

Milken Institute School of Public Health

THE GEORGE WASHINGTON UNIVERSITY

Department of Exercise & Nutrition Sciences

PhD

Exercise Physiology & Applied Nutrition

2026-2027

Note: All curriculum revisions will be updated immediately on the website
<http://www.publichealth.gwu.edu>

Program Director

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Mission

The mission of the multidisciplinary Exercise Physiology and Applied Nutrition (EPAN) PhD program is to educate individuals in physical activity and nutrition science, using a translational approach that focuses on the roles of physical activity and nutrition in human health, from the molecular mechanisms to the community setting. Our scholars will be rigorously trained in science, including the use of sound methodological approaches and innovative thinking in order to advance knowledge that can be translated into real-world health applications of physical activity and nutrition.

Program Requirements

All Milken Institute School of Public Health (SPH) EXNS PhD students are required to have completed a master's degree in a relevant field. Students will take specific PhD Required Core Courses (10 credits), Required Foundational Courses (15 credits), Tailoring Courses (specific electives, minimum 12 credits) and Dissertation Research (9-11 credits).

Program Competencies

Students in the EPAN PhD program will be able to:

1. Integrate physiological and nutritional science concepts as they relate to disease prevention and overall health.
2. Evaluate valid methodological approaches in exercise physiology and nutrition science that can be utilized in laboratory and community-based research.
3. Analyze and critically evaluate data in exercise physiology and nutrition research.
4. Interpret and communicate exercise physiology and nutrition research results to scientific and public health audiences.
5. Develop and analyze hypotheses that can be tested by appropriate quantitative or qualitative research designs and methodologies.

Course Distribution Summary

- Total Credits = minimum 48 credits
- Required Core Courses = 10 credits
- Required Foundation Courses = 15 credits
- Tailoring Electives = 12 credits minimum
- Dissertation Preparation and Dissertation = 9-11 credits

**Required PhD Program Core Courses
10 Credits**

		Credits	Semester(s) offered
PUBH 8001	PhD Seminar: Cross Cutting Concepts in Public Health	1	Fall (1 st 7 weeks)
PUBH 8475	Research Ethics and Integrity in Domestic and International Research	1	Fall (2 nd 7 weeks)
PUBH 8416	Study Design and Evaluation Methods ¹	3	Spring
PUBH 8418	Applied Statistical Analysis ²	3	Fall
PUBH 8435	Dissertation Proposal Development	2	Fall
PUBH 6080	Pathways to Public Health (<i>see below</i>)	0	Fall (Year 1)

**Required Foundational Courses
15 Credits**

		Credits	Semester(s) offered
EXNS 6202	Advanced Exercise Physiology I	3	Fall
PUBH 6619	Fundamentals of Nutrition Science	3	Fall/Spring
PUBH 6611	Nutrition Assessment	2	Spring
EXNS 6810	Advanced Metabolism	3	Spring
EXNS 8108	Lab Techniques in Human Physiology	2	Fall (offered every other year)
EXNS 8110	Seminar in Exercise Physiology and Applied Nutrition	1+1	Fall

**Examples of Specialization Areas and Relevant Courses
12 Credits Minimum**

		Credits	Semester(s) offered
<i>Epidemiology Focus</i>			
EXNS 6208	Physical Activity in Public Health	2	Spring
PUBH 6235	Epidemiology of Obesity	1	Summer
PUBH 6237	Chronic Disease Epidemiology	2	Fall/Spring
PUBH 6242 + PUBH 8242	Clinical Epidemiology and Public Health: Reading the Research + Advanced Topics: Clinical Epi	2+1	Spring
PUBH 6244 + PUBH 8244	Cancer Epidemiology + Doctoral Topics: Cancer Epidemiology	2+1	
PUBH 6614	Study Design and Analysis in Nutritional Epidemiology	2	Fall
<i>Exercise Physiology Focus</i>			
EXNS 6203	Advanced Exercise Physiology II	3	Spring
EXNS 6221	Science and Theory of Training	3	Spring
BIOC 6221	Proteins, Pathways, and Human Health	4	Fall
BMSC 8212	Systems Physiology	3	Fall
<i>Applied Nutrition or Nutrition Policy Focus</i>			
EXNS 6242	Nutrition through the Lifecycle	2	Fall
PUBH 6612	Food Systems in Public Health	2	Fall
PUBH 6613	U.S. Food Policy and Politics	2	Spring

¹ Or PUBH 6495 Field Trial Methods and Application (1 additional credit) OR PUBH 6247 Design of Health Studies (3 credits)

² PUBH 6862 Applied Linear Regression Analysis may be taken in place of PUBH 8418 Applied Statistical Analysis. Students who exempt out of PUBH 8416 and/or PUBH 8418 or PUBH 6862 may choose alternate advanced statistics/methods courses in consultation with the program director and/or their advisor.

PUBH 6199	Topics: Food and the Global Environment	1	Varies	
PUBH 6482	International Food and Nutrition Policy and Programs	2	Spring	
PUBH 6499	Global Maternal and Child Nutrition	2	Fall	
<i>Social & Behavioral Focus</i>				
EXNS 6207	Psychological Aspects of Sport and Exercise	3	Fall	
PUBH 6620	Designing Healthy Communities	2	Spring	
PUBH 6625	Multi-Level Determinants of Childhood Obesity	2	Spring	
PUBH 6007	Social and Behavioral Approaches to Public Health	2	Fall/Spring/Summer	
PUBH 6550	Maternal and Child Health I	3	Fall	
PUBH 6562	Physical Activity and Dietary Interventions for Promoting Healthy Weight	2	Summer	
PUBH 8434	Behavioral Medicine and Public Health	3		
PUBH 8408	Advanced Topics: Health Behavior Research and Practice Applications	3		
<i>Cellular/Molecular Biology Focus</i>				
BMSC 8210	Genes to Cells	3		
BMSC 8230	Molecular basis of Human Disease	3		
GENO 8231	Introduction to Genomics, Proteomics, and Bioinformatics	3		
GENO 6223	Bioinformatics	2		
BIOC 6222	Biochemical Genetics and Medicine	3	Spring	
MLS 6145/6146	Advanced Clinical Biochemistry I + II	6 (3 each)	Fall	
<i>Advanced Statistics/Methods Courses ³</i>				
PUBH 6530	Qualitative Methods in Health Promotion	2	Spring	
PUBH 6862	Applied Linear Regression Analysis ³	3	Fall	
PUBH 8364	Quantitative Methods	3	Spring	
PUBH 8417	Qualitative Research Methods and Analysis	3	Spring	
PUBH 8419	Advanced Analysis and Dissemination	3	Spring (even years)	
EDUC 8122	Qualitative Research Methods	3	Fall	
EDUC 8131	Case Study Research Methods	3	Spring	
EDUC 8140	Ethnographic Research Methods	3	Spring	
EDUC 8171	Predictive Designs and Analysis	3	Fall	
EDUC 8172	Multivariate Analysis	3	Spring	
EDUC 8173	Structural Equation Modeling	3	Spring	
<i>Additional Relevant Course Offerings</i>				
PUBH 8116	Communicating Research Results	2	Spring	
May Add Additional Specialization Courses Approved in Advance by Advisor and Program Director				
Dissertation Research 9-11 Credits				
		Credits	Semester(s) offered	
EXNS 8999	Exercise Physiology or Applied Nutrition Dissertation	9-11		
Total credits		48		

³ It is highly encouraged that students take additional higher-level statistics courses in consultation with their dissertation advisor.

Graduation Requirements

All students accepted to this MPH program must follow the policies and regulations outlined in the [GW Bulletin](#) and the [GWSPH Student Handbook](#). This includes, but is not limited to:

- Minimum Grade Point Average (GPA)
- Minimum Course Grades
- Continuous Enrollment
- Maximum Time to Degree
- Required Minimum Degree Credits
- Transfer Credit Policy
- CITI Training
- Integrity Quiz and Plagiarism
- Professional Enhancement (PE) Hours
- PUBH 6080 Pathways to Public Health
- Graduate Teaching Assistantship Program
- Comprehensive Examination
- Culminating Experience (Dissertation)