**BSC 116-001 PRINCIPLES OF BIOLOGY II (Fall 2021)**

**Instructor:** Dr. Kevin Kocot

307 Mary Harmon Bryant Hall

205-348-4052

kmkocot@ua.edu

**Teaching Assistants:** Audrey McQuagge – ajmcquagge@crimson.ua.edu

 Blue Pahl – kdpahl@crimson.ua.edu

**Lecture schedule:** MWF 11-11:50 AM in 1012 North Lawn Building

**Office hours:** MW 4-5 PM (or by appointment; preferred) in 307 Mary Harmon Bryant Hall or via Zoom

**Course web page:** <http://ualearn.blackboard.com>

**Prerequisites:** Grade of C- or better in BSC 114/115 or BSC 118.

**Required materials:** BSC 116 Access Granted Program (ISBN 978-0-01-355270-1): Campbell Biology 11th Edition (hardback, loose-leaf, or digital) including access to Pearson Mastering Biology (for the online homework).

**Course description:** For biology majors, biology minors, pre-health students, and select others. Study of the structure, function, and ecology of organisms, including bacteria, plants, algae, other “protists,” fungi, and animals. Offered fall, spring, and summer. NOTE: A student must take both BSC 116 and BSC 117 in order to use either one of the courses to satisfy a portion of the natural science (N) requirement of the University Core Curriculum. 3.0 credit hours.

**Inclusivity statement:**

The instructor will maintain the course as an inclusive learning community, respecting those of differing backgrounds and beliefs. The instructor will be respectful to all citizens in this class, regardless of culture, ethnicity, race, sex, gender identity and expression, sexual orientation, nation of origin, age, languages spoken, veteran’s status, religion, or disability. These expectations also fall on the students of the course. Please maintain a respectful, professional, and civil demeanor.

**Course objectives:**

1. Survey the major groups of single- and multi-celled organisms.
2. Compare and contrast variation in form and function of organisms in the context of evolutionary relationships and ecological interactions.
3. Review the basic physiology of multicellular organisms, with an emphasis on plants and animals.
4. Review the ecological principles underlying the complex interactions among organisms and their environment at the levels of the individual, population, community, and ecosystem.
5. Emphasize the relevance of organismal biology to human health and happiness.

**Student learning outcomes:**

1. Recognize and classify higher-level organismal diversity.
2. Know the basic historical (evolutionary) and contemporary (ecological) patterns observed in the biosphere.
3. Contrast and compare the variety of organismal body-plans, ecologies, life histories, and reproductive modes.
4. Understand the nature of organismal interactions and the ways these relationships lead to the organization of individuals into populations, communities, and ecosystems.
5. Demonstrate the ability to learn, synthesize, and retain a large body of knowledge, including a vast terminology.
6. Understand the scientific method and be able to critically evaluate scientific information.

**Exams and assignments:** There are 505 possible points in the course (the lowest exam score is dropped):

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| 100 points | Exam 1 |
| 100 points | Exam 2 |
| 100 points | Exam 3 |
| 100 points | Exam 4 (“Final Exam” – NOT cumulative) |
| 5 points | Welcome survey and assessment (points for completion) |
| 200 points | Mastering Biology homework (points per assignment varies) |

*Exams:*

* There will be four exams worth 100 points each but your lowest exam score is dropped.
* Exam 4 / the “Final Exam” is not cumulative.
* Exams in BSC 116 are scantron-based. Bring a couple pencils with a good eraser.
* Exams 1-3 will be on select Thursday evenings from 5-6:15 PM in 1012 North Lawn Building. See the class schedule for dates of exams. There will not be a class meeting every Thursday evening, just on testing days.
* Exam 4 (“Final Exam”) will be Tuesday, 7 December at 10:30 AM in 1012 North Lawn Building.
* Questions on exams will be multiple choice (50 questions/exam each worth 2 points) and will cover material from the lectures, assigned reading, and homework. Lecture material will be strongly emphasized but you are expected to do all assigned readings and complete homework assignments on time.
* You must bring your university photo ID (physical card or mobile app) with you to all exams.
* All exams are closed book; no printed, written, or digital study aids may be used during the exam.
* If you arrive for an exam after another student has already finished it and left, you will not be allowed to take the exam.

*Mastering Biology homework and practice questions:*

* Access homework via Blackboard. Assignments for practice and for a grade will be posted to Pearson “Mastering Assignments.”
* Graded homework assignments and practice “Dynamic Study Module” assignments have been customized for this course and are excellent study tools. After completing an assignment, you may practice it multiple times before the exam.
* Each class period will have an associated homework assignment and a “Dynamic Module” assignment. Some of these assignments touch on topics we are only able to superficially cover in lecture, so it is important to do the assigned reading beforehand.

**Grading policy:** Grades are based on a percentage derived from total points accumulated during the semester:

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| A+ = 97-100 | B+ = 87-89.9 | C+ = 77-79.9 | D+ = 67-69.9 | F < 60 |
| A = 94-96.9 | B = 84-86.9 | C = 74-76.9 | D = 64-66.9 |  |
| A- = 90-93.9 | B- = 80-83.9 | C- = 70-73.9 | D- = 60-63.9 |  |

To ensure a fair and accurate representation of the performance of all the students in the class, the instructor reserves the right to modify the above point distribution in the student’s favor for all students in the course in the event of unusual circumstances that prevents a large fraction of the class from completing class requirements in the normal fashion.

**Policy on missed exams and coursework:** Students will be permitted to make up exams with a significant, documented excuse (generally health-related) that should be submitted as soon as possible. Requests for makeup exams made after the exam will only be granted for emergencies. The university medical center does not handle emergencies. Make-up exams may be different from regular exams and consist of essay, short answer, and/or fill-in-the-blank questions.

**Attendance policy:** Your attendance at all lecture periods is strongly encouraged. Lectures will be recorded using Panopto and available via Blackboard.

**Getting help:** Free tutoring is available for this course from the Capstone Center for Student Success and your TAs. The Capstone Center for Student Success’s office is located on the 3rd floor of Russell Hall (room 356) and tutoring will likely be provided via Zoom. Visit their website (<https://success.ua.edu/>) for more information. Your TAs for this course are Audrey McQuagge (ajmcquagge@crimson.ua.edu) and Blue Pahl (kdpahl@crimson.ua.edu). They will provide free tutoring via Zoom. Blue’s office hours are 1-4 PM on Thursdays and Fridays. Audrey’s office hours are 3:30-5:30 on Mondays and Wednesdays and 1-3 PM on Tuesdays. See the Biology Helpdesk flyer on Blackboard for their Zoom links.

**Notification of changes:** The instructor will make every effort to follow the guidelines of this syllabus as listed; however, the instructor reserves the right to amend this document as the need arises. In such instances, the instructor will notify students in class and via email and will endeavor to provide reasonable time for students to adjust to any changes.

**Statement on academic misconduct:** All acts of dishonesty in any work constitute academic misconduct. This includes but is not limited to, cheating, plagiarism, and fabrication of information, misrepresentations and abetting of any of the above. The Academic Misconduct Policy will be followed if academic misconduct occurs. Students should refer to the official Academic Misconduct Policy provided in the online catalog. The University of Alabama expects all students to conduct their studies in an honorable manner. Any form of academic misconduct will result in appropriate penalties, which may include dismissal from the university.

**Statement on disability accommodations:** If you are registered with the Office of Disability Services, please make an appointment with me as soon as possible to discuss any course accommodations that may be necessary. If you have a disability but have not contacted the Office of Disability Services, please call 348-4285 to register for services. Students must set up all exams (including the final) at ODS during the first two weeks of the semester to ensure that they have a spot for testing.

**Severe weather protocol:** In the event of severe weather, all classes will meet as planned unless the University of Alabama in conjunction with the National Weather Service recommends alternative safety precautions (e.g., temporary suspension of classes, closing the university). Please note that for this class, we will follow the weather advisory posted on the University of Alabama’s homepage (http://ua.edu/) for information on any class cancellations or changes.

**Pregnant student accommodations:** Title IX protects against discrimination related to pregnancy or parental status. If you are pregnant and will need accommodations for this class, please review the University’s FAQs on the UAct website.

**Religious observances:** Under the Guidelines for Religious Holiday Observances, students should notify the instructor in writing or via email during the first two weeks of the semester of their intention to be absent from class for religious observance. The instructor will provide reasonable opportunity to complete academic responsibilities as long as that does not interfere with the academic integrity of the course. See full guidelines at Religious Holiday Observances Guidelines.

**UAct statement:** UA is committed to an ethical, inclusive community defined by respect and civility. The UACT website ([www.ua.edu/uact](http://www.ua.edu/uact)) provides extensive information on how to report or obtain assistance with issues related to dating violence, domestic violence, stalking, sexual assault, sexual violence or other Title IX violations, illegal discrimination, harassment, child abuse or neglect, hazing, threat assessment, retaliation, and ethical violations or fraud.

**Statement on COVID-19:** All University faculty, staff, and students are expected to maintain a commitment to the health and safety of our campus community. Due to the current COVID-19 pandemic, specific health and safety standards are in place to minimize exposure and community spread on campus. In the interest of your health and safety and that of all UA students, faculty and staff, the University reserves the right to change the mode of instruction or schedule of instruction at any time, based upon prevailing public health and other guidance. While the method of delivery may change, educational instruction and opportunities will continue. As such, the University will not provide a refund of tuition, in whole or in-part, based on any such changes. Detailed information on changes in format or schedule can be found at studentaccounts.ua.edu and financialaid.ua.edu.

 In accordance with current CDC and UA System Comprehensive Health and Safety Task Force guidance, face coverings are no longer required for those who are fully vaccinated in most University of Alabama facilities. Masks will continue to be required in all clinical settings, inside the University Medical Center and the Student Health Center, and on the Crimson Ride buses. Individuals may choose to continue to wear a mask in circumstances where one is not required. All unvaccinated faculty, staff and students are required to wear face coverings inside all University buildings. Physical distancing of at least 3 feet is still required.

 People are considered fully vaccinated two weeks after their final dose of the COVID-19 vaccine. Getting vaccinated is the best way to protect yourself and our herd. COVID-19 vaccines are being administered by the University Medical Center, the Student Health Center and various businesses and healthcare providers. To help UA officials plan for supplies, let UA know if you were vaccinated off campus.

**Wellness resources:** College can be a stressful time. If you or someone you know is facing a challenging time or dealing with academic or personal stress, anxiety, depression, or other concerns, we strongly encourage and support you to seek assistance or to help friends find the care that they may need (<https://tinyurl.com/5cw2468>). Also, if you are experiencing a personal crisis and need urgent assistance, you can also contact the following resources:

Counseling Center

* Monday-Friday during routine Center hours (205-348-3863).
* Weekends, holidays, after-hours (contact UAPD at 205-348-5454 and ask to speak with the on-call counselor).
* You may also text BAMA to 741-741 to text with a trained volunteer.

Women and Gender Resource Center

* Monday-Friday during routine Center hours (205-348-5040).
* Weekends, holidays, after-hours (contact UAPD at 205-348-5454 and ask to speak to the on-call advocate for the WGRC.

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| **Date** | **Lecture Topic** | **Deadlines** | **Campbell Chapter(s)** |
| Wednesday, August 18 | 1 – Welcome & Scientific Method |  | 1 |
| Friday, August 20 | 2 – Evolutionary History of Life |  | 25 |
| Monday, August 23 | 3 – Understanding the Tree of Life |  | 25 & 26 |
| Wednesday, August 25 | 4 – Prokaryotes |  | 27 |
| Friday, August 27 | 5 – “Protists” |  | 28 |
| Monday, August 30 | 6 – Fungi |  | 31 |
| Wednesday, September 1 | 7 – Plant Diversity I |  | 29 |
| Friday, September 3 | 8 – Plant Diversity II |  | 30 |
| Monday, September 6 | **Labor Day – no class** |  |  |
| Wednesday, September 8 | TBD | **Homework Batch #1 due** |  |
| Thursday, September 9 |  | **Exam 1** | **1, 25-31 (8 lectures)** |
| Friday, September 10 | 9 – Plant Growth and Development |  | 35 |
| Monday, September 13 | 10 – Plant Physiology |  | 36 |
| Wednesday, September 15 | 11 – Plant Nutrition |  | 37 |
| Friday, September 17 | 12 – Flowering Plant Reproduction  |  | 38 |
| Monday, September 20 | 13 – Plant Communication |  | 39 |
| Wednesday, September 22 | 14 – Introduction to Animals |  | 32 |
| Friday, September 24 | 15 – Invertebrates I |  | 33 |
| Monday, September 27 | 16 – Invertebrates II |  | 33 |
| Wednesday, September 29 | 17 – Invertebrates III & Vertebrates I |  | 33 |
| Friday, October 1 | 18 – Vertebrates II |  | 34 |
| Monday, October 4 | 19 – Animal Form and Function |  | 40 |
| Wednesday, October 6 | TBD | **Homework Batch #2 due** |  |
| Thursday, October 7 |  | **Exam 2** | **32-39 (10 lectures)** |
| Friday, October 8 | 20 – Nutrition |  | 41 |
| Monday, October 11 | 21 – Circulation & Gas Exchange |  | 42 |
| Wednesday, October 13 | 22 – Innate Immunity |  | 43 |
| Friday, October 15 | 23 – Acquired Immunity |  | 43 |
| Monday, October 18 | 24 – Excretion |  | 44 |
| Wednesday, October 20 | 25 – Endocrine System |  | 45 |
| Friday, October 22 | 26 – Reproduction |  | 46 |
| Monday, October 25 | 27 – Development |  | 47 |
| Wednesday, October 27 | 28 – Nervous System I |  | 48 |
| Friday, October 29 | **Study break – no class** |  |  |
| Monday, November 1 | 29 – Nervous System II |  | 48 |
| Wednesday, November 3 | TBD | **Homework Batch #3 due** |  |
| Thursday, November 4 |  | **Exam 3** | **40-48 (11 lectures)** |
| Friday, November 5 | 30 – Nervous System III |  | 49 |
| Monday, November 8 | 31 – Sensory motor mechanisms |  | 50 |
| Wednesday, November 10 | 32 – Animal Behavior |  | 51 |
| Friday, November 12 | 33 – Ecology |  | 52 |
| Monday, November 15 | 34 – Populations Ecology |  | 53 |
| Wednesday, November 17 | 35 – Community Ecology |  | 54 |
| Friday, November 19 | 36 – Ecosystems |  | 55 |
| Monday, November 22 | 37 – Cons. Biology & Global Change I |  | 56 |
| Wednesday, November 24 | **Thanksgiving – no class** |  |  |
| Friday, November 26 | **Thanksgiving – no class** |  |  |
| Monday, November 29 | 37 – Conservation Biology & Global Change II |  | 56 |
| Wednesday, December 1 | TBD | **Homework Batch #4 due** |  |
| Tuesday, December 7 |  | **Final Exam (10:30 AM)** | **50-56** |