

**THE UNIVERSITY OF TEXAS AT EL PASO**  
**COLLEGE OF SCIENCE**  
DEPARTMENT OF BIOLOGICAL SCIENCES  
PLEASE CHECK FOR UPDATES ON LINE- SYLLABUS IS SUBJECT TO CHANGE

**COURSE #:** BIOL 4321 CRN 15943  
**COURSE TITLE:** Developmental Biology  
**CREDIT HRS:** 3  
**TERM:** Fall 2021  
**LOCATION & TIME:** HSSN 135 T/Th 4-5:20pm  
**PREREQUISITES:** BIOL1305, 3414, ZOOLOGY 2406, or BIOL 1306  
**COURSE INSTRUCTOR:** Dr. Charlotte M. Vines  
**OFFICE LOCATION:** Biosciences 4.126  
**CONTACT INFO:** Phone: 915-747-8127  
e-mail: cvines@utep.edu  
FAX: 915-747-5808  
**OFFICE HOURS:** Tues 5:20 – 6 pm (or by appointment)  
**TEXTBOOK** Developmental Biology, Barresi and Gilbert. 12<sup>th</sup> edition.

**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).

**Grades will be based on the following criteria:**

**10% proper use of the English Language, without mistakes to write your paragraphs.** There should be no typos. You should use your textbook to help you with this on exams and case studies. If you are having problems, contact the UTEP writing center.

**35% Is your answer correct?** Did you write a logical and textbook supported argument for your response.

**35% Do you provide sound, logical supporting evidence for your answer?** What ideas from our textbook did you use to support your answer?

**15% Do you have a clear conclusion for each answer or case study?** Does your answer contain a conclusion that fits with your answer.

**5% If you go over the word limit, I will not read past the limit for grading and you will lose 5% of the points for the question.**

**ASSESSMENT:** Students will be assessed via three term exams (each worth 20% of the grade) case studies (10% of the grade) and a comprehensive final exam grade (30%). All exams will be submitted on Black Board and evaluated for plagiarism. Although each student must turn in their own work, *in their own words*, students


**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 case studies, 20% is your R21.

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 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.

**COURSE  
SCHEDULE  
(SUBJECT  
TO  
CHANGE)**

Date	Chapter/Topic
August 23-27, 2021	Chapter 1- The Making of a Body and a Field
August 30-Sept 3, 2021	Chapter 2 – Specifying Identity
September 6, 2021	Labor Day- UTEP closed 
September 7-10, 2021	Chapter 3 – Differential gene expression
September 13-17, 2021	Chapter 4 – Cell to Cell Communication
September 20, 2021	<b>Midterm Exam posted at 11:59PM</b>
September 20-24, 2021	Chapter 4 – Cell to Cell Communication
<b>September 26, 2021</b>	<b>Midterm Exam # 1 Due at 6:00PM</b>
September 27-October 1, 2021	Chapter 5 – Stem cells
October 4-8, 2021	Case Study #1 Two heads are better than one-
Oct 11-15, 2021	Chapter 6 – Sex determination and Gametogenesis
October 18 – 22, 2021	Chapter 7 – Fertilization the beginning of an organism
October 19, 2021	<b>Midterm Exam2 posted 11:59PM</b>
Oct 25 – 29, 2021	Chapter 7 complete Chapter 8- Further Development: A Classic Paper Links Genes and Development
October 26, 2021	<b>Midterm Exam # 2 Due at 6:00PM</b>
November 1- Nov 5, 2021	Chapter 9 <i>Drosophila</i> fertilization
<b>October 29, 2021</b>	<b>DROP DATE</b>
November 8-12, 2021	Chapter 9 Completed Chapter Chapter 10 Further development
November 16, 2021	Case Study #2- Capacitation
November 15-19, 2021	Chapter 10-Urchins in the lab
November 16, 2021	<b>Midterm Exam3 posted at 11:59PM</b>
November 23, 2021	Chapter 11- Mechanisms of MBT

<b>November 23, 2021</b>	<b>Midterm Exam # 3 Due at 6:00PM</b>
<b>November 25, 2021</b>	<b>NO CLASS TODAY- HAPPY</b>  <b>THANKSGIVING</b>
November 29-Dec 3, 2021	Chapter 23 – Development in Health and Disease Chapter 24 - Development and the Environment
<b>December 7, 2021</b>	<b>FINAL Exam Due at 5:00PM No work will be accepted after this date</b>

**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 October 29<sup>th</sup> . The College of Science aligns with UTEP’s posted drop date. The college 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.**

**COVID-19** Please stay home if you have been diagnosed with COVID-19 or are experiencing COVID-19 symptoms. If you are feeling unwell, please let me know as soon as possible, so that we can work on appropriate accommodations. The University is currently collaborating with the City of El Paso to offer a drive-up testing site. Free testing for students is available at the UTEP Student Health and Wellness Center. If you receive a positive COVID-19 test, please let UTEP know at [covidaction@utep.edu](mailto:covidaction@utep.edu) so our COVID Action Team can follow up with you. Learn more about the city’s testing site and on-campus testing for students at [utep.edu/covidtesting](http://utep.edu/covidtesting).

If you have tested positive for COVID-19, you are encouraged to report your results to [covidaction@utep.edu](mailto:covidaction@utep.edu), so that the Dean of Students

Office can provide you with support and help with communication with your professors.

UTEP has arranged for COVID-19 [vaccinations](#), and provided incentives of \$25 in Miner Bucks, T-shirts and other free giveaways or \$550 toward your rent for the semester.

The Center for Disease Control and Prevention recommends that people in areas of substantial or high COVID-19 transmission wear face masks when indoors in groups of people. The best way that Miners can take care of Miners is to get the vaccine. If you still need the vaccine, it is widely available in the El Paso area, and will be available at no charge on campus during the first week of classes. For more information about the current rates, testing, and vaccinations, please visit [epstrong.org](#).

**MAKE-UP POLICY:**

There will be **NO MAKE UP EXAMS OR CASE STUDIES**. If you miss an exam the exam will receive a zero.

**ATTENDANCE POLICY:**

10% of your grade will be derived from in case studies. **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:**

Students with disruptive behavior will be dropped from the class. If you are tardy to office hours or miss the case studies there will be no makeups.

**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, [dss@utep.edu](mailto:dss@utep.edu), [cass@utep.edu](mailto: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](http://www.sa.utep.edu/cass). The student is responsible for presenting to the instructor any DSS accommodation letters and instructions.

**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