

## Biology 5 (Biol 5) Human Biology

<i>Semester: Spring 2022</i>		<i>Reedley Community College</i>
Lecture Instructor: Dr. Christopher Emerling Email: christopher.emerling@reedleycollege.edu		<i>Class No. 53770, 53771</i> Lecture: TR 12:30–1:45 pm Social Science, Room 32
Office Hours: MTWRF 11:00–11:50 am, LFS 13 Zoom ID: 990 6009 7271 Phone: extension 3134 Can request appointments		
<i>Class Dates: 1/10/22–5/20/22</i>		

### Catalog Description:

This course is an introductory human biology course that examines science and societal issues. This course emphasizes the structure of the human body and the functional interrelationships of the body's systems: integument, circulatory, digestive, respiratory, urinary, skeletal, muscular, nervous, endocrine, reproductive, and genetics

### Prerequisites:

None, eligibility for ENGL 125, 126, or 153; or ESL 67 and 68 recommended. This is an introductory course using the principles approach to general biology which satisfies the general science requirements focused on students entering health or science careers. It is a prerequisite for all advanced science courses (Human Anatomy, 20; Human Physiology, 22; Human Anatomy and Physiology, 24; Microbiology, 31).

### Student Learning Outcomes:

Upon completion of this course, students will be able to:

1. demonstrate knowledge regarding the process of science and society, microscopy, and the cell
2. identify human body levels of organization and homeostatic mechanisms
3. demonstrate knowledge of the chemical basis of life
4. evaluate scientific literature and current biological achievements
5. apply the principles of genetics to humans and understand the outcome of normal and abnormal DNA
6. describe the basic cellular, molecular and gross anatomy of tissues, organs and organ systems and explain the basic function of those tissues and organs that relate to the integument, circulation, digestive, respiratory, urinary, skeletal, muscular, nervous, endocrine, reproduction, genetics, and evolution
7. identify and recall fundamental structures from anatomical models and slides using correct nomenclature and language

### Course Objectives:

In the process of completing this course, students will:

1. read, analyze, evaluate, and discuss scientific method, the cell, and human levels of organization
2. learn the periodic table of the elements, the chemistry of the carbon atom, and the chemical structure of humans
3. analyze and interpret data on the homeostatic mechanisms within the human body
4. learn the cell's structure, function, and the cell cycle in relation to the multicellular human body
5. observe and document the structure and function of the human body by examining human body systems including: circulatory, digestive, respiratory, urinary, skeletal, muscular, nervous, sensory, endocrine, and reproduction

6. review classical and molecular genetics and learn the processes of replication, transcription, and translation
7. perform experiments, observe, and record data
8. study evolution
9. discuss social issues between humans and science
10. develop a vocabulary to effectively communicate information related to anatomy and physiology.
11. summarize the levels of structural organization important to human anatomy

### TENTATIVE SCHEDULE

Week 1: 1/10–1/14	Lecture 1: Science
Week 2: 1/17–1/21	Lecture 2: Science cont'd
	Lecture 3: Science cont'd
Week 3: 1/24–1/28	Lecture 4: Science cont'd
	Lecture 5: Molecules
Week 4: 1/31–2/4	Lecture 6: Molecules cont'd
Week 5: 2/7– 2/11	Lecture 7: Characteristics of Life
	Lecture 8: Characteristics of Life cont'd
Week 6: 2/14–2/18	Exam 1
	Lecture 9: Eukaryotic cells
Week 7: 2/21–2/25	Lecture 10: Multicellular life
	Lecture 11: Multicellular life cont'd
Week 8: 2/28–3/4	Lecture 12: Multicellular life cont'd
Week 9: 3/7– 3/11	Lecture 13: Evolution
	Lecture 14: Ecology
Week 10: 3/14–3/18	Lecture 15: Tissues, Integumentary System
	Lecture 16: Cardiovascular system
Week 11: 3/21–3/25	Lecture 17: Lymphatic and Immune System

	Lecture 18: Digestive system
Week 12: 3/28–4/1	Exam 2 Lecture 19: Respiratory System
Week 13: 4/4–4/8	Lecture 20: Urinary System Lecture 21: Skeletal System
4/11–4/15	<b>SPRING BREAK</b>
Week 14: 4/18–4/22	Lecture 22: Muscular System Lecture 23: Nervous System
Week 15: 4/25–4/29	Lecture 24: Senses Lecture 25: Endocrine System
Week 16: 5/2–5/6	Lecture 26: Reproductive System Lecture 27: TBD
Week 17: 5/9–5/13	Exam 3
Week 18: 5/16–5/20	Cumulative Final Week

## Textbook

- There is an *optional* textbook available for purchase: McGraw-Hill's Human Biology 16th Edition by Sylvia Mader and Michael Windelspecht (ISBN10: 1260233030 ; ISBN13: 9781260233032). It is optional in that it can supplement your understanding of the content, but I will not test you directly out of the textbook.

## Technology Requirements

- All students must have access to a device with internet access to that allows students to retrieve and complete assignments through Canvas.
- Check Canvas and your Reedley College email accounts regularly (multiple times per week) for announcements.
- If you need access to technology in order to complete your course, please make sure to contact the [Information Center](#) to check out a laptop or other needed technology.

## ATTENDANCE AND DROP/ADD POLICY

Attendance is expected of all students every week in this class. In order to avoid being dropped from this class, you must attend the first day of lecture and/or lab, unless you contact me ahead of time to provide a legitimate excuse for your absence.

Beyond this, I reserve the right to drop students (both enrolled and waitlisted) based on the following policy:

1. Student does not attend the remainder of the first week
2. Student does not attend the second week assignment and does not respond to contact efforts from the professor during the third week

## ASSESSMENTS

Category	Assignment Description	Points
Lecture	Lecture Exams (3)	30% of grade (10% each)
	Final Cumulative Exam	15% of grade
	Quizzes and Quiz Reflections	10% of grade
Lab	Labs Activities (14)	15% of grade
	Lab Practical Exams (3)	25% of grade
	Case Study	5% of grade

The final course grade is based on the traditional scale:

Percent Range	Grade
90-100	A
80-89.99	B
70-79.99	C
60-69.99	D
Less than 60	F

**Course grades are non-negotiable.** Instructor reserves the right to adjust individual tests and/or assignments should it be to the benefit to the entire class. Final grades may be adjusted to the benefit of the students, should their be a justifiable reason for doing so. I do not round up grades to the next letter grade given that there are multiple opportunities to boost grades during the course.

### LECTURE ASSESSMENTS

**Lecture exams** These may be any combination of multiple-choice, true-false, matching, short-answer and essay questions based on the main objectives of each lecture and may be based on words only or may include images. Please note that I require spelling and grammar be as close to accurate as reasonably possible; spelling must be at least phonetically approximate, such that it is unambiguous what your answer is. If I can't clearly understand it, I can't give you points for it.

**Lecture final exam** This will be comprehensive. Since this course is a prerequisite for all other health-related Biology classes, it is important that you retain as much knowledge as possible from this course to ease your way in the following semesters.

**Quizzes** These will not be traditional quizzes in which you will be graded on the accuracy of your answers. Rather, these will be used to prepare you for the exams by giving you a feeling for the format and helping you to assess your level of knowledge so that you know what to focus on before the exam. Merely attempting to answer the questions will result in full credit. Furthermore, there will be reflection assignments to help you to evaluate how you're performing on these quizzes.

## EXTRA CREDIT

I do not provide extra credit opportunities in a traditional sense. My belief is that you need to learn and complete what we are doing in class, not something beyond the scope of the normal content. However, I do believe strongly in providing the chance to learn from your mistakes and redeem yourself. As such, I do have opportunities to earn back points on certain assessments, as part of my 'redemption' policy.

## REDEMPTION POLICY

Students often make mistakes on assignments and exams, whether due to lack of proper studying or personal life crises. However, the way classes are typically structured, any damage done early in the semester can permanently damage a student's standing, such that their grade is irrecoverable. This is problematic from the perspective of learning because it punishes mistakes, without rewarding any learning from those mistakes. To correct for this imbalance, I will be providing two forms of 'redemption' in the course, including 'exam autopsies' and final exam redemption. Typically, only on the first exam, you will have an exam autopsy in which you will get a chance to earn back points if you reflect on everything you missed. There may be more autopsies at the instructor's discretion, but these may vary in the % of points that can be earned back (typically fewer points on later exams). The final exam redemption involves using your final exam score to boost your score on certain previous assessments, should the grade be high enough. The hope is that this incentivizes students to learn from their mistakes and apply their new knowledge on the final exam.

An example of how the final exam redemption policy can occur is as follows: if you received a 56% on exam 3, but you received an 86% on the final, your exam 3 score will change to 86%. In other words, if your final exam grade (%) is higher than a qualifying assessment grade, then I will replace that grade with your final exam grade %. This is exact example should not be taken as the definitive policy, as I am still trying to figure out the optimum method. As such, more specifics regarding this policy will be given later on in the course.

## LATE ASSIGNMENTS AND EXAM MAKE-UP POLICY

Certain assignments can be turned in late, but for each day late, I will automatically deduct 10% of the possible points. One "day late" constitutes turning something in within the 24 hours following an assignment due date and time. For example, if an assignment is due on a Monday @ 7:00 pm, any point between Monday @ 7:01 pm and Tuesday @ 7:00 pm, the assignment will lose 10% of the points. This will policy will apply to discussions only up to a point and may be cut off at a 0 early, given that students that reply too slowly to other students will render their discussion comments irrelevant.

This policy does not apply to lecture exams and practicals. These can only be made up if the student falls victim to extreme, **documentable** circumstances, and therefore making up exams will be fully at the discretion of the instructor.

## COMMUNICATION POLICY

The best way to get ahold of me is to send me a direct message through Canvas. The second best way is to email me at [christopher.emerling@reedleycollege.edu](mailto:christopher.emerling@reedleycollege.edu). I regularly check announcements for comments and replies, so this is also a viable option for communicating about specific content. Don't know how to send a message in canvas? Check out this quick guide [How to send a message in canvas](#).

Please allow a 24hr response time on business days (Mon-Fri). I often reply on weekends as well, but given that I try to give myself a mental break from work on Saturdays and earlier on Sundays, please do not assume that I will reply at those times. I tend to be very prompt with my email responses, however, there are times when it may take me up to 24hrs to respond. As a rule, I try to prioritize Canvas messages and e-mails that require an immediate response over those that are less urgent, so please indicate if the message is urgent. If you do not receive a response from me after 24hrs then please double check that you have contacted me correctly (e.g., was it the correct email address?), and then try both Canvas messages and e-mail. Emailing and messaging can be used 24/7. If I expect to be away from my computer for any significant length of time, you will be notified in advance.

## OFFICE HOURS

Office hours are a great chance to meet one-on-one with your instructor, so you can get extra clarification on concepts that you have found difficult, practical advice on studying, additional context for completing assignments, and otherwise general support in the course. You can stop by my office directly during these hours, but if you cannot make it in person, I can jump onto Zoom and chat with you. My office hours office number, the Zoom ID and are posted on the first page of this syllabus. Office hours likely will not be posted in the first week but will be posted as soon as I have all the information I need to schedule them.

## CANVAS

All lecture slides will be located on Canvas, which you can access here: <https://scccd.instructure.com/login/ldap>. Please turn on e-mail notifications for Announcements in Canvas or check them regularly. You can find them under the tab “Announcements” and see the three most recent announcements at the top of the course page.

## DROPPING THE COURSE

It is the student’s responsibility to drop themselves from the course, not the professor. Here are some important dates, derived from the [Reedley College Academic Calendar](#):

**January 21<sup>st</sup>**: last day to drop for full refund

**January 28<sup>th</sup>**: last day to drop to avoid a “W” in person; last day to Add in person

**January 30<sup>th</sup>**: last day to drop to avoid a “W” on WebAdvisor; last day to Add on Webadvisor

**February 11<sup>th</sup>**: last day to change to/from Pass/No Pass grading basis

**March 11<sup>th</sup>**: last day to drop, letter grades assigned after this date

## TUTORING

We may have a tutor embedded in our course this semester. The tutors are former, successful students who understand the material well, know how to study for the class and can help you succeed. I highly recommend most students to receive tutoring, even students who tend to do reasonably well. Students that are getting tutored are not ‘less than’ others who don’t go to tutors. I received tutoring when I was in college (calculus and physics), and this tutoring helped me enormously to succeed in those classes.

## COLLEGE POLICIES

The university has several policies that you will be expected to adhere to in my course. The policies on **Disabled Students Programs and Services, Student Conduct Standards, Academic Dishonesty**, and the **Computer/Network Equipment Use Policy**, portions of which are below, can all be found in the Reedley College Catalog.

**Academic Dishonesty:** “Students at Reedley College are entitled to the best education that the college can make available to them, and they, their instructors, and their fellow students share the responsibility to ensure that this education is honestly attained. Because cheating, plagiarism, and collusion in dishonest activities erode the integrity of the college, each student is expected to exert an entirely honest effort in all academic endeavors. Academic dishonesty in any form is a very serious offense and will incur serious consequences.” Reedley College Catalog. In an online classroom, academic dishonesty can manifest in (1) copying other students’ work, (2) sharing answers on exams and much more. When you cheat, not only do you defraud the college, but you devalue your education and the education of others by weakening the integrity of our institution. Furthermore, in my experience, cheaters almost never succeed at their career goals, so don’t ruin your opportunity to learn!

Please see the Student Conduct Standards and Grievance Procedures Handbook available in the Vice-President of Student Services office, or at the links listed below.

Student Conduct Standards: <https://www.reedleycollege.edu/about/about-us/policies-and-procedures/student%20conduct%20standards.html>

Grievance Procedures: <https://www.reedleycollege.edu/about/about-us/policies-and-procedures/grievance-procedures.html>

**Academic Accommodations:** If you have a verified need for an academic accommodation or materials in alternate media (e.g. Braille, large print, electronic text, etc.) per the Americans with Disabilities Act (ADA) or Section 504 of the Rehabilitation Act, please contact the instructor as soon as possible.

### **DIVERSITY STATEMENT**

Diversity is not only a fact of life but, to me, it is one of life's most beautiful traits and greatest strengths. My goal is for all students from all backgrounds and perspectives to be able to succeed, thrive and feel valued in my courses. My valuing of diversity encompasses gender, sexual identity, disability and health status, age, socioeconomic status, religion, philosophy, ethnicity, race, and culture. If you believe that my course and/or my instructional techniques are in any way invalidating your group identity or are in some way hampering your ability to succeed, please let me know so that I can address any concerns you have.

### **FINAL NOTES FOR LECTURE PORTION**

Every syllabus represents the intended roadmap and structure of the course, but due to unforeseen events and/or feedback during the semester, adjustments may be necessary. This is a reminder that some details described in this syllabus are potentially subject to change at the discretion of the instructor, but he will inform you as promptly and clearly as possible as to the reasoning for any changes.

Student Learning Outcomes are statements about what the discipline faculty hope you will be able to do at the end of the course. This is NOT a guarantee: the ultimate responsibility for whether you will be able to do these things lies with you, the student. In addition, the assessment of Student Learning Outcomes is done by the department in order to evaluate the program as a whole, and not to evaluate individual faculty performance.

## Lab Component

This course, being a 4-unit course, has a required laboratory component attached. Please make note that lab portion of the class is NOT taught by the same person teaching the lecture component. When it comes to communication with your instructors, please make sure to communicate with the instructor best suited for your question or concern. Any questions about the labs, lab exams, and case study should be sent to the lab instructor (contact information below) and any questions regarding adds/drops, lectures, lecture exams, other projects, and final grades should be sent to lecture instructor. Either instructor will respond to you to the best of their ability, but for the fastest solution to a concern, please use these communication instructions.

### Contact Information:

**Lab Instructor:** Kevin Helwick

**Email:** [kevin.helwick@reedleycollege.edu](mailto:kevin.helwick@reedleycollege.edu)

**Office Hours:** By Appointment Only (via Zoom)

The easiest way to reach me is by Canvas Message, as emails tend to get buried in my inbox. Please allow 24 hours as a response time. If I don't respond by then, feel free to message me again (politely!)

### Needed Materials:

All necessary lab handouts will be available for free online in a PDF format. Students may either electronically write on their handouts or print out the PDFs and handwrite assignments. If a student chooses to print and handwrite their lab assignments, they MUST follow the following instructions:

- Handwriting must be neat (if I can't read it, I can't grade it!)
- Assignments must be properly scanned (no cell phone photos!)

For scanning assignments, either use a full scanner connected to a computer OR you may use one of many scanning apps made for phone and tablet devices, such as Genius Scan and Cam Scanner. These apps use your phone's camera to create a better, clearer image without the background noise.

### Lab-Specific Policies:

1. The general setup of labs for this online course is that all assignments, exams, and projects will be due at 11:59 PM on the days we meet.

#### Exams:

The lab practicals are different from lecture exams, and will require you to identify structures from images, remember procedures, and more. These practicals are based off of the lab only, although studying the lecture material will help reinforce most of the concepts covered in lab.



### Late Assignments:

I understand that things happen from time to time and sometimes a student isn't able to finish something by the deadline. For these occasions, I have a system in place where each student gets **THREE (3) 48-HOUR EXTENSION PASSES**. These passes can be used on any lab assignment (except exams), no questions asked. Simply submit your assignment within the 48 hours following the deadline. For example, if the assignment is due on Friday at 11:59PM, you have until 11:59PM on Sunday to turn in the assignment. After those 48 hours pass, no late assignments will be accepted.

These passes **CANNOT** be used on Lab Practicals. Practicals **MUST** be taken on the day they are scheduled unless there is an extreme, documented reason why a student cannot complete the practical on the given day.

### Case Study:

As required by the department, students will complete a case study group project. Students will work in teams of 3-4 people. This is a major project and is required to pass the class. More details will be given via Zoom and Announcements.

### Tentative Schedule:

#### **Week of the Lab Assignments and Exams Semester**

Week 1 Microscopes & Safety Lab

Week 2 Macromolecules Lab

Week 3 Cells lab

Week 4 Lab practical one

Week 5 DNA lab (Case study assigned)

Week 6 Mitosis and Meiosis Lab

Week 7 Genetics lab

Week 8 Histology Lab

Week 9 Cardiovascular System Lab

Week 10 Homeostasis and Maintenance Labs

Week 11 Lab practical 2

Week 12 Musculoskeletal system lab

Week 13 Nervous System and Senses Lab (Case study outline due)

Week 14 Endocrine and Reproductive Systems lab

Week 15 Virtual Dissection Lab

Week 16 Human Evolution Lab

Week 17 Lab Practical 3