VIPs-Who Can Help?! 

- Dr. Bob Brennan – Department Chair 
  - Rbrennan1@uco.edu 

- Lindsay Berry and Stella Beteck, Academic Advisors 
  - lberry4@uco.edu and sbeteck@uco.edu 

- Dr. Carrie Bentley, Pre-Health Professions Advisor, Biology Department 
  - cbentley3@uco.ecu 

- Dr. Beth Allan, Secondary Science Education, Biology Department 
  - eallan@uco.edu 

- Katelynn Knick, Biology Administrative Assistant 
  - HOH 200 -- 405-974-5921 -- kknick@uco.edu
Biology Department Website

http://www.biology.uco.edu/
Biology Degree Programs

- **B.S. Biology**
  - Various employment and graduate school opportunities

- **B.S. Biomedical Science**
  - Plan to go to professional school (medical, dental, optometry, PA, physical therapy); or work in a biomedical laboratory

- **B.S. Science Education-Biology**
  - Plan to teach high school or middle school biology
  - Dr. Beth Allan can assist you with Science Ed enrollment questions

- **B.S. Medical Laboratory Science**
  - Work in hospital lab
Enrollment Information

• Enrollment begins on **October 29**

• *Please* talk to an advisor or biology faculty member before enrolling.

• Please see your Academic Advisor for a *degree check* two semesters before you plan to graduate.

• Apply for graduation the semester **before** your last semester. Check the deadlines.
  
  • The deadlines:
    • Summer 2019 is March 1 (past)
    • Fall 2019 is July 1 (to avoid a late fee!)
    • Spring 2019 graduation in May is **November 1**
Course Substitutions

• If you need or want to take a course that is not on your degree plan, contact the Department Chair for **advanced approval** for this substitution.
  • Note: all upper division bio electives do NOT count towards the guided electives for biomed sciences degree

• After the course grade is posted to your transcript, the substitution paperwork will be processed.
Courses Offered Only…

• Fall Semesters
  • BIO 2000 Intro to Health Careers
  • BIO 3154 Invertebrate Zoology and Lab
  • BIO 3454 Vertebrate Zoology and Lab
  • BIO 3543 Ecological Methods
  • BIO 4012 Intro to Biological Research
  • BIO 4204 Plant Ecology and Lab
  • BIO 4264 Mammalogy and Lab
  • BIO 4343 Molecular Biology Techniques
  • BIO 4354 Plant Anatomy and Lab
  • BIO 4414 Virology and Lab

• Spring Semesters
  • BIO 3254 Comparative Vertebrate Anatomy and Lab
  • BIO 4103 History and Nature of Science
  • BIO 4134 Developmental Biology
  • BIO 4294 Plant Taxonomy and Lab
  • BIO 4334 Environmental Microbiology
  • BIO 4723 Biometrics
  • BIO 4743 Population Genetics
  • BIO 4774 Parasitology and Lab
  • BIO 4853 General Methods of Teach. Science and Lab
Courses Offered Only…

• Alternate Years
  • BIO 3604 Plant Kingdom – the fall of even years
  • BIO 4024 Freshwater Ecology – the spring of odd years (Sp ’19)
  • BIO 4044 GIS & Ecology- the spring of odd years (Sp ’19)
  • BIO 4324 Marine Ecology and Lab – the spring of even years
  • BIO 4504 Mycology and Lab – the fall of odd years
  • BIO 4734 Ornithology and Lab – the spring of even years
  • BIO 4754 General Entomology and Lab – the fall of odd years
  • BIO 4763 Biology of Cancer – irregular offering in the spring (Sp ‘19)
  • BIO 4254 Animal Behavior – Irregular offerings in the fall
Seminar Courses-Electives

- BIO 4910
  - These are regular lecture courses on special topics.
  - Sometimes new courses being offered for the first time.
  - You still have to take exams and do homework!
- Spring 2019:
  - CRN 25309- Fire & Disturbance Ecology
  - CRN 23424- Genomics & Bioinformatics
Concurrent Enrollment with Labs

- Most courses are listed as Lecture and Lab combined
- A few labs are separate from the lecture course
  - BIO2203 Cell Biology → BIO2011 Cell Biology Lab (required)
  - BIO3303 Genetics → BIO3303 Genetics Lab (elective)
- Note: You do **not** have to take Cell Biology and Cell Biology lab concurrently
  - Must have lecture before/concurrent with lab
Order of Courses

• In your major, generally take courses in level order: 1000, 2000, 3000, 4000

• Don’t postpone your “hard” courses or all of your electives until your final semester or two.
  • This makes your final semesters extremely challenging.
  • You may not be able to finish when you want to if courses are not offered or are offered at conflicting times.

• Cell Biology and Genetics are the “gateway” to most upper division courses

• Biology degree requires many Chemistry courses. Chem and Phys require math so make sure you are meeting pre-requisites
Bio 4840: Capstone and ACAT

- After you have completed 60 hours of your Program of Study

- Capstone- 0 credit hour class
  - BIO 4871 – Senior Seminar: Evolutionary Medicine
  - BIO 4012 - Introduction to Biological Research
  - Internship, independent research, professional school application
  - http://sites.uco.edu/cms/biology/capstone/index.asp

- ACAT- arrange with Biology Office
  - Dept. uses in assessment of our programs and curriculum
Things to Know - Summer

• Don’t plan to miss classes in Summer School!
• Courses meet often and material moves fast!

• Limited schedule of majors courses - always subject to change depending on faculty availability.
  • BIO 1204- Biology I for Majors: Principles
  • BIO 1225- Biology II for Majors: Diversity and Lab
  • Bio 2203- Cell Biology (possible offering)
  • BIO 3054- Microbiology for Majors & Lab (possible offering)
  • BIO3543- General Ecology
  • BIO3703- Evolution (possible offering)
  • BIO 2102- Bio & Med Terminology (elective)
  • BIO2504 Human Anat & Lab (nursing majors, pre req for PA, “A” in HA pre req for BIO 4622 Methods of Human Dissection)
  • BIO 2604- Human Phys & Lab (nursing majors, pre req for PA)
Class Resources

• HOH 318: computers with software specific to biology analysis

• SIs: Lower division courses (BIO 1204/ Cell) have SI support.

• Tutor.com: Each UCO student gets 10 free hours of support from Tutor.com.

• Tutoring Central/ The Broncho Education and Learning Lab (The BELL): located in NE corner of West Hall and W112 of the Quad res hall
Scholarships and Tuition Waivers-Biology Department

• Applications for both scholarships and tuition waivers will be available in the Department Office and online in January of each year with a February deadline.

• Tuition waivers are both need-based and merit-based.

• Scholarship recipients will be recognized at the College Awards Reception each April.

• If you receive a scholarship or tuition waiver award, the funds will be posted to your UCO Bursar’s Account for use in 2019-20.

• Check Financial Aid office for opportunities outside the Biology Department
Clubs

Opportunity to be active in department and opportunities for research.

- Tri-Beta Biology Club
- Wildlife Society
- Pre-Med/Health Professions Club
- Pre-Dental Society
- Horticulture Club
- Pre-Vet & Animal Welfare Club (PAWS)
- Serving the Underserved
Opportunities to Work in the UCO Biology Department

• Supplemental Instruction
  • Limited positions, filled by high achieving students with good mentoring skills
  • BIO 1204-Biology for Majors, BIO 2203-Cell Biology
  • Talk to your Instructor
  • May require training before semester begins
Research Opportunities

To do research with a faculty member…

- Search the Biology website for faculty research interests
- Ask faculty members if they are accepting new students
- You may have to volunteer
- Some faculty members have grants to pay students for research work.

- Consider applying for student grants
  - **RCSA grant**- $500 for materials
    - Funding for paid research hours & (possibly) tuition waiver
    - Submitted with a research advisor
    - **Due 3rd week of February each year**
  - **Transformative Learning Experiences-STLR grants**-
    - **Due Dates varies**
    - Funding for paid hours conducting education and basic research
Summer Undergraduate Research and Clinical Experiences

- These are funded programs available at many universities and in many areas of science (OU SURE, OU CURE, OMRF, Univ of Nebraska)

- Institutions pay for your travel, room and board, plus a stipend

- Allows you to find out if you like a particular area of research; clinical opportunities exist as well

- If you are interested in exploring and applying, contact your research mentor

- If you are successful in getting a summer REU, please notify the department
Summer Undergraduate Research Experiences

https://www.nsf.gov/crssprgm/reu/list_result.jsp?unitid=5047
Graduate School

- MS and PhD programs in Biology (field-based)/Biomedical Sciences (molecular)
  - Research-based degrees

- Biomedical programs-
  - typically you **are paid** to attend graduate school (*most programs).
  - Research schools will recruit you and pay for you to visit.

- General GPA requirement: 3.00 in Biology, plus GRE score
How to get into med/dental/ PA school: (besides good grades, compelling story and MCAT)...?
Class advisement for various health careers
  • See UCO Health Professions website for advising sheets for medical, dental, PA, pharmacy, optometry schools in OK
• Help with personal statements and interviewing
• Shadowing, volunteering opportunities
• Clubs
• Summer options- research, clinical
• Career advisement
• Pre med/ pre dental committee interviews
• Life and Health Sciences Career Fair- 11/6/18 10-2 in Nigh (Reps from Medical, PA, pharmacy schools, hospitals, clinical and biotech jobs)
## What classes to take?

### Pre-med
- Mam phys 1 and 2
- Genetics
- Biochem 1 (and 2 if poss)
- Physics 1 and 2
- Org Chem 1 and 2
- Psych and sociology

### Pre-dental
- Mam phys 1 and 2
- Genetics
- Biochem 1
- Physics 1 and 2
- Org Chem 1 and 2
- Psychology
- Hum anat and methods of hum dissection

### Pre-PA
- Human phys or Mam phys 1 and 2; Hum anat; 2 psych classes; upper div bio- see UCO HP website for advising sheets for each school
Questions?

Biology - the only science where multiplication and division mean the same thing.