BALL STATE UNIVERSITY
College of Health
School of Kinesiology

EXSC 293: Foundations of Physiology and Exercise
Fall 2026
3 Credits

Instructor: Dr. Rudi Marciniak, Ph.D., CSCS, TSAC-F, EP-C
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Office Hours: By appointment (in person or TEAMS or Zoom)

Day/Time/Location: Tuesdays & Thursdays, 9:30-10:45am

Location: Health and Physical Activity (HP) Building, Room 252

Course CANVAS Page: All course content will be posted to CANVAS. Check the page regularly.

Course Description: This course will present an introduction to exercise physiology by providing a basic overview of systems physiology at rest, along with the acute responses and chronic adaptations in these systems that are brought about by exercise. *Prerequisite*: Anatomy class (EXSC 292, ANAT 201) or permission of the program coordinator

Course Objectives: Upon completion of EXSC 293, students will be able to:

1. Understand the basic function of the various systems in the body, including energy, neuromuscular, endocrine, cardiovascular, and respiratory at rest. This basic information will serve as the foundation for understanding the responses of these systems to exercise.
2. Understand the acute responses of the energy, neuromuscular, endocrine, cardiovascular, and respiratory systems that occur during exercise.
3. Understand the chronic adaptations in the energy, neuromuscular, endocrine, cardiovascular, and respiratory systems that result from regular exercise training.

Instructional Method: Lecture. The course instructor will randomly call on students to contribute to in-class discussions. Knowledge exploration in class will be a significant component of the learning process.

Course Time Commitment: It is expected that students will spend approximately 2 hours of study time outside of class for every one hour in class. Since this is a 3-credit class, you should expect to study an average of 6 hours outside of class each week.

Course Reading Materials (*Required*):

1. *Physiology of Sport and Exercise*, 9th ed., by Kenney, Wilmore, and Costill.
2. Any additional reading requirements, which are primarily peer-reviewed articles from the scientific literature, will be made available on the course CANVAS website as announced in class and/or via the announcements page on the CANVAS site.

Course Notes: A version of the notes will be posted on CANVAS prior to each synchronous class

Course Evaluation

Lightning Strikes (n=10) = 5%
Research Article Critique Assignments (n=2) = 10%
Comprehension Quizzes (n=6) = 30%
Exams (n=4, equal weight) = 55%

Grades will be earned based on the following scale. There is no curving of grades or rounding up the decimal. There are no make-ups allowed for any evaluative component. Missed deliverables will result in 0 points assigned for that item.

Grading: Grades will be earned based on the following scale:

A	93.00% to 100.00%	**B-**	80.00% to 82.99%	**D+**	67.00% to 69.99%
A-	90.00% to 92.99%	**C+**	77.00% to 79.99%	**D**	63.00% to 66.99%
B+	87.00% to 89.99%	**C**	73.00% to 76.99%	**D-**	60.00% to 62.99%
B	83.00% to 86.99%	**C-**	70.00% to 72.99%	**F**	≤59.99%

Lightning Strikes (5%)

Lightning Strikes (n=10) will *randomly occur during class* on any non-comprehension quiz or exam day. They're over in a flash and happen unexpectedly. Each "Strike" will include 1-3 multiple choice, drawing, fill in the blank, or short response questions. These "Strikes" will be completed in paper and pen/pencil format and closed notes. Full credit will be awarded to those that are present (i.e., in attendance) and complete the question regardless of answer correctness. There will be no make-up "strikes" given and 0-points will be awarded for any missed "strike". At least 8 "strikes" must be completed for full credit of this evaluative component.

Research Article Critique Assignments (10%)

Research article critiques (n=2) will be assigned during the semester as listed in the syllabus. These assignments are designed to teach you to: 1) search for peer-reviewed literature, 2) synthesize key points from peer-reviewed literature, and 3) apply peer-reviewed literature to exercise science practice. These critiques will be completed via Word Documents and uploaded to a dropbox on CANVAS. There will be no make-up assignments accepted and 0-points will be awarded for any late or missing work.

Comprehension Quizzes (30%)

Comprehension Quizzes (n=6) will occur during *class as listed in the syllabus (All quizzes will occur on Thursdays)*. Each quiz will include 5-10 multiple choice, true/false, sequence ordering, as well as drawing (i.e., figure, structure). These quizzes will be completed in paper and pen/pencil format and closed notes. There will be no make-up quizzes given and 0-points will be awarded for any missed quiz. If you have accommodations for quizzes, an unexcused absence the day of the quiz will result in 0-points rewarded for that quiz similar to any other students' absence.

Unit Exams (55%)

There will be 4 CANVAS Exams as indicated in the schedule. The exams will be multiple-choice (MC) and have a total time limit equal to 75 seconds per MC question (Example: 40 questions x 75 seconds = 50 minutes). These exams are closed notes and the questions will not be asked in the order of the notes, which means that being prepared is important. Exams 1-3 will be open from 6 am Thursday until 1 pm Friday. There will be NO class on the Thursdays of Exam weeks so you can use the time as you need to take the online exam. Exam 4 will take place during finals week and the available time for this will be announced at a later date. ***In general, exams/quizzes cannot be made up. However, arrangements can be made to complete them at different times if an absence is unavoidable due to emergencies, varsity sports participation, etc. These arrangements must be made BEFORE THE DUE DATE and are SUBJECT TO THE PROFESSOR'S APPROVAL. Without prior accommodation with Dr. Marciniak, missed quizzes/exams will be awarded 0 points.***

Extra-Credit for Supplemental Instruction Participation
Supplement instruction (SI) is a resource available to all students in this course where an SI instructor holds study sessions and/or office hours to review course concepts and demonstrate successful study skills for students. Participation in SI is not required as part of this course, however students that engage in this resource can receive 0.25 pts per each attended session (no maximum) that will be added to their overall Unit Exams points at the end of the semester.

Course, Department, and Program Policies
Attendance policy: Attendance is expected at every class. In the event of an unavoidable absence, students are responsible for all course material and information disseminated during the missed class.

Academic fraud: Academic dishonesty by a student will not be tolerated in activity or academic areas and will be treated in accordance with the policy in the faculty handbook. Please refer to the specific sections in Undergraduate Rights and Responsibilities for information regarding academic honesty. These policies (including cheating on exams and plagiarism) will be strictly enforced. Incidents of academic dishonesty will be prosecuted to the full extent within the university judicial process.

Artificial Intelligence: Absolutely no use of artificial intelligence (AI) is permitted for this course, including planning and review stages of any assignment (i.e., Assistive and/or Predictive AI), as well as full and/or partial assignment generation (i.e., Generative AI). All work produced and/or submitted in this course should reflect your own ideas and demonstrate your current knowledge, abilities, and skills. Therefore, GenAI should not be used to complete any portion of the assignment(s). Doing so constitutes a violation of Ball State University's Student Academic Ethics Policy.

Copyright Information on Course Materials: Students may not reproduce, distribute or publicly post their course materials without the instructor's permission. Students selling or distributing course materials or posting exams (e.g., quizlet.com) may violate the Ball State Code of Conduct and/or the Information Technology Users' Privileges and Responsibilities policy. Students violating this policy may be referred directly to Dr. Mike Gillilan in the Office of Student Rights and Community Standards.

Statement on Student Needs: If you need course adaptations or accommodations because of a disability, if you have any emergency medical information to share with me, or if you need special arrangements in case the building must be evacuated, please speak to me as soon as possible.

Statement on Diversity: Ball State University aspires to be a university that attracts and retains a diverse faculty, staff and student body. We are committed to ensuring that all members of the campus community are welcome through our practice of valuing the various experiences and world views of those we serve. We promote a culture of respect and civil discourse as evident in our Beneficence Pledge. For Bias Incident Response service information, go to bsu.edu/multiculturalcenter/bias or e-mail mc2@bsu.edu.

Title IX: Title IX makes it clear that violence and harassment based on sex and gender are Civil Rights offenses subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories such as race, national origin, etc. If you or someone you know has been harassed or assaulted, here are available resources at Ball State University:

- Title IX Coordinator, AD Room 002, (765) 285-5163
- Office of Victim Services, Health Center, Room 205, (765) 285-7844; this resource is confidential
- Counseling Center, Lucina Hall, Room 320, (765) 285-1736; this resource is confidential
- Police Department, 200 North McKinley Avenue, (765) 285-1111 (911 from a campus phone), www.bsu.edu/police

Miscellaneous: You are not required to be online during class. Please turn off cell phones & other devices. Any students utilizing cell phones and/or headphones, or using computers for non-class related tasks, in class will be

asked to leave. If computers become a problem, privileges for all technology (i.e., computers, tablets, etc.) will revoked from class lectures.

Student Resources

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***.

WK	Date	Lecture Schedule	Readings	Deliverables
1	**8/24**	Bioenergetics	Ch 2	
2	**8/31**	Bioenergetics		**In-Person QUIZ 1**
3	**9/7**	Labor Day—NO CLASS Mon (9/7) Energy Expenditure during Exercise	Ch 5	
4	**9/14**	Energy Expenditure during Exercise EXAM Online—NO CLASS Thurs (9/17)		**Online EXAM 1**
5	**9/21**	Neural Control of Skeletal Muscle	Ch 3; Ch 1	**CRITIQUE 1**
6	**9/28**	Neural Control of Skeletal Muscle Skeletal Muscle Function		**In-Person QUIZ 2**
7	**10/5**	Skeletal Muscle Function	Ch 1	**In-Person QUIZ 3**
8	**10/12**	Fall Break—NO CLASS Mon-Tues (10/12-10/13) EXAM Online—NO CLASS Thurs (10/15)		**Online EXAM 2**
9	**10/19**	Cardiovascular System	Ch 7 & 9	**CRITIQUE 2**
10	**10/26**	Cardiovascular System		**In-Person QUIZ 4**
11	**11/2**	Pulmonary System	Ch 8 & 9	**In-Person QUIZ 5**
12	**11/9**	Pulmonary System EXAM Online—NO CLASS Thurs (11/12)		**Online EXAM 3**
13	**11/16**	Hormones/Endocrine	Ch 4	
14	**11/23**	Renal System Thanksgiving Break—NO CLASS Wed-Fri (11/25-11/27)	Ch 12	**In-Person QUIZ 6 (Tues)**
15	**11/30**	Additional Content		
16	**12/7**	Last Day of Classes Monday (12/7) **Finals Week**		**Online EXAM 4**

All elements of this syllabus are subject to change. You will be informed of any modifications as soon as possible.