THE UNIVERSITY OF TEXAS AT EL PASO  
COLLEGE OF SCIENCE  
DEPARTMENT OF BIOLOGICAL SCIENCES

Course No.: ZOOL 4476  
Course Title: Fish, Amphibians, Reptiles  
Credit Hrs: 4 credit hours, upper division  
Term: Fall, 2023 (CRN 12343)  
Course Meetings & Location: Lecture: TR 10:30-11:50 AM, Phys Sci Build 222A  
Laboratory: T 4:00-6:50 PM BIOL B-206

Prerequisite Courses: BIOL 1306-1108 or ZOOL 2406. However, this offering is a senior-level course, and enrollees should perform have some prior upper-division biology coursework experience.

Instructor: Dr. Vicente Mata-Silva  
Office Location: Biology Building B-406  
Contact Information: email (preferred): vmata@utep.edu; (915) 747-5354

Office Hours: 2:00-4:00 PM TR, 10:00-11:30 AM MW, and by appointment

Textbook: No textbook is required. However, students need to have access to an appropriate general biology or zoology textbook, such as they used when taking BIOL 1306 and/or ZOOL 2406. Accessory materials, including field guides and published keys, may be optionally acquired as needed by the individual learner.

Course Objectives/  
Learning Outcomes: Students should emerge from the class with a basic understanding of the natural history and diversity of three divergent groups of vertebrates: fishes, amphibians, and reptiles. Students will also acquire the ability to recognize representative taxonomic groups and a variety of local species, as well as become familiar with the characteristics utilized to identify species.

Course Activities/Assignments: ZOOL 4476 is organized around three mandatory-attendance hours of lecture two days a week coupled with the availability of three hours of laboratory per week for self-paced learning. The laboratory room (B-206) will also be available at other times upon request, as long as the lab room is not in use by others.

A brief quiz will be available every Tuesday regarding the lecture sessions on Blackboard. Students must be on time to class.

The overall lecture plan, subject to modification as the semester deteriorates, is to spend five weeks on fishes, four weeks on amphibians, and five weeks on reptiles. An entire semester or more could easily be spent on each of these groups, but the lecture material will primarily focus upon such topics as biodiversity, evolutionary trends, ecology, and interactions with human beings for each group separately.  
Graduate students enrolled in this class have additional expectations of them that do not apply to the undergraduates. See the section on assessment of course objectives, below.
The lack of an appropriate textbook has consequences.

**Attendance at all lecture/lab sessions is absolutely required.** Students are responsible for all materials presented, discussed, or assigned during this lecture time. Blackboard postings are not intended to substitute for in-class note-taking and assiduous study of those notes. Moreover, as the laboratory practical exams take considerable time to set up and take down, they are perforce not ordinarily subject to make-ups.

Attendance will be checked through the semester with ......

**Laboratory:** The overall laboratory objectives are that each student will: learn to recognize a major subset of the regional species. Learn to recognize a small subset of taxa representing worldwide diversity learn how to use standard identification tools examine structures and view examples described in lectures

The laboratory room where the materials to be mastered are accessible in Biology Building Room B-206. Mastery of these materials is largely self-paced, and thus there is flexibility in how and when each student approaches learning what is required of them. The Tuesday afternoon laboratory sessions will include the services of the TA (Art Rocha) and/or Dr. Mata. Pertaining to the lab assignments and grading; it is essential for lab safety, materials and cleanup be part of the grade; as failure to do so will be docking of points to the assignment(s) by the instructor/TA.

Other time for study of lab materials in B-206 may also present itself, but the room is subject to use for other classes and meetings; students may not use B-206 when it is reserved for meetings or other classes, and the room MUST BE LOCKED when not occupied. Students should not procrastinate in mastering lab material; such material may appear on the quizzes. Also, B-206 will be closed to students on the Practical Examination days.

Safety goggles (provided by the student) must be worn in the laboratory when specimens are removed or returned to specimen jars by not only the person performing the operation, but also every other person within 12 feet. Specimen jars are to be kept closed when specimens are not being removed or replaced. Protective gloves are highly recommended when handling preserved specimens; disposable gloves will be provided in the lab. Specimens and other provided materials may not be removed from the lab room. APPROPRIATE CLOTHING, INCLUDING CLOSED-TOED SHOES, MUST BE WORN IN B-206. NO FOOD OR DRINK ARE ALLOWED IN B-206. NO MINOR CHILDREN ARE PERMITTED IN B-206, EITHER, EXCEPT BY PRIOR ARRANGEMENT WITH THE EHS OFFICE.

Please refrain from bringing live animals into B-206 without permission of Dr. Mata or the TA; venomous or other toxic vertebrates are especially unwelcome.

**Assessment of Learning:**

Evaluation will be through three lecture-content examinations (including a final examination), three practical laboratory examinations, Quizzes, and assignments. Graduate students (only) are additionally required to each deliver one classroom lecture and to assist Dr. Mata and the teaching assistant in one third of the laboratory sessions.

**Grading:** Grades will be calculated from the following:

30 % Lecture Exams (Three including the final) (Blackboard)
20% Lecture quizzes (Blackboard)
10% Attendance (see Attendance Policy, above)
25% Lab Exams (three)
15% Lab assignments

Missed Examination Policy: Missing any of the exams contributes zero percent toward the student’s final course grade, and may well be a catastrophe for grade expectations. These problems will be handled on a case-by-case basis discretion of Dr. Mata or the TA, who insist that the following rule be observed: If a student must miss an examination (not a quiz) because of illness, death in the family, University-sponsored event, or for any other reason other than their own demise, he or she must contact Dr. Mata either in person or by email, either BEFORE the test date or **WITHIN 48 HOURS** following the start of the examination and (for all exams except the Final) BEFORE the next class period. The student is expected to personally discuss the situation with Dr. Mata within that 48-hour period, and arrange for a satisfactory solution. Missed lecture quizzes can be taken only with strong justification and approved by Dr. Mata. Under some circumstances, a quiz may be taken beforehand by appointment.

Drop Policy: The student drop date is **3 November 2023**. The results of the first lecture Examination, at least one lab practical exam, and a handful of quizzes will be known by that time. Students are thus expected to act in a wise and timely fashion in their own interests. The instructor will not drop any student who has taken any quizzes or any examination; withdrawal action must be taken by the student’s own initiative by this **3 November deadline**. Students who find themselves in academic trouble anytime during the semester should promptly consult with Dr. Mata so that their options can be explored (that is, don’t wait until the end of the semester!).

Academic Integrity Policy: Students found cheating during an exam will be turned in to the Dean of Students for disciplinary action. You may review UTEP policy in these matters at http://academics.utep.edu/Default.aspx?tabid=23785.

Civility Policy: Civility between the members of the class, and between the instructor and the students, is expected. Please use polite and temperate language at all times. Silence your Iphone before entering the classroom. Do NOT take calls during class time. Avoid all noisy endeavors not related to the matter at hand (talking, eating, snapping chewing gum, and, of course, snoring). Be in time for class.

Disability Policy: If a student has or suspects he/she has a disability and needs an accommodation, he/she should contact the Center for Accommodations and Support at 747-5148, or at cass@utep.edu, or go to Room 106 Union East Building. The student is responsible for presenting to the instructor any CASS accommodation letters and instructions.

Military Call-up: The instructor understands that military deployment affects not only soldiers but also their families. Please consult with Dr. Mata or the TA as necessary when such matters arise.
ZOOL 4476 COURSE TENTATIVE CALENDAR FALL 2023

LECTURE
29 August: Syllabus and Course introduction, review of basic chordate structure and function.
31 August: Chordata and Lampreys
5 September: Lampreys and Hagfishes
7 September: Gnathostome Brain
12 September: Sharks I
14 September: Sharks II
19 September: Coelacanths
21 September: Teleosts – Four basal lineages
26 September: Neotropical Gymnoformes
28 September: Cyprinodontiformes
3 October: End of Fishes
5 October: Start of Amphibians
10 October: Lecture Exam 1 - Fishes
12 October: No class - Field Bio trip to IMRS (11-15 October).
17 October: Caecilians
19 October: Salamanders
24 October: Salamanders and Anurans
26 October: Anurans II
31 October: Anurans III
2 November: Start with Reptiles
7 November: Lecture Exam II – Amphibians
9 November: Herbivorous Lizards
14 November: Venom Delivery Systems in Snakes
16 November: Communication in reptiliaforms
21 November: Parthenogenesis in whiptail lizards
23 November: Turtles
28 November: Lepidosaurs
30 November: Thanksgiving - No class
5 December: Snakes I
7 December: Snakes II
12 December (Tuesday) – Lecture Exam III (=Final) (10:30:00 AM -11:00 PM) over Reptile lecture material.

LAB
5 September: Lab Instructions; begin with fishes.
12 September: Cephalochordates to Agnatha
19 September: Chondrichthyes to Chondrosteans
26 September: Actinopterygians: Last chance to review the material before the exam.
3 October: Laboratory Practical No. 1 (Fishes) @ 4:00 PM in Biology B-206
10 October: Amphibia introduction
17 October: Amphibians: Caudata
24 October: Amphibians: Anura
31 October: Amphibians: Last chance to review the material before the exam.
7 November – Laboratory Practical No. 2 (Amphibians) @ 4:00 PM in Biology B-206
14 November: Reptilia introduction
21 November: Reptilia: Squamata and Crocodilians
28 November: Reptilia: Testudines
5 December: Reptilia: Last chance to review the material before the exam.
12 December – Laboratory Practical No. 3 (Reptiles) @ 4:00 PM in Biology B-206