Human Physiology (PHYS 215)
Fall 2026

1. Course Basics

Human Physiology
PHYS 215 Fall 2026
Sections: 5(CRN 37417), 6(CRN 27748), 7(CRN 24683), and 8(CRN 24684)
Lecture: Monday and Wednesday, 11 AM – 12:50 PM (Lecture Room FB 101)
Lab: as scheduled per section number (Lab room FB 457)

2. Instructor Information

Primary Instructor

Dr. Bikram Sharma
Associate Professor of Biology
Department of Biology
Ball State University, Muncie, IN 47306

Lab Instructors:

a. ***Lab coordinator:***
Dr. Nouran Amin

b. ***Teaching Assistants:***
TBD

[Details on emails, office phones, and office hours for instructors are provided in the course canvas page]

3. Course Information

Course Description
Study of cell physiology and all human body systems. Body fluid balance, acid-base balance, and temperature regulation are also covered. Group experimentation with recording apparatus. Includes use of animals or animal tissue.

Prerequisites
ANAT 201 and course in biology or permission of the department chairperson. *Prerequisite recommended:* a chemistry course.

Course Objectives:
Physiology is the study of human body functions, and this course is meant to provide a basic understanding of these functions covering different body systems. After completing this course with a passing grade, a student should be able to:

1. Explain the concept of homeostasis within the human body.
2. Describe the basic processes that regulate cell volume and composition.
3. Demonstrate knowledge of the nervous, muscular, cardiovascular, blood, immune, respiratory, urinary, digestive, endocrine, and reproductive systems as well as acid base regulation and thermoregulation in the body.
4. Learn how these systems interact with each other and work together to carry out the bodily function and maintain physiological homeostasis.
5. Perform and interpret physiological experiments.
6. Learn basic physiological parameters of the human body.

Course Modality/structure:

1. **Course Lecture**: The in-person lecture portion of the course is divided into five units:
    a. **Unit 1:** Introduction to Physiology, Concept of homeostasis, Cell Physiology, and Membranes
    b. **Unit 2:** Neural and hormonal communication, Central nervous system, and Peripheral Nervous system.
    c. **Unit 3:** Muscle, cardiovascular physiology, blood, and Body defenses (immunity)
    d. **Unit 4:** Respiratory System, Urinary System, and Acid-Base Balance, Digestive System
    e. **Unit 5:** Energy balance and Temperature Regulation, Endocrine system, and Reproductive System
2. **Weekly Textbook Readings:** At the start of each week, you will be assigned textbook readings that will clarify and reinforce the lecture material. Most readings are accompanied by SmartBook assignments, which are graded assignments throughout the semester.
3. **Lectures and Participation:** Lectures take place every Monday and Wednesday. Periodically, there will be take home topic (1 take home lecture per unit). During most lectures, you will submit a participation assignment, which will be graded.
4. **Weekly Lab Sessions:** You will attend lab sessions once a week, which will include activities designed to demonstrate and reinforce lecture topics, as well as introduce related concepts. If you have an excused absence, you may arrange to complete the lab with another section, but this is limited and requires instructor permission.

4. Course Materials

Required eTextbook:

- *Vander's Human Physiology: The Mechanisms of Body Function, 19th edition.* Widmaier McGraw-Hill **eBook with Connect Access.**

The e-book can be purchased through the course canvas site for the best price. Click on the McGraw-Hill tab on canvas and follow the links. For student's whose financial aid requires purchasing the e-book at the bookstore, access code cards are available at the bookstore.

Students wishing to purchase an additional optional hardback textbook may do so at the BSU Bookstore, but e-book access is required to complete assignments.

All required course materials can be obtained through the Ball State First Day program. All students are automatically enrolled each semester. Please check your bsu.edu email for information about delivery of physical and digital materials. Students who wish to opt out during the **Fall 2026** semester must do so by **August 30, 2026**. Students who opt out are responsible for obtaining all required course materials on their own through the Ball State Bookstore or another retailer. If you opt out, your digital access will expire shortly after, and you will lose access to publisher-provided course content, online assignments, quizzes, and exams.

To access your e-book purchased through First Day:

- Click on the McGraw-Hill link in the left column in Canvas and follow the steps.
- Please be aware that you will need the e-book to complete course assignments.
- Students wishing to purchase an optional hardcopy of the textbook may do so at the same link or at the BSU Barnes and Noble bookstore (in the Atrium). You may also search online for a used copy. Please be advised that the eBook with connect access is required to complete course work.
- The textbook is also available at the BSU Main Library and at the Science Library in the Foundational Science Building for those who want to take pictures of assigned readings or read from a regular book.

Material provided by instructor: Lecture PowerPoints and other materials from instructor are available in Canvas on a weekly basis. *Note:* Course materials for the lecture portion of the course will be needed on the first day of class.

Lab Materials: Lab material will be provided by your lab instructor in the course Canvas website.

Course Time Commitment: Students are expected to dedicate around 2 hours of study time outside of class for every hour spent in class. As this is a 5-unit course, you should plan to study an average of 10 hours outside of class each week. If you don't commit to daily studying, it's easy to fall behind in the course, which can lead to feeling overwhelmed by the amount of last-minute preparation needed for exams.

5. Course Assignments and Assessments

Lecture = 80% of the course grade

1. **Exams** = 30% of course grade
2. **Mid-Term Exam** = 15 % of course grade
3. **Final Exam** = 15 % of course grade
4. **SmartBook Assignments**: 10% of course grade
5. **Participation Assignments** = 10% of course grade (*lowest 5 participation dropped*)

Lab = 20% of the course grade

1. Pre-Lab Quizzes = 6 % of course grade (13 offered, lowest 1 dropped)
2. Lab Reports = 12 % of course grade (13 offered, lowest 1 dropped)
3. Final Lab Project = 2% of course grade

Grading Scale: Letter grades will be determined on the following percentage scale:

A	=	93.6-100%	C	=	72.6-76.5%
A-	=	89.6-93.5%	C-	=	69.6-72.5%
B+	=	86.6-89.5%	D+	=	66.6-69.5%
B	=	83.6-86.5%	D	=	63.6-66.5%
B-	=	79.6-83.5%	D-	=	59.6-63.5%
C+	=	76.6-79.5%	F	=	59.5% and below

Final grade: Your final grade will be based on the percentage earned in each weighted category. I **WILL NOT** round up the grades.

Assignment details, including instructions, will be posted and updated on Canvas. Please check Canvas regularly to stay informed and on track.

1. **Unit Exams:** At the end of each unit (1-5), there will be an exam administered. These are closed book exams and will be administered either on paper in-person during class or on canvas with Respondus Lockdown Browser, synchronous, in the classroom. These exams will cover the material discussed in the lectures and will cover unit material from last exam upto that point.
2. **Midterm and Final Exams:** These exams will be cumulative and administered on paper **in-person during** class time. They will be closed book, closed notes. They will cover major themes of the course which have been covered up to the point the exam is administered.
3. **SmartBook Assignments:** SmartBook assignments are interactive, adaptive reading activities delivered through McGraw-Hill Connect. These assignments are designed to reinforce key concepts by highlighting important content, asking targeted questions, and adapting to your learning needs in real time. Completing SmartBook assignments before class will help you better understand the material and actively participate in discussions. These assignments are graded based on completion and are due by the posted deadlines on Connect.
4. **Participation Assignments:** Participation assignments may include **in-class** quizzes, drawings, labeling, or short essay questions designed to reinforce lecture content and encourage engagement. These assignments contribute to your participation grade and are only available to students who attend the lecture in person. **No make-up** opportunities will be provided for missed participation activities. **YOU WILL BE ALLOWED TO DROP upto 5 LOWEST PARTICIPATION GRADES**.

COMPUTERS AND ELECTRONIC DEVICES: It is essential to have a computer or tablet that is compatible with the Canvas platform. Be aware that some devices may have compatibility issues with Canvas. Since most course materials, announcements, and some assessments are available online, reliable internet access and a compatible device are crucial to fully engage with the course and keep up with assignments. Please note that issues with electronic devices or internet access are not acceptable reasons for incomplete assessments.

5. University Statements, Policies, and Information

University Statement
We are committed to ensuring that all members of the community are welcome, through valuing the various experiences and worldviews represented at Ball State and among those we serve. We promote a culture of respect and civil discourse.

Disability Statement
If you need course adaptations or accommodations because of a disability, please contact the instructor of record as soon as possible. Ball State's Disability Services Office coordinates services for students with disabilities; documentation of a disability needs to be on file in that office before any accommodations can be provided. Disability Services can be contacted at 765-285-5293 or dsd@bsu.edu.

Freedom of Expression
In this course, we are committed to fostering a learning environment that values intellectual diversity, encourages free expression, and promotes open inquiry. As members of the Ball State Community, we treat each person in the Ball State community with civility, courtesy, compassion, and dignity and respect and learn from differences in people, ideas, and opinions. Please review Ball State University's Statement on Freedom of Expression, the resources on Ball State's Freedom of Expression webpage, and Ball State's Beneficence Pledge.

Attendance
Only university-approved excuses will be accepted. Course attendance policies are consistent with University policies regarding student absences. Absences will be excused for the following with appropriate documentation: funeral and bereavement leave, jury duty, late course addition, military absences, observance of religious holidays, pregnancy leave, student-athletes participating in university- or department-approved activities, and university advisories.

- Students may encounter other unprecedented circumstances (e.g. car accidents, job interviews) that result in course absences. Under such circumstances, absences can be excused with sufficient documentation.
- Students are expected to notify their instructors once they anticipate being absent for any reason (e.g., funeral) or as soon as possible after the absence begins (e.g., unexpected injury or illness). The student needs to provide documentation (with confidential information redacted when appropriate) to their instructor if requested.
- "Not feeling well" excuses without a Dr.'s note will not be accepted and you will be marked as unexcused.
- It is the student's responsibility to obtain copies of any information, announcements, assignments, etc. which were missed due to an unexcused absence.
- Excused absences for university-related functions must be arranged in advance.
- To apply attendance policies fairly and consistently, the lowest 5 participation scores will be auto dropped for all students *regardless of reason for absence*. *Students missing more than 5 in-class participation for any reason will not be eligible to make up participation points and will be required to meet with the instructor in-person to discuss the best course of action.*
  In other words, Attendance at all lecture sessions is **EXPECTED**. A daily participation grade will be recorded. Students must be present to earn these points. The lowest five (5) participation grades will be dropped to accommodate absence for any reason.

- Attendance at all laboratory sessions is **MANDATORY**.

Course Withdrawals: You have until **10/28/2026**, to withdraw from this course. After that, a late withdrawal is only allowed with my permission. These are not given unless you can document extenuating circumstances.

Title IX
Ball State University is committed to providing a safe and inclusive learning environment for all students. If you or someone you know has experienced sexual harassment—including sexual assault, dating violence, domestic violence, or stalking, please know that you are not alone. The University offers support services and resources. For more information or to report an incident, please visit bsu.edu/titleix or contact the Title IX Coordinator at 765-285-1545 or at titleix@bsu.edu

As your instructor, I am a mandatory reporter under the Title IX policy and required to report any information I receive about possible sexual harassment. This includes information shared in class discussions, assignments, or private conversations.

What happens after I report? The Title IX Coordinator will email the person who experienced sexual harassment (complainant) and invite them to schedule a meeting. If the complainant **chooses** to meet with the Title IX Coordinator,

- Title IX Coordinator will offer supportive measures (e.g., counseling, extensions on deadlines, course-related adjustments, changes to work or class schedules, and/or referrals to campus offices), review the policy, and discuss options to move forward.
- If a complaint is filed by the complainant or the University, an investigation will begin following University policy.

Pregnancy and Related Conditions
Ball State University provides reasonable modifications for students affected by pregnancy, childbirth, or related medical conditions. Students seeking academic, housing, or other modifications are encouraged to contact the Title IX Office as early as possible to discuss available options and support. For assistance, contact the Title IX Office at 765-285-1545 or titleix@bsu.edu.

University Grade Appeal Policy
If you believe you received a final course grade that does not reflect your performance due to fairness or a procedural issue, you have the right to file an appeal within 5 school days after final grades are posted by the Office of the Registrar. Review the University Grade Appeal Policy and Process.]

Student Academic Ethics Policy
Honesty, trust, and personal responsibility are fundamental attributes of the university community. Academic dishonesty and other forms of academic misconduct threaten the foundation of an institution dedicated to the pursuit of knowledge and will not be tolerated. To maintain its credibility and reputation, and to equitably assign evaluations of scholastic and creative performance, Ball State University is committed to maintaining a climate that upholds and values the highest standards of academic integrity. Visit the VPAA's academic integrity website (Students tab) for resources on understanding academic integrity, citing sources properly, and avoiding inadvertent academic dishonesty. To learn

about BSU's academic integrity expectations and students' rights, please read the University Student Academic Ethics Policy.

Academic integrity violations include giving or receiving an unfair academic advantage (cheating), presenting someone else's ideas or work as your own (plagiarism), and falsifying academic records. Unless otherwise indicated, you must work independently by yourself. Check with me if you are unsure whether something constitutes academic dishonesty. Examples of academic integrity violations include, but are not limited to:

- Using resources not authorized by the faculty member (including devices, AI tools, hidden notes, and open books)
- Using commercial study websites to find answers to graded assignments (Chegg, Course Hero, StudyPool, OneClass, etc.).
- Without the instructor's written permission, giving away, buying, or selling graded assignments class notes, exams, study guides, or other course materials to other students or to third-party vendors (Course Hero, Chegg, 24HourAnswers, etc.).
- Working with another person on any assignment other than authorized group projects.
- Sharing or allowing others to access your files, whether done with permission or not.
- Reusing your own work from another semester, course, or section.
- Sharing answers with others during exams (passing notes, texting, whispering, gesturing)
- Discussing exam questions and answers with students who have not taken the exam.
- Soliciting others to complete work for you.

Generative AI (GenAI) Statement

Generative AI (GenAI) refers a class of AI tools that can create text, images, audio, video, and other similar media from existing training datasets. This may include user-prompted tools or tools running autonomously (aka, "agentic AI"). Note that some AI tools are becoming embedded in platforms that students use to create their assignments (e.g., Grammarly, Microsoft Word, Excel, Adobe Acrobat, Canva, OneNote, and Evernote). The mere presence and use of AI-assisted features in such tools, such as grammar suggestions, predictive text, formatting help, or auto-completion, would not normally be considered GenAI.

Conditional Use (Specific or limited GenAI use permitted)

At Ball State, we use GenAI to elevate human potential, not replace it. To succeed in an AI-infused world, students must balance technical skills with durable skills, lifelong abilities such as critical thinking, ethical judgment, communication, accountability, and responsible decision-making that define a Ball State graduate. Developing these durable skills requires you as students to think carefully about:

- when AI should and should not be used;
- how to use AI responsibly;
- how to verify AI-generated information; and
- and how to remain accountable for final work.@

You may use GenAI tools for some work submitted in this course. You will be informed as to when, where, and how these tools are permitted to be used, along with guidance for attribution. Any use outside of this permission constitutes a violation of Ball State

University's Student Academic Ethics Policy. When in doubt, please ask the instructor before using GenAI. You, the student, are always responsible for the content you submit, publish, share, or act upon, regardless of whether GenAI tools assisted in the process. For data security reasons, please use BSU-approved GenAI tools (e.g., BSU Gemini, NotebookLM), which support single sign-on (SSO) with BSU ID and password. Commonly used public GenAI tools carry a higher risk of data being shared externally. In contrast, when using BSU-approved GenAI tools, any data you input is protected within the BSU system. Instructors do not have access to BSU IT Center logs of AI tool usage, so student data shared through BSU-approved GenAI tools remain private.

You, the student, are always responsible for the content you submit, publish, share, or act upon, regardless of whether GenAI tools assisted in the process. For data security reasons, please use BSU-approved GenAI tools (e.g., BSU Gemini, NotebookLM), which support single sign-on (SSO) with BSU ID and password. Commonly used public GenAI tools carry a higher risk of data being shared externally. In contrast, when using BSU-approved GenAI tools and logging in through Ball State SSO, your data is treated as private and uploaded content will not be used to train future AI models or otherwise be shared outside of BSU. Instructors do not have access to BSU IT Center logs of GenAI tool usage, so student data shared through BSU-approved GenAI tools remain private.

6. Student Support Services

The Learning Center
The Learning Center offers free Tutoring and Academic Coaching for many courses at Ball State. Students can make appointments for online (Zoom) or in-person (NQ 350) appointments. To make an appointment, visit myballstate.bsu.edu and click on "Navigate" in the Academic Tools section, or just go directly to bsu.navigate.eab.com.

Testing accommodations for students with disabilities are available for students who have received the appropriate documentation from Disability Services. Tests may be administered in the Learning Center. Supplemental Instruction is available in select courses. If you have an SI leader for your course, that person will provide students with information the first week of school regarding weekly study sessions. For more information about Learning Center programming, visit bsu.edu/learningcenter or call 765-285-1006. Follow us on Instagram: BallStateLC.

The Writing Center
All writers improve with practice and feedback, so as a student in this course, you are encouraged to use the Writing Center (in Robert Bell 295 during weekdays, Bracken Library First Floor West in the evenings, or online during any of our regularly scheduled hours) to get additional feedback on your writing. The Writing Center offers free planning, feedback, and accountability sessions (in person and online) to all students composing essays, reports, reflections, research projects, web content, lesson plans, slideshows, poster presentations, resumes, and other digital or print texts. To schedule a free appointment to discuss your writing, go to bsu.edu/writingcenter. Online and in-person appointments are available; however, plan ahead because appointments book quickly!

The Basic Needs Hub
If you are having difficulty affording enough food, do not have a safe and reliable place to sleep, and/or experiencing an emergency or crisis, help is available through the Basic

Needs Hub. The Basic Needs Hub has information, resources, and provides individualized support to students. To talk with a supportive staff member about your experience, receive one on one assistance, or learn more about resources, you can submit a Basic Needs Assistance Form.

The Counseling Center
The Ball State University Counseling Center offers free and confidential services to all students. The Counseling Center is located in Lucina Hall, Room 320. To schedule an appointment, you can contact us at 765-285-1736. Ball State also offers a 24/7 Crisis Line, which can be reached at 765-285-HOPE (4673). The Crisis Line is a mental health resource for those who are struggling with any mental health concerns, including thoughts of self-harm and/or suicide.

At the Ball State Counseling Center, we see students for a variety of reasons, some of which include homesickness, relationship concerns, anxiety, and depression. At your first appointment, you will work with a therapist to create a plan that will connect you with resources that best fit your needs. We assist students with getting connected to therapy at our Center as well as connecting students to self-help resources, other on-campus resources, and community-based resources. All Ball State students also have access to several on-demand, self-help resources through a variety of different platforms. All of these resources, including a direct link to our website, can be found **here**.

The Speaking Center
The Speaking Center is a free resource available to all members of the BSU community wanting to improve their public speaking abilities. We offer personalized coaching designed to help you become a more confident and effective speaker. Our trained coaches provide constructive feedback and support throughout the entire speech preparation process, whether you are in the early stages of brainstorming ideas and organizing your thoughts, or you need to practice your delivery and refine your message.

The Center is in the David Letterman Communication and Media Building, room 302. To schedule an appointment, please access us through your Navigate app or use this direct link to sign up for a time**.** Appointments are available both in person and on Zoom. Appointments are available in person, on Zoom, and in virtual reality (VR) for those interested in practicing in an immersive speaking environment.

Canvas Accessibility
Canvas provides a user experience that is easy, simple, and intuitive. Special attention has been paid to making Canvas screen-readable. The Rich Content Editor encourages users to create accessible content pages (i.e. text formatting is accomplished using styles). Canvas is designed to allow limited customization of colors and schemes to be accessible for all users. The National Federation of the Blind granted Canvas the Gold Level Web Certification in 2010. **Find more information by visiting the Canvas Voluntary Product Accessibility Template (VPAT).**

FERPA and Privacy
As a student, your educational records are considered confidential. Under FERPA (Family Educational Rights and Privacy Act), your records are confidential and protected. Under most circumstances, your records will not be released without your written and signed consent. However, some directory information may be released to third parties without

your prior consent unless a written request to restrict this is on file. You can learn more about student rights to privacy by reading **Ball State's FERPA and Privacy and Protection.**

Video Conferencing Recording
In this class, software may be used to record live class discussions. As a student in this class, your participation in live class discussions may be recorded. These recordings typically will be made available only to students enrolled in the class, to assist those who cannot attend the live session or to serve as a resource for those who would like to review content that was presented. Students who prefer to participate via audio only will be allowed to disable their video camera so only audio will be captured. Students who prefer to listen only must disable their audio capability and visual camera. If you have concerns, please discuss these options with me.

Plagiarism Detection
The campus subscribes to Turnitin, a plagiarism prevention service, through Canvas. You may need to submit written assignments to Turnitin. Student work will be used for plagiarism detection and for no other purpose. The student may indicate in writing to the instructor that he/she refuses to participate in the plagiarism detection process, in which case the instructor can use other electronic means to verify the originality of their work.

Proctoring
This course will require the use of the Respondus LockDown Browser and Monitor for online exams. Watch this short video to get a basic understanding of LockDown Browser and the optional webcam feature (which may be required for some exams.) Instructions for obtaining the software can be found in canvas

7. Course Expectations and Policies

Course Participation Expectations
- This course is designed with weekly activities, discussion, lab and other forms of regular collaboration and communication.
- It is recommended that you log into your Canvas course 3 to 4 times a week and check your official Ball State email account daily to view announcements and prepare for class.
- Please complete all assignments, quizzes, tests, and any other activities by the stated due dates.

Feedback Policy
- The instructor will respond to email from your official Ball State email address within 24 hours during weekdays (Monday-Friday) and within 48 hours on the weekend.
- The instructor will grade your quizzes, assignments, and discussions in a timely manner, no later than within a week of submission.
- Contact the instructor directly if you have questions or concerns about your performance.
- It is your responsibility to get hold of me (in person during class OR during office hours) when you fail to get timely email response from me.

Late Assignment Policy

- All assignments are due by the due dates indicated in Canvas.
- Unit exams and Smart Book homework are due by midnight EST/EDT on the due dates. After the indicated due date this work will be accepted, but zeros will temporarily appear in the gradebook when exams, Smart Book work, or case studies are late. Zeros will be replaced with scores once work is complete. This is to remind students that work is missing.
- Midterm exams and final exams will not be accepted late except in the case of extreme extenuating circumstances with an approved excused absence and with scheduled proctored make-up time.
- Participation challenge questions are due during class and will only be accepted from students who are in attendance. Make-ups for participation points are not offered, but the lowest 5 participation grades are dropped to accommodate absence for any reason.
- Submit lab work as instructed by your lab instructor (GA). Students must attend lab to get credit for lab reports. Students unable to attend their assigned lab time should contact the course instructor to arrange proctored attendance at an alternate time on a very limited basis.
- No assignments will be accepted after 5:00 pm on final day of the semester (12/11/25).
- Assignments posted after the indicated due dates may be subject to deduction. The penalty will be one letter grade (10%) per day late, for example, example an assignment earning 90/100 submitted one calendar day late would receive 81/100 points.
- Internet connectivity and technical issues may occur and impede you from turning in work on time. Begin assignments early, save and submit your work frequently, and submit before the deadline when possible. You should also have a back-up plan, such as using a campus or local library computer, borrowing a device, or identifying another reliable internet connection.
- Canvas will not accept assignments for grading after 5:00 pm EST/EDT on 12/11/26.

Assignment Submission Policy

- All assignments should be submitted as Word documents with extensions of .doc or .docx unless otherwise indicated in the assignment description.
- Assignments, unless otherwise indicated, should be submitted using the assignment link in the module.

Grading Policy

- It is policy that appropriate evaluation of your academic performance is an integral part of your learning experience.
- In the absence of mistakes, fraud, bad faith or incompetence, the instructor will be the key decision-maker on the assignment of grades.

Engagement Expectations

To support a respectful and engaging academic community that encourages the free exchange of ideas and civil discourse, we will follow these ground rules:

- **Respect different perspectives.** Share your ideas and let others share theirs.
- **Challenge ideas, not people.** Disagree respectfully. No personal attacks or put-downs. Focus on exploring ideas critically and constructively.

- **Listen to understand.** Stay curious, ask questions to understand, and give others space to speak.
- **Assume good intentions.** Approach discussions with curiosity and compassion.
- **Keep it private.** What is shared in class stays in class. Do not share others' words or work without permission.
- **Be respectful.** Avoid hurtful language, stereotypes, or content that may demean others. Keep feedback constructive.

8. Course Schedule

To support a learning experience that is responsive to the needs, interests, and pace of our class community, the course schedule may shift over the semester. The most current version of the schedule will always be available on Canvas. I encourage you to check Canvas regularly for updates and contact me if you have any questions.

9. Subject to change statement

This syllabus and schedule are subject to change in the event of extenuating circumstances.