Total:** 1025

Scale:

- A – 90 – 100%
- B – 80 – 89%
- C – 70 – 79%
- D – 60 – 69%

**Missed Exams – excused only per TAMUCC guidelines; such exams are given only under EXTREME circumstances and will be total essay.**
## COURSE CONTENT/SCHEDULE – will review first day of class

<table>
<thead>
<tr>
<th>DATE</th>
<th>Time: CLASS</th>
<th>Time: LAB</th>
<th>DEADLINES/READING ASSIGNMENTS</th>
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</thead>
<tbody>
<tr>
<td>July 2</td>
<td>Syllabus, Expectations, Surveys</td>
<td>How People Learn</td>
<td>Read NSTA Principles of Professionalism, TAKS Ch. 1</td>
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<tr>
<td>July 3</td>
<td>Beliefs about Science/Inquiry and Standards of Science</td>
<td>Candle Lab/Culturally Relevant Teaching</td>
<td>Read Family Science in Coursepack, Evolution NSTA Position Statement</td>
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<td>July 4</td>
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<td>No Class - Happy Independence Day!</td>
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<tr>
<td>July 5</td>
<td>Family Science</td>
<td>Evolution and Natural Selection/Video</td>
<td>Read TAKS Ch. 15 and 2</td>
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<tr>
<td>July 9</td>
<td>Ecology and Cycles, Lords of Nature</td>
<td>Taxonomy and the 5 Kingdoms</td>
<td>Candle Lab Due, Lords of Nature Due at End of Class</td>
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<tr>
<td>July 10</td>
<td>Cell Theory/Cell Structure</td>
<td>Family Science Project Construction</td>
<td>Evolution Paper Due, Read TAKS Ch. 17 and 7, Family Science Project Outline Due</td>
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<tr>
<td>July 11</td>
<td>Mitosis and Meiosis and Lab</td>
<td>Family Science Peer Evaluation</td>
<td>Read TAKS Ch. 8</td>
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<td>July 12</td>
<td>Monera, Protista, and Fungi, Pondwater and Microscopes</td>
<td>Review</td>
<td>Read TAKS Ch. 18, 19, and 20</td>
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<tr>
<td>July 16</td>
<td>EXAM I</td>
<td>Kingdom Animalia Activity</td>
<td>Read TAKS Ch. 25</td>
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<td>July 17</td>
<td>Porifera</td>
<td>Cnideria, Platyhelminthes</td>
<td>Read TAKS Ch. 26</td>
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<tr>
<td>Date</td>
<td>Activity</td>
<td>SLOs/Texts</td>
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<tr>
<td>July 18</td>
<td>Mollusca, Annelida, Earthworm Dissection</td>
<td>Arthropoda, Echinodermata Read TAKS Ch. 27-29</td>
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<td>July 19</td>
<td>Sea Star Dissection and Perch Dissection</td>
<td>Chordates: Fish and Amphibians Read TAKS Ch. 30</td>
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<tr>
<td>July 23</td>
<td>Chordates: Reptiles, Birds, and Mammals</td>
<td>Owl Pellet Dissection, Review Read TAKS Ch. 31 and 32</td>
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<td>July 24</td>
<td>EXAM II</td>
<td>Viruses</td>
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<td>July 25</td>
<td>Biodiversity</td>
<td>Racing Extinction Read TAKS Ch. 5</td>
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<td>July 26</td>
<td>Circulatory and Respiratory Systems</td>
<td>Heart Dissection, Systems Lab Read TAKS Ch. 37 and 34</td>
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<td>TBD</td>
<td>Family Science Night at London ISD</td>
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<tr>
<td>July 30</td>
<td>Muscular and Skeletal Systems</td>
<td>Nervous and Sensory Systems FSN Reflection Due, Read TAKS Ch. 36</td>
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<td>July 31</td>
<td>Brain Dissection, Flowering Plants</td>
<td>Flower Dissection, Slides Read TAKS Ch. 21-24</td>
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<td>August 1</td>
<td>Heredity and DNA, Genetics</td>
<td>Review/Wrap-up Read TAKS Ch. 11 and 12</td>
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<tr>
<td>Aug 2</td>
<td>EXAM III</td>
<td>Final Lesson Plan Due</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.
J. COURSE POLICIES

Attendance/Tardiness
Students are expected to attend every scheduled class and laboratory meeting. Family vacations and celebrations of your 21st birthday are worthwhile, but are not classified as excused absences. If you book an airplane flight which conflicts with class, I do NOT consider that to be an excused absence. Routine events should be scheduled to avoid class conflicts. In general, only unavoidable absences are excused (major family illness or accidents, deaths, funerals).

I WILL BE TAKING ATTENDANCE AT EACH CLASS. STUDENTS ARE GIVEN ONE UNEXCUSED ABSENCES PER SEMESTER FOR THIS CLASS. AFTER THAT ABSENCE, THEY WILL RECEIVE A 10% DROP IN THEIR FINAL LETTER GRADE FOR EACH ADDITIONAL UNEXCUSED ABSENCE. LEAVING CLASS EARLY/ARRIVING LATE FOR CLASS WILL COUNT AS ½ ABSENCE.

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 stationary, 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.

Unacceptable Excuses: Only unavoidable absences are excused (see above), so you should schedule routine personal events (e.g., vacations, wedding, reunions, non-emergency medical or dental visits, parent-teacher conferences, household or auto repairs) to avoid conflicts with your classes. Oversleeping is never an acceptable excuse. Employment conflicts are not acceptable excuses for absences, tardiness, or leaving class early. Texas waves jury duty for students, so jury duty is not an acceptable excuse. 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.

It is the responsibility of the student to obtain any material missed during an absence from his/her classmates. It is always your responsibility to determine what happened in class or laboratory during your absence. If you are absent, you must obtain any handouts or assignments from me in my office on your own time: I rarely bring assignments to class more than once. You must obtain class notes from other students.

Special circumstances may warrant deviating from these guidelines (including administering a “make-up” examination) and will be refereed to the Vice President of Student Affairs. This also
applies to any situations for which you cannot provide an acceptable excuse as outlined above.

**Late Work and Make-up Exams**

Except in cases were prior arrangements have been made with the instructor for university approved absences, there is NO provision for making up late work and/or missed exams and quizzes. Anyone arriving after someone has completed an examination and left the room will not be allowed to take that examination. 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. In the event of an examination that is missed, regardless of circumstances regarding illness, absenteeism, death in the family, etc., NO make-up examinations will be administered.

**K. COLLEGE AND UNIVERSITY POLICIES**

- **Academic Integrity (University)**
  It is expected that university students will demonstrate a high level of maturity, self-direction, and ability to manage their own affairs. Students are viewed as individuals who possess the qualities of worth, dignity, and the capacity for self-direction in personal behavior.
  See Full University Policy at [http://catalog.tamucc.edu/content.php?catoid=10&navoid=313#Academic_Integrity](http://catalog.tamucc.edu/content.php?catoid=10&navoid=313#Academic_Integrity)

- **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.

**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/](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**
  Disability Services (DS) is the hub for coordinating services and accommodations to
ensure accessibility and utilization of all programs for all Texas A&M University-
Corpus Christi students with disabilities. Our services are designed to meet the unique
educational needs of enrolled students with documented permanent or temporary
disabilities. DS provides intake and consultation services to students seeking to
register with our office. DS reviews an individual’s documentation of disability and
assesses eligibility for services and the determination of reasonable accommodations.
For more information visit the Disability Services Office at 116 Corpus Christi Hall
or go to http://disabilityservices.tamucc.edu/

- **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.

**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.