Program Director
Jennifer Sacheck, PhD
Sanofi Professor of Prevention & Wellness
Department of Exercise & Nutrition Sciences
950 New Hampshire Avenue, NW
Washington, DC 20052
Email: jsacheck25@gwu.edu

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.

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

### UNIV 0250- Graduate Teaching Assistant Certification

Successful completion of this certification is required prior to taking on role as Teaching Assistant. This online certification is paid for by GW. The 1-credit received for this certification is not counted toward the 48-credit PhD Program.

### Required PhD Program Core Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Semester(s) offered</th>
</tr>
</thead>
<tbody>
<tr>
<td>PUBH 8001</td>
<td>PhD Seminar: Cross Cutting Concepts in Public Health</td>
<td>1</td>
<td>Fall (1st 7 weeks)</td>
</tr>
<tr>
<td>PUBH 8475/6421</td>
<td>Research Ethics and Integrity in Domestic &amp; International Research Or Responsible Conduct of Research</td>
<td>1</td>
<td>Fall (2nd 7 weeks)</td>
</tr>
<tr>
<td>PUBH 8416</td>
<td>Study Design and Evaluation Methods*</td>
<td>3</td>
<td>Spring</td>
</tr>
<tr>
<td>PUBH 8418</td>
<td>Applied Statistical Analysis**</td>
<td>3</td>
<td>Fall</td>
</tr>
<tr>
<td>PUBH 8435</td>
<td>Dissertation Proposal Development</td>
<td>2</td>
<td>Fall</td>
</tr>
<tr>
<td>PUBH 6080</td>
<td>Pathways to Public Health (non-MPH grads)</td>
<td>0</td>
<td>Fall (Year 1)</td>
</tr>
</tbody>
</table>

### Required Foundational Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Semester(s) offered</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXNS 6202</td>
<td>Advanced Exercise Physiology I</td>
<td>3</td>
<td>Fall</td>
</tr>
<tr>
<td>PUBH 6619</td>
<td>Fundamentals of Nutrition Science</td>
<td>3</td>
<td>Fall/Spring</td>
</tr>
<tr>
<td>PUBH 6611</td>
<td>Nutrition Assessment</td>
<td>2</td>
<td>Spring</td>
</tr>
<tr>
<td>EXNS 6810</td>
<td>Advanced Metabolism</td>
<td>3</td>
<td>Spring</td>
</tr>
<tr>
<td>EXNS 8108</td>
<td>Lab Techniques in Human Physiology</td>
<td>2</td>
<td>Fall (offered every other year)</td>
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<tr>
<td>EXNS 8110</td>
<td>Seminar in Exercise Physiology &amp; Applied Nutrition</td>
<td>1+1</td>
<td>Fall</td>
</tr>
</tbody>
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### Examples of Specialization Areas and Relevant Courses

#### 12 Credits Minimum

<table>
<thead>
<tr>
<th>Course Code</th>
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<th>Credits</th>
<th>Semester(s) offered</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXNS 6208</td>
<td>Physical Activity in Public Health</td>
<td>2</td>
<td>Spring</td>
</tr>
<tr>
<td>PUBH 6235</td>
<td>Epidemiology of Obesity</td>
<td>1</td>
<td>Summer</td>
</tr>
<tr>
<td>PUBH 6237</td>
<td>Chronic Disease Epidemiology</td>
<td>2</td>
<td>Fall/Spring</td>
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<tr>
<td>PUBH 6242/PUBH 8242</td>
<td>Clinical Epidemiology &amp; Public Health: Reading the Research + Advanced Topics: Clinical Epi</td>
<td>2+1</td>
<td>Spring</td>
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<tr>
<td>PUBH 6244/PUBH 8244</td>
<td>Cancer Epidemiology + Doctoral Topics: Cancer Epidemiology</td>
<td>2+1</td>
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<tr>
<td>PUBH 6614</td>
<td>Study Design and Analysis in Nutritional Epidemiology</td>
<td>2</td>
<td>Fall</td>
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#### Epidemiology Focus

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Semester(s) offered</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXNS 6203</td>
<td>Advanced Exercise Physiology II</td>
<td>3</td>
<td>Spring</td>
</tr>
<tr>
<td>EXNS 6221</td>
<td>Science and Theory of Training</td>
<td>3</td>
<td>Spring</td>
</tr>
<tr>
<td>BIOC 6221</td>
<td>Proteins, Pathways, and Human Health</td>
<td>4</td>
<td>Fall</td>
</tr>
<tr>
<td>BMSC 8212</td>
<td>Systems Physiology</td>
<td>3</td>
<td>Fall</td>
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</table>

#### Exercise Physiology Focus

#### Applied Nutrition or Nutrition Policy Focus

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Semester(s) offered</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXNS 6242</td>
<td>Nutrition through the Lifecycle</td>
<td>2</td>
<td>Fall</td>
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</tbody>
</table>
### Food Systems in Public Health
- **PUBH 6612** | Food Systems in Public Health | 2 | Fall
- **PUBH 6613** | US Food Policy and Politics | 2 | Spring
- **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

### Social & Behavioral Focus
- **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 & Practice Applications | 3

### Cellular/Molecular Biology Focus
- **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

### Advanced Statistics/Methods Courses
- **PUBH 6530** | Qualitative Methods in Health Promotion | 2 | Spring
- **PUBH 6862** | Applied Linear Regression Analysis** | 3 | Fall
- **PUBH 8364** | Quantitative Methods | 3 | Spring
- **PUBH 8417** | Qualitative Research Methods & Analysis | 3 | Spring
- **PUBH 8419** | Advanced Analysis & 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

### Additional Relevant Course Offerings
- **PUBH 8116** | Communicating Research Results | 2 | Spring

### Dissertation Research
- **EXNS 8999** | Exercise Physiology or Applied Nutrition Dissertation | 9-11 Credits

### Total credits
- **48**

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

**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.

***It is highly encouraged that students take additional higher-level statistics courses in consultation with their dissertation advisor.
**Graduate Teaching Assistant Certification (UNIV 0250).** Successful completion of this certification is required prior to taking on role as teaching assistant. This online certification is paid for by GW. The 1-credit earned for this certification does not count toward the PhD degree program requirements.

**Pathways to Public Health course (PUBH 6080).** As an accredited School of Public Health, curriculum in all graduate academic programs must provide a foundation in public health. If a student already holds a degree from an accredited program or school of Public Health, this course will be waived. Otherwise, this zero-credit, free, online course should be completed within one year of matriculation.

**Specialization courses.** Different specialization courses may be considered. Seek advisor’s/program director’s approval and where necessary, instructor approval.

**PhD Program Specific Competency Map.** Below, PhD program competencies are mapped to the required courses in which they are introduced, developed, and or mastered.

<table>
<thead>
<tr>
<th>Program Specific Competencies</th>
<th>Advanced Exercise Physiology</th>
<th>Nutrition Assessment</th>
<th>Fund of Nutrition Science</th>
<th>Advanced Metabolism</th>
<th>Lab Tech Human Phys</th>
<th>EPAN Doctoral Seminar</th>
<th>Dissert Proposal Develop</th>
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</thead>
<tbody>
<tr>
<td>1. Integrate physiological and nutritional science concepts as they relate to disease prevention and overall health.</td>
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<td>D</td>
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<td>4. Interpret and communicate exercise physiology and nutrition research results to scientific and public health audiences.</td>
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**List of Courses**

- EXNS 6202: Advanced Exercise Physiology
- PUBH 6611: Nutrition Assessment
- PUBH 6619: Fundamentals of Nutrition Science
- EXNS 6810: Advanced Metabolism
- EXNS 8108: Lab Techniques in Human Physiology
- EXNS 8110: EPAN Doctoral Seminar
- PUBH 8435: PhD Dissertation Proposal Development

Updated 3/25/2024
Graduation Requirements

1. **Integrity Quiz & Plagiarism.** In the first semester as a PhD student, all students should review the George Washington University’s Code of Academic Integrity, take the quiz and submit documentation to the School of Public Health’s Office of Student Records.

2. **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.

3. **Credits.** Successful completion of all required coursework.

4. **Grade point average.** A minimum overall grade point average of 3.0.

5. **Comprehensive examination.** After completion of course requirements, students will take a comprehensive exam based on the core courses, within one month of completion of all core coursework. Upon successful completion of the exam, students officially enter the doctoral candidacy phase of the program. The exam may be repeated, up to one time, upon approval.

6. **Proposal defense.** Doctoral candidates prepare a written dissertation research proposal with guidance from their dissertation advisor and committee. Each doctoral candidate gives an oral presentation and defense to the committee who determines the student’s readiness to commence the dissertation.

7. **Dissertation.** Doctoral candidates are required to conduct original research on a contemporary public health problem or issue relevant to the disciplines of exercise physiology and/or nutrition. Students are guided by existing exercise and nutrition science data and theory in formulating their dissertation questions. Research must be primarily analytic, community- or laboratory-based. The student gives an oral defense to the dissertation committee.

8. **Professional Enhancement.** All GWSPH students must complete a minimum of 8 hours of professional enhancement activities. This can be accomplished through participation in seminars, workshops, professional meetings and other appropriate functions. Documentation of attendance to the event should be submitted to the SPH Office of Student Records.

9. **Timeline.** The degree must be completed within seven years of matriculation. Degrees are awarded each semester, though formal commencement ceremonies, including the doctoral hooding ceremony, only occur in May. Students are eligible to participate in graduation activities only after they have completed all degree requirements, including a successful dissertation defense and have no financial obligations to the University.