

# Herpetology (Bio 227)

## Syllabus – Spring 2026

### Course Goals

- Learn major morphological features such that you can identify preserved and living reptiles and amphibians using taxonomic keys
- Learn techniques for identifying reptiles and amphibians in the field
- Learn various field techniques for the collection of reptiles and amphibians
- Learn techniques necessary for the proper euthanasia, preservation, and labeling of reptiles and amphibians for museum collections
- Gain an appreciation for and begin to master skills necessary for photographing live reptiles and amphibians both in the field and in lab

### Lecture Schedule

- Lecture will consist of discussion of the major characteristics of each amphibian and reptile class and order
- The order of topics will proceed as follows:
  - Intro & Herp History
  - Systematics
  - Tetrapod Evolution
  - Amphibian Morphology
  - Reptile Morphology
  - Monophyly of Amphibians
  - Order Gymnophiona – Caecilians
  - Order Caudata – Salamanders
  - Order Anura – Frogs
  - Amniote Evolution
  - Order Crocodylia – Alligators and Crocodiles
  - Order Rhynchocephalia – Tuatara
  - Order Squamata – Lizards and Snakes
  - Suborder Lacertilia - Lizards
  - Suborder Serpentes - Snakes

### Field Schedule

- See attached

## Grades

- Final grades: A (100-90%), B (89-80%), C (79-70%), D (69-60%), F (59% or less)
- + & – correspond with the top and bottom 3% of each block (e.g. 90-93% = A–)
- Points are broken down as follows:
  - Books first day .....25 pts
  - Species identification .....100 pts (20 pts each, 2 attempts, pass/fail)
  - Daily journal .....50 pts
  - Final portfolio .....100 pts
  - Field Participation/Attitude.....400 pts (100 pts each week)
  - Morning clean-up.....50 pts (pass/fail)
  - Animal care.....Pass/fail entire course
  - Total .....725 pts

## Grading Notes

- **The Participation/Attitude Grade**
  - While in the field, I record notes on your level of participation
  - At the end of each week, you will be given a grade (out of 100) for participation
  - I will give you feedback in the field when I feel your participation is not adequate
  - If you don't hear from me, you are doing great.
  - You can always ask how you are doing.
  - What is acceptable participation/attitude?
  - This grade counts for >50% of your grade in this class. It can sink or save you.
  - I have designed this class so there are no exams and we are almost always outside
  - Show me you want to be here and are willing to work hard in the field
- **Species Identification**
  - This occurs on the first and second day of class
  - You will learn morphology of each group that is used to ID species in the field
  - You will get a preserved specimen and must identify it using a dichotomous key
  - You are graded as pass/fail and only have 2 chances per species
  - You can of course ask questions, but go slow and follow the key!
  - 20 points each for salamander, frog, lizard, turtle, snake (100 pts total)
- **Daily Journal**
  - 50 pts total (15 pts complete, 10 pts legible, 25 pts detailed)
  - Your daily entry (excluding class list) should be completed by the end of each day, except for the class list which we will do the following morning.
  - This is the only homework I require, take it seriously. Doing this in the van between sites is a good option. Taking notes in your phone is perfectly acceptable, but you may NOT do the journaling on your phone.
  - Content should be based on field excursions and should include:
    - Description of the day's events, including:
      - Location and times
      - Number of collectors
      - Weather conditions
      - Types of habitats sampled
      - Methods for sampling

- Your personal views, feelings, thoughts about the day
    - Did you find anything cool?
    - Did you find anything rare?
    - How were you feeling? Nervous? Excited?
    - What was the site(s) like? Any interesting features?
  - List of species discovered
    - Personal list – species and numbers of individuals you find
    - Class list – total species and numbers the class as a whole found
- **Final Portfolio**
  - In the good ol' days everything was collected and killed for scientific museums
  - We can't do that each year due to depredation of local populations
  - You will keep a "collection" consisting of photographs of each species you find
  - Your final portfolio can be a digital powerpoint or paper version in a 3-ring binder
  - Your portfolio will consist of the following:
    - Title page with your name (can go on the front of the binder) and your favorite photo of you in the field.
    - Your species checklist with your name at the top
    - A separate page/slide listing the Class, Order, & Family (hand written ok)
    - A separate page/slide for each species found within that Family
      - This page should have the species name and common name
      - If submitting a hard copy portfolio, photos should be printed on photo paper (CVS/Walgreens)
    - You should put the pictures in the following order:
      - Caudata
      - Anura
      - Testudines
      - Squamata (Lizards, Snakes)
    - The order of families and species within those families does not matter, but they should be grouped by family
- **Animal Care**
  - While animals are in your care (either for a short time in the field or long term in the lab) they will be cared for and housed correctly
  - If you don't know what to do – ASK
  - The purposeful death of an animal without scientific merit will result in your failure and removal from the course.
- **Morning clean up**
  - The last Friday of class we will clean up the lab, van, and field equipment
  - You will return any borrowed equipment
  - Help clean the van and store equipment
  - Clean your personal space
- **Tennessee**
  - We will spend the last week+ of class at the University of Tennessee's field station in Gatlinburg (<https://fieldstation.utk.edu/>)
  - Dates are **13–21 May**

- Two former students (Kari Spivey & Jax Betzner) will be traveling with us as instructors. Both are exceptional herpetologists and can help guide you and answer questions.
- We will leave early AM with 10 people in the 15-passenger and 4 in the minivan.
- DO NOT BRING ALCOHOL OR DRUGS
- You will stay in open-air adarondacks. There is a separate shower/bath house and kitchen. Things you need to bring:
  - Toiletries
  - Soap/shampoo
  - Towel and washcloth
  - Sleeping bag and pad (provided by me).
  - Clothing
  - Your plethora of shoes
  - Money for trinkets, snacks, etc (not necessary)
- We will go to Walmart sporadically.
- They do have washers and dryers.
- This trip is ALWAYS a ton of fun and there is no reason to suffer through a problem. If you need something talk to me. If you don't feel good, talk to me. If you get hurt, talk to me!
- We will take many side trips and excursions. But you will also have personal time to explore, herp on your own, journal, work on the portfolio, and have fun.
- We will be cooking our own food or going out to eat for the duration of the trip. Everyone is expected to help prep and clean up. There will be cooking and clean-up responsibilities.
- Please talk to me if you have dietary restrictions ASAP.