Organismal Biology and Physiology
Learning biological principles by the comparative study of life on Earth

BIOL 3050
Credits: 3
TR 10:30 – 11:45 AM

Course format

Tuesday & Thursday: Synchronous Zoom lectures and in-Zoom activities will start at 10:30 am. Weekly quizzes will happen at 10:30 (start of class) each Tuesday. Homework assignments will usually be due before the next class.

What will we learn?

Concepts:
- basic biological principles that shape the world around us
- how evolution and comparative biology influences design, technology, and human health
- how global change is affecting organisms (including us!)
- THE UNKNOWN! - how little we still understand about the biological world

Skills:
- writing/science communication
- collaborative work
- data manipulation, analysis, and interpretation

Instructor information

Instructor: Dr. Molly Womack
Email: molly.womack@usu.edu
Office: BNR 235A (or Zoom)
Grading

- 20% in-class, weekly quizzes (writings, discussions, etc.)
- 15% in-class activities (writings, discussions, etc.)
- 25% out of class activities “homework” (writings, discussions, etc.)
- 30% projects (details to be discussed)
- 10% final project presentation

How to participate in synchronous Zoom class

come prepared
- read any material thoroughly

be present
- turn phone off
- minimize other computer windows
- be ready to ask questions or add thoughts on topics

respect others when in discussions
- let others finish their thoughts
- leave space for others to join-in
- add to other’s points instead of contradicting or disimissing them

Projects

There will be a total of 3 class projects.
The first project will be due on February 23rd
The second project will be due on March 23rd
The third project will be due on April 30th
   *The third project will also require a 5 minute lightning talk/powerpoint presentation

Instructions for class projects will be given well ahead of the deadline, however, you can reach out to Dr. Womack with questions at any time.
Overview of weekly topics

Week 1 (Jan 19th): Overview of organismal biology, introductions, & course tools

Week 2 (Jan 26th): The ins and outs of homeostasis

Week 3 (Feb 2nd): Homeostasis cont. - temperature control

Week 4 (Feb 9th): Food, nutrients, and digestion

Week 5 (Feb 16th): Growth, work, and energy

First project Due Feb. 23rd before start of class

Week 6 (Feb 23rd): Sleep, nocturnality, and dual brains

Week 7 (Mar 2nd): Nervous system and reflexes

Week 8 (Mar 9th): Sensory systems

Week 9 (Mar 16th): Learning and Memory

Second project Due March 23rd before start of class

Week 10 (Mar 23rd): Plasticity versus robustness

Week 11 (Mar 30th): Longevity and ageing

Week 12 (Apr 6th): Reproduction and parental care

Week 13 (Apr 13th): Symbioses

Week 14 (Apr 20th): project presentations (lightning talks)

Week 15 (Apr 27th): LAST DAY OF CLASSES – project presentations (lightning talks)
- No Thursday class

NO FINAL EXAM, Projects Due Apr. 30th by 11:59 PM.