Milken Institute School of Public Health THE GEORGE WASHINGTON UNIVERSITY	**Department of Exercise and Nutrition Sciences** **Master of Science in Exercise and Nutrition Sciences** **Strength and Conditioning** **2020-2021**

Program Director

Department Address	**Director Address**
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Mission Statement

The mission of this program is to provide formal graduate level academic instruction in the science and theory of resistance training, for the purpose of improving athletic performance and the prevention of inactivity related health disorders.

Goals

The goals of this program in the Department of Exercise and Nutrition Sciences are to:

- Establish scientific basis for the value of anaerobic exercise, and to provide internal and external programs that promote health behaviors across the lifespan.
- Meet an increasing demand for well-educated professionals capable of delivering a broad range of exercise-based preventive, technical, educational, and rehabilitative services.
- Gain insight into strategies for the prevention and treatment of sarcopenia, osteoporosis and obesity.
- Provide advanced training in exercise physiology as it relates specifically to resistance training for the purpose of increasing athletic performance and the prevention or treatment of inactivity-related health disorders.
- Prepare students with knowledge and skills to take the Certified Strength and Conditioning Specialist (CSCS) exam offered through the NSCA, and the Level One Weightlifting Coaching Course offered through United States Weightlifting (USAW)

Course Requirements

All GW Department of Exercise and Nutrition Sciences Master Degree students who select the Strength and Conditioning Program enroll in both Core Courses (17 credits) and Program-Specific Courses (19 credits). The 36 credit program includes a culminating experience which is a 6-credit internship plus the successful completion of a Comprehensive Exam.

Milken Institute School of Public Health

THE GEORGE WASHINGTON UNIVERSITY

Master of Science
Exercise & Nutrition Sciences – Strength and Conditioning

Program-at-a-Glance
2020-2021

Prerequisites

Undergraduate course in Exercise Physiology (must be completed prior to beginning coursework at GW, and must receive a grade of "B" or better)

		Credits	Semester Offered	Grade
MSES Core Courses				
EXNS 6202 (DE)	Advanced Exercise Physiology I	3	Fall	
EXNS 6203 (DE)	Advanced Exercise Physiology II	3	Spring	
PUBH 6002 (DE)	Biostatistical Applications for Public Health	3	Fall & Spring	
EXNS 6207 (DE)	Psychological Aspects of Sport and Exercise	3	Fall	
EXNS 6208 (DE)	Physical Activity: Physiology & Epidemiology	2	Spring	
PUBH 6619 (DE)	Fundamentals of Nutrition Science	3	Fall & Spring	
PUBH 6080 (DE)	Pathways to Public Health	0	Fall, Spring, Summer	
Program Specific Courses				
EXNS 6220	Power Training for Sports Performance	2	Spring	
EXNS 6221 (DE)	Science and Theory of Resistance Training	3	Spring	
EXNS 6222 (DE)	Current Topics in Strength and Conditioning	2	Fall	
EXNS 6223 (DE)	Biomechanical Analysis	3	Spring	
Elective(s)	Approved by Program Director	3	Fall, Spring, Summer	
EXNS 6233	Graduate Internship **and** Comprehensive Exam	6 0	Fall, Spring, Summer Fall, Spring, Summer	
Total Credits		**36**		

- *DE = Distance Education- course delivered online.*
- *Pathways to Public Health (PUBH 6080) may be waived for students who matriculate with a prior Masters of Public Health (MPH) from a CEPH accredited institution.*

Course Descriptions and Registration information can be found on the website: http://publichealth.gwu.edu/academics/.

Exercise and Nutrition Sciences
Graduation Requirements

1. **Graduate Credit Requirement:** 36 graduate credits are required.

2. **Course Requirements.** Successful completion of core courses and the program specific courses are required.

3. **Pathways to Public Health (PUBH 6080).** Successful completion of PUBH 6080 prior to graduation.

4. **Grade Point Requirement.** A 3.0 (B average) overall grade point average is required.

5. **Time Limit Requirement.** The degree must be completed within five years.

6. **Transfer Credit Policy.** Up to 12 graduate credits that have not been applied to a previous degree may be transferred to the MSEXSC upon approval. Courses need to have been taken within the past three years from an accredited institution with a grade of B or better.

Suggested Course Sequence

Fall Semester, 1st year (9 credits)

EXNS 6202	Advanced Exercise Physiology I (3)
PUBH 6002	Biostatistical Applications for Public Health (3)
EXNS 6207	Psychological Aspects of Sport and Exercise (3)
PUBH 6080	Pathways to Public Health (0)

Spring Semester, 1st year (9 credits)

EXNS 6203	Advanced Exercise Physiology II (3)
EXNS 6223	Biomechanical Analysis (3)
EXNS 6221	Science and Theory of Resistance Training (3)

Fall Semester, 2nd year (8 credits)

PUBH 6619	Fundamentals of Nutrition Science (3)
EXNS 6222	Current Topics in Strength & Conditioning (2)
ELECTIVE	Approved by Program Director (3)

Spring Semester, 2nd year (10 credits)

EXNS 6208	Physical Activity: Physiology & Epidemiology (2)
EXNS 6233	Graduate Internship (6)
EXNS 6220	Power Training Laboratory (2)

(36 credits total)

Updated March 2020

MS, Strength & Conditioning

	PUBH 6002	EXNS 6202	EXNS 6203	EXNS 6207	EXNS 6208	PUBH 6619	EXNS 6233	EXNS 6220	EXNS 6221	EXNS 6222	EXNS 6223
MS Exercise Science Core Competencies											
Students will demonstrate knowledge and understanding of the physiology of exercise.		I	I/D		D						
Students will demonstrate knowledge and understanding of the pathophysiology of selected chronic diseases and conditions.		I	I		D/M						
Students will demonstrate knowledge and understanding of the role of exercise training and regular physical activity as it relates to improved health, function, and performance across the lifespan.		I	I		D/M						
Students will demonstrate knowledge and understanding of various programmatic design variables that can be manipulated to bring about specific exercise- and physical activity outcomes.		I	I	D	D	D	M				
Students will demonstrate knowledge and understanding of current evidence- based aspects of physical activity and exercise training as it relates to improved health.		I	I	D	D	D					
Students will apply various theories of social and behavioral change as they relate to exercise adoption and maintenance and to improved health.				I/D	D		M				

MS Exercise Science Core Competencies	**PUBH 6002**	**EXNS 6202**	**EXNS 6203**	**EXNS 6207**	**EXNS 6208**	**PUBH 6619**	**EXNS 6233**	**EXNS 6220**	**EXNS 6221**	**EXNS 6222**	**EXNS 6223**
Students will evaluate these programs with regard to their effectiveness in improving physical performance and health.				D	D		D				
Students will design research studies that are consistent with advancing the field of exercise science.							D				
Students will integrate applicable statistical and epidemiological theories in the development and evaluation of this research.	D				D						
Program Specific Competencies											
GOAL: To integrate evidence-based knowledge of exercise physiology, psychology, and the science of exercise training to improve athletic performance.											
Students will demonstrate knowledge and understanding of the physiology of exercise. [Cognitive: levels 1 and 2].		I	I		D				D	D	D
Students will demonstrate knowledge and understanding of the role of exercise training as it relates to improved athletic performance and health. [Cognitive: levels 1 & 2].		I	I		D			D	D	D	D
Students will demonstrate knowledge and understanding of various programmatic design variables that can be manipulated to bring about specific training outcomes. [Cognitive: levels 1 and 2].				I		I		D	D	D	D

MS Exercise Science Core Competencies	PUBH 6002	EXNS 6202	EXNS 6203	EXNS 6207	EXNS 6208	PUBH 6619	EXNS 6233	EXNS 6220	EXNS 6221	EXNS 6222	EXNS 6223
Students will demonstrate knowledge and understanding of current evidence- based aspects of exercise training as it relates to improved athletic performance and health. [Cognitive: levels 1 and 2].								D	D	D	
GOAL: To utilize social and behavioral theories in designing exercise training programs that lead to maximal improvement in athletic performance and health.											
Students will apply various theories of social and behavioral change as they relate to improved athletic performance and health. [Cognitive: level 3; Affective: levels 3 and 4].				I/D	I/D						
Students will demonstrate skills in the design of exercise training interventions and sport-specific exercise programs that are consistent with these social and behavioral theories. [Cognitive: levels 3-5; Psychomotor levels 3-6].				D	D			D	D	D	
Students will evaluate these interventions with regard to their effectiveness in improving athletic performance and health [Cognitive: levels 3-6].				D	D				D	D	
GOAL: To utilize statistical and epidemiological theories in the development and production of research related to improved athletic performance and health.											
Students will design research studies that are consistent with advancing the field of strength and conditioning [Cognitive: levels 3-6].									D	D	

MS Exercise Science Core Competencies	PUBH 6002	EXNS 6202	EXNS 6203	EXNS 6207	EXNS 6208	PUBH 6619	EXNS 6233	EXNS 6220	EXNS 6221	EXNS 6222	EXNS 6223
Students will integrate applicable statistical and epidemiological theories in the development and evaluation of this research [Cognitive: level 5; Affective: levels 3-6].				I/D							
GOAL: To work with other professionals in the field of Strength & Conditioning for the purpose of gaining practical knowledge of the current state of the profession.											
Students will integrate their knowledge of Strength & Conditioning into existing professional experiences with other professionals in the field [Cognitive: level 5; Affective: levels 3-6; Psychomotor: levels 3-6].							M		I	D	
Students will appreciate the role of different strength & conditioning theories and practices among their partners in the field [Cognitive: level 2; Affective; levels 3 and 4].							M		I	D	

I = Introduced
D = Developed
M = Mastered