

### Undergraduate Program Director

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

### Program Mission Statement

The mission of the Bachelor of Science (BS) in Exercise Science (EXSC) program is to advance the scientific basis of the benefits of regular physical activity and proper nutrition to health and function throughout the life-span. The BS in EXSC program trains students in the science and practice of exercise, physical activity, and health in the greater context of public health by developing critical thinking skills and fostering life-long learning.

### Careers

The BS in Exercise Science prepares students for professional careers in the field and for entrance into professional graduate programs:

- Medicine (Physician Assistant, Nursing, Physician)
- Physical Therapy
- Nutrition
- Corporate Fitness and Wellness Programs
- Personal Training
- Exercise Rehabilitation
- Coaching
- Sport Psychology
- Health Promotion
- Other health and public health professions

### Degree Requirements

All students accepted to the BS with a major in Exercise Science **complete 124 credit hours** and **maintain a minimum 2.5 grade point average in the core Exercise Science courses**. In addition **students must earn a minimum of a C- in each exercise science core course**. There are four levels of requirements for the BS with a major in Exercise Science: University general education requirements, Exercise Science core requirements, guided electives, and general electives. General education requirements are taken by all University undergraduate students and form the liberal arts education component of the BS degree with a major in Exercise Science. Students with a declared concentration must meet the requirements for the concentration in addition to the four levels of requirements listed above.

**PROGRAM-AT-A-GLANCE 2020-2021**  
**DEPARTMENT OF EXERCISE and NUTRITION SCIENCES**  
**BACHELOR OF SCIENCE in EXERCISE SCIENCE**

| University General Education Requirements (GenEd) Courses<br>(See University Bulletin for GenEd's under University Regulations) |   | Credits   |
|---|---|-----------|
| <b>University Writing</b>   | UW 1020 UNIVERSITY WRITING OR HONR 1015   | 4         |
| <b>WID</b>  | TWO WID COURSES; These may also be counted in another category  | 6         |
| <b>Humanities</b>   | ONE COURSE IN HUMANITIES<br><a href="http://bulletin.gwu.edu/university-regulations/general-education/">http://bulletin.gwu.edu/university-regulations/general-education/</a>           | 3         |
| <b>Mathematics or Statistics*</b>   | ONE COURSE IN EITHER MATH OR STATISTICS<br><i>Can be satisfied with STAT 1051 or STAT 1053 or STAT 1127 (required for the BS in Exercise Science)</i>                                   | 3         |
| <b>Science*</b>   | ONE NATURAL OR PHYSICAL SCIENCE COURSE WITH LABORATORY EXPERIENCE<br><i>Can be satisfied with BISC 1115/1125 which is required for the BS in Exercise Science</i>                       | 4         |
| <b>Social Science*</b>  | TWO COURSES IN THE SOCIAL SCIENCES<br><a href="http://bulletin.gwu.edu/university-regulations/general-education/">http://bulletin.gwu.edu/university-regulations/general-education/</a> | 6         |
| <b>TOTAL GenEd</b>  |   | <b>26</b> |

### Exercise Science Core

| Exercise Science Core Courses (same for all concentrations)  |  |   |  |                         |  |           |
|--|--|---|--|-------------------------|--|-----------|
| EXNS 1103  | Professional Foundations in Exercise Science | 1 |  | EXNS 3110               | Field Experience   | 2         |
| EXNS 1110  | Applied Anatomy & Physiology I & Lab         | 4 |  | EXNS 4110               | Current Issues in EXNS   | 3         |
| EXNS 1111  | Applied Anatomy & Physiology II & Lab        | 4 |  | PUBH 1101               | Introduction to Public Health  | 3         |
| EXNS 2111  | Exercise Physiology I & Lab                  | 4 |  | PSYC 1001               | General Psychology   | 3         |
| EXNS 2112  | Exercise Physiology II & Lab                 | 4 |  | BISC 1111* <sup>G</sup> | Intro Biology: Cells & Molecules   |           |
| EXNS 2113  | Kinesiology                                  | 4 |  | STAT* <sup>G</sup>      | 1051 or 1053 or 1127   |           |
| EXNS 2116  | Exercise and Health Psychology               | 3 |  | COMM* <sup>G</sup>      | 1040 or 1041<br>(satisfies Social Science & Oral Communication requirement)                    |           |
| EXNS 2119  | Introduction to Nutrition Sciences           | 3 |  | ANTH* <sup>G</sup>      | 1002, 1003, 1004<br>(satisfies Social Science & Global/Cross Cultural Perspective requirement) |           |
| <b>Total Exercise Science Core Requirements (*G = excluding GenEd requirements)</b>  |  |   |  |                         |  | <b>38</b> |
| <b>Students must maintain/earn a minimum of 2.5 GPA in the Exercise Science Core Courses and earn a C- or better in each core course to graduate</b> |  |   |  |                         |  |           |

## Concentration Requirements:

### No Concentration

| BS Exercise Students-No Concentration-Must Fulfill the Following Degree Requirements   |            |
|--|------------|
| ➤ All General Education Requirements (GenEd) & WID Courses   | 26 Credits |
| ➤ All Core Exercise Science Requirements <ul style="list-style-type: none"> <li>• C- or better required in core Exercise Science courses</li> </ul>                    | 38 Credits |
| ➤ Guided Electives Planned with Advisor <ul style="list-style-type: none"> <li>• Please see the “Guided Electives” worksheet for a list of approved courses</li> </ul> | 42 Credits |
| ➤ General Electives  | 18 Credits |
| Total Exercise Science Core Requirements ( <i>not including GenEd requirements</i> )   | 124        |

### Pre-Athletic Training/Sports Medicine Concentration

| Pre-Athletic Training/Sports Medicine Concentration Requirements |                               |   |  |            |                                      |    |
|--|-------------------------------|---|--|------------|--------------------------------------|----|
| EXNS 2110  | Injury Prevention and Control | 3 |  | EXNS 3119  | Therapeutic Exercise                 | 4  |
| EXNS 2121  | Orthopedic Taping and Bracing | 1 |  | EXNS 3121  | Medical Issues in Sports Medicine    | 3  |
| EXNS 3117  | Injury Assessment             | 4 |  | EXNS 3123W | Psychology of Injury and Performance | 3  |
| EXNS 3118  | Therapeutic Modalities        | 4 |  | EXNS 3125  | Athletic Training Practicum          | 3  |
| Total Concentration Requirements                                 |                               |   |  |            |                                      | 25 |

| BS Exercise Students-Pre-Athletic Training/Sports Medicine-Must Fulfill the Following Degree Requirements  |            |
|--|------------|
| ➤ All General Education Requirements (GenEd) & WID Courses   | 26 Credits |
| ➤ All Core Exercise Science Requirements <ul style="list-style-type: none"> <li>• C- or better required in core Exercise Science courses</li> </ul>                    | 38 Credits |
| ➤ Pre-Athletic Training/Sports Medicine Concentration Requirements   | 25 Credits |
| ➤ Guided Electives Planned with Advisor <ul style="list-style-type: none"> <li>• Please see the “Guided Electives” worksheet for a list of approved courses</li> </ul> | 17 Credits |
| ➤ General Electives  | 18 Credits |
| Total Exercise Science Core Requirements ( <i>not including GenEd requirements</i> )   | 124        |

## Pre-Medical Professional Concentration

| Pre-Medical Professionals Concentration Requirements                               |   |   |  |                                |   |           |
|--|---|---|--|--------------------------------|---|-----------|
| BISC 1116/<br>BISC 1126  | Intro Biology: The Biology of Organisms/Lab | 4 |  | MATH $\geq$ 1220* <sup>G</sup> | Calculus with Precalculus I<br>(or higher level MATH) | 3         |
| CHEM 1111  | General Chemistry I                         | 4 |  | PHYS 1011                      | General Physics I                                     | 4         |
| CHEM 1112  | General Chemistry II                        | 4 |  |                                |   |           |
| CHEM 2151  | Organic Chemistry I                         | 3 |  | PHYS 1012                      | General Physics II                                    | 4         |
| CHEM 2153  | Organic Chemistry I Lab                     | 1 |  |                                |   |           |
| CHEM 2152  | Organic Chemistry II                        | 3 |  |                                |   |           |
| CHEM 2154  | Organic Chemistry II Lab                    | 1 |  |                                |   |           |
| <b>Total Exercise Science Core Requirements (not including GenEd requirements)</b> |   |   |  |                                |   | <b>31</b> |

| BS Exercise Students-Pre-Medical Professionals Concentration-Must Fulfill the Following Degree Requirements  |            |
|--|------------|
| ➤ All General Education Requirements (GenEd) & WID Courses   | 26 Credits |
| ➤ All Core Exercise Science Requirements <ul style="list-style-type: none"> <li>• C- or better required in core Exercise Science courses</li> </ul>                    | 38 Credits |
| ➤ Pre-Medical Professionals Concentration Requirements   | 31 Credits |
| ➤ Guided Electives Planned with Advisor <ul style="list-style-type: none"> <li>• Please see the "Guided Electives" worksheet for a list of approved courses</li> </ul> | 11 Credits |
| ➤ General Electives  | 18 Credits |
| <b>Total Exercise Science Core Requirements (not including GenEd requirements)</b>   |            |
| <b>124</b>   |            |

## Pre-Physical Therapy Concentration

| Pre-Physical Therapy Concentration Requirements                                    |   |   |  |                           |  |           |
|--|---|---|--|---------------------------|--|-----------|
| BISC 1116/<br>BISC 1126  | Intro Biology: The Biology of Organisms/Lab       | 4 |  | PHYS 1011                 | General Physics I                                  | 4         |
| CHEM 1111  | General Chemistry I                               | 4 |  | PHYS 1012                 | General Physics II                                 | 4         |
| CHEM 1112  | General Chemistry II                              | 4 |  | PSYC 2013 or<br>PSYC 2011 | Developmental Psychology OR<br>Abnormal Psychology | 3         |
| MATH =><br>1220  | Calculus or pre-calculus I (or higher level math) | 3 |  |                           |  |           |
| <b>Total Exercise Science Core Requirements (not including GenEd requirements)</b> |   |   |  |                           |  | <b>26</b> |

| BS Exercise Students-Pre-Physical Therapy Concentration-Must Fulfill the Following Degree Requirements   |            |            |
|--|------------|------------|
| ➤ All General Education Requirements (GenEd) & WID Courses   | 26 Credits |            |
| ➤ All Core Exercise Science Requirements <ul style="list-style-type: none"> <li>• C- or better required in core Exercise Science courses</li> </ul>                    | 38 Credits |            |
| ➤ Pre-Physical Therapy Concentration Requirements  | 26 Credits |            |
| ➤ Guided Electives Planned with Advisor <ul style="list-style-type: none"> <li>• Please see the “Guided Electives” worksheet for a list of approved courses</li> </ul> | 16 Credits |            |
| ➤ General Electivesa   | 18 Credits |            |
| <b>Total Exercise Science Core Requirements (not including GenEd requirements)</b>   |            | <b>124</b> |

## EXERCISE SCIENCE GUIDED ELECTIVES 2020-2021

### ANTHROPOLOGY

|           |   |   |
|-----------|---|---|
| ANTH 1005 | Biological Bases of Human Behavior  | 4 |
| ANTH 2502 | Anthropology of Science and Technology: Twenty-First-Century Brave New Worlds | 3 |
| ANTH 3413 | Evolution of the Human Brain  | 3 |
| ANTH 3504 | Illness, Healing, and Culture   | 3 |

### BIOCHEMISTRY

|           |                            |   |
|-----------|----------------------------|---|
| BIOC 3261 | Intro Medical Biochemistry | 4 |
| BIOC 3262 | Biochemistry Lab           | 2 |
| BIOC 3560 | Diet, Health, & Longevity  | 3 |

### BIOLOGICAL SCIENCES

|                            |   |   |
|----------------------------|---|---|
| BISC 1116                  | Intro Biology: The Biology of Organisms | 3 |
| BISC 1126                  | Intro Biology-lab for BISC 1116         | 1 |
| BISC 2202                  | Cell Biology                            | 3 |
| BISC 2207                  | Genetics                                | 3 |
| BISC 2208                  | Genetics Laboratory                     | 1 |
| BISC 2213                  | Biology of Cancer                       | 3 |
| BISC 2214                  | Developmental Biology                   | 3 |
| BISC 2220                  | Developmental Neurobiology              | 3 |
| BISC 2320                  | Neural Circuits & Behavior              | 3 |
| BISC 2322                  | Human Physiology                        | 3 |
| BISC 2323                  | Human Physiology Lab                    | 1 |
| BISC 2336                  | Introductory Microbiology               | 3 |
| BISC 2337                  | Introductory Microbiology Laboratory    | 1 |
| BISC 2337W                 | Introductory Microbiology               | 4 |
| BISC 2581                  | Human Gross Anatomy                     | 3 |
| BISC 3122                  | Human Physiology                        | 3 |
| BISC 3123                  | Human Physiology Laboratory             | 1 |
| BISC 3165                  | Biochemistry I                          | 3 |
| BISC 3166                  | Biochemistry II                         | 3 |
| BISC 3209                  | Molecular Biology                       | 3 |
| BISC 3208                  | Molecular Biology Laboratory            | 1 |
| BISC 3261                  | Introductory Medical Biochemistry       | 4 |
| BISC 3262                  | Biochemistry Lab                        | 2 |
| BISC 3263 or<br>BISC 3263W | Special Topics in Biochemistry          | 2 |
| BISC 3320                  | Human Neurobiology                      | 3 |

### CHEMISTRY

|           |                         |   |
|-----------|-------------------------|---|
| CHEM 1111 | General Chemistry I     | 4 |
| CHEM 1112 | General Chemistry II    | 4 |
| CHEM 2151 | Organic Chemistry I     | 3 |
| CHEM 2153 | Organic Chemistry I Lab | 1 |

|                            |                                |   |
|----------------------------|--------------------------------|---|
| CHEM 2152                  | Organic Chemistry II           | 3 |
| CHEM 2154                  | Organic Chemistry II Lab       | 1 |
| CHEM 3165                  | Biochemistry I                 | 3 |
| CHEM 3166 or<br>CHEM 3166W | Biochemistry II                | 3 |
| CHEM 3262                  | Biochemistry Lab               | 2 |
| CHEM 3263W                 | Special Topics in Biochemistry | 2 |

### EMERGENCY HEALTH SERVICES

|          |  |   |
|----------|--|---|
| EHS 1002 | CPR & First Aid  | 1 |
| EHS 1040 | EMT Basic  | 3 |
| EHS 1041 | EMT Basic Lab  | 1 |
| EHS 1058 | EMT Instructor Development                                   | 2 |
| EHS 2108 | Emergency Medical Clinical Scribe                            | 3 |
| EHS 2110 | Emergency Department Critical Care Assessment and Procedures | 4 |

### EXERCISE & NUTRITION SCIENCES

|                       |  |     |
|-----------------------|--|-----|
| EXNS 1112             | Current Issues in Coaching   | 3   |
| EXNS 1114             | Community Nutrition  | 3   |
| EXNS 1117             | Principles of Coaching   | 3   |
| EXNS 1118             | Sport Nutrition  | 3   |
| EXNS 1119W            | Children and Sport   | 3   |
| EXNS 1199             | Topics in EXNS   | 1-3 |
| EXNS 2110             | Injury Prevention and Control  | 3   |
| EXNS 2117 or<br>2117W | Sport Psychology   | 3   |
| EXNS 2121             | Orthopedic Taping & Bracing  | 1   |
| EXNS 2120             | Assessment of Nutritional Status   | 3   |
| EXNS 2122             | Food Systems in Public Health  | 3   |
| EXNS 2124             | Lifecycle Nutrition  | 3   |
| EXNS 3101             | Independent Study  | 3   |
| EXNS 3102             | Applied Sport Psychology   | 3   |
| EXNS 3110             | Field Experience in Exercise and Nutrition Sciences (beyond the required credits for graduation) | 1-9 |
| EXNS 3111W            | Exercise and Nutrition Science Research Methods  | 3   |
| EXNS 3117             | Injury Assessment  | 4   |
| EXNS 3118             | Therapeutic Modalities in Sports Med.  | 4   |
| EXNS 3119             | Therapeutic Exercise in Sports Medicine  | 4   |
| EXNS 3121             | Medical Issues in Sports Medicine  | 3   |
| EXNS 3123W            | Psychology of Injury and Performance   | 3   |

### HEALTH & WELLNESS

|                            |                                   |     |
|----------------------------|-----------------------------------|-----|
| HLWL 1101                  | Special Topics                    | 1-3 |
| HLWL 1102                  | Stress Management                 | 3   |
| HLWL 1103                  | Issues in Men's Health            | 3   |
| HLWL 1104                  | Outdoor & Environmental Education | 3   |
| HLWL 1105                  | Yoga & the Meaning of Life        | 3   |
| HLWL 1106                  | Drug Awareness                    | 3   |
| HLWL 1108 or<br>HLWL 1108W | Weight & Society                  | 3   |

|           |                                |   |
|-----------|--------------------------------|---|
| HLWL 1109 | Human Sexuality                | 3 |
| HLWL 1110 | Issues in Alternative Medicine | 3 |
| HLWL 1112 | Issues in Women's Health       | 3 |
| HLWL 1114 | Personal Health & Wellness     | 3 |
| HLWL 1117 | Lifetime Fitness               | 3 |

#### HEALTH SCIENCES

|                    |   |   |
|--------------------|---|---|
| HSCI 2110          | Writing and Composition in the Health Sciences                    | 3 |
| HSCI 2101          | Psychological Aspects of Health (Residential and Online*)         | 3 |
| HSCI 2102          | Pathophysiology (ONLINE* ONLY)                                    | 3 |
| HSCI 2110          | Disease Prevention/Health Promotion (ONLINE* ONLY)                | 3 |
| HSCI 2112 or 2112W | Writing in the Health Sciences                                    | 3 |
| HSCI 2117          | Introduction to Statistics for the Health Sciences (ONLINE* ONLY) | 3 |
| HSCI 2112W         | Writing in the Health Sciences (ONLINE* ONLY)                     | 3 |

#### PHYSICS

|           |                    |   |
|-----------|--------------------|---|
| PHYS 1011 | General Physics I  | 4 |
| PHYS 1012 | General Physics II | 4 |

#### PSYCHOLOGY

|                         |                          |   |
|-------------------------|--------------------------|---|
| PSYC 2011 or PSYC 2011W | Abnormal Psychology      | 3 |
| PSYC 2013               | Developmental Psychology | 3 |
| PSYC 2014               | Cognitive Psychology     | 3 |
| PSYC 2015               | Biological Psychology    | 3 |
| PSYC 2570               | Peer Education           | 3 |
| PSYC 3128               | Health Psychology        | 3 |

#### PUBLIC HEALTH

|                    |   |   |
|--------------------|---|---|
| PUBH 1102          | History of Public Health                            | 3 |
| PUBH 2110          | Public Health Biology                               | 3 |
| PUBH 2112          | Principles of Health Education and Health Promotion | 3 |
| PUBH 2113          | Impact of Culture Upon Health                       | 3 |
| PUBH 2116          | Global Delivery of Health Systems                   | 3 |
| PUBH 2117          | Service Learning in Public Health                   | 3 |
| PUBH 3130          | Health Services Management and Economics            | 3 |
| PUBH 3131          | Epidemiology: Measuring Health and Disease          | 3 |
| PUBH 3135W         | Health Policy                                       | 3 |
| PUBH 3137          | Global Public Health Nutrition                      | 3 |
| PUBH 3151 or 3151W | Current Issues in Bioethics                         | 3 |

\*Courses offered online may only be taken in the summer term