Milken Institute School of Public Health
THE GEORGE WASHINGTON UNIVERSITY

Department of Exercise and Nutrition Sciences

Bachelor of Science in Exercise Science

2026 – 2027

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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 lifespan. 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 and human performance by developing critical thinking skills and fostering life-long learning.

Goals/Competencies of the BS Program in Exercise Science at GW

The goals of this program in Exercise Science are to ensure that the graduates are able to:

1. Demonstrate knowledge of systems and functions underlying physical activity, exercise, and health across levels of the human organism.
2. Demonstrate knowledge of human responses and adaptations to physical activity and exercise.
3. Develop critical thinking skills to evaluate, interpret, and synthesize physical activity, exercise, and health related interventions, outcomes, and research.
4. Utilize oral and written communication skills to summarize, critically evaluate, and discuss scientific evidence on key physical activity, exercise, and health related topics.
5. Develop and apply physical activity, exercise, and behavioral interventions to improve human health, function, and performance.
6. Translate physical activity and exercise science principles across public health settings.

Careers

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

- Athletic Training
- Coaching
- Corporate Fitness and Wellness Programs
- Exercise Rehabilitation
- Health Promotion
- Medicine (Physician Assistant, Nursing, Physician)
- Nutrition
- Personal Training

- Physical Therapy
- Sport Psychology
- Strength and Conditioning
- Other health and public health professions

Degree Requirements
All students accepted to the BS with a major in Exercise Science must follow the policies outlined in the GW Bulletin and the GWSPH Student Handbook.

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. University 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
2026-2027 DEPARTMENT OF EXERCISE and NUTRITION SCIENCES
BACHELOR OF SCIENCE in EXERCISE SCIENCE

University General Education Requirements (GenEd) Courses *(See University Bulletin for GenEd's under University Regulations)*		
Category		Credits
University Writing	UW 1020 UNIVERSITY WRITING	4
WID	TWO WID COURSES; These may also be counted in another category	6
Humanities	ONE COURSE IN HUMANITIES http://bulletin.gwu.edu/university-regulations/general-education/	3
Mathematics or Statistics	ONE COURSE IN EITHER MATH OR STATISTICS *Students in the BS in Exercise Science should take STAT 1051 or STAT 1053 or STAT 1127*	3
Science	ONE NATURAL OR PHYSICAL SCIENCE COURSE WITH LABORATORY EXPERIENCE *Students in the BS in Exercise Science should take BISC 1111*	4
Social Science	TWO COURSES IN THE SOCIAL SCIENCES *Students in the BS in Exercise Science should take ANTH and COMM courses* http://bulletin.gwu.edu/university-regulations/general-education/	6
	TOTAL GenEd Credits	**26**

Students should review the GW Bulletin to ascertain the prerequisite courses for the Exercise Science core courses.

Exercise Science Core

BS in Exercise Science Core Courses (same for all concentrations)		
Course Number	**Course Title**	**Credits**
PUBH 1010	First Year Experience Course	1
PUBH 1101	Introduction to Public Health	3
EXNS 1103	Professional Foundations in Exercise Science	1
EXNS 2116	Exercise & Health Psychology	3
EXNS 2119	Introduction to Nutrition Sciences	3
EXNS 2210	Applied Anatomy & Physiology I & Lab	4
EXNS 2211	Applied Anatomy & Physiology II & Lab	4
EXNS 3110	Field Experience in Exercise & Nutrition Sciences	2
EXNS 3111W	Exercise & Nutrition Sciences Research Methods	3
EXNS 3313	Kinesiology & Lab	4
EXNS 3314	Exercise Physiology & Lab	4
Selective	Choose one of the following courses: EXNS 3328 Scientific Principles of Strength & Conditioning [1] OR EXNS 3810 Human Metabolism	3
	Total Exercise Science Core Credits	**35**

Note: Students should review all policies and regulations outlined in the GW Bulletin and the GWSPH Student Handbook, particularly those related to minimum course grades, approved guided electives, and maximum credit allowances. Students may take more than 14 general elective credits, but this is the minimum number required for graduation.

Concentration Requirements:

No Concentration

BS Exercise Science - No Concentration Must Fulfill the Following Degree Requirements	
General Education Requirements (GenEd) & WID Courses	26 Credits
Core Exercise Science Requirements	35 Credits
Guided Electives (Planned with Advisor)	45 Credits
General Electives	14 Credits
Total Exercise Science No Concentration Credits	**120**

[1] Students in the Strength & Conditioning concentration are strongly encouraged to take EXNS 3328 Scientific Principles of Strength & Conditioning as their selective as it is a prerequisite for one of the required concentration courses (EXNS 4103 Training & Conditioning Program Design & Application I).

Pre-Athletic Training/Sports Medicine Concentration[2]

Pre-Athletic Training/Sports Medicine Concentration Requirements		
Course Number	**Course Title**	**Credits**
CHEM 1111	General Chemistry I	4
EXNS 1113	Medical Terminology	3
EXNS 3123W	Psychology of Injury and Rehabilitation	3
PHYS 1011	General Physics I	4
Selective Courses: Choose two to three courses from the following list: (6-8 credits): CHEM 1112 General Chemistry II (4) PHYS 1012 General Physics II (4) EXNS 2121 Orthopedic Taping and Bracing (1) EXNS 2214 Injury Prevention, Control, & Assessment with Lab (4) EXNS 3328 Scientific Principles of Strength & Conditioning (3) EXNS 4103 Training & Conditioning Program Design & Application I with Lab (4)		6-8
Total Pre-Athletic Training/Sports Medicine Concentration Credits		**20-22**

BS Exercise Science - Pre-Athletic Training/Sports Medicine Concentration Must Fulfill the Following Degree Requirements	
General Education Requirements (GenEd) & WID Courses	26 Credits
Core Exercise Science Requirements	35 Credits
Pre-Athletic Training/Sports Medicine Concentration Requirements	20-22 Credits
Guided Electives (Planned with Advisor)	23-25 Credits
General Electives	14 Credits
Total Exercise Science Pre-Athletic Training/Sports Medicine Concentration Credits	**120**

[2] Students wishing to enter an MS Athletic Training program are required to complete 80 hours of supervised shadowing with a certified athletic trainer (ATC). It is highly recommended for students to utilize EXNS 3110 Field Experience requirement to complete these hours.

Pre-Medical Professionals Concentration

Pre-Medical Professionals Concentration Requirements		
Course Number	**Course Title**	**Credits**
BISC 1112	Introductory Biology: The Biology of Organisms & Lab	4
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
MATH ≥1220	Calculus with Precalculus I (or higher-level MATH)	3
PHYS 1011	General Physics I	4
PHYS 1012	General Physics II	4
	Total Pre-Medical Professionals Concentration Credits	**31**

Additional Courses Recommended for Pre-Medical Professionals		
Course Number and Title	**Recommendation**	**Credits**
English or Writing [3]	Strongly Recommended	6
PUBH 2142 or STAT 1051, 1053, or 1127 [4]	Strongly Recommended	3
BISC 3261 or CHEM 3165 Intro to Biochemistry or Biochemistry 1 [5]	Strongly Recommended	3
BISC 2202 Cell Biology [4]	Helpful/Not Required	3
BISC 2207 and BISC 2208 Genetics & Lab [4]	Helpful/Not Required	3-4
BISC 2322 Human Physiology [4]	Helpful/Not Required	3
BISC 2337W Introductory Microbiology [4]	Helpful/Not Required	4
	Total PMP Additional Recommended Courses	**25-26**

BS Exercise Science - Pre-Medical Professionals Concentration Must Fulfill the Following Degree Requirements	
General Education Requirements (GenEd) & WID Courses	26 Credits
Core Exercise Science Requirements	35 Credits
Pre-Medical Professionals Concentration Requirements	31 Credits
Guided Electives (Planned with Advisor)	14 Credits
General Electives	14 Credits
Total Exercise Science Pre-Medical Professionals Concentration Credits	**120**

[3] May be fulfilled with UW20/WID courses; also meets GenEd requirements
[4] This course is also required for BS Exercise Science major
[5] This course is a guided elective for BS Exercise Science major

Pre-Physical Therapy Concentration

Pre-Physical Therapy Concentration Requirements		
Course Number	**Course Title**	**Credits**
BISC 1112	Introductory Biology: The Biology of Organisms & Lab	4
CHEM 1111	General Chemistry I	4
CHEM 1112	General Chemistry II	4
PHYS 1011	General Physics I	4
PHYS 1012	General Physics II	4
PSYC 2013 or PSYC 2011	Developmental Psychology OR Abnormal Psychology	3
	Total Pre-Physical Therapy Concentration Credits	**23**

BS Exercise Science - Pre-Physical Therapy Concentration Must Fulfill the Following Degree Requirements	
General Education Requirements (GenEd) & WID Courses	26 Credits
Core Exercise Science Requirements	35 Credits
Pre-Physical Therapy Concentration Requirements	23 Credits
Guided Electives (Planned with Advisor)	22 Credits
General Electives	14 Credits
Total Exercise Science Pre-Physical Therapy Concentration Credits	**120**

Strength & Conditioning Concentration

Strength & Conditioning Concentration Requirements		
Course Number	**Course Title**	**Credits**
EXNS 1117	Principles of Coaching	3
EXNS 2117	Sport Psychology	3
EXNS 2118	Sport and Nutrition	3
EXNS 3110	Field Experience in Exercise and Nutrition Sciences [6]	4
EXNS 3123W	Psychology of Injury and Rehabilitation	3
EXNS 4103	Training & Conditioning Program Design & Application I [7]	4
EXNS 4104	Training & Conditioning Program Design & Application II	4
Total Exercise Science Strength & Conditioning Concentration Credits		**24**

BS Exercise Science - Strength & Conditioning Concentration Must Fulfill the Following Degree Requirements	
General Education Requirements (GenEd) & WID Courses	26 Credits
Core Exercise Science Requirements	35 Credits
Strength & Conditioning Concentration Requirements	24 Credits
Guided Electives (Planned with Advisor)	21 Credits
General Electives	14 Credits
Total Exercise Science Strength & Conditioning Concentration Credits	**120**

[6] Students must complete 4 additional EXNS 3110 Field Experience in Exercise and Nutriton Sciences credits for the Strength and Conditioning Concentration in addition to the 2 credits required by the BS Exercsie Science Core

[7] Students are strongly encouraged to take EXNS 3328 Scientific Principles of Strength & Conditioning as their Exercise Science core selective as it is a prerequisite for EXNS 4103 Training & Conditioning Program Design & Application I.

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EXERCISE SCIENCE GUIDED ELECTIVES 2026-2027

The courses listed below have been identified as highly relevant to the BS in Exercise Science curriculum.

Guided elective credits are required to be selected from this list.

General electives can also be selected from this list, or any other undergraduate course at the University.

Note: Courses offered online may only be taken in the summer term.

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 1112	Intro Biology: The Biology of Organisms	4
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 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	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 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 1113	Medical Terminology	3
EXNS 1114	Community Nutrition	3
EXNS 1117	Principles of Coaching	3
EXNS 1119W	Children and Sport	3
EXNS 1199	Topics in EXNS	1-3
EXNS 2117 or 2117W	Sport Psychology	3
EXNS 2118	Sport and Nutrition	3
EXNS 2120	Assessment of Nutritional Status	3
EXNS 2121	Orthopedic Taping & Bracing	1
EXNS 2122	Food Systems in Public Health	3
EXNS 2123	Nutrition and Chronic Disease	3
EXNS 2124	Lifecycle Nutrition	3
EXNS 2126W	International Nutrition	3
EXNS 2214	Injury Prevention, Control, and Assessment	4
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 3114W	Cultivating Food Justice in Urban Food Systems	3
EXNS 3118	Therapeutic Modalities in Sports Medicine with Lab	4
EXNS 3119	Therapeutic Exercise in Sports Medicine with Lab	4
EXNS 3121	Medical Issues in Sports Medicine	3
EXNS 3123W	Psychology of Injury and Rehabilitation	3
EXNS 3328	Scientific Principles of Strength and Conditioning	3
EXNS 3810	Human Metabolism	3
EXNS 3995	Undergraduate Research	3
EXNS 4103	Training and Conditioning Program Design and Application I with Lab	4
EXNS 4104	Training and Conditioning Program Design and Application II with Lab	4
EXNS 4199	Topics in Exercise and Nutrition Sciences (Obesity Prevention *only*)	3

HEALTH & WELLNESS

HLWL 1101	Special Topics	1-3
HLWL 1102	Stress Management	3
HLWL 1106	Drug Awareness	3
HLWL 1108	Weight & Society	3
HLWL 1109	Human Sexuality	3
HLWL 1114	Personal Health & Wellness	3
HLWL 1117	Lifetime Fitness	3

HEALTH SCIENCES

HSCI 2100	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

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 2571	Helping Skills	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 2117	Service Learning in Public Health	3
PUBH 2142	Introduction to Biostatistics 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 3151W	Current Issues in Bioethics	3
PUBH 3995	Undergraduate Research in Public Health	3