



THE GEORGE  
WASHINGTON  
UNIVERSITY  
MEDICAL CENTER

**School of Public Health and Health Services**

**Bachelor of Science (BS)**

**Exercise Science**

**Pre-Dietetics Concentration**

**2011-2012**

**Department of Exercise Science**

**School of Public Health and Health Services**  
**Bachelor of Science in Exercise Science**  
**Pre-Dietetics Concentration**  
**2011 - 2012**

**Program Advisor**

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

**Background**

The George Washington University School of Public Health and Health Services (SPHHS) first offered the BS Exercise Science fall semester 1997. SPHHS was established in July 1997, bringing together three long-standing University programs, and is fully accredited by the Council on Education for Public Health (CEPH). The school educates over 800 students at the undergraduate, graduate, and doctoral levels, and with seven academic departments and four research centers. Since its inception, SPHHS has offered several undergraduate degrees and programs, including the Bachelor of Science in Exercise Science, the Bachelor of Science in Athletic Training, the Bachelor of Science in Public Health, the Secondary Field of Study/Minor in Exercise Science, the Secondary Field of Study/Minor in Public Health, and the Concentration in Global Public Health in conjunction with the Elliott School of International Affairs. To learn more about SPHHS, visit <http://sphhs.gwumc.edu>.

**Careers**

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

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

**Degree Requirements**

All students accepted to the BS with a major in Exercise Science complete 124 credit hours with a minimum 2.0 grade point average (GPA). There are two levels of requirements for the BS with a major in Exercise Science for students to complete: General curriculum requirements and Exercise Science core requirements, plus electives. General curriculum requirements are taken by all undergraduates in SPHHS and form the liberal education component of the BS degree with a major in Exercise Science.

**School of Public Health and Health Services  
 Department of Exercise Science  
 Bachelor of Science in Exercise Science Pre-Dietetics Concentration  
 Program at a Glance  
 2011-2012**

<b>General Curriculum Requirement (GCR) Courses</b>		<b>Credits</b>
Literacy	UW 1020	4
Quantitative and Logical Reasoning	STAT 1053 and MATH (≥ 1220)	6
Natural Science	BISC 1111 and BISC 1112 CHEM 1111 and CHEM 1112	16
Humanities and Social/Behavioral Sciences	PSYC 1001 and SPHR 1011, or COMM 1040, or COMM 1041, or COMM 1042 and Two additional approved social/behavioral science courses (6 credits) Two approved humanities courses (6 credits)	18
Public Health	PubH 1101 or 2110 or 2111	3
Writing in Discipline	Two courses; these may also count toward another category	6
<b>Total GCR</b>		<b>53</b>
<b>Exercise Science Core Courses (same for all concentrations)</b>		
EXSC 1103 (3) Professional Foundat'ns in Exercise Sci EXSC 1110 (4) Applied Anatomy & Physiology I EXSC 1111 (4) Applied Anatomy & Physiology II EXSC 2110 (4) Prevention and Care of Injury EXSC 2111 (4) Exercise Physiology I EXSC 2112 (4) Exercise Physiology II	EXSC 2113 (4) Kinesiology EXSC 2114 (3) Nutrition Sciences I EXSC 2115 (3) Nutrition Sciences II EXSC 2116 (3) Exercise & Health Psychology EXSC 4110 (3) Current Issues in EXSC EXSC 3110 (3) Internship	<b>42</b>
<b>Concentration Courses</b>		
CHEM 1151 (3) and 1153 (1) CHEM 1152 (3) and 1154 (1) BIOC/BISC/CHEM 3261 (3) and 3262 (1) SOC 1001 (3) BISC 2337 (3)		
<b>Total Concentration Courses</b>		<b>18</b>
<b>Electives</b>		
Planned with Advisor		<b>11</b>
<b>Total Credits</b>		<b>124</b>

<b>BS Exercise Students Must Fulfill These Degree Requirements</b>	
◆ All General Curriculum Requirements (53 Credits)	
◆ All Core Exercise Science Requirements (42 Credits)	
◆ All Concentration Requirements (18 Credits)	
◆ Electives Planned with Advisor (11 Credits)	
◆ C- or better in required major field courses	

**Exercise Science  
Undergraduate Course Offerings  
2011-2012**

ExSc	1050	Emergency Procedures and Safety Skills	2	Introduction to common safety principles, predisposing factors and common causes of accidents, injuries, and illnesses. This course includes American Red Cross Professional Rescuer and Automated External Defibrillator certification. Laboratory fee, \$25.
ExSc	1101	Experimental Course	1-3	Topic announced in the Schedule of Classes. May be repeated for credit provided the topic differs.
ExSc	1103	Professional Foundations in Exercise Science	3	Nature, scope, and scientific basis of exercise science: orientation to professional competencies and opportunities.
ExSc	1110-1111	Applied Anatomy Physiology I-II	4 4	Fundamentals of human anatomy and physiology for students preparing for health sciences professions. Emphasis on bones, joints, muscles, innervation, and blood supply. Laboratory fee: \$40 per semester. EXSC 1110 the prerequisite for EXSC 1111.
ExSc	1117	Principles of Coaching	3	Study of coach/athlete behavioral patterns and interactions, coaching methods, and interdisciplinary principles applicable to sport coaching.
ExSc	1118	Sport and Nutrition	3	The nutrition needs for recreational exercise and sports; skills in assessing nutritional needs; development of individual nutrition programs that are sport/activity-specific; and identification and correction of nutrition problems affecting sports performance.
ExSc	1119 W	Children and Sport	3	Learn to understand the psychological, psychomotor, and physiological factors of children's participation in sports. Examine the importance of sport to children, maturation, readiness to compete, adaptations to training; participation motives, social factors, role of parents, role of coaches, fundamentals of training, overtraining, nutrition, gender, stress, competition, current issues and child protection. Theoretical aspects of these developmental issues will be examined and applied in a variety of sport settings. (Writing in the Discipline – WID Course)
ExSc	1121	Introduction to Athletic Training	3	Introduction to the profession of athletic training. Exploration of topics related to athletic training and sports medicine.
ExSc	1180	Topics in Exercise Science	1-3	Topic to be announced in <i>Schedule of Classes</i> . May be repeated for credit with advisor's permission.
ExSc	2110	Prevention and Care of Injury	4	Information and practical experience in preventing, recognizing, and treating injuries that occur in physically active individuals. Prerequisite: EXSC 1110 and EXSC 1111 or equivalent.
ExSc	2111	Exercise Physiology I	4	The physiological functions of the body and the effect of exercise on these functions. Prerequisite: EXSC 1110 and EXSC 1111

ExSc	2112	Exercise Physiology II	4	Understand how the physiological systems of the body respond to acute and chronic exercise with attention to neuromuscular adaptations to exercise. Exercise training program design, training in extreme environmental conditions, and training consideration for special populations. Prerequisite: EXSC 2112
ExSc	2113	Kinesiology	3	Analysis of human movement with emphasis on the biomechanics of exercise and sport movement patterns. Prerequisite: EXSC 1110 and EXSC 1111 or equivalent, an approved course in anatomy.
ExSc	2114	Nutrition Sciences I	3	Understand how the macronutrients (fat, carbohydrate and protein) are digested, absorbed, and metabolized by the human body. Other topics include alcohol metabolism, weight management, body composition, and macronutrient metabolism in exercise. Prerequisite: BISC 1111
ExSc	2115	Nutrition Sciences II	3	Understand how the micronutrients (vitamins and minerals) are digested, absorbed, and metabolized by the human body. Other topics include hydration, the roles of phytochemicals in the diet, and the affect of exercise on micronutrients. Prerequisite: EXSC 2114
ExSc	2116	Exercise and Health Psychology	3	The relation of behavioral factors to health and disease. The role of physical activity in the prevention of chronic disease and disability. Health behavior theories and cognitive behavioral approaches to health behavior change.
ExSc	2117 W	Sport Psychology	3	Study of the psychological aspects of sport participants, athletes, teams, and competition in sport situations, including personality, motivation, performance level, achievement, and behavioral change strategies, social factors, training events, and measurement techniques. Prerequisite: PSYC 1001 (Writing in the Discipline – WID Course)
ExSc	2119	Basic Nutrition	3	The six classes of nutrients, their chemical basis, physiological functions and conversion into useable energy. Nutrient needs across the lifespan.
ExSc	2121	Orthopedic Taping and Bracing	1	Laboratory complement to EXSC 2110 required for Athletic Training majors only. Laboratory fee, \$40.
ExSc	3101	Independent Study	3	For departmental majors only. Provides the student with an opportunity to gain or enhance public health knowledge and to explore an area of interest related to public health research or the delivery and/or administration of health services. Prerequisite: outline of project must be approved prior to registration by project supervisor, program director, and dean's office prior to registration.

ExSc	3102 W	Applied Sport Psychology	3	Introduces students to current research, theoretical perspectives and practical aspects of applied sport psychology. Examine nature of peak mental performance and a range of psychological skills. Develop practical skills in applying mental skills training and use a variety of methods for assessing psychological skills in sports settings. Different approaches to applying and developing mental skills programs for athletes and profession and ethical issues will be examined. (Writing in the Discipline – WID Course)
ExSc	3110	Internship	3-9	For departmental majors. Prerequisite: EXSC 1110-1111 and EXSC 2111 or permission of instructor.
ExSc	3117	Injury Assessment	4	Information and practical experience in the evaluation and assessment of orthopedic and other injuries. Prerequisite: EXSC 2110. Laboratory fee: \$40.
ExSc	3118	Therapeutic Modalities in Sports Medicine	4	Explanation and demonstration of the use of therapeutic modalities on the healing process including discussion of the use of therapeutic modalities to enhance the rehabilitation process after athletic injury. Prerequisite: EXSC 3117 or permission of instructor. Laboratory fee: \$40.
ExSc	3119	Therapeutic Exercise in Sports Medicine	4	Discussion and application of general rehabilitation techniques to specific athletic injuries, including evaluation, implementation, and follow-up after specific joint injuries, Prerequisite: EXSC 3117 or permission of instructor.
ExSc	3121	Medical Issues in Sports Medicine	3	For Athletic Training majors only. General medical issues and pharmacology as they relate to the profession of athletic training. Laboratory fee, \$40.
ExSc	3122	Athletic Training Administration	3	Standards, policies, and practices of organization, supervision, and administration of athletic training programs.
ExSc	3123 W	Psychology of Injury and Performance	3	For Athletic Training Majors only. A study of various areas within the behavioral sciences related to the rehabilitation and prevention of injuries and the injured physically active individual. (Writing in the Discipline – WID Course)
ExSc	3124 3125 4121 4122	Athletic Training Practicum I - IV	3, 3, 3, 3	For Athletic Training majors only. Practical clinical experience and application of athletic training skills. Laboratory fee: for EXSC 3124, \$25; for EXSC 3125, \$10; for EXSC 4122, \$35.
ExSc	4110	Current Issues in Exercise Science	3	Study of current literature with implications for exercise and sport science specializations; use of library resources and retrieval systems; evaluation of professional competencies. Senior Exercise Science majors only.

Health and Wellness Course Offerings 2011-2012				
HLWL	1101	Topics	1-3	Topic announced in the Schedule of Classes. May be repeated for credit provided the topic differs.
HLWL	1102	Stress Management	3	This course addresses stress management from a holistic point of view, which includes mind body, spirit and emotions. Through self assessment and other consciousness raising activities students will become aware of their dominant stressors and how these stressors affect health and wellness.
HLWL	1103	Issues in Men's Health	3	This course will address relevant topics as they pertain to issues in men's health. The course will examine issues in men's health throughout the lifespan (i.e., from birth until death) and will incorporate various aspects of health ranging from physical and emotional to spiritual and occupational.
HLWL	1104	Outdoor and Environmental Education	3	A conceptual and experiential introduction to outdoor education, environmental education, wilderness travel and outdoor leadership with particular emphasis on the Virginian context.
HLWL	1105	Yoga and the Meaning of Life	3	This course provides students with an understanding of the historical teachings that have contributed to the physical, psychological and spiritual practices of yoga. The class is designed to help students adopt these teachings to benefit their own lives.
HLWL	1106	Drug Awareness	3	Analysis of the complex role drugs play in contemporary society and the ethical, legal, socioeconomic and health issues that surround their therapeutic and recreational use.
HLWL	1108	Weight and Society	3	Background and concepts of body dissatisfaction, disordered eating, food preoccupation, and exercise obsession.
HLWL	1109	Human Sexuality	3	Biological and developmental aspects of human sexuality; psychological and emotional aspects of sexual behavior; sexual identity; social forces affecting sexual issues; and research trends in the area of human sexuality.
HLWL	1110	Issues in Alternative Medicine	3	Various Modalities of alternative/complementary/ integrative therapy. Critical analysis and evaluation of the many dimensions of these approaches.
HLWL	1111	Sport and the Law	3	Basic principles of the law as they apply to amateur and professional sports. Legal issues and their ramifications.
HLWL	1112	Issues in Women's Health	3	An introduction to health promotion and disease prevention pertaining especially to diseases, disorders, and conditions that are more prevalent among or unique to women or for which risk factors or interventions may differ for women and men. Topics are covered from epidemiological, socio-cultural, historical, and behavioral perspectives.

HLWL	1114	Personal Health and Wellness	3	A survey of the various components involved in personal health and wellness, such as personal fitness, sexuality, mental health, and environmental health. Emphasis is on application of knowledge through the use of decision-making and behavior modification skills.
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