ZOOLOGY, BIO214-01
FALL 2022

Class Time and Location: **MW** 12:30 PM–1:45 PM, Lab: **W** 10:00AM-12:00 PM, Spencer 229
Instructor: Krishna Nath, Ph.D., M.Sc., B.Ed.
Office and Contact Information: Room # Spencer 238; Phone 394-7622 ext 1336
Email: knath@uarichmountain.edu
Office Hours: Posted on the office door

RESOURCES:

Lecture Text: *Zoology, 10th edition*; by Miller and Harley; 2020; ISBN 978-0-07-783727-3
Laboratory Manual: *Exercises for the Zoology Laboratory, 4th edition*; by David Smith
ISBN 978-1-61731-776-7

Illness Policy: Students are encouraged but not required to wear masks in classroom and public spaces. For attendance purposes, a student who is displaying symptoms of illness must email: contact.tracing@uarichmountain.edu to determine next steps for an excused absence related to COVID or flu. Contacting an instructor **DOES NOT** start this process or guarantee an excused absence.

FOOD & DRINK: Food and drinks, including water are not allowed in the classroom at any time.

COURSE DESCRIPTION: Introduction to zoological principles relating to cells, organ systems, development, genetics, ecology, evolution, and animal phyla. Course designed for biology majors, but may also be taken for general education. Laboratory is an integral part of this course and participation is required for successful completion of this course. **ACTS course # BIOL 1054**

PROGRAM OUTCOME and Rationale: The knowledge and critical thinking skills acquired in the general education component enable students to analyze problems, to arrive at intelligent conclusions, and to make reasoned choices in their professional and personal lives. My goal is that each student will complete this course with an appreciation for the unity and diversity life on earth and be an intelligent consumer of biological resources.

COURSE OBJECTIVES: Upon successful completion of Zoology, the student should be able to:

- Describe the relationship that exists between zoology and the other biological sciences.
- Identify the major zoological disciplines and describe the particular aspect of zoology with which each is concerned.
- Discuss the history of man's thinking concerning organic evolution. Such discussion should include:

1. Pre-Darwinian concepts
2. Darwinism--the theory of natural selection
3. Neo-Darwinism--the modern synthesis.
4. Give evidence from the realms of biogeography, paleontology, comparative anatomy, comparative embryology, and molecular genetics to support the theory of evolution.

- Define species and describe the various processes of speciation.
- Understand and recognize how embryonic development differs among animal phyla.

- Describe the basic characteristics of phylogeny, taxonomy, form, function, and natural history associated with the various phyla including:

1.	Protozoan Groups	6.	Annelida
2.	Porifera	7.	Nematoda
3.	Cnidaria	8.	Arthropoda
4.	Platyhelminthes	9.	Echinodermata
5.	Mollusca	10.	Chordata

LECTURE AND EXAM SCHEDULE*

Topic	Unit	Chapter
Zoology	1	An Evolutionary and Ecological Perspective
Cells	2	Cells, Tissues, Organs, and Organ Systems
	3	Cell Division and Inheritance
Test 1	**9/19 M**	**Prepare Chapter 1-3**
Evolution	4	Evolution: History and Evidence
Evolution	5	Evolution: Gene frequencies
Ecology	6	Ecology: Preserving the Animal Kingdom
Test 2 (mid-term)	**10/12 W**	**Prepare Chapter 4-6**
Classification	7	Animal Classification, Phylogeny, and Organization
Protists	8	Animal-Like Protists
Sponges and Radiates	9	Multicellular and Tissue Levels of Organization
Test 3	**11/9 W**	**Prepare Chapter 7-9**
Lophotrophozoan	10	The smaller Lophotrophozoan Phyla
Molluscs	11	Molluscan Success
Annelids	12	Annelida: The Metameric body Plan
Arthropods	14	Blueprint for Success
Hemichordates and Chordates	17	Hemichordata and Invertebrate Chordates
Test 4	**12/5 M**	**Prepare Chapter 11, 12, 14 and 17**
Final Exam	**12/7**	**Prepare for final exam 1-9**

TENTATIVE LAB SCHEDULE

Date	Topic	Chapter
Week 1	**Syllabus, Fundamental Laboratory Skills/ Microscopes**	**1**
Week 2	**Cells and Tissues**	**2**
Week 3	**Animal Classification and Protists**	**4**
Week 4	**The Sponges**	**5**
Week 5	**The Radiate Animals**	**6**
Week 6	**The Flatworms**	**7**
Week 7	**The Molluscs**	**8**
Week 8	**The Annelids vs.**	**9**
	The Nematodes	**10**
Week 9	**The Arthropods**	**11**
Week 10	**The Echinoderms**	**12**
Week 11	**Phylum Chordata**	**13**
Week 12	**The Fishes and Class Amphibia**	**14, 15**
Week 13	**Nonavian Reptiles**	**16**
Week 14	**The Birds and The Mammals; revision**	**17**
Week 15-16	***Final Exam and Lab reports***	

Disclaimer: The information contained in this syllabus is as accurate as possible, but may be subject to change with reasonable advance notice. The schedule and content of lectures and assignments may be changed at the discretion of the instructor upon oral notification in class. Changes may involve additions, deletions, substitutions, or changes in sequence or due date.

UARM CREDIT HOUR CALCULATOR: For every course credit hour, you should expect to spend at least three clock hours per week of concentrated attention on course-related work, including but not limited to time attending class, as well as out-of-class time spent reading, reviewing, organizing notes, preparing for upcoming quizzes/exams, problem solving, developing and completing homework, and other activities that enhance learning. For a three hour course, a typical student should expect to spend at least nine hours per week dedicated to the course. This includes the time spent in class.

Course Requirements / Evaluation: Each student needs to be graded independently for Lecture & Lab, respectively.

Course Requirements / Evaluation for lecture: Evaluation of student performance in the course will be based on the following factors:

1.	Four Tests 1-4:	4 @ 75 points each	= 300 points (Test 2 is Mid-term Exam).
2.	Quizzes and assignment	10 @ 20 points each	= 200 points
3.	Final Exam:	1 @ 100 points	= 100 points
	Total points		**= 600**

Course Requirements / Evaluation for Lab: Evaluation of student performance in the course will be based on the followings. However, each student needs to be graded independently for Lecture & Lab, respectively.

1.	Lab activities:	10 @ 10 points each	= 100 points
2.	Techniques on Zoology:	1 @ 20 points	= 20 points
3.	One Formal Lab Report:	1 @ 20 points	= 30 points
4.	Lab Final Exam:	1 @ 50 points	= 50 points
	Total points		**= 200**

GRADING SCALE:

A = 100 - 90%
B = 89 - 80%
C = 79 - 70%
D = 69 - 60%
F = 59% or lower

LABORATORY QUIZZES – Approximately 10 quizzes will be given throughout the semester during laboratory periods. The quizzes will consist of questions related to laboratory exercises performed, assigned readings, and related lecture information. These quizzes will be administered at the end of class, most often orally. In some cases, participation in dissections, lab report, or a completed exercise from the manual will be submitted to Dr. Nath, Instructor of Zoology.

LAB PRACTICAL – Exams in the laboratory will test your knowledge of the material covered in lab. This exam will test your knowledge of classification of organisms (Phylum, Class, and Order,) identification of anatomical structures, and function of those structures. A crib sheet or notes will not be permitted.

Disability Policy: It is the policy of UARM to accommodate students with disabilities, pursuant to state and federal law. Any student with a disability who needs accommodations should contact the Vice President for Student Affairs Office, 394-7622 ext.1400.

Title IX and Discrimination Policy: UA Rich Mountain adheres to a policy that enables all individuals regardless of race, color, gender, national origin, age, religion, sexual orientation, veteran's status, or disability, to work and study in an environment unfettered by discriminatory behavior or acts. Harassment of an individual or group will not be condoned, and any person (student, faculty, of staff member) who violates this policy will be subject to disciplinary action.

Harassment that is considered discriminatory includes actions or conduct (verbal, graphic, gestural, or written) directed against any person or group with the intent to demean or create a hostile or threatening environment. It is not the intent of this policy to infringe upon or limit educational, scholarly, or artistic expression. Any person who believes he or she has been discriminated against should contact the Title IX Coordinator to obtain assistance and information concerning the filing of a complaint.

Face mask policy: Students are encouraged but not required to wear face masks in class and public spaces.

Attendance Policy: For attendance purposes, a student who is displaying symptoms of illness must email: contact.tracing@uarichmountain.edu to determine next steps for an excused absence related to COVID or flu. Contacting an instructor **DOES NOT** start this process or guarantee an excused absence.

Food and Drink: Food and drinks, including water are not allowed in the classroom at any time.
Arkansas Clean Air Act: In compliance with the Arkansas Clean Air Act, UARM is a smoke and tobacco free facility. Students are to refrain from the use of all tobacco products while on campus.

Student Misconduct: Students committing misconduct are subject to disciplinary sanction(s) and or restrictions. Misconduct or prohibited behavior includes, but is not limited to endangerment, harassment, disruption, sexual misconduct, dishonesty, illegal drugs and/or alcohol, fire or safety issues, gambling, property violations, computer violations or other violations as listed in detail in the UARM catalog.

UARM Mission: University of Arkansas Rich Mountain exists to provide all residents of the Ouachita Mountain Region with exemplary educational and enrichment opportunities to improve the quality of life and standard of living.

Campus Security: UA Rich Mountain strives to provide a safe learning environment; therefore, students who know of any security risk are asked to contact a college official. For more information follow this link and look under Health and Safety: http://www.uarichmountain.edu/at-a-glance/disclosures

UA Rich Mountain Mission: UA Rich Mountain provides transformative education to all learners.

Credit Hour Requirement Calculator

Course Information

Department, Course Number	Biological Science	BIO214

Course Title			Zoology	I
Credit Hours	4			
Mode of Delivery	Traditional			Lecture/Lab
Weeks in Part of Term	15			
Level of Reading Material	Advanced/Scientific/Technical (2)			2
Reading Level of Students	Average Student (2)			2
Average Pages per Hour	11			

Enter either week or term, not both

Contact Hours		**Hours/Week**	**Hours/Term**	**Total Hours**
Lecture/Recitation			45	45
Lab Contact Hours			30	30
	Pages Asg'd	**Hours/Week**	**Hours/Term**	
Syllabus Items				
Reading Lecture Material	400		18.9	36.4
Chapter Points Homework			20	20
Reading Lab Assignment	70		10.8	6.4
Preparing for Lab Practical			3	3
Reviewing for Exams			8	8
				0

Total Hours	150.8
Required Hours	141
Difference	Ok + 0.8