

**Biology 1108 - Topics in the Study of Life**  
**PERSIST/FYRIS Section - Drug Development and Bioassay II**  
**CRN 26295**  
**Spring, 2023**

Dr. Marc Cox 747-5429; [mbcox@utep.edu](mailto:mbcox@utep.edu)  
Office Hours: Biosciences 3.128, open door policy or please email to schedule an appointment.

**Day/Time:** M/W 9:00 AM - 10:20 AM  
**Location:** Physical Sciences Building 303

**Assistant Instructor:** Isela Rodriguez; [iarodriguez8@miners.utep.edu](mailto:iarodriguez8@miners.utep.edu)

**Course Objectives:** In the first semester (BIOL 1107) the students will have learned the concepts of basic drug development and the application of a yeast-based bioassay for drug screening. In this course the students will use their newly acquired knowledge and adapt their bioassay for use in screening natural supplement samples for the presence of hormone mimicking chemicals. In doing so, the students will gain a broad understanding of model systems and how they can be applied across many different settings and disciplines. As part of this course students will also gain a broad understanding of the basic principles of toxicology and environmental health.

**Textbook:** There is no required textbook. All reading material will be provided.

**Quizzes:** A total of two in-class quizzes are scheduled during the first two weeks of the semester.

**Project Proposal:** Students will prepare a brief project proposal that includes, background, problem to be addressed, hypothesis, rationale, experimental approach, expected outcomes and potential problems prior to beginning their experimentation for the semester. Guidelines and rubric will be uploaded to Blackboard.

**Laboratory Notebooks:** Laboratory notebooks will be checked (i.e. graded) periodically. The grades will be based on legibility and detailed documentation of experimental procedures and results.

**Interim Lab Report:** Midway through the semester each individual student will submit an interim draft report including the study objective, experimental design, and data analysis with an interpretation of results obtained to-date. This interim report will serve as an initial draft of the final report. Guidelines and rubric will be uploaded to Blackboard.

**Group Presentations:** Several group presentations are scheduled throughout the semester (see schedule for presentation details).

**Final Report:** Students will build on their interim lab report throughout the semester to develop a larger final report that includes a final analysis and discussion of the data, and provides conclusions and potential future directions. Guidelines and rubric will be uploaded to Blackboard.

**Grading:** Attendance is worth 10% of your final grade. All quizzes combined are worth 10% of your final grade. The laboratory notebooks are worth 5% of your final grade. The project proposal, interim lab report and data presentations are each worth 15% of your final grade. The final report is worth 30% of your final grade. Grading scale: A=90-100%; B=80-89%; C=70-79%; D=60-69%; F is <60%.

**Make-up Policy:** There are no make-up quizzes except in extraordinary circumstances. If a student has a serious illness, notify the instructor before the quiz is given and provide documentation of your excuse. If there is a legitimate excuse for being absent, make arrangements with the instructor to take the quiz before.

**Attendance** It is the student's responsibility to attend class regularly. Attendance will be monitored and graded. If a student has a serious illness or a legitimate excuse (includes military personnel called to active duty or training) for being absent, make arrangements with the instructor beforehand.

**Drop Policy:** March 30<sup>th</sup> is the last day students may drop with an automatic "W". Census day is February 1<sup>st</sup>.


**Academic Integrity Policy:** UTEP's policies regarding academic integrity apply in this course. Cheating will be reported to the appropriate administrative officer. Failure to take the final exam may result in receiving an F in this course. Incompletes are only given in exceptional circumstances.

**Civility Statement:** Please be respectful of all students' right to learn without disruptions. In line with this statement please make an active effort to keep the talking to a minimum during lectures and presentations. Also make an active effort to either turn cell phones off or turn them to vibrate mode prior to the start of class.

**Disability Statement:** If a student has a disability and need classroom accommodations, please contact the Center for Accommodations and Support Services (CASS) at 747-5148, or by email to [cass@utep.edu](mailto:cass@utep.edu), or visit their office located in UTEP Union East, Room 106. For additional information, please visit the CASS website at [www.sa.utep.edu/cass](http://www.sa.utep.edu/cass).

**Schedule:**

Date		Topic	Assignment
1/23	M	Introduction to Basic Principles of Toxicology	Homework: Read the provided "A four-hour yeast bioassay" paper for Wednesday 1/25/2023
1/25	W	Introduction to the endocrine system and endocrine disruptors	Quiz #1 Homework: Read Provided Article for Monday 1/30/2023
1/30	M	Introduction to natural supplements and extraction methodologies	Quiz #2 Homework: Identify supplements of interest

2/1	W	Discuss Experimental Design	Homework: Prepare a brief project proposal <b>Due: 2/6/2023</b>
2/6	M	Group Presentations: Project Proposal	Turn in Project Proposal
2/8	W	Open Experimentation	
2/13	M	Open Experimentation	
2/15	W	Open Experimentation	
2/20	M	Open Experimentation	
2/22	W	Open Experimentation	
2/27	M	Open Experimentation	
3/1	W	Open Experimentation	
3/6	M	Open Experimentation	
3/8	W	Open Experimentation	Laboratory Notebook Inspection
3/13	M	<b>SPRING BREAK – NO CLASS</b>	
3/15	W	<b>SPRING BREAK – NO CLASS</b>	
3/20	M	Group presentations: Results, interpretation, challenges, new directions	Turn in interim lab report

3/22	W	Open Experimentation	
3/27	M	Open Experimentation	
3/29	W	Open Experimentation	
4/3	M	Open Experimentation	Laboratory Notebook Inspection
4/5	W	Open Experimentation	
4/10	M	Open Experimentation	
4/12	W	Open Experimentation	
4/17	M	Open Experimentation	
4/19	W	Open Experimentation	
4/24	M	Open Experimentation	
4/26	W	Open Experimentation	Laboratory Notebook Inspection
5/1	M	Final Group Presentations	Final Reports Due
5/3	W	Last Day/No Class	