Mayville State University

BIOL 312L, Vertebrate Zoology (Online)

Joseph Mehus

Spring 2024

1cr

Contact Information: email – joseph.mehus@mayvillestate.edu, 7017884802, SB 134

Hours of Availability: Open door policy; by appointment, 11am-Noon MWF

Instruction Mode: Online, Asynchronous

Time Zone: Central; Due Date Time: 5pm CST

Meeting Times and Location: Thursdays, 10am-Noon

Course Description

Two hours laboratory per week. Activities include examination of living and fixed specimen of representative vertebrate genera, including the dissection of specimen as appropriate. Field activities may be required. Multimedia activities will be integrated.

Pre-/Co-requisites: BIOL 312

Purpose of the Course

The purpose of this course is to expose students to numerous genera of vertebrate animals. This will include the linkage between invertebrate animals and vertebrate organisms through evolution. Students will understand the taxonomic explanation of organisms in this course and be able to explain how structures and functions relate to current animal taxa

Course Objectives

Through numerous instructional strategies and learning experiences, the following outcomes are expected to be met by the learner after completing this course (as aligned to Composite Science Education Program Approval Standards through North Dakota's Education Standards and Practices Board):

Identify vertebrate animals and understand taxonomic level characteristics

Understand what it means to be an invertebrate chordate

Describe the ecological niche of different taxa of vertebrate animals

Successfully identify vertebrate, specific organ/organ-like structures/function of tissue

Identify anthropological roles of specific vertebrate taxa

Present information about relevant vertebrate species

Standards Alignment (Composite Science Education Program Approval Standards-ND ESPB):

- 13047.1 Composite Science Major/General Science The composite/general science program requires that environmental science be incorporated within other courses or as a separate course. The composite/general science program requires:1. Coursework in biology, chemistry, physics, and earth science, including: a. Minimum of twenty four semester hours in one area, b. Minimum of twelve semester hours in two other areas, c. Minimum of four semester hours in the fourth area, d. Courses must be from those that the institution allows toward graduation in the science major. 2. Study of mathematics through the pre-calculus level (college algebra and above) and statistics.

Program Student Learning Outcomes (SLOs) Addressed in This Course

The Academic Program Student Learning Outcomes document can be found in your course shell. It contains all learning outcomes pertaining to Essential Studies courses and all majors and minors. The document has an index, so you can quickly find the degree you are pursuing.

As part of Mayville State's effort to demonstrate continuous improvement in achieving student learning outcomes, this course:

☐ introduces SLO #	☐ introduces SLO #	☐ introduces SLO #	☐ introduces SLO #
☐ reinforces SLO #	☐ reinforces SLO #	☐ reinforces SLO #	☐ reinforces SLO #
☒ masters SLO #2	☐ masters SLO #	☐ masters SLO #	☐ masters SLO #
For Major / Minor:	For Major / Minor:	For Major / Minor:	For Major / Minor:
Biology			

Oral communication is a prepared, purposeful presentation designed to increase knowledge, to foster understanding, or to promote change in the listeners' attitudes, values, beliefs, or behaviors. This activity will be designed to evaluate oral presentations of a single speaker and is best applied to live or video-recorded presentations.

Course Improvements Based on Most Recent Assessment Findings

This course will be assessed in the future (based on the 2019-2025 assessment curriculum map) and the findings will be reported in this syllabus.

Required/Recommended Materials

Zoology, 12th Ed. Stephen Miller; John Harley – Highly Recommended

Lab Kit from MSU Bookstore

Digital Camera/Cell Phone

Lab materials and tools will be provided to students. Students will be required to have a computer that meets the university technology requirements and uses MS Office to include Word and PowerPoint.

Instructional Strategies

- Indirect instruction
- Direct instruction
- Interactive instruction
- Hands-on learning
- Guided and independent study
- Inquiry approach
- Dissections
- Questioning skills
- Downloaded animations
- Application

Learning Experiences

Read all chapters/lab protocols provided before starting lab.

Hands on lab experience.

Assignments will be turned in directly to instructor OR via blackboard

It is important to check your grades in Blackboard. If you find that the instructor has made a mistake while entering your grade, you have one week to bring it to the attention of the instructor. After that one-week period, grades will be locked.

Late work is not accepted unless a request is made prior to absence and with documentation of a university excused absence. Keep in mind we will be working with live invertebrates so missed labs may not be able to be made up upon viability of the animals.

Instructional Technologies Utilized in this Course

- Blackboard Ally
- Blackboard Collaborate Ultra
- Blackboard Learn
- NetTutor
- Teams
- Library Resources
- PubMed and/or Other Identification Resources
- Internet
- Zoom

Expectations/Protocols

Labs will be distributed via the instructor or via Blackboard. Labs need to be completed and submitted before the due date given by the instructor. A computer will be required for lab. Labs will vary depending on topics being covered. Late work is not accepted unless a request is made prior to absence and with documentation of a university excused absence.

Final grades will TENTATIVELY be based upon lab assignments and a single, semester-long project. Final grades are determined on a 90=A, 80=B, 70=C, 60=D, >60 =F scale.

Total Points possible = 400

10 Assignments = 20 points each

Comparative Anatomy Project = 200 points (Due 2 Weeks before Finals Week)

Method of Evaluation/Grading

Grades for items to be evaluated can be anticipated within 2 weeks of the due date. Occasionally a set of assignments will take longer to grade, especially if the assignment is text heavy and may take an additional week.

Instructor/Student Communication

Students are accountable for all academic communications sent to their Mayville State University email address. Students should not use outside email. Instructor is not responsible for emails not received (by the instructor themselves or by students) if outside email is used.

Faculty response time will be up to 72 hours during the work week if a specific question is asked (most questions responded to in 24 hours). If no questions are explicitly asked, a response may not be deemed necessary. Emails will not be checked on the weekend. An email sent on a Friday afternoon may not be responded to until the following Tuesday (or longer if a holiday). Please plan accordingly.

Late Arrivals

The grading system for students adding this course after the first day of instruction will **not** be modified. The student will be graded on the activities that transpired from the beginning of the course. Students will be penalized for missed assignments and the student is still responsible for learning the course material that was covered during their initial absence. By continuing the course, you accept this rule.

Important Student Information

Navigate to Blackboard > MaSU tab > Student Resources tab to find a document entitled, "Important Student Information," which includes information about:

- ✓ Academic Grievance Concerns and Instructor English Proficiency
- ✓ Starfish - Student Success System
- ✓ Students with Documented Disabilities
- ✓ Academic Honesty
- ✓ Emergency Notification
- ✓ Continuity of Academic Instruction for a Pandemic or Emergency
- ✓ Family Educational Rights and Privacy Act of 1974 (FERPA)
- ✓ Diversity Statement

Course Timeline/Schedule

PRINT THIS COURSE SCHEDULE. The course will follow this outline. Times for drop boxes to close for reviews and assignments is 5:00pm (CST) on the dates listed below. Late work is not accepted. Do not email late work to the instructor and ask for special exceptions. Students can work ahead by completing work early, which is encouraged to eliminate the possibility of late work. It is best practice to complete works one day early to eliminate "emergency situations." New items will open upon completion of previous work before due dates. If something does not open early, please contact the instructor via email to resolve the issue. Exams need to be

completed before 5pm (CST) on the dates listed below. Late exams will not be allowed. Exceptions are ONLY granted if the student sends a request (INCLUDING documentation in the original request) for a university excused absence prior to not completing a review/quiz/activity/exam. Being too busy, moving, traveling, or picking up a shift at work is not a university excused absence.

Topic	**Due Date**	**Assignment Checklist**
Enrollment Verifications	**1/19/24**	**Enrollment Verifications**
Lab Safety/Microscopy Lab	1/29/24	○ Form/Waiver ○ Lab Activity
Chordata: Urochordata & Cephalochordata	2/8/24	○ Lab Project
The Fishes: Vertebrate Success in Water	2/18/24	○ Lab Project
The Amphibians: The First Terrestrial Vertebrates	2/28/24	○ Lab Project ○ Library Project
Nonavian Reptiles	3/9/24	○ Lab Activity
Birds: The Avian Reptiles	3/19/24	○ Lab Activity
Mammals: Synapsid Amniotes	3/29/24	○ Lab Activity
Dissection: Comparative Anatomy of Fishes	4/8/24	○ Lab Activity
Dissection: Amphibians & Nonavian Reptiles	4/18/24	○ Lab Activity
Dissection: Avian Reptiles & Mammals	4/28/24	○ Finish Project ○ Lab Activity
Comparative Anatomy Project	5/5/24	○ Lab Activity