



BIOL22 Human Physiology (Hybrid)

Section 50020 Room LFS-11 Lab Th 9:00AM Lab

Welcome to Reedley College

Our Mission

The mission of Reedley College is to cultivate opportunities that empower our students and communities through engaging, equity-minded programs and services.

Our Commitment to Diversity, Equity, and Inclusion

At Reedley College, we believe that the best learning environment for students and staff is one in which we encounter viewpoints and experiences that are different, yet complementary to ours. This environment is fostered by the presence of people with diverse backgrounds. We recognize that acknowledging diversity is a necessary precondition, but sustained effort is necessary to ensure equity and greater inclusion. Through strategic planning and initiatives, we seek to develop programs that promote equity and inclusion for everyone so that all members of RC community can reach their full potential. To create and maintain a truly diverse, equitable and inclusive learning community, we strive to make all feel equally valued, and we uphold our Commitment to Freedom of Expression. We may celebrate diversity, but we “live” inclusion.

Course Overview

What's this course about?

The Human Physiology course is a comprehensive study of the structure and function of the human body, designed specifically for community college students. This course delves into the intricate mechanisms that enable the human body to function and provides a solid foundation for understanding human health and disease. Throughout the course, students will explore various physiological systems, including the cardiovascular, respiratory, digestive, nervous, endocrine, musculoskeletal, and reproductive systems. They will learn about the fundamental concepts and principles that govern these systems and how they work together to maintain homeostasis. Laboratory sessions provide students with practical opportunities to apply their theoretical knowledge. They will have access to testing equipment, such as microscopes, models, and data recording tools, to explore physiological phenomena firsthand. Through experiments and simulations, students will gain a deeper understanding of concepts and develop critical thinking and problem-solving skills. Topics covered in the course include cell physiology, tissues and organs, neural control, muscle function, blood circulation, respiration, digestion and metabolism, endocrine regulation, and reproduction. Students will also learn about the physiological adaptations to exercise, environmental challenges, and the impact of various diseases on the body's functions.

Course Objectives

- Assess the results of laboratory experiments and demonstrations.
- Illustrate the cell membrane, its electrical activity, and the conduction of action potentials.
- Compare the autonomic system and the endocrine system.
- Analyze the cardiovascular system by performing an EKG and monitoring blood pressure.
- Evaluate lung and kidney function using computer simulations.
- Demonstrate knowledge of metabolic and physiological disorders of the major organ systems

Course Student Learning Objectives

- Describe the function of each human organ and organ system.
- Explain the cell membrane potential and how it becomes an action potential.
- Describe cell-to-cell communication.
- Demonstrate the use of the electrocardiograph and identify the components of a normal reading.
- Describe the interactions of the respiratory and excretory systems.
- Demonstrate critical thinking in the evaluation of homeostasis.
- Be able to obtain desired information about human structures, functions, or pathology using common references: have the foundation of knowledge needed for further studies in physical therapy, pharmacology, pathology, pathophysiology, and medicine.

Faculty Member

| | |
|---|---|
| Instructors: Lecture and Lab: Joseph Lin | Email: Joseph.lin@reedleycollege.edu |
| Telephone: 5596380300 ext. 3407 | Office Hours: Lin: Upon request and Discord https://discord.gg/B7UbGUW |

Communication Expectations

In class and online

Identify yourself by your real name. Be mindful of your language, and avoid including personal information, such as phone numbers or addresses, in any online discussions. All online communications should be transmitted with the intent to inform, inspire, etc. and not to offend or breach personal privacy. Use humor, joke, or sarcasm with caution. We often rely on non-verbal cues such as facial expressions to communicate joking or sarcasm, but these cues are not always clear in an online environment. These cues can be simulated with emoticons to reduce misunderstandings.

Be Professional, Clear and Respectful. Clear and effective writing translates to clear and effective communication. Writing the way, you speak is a good rule of thumb, use a positive tone and adhere to the same rules you would follow in face-to-face communications. Remember This Course is Online. Your instructor and fellow students may be located around the world or have very different schedules than you do. You may not always receive an immediate response.

Apps and technology

Tophat: Tophat is an online learning platform designed to enhance student engagement and facilitate interactive learning experiences in higher education. The platform offers a range of tools and features that allow instructors to create and deliver interactive content, assess student understanding, and foster active participation in the classroom. You will need to purchase access key to use the textbook.

<https://app.tophat.com/e/460369>

Canvas: Canvas is fully functional on many types of smartphones and tablets. Compatible devices include platforms such as iPhone/iPad/iPod Touch, and Android. **However, it is recommended that you do not solely rely on one of these devices to complete your online course work. Access to a computer is still needed for many online activities.** Visit the Mobile section of the [Canvas Guides](#) website for more information.

Learner Expectation

What to keep in mind

- Lectures are asynchronous (self-paced online) via Canvas and Connect which includes videos and readings.
- Labs are synchronous (in-person) at Reedley College campus.
- If you feel any symptoms from any airborne illness (including COVID) sneezing, coughing, or fevers you are excused from the lab and can request an extension for any assignment.
- Review the assignments on the Course Schedule and print them out for easy reference as you complete each task.
- You are expected to plan your study time around the course schedule and recommended completion dates.
- While the due dates for the course are just suggestions, it is expected that all assignments will be submitted based on due dates located on McGraw-Hill Connect website and Canvas.
- Check your email account regularly for updated information. Use e-mail for private messages to the instructor and other students.
- If you have questions or confusion about an assignment, act promptly! Check the Question Cafe to see if your concern has been addressed already and post your question there if you don't see an answer.

Course Requirements/Assignments

Total points

| Assignment Description | Points |
|-------------------------------|-------------|
| Tophat Reading | 180 points |
| Tophat Homework Assignment | 180 points |
| Final Exam | 150 points |
| Lecture Exams | 300 points |
| Connect PhiLS and Simulations | 64 points |
| Connect Post lab | 80 points |
| Case Study Poster | 104 points |
| Total | 1058 points |

Activities, Assignments, and Submissions

Tophat: Final and Lecture Exams

Four midterms and one comprehensive final will cover the topics listed in the schedule below. Each exam will be scheduled on the Tophat platform at a fixed time slot. Extensions can be requested if you are feeling symptomatic or have an excused absence.

Tophat: Reading and Homework Assignments

Tophat reading assignments include interactive elements such as embedded videos, animations, and self-assessment quizzes, enhancing students' understanding and retention of the subject matter. These multimedia components can help visualize complex physiological processes, making the learning experience more dynamic and comprehensive. Tophat homework assignments include multiple choice and short answer questions that review key concepts related to the reading. **Tophat reading and homework assignments will be due the Sunday 11:59PM each week.** Extensions can be requested if you are feeling symptomatic or have an excused absence.

Connect Lab: PhiLs (Physiology Interactive Lab Simulations), Simulation, Post lab

Connect PhiLs and Simulations is a virtual lab platform for physiology that gives students an immersive and interactive learning experience, allowing them to explore and experiment with physiological concepts in a virtual laboratory environment. These simulations aim to replicate the hands-on experience of a traditional laboratory setting. The applications are post lab worksheets that need to be completed after the PhiLS or simulation. **These items are due at the end of each lab session.** Extensions can be requested if you are feeling symptomatic or have an excused absence.

College Information, Policies, and Guidelines

Expectations of Students at Reedley College

As a student at RC, you will need to balance your academic work with your personal and professional life. This balance is not easy to achieve! As such, it's useful to know the expectations RC faculty and staff hold for you. As an RC student, you are expected to:

- Actively participate in all aspects of the course in which you are enrolled, including reading the assigned readings, viewing the presentations, submitting course assignments, and completing assessments like exams and module quizzes.
- Apply professional standards and conventions to your written work. It is assumed that you utilize available tools (e.g., spell-checker) to review your documents before submitting them.
- Submit all required coursework on the published due dates in your course.
- Unless clearly identified as a collaborative project, each assignment must be submitted as an individual effort.
- Adhere to standards and guidelines pertaining to intellectual property and plagiarism, including the “student conduct standards” policy: <https://www.reedleycollege.edu/about/policies-and-procedures/student%20conduct%20standards.html>
- These policies and guidelines will help you complete this course more successfully: Submit ALL required coursework by the due dates and times published in your course. Check your email daily.
- For help with issues, call Student Services at 559-494-3526.
- If you have questions about an assignment, please contact your course faculty member.

Attendance Policy

An attendance policy is required by the college to fulfill a federal compliance mandate. Reedley College of Education recognizes regular attendance and interaction in a course is required to optimize the student learning experience.

Maximum student learning outcomes are achieved through course attendance and interaction. Students, in their own interest, are, therefore, responsible for regular attendance. Students may expect poor attendance or lack of participation and interaction to negatively impact their course grades.

Student Attendance: For all electronically delivered credit hour courses at Reedley College, attendance is measured by a student’s engagement in the course by submission of assignments. To maintain registration in the course, students must complete the Mandatory Attendance Verification form by 5:00 PM PST on Friday of the first week. Students who do not complete the Attendance Verification form by 5:00 PM PST on the Friday of the first week of the term are administratively withdrawn from the course.

Grade Evaluation

To calculate your grade, total all points earned and divide that number by the total points available. Course grades are non-negotiable. I DO NOT ROUND UP your grades to the next letter grade. The final course grade is based on:

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

Late Work

Due to extenuating circumstances, students may submit an assignment past the due date.

Assignments: Students are responsible for contacting their faculty member regarding all late work and to establish the deadline for late submission. At the faculty's discretion, late work may be accepted without a point deduction, dependent solely on extenuating student circumstances which will require documentation when asked.

Quizzes/Exams: Quizzes and Exams must be completed by the specified deadlines. Late submissions of quizzes and exams are not accepted except in the case of extenuating circumstances.

For Students Requesting Extensions Due to Extenuating Circumstances Only: Extenuating circumstances are limited to any emergency which can be clearly documented, including, but not limited to, a death in the family, medical emergency/illness requiring medical attention for the student or family member, or related urgent issues beyond the student's control. Students must submit all documentation within 48 hours after the original assignment deadline.

Standards of Student Behavior

A college is a marketplace of ideas, and in the course of the search for truth, it is essential that freedom exists for contrary ideas to be expressed. RC students are expected to conduct themselves as responsible members of the College's academic community. This requires the demonstration of mutual respect and civility in academic and professional discourse. As such, it is mandatory students interact with other students and all College faculty, administrators, and staff with respect and in a professional manner. Conduct that is determined to impair the opportunities of others to learn or that disrupts the orderly functions of the College will be deemed misconduct and will be subject to appropriate disciplinary action,

Disciplinary Action for Student Conduct Behavior: While an alleged violation of the Standards of Student Behavior is being investigated, a student may be removed from class, College-sanctioned events, or other College functions. If a violation is found, disciplinary action will be based on the seriousness of the situation and may include, but not be limited to, documented counseling by a college staff member, loss of credit, suspension and/or dismissal.

Academic Integrity

Academic dishonesty, which includes but is not limited to plagiarism, self-plagiarism, collusion, abuse of resource materials, fabrication, conspiracy to plagiarize, or cheating on an examination or other academic work, is subject to disciplinary action. Student work created for a specific assignment in a course will be subject to plagiarism sanctions if reused for any other purpose. For questions regarding self-plagiarism, students should visit the College's Writing Center for assistance. **Exams must be taken independently.**

Accommodation of Disabilities Policy

To be considered for disability-related accommodations, individuals are responsible for identifying themselves and disclosing information about their disability to Disability Support Services at 559-494-3032 or through <https://www.reedleycollege.edu/student-services/disabled-student-programs-and-services/index.html>

In keeping with its mission to deliver high-quality, affordable, and accessible online programs to its students, Reedley College makes all efforts to comply with the requirements of applicable state and federal laws, including Section 504 of the

Rehabilitation Act of 1973, the Americans with Disabilities Act of 1990 (ADA), and the ADA Amendments Act of 2008, in the provision of and access to post-secondary education. As such, the college provides reasonable accommodation for qualified students with disabilities unless doing so would cause undue hardship to the College.

Best Practices for Online Learning

An online learning environment needs structure for effective communication to occur. Below is a list of guidelines for effective online communication:

- Stay engaged and on-task with relevant messages.
- Communicate using a respectful, professional tone suitable for collaborative learning environments.
- Utilize netiquette standards in all forms of communication.

Mark Your Calendar

This syllabus and schedule are subject to change in the event of extenuating circumstances. It is **your responsibility** to check Canvas announcements during the semester of this course. (*) Double chapters in the week.

| Week | Dates | Lecture | Lab |
|------|-------------|--|---|
| 1 | 1/8-1/12 | Module 1 Introduction to Tophat Physiology Chapter 1 Reading Chapter 1 Homework Assignment Due (1/14) | Simulation Tutorial PhiLS Introduction Post Lab |
| 2 | 1/15 – 1/19 | Module 2 Cell Structure and Function Chapter 2 Reading Chapter 2 Homework Assignment Due (1/21) MLK 1/15 No Class | Simulation Cell Structure 1 and 2 Post Lab |
| 3 | 1/22 – 1/26 | Module 3 Nutrition and Metabolism Chapter 3 Reading Chapter 3 Homework Assignment Due (1/28) | PhiLS Nutrition and Metabolism Post Lab |
| 4 | 1/29 – 2/2 | Module 4 Excitable Cells Chapter 4 Reading Chapter 4 Homework Assignment Due (2/4) | PhiLS Excitable Cells Post Lab |
| 5 | 2/5 – 2/9 | Module 5 Muscle Physiology Chapter 5 Reading Chapter 5 Homework Assignment Due (2/11) | PhiLS Muscle Physiology Post Lab |
| 6 | 2/12 – 2/16 | Module 7 General Sensation Chapter 7 Reading Chapter 7 Homework Assignment Due (2/18) Lincoln Day 2/15 No Class | PhiLS General Sensation Post Lab |
| 7 | 2/19 – 2/23 | Module 8 Specialized Senses Chapter 8 Reading Chapter 8 Homework Assignment Due (2/25) Exam #1 (Module 1, 2, 3, 4, 5) on (2/25) Washington Day 2/19 No Class | Simulations Specialized Senses 1 and 2 Post Lab |
| 8 | 2/26 – 3/1 | Module 9 Motor Control Chapter 9 Reading Chapter 9 Homework Assignment Due (3/3) | PhiLS Motor Control Post Lab |
| 9 | 3/4 – 3/8 | Module 10 Autonomic Nervous System Chapter 10 Reading Chapter 10 Homework Assignment Due (3/10) | PhiLS Autonomic Nervous System Post Lab |
| 10 | 3/11 – 3/15 | Module 11 Endocrine Chapter 11 Reading Chapter 11 Homework Assignment (Due 3/17) | Simulations Endocrine 1 and 2 Post Lab |
| 11 | 3/18 – 3/22 | Module 12 Blood Chapter 12 Reading Chapter 12 Homework Assignment Due (3/24) Exam #2 (Module 7, 8, 9, 10) on (3/24) | PhiLS Blood Post Lab |
| 12 | 3/25 – 3/29 | Module 13 Heart Chapter 13 Reading Chapter 13 Homework Assignment Due (3/31) Spring Break 3/25-3/29 | Simulations Heart 1 and 2 Post Lab |

| | | | |
|-------|-------------|--|--|
| 13 | 4/1 – 4/5 | Module 14 Circulation & BP Reg. Chapter 14 Reading Chapter 14 Homework Assignment Due (4/7) | PhiLS Circulation & BP Reg. Post Lab |
| 14 | 4/8 – 4/12 | Module 15 Respiratory System Chapter 15 Reading Chapter 15 Homework Assignment Due (4/14) | PhiLS Respiratory System Post Lab |
| 15 | 4/15 – 4/19 | Module 16 Immune System Chapter 16 Reading Chapter 16 Homework Assignment Due (4/21) Exam #3 (Module 11, 12, 13, 14) on (4/21) | Simulation Immune System 1 and 2 Post Lab |
| 16 | 4/22 – 4/26 | Module 17 Digestive System Chapter 17 Reading Chapter 17 Homework Assignment Due (4/28) | PhiLS Renal and Digestive System Post Lab |
| 17 | 4/29 – 5/3 | Module 18 Renal System Chapter 18 Reading Chapter 18 Homework Assignment Due (5/5) | Case Study Poster Presentation |
| Final | 5/6 – 5/10 | Module 19 Reproductive System Chapter 19 Reading Chapter 19 Homework Assignment Due (5/7) Final Exam (5/7) | |