

THE UNIVERSITY OF TEXAS AT EL PASO COLLEGE OF SCIENCE

DEPARTMENT OF BIOLOGICAL SCIENCES

Course #: BIOL 1107

Course Title: LABORATORY COURSE – Organismal Biology

Term: Fall 2018

Meetings & Location: T/Th 9-11:50AM / Biology Building 412

Prerequisite Courses: BIOL 1305 or BIOL 1306/1108 (can be taken concurrently)

Instructor: Dr. Nadine Gehre and Dr. Charlotte M. Vines

Peer Leader: Diana Moreno dmoreno2@miners.utep.edu
Maria Uribe msuribe@miners.utep.edu

Office Location: Biosciences 4.126 (Gehre) and Biosciences 4.124 (Vines)

Contact Info: (915) 747-8127 / ngehre@utep.edu / cvines@utep.edu

Office Hours: with Appointment, Office 4.126

Textbook(s), Materials Required: Lab manual and handouts, Lab book, Calculator

Course Objectives, Activities and Assignments:

In this course, we will attempt to generate, purify and analyze protein antagonists. Evaluation will be based on your performance in the laboratory. Your performance will be evaluated based on the completeness of your notebook and participation during the class. You will be expected to purchase a bound laboratory notebook (National® Brand 100% Recycled Computation Notebook, 4 x 4 Quad, 11 3/4" x 9 1/4" Item # 951640). Each notebook must contain a **table of contents** (pages 1 and 2) and **complete experiments** (Date of study, purpose of study, hypothesis being tested, approach to test the hypothesis/experiments, results, discussion of what you will do with the results). You will be graded on neatness, and completeness of the entries. You are expected to purchase and wear a laboratory coat, and goggles to each class. In addition, you are expected to wear closed-toe shoes, and legs must be fully covered with pants (**no holes in your pants please!**). Dresses, shorts and skirts will not be allowed. **If you are not dressed**

appropriately you will not be allowed to participate that day in lab and your absence will be unexcused. **No exceptions!**

Assessment of Course Objectives:

Student grades will be based on the weekly lab quizzes (20%), notebooks (45%), and final presentation (15%), as well as attendance (20%). A 10-minute quiz will be administered at the beginning of Thursday's class. Attendance is mandatory. For each lab missed you will lose 10% of your attendance. **Notebooks will be deducted 10% for each day the notebook is late.** At the end of the semester each student will give a 20 minute (15 minute presentation/5 minutes for questions) PowerPoint presentation on the work that they have completed during the semester.

Course Schedule (Subject to change): See Table

Make-up Policy: There will be **NO MAKEUP QUIZZES**. If you miss a quiz you will receive the score of **ZERO**.

Grade Disputes: **UNDER EXTENUATING CIRCUMSTANCES, AT THE DISCRETION OF DR. GEHRE STUDENTS WILL BE ALLOWED TO MAKE UP A QUIZ. THIS QUIZ MUST BE MADE UP, DURING OFFICE HOURS, WITHIN ONE WEEK OF THE MISSED QUIZ. Students who fail to take a quiz without prior approval from Dr. Gehre will earn a score of zero for the quiz.**

Attendance Policy: 20% of your grade will be derived from attendance. Being late, will lead to deductions of points.

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: **During the quizzes, 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.**

Letters grade for this class will be assigned as follows:

A 100-90%

B 80-89%

C 70-79%

D 60-69%

F 0-59%

Academic Integrity: The UTEP academic integrity policy will be strictly enforced during exams. **Students are expected to be above reproach in all scholastic activities.**

Students who engage in scholastic dishonesty are subject to disciplinary penalties, including the possibility of failure in the course and dismissal from the university.

“Scholastic dishonesty includes but is not limited to cheating, plagiarism, collusion, and the submission for credit of any work or materials that are attributable in whole or in part to another person, taking an examination for another student, any act designed to give unfair advantage to a student or the attempt to commit such acts.” Regent’s Rules and Regulations, Part One, Chapter VI, Section 3.2, Subdivision 3.22. Since scholastic dishonesty harms the individual, all students, and the integrity of the University, policies on scholastic dishonesty will be strictly enforced. From the UTEP Dean of Student Affairs (<http://studentaffairs.utep.edu/Default.aspx?tabid=4386>) “It is an official policy of university that all suspected cases or acts of alleged scholastic dishonesty must be referred to the Dean of Students for investigation and appropriate disposition. Any student who commits an act of scholastic dishonesty is subject to discipline. Scholastic dishonesty includes, but is not limited to cheating, plagiarism, collusion, and the submission

Examples of “cheating” include:

- Copying from the homework, in-class work or exam paper of another student, engaging in written, oral, or any other means of communication with another student during an exam or homework assignment, or giving aid to or seeking aid from another student during a test.
- Possession and/or use during an exam or home test of materials which are not authorized by the person giving the test, such as class notes, books, or specifically designed “crib notes”.

- Using, obtaining, or attempting to obtain by any means the whole or any part of non-administered test, test key, homework solution, or computer program; using a test that has been administered in prior classes or semesters but which will be used again either in whole or in part without permission of the instructor; or accessing a test bank without instructor permission.
- Collaborating with or seeking aid from another student for an assignment without authority.
- Substituting for another person, or permitting another person to substitute for one's self, to take a test.
- Falsifying research data, laboratory reports, and/or other records or academic work offered for credit.

“Plagiarism” means the appropriation, buying, receiving as a gift, or obtaining by any means another's work and the unacknowledged submission or incorporation of it in one's own academic work offered for credit, or using work in a paper or assignment for which the student had received credit in another course without direct permission of all involved instructors. NOTE: This includes cutting-and-pasting and photocopying from on-line and other material.

“Collusion” means the unauthorized collaboration with another person in preparing academic assignments offered for credit or collaboration with another person to commit a violation of any provision of the rules on scholastic dishonesty.

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, 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.

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

| Fall 2018 Dates | | Due Dates |
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| Week 2 09/04 | <ul style="list-style-type: none">• Syllabus and Rules• Information on BB• Basic Laboratory Safety• Introduction to scientific concepts of our class | How to work with a pipette |
| 09/06 | Concepts in Microbiology <ul style="list-style-type: none">• Preparation of Buffers and transformation of Bacteria• DH5a vs. BL21 DE3 pSUMO-8.83 | Quiz 1 |
| Week 3 09/11 | Protein expression system Bacteria <ul style="list-style-type: none">• Isolation of DNA from Bacteria Culture (Miniprep) | Presentation CCR7 Research |
| 09/13 | Restriction digestion analysis and DNA agarose gel electrophoresis <ul style="list-style-type: none">• Plasmid digestion and agarose DNA gels• Transformation BL21 DE3 | Quiz 2 / Lab Notebook due |
| Week 4 09/18 | Bacterial growth curves and IPTG induction <ul style="list-style-type: none">• Induction of over night culture with IPTG Buffers and Calculation of Concentrations | |
| 09/20 | Protein Visualization SDS - Page <ul style="list-style-type: none">• SDS Page / Coomassie | Quiz 3 / Lab Notebook due |
| Week 5 09/25 | <ul style="list-style-type: none">• SDS Page What is a Western blot | Literature Presentation |

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| | <ul style="list-style-type: none"> Western blot | |
| 09/27 | <ul style="list-style-type: none"> Developing WB | Quiz 4 / Lab Notebook due |
| Week 6 10/02 | Protein Isolation Protocols in the Literature | |
| 10/04 | <ul style="list-style-type: none"> Protein Isolation from O/N culture | Quiz 5 / Lab Notebook due |
| Week 7 10/09 | <ul style="list-style-type: none"> Analysis of Isolated Proteins | Literature Presentation |
| 10/11 | | Quiz 6 / Lab Notebook due |
| Week 8 10/16 | TBD | |
| 10/18 | TBD | Quiz 7 / Lab Notebook due |
| Week 9 10/23 | TBD | Literature Presentation |
| 10/25 | TBD | Quiz 8 / Lab Notebook due |
| Week 10 10/30 | TBD | |
| 11/01 | TBD | Quiz 9 / Lab Notebook due |
| Week 11 11/06 | TBD | |
| 11/09 | TBD | Quiz 10 / Lab Notebook due |
| Week 12 11/13 | TBD | |
| 11/15 | TBD | Quiz 11 / Lab Notebook due |
| Week 13 11/20 | TBD | |
| 11/22 | Thanksgiving | |
| Week 14 11/27 | TBD | |
| 11/29 | TBD | Quiz 12 / Lab Notebook due |

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| Week 15 12/04 | Final Presentations | |
| 12/06 | Final Presentations | |
| No classes during Finals week! | | |