

Utah State University-Eastern

Organismal Biology and Physiology (BIOL 3050)

Spring 2021; 3 Credit-Hour Course

Lecture: MWF 10:30am to 11:20am (RVS 186 or
Broadcast/Zoom)

Instructor:

Tyson D. Chappell PhD.

Email:

tyson.chappell@usu.edu

Office:

Reeves #261

Office Phone: 613-5345 or Science Secretary 613-5316

Office Hours: I will typically be available to talk immediately after class MWF or email/call for questions.

Course Description:

This course uses information from diverse disciplines in the life sciences to provide a comprehensive understanding of organisms as integrated units of biological organization. Students learn about physiological systems from an evolutionary perspective. Prerequisites/Restrictions: BIOL 1610 BIOL 1620 CHEM 1210

Pre-requisites:

BIOL 1610 BIOL 1620 CHEM 1210

Course fees:

None unless taking the lab component.

Textbook and Supplies (many options available):

(Required):

Either the Customized book by Chappell:

ORGANISMAL BIOLOGY AND PHYSIOLOGY (ISBN-13: 9780137116539) This book is a paperback with a chimp on the cover.

Or the full textbook:

Biological Science (ISBN 9780134678320) 7th edition By Freeman, Scott, Podgorski et. al.

Course Objectives:

1. Significant factual knowledge regarding organisms' biology and physiology within an evolutionary perspective
2. Developing specific points of view needed by professionals in biological fields
3. How to find and use resources for answering questions or solving problems to explore a topic in depth
4. See schedule for list of topics/chapters that we will be discussing this semester

Required Student Skills:

Ability to take notes, follow directions, attend class PROMPTLY, and respond to a lecture teaching method consisting of white-board discussion and multimedia presentations. You will also have several previously recorded videos of my lectures and demos to view before certain classes. This approach is called a “flipped classroom” teaching method. It requires that students are prepared BEFORE certain classes take place in order to have some knowledge and exposure of a subject prior to classroom discussion. Some entire courses use this approach. This semester there will be a small percentage of the flipped classroom pedagogy (the science behind HOW to teach).

Student Assistance:

I will be using Canvas for the management of this class. All reserve materials, including my power point lectures, the syllabus, class schedule, and updated grade sheets, will be available through Canvas. To access Canvas, go to the web address: <https://usu.instructure.com/login> . Student “A numbers” and password will be required to login. Privacy is your responsibility. You will be responsible for every email and quiz submitted under your name. You will also be held accountable for every email I send through Canvas. You will want to check Canvas regularly.

For the Price campus, you may also contact Debbie Pearson if you have trouble logging on or questions regarding use 613-5716 debbie.pearson@usu.edu

For Statewide student questions or assistance needs: <https://statewide.usu.edu/student-support/>

Kaltura will be used to record each lecture. Kaltura is meant to be used as a backup in case of emergency or should the covid situation change and to review material for exams. Zoom will also be available.

Exams:

Exams will include material from lecture notes, class discussions, and material found in the textbook. There will be 6-8 exams, none of which are comprehensive. Check syllabus schedule below for exam dates. You will be responsible to schedule your exam time with the testing center. Exams are worth **100 points**
Your lowest exam score is dropped as each exam is taken.

You must bring picture identification to be admitted for the exam if taken at the campus testing center.

In the testing center or on Proctorio, ALL exams are CLOSED book, No notes, No friends, No cell phones, only one webpage should be open. In the testing center you may ask for a blank sheet of paper to write on during the exam but the entire sheet **must** be returned to the testing center help prior to you leaving. If using proctorio and wanting to use a blank piece of paper, you must be very good at showing me your desk and both sides of the blank piece of paper. During the test, make sure you are being very clear about keeping your hands above the desk. Also show the camera both sides of the paper prior to submitting the exam.

Testing center hours of operation:

Mon to TH: ~8:30pm to 8:30pm (last test distributed at 8pm).

Friday: 8:30am to 5:30pm (last test distributed at 5pm).

Assignments:

Assignments will be due for every chapter. These assignments will be accessible on canvas and will be open book. You should be able to complete these from any electronic device (**Cell phones have a much higher chance of giving**

trouble though. Be advised). Assignments are meant to help you study, learn, and review the material to prepare you for exams. Exam questions will be similar, although not necessarily identical to the assignments. Assignments will have 20 questions to answer. Each correct question is worth ½ a point for a total of 10 points if turned in on time or 5 point maximum for turning it in 1 day late (each answer worth ¼ point). You do NOT need to finish the entire assignment in one sitting. Opening an assignment, answering a few questions and then closing your browser will save your answers when you come back to it. However, if you have an assignment open for many days, sometimes Canvas will cause it to be submitted before you have completed all the answers. Assignments are meant to motivate you to study and learn the material. Completing the reproductive assignment can take the place of a missing or low scoring assignment.

Each chapter also has questions at the end that you can answer if you'd like additional questions to test your knowledge. Answers found in back of the full textbook.

Pay attention to Canvas' calendar (set up the calendar to remind you when exams or assignments are due) as well as at the end of this syllabus for each assignment's due date. I will not remind you every day when these are due. As with most things in the course, YOU must be responsible for your own success or failure. These assignments can help you with your final grade IF you complete all of them and earn ALL of your points.

After submitting the assignment your score will be shown along with your answers. If you truly want to learn the material, immediately after completing the assignment you should go back through the assignment and figure out the correct answer to the ones you missed. The assignments are supposed to support your learning process.

ALL assignments are due by 10:30 AM on their respective due dates.

Classroom Policies:

Face coverings must be worn by students, faculty, staff, and visitors, in USU buildings and facilities, as well as outside where social distancing measures (at least a 6-foot distance) are difficult to maintain.

Cheating – Cheating in any form will not be tolerated. *Cheating* on any exam will result in you earning an *F grade on the exam and possibly even in the course*. No exceptions. BE AWARE. If you **need paper to write anything down on, it must be requested of the testing center helpers and that paper must be turned back in prior to you leaving the center**. Do not throw it away, give it to the helpers to dispose of. Absolutely NO cell phone use or any other electronic aids are permitted. Finally, do not access ANY webpage except the page for the exam.

Attendance – Class attendance (**PHYSICALLY AND MENTALLY**) is your responsibility. However, it has been shown that students who attend classes regularly AND PAY ATTENTION have a higher grade than those who do not. I do mind tardy behavior. Please do not come to class late, it is disruptive for those who arrive on time. Missing class will also cause you to miss out on random extra credit for attendance made available for those that show up on time to class.

The amount of material covered every lecture is significant. I advise you, missing any class, or leaving early is not going to help you learn the information any better. We will be covering huge amounts of information and you must be prepared prior to each class by having **already read that day's material ahead of time** otherwise you may become swamped with new material and lost very easily.

Class Courtesy – I reserve the right to remove any student from my class that may be disruptive or hinder the educational progression of any other student. Please be courteous to other students and **turn off cell phones**

during class. Please turn off the keyboard “clicks” to your tablet devices. Finally, avoid being a distraction to other students. You DO NOT have the right to disrupt another student's pursuit of knowledge.

On the Price campus: Student Support Services (SSS)/Accommodations for Students with Disabilities:

If a student has a disability that qualifies under the Americans with Disabilities Act (ADA) and requires accommodations, he/she should contact the Disability Resource Center for information on appropriate policies and procedures. Disabilities covered by ADA may include learning, psychiatric, physical disabilities, or chronic health disorders. Students can contact DRC if they are not certain whether a medical condition/disability qualifies. You may contact the DRC by phone (435)613-5337, email karl.burnside@usu.edu or visit the office located at JLSC 223.

Student counseling services are also available in the Office of Student Success. Please contact Darrin Brandt by phone (435)613-5670 or email at darrin.brandt@usu.edu to set up an appointment. This is a free service to USU Eastern students.

Grade-Determination Method:

Total points are distributed as follows:

- 6-8 exams @ 100 (lab + lecture) points each..... ~800 pts.
- Chapter assignments: 10 points each TBD pts
- Total Points... ~900 pts.**

To receive a B or an A grade, you will need to spend the appropriate amount of focused study outside of class e.g. each credit should merit 3 hours of studying outside of class. Ergo, a 4 credit class should find you studying at least 12+ hours outside of class each week to attain an A or B. If this amount of studying is not adequately assisting you in earning the grade that you desire, perhaps additional time may be required as well as serious reflection on your study habits.

In addition, +5 points will be given to students that fill out their online student evaluation form for this course. You will need to **print off the last page of the evaluation that indicates the completion of the course evaluation. Turn this printed page into me immediately afterwards.** An additional +5 points will be given to all if 80% of the class also fills out the student evaluation form. Details will be coming in several weeks. When filling out the course evaluation, please pay extra attention to your feelings regarding the course objectives as mentioned above in bold highlights. Thank you.

Grading Scale:

The total points obtained by each student will be turned into a letter grade. The grading scale is:

- A** (94% -100%), **A-** (90% - 93%)
- B+** (86% - 89%), **B** (83% - 85%), **B-** (80% -82%)
- C+** (76% - 79%), **C** (73% - 75%), **C-** (70% - 72%),
- D+** (66% - 69%), **D** (60% - 65%),
- F** (those at or below 59%)

Those students who score less than 60% on the first exam **should seek tutoring, ask me for more help before an exam, or drop the class.**

The instructor reserves the right to alter the grade-determination method if necessary.

Organismal Biology and Physiology: BIOL 3050; Spring 2021:

Week	Day	Date	Text Chptr	Topic/Text Book pages	Notes/Exams/Assignments
1	M	18-Jan		Martin Luther King, Jr. Day	
	T	19-Jan			
	W	20-Jan		Syllabus	Reminder about purge process: If you don't pay in time, you'll be removed from the course.
	TH	21-Jan			
	F	22-Jan	1	Biology: The Study of life	
	Sat	23-Jan			
	Sun	24-Jan			
2	M	25-Jan	1	Biology: The Study of life	
	T	26-Jan			
	W	27-Jan	4	Water and Carbon: Chemical Basis of Life	
	TH	28-Jan			
	F	29-Jan	4	Water and Carbon: Chemical Basis of Life	You must be paid up fully by TODAY to prevent your purge!
	Sat	30-Jan			
	Sun	31-Jan			
3	M	1-Feb	5	Protein Structure and Function	
	T	2-Feb			
	W	3-Feb	5	Protein Structure and Function	
	TH	4-Feb			
	F	5-Feb	6	Nucleic Acids and an RNA world	
	Sat	6-Feb			
	Sun	7-Feb			
4	M	8-Feb	7	Intro to Carbohydrates	Last day to drop without "W."
	T	9-Feb			
	W	10-Feb	8	Lipids, Membranes, and the first cells	
	TH	11-Feb			
	F	12-Feb	8	Lipids, Membranes, and the first cells	
	Sat	13-Feb			
	Sun	14-Feb			
5	M	15-Feb		President's day	
	T	16-Feb			
	W	17-Feb	11	Energy and Enzymes: Intro to Metabolism	
	TH	18-Feb			
	F	19-Feb		Energy and Enzymes: Intro to Metabolism	
	Sat	20-Feb			

	Sun	21-Feb			
6	M	22-Feb	12	Cellular Respiration and Fermentation	
	T	23-Feb			
	W	24-Feb		Cellular Respiration and Fermentation	
	TH	25-Feb			
	F	26-Feb	13	Photosynthesis	
	Sat	27-Feb			
	Sun	28-Feb			
7	M	1-Mar	13	Photosynthesis	
	T	2-Mar			
	W	3-Mar	15	Cell-Cell Interactions	
	TH	4-Mar			
	F	5-Mar		Cell-Cell Interactions	
	Sat	6-Mar			
	Sun	7-Mar			
8	M	8-Mar	17	Evolution by natural selection	
	T	9-Mar			
	W	10-Mar	17	Evolution by natural selection	
	TH	11-Mar			
	F	12-Mar		No Class Day	
	Sat	13-Mar			
	Sun	14-Mar			
9	M	15-Mar	18	Evolutionary Processes	
	T	16-Mar			
	W	17-Mar	18	Evolutionary Processes	
	TH	18-Mar			
	F	19-Mar	19	Speciation	
	Sat	20-Mar			
	Sun	21-Mar			
10	M	22-Mar	19	Speciation	
	T	23-Mar			
	W	24-Mar	21	Viruses	
	TH	25-Mar			
	F	26-Mar	21	Viruses	
	Sat	27-Mar			
	Sun	28-Mar			
11	M	29-Mar	22	Bacteria and Archaea	
	T	30-Mar			
	W	31-Mar	22	Bacteria and Archaea	
	TH	1-Apr			
	F	2-Apr	23	Fungi	
	Sat	3-Apr			
	Sun	4-Apr			
12	M	5-Apr	23	Fungi	
	T	6-Apr			

	W	7-Apr	24	Intro to Animals	
	TH	8-Apr		Intro to Animals	Friday class Schedule
	F	9-Apr		No Class Day	
	Sat	10-Apr			
	Sun	11-Apr			
13	M	12-Apr	24	Intro to Animals	
	T	13-Apr			
	W	14-Apr	27	Animal form and function	
	TH	15-Apr			
	F	16-Apr	27	Animal form and function	
	Sat	17-Apr			
	Sun	18-Apr			
14	M	19-Apr	25	Plant form and function	
	T	20-Apr			
	W	21-Apr	25	Plant form and function	No Test Week: 21 to 27th
	TH	22-Apr			
	F	23-Apr	33	Plant Nutrition	
	Sat	24-Apr			
	Sun	25-Apr			
15	M	26-Apr	33, 34	Plant Nutrition. Water and sugar transport	
	T	27-Apr			
	W	28-Apr	34	Water and sugar transport	
	TH	29-Apr			Final exam week Apr 29 to May 5th
	F	30-Apr			
	Sat	1-May			
	Sun	2-May			
16	M	3-May			
	T	4-May			
	W	5-May			