



Department of Athletic Training and
Exercise Physiology

EXPH 3003 Strength and Conditioning –
Theory and Application
Spring 2024

Instructor: Brett Crossland, Ph.D.

Office: Ligon Coliseum

E-mail: brett.crossland@msutexas.edu

Office: 208 Ligon Coliseum

Office Phone: 940-397-4956

Office Hours: M/T/W/R - 9:00 - 11:00 AM

Course Location: Ligon Coliseum 223 and Wellness Center Weight Room

Course meeting days: Monday, Wednesday, Friday

Course time: 12:00 – 12:50 PM

Important Dates:

First Day of Class	Wednesday, January 17
Spring Break	March 10-16 (No Class)
Last Day to Withdraw	Monday, March 5
Easter Holiday	March 29 (no class)

EXERCISE PROJECT:

Background information for
project due Sunday February 4

Exercise Prescription
General Plan due Sunday February 25

Exercise Prescription plan due Sunday April 14

EXAMS:

Exam I	Friday, February 23 (in class)
Exam II	Wednesday, April 5 (in class)
Final Exam	TBD

Prerequisites:

Successful completion (with a grade of C or above) in EXPH 1993 or 2993 and EXPH 2503.

Required Readings:

- Essentials of Strength Training and Conditioning, 4th edition, Haff and Triplett, eds.
ISBN: 9781492501626

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. Remember, if you plan on doing well in this, or any other course, you need to study outside of class three (3) hours for each credit hour of a course. Since this is a 3-credit hour course, you should be studying outside of class for 9 hours during the week and staying current with the materials presented.

Study Hours and Tutoring Assistance

There will be few study hall sessions prior to each EXAM by GA.

Student Handbook

Refer to: [Student Handbook-2022-23](#)

Academic Misconduct Policy & Procedures

Academic Dishonesty: Cheating, collusion, and plagiarism (the act of using source material of other persons, either published or unpublished, without following the accepted techniques of crediting, or the submission for credit of work not the individuals to whom credit is given or work submitted previously by a student in another course). Additional guidelines on procedures in these matters may be found in the Office of Student Conduct.

Other Required Materials

- Closed-toe shoes (indoor soccer shoes, Converse Chuck Taylors, athletic shoes, lifting shoes).
- Large notebook (spiral or otherwise) for taking notes on how to coach and perform the lifts)
- Appropriate clothing to exercise in (athletic shorts, shirts, sweatpants, sweatshirts)

Class Description:

A comprehensive theory and practice course designed to prepare the student to function as a sports/exercise science practitioner with individuals and small groups in commercial, educational, high performance, and clinical environments. A secondary objective of the course is preparation for successful completion of professional allied health certification exams. The course includes a combination of science-based theoretical lectures addressing the exercise programming of individuals, practical exercise leadership experience with individuals and small groups, and regular student participation in a variety of physical activity modalities according to ACSM/NSCA/ASEP/USOC recommendations.

Objectives:

At the completion of this course, students should be able to:

1. Demonstrate and understand the factors used in establishing an exercise training program
2. Have an understanding of the basis of providing instruction and feedback in order to properly teach physical skill
3. Understand how to apply the concept of energy-systems to different types of training (aerobic/anaerobic)
4. Understand how to assess the performances and factors affecting performances in individuals who are exercising for fitness/recreation and/or sport

5. Gain an understanding of how to interpret theoretical information (e.g., research) for the enhancement of human performance and physical well being

Class Policies and Student Conduct:

Attendance is imperative for success in this class. The student is responsible for any information presented, discussed and assigned in class regardless of whether or not the student was present.

Make-up tests, quizzes, assignments, or other grades will be granted for excused absences only:

- serious illness (doctor's note required)
- official university excused absences (with proper documentation **and** prior notification)
- extenuating AND unusual circumstances (PRIOR approval should be obtained or direct contact made with the instructor **within 24 hours** of the event). Whether or not specific circumstances qualify as both extenuating AND unusual is at the discretion of the instructor on a case-by-case basis.
- Documentation of the reason for any absence must be provided to the instructor.
- In emergencies where advance notification is not possible, the student must contact the Dean of Students to initiate an official request for an excused absence (940-397-4291).

Late assignments will not be accepted for any reason barring the guidelines described in the course syllabus.

When contacting the instructor in reference to class issues via e-mail (brett.crossland@msutexas.edu) or other method (for example a note in my mail box or on my office door), if you do not receive confirmation that I have received your message, project, etc., within a reasonable time period (**2 work days**), then I did not get it! **In other words, if you do not hear back from me, please follow up to make sure we are communicating effectively!**

Please check your msutexas e-mail account AND D2L prior to coming to class. If I am ill or there is a change in the class location, materials required, or meeting time, I will send an e-mail out to all of your student accounts.

Students are strongly encouraged to ask, and respond to, questions in class, because this identifies problem areas for the instructor.

It is also recommended that every day after class you go through and review and organize the notes you have taken, rectifying the material with what you have read in the text. Preparation immediately before the examinations is greatly facilitated by this process.

Students are encouraged to come to office hours in order to ask additional questions on the material or to gain a better understanding of grades on exams or assignments.

Please turn off your cell phones and put them away prior to the start of class. Failure to comply with this policy will result in the student being dismissed from class and will have major implications for the student's participation grade.

Please understand that slides are an outline and do not represent all of the information which will be covered in class. If we talk about topics in class, unless I specify otherwise, they are fair game for exam material. If there is something that comes up in class discussion which you do not understand, please be sure to let me know so that I can slow down and help you get it right.

Evaluation:

EXAMS:

There will be three (3) exams during the semester. Exams will be in multiple choice format.

Students who give prior notification for a university excused absence will be allowed to complete an alternate version of the exam outside of class.

Students who miss class for an emergency are required to schedule a time to make the exam up within 3 school days of return to classes. Students who miss exams for something which is scheduled ahead of time (sports, musical ensembles, etc.) must make arrangements prior to take the exam. The exam does not necessarily have to be taken prior to traveling, but the arrangements as far as when the exam will be taken must be made prior to traveling. It is the student's responsibility to make these arrangements within one week of returning from travel.

Students who miss an exam for what would *not* be considered a university excused absence or who do *not* give prior notification of excused absences will *not* be allowed to take the exam at an alternate time.

EXERCISE PRESCRIPTION PROJECT: ○ Develop a 3-month (12-week) exercise prescription program for a person to be determined in class:

Details:

- Give background information on your individual or your group.
- Talk about any specific concerns in dealing with a person with the specific characteristics of your subject
- Break overall plan down from the macrocycle to mesocycle to the microcycle level
- Give a general overview of each phase as you move through the program
- Provide a graph for volumes, intensities, and rest-times for each mesocycle for each type of training (i.e. resistance, cardiovascular, flexibility, balance, speed, etc...)
- Use the principles of periodization, or planned variation down to the microcycle level – THIS IS IMPORTANT!
- Use the appropriate stimulus for the desired response – See class notes or research papers for determination of intensities, volume, exercise selection
 - Some of this can be found in the optional resources listed in the beginning of the course syllabus

- Exercise choices on the part of students which do not reflect scientific principles discussed in class or in the readings or which are not supported by peer-reviewed research will be heavily penalized
- Show sufficient detail that I could implement this program correctly with your subject if needed – THIS IS IMPORTANT!
- Projects must be submitted via D2L in a file for the class which will be created by the instructor by Sunday April 14, 2024. TurnItIn is a plagiarism detection service.

PRACTICAL/ORAL EXAMS:

On the days designated as “Practical Exam” days, students will individually demonstrate how to teach a new exercise or skill and may be required to complete an oral quiz over material covered throughout the semester. Students should also be able to identify flaws in lifting technique being performed by another lifter. The lifts chosen and information tested upon is at the sole discretion of the instructor and may include any and all information presented in class, in the text, and in your article readings.

PARTICIPATION:

Evaluation for this portion of the class grade is subjective in nature and will be based on areas such as: cheerful and willing participation in class discussions, full engagement in class activities, following instructions, compliance with safety policies, having and displaying a positive attitude, readily and willingly answering questions when called upon in class, being on time and ready to start at the beginning of class (phones put away, headphones removed), etc.

Students who miss more than 15% of practical/applied sessions will earn a zero for their participation grade, regardless of their performance in other areas.

SAFETY POLICY:

Students are expected to follow instructor directions at all times. Any student who is acting in an unsafe manner will have the proper procedures explained to them. Failure to comply with those procedures will result in the removal of that student from that week’s class which creates an inability for that student to earn participation points for that session.

COURSE ASSESSMENT BREAKDOWN:

A. Exercise Prescription Program	150pts	25%
B. Participation (6 @ 10 pts each)	60pts	10%
C. Practical Exam	90pts	15%
D. Exams (3 @ 100pts each)	<u>300pts</u>	<u>50%</u>
	Total: 600pts	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

Tentative Course Schedule:

Week	Date	Topic	Reading	Assignments
1	1/17	Course Introduction		
1	1/19	Structure & Function of Body Systems	pp. 1-18	
2	1/22	Structure & Function Cont.	pp. 1-18	
2	1/24	Structure & Function Cont.	pp. 1-18	
2	1/26	Biomechanics of Resistance Exercise	pp. 19-42	
3	1/29	Bioenergetics of Exercise & Training	pp. 43-64	
3	1/31	Bioenergetics of Exercise & Training	pp. 43-64	
3	2/2	Practical / Applied Session	Background Info Due - 2/4	
4	2/5	Endocrine Response	pp. 65-86	
4	2/7	Endocrine Response	pp. 65-86	
4	2/9	Practical / Applied Session		
5	2/12	Performance Enhancing Substances	pp. 225-248	
5	2/14	Performance Enhancing Substances	pp. 225-248	
5	2/16	Practical / Applied Session		
6	2/19	Periodization	pp.583-604	
6	2/21	Periodization	pp.583-604	
6	2/23	EXAM #1	Exercise Rx General Plan Due - 2/25	
7	2/26	Adaptations to Anaerobic Training	pp. 87-114	
7	2/28	Adaptations to Anaerobic Training	pp. 87-114	
7	3/1	Practical / Applied Session		
8	3/4	Program Design for Resistance Training	pp. 439-470	
8	3/6	Program Design for Resistance Training	pp. 439-470	
8	3/8	Practical / Applied Session		
10	3/18	Adaptations to Aerobic Training	pp. 115-134	
10	3/20	Adaptations to Aerobic Training	pp. 115-134	
10	3/22	Practical / Applied Session		
11	3/25	Program Design for Aerobic Training	pp. 559-582	
11	3/27	Program Design for Aerobic Training	pp. 559-582	
12	4/1	Practical / Applied Session		

12	4/3	Age/Sex Related Diff. Res. Training	pp. 135-154	
12	4/5	EXAM # 2		
13	4/8	Age/Sex Related Diff. Res. Training	pp. 135-154	
13	4/10	Age/Sex Related Diff. Res. Training	pp. 135-154	
13	4/12	Practical / Applied Session	EXERCISE RX DUE - 4/14	
14	4/15	Psychology of Athletic Performance	pp. 155-174	
14	4/17	Nutritional Strategies for Performance	pp. 201-224	
14	4/19	Practical / Applied Session		
15	4/22	Principles of Test Selection	pp. 249-258	
15	4/24	Admin/Scoring/Interp. Of Testing	pp. 259-316	
15	4/26	Practical / Applied Session		
16	5/1	Rehabilitation & Reconditioning	pp. 605-622	
16	5/3	Rehabilitation & Reconditioning	pp. 605-622	
16	5/5	Review for Final Exam		
	TBD	Final Exam		

Assumption of risk:

As with any activity there is an assumed risk while participating. We will do all we can to provide a safe environment; however, you are ultimately responsible for your well-being. The university will not be held liable for any injuries that occur.

Any student who has a documented medical condition, (e.g. Asthma, Hypertension, Cardiac Condition, etc.), or any injury or other musculoskeletal condition that may preclude participation in a specific activity should inform the instructor immediately.

Arrangements will be made with an alternate activity for your participation.

Extra Credit

There will be several impromptu activities related to our class or department throughout the semester. If you participate in those activities, you will receive extra credits to the EXAM point total from participating of **research project, conference/thesis presentation, or/and study halls, etc.**

Late Work

Late assignments will not be accepted.

Make Up Work/Tests

No make-up exams/assignments will be given for any personal reasons, except under medical/religious/family emergency situations/ authorized participation in official school functions.

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 go to <http://www.mwsu.edu/student-life/disability>.

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.