The University of Texas at El Paso
College of Science
Department of Biological Sciences
Please check for updates online - Syllabus is subject to change

Course #: BIOL 4321 CRN 16736
Course Title: Developmental Biology
Credit Hrs: 3
Term: Fall 2019
Location & Time: T/Th 4:30 – 5:50pm UGLC 336
Prerequisites: BIOL1305, 3414, ZOOL 2406, or BIOL 1306
Course Instructor: Dr. Charlotte M. Vines
Office Location: Biosciences 4.124
Contact Info: Phone: 915-747-8127
e-mail: cvines@utep.edu
FAX: 915-747-5808
Office Hours: Tues 2 – 3 pm (or by appointment)

Course Activities/Assignments:
Evaluation will be based on the average of 4 exam grades: 3 take home midterms (20% each of your final grade), one final (20% of your final grade) class participation (10% of grade) and Case studies (10% of grade).

Assessment:
Students will be assessed via three term exams (each worth 20% of the grade) class participation/case studies (Each worth 10% of the grade) and a comprehensive final exam grade (20%). All exams will be submitted on Black Board and evaluated for plagiarism. Although each student must turn in their

Graduate students ONLY. Graduate students enrolled in this course will be expected to develop an R21 style specific aims and Research strategy for an application for funding. This assignment will be due on the last day of class. You will need to identify a current question in developmental biology and design a proposal that designs experiments to attempt to address that question. See https://grants.nih.gov/grants/guide/pa-files/PA-19-053.html and https://grants.nih.gov/grants/how-to-apply-application-guide/forms-e/research-forms-e.pdf for details. 70% of your grade is exams (17% each midterm and 19% for the final), 10% is class participation, 20% is your R21.
own work, *in their own words*, students may work
together to discuss answers and derive suitable ways
to respond to the questions on the exam. Exams that
are identified by Black Board, with greater than 50%
identical words will be graded, and each student who has
turned in a copy will receive a split grade (if 2
students turn in a perfect exam, their final grade will
be 100/2 or 50%. If 3 students turn in a perfect exam,
their final grade will be 100/3 or 33%)

**Course Description:** This course examines the basic molecular
mechanisms that are used during the development of
animals from germ cells and fertilization thru various
stages of embryonic development and in some
animals post-embryonic development. We will look
at evolutionary mechanisms that promote growth and
differentiation at the molecular and organismic level.
We will cover invertebrate (worm, sea urchin, fly) and
vertebrate (frog, fish, chicken, mouse) animals.
Students should have a basic understanding of
 genetics, cell molecular biology prior to taking this
class.

<table>
<thead>
<tr>
<th>Date</th>
<th>Chapter/Topic</th>
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<tbody>
<tr>
<td>August 27-29, 2019</td>
<td>Chapter 1 - The Making of a Body and a Field</td>
</tr>
<tr>
<td>September 3-5, 2019</td>
<td>Chapter 2 – Specifying Identity</td>
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<td>September 10-12, 2019</td>
<td>Chapter 3 – Differential gene expression</td>
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<td>September 17-24, 2019</td>
<td>Chapter 4 – Cell to Cell Communication</td>
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<tr>
<td>September 19, 2019</td>
<td>Midterm Exam posted at 11:59PM</td>
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<td><strong>September 26, 2019</strong></td>
<td>Midterm Exam # 1 Due at 6:00PM No Class today</td>
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<tr>
<td>October 1-8, 2019</td>
<td>Chapter 4 – Cell to Cell Communication</td>
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<tr>
<td>October 10, 2019</td>
<td>Case Study #1 Two heads are better than one</td>
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<td>October 15 – 17, 2019</td>
<td>Chapter 5 – Stem cells</td>
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<td>October 22 – 31, 2019</td>
<td>Chapter 6 – Sex determination and Gametogenesis</td>
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<tr>
<td><strong>November 1, 2019</strong></td>
<td>DROP DATE</td>
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<tr>
<td>November 5, 2019</td>
<td>Midterm Exam # 2 Due at 6:00PM No Class today</td>
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<tr>
<td>November 7-12, 2019</td>
<td>Chapter 7 - Fertilization</td>
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<tr>
<td>November 14, 2019</td>
<td>Case Study #2- Capacitation</td>
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November 14-19, 2019  |  Chapter 8-Gastrulation  
November 14, 2019  |  Midterm Exam posted at 11:59PM  
November 21, 2019  |  Midterm Exam # 3 Due at 6:00PM  
                        |  No Class today  
November 26, 2019  |  Chapter 9 Genetics of Axis Specification in *Drosophila*  
November 28, 2019  |  NO CLASS TODAY- HAPPY THANKSGIVING  
December 3-5, 2019  |  Chapter 23 – Development in Health and Disease  
December 5, 2019  |  Chapter 24 - Development and the Environment  
December 8, 2019  |  FINAL Exam Due at 5:00PM No work will be accepted after this date

**Grading Policy:**  
Letter grades for this course will be assigned as follows:  
90-100%  A  
80-89%  B  
70-79%  C  
60-69%  D  
0-59%  F

**Drop Date:**  
The drop date is November 1ST. The College of Science aligns with UTEP’s posted drop date of November 1 for the Fall 2019 semester. We will not approve any student- or faculty-initiated drop requests for a course after that date, except under circumstances of complete withdrawal of ALL COURSES.

**Make-up Policy:**  
There will be NO MAKE UP EXAMS OR QUIZZES. If you miss an exam the exam will receive a zero.

**Attendance Policy:**  
10% of your grade will be derived from in class quizzes. **UNLESS YOU ARRANGE IT WITH THE PROFESSOR, THERE ARE NO MAKE-UPS.**

**Academic Integrity Policy:**  
The UTEP academic integrity policy will be strictly enforced during exams. Any student failing to adhere to the policy will be disciplined.

**Civility Statement:**  
All cell phones should be turned off during class. Students with disruptive behavior will be asked to leave the class. If you are tardy and miss the quizzes there will be no makeup quiz.

**Disability Statement:**  
If a student has or suspects she/he has a disability and needs an accommodation, he/she should contact the Disabled Student Services Office (DSSO) at 747-5148,
military statement: If you are in the military, with the potential of being
called up for military service and/or training during the
course of the semester, you are encouraged to contact
Dr. Vines as soon as possible

dss@utep.edu, cass@utep.edu or go to Room 106
Union East Building. For additional information please
visit the CASS website at www.sa.utep.edu/cass. The
student is responsible for presenting to the instructor
any DSS accommodation letters and instructions.