



Midwestern State University

Department of Athletic Training and Exercise
Physiology

EXPH 5023 – Advanced Exercise Physiology

Day and Time: Wednesday - 6:00 - 8:50 am

Location: Room 223, D.L. Ligon Coliseum

Instructor: Brett Crossland, Ph.D.

Email: brett.crossland@msutexas.edu

Telephone: 940-397-4956

Office: 208 Ligon Coliseum

Office Hours: M/W: 11:00 am – 1:00 pm; T/TH 9:00 - 11:00 am

Important Dates:

First Day of Class – Monday, August 30

Last Day to Drop – Monday, October 30

Thanksgiving Holiday – November 21-25 (No Class)

Exam I - Wednesday, September 27

Exam II - Wednesday, November 1

Final Exam – Wednesday, December 13 (8:00 pm – 10:00 pm)

Textbook: No textbook is required for this course. All required reading materials will be provided via D2L by the instructor.

Course Objectives:

1. Explain the energy systems, energy transfer during exercise and how best to train these systems for maximum performance in the development of physical fitness and performance.
2. Describe the physiology of muscular contraction and the principles related to the development and maintenance of strength, muscular endurance and flexibility.
3. Describe the function of the respiratory and circulatory system during rest and during exercise.
4. Describe the function of the cardiovascular system including the associative factors and theories related to performance and preventative wellness.
5. Describe the physiological responses and adaptations to environmental changes at rest and during exercise.
6. Develop an understanding of sport training methods for strength, power and endurance and the physiological effects.
7. Describe hormonal regulation of exercise as it relates to metabolism and energy transfer.

Course Evaluation: Evaluation of the course material will be broken down between ten (10) laboratory assignments throughout the semester, one (1) research paper, and three (3) exams.

Exams will be in person and worth 50% of your overall grade. MAKE UP EXAMS WILL NOT BE GIVEN AFTER THE SCHEDULED DATE.

A. Research Paper (1 @ 100 pts)	100 pts	17%
B. Labs (10 @ 20pts each)	200 pts	33%
C. Exams (3 @ 100pts each)	<u>300 pts</u>	<u>50%</u>
Total: 600 pts		100%

GRADING SCALE:

Grades will be assigned on the following points needed:

A: $\geq 90.00\%$	≥ 540
B: 80.00-89.99%	480-539
C: 70.00-79.99%	420-479
D: 60.00-69.99%	360-419
F: $\leq 59.99\%$	359 pts and below

Attendance

Attendance at class is **compulsory** if you intend on performing well in this course. Attendance will be taken for each class period. If you are not feeling well, I encourage you to stay away from the classroom. Lectures will not be recorded so it is your responsibility to get notes from fellow classmates. Lab assignments can not be completed without attendance of the weekly lecture therefore any missed class will result in a missed laboratory assignment.

Classroom Policies: It is assumed that everyone enrolled in this course is here to pursue further knowledge in the area of human movement. The following list provides what will be expected by the instructor and should also be expected by the students:

1. Attendance in class is expected. If you will not be able to participate in a class session please notify the instructor **PRIOR** to your absence in a timely manner. Only those with excuses that are related to University events (academic, athletic, etc.) or religious purposes may make-up work. If you have an excused absence and will not be available for an exam (**EXCLUDING** the FINAL EXAM) you must take the exam **PRIOR** to your absence (**NO EXCUSES!!**).
2. Turn off all cell phones, pagers, and any other electronic devices before class begins. It is disrupting to other students, and disturbing to the instructor if these electronic devices are active during the class period.
3. If you have a question that was not answered during the class period please feel free to stop by my office or email me your question (see front page).
4. Neither academic dishonesty nor plagiarism will be tolerated and as such, disciplinary action will be issued in accordance with university guidelines.

Services for Students with Disabilities

In accordance with Section 504 of the Federal Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990, Midwestern State University endeavors to make reasonable accommodations to ensure equal opportunity for qualified persons with disabilities to participate in all educational, social, and recreational programs and activities. After notification of

acceptance, students requiring accommodations should make application for such assistance through Disability Support Services, located in the Clark Student Center, Room 168, (940) 397-4140. Current documentation of a disability will be required in order to provide appropriate services, and each request will be individually reviewed. For more details, please see: <http://www.mwsu.edu/studentlife/disability>.

Tentative Course Schedule

Week	Date	Topic	Assignments
1	8/30	Class Intro / Muscle Physiology	Lab #1 - Due 9/3
2	9/6	Bioenergetics	Lab #2 - Due 9/10
3	9/13	Autonomic Control of Exercise	Lab #3 – Due 9/17
4	9/20	What Limits $VO_{2\max}$?	Lab #4 - Due 9/24
5	9/27	EXAM 1	
6	10/4	What Limits $VO_{2\max}$?	Lab # 5 - Due 10/8
7	10/11	Muscle Damage & Inflammation	Lab #6 - Due 10/15
8	10/18	Anaerobic Training Methods	Lab #7 - Due 10/22
9	10/25	Aerobic Training Methods	Lab #8 - Due 10/29
10	11/1	EXAM 2	
11	11/8	Environmental Factors Affecting Exercise	Lab # 9 – Due 11/12
12	11/15	Environmental Factors Cont.	Lab # 10 – Due 11/19
13	11/22	No Class - Thanksgiving	
14	11/29	Body Composition	Research Paper Due 12/3
15	12/6	Review for Final Exam	
	12/13	FINAL EXAM	8:00 – 10:00 pm

College Policies

Campus Carry Rules/Policies

Refer to: Campus Carry Rules and Policies

Smoking/Tobacco Policy

College policy strictly prohibits the use of tobacco products in any building owned or operated by WATC. Adult students may smoke only in the outside designated-smoking areas at each location.

Alcohol and Drug Policy

To comply with the Drug Free Schools and Communities Act of 1989 and subsequent amendments, students and employees of Midwestern State are informed that strictly enforced policies are in place which prohibits the unlawful possession, use or distribution of any illicit drugs, including alcohol, on university property or as part of any university sponsored activity. Students and employees are also subject to all applicable legal sanctions under local, state and federal law for any offenses involving illicit drugs on University property or at University-sponsored activities.