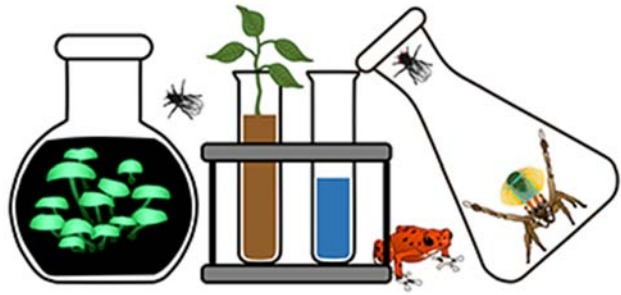


# BIOL 198: Principles of Biology - Fall 2022

## Coordinator

Name: Dr. Eva Horne  
Division of Biology  
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## Section instructors:

Each section has its own set of instructors. You can find yours [at this link](#). Section instructors are responsible for your grades, attendance, and any adjustments you may need to quizzes or course material due to absences.

I, as coordinator, write the exams, grade exams, post exam grades, make sure computer material is working properly, make sure all the sections are covering the same material at the same time, and a host of other behind the scenes things to ensure that everything runs smoothly. If you have questions, contact your section instructors first, then contact me.

## Class Format

The format for this course is based on a modified studio model. You learn by active **investigation** and then **application** of information in a problem-solving format. In each class, you perform a variety of laboratory and/or computer-based activities that allow you to solve problems and answer questions. Find out more about the studio format on the [Principles of Biology website](#).

## Required Textbooks

**eText: *Principles of Biology, Edited Collection***, E. Horne et al. The readings for each class can be found in the appropriate Modules link at left.

***Principles of Biology Studio Manual, 23<sup>rd</sup> edition***, R. Bear *et al.*, (2021). You need this manual for every class period. It is your record of the exercises and experiments done during class, in other words it is your lecture notes. The manual also contains the pre-class exercises that are **required BEFORE** each class.

## Expectations for classroom conduct:

All student activities in the University, including this course, are governed by the [Student Judicial Conduct Code](#). As outlined in the [Student Governing Association By Laws](#), Article V, Section 3, number 2. Students who engage in behavior that disrupts the learning environment may be asked to leave the class.

## Cell phone policy:

Texting, talking, or playing games on your phone is a distraction for you and your fellow students. **Please refrain from these activities during class.** Using a phone or tablet for the purpose of enhancing your understanding of the material is acceptable. Please do not abuse this policy.

## Attendance:

Interacting with instructors and other students is an important component of this class. Therefore, participation (attending class and interacting with peers and staff) is strongly recommended, and an attendance bonus is available. At the end of the semester, the attendance bonus is calculated as:  $(\text{Number of days present} / \text{Total number of days}) \times 5 = \text{attendance bonus}$ . So, if you attend class on 26 days out of 29, your attendance bonus is  $(26/29) \times 5 = 4.48$  exam points. If you have perfect attendance, your bonus is 5 points. At the end of the semester, these points are added to your exam point total. Attendance is defined as being present in the classroom and by completion of the day's material. There is NO distinction between "excused" and "unexcused" absences. All absences, regardless of cause, are counted equally.

If you know you are going to miss class for an appointment or school event, you have the option of attending a different section. Please contact the instructors (Contact info [Here](#)) of the section you would like to attend and ask for permission to attend.

## Covid 19 and attendance:

Students who are unable to attend class due to the need to isolate or quarantine because of COVID-19 related symptoms, exposure, illness, or travel-related self-quarantine mandates (see [K-State policies](#)) should contact the student's [instructors](#).

For those students who are isolated or quarantined, accommodations will be made based on the [recommendations](#) of the Office of Student Life. Please contact your [studio instructors](#) about accommodations.

## Course schedule

The class is divided into seven modules, each ending with a capstone activity and an exam.

Module 1 = Introduction to Biology and Evolution (weeks 1 and 2)

Module 2 = Ecology (weeks 3 and 4)

Module 3 = Cell Biology (weeks 5 and 6)

Module 4 = Genetics (weeks 7 and 8)

Module 5 = Energetics (weeks 9 and 10)

Module 6 = Plant Biology (weeks 11 and 12)

Module 7 = Animal Biology (weeks 13, 14, and 15)

Class	Dates	Assessments
<b>Module 1, Class 1: Introduction to the studio class</b>	23 & 24 Aug	Pre-class quiz
<b>Module 1, Class 2: Introduction to Science &amp; Biology</b>	25 & 26 Aug	Pre-class quiz
<b>Module 1, Class 3: Evolution and Natural Selection</b>	30 & 31 Aug	Pre-class quiz
<b>Module 1, Class 4: Phylogeny and Taxonomy</b>	1 & 2 Sep	Pre-class quiz
	<b>Due - 2 Sep</b>	<b>Capstone 1</b>
<b>Module 2, Class 1: Ecosystems</b>	6 & 7 Sep	Pre-class quiz
<b>Module 2, Class 2: Populations</b>	8 & 9 Sep	Pre-class quiz
	<b>12 Sep</b>	<b>Exam 1 - 530 pm</b>
<b>Module 2, Class 3: Communities</b>	13 & 14 Sep	Pre-class quiz
<b>Module 2, Class 4: Ecological Research</b>	15 & 16 Sep	Pre-class quiz
	<b>Due - 16 Sep</b>	<b>Capstone 2</b>
	<b>19 Sep</b>	<b>Exam 2 - 530 pm</b>
<b>Module 3, Class 1: Introduction to Cells</b>	20 & 21 Sep	Pre-class quiz
<b>Module 3, Class 2: Water, Carbohydrates, Lipids</b>	22 & 23 Sep	Pre-class quiz
<b>Module 3, Class 3: Proteins and enzymes</b>	27 & 28 Sep	Pre-class quiz
<b>Module 3, Class 4: Cell cycle</b>	29 & 30 Sep	Pre-class quiz
	<b>Due - 30 Sep</b>	<b>Capstone 3</b>
	<b>3 Oct</b>	<b>Exam 3 - 530 pm</b>
<b>Module 4, Class 1: Molecular Genetics</b>	4 & 5 Oct	Pre-class quiz
<b>Module 4, Class 2: Mendelian Genetics</b>	6 & 7 Oct	Pre-class quiz
<b>Module 4, Class 3: Variations on Mendel</b>	11 & 12 Oct	Pre-class quiz
<b>Module 4, Class 4: Population Genetics</b>	13 & 14 Oct	Pre-class quiz
	<b>Due - 14 Oct</b>	<b>Capstone 4</b>
	<b>17 Oct</b>	<b>Exam 4 - 530 pm</b>
<b>Module 5, Class 1: Introduction to energetics</b>	18 & 19 Oct	Pre-class quiz

<b>Module 5, Class 2: Photosynthesis</b>	20 & 21 Oct	Pre-class quiz
<b>Module 5, Class 3: Respiration</b>	25 & 26 Oct	Pre-class quiz
<b>Module 5, Class 4: Alternate energy sources</b>	27 & 28 Oct	Pre-class quiz
	<b>Due - 28 Oct</b>	<b>Capstone 5</b>
	<b>31 Oct</b>	<b>Exam 5 - 530 pm</b>
<b>Module 6, Class 1: Introduction to plants</b>	1 & 2 Nov	Pre-class quiz
<b>Module 6, Class 2: Plant reproduction</b>	3 & 4 Nov	Pre-class quiz
<b>Module 6, Class 3: Plants and environment</b>	8 & 9 Nov	Pre-class quiz
<b>Module 6, Class 4: Climate Change</b>	10 & 11 Nov	Pre-class quiz
	<b>Due - 11 Nov</b>	<b>Capstone 6</b>
	<b>14 Nov</b>	<b>Exam 6 - 530 pm</b>
<b>Module 7, Class 1: Introduction to animals</b>	15 & 16 Nov	Pre-class quiz
<b>Module 7, Class 2: Acquisition and Transport</b>	17 & 18 Nov	Pre-class quiz
<b>Thanksgiving break</b>	<b>21 - 25 Nov</b>	-----
<b>Module 7, Class 3: Internal communication &amp; coordination</b>	29 & 30 Nov	Pre-class quiz
<b>Module 7, Class 4: External communication &amp; coordination</b>	1 & 2 Dec	Pre-class quiz
<b>Module 7, Class 5: Adaptation to land</b>	6 & 7 Dec	Pre-class quiz
<b>Module 7, Class 6: Homeostasis</b>	8 & 9 Dec	Pre-class quiz
	<b>Due - 9 Dec</b>	<b>Capstone 7</b>
	<b>15 Dec</b>	<b>Exam 7 - 730 am</b>

## Grading:

Grades are based upon standard 90-80-70-60% cutoffs for A, B, C, D grades. A student who earns an A grade for Principles of Biology (Biol 198) has mastered the material and is well prepared to succeed in upper level Biology course work. A student who earns a B for Biol 198 has a proficient understanding of the material and is prepared for upper level Biology course work. A student who earns a C for Biol 198 has knowledge of the material and with additional preparation can succeed in upper level Biology

course work. A student who earns a D for Biol 198 has minimal knowledge of the subject and needs substantial changes in academic readiness in order to succeed in upper level Biology course work. A student who earns an F for Biol 198 is not ready for upper level Biology course work. **Neither extra credit nor special projects are available in this course.** It is also not possible to take an exam more than once. **Please direct all questions about your grades to your studio instructor(s).**

### Summary of available points:

**Daily pre-class quizzes** = 11% of overall grade

**Capstone activities** = 11% of overall grade

**Exams** = 78% of overall grade

- **Exam 1** = 20 questions worth one point each
- **Exams 2-6** = 30 questions worth one point each
- **Exam 7 (Final)** = 40 questions worth one point each

### Daily pre-class quiz (Each week)

**(11% of your overall grade):** These daily assignments are online and consist of 4-5 multiple choice questions from pre-class reading, intro lecture and pre-class assignment in your studio manual. Pre-class quiz answers are posted after the last section meets for a particular class.

**Video and reflective writing assignment:** This experience is part of a research project about college transition and degree progress in STEM. Completed assignments are not evaluated. All students who complete the assignment earn a point toward their final grade. You must be present to receive a point. As part of the study, the researchers will track demographic information, course grades, future enrollment, and major changes. Although unique to you, these data will not be linked to you in any analysis or report. Your identity will not be shared. Participation is voluntary. There are no risks or immediate benefits to participation. If you would prefer not to participate in this study, please write “opt out” on the in-class writing assignment. If you have any questions about this research, please contact Dr. Jeannie Brown Leonard, vice provost for student success at brownleonard@ksu.edu or Rick Scheidt, Chair, Committee on Research Involving Human Subjects, 203 Fairchild Hall, Kansas State University, Manhattan, KS 66506, (785) 532-3224.

### Capstone activities (Each module: usually every two weeks)

**(11% of your overall grade):** Capstone activities are an assessment of how well you understand basic biological principles and consist of one or two videos with multiple questions. You can sometimes answer the questions simply by watching the video. Other times, you will want to work through the material before answering. These activities will be open for the entire module, so you can do them any time, though you should pay attention to what is being asked and when you learn that particular material. Capstones are due on midnight of the last Friday of each module so that you can use them as feedback for things you should concentrate on before the exam.

## Exams (Each module: usually every two weeks)

**210 points (78% of your overall grade):** Regular exams in this course consist of multiple-choice questions (4-5 answer choices per question) worth 1 point each. Make-up exams are short-answer/fill-in-the-blank. See below for more important information about the exams.

## Late or Missing Assignments

The purpose of assignment deadlines is to help you stay on track to complete all materials in a timely manner. Keeping up with your assignments is one of the best ways to not fall behind and to succeed in the class, but sometimes, life interferes. The weekly pre-class quizzes and capstone activities are set up so that you can submit them for up to four days after the due date. However, by doing so, you will lose 10% of the possible points for each day the assignment is late. Missing exams is handled via makeups, which are explained under "Exams".

## Exams

### The Importance of Objectives

Exam questions test your understanding of the **OBJECTIVES** listed first in the studio manual material for each day. Exam questions may come from the studio manual, the classroom computer material, the studio exercises, or the eText readings. So, you should take notes on each objective from all these sources. Be sure to take notes and write out definitions in your own words. If you do not understand something, please ask questions. You can also use the "Guide to objectives" available for each class in the modules.

### Exam Locations

Regular exams will be at **5:30 PM on Monday evenings** according to the schedule above. The table below shows where students from each section will take their exams. **The final exam** is Thursday, 15 Dec at **7:30 AM!** Make sure to come to your exam room **on time** with a **#2 pencil and your student I.D. card**. All electronic devices of any type must be turned off and stowed away during the exam. Be prepared to show your KSU ID card to the exam proctor when you submit your exam.

<b>If you are in sections:</b>	<b>Go to:</b>
TU 930 and WF 930	Weber 123
WF 1130 and WF 130	Seaton 0057
TU 1130, TU 130, and TU 330	Cardwell 101

## Exam scoring/posting

Exam scores and answer keys will be posted on this Canvas site as soon as all exams are graded. If there is a problem in the reporting of your score (e.g., incorrect student number or version number, a missing exam score, incorrect score, etc.), **notify the grader** (Luke Messer, [clukemesser@ksu.edu](mailto:clukemesser@ksu.edu)), **within two weeks of scores being posted**. After that time, the recorded grade becomes your permanent score.

## Exam time conflicts

If the Monday evening exam time conflicts with your schedule for any of these reasons:

employment	performance or practice for music and theatre events
another KSU class	scheduled varsity athletic practice or games
child care	car pool commuting from out of town

You may take the exam early on the scheduled exam day from 11:30 to 1:30 p.m. in Ackert 112. **You must get permission to take the early exam** by contacting the course coordinator (Eva Horne, [ehorne@ksu.edu](mailto:ehorne@ksu.edu)) on or before Friday of the week prior to the exam. Please note that having another exam (Chemistry, Physics, etc.) scheduled later the same evening is **NOT** a conflict. **No early or late exams will be scheduled for the final!**

## Exam complaints

Questions about the interpretation of correct or incorrect answers on the exams should be directed to your studio instructors. They have the authority to change your grade if they believe that your rationale for choosing a particular answer is reasonable. You should also do this within two weeks of the exam.

## Missed exams

If you miss a Monday evening exam, let your studio instructor know immediately (though you don't need to tell them why you missed the exam). Then go to your Canvas calendar to sign-up for a time. You can find directions for how to do this [here](#). All make-up exams must be taken within two weeks of the missed exam (Covid related arrangements can be made) or your grade will remain zero for that exam! The makeup exams are NOT the same multiple-choice format as the regular Monday night exams. Questions on the make-up exam are short-answer/fill-in-the-blank.

## Resources

We want you to succeed in this course, so here are some more places to get information or help:

### Student Access:

Students with disabilities who need classroom accommodations, access to technology, or information about emergency building/campus evacuation processes should contact the Student Access Center and/or their instructor. Services are available to students with a wide range of disabilities including, but not limited to, physical disabilities, medical conditions, learning disabilities, attention deficit disorder, depression, and anxiety. If you are a student enrolled in campus/online courses through the Manhattan or Olathe campuses, contact the Student Access Center at [accesscenter@k-state.edu](mailto:accesscenter@k-state.edu), 785-532-6441.

### Guides to Objectives:

Guides for the objectives in each module are available on the Canvas Biol 198 site. These guides are based on the **OBJECTIVES**, and will help you find the resources (studio manual, the web-based material, the studio exercises, or the eText) required to master these objectives. The guides are NOT a substitute for attending class and/or doing the assigned readings!

### Tutoring:

Six of our nine undergraduate practicum students are also tutors for the course. The tutors are not a substitute for coming to class or doing the work, but they are wonderful for helping you understand any of the material. Also, since most of them have recently taken the class themselves, they can likely help you figure out good ways to study. Students who go to the tutors are often able to do better on exams than those who don't. You can find more information and links for making appointments on the Tutoring Page in Canvas.

### Web resources:

Many of the web-based computer tutorials used during class will be available at the [in-class material website](#). This site is password-protected; userid = **biol198student** and password = **Nikhedonia** (case-sensitive). **Do not provide this information to anyone not currently enrolled in BIOL198.**

## Academic Honesty

Kansas State University has an Honor and Integrity System based on personal integrity, which is presumed to be sufficient assurance that, in academic matters, one's work is performed honestly and without unauthorized assistance. Undergraduate and graduate students, by registration, acknowledge the jurisdiction of the Honor and Integrity System. The policies and procedures of the [Honor and Integrity System](#) apply to all full and part-time students enrolled in undergraduate and graduate courses on-campus, off-campus, and via distance learning. A component vital to the Honor and Integrity System is the inclusion of the Honor Pledge which applies to all assignments, examinations, or other course work undertaken by students. The Honor Pledge is implied, whether or not it is stated:



"On my honor, as a student, I have neither given nor received unauthorized aid on this academic work." A grade of XF can result from a breach of academic honesty. The F indicates failure in the course; the X indicates the reason is an Honor Pledge violation.

Particular forms of academic dishonesty that will not be tolerated in BIOL 198 include: plagiarism, use of notes or other written material during exams, looking at another student's exam during the exam period, using any sort of electronic device during exams, having another person stand in on an exam, deliberate falsification of lab results, and copying quiz answers from another student, among others.

KSU also has a plagiarism policy with this definition - *Plagiarism is taking credit for someone else's ideas, work, or words. In a university setting, it means submitting academic, scholarly, or literary work in which you either claim or imply the material to be your own, when that is not the case. Webster's New Collegiate Dictionary, eleventh edition, defines plagiarism simply: "to steal and pass off the ideas or words of another as one's own without crediting the source" (2003).* If you have questions about specific applications of this definition, or the definition itself, please consult with your instructor.

**In addition, in this class,** the following are violations of the KSU Honor Pledge and are not allowed:

- Sharing of instructor-provided class materials without written permission from the instructor (this includes posting questions to Chegg or other electronic media site) in any format that allows access by the public or by other students. Instructor-provided class materials include, but are not limited to, assignments, handouts, presentation files or printouts, or study guides. You may contribute your personal notes to other students or to course-specific note-taking web sites, but these cannot include any instructor-provided materials.
- Accessing or viewing assignment questions/answers that have been posted, without the permission of the instructor, to an electronic media site (such as Chegg).
- The use of or reference to, materials from other students without written permission from the instructor. These include but are not limited to old exams, other graded assignments, papers, or quizzes, whether from the current semester, or past semesters.

## Copyright

Copyright 2022 (The Principles of Biology Teaching Staff) as to this syllabus, all computer-based material, and any provided powerpoint slides. During this course, students are prohibited from selling notes to or being paid for taking notes by any person or commercial firm without the express written permission of the professor teaching this course. In addition, students in this class are not authorized to provide class notes or other class-related materials (including exams and exam questions) to any other person or entity (this includes posting questions or material to electronic media sites for any purpose), other than sharing them directly, for the purposes of studying, with another student taking the class during the same semester, without prior written permission from the professor teaching this course.

Copyright is a form of legal protection that allows authors, photographers, composers, and other creators to control some reproduction and distribution of their work. Both students and professors are protected by copyright. Please visit K-State's [Copyright website](#) for more information.

## University policies

### Mutual Respect and Inclusion

At K-State, faculty and staff are committed to creating and maintaining an inclusive and supportive learning environment for students from diverse backgrounds and perspectives. K-State courses, labs, and other virtual and physical learning spaces promote equitable opportunity to learn, participate, contribute, and succeed, regardless of age, race, color, ethnicity, nationality, genetic information, ancestry, disability, socioeconomic status, military or veteran status, immigration status, Indigenous identity, gender identity, gender expression, sexuality, religion, culture, as well as other social identities.

Faculty and staff are committed to promoting equity and believe the success of an inclusive learning environment relies on the participation, support, and understanding of all students. Students are encouraged to share their views and lived experiences as they relate to the course or their course experience, while recognizing they are doing so in a learning environment in which all are expected to engage with respect to honor the rights, safety, and dignity of others in keeping with the [K-State Principles of Community](#).

If you feel uncomfortable because of comments or behavior encountered in this class, you may bring it to the attention of your instructor, advisors, and/or mentors. If you have questions about how to proceed with a confidential process to resolve concerns, please contact the Student Ombudsperson Office. Violations of the [student code of conduct](#) can be reported at [this website](#). If you experience bias or discrimination, it can be reported [here](#).

### Discrimination, Harassment, and Sexual Harassment

Kansas State University is committed to maintaining academic, housing, and work environments that are free of discrimination, harassment, and sexual harassment. Instructors support the University's commitment by creating a safe learning environment during this course, free of conduct that would interfere with your academic opportunities. Instructors also have a [duty to report](#) any behavior they become aware of that potentially violates the University's policy prohibiting discrimination, harassment, and sexual harassment ([PPM 3010](#)).

If a student is subjected to discrimination, harassment, or sexual harassment, they are encouraged to make a non-confidential report to the University's [Office for Institutional Equity \(OIE\)](#) using the [online reporting form](#). Incident disclosure is not required to receive resources at K-State. Reports that include domestic and dating violence, sexual assault, or stalking, should be considered for reporting by the complainant to the [Kansas State University Police Department](#) or the [Riley County Police Department](#). Reports made to law enforcement are separate from reports made to OIE. A complainant can choose to report to one or both entities. Confidential support and advocacy can be

found with the [K-State Center for Advocacy, Response, and Education \(CARE\)](#). Confidential mental health services can be found with Lafene Counseling and Psychological Services ([CAPS](#)). Academic support can be found with the [Office of Student Life \(OSL\)](#). OSL is a non-confidential resource. A comprehensive list of resources is available [here](#). If you have questions about non-confidential and confidential resources, please contact OIE at [equity@ksu.edu](mailto:equity@ksu.edu) or (785) 532–6220.

## Mental Health

Your mental health and good relationships are vital to your overall well-being. Symptoms of mental health issues may include excessive sadness or worry, thoughts of death or self-harm, inability to concentrate, lack of motivation, or substance abuse. Although problems can occur anytime for anyone, you should pay extra attention to your mental health if you are feeling academic or financial stress, discrimination, or have experienced a traumatic event, such as loss of a friend or family member, sexual assault or other physical or emotional abuse.

If you are struggling with these issues, do not wait to seek assistance.

- Kansas State University [Counseling Services](#) offers free and confidential services to assist you to meet these challenges.
- [Lafene Health Center](#) has specialized nurse practitioners to assist with mental health.
- The [Office of Student Life](#) can direct you to additional resources.
- K-State [Family Center](#) offers individual, couple, and family counseling services on a sliding fee scale.
- [Center for Advocacy, Response, and Education](#) (CARE) provides free and confidential assistance for those in our K-State community who have been victimized by violence.

## Academic Freedom

Kansas State University is a community of students, faculty, and staff who work together to discover new knowledge, create new ideas, and share the results of their scholarly inquiry with the wider public. Although new ideas or research results may be controversial or challenge established views, the health and growth of any society requires frank intellectual exchange. Academic freedom protects this type of free exchange and is thus essential to any university's mission.

Moreover, academic freedom supports collaborative work in the pursuit of truth and the dissemination of knowledge in an environment of inquiry, respectful debate, and professionalism. Academic freedom is not limited to the classroom or to scientific and scholarly research, but extends to the life of the university as well as to larger social and political questions. It is the right and responsibility of the university community to engage with such issues.

## Face Coverings

Kansas State University strongly encourages, but does not require, that everyone wear masks while indoors on university property, including while attending in-person classes. For additional information and the latest on K-State's face covering policy, [go here](#).