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** **2023-2024**

Program Director

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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)

Program Competencies

1. Integrate evidence-based knowledge of exercise physiology, nutrition, and the science of training to create exercise programs that improve health and optimize athletic performance.
2. Utilize social and behavioral theories in designing exercise training programs that lead to maximal improvement in athletic performance and health.

3. Utilize statistical and epidemiologic methods in the development, production, and dissemination of research related to improved athletic performance, physical activity, and health.
4. Utilize biomechanical principles in the evaluation, development, and implementation of sport-specific training programs.
5. Develop, coach, and execute complex exercise training modalities for working with athletic populations.

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 (3 credits) and Program- Specific Courses (33 credits). The 36-credit program includes a culminating experience that is a 6-credit internship plus the successful completion of a Comprehensive Exam, or a 6-credit thesis and thesis defense.

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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 four years.
6. **Professional Enhancement.** Successful completion of 8 hours of Professional Enhancement activities prior to graduation.
7. **Transfer Credit Policy.** Up to 12 graduate credits that have not been applied to a previous graduate degree may be transferred to the MSEXSC. Courses need to have been taken within the past three years from an accredited institution with a grade of B or better.
8. **CITI Training requirement:** All students are required to complete training regarding human subject protection regulation and the Health Insurance Portability and Accountability Act of 1996 (HIPAA). To fulfill this requirement, you must complete the Collaborative IRB Training Initiative (CITI) Course in The Protection of Human Research Subjects.

Prerequisite

Undergraduate Exercise Physiology – Course must be completed prior to beginning coursework at GW. Student must receive a grade of "B" or better.

Milken Institute School of Public Health
THE GEORGE WASHINGTON UNIVERSITY

Master of Science
Exercise and Nutrition Sciences
MS in Strength and Conditioning
Program at a Glance
2023-2024

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
Core Courses			
PUBH 6002 (DE)	Biostatistical Applications for Public Health	3	Fall, Spring
PUBH 6080 (DE)	Pathways to Public Health	0	Fall, Spring, Summer
Program Specific Courses			
EXNS 6202 (DE)	Advanced Exercise Physiology I	3	Fall
EXNS 6203 (DE)	Advanced Exercise Physiology II	3	Spring
EXNS 6207 (DE)	Psychological Aspects of Sport and Exercise	3	Fall
EXNS 6208 (DE)	Physical Activity: Physiology & Epidemiology	2	Spring
EXNS 6220 (DE)	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
PUBH 6619 (DE)	Fundamentals of Nutrition Science	3	Fall & Spring
Elective(s)	Approved by Program Director	3	Fall, Spring, Summer
Culminating Experience *Students will choose one of the following as a culminating experience*			
EXNS 6261 **and** EXNS 6998	Thesis Seminar **and** Thesis Research	3 3	Fall, Spring, Summer Fall, Spring, Summer
OR			
EXNS 6233	Graduate Internship **and** Comprehensive Exam	6 0	Fall, Spring, Summer Fall, Spring, Summer

DE = Distance Education- course delivered online.

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

Exercise and Nutrition Sciences
Strength and Conditioning – Online Program

Suggested Course Sequence

NOTE: PUBH 6080 (0 credits) must be taken prior to graduation

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)

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)
Or
EXNS 6261 Thesis Seminar (3)

Spring Semester, 2nd year (10 credits)

EXNS 6208 Physical Activity: Physiology & Epidemiology (2)
EXNS 6220 Power Training Laboratory (2)
EXNS 6233 Graduate Internship (6)
Or
EXNS 6998 Thesis Research (3)

(36 credits total)

*Students completing a thesis should register for their elective in Spring of the 2nd year.

	I=Introduced	*D=Developed*	*M=Maintained*									
MS, Strength & Conditioning	**EXNS 6202**	**EXNS 6203**	**EXNS 6207**	**EXNS 6208**	**PUBH 6619**	**EXNS 6220**	**EXNS 6221**	**EXNS 6222**	**EXNS 6223**	**EXNS 6233**	**EXNS 6261**	**EXNS 6998**
Program Specific Competencies	Advanced Exercise Physiology I	Advanced Exercise Physiology II	Psych Aspects of Sport & Exercise	Physical Activity: Physiology & Epi	Fundam of Nutrition Science	Power Training	Science & Theory of Training	Current Topics in S&C	Biomech-anical Analysis	Internship	Thesis Seminar	Thesis Research
1. Integrate evidence-based knowledge of exercise physiology and nutrition with the science of training to create exercise programs that improve health and optimize athletic performance.	I/D	I/D			I		M					
2. Utilize social and behavioral theories in designing exercise training programs that lead to maximal improvement in athletic performance and health.			I/D	D								
3. Utilize statistical and epidemiologic methods in the development, production, and dissemination of research related to improved athletic performance, physical activity, and health.			I	D/M							M	M
4. Utilize biomechanical principles in the evaluation, development, and implementation of sport-specific training programs.							I		I/D			
5. Develop, coach, and execute complex exercise training modalities for working with athletic populations.						M	I/D	I/D		M		

List of Courses

EXNS 6202: Advanced Exercise Physiology I
EXNS 6203: Advanced Exercise Physiology II
EXNS 6207: Psychological Aspects of Sport and Exercise
EXNS 6208: Physical Activity: Physiology and Epidemiology
PUBH 6619: Fundamentals of Nutrition Science
EXNS 6220: Power Training
EXNS 6221: Science and Theory of Training
EXNS 6222: Current Topics in Strength and Conditioning
EXNS 6223: Biomechanical Analysis
EXNS 6233: Internship