

Sport and Exercise Physiology- SCI04329
Spring 2022

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Office Hours: M, W, F: 10am-12pm; 1-2pm

Tues: 1-2pm

**I am also available by appointment*

Lecture: BU209 M,W,F: 12:00-12:50pm

Laboratory: BU209 Thursday: 8:00-9:50am

Course Description:

This course will explore the human body's physiological response to acute exercise and exercise training. The main systems of the body (musculoskeletal, cardiovascular, respiratory, endocrine, and nervous) and cellular energy metabolism will be examined at rest through maximal exercise. Additionally, how the main systems of the body adapt to exercise training will be described. The laboratory activities will demonstrate how human fitness and performance are measured. Current topics in sport and exercise physiology will be integrated into the course material. Students will gain an appreciation for how exercise and physical activity are essential for optimal human health. Students interested in exploring careers in health and medical fields are encouraged to take this course.

Course Objectives:

We will be using a phenomena-based approach to learning by asking questions about observable events related to sport and exercise physiology. Students will direct the learning process to try to explain the physiology behind what is observed.

Through phenomena-based learning, students will:

1. Comprehend and interpret current issues in exercise physiology.
2. Explain how the main systems of the body (cardiovascular, respiratory, endocrine, nervous, and musculoskeletal) respond to exercise.
3. Describe the basic principles of exercise training.
4. Understand how the main systems of the body adapt to exercise training.
5. Explain and demonstrate how human fitness and performance can be assessed in the laboratory.

Textbook:

Kenney WL, Wilmore JR, Costill DL. 2020. Physiology of Sport and Exercise. 7th Ed. Champaign, IL: Human Kinetics.

Assessments:

Unit Assessments (50 points per unit x 5 units)	~39% = 250 points
Progress Assignments (30 points per unit x 5 units)	~23% = 150 points
Laboratory Assignments (~10-12 assignments)	~23% = 150 points
<u>Quizzes (20 points per unit x 5 units)</u>	<u>~15% = 100 points</u>
	= 650 points

Grading Scale:

100 – 93% = A	< 90 – 87% = B+	< 80 – 77% = C+	< 70% = D*
< 93 – 90% = A-	< 87 – 83% = B	< 77 – 70% = C	
	< 83 – 80% = B-		

Unit Assessments:

The course material will be divided into 5 units (see unit topics below). Students will research and discuss phenomena related to the topic of each unit. At the end of the unit, a final assessment will be completed that will allow students to demonstrate their understanding of an exercise physiology topic. This final assessment might include writing an essay paper, designing a poster, or giving an oral presentation. The instructor and/or class will decide on what type of assessment will be created at the beginning of each unit.

Progress Assignments:

As research is gathered about unit phenomena, progress assignments will be given to assess each student's learning progress. Each assignment will be worth ~5-10 points. Assignments will be graded based on completion and/or correctness.

Laboratory Assignments:

The goal of each laboratory activity will be to take a more in-depth analysis of a course topic. Each laboratory activity will have an assignment that will be submitted by the due date provided by the instructor. Each assignment will be worth 10-20 points.

Quizzes:

During each unit, a 20-point quiz will be administered. The quiz will be announced at least one class period ahead of time. The quiz will cover any unit material that has been explored.

Late Work:

- **All assignments are expected on the date announced in class.** Due dates will also be posted with the assignment on Canvas. However, assignments will be permitted a 24-hour extension without penalty or explanation.
 - For example, work due on Friday must be turned in before 11:59 p.m. (midnight) on Saturday, **not Monday**.
- Work received after the 24-hour extension will receive a 30% deduction.
 - There are extenuating circumstances that might prevent a student from submitting work on time. These circumstances must be approved by the IA administration.
 - If a student has an excused absence on a day an assignment is due, the student will not be penalized. When the student returns to the classroom after an excused absence, they must communicate with the instructor about an appropriate due date for completion of missed work.
 - Each student is allowed to submit 1 assignment late (beyond the 24h grace period) for an unexcused reason without penalty. In order to be granted this allowance, the student must contact the instructor to state that they will be submitting an assignment late. If work is submitted late without communication with the instructor, 30% will be deducted.
 - Unexcused late work for a given unit cannot be submitted after the Final Assessment for that unit is completed. Any work not submitted before the Final Assessment will receive a grade of "0".
 - **If you are absent for a quiz**, the quiz **MUST** be made up within the week of your return.

Academic Integrity Policy:

- Academic dishonesty in any form will not be tolerated. The student is responsible for knowing the policies and consequences as stated in the Academy handbook.
- Specifically for this course, cooperative group work on homework assignments is appropriate and is encouraged, but simple copying of an assignment from another or allowing another to copy your homework without collaboration is not acceptable.
- **Additionally, exchanging ANY information about the content of exams with students yet to take the exam or solicitation of such information is a severe violation of academic honesty standards.**
- Plagiarized work will receive a minimum penalty of "0" for that assignment and/or reduction of the overall course grade as deemed appropriate to the severity of the infraction.
- If an ethics violation occurs, instructors are required to report them regardless of the severity → *this includes talking to your parents/guardians.*
- If you have any questions regarding what constitutes cheating, please speak to the instructor. In order to preserve the credibility of all students' grades, it is strongly encouraged to tell the instructor if you observe violations of the integrity policy.

Indiana Academy Unexcused Absence Policy:

It is the policy of the Indiana Academy that any absence from class is unexcused, except for illness, death in the family, college or school-related activities, and extenuating circumstances. When a student is absent from a class, the instructor reports the student absence to the Faculty Attendance Coordinator in the Office of Academic Affairs. Unless the absence is excused by a school official, it is considered unexcused. The decision as to whether an absence is excused is not determined by the instructor.

You are expected to attend every class. You are allowed one unexcused absence without penalty. Each additional unexcused absence will be penalized as follows: Unexcused absence (1) = 1-point subtraction from final grade. Unexcused absence (2) = 3-point subtraction from final grade. Unexcused absence (3) = 5-point subtraction from final grade. (For example, if you have an 89 final average with (3) unexcused absences your final grade will be 84). Four (4) or more unexcused absences will lead to academic and residential consequences beyond the scope of this class determined by the Office of Academic Affairs (i.e., residential groundings, parent/principal conference, and/or detention).

Student Expectations:

- **Please know that I like hearing from you.** I am here to support you. Please do not hesitate to contact me when you need help. **Communication is key.**
- **You are expected to take an active role in class discussions/activities during lecture and lab.** Please come to our class meetings distraction free from other electronic devices or applications.
- **You are expected to periodically check your email accounts and Canvas.** I will make class announcements through Canvas Announcements.
- **Class materials and grades will be posted to Canvas. Grades will be posted to PowerSchool.** As grades are posted, it is your responsibility to make sure grades are posted correctly. Please contact me immediately if any grades are posted incorrectly.
- **You are expected to turn in assignments on time.** Please see the late policy provided above for submitted assignments for more details.
- **You are expected to attend class regularly and be there on-time.** If you are not in class on time, it will be reported as a tardy. If you are more than 15 minutes late for lecture or lab, then these may be recorded as absences. Exceptions might be made for students with extenuating circumstances.
- **If you are absent from lecture or lab, it is your responsibility to contact me.** Work can be made up for excused absences.

- **If you are absent on the day of a quiz or when a Unit Assessment is due**, it is your responsibility to contact me as soon as you can to set up a time for you to make it up.
- **All work you submit for individually submitted assignments and assessments must be original.** Copying from another student or plagiarism of others' work (including websites, textbooks, etc.) will result in at least a "0" for that assignment. Please review the Academic Integrity Policy provided above.

Indiana Academy Mask Policy:

The Indiana Academy will follow [Ball State University's mask policy](#) (see Section IV). Based on current CDC guidance recommending the wearing of face masks for all people—regardless of vaccination status—in public indoor settings in communities where the rate of coronavirus transmission is high or substantial, all employees, students, and campus visitors are required to wear a mask while inside any University building. This requirement is effective on August 9, 2021. Fully vaccinated people are not required to wear masks outdoors.

Individuals who are not fully vaccinated for COVID-19 are required to wear face masks while inside campus buildings and outside when physical distancing cannot be maintained.

If a student declines to wear a face mask as required, the student will be referred to the Director of Academic Affairs or the Director of Residential Affairs. If the situation occurs in a classroom or other academic setting, it is considered a classroom management issue, and the teacher will remind the student of the requirement and give the student a chance to comply with it prior to referring the matter to the Director of Academic Affairs or the Director of Residential Affairs. Wearing masks is crucial to preventing the spread of COVID-19 to others.

Special Circumstances:

If you need course adaptations or accommodations because of a disability, if you have emergency medical information to share with me, or if you need special arrangements in case the building needs to be evacuated, please make an appointment with me as soon as possible.

If you are struggling with study habits, stress and/or personal issues, I encourage you to discuss this with your SLC and/or contact the Guidance Office for help in dealing with these issues so that you can thrive at the academy. Many resources are available to students and important contact information is listed below:

For Academic assistance: Ms. Rebecca Hammons (rebecca.hammons@bsu.edu)
phone: 765-285-8108 office: WA 160-B

Mental Health Therapist: Dr. Mindy Wallpe (mcwallpe@bsu.edu)
phone: 765-285-8130 office: WA 160-C

BSU and IA commitment to 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 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 as expressed in our Beneficence Pledge and through university resources found at <http://cms.bsu.edu/campuslife/multiculturalcenter>.

Class Schedule:

Unit	Week	Potential Lab Topics
Unit 1: Introduction to Exercise Science & Principles of Exercise Training	Week 1- Jan. 3rd	Scientific Literacy Homeostasis Progressive Overload
	Week 2- Jan. 10 th	
	Week 3- Jan. 17 th (No class Mon.)	
	Week 4- Jan. 24 th	Unit 1 Assessment
Unit 2: Skeletal Muscle	Week 5- Jan. 31 st	Handgrip Dynamometry Fiber Type
	Week 6- Feb. 7 th (No class Mon.)	
	Week 7- Feb. 14 th	Unit 2 Assessment
Unit 3: Bioenergetics	Week 8- Feb. 21 st	Anaerobic Testing Blood Glucose
	Week 9- Feb. 28 th	
	Week 10- March 7 th (Spring Break)	No Lab
	Week 11- March 14 th	Unit 3 Assessment
Unit 4: Cardiovascular and Respiratory Systems	Week 12- March 21 st	Maximal Aerobic Capacity Blood Pressure and Heart Rate
	Week 13- March 28 th	
	Week 14- April 4 th	Unit 4 Assessment
Unit 5: Adaptations to Exercise Training	Week 15- April 11 th (No class Friday)	Blood Lactate Documentaries Case Studies
	Week 16- April 18 th (No class Monday)	
	Week 17- April 25 th	
	Week 18- May 2 nd	
	Exam Week	Unit 5 Assessment

The instructor reserves the right to change the syllabus on an "as needed" basis. Students will be notified of any changes, as they might occur. Please be sure to check Canvas and your e-mail regularly for announcements.