

## CAREER OPPORTUNITIES HEALTH, NUTRITION AND EXERCISE SCIENCES

Physical Education, Exercise Science, Recreation, and the many related programs provide a number a varied and unique opportunities for students today. In the past, a degree in Physical Education meant that an individual would most likely become a gym teacher. However, with the increased attention to health, fitness, and leisure, as well as rehabilitation and therapy, physical education now encompasses many different areas. Below are a number of different career directions that students may pursue while in our College.

Individuals planning careers in these fields generally must like people and motivating them through sensitivity to their needs. Other important qualities include good health, creativity and resourcefulness for planning activities, good judgment, and responsibility. To help develop these qualities, individuals are encouraged and advised to obtain related work/volunteer experience while in school; this experience will increase chances of obtaining employment in the field in the future. Also, in most cases, completion of an advanced degree provides additional salary increases. Remember that many of the careers listed above may require specialized training, internships, advanced degrees, certifications, and/or licensing.

### **EXERCISE SCIENCES/SPORTS MEDICINE**

(Majors/Concentrations: Athletic Training, Exercise Sciences/Biomechanics, Exercise Physiology)

- **Biomechanics**  
The advanced study of human movement using basic mechanical principles of motion (involves the use of computers and some knowledge of physics). Develops a fundamental understanding of the mechanics of the human body at rest or in motion. Also examines basic principles of static and dynamics as applied to the quantitative analysis of selected activities in sport. Research may include analysis of elite athletic performance, strength conditioning and training, analysis of sport equipment, and mechanical efficiency of industry.
- **Exercise Physiology**  
The study of the integration of the body systems in performance of exercise, work, and sport activities. Performance of exercise activities by the human body under environment and/or stress situations. Research focuses on the scientific basis for the use of exercise in preventing disease and/or improving performance, exercise metabolism, pediatric aspects of exercise, strength, performance enhancement (based on environment, training, nutrition, etc.), hypertension, prevention, and orthopedic rehabilitation.
- **Athletic Training**  
Designed to prepare students for professional certification in athletic training, for advanced study in related areas of sports medicine, and for career opportunities in academic, athletic, and hospital settings. Career opportunities will prepare students for a career in the prevention, diagnosis, and treatment of athletic injuries. Experiences include physical therapy, taping, first aid, and safety measures.
- **Kinesiology**  
Provides students with an understanding of how human movement and physical activity affects the structure and function of the human body.

- **Cardiac Rehabilitation**  
Prepares students for careers in cardio-pulmonary rehabilitation including assessment, prescription, counseling, and supervision of patients with cardiovascular, pulmonary, or metabolic disorders. Involvement in areas in community- and hospital-based programs.
- **Preventive and Rehabilitative Cardiovascular Health**  
Designed for students who wish to work in the area of cardiovascular health, both in the prevention of cardiac disease, and in the rehabilitation of those who have experienced cardiovascular problems.
- **Motor Learning/Control**  
Where cognitive processes such as perception, attention, memory, and external factors related to condition of practice are examined for their effects on acquisition and control of skillful motor activity. Research may include areas in exercise and central nervous system functions for the aging, injured and diseased populations, exercise and balance mechanisms, skill acquisition and retention, and information processing and optimal athletic performance.
- **Motor Development**  
Pattern of motor development from infancy through adolescence. Focuses on motor performance, perceptual-motor development in children, assessment for motor problems, remedial activities, principles of motor learning, and conditions that improve motor learning.
- **Movement Science**  
Concerned with the human force production, work output, and efficiency of movement, which gives a better understanding of exercise stress, mechanics of movement, and fitness throughout the lifespan.
- **Physical Therapy**  
Prepares the individual to engage in the identification, resolution, and prevention of dysfunctional motor behavior. Identifies causes of motor dysfunction in order to design appropriate programs to prevent injury and disability. Once the injury exists, the therapist is concerned with helping to achieve painless strength, range of motion, coordination of motion, and function. If normal motor behavior cannot be developed or restored, the therapist helps the individual to learn to adapt motor performance within the limitations of permanent loss.
- **Sport Physical Therapy**  
Function in the prevention, correction, and alleviation of the effects of disease and injury that is sports- related. Also may serve as a consultant to collegiate and professional sports programs.
- **Occupational Therapy**  
Involved in assisting people who have experienced physical injuries or illness, psychological or developmental problems, or problems associated with the aging process. Therapists coordinate a variety of educational, vocational, and rehabilitative therapies to allow the patient to become as self-sufficient as possible and lead a normal life in work, education, and pleasure.

- **Strength and Conditioning Trainer/Coach**  
Involved in the biomechanical and kinesiological factors, which are important in understanding the function and proper techniques for execution of a wide variety of standard and advanced weight training exercises. Physiological bases for strength training and adaptations caused by different training regimes are emphasized.

## **PHYSICAL EDUCATION INSTRUCTION, CURRICULUM, SKILL, AND DEVELOPMENT**

(Major: Health and Physical Education).

- **Adapted Physical Education**  
Study of prevalent abnormalities found in a general population including causes, prevention, care, and treatment. Methods of screening students for determination of these disabilities are presented through laboratory experiences.
- **Psychology of Exercise and Sport**  
Focuses on the psychological factors that influence sport participation, sport performance, and rehabilitation. Involved in the study and use of psychological theories and concepts, and their relationship to human behavior in sport. Sport viewed in the context of the participant, the teacher/coach, the spectator, and the entrepreneur.
- **Sociological, Philosophical, and Historical Perspective of Sport**  
Compares professional issues and social forces to various philosophic systems. Examines personal beliefs, values, and assumptions for the purpose of developing and/or refining a professional philosophy and a professional plan of study.
- **Social Science of Physical Activity**  
Emphasizes motivational, emotional, and cognitive processes as antecedents to and consequences of exercise and sport activity in humans throughout the lifespan. Concentrates on issues surrounding sports and its impact on society.
- **Human Movement and Sport**  
Provides advanced preparation for elementary, secondary, or college positions in physical education and coaching. Oriented towards a practical application and offers an opportunity for the in-depth research needed for (a) teaching physical education at all levels; (b) coaching at the secondary and post-secondary levels, as well as with private and municipal agencies; and (c) continued work at other institutions.
- **Program Administration**  
Provides the basic knowledge and principles of administration with specific application to the area of physical education and athletics.
- **Curriculum Development**  
Curriculum design content, foundations and related topics, as well as principles of supervision appropriate for the student teacher, cooperating teacher, and/or the head of a physical education department.
- **Teaching (Elementary/Secondary)**  
This degree program is primarily designed to prepare students for a career in teaching at the elementary and secondary levels.

## **HEALTH PROMOTION AND WELLNESS**

(Major/Concentration: Health Behavior Science/Fitness Management)

- **Health Promotion**  
Preparation for work in the health promotion field in diversified setting, including corporate, club, private, and governmental. Reviews the pathophysiology of cardiovascular disease, including the theory and principles of major risk factor development. Prepares the student to plan, create, and implement health promotion programs in the workplace, focusing on program selection, promotion, evaluation, and expansion. Qualifies the student to pursue clinically oriented programs in preventative and rehabilitative health programs, and provides an excellent background for advanced study.
- **Exercise and Wellness**  
Programmatic approach where the contributions of exercise to optimal health and professional application of exercise are emphasized through research on the development, implementation, and evaluation of exercise programs.
- **Preventive and Rehabilitative Cardiovascular Health**  
Designed for students who wish to work in the area of cardiovascular health, both in the prevention of cardiac disease, and in the rehabilitation of those who have experienced cardiovascular problems.
- **Stress Management**  
Focuses on the phenomenon of stress and includes application of various techniques in a laboratory setting with the emphasis on individual measurement, awareness and improvement of relaxation. Principles include tension reduction, relaxation techniques, or the refinement of relaxation techniques, or the refinement of relaxation techniques.
- **Fitness Management**  
Integrates managerial skills with scientific and clinical knowledge of exercise physiology, human physiological chemistry, behavioral psychology, and nutrition. Experiences may include publication of newsletters and articles for professional journals, worksite health promotion cost-benefit research and health promotion development, management, and evaluation. Requires skill in both cardiovascular health and management. Designed for those who wish to function as a manager in organizations with cardiovascular fitness programs. May also identify concepts in general management principles including organizational structure, personnel management, and budgeting. References made specifically to the health/fitness industry, addressing promotion and marketing, facility development, and risk management.
- **Health Education/Counseling**  
Provides training for careers in public, non-profit and private health agencies. Health educators in local and state health departments assess health problems and concerns of the community; plan, implement, and evaluate programs, conduct workshops, make presentations, and attempt to promote health through various educational means. Opportunities in the environmental health are open health educators in the government setting. Corporate settings provide opportunities for the health educator to develop and administer wellness programs, counsel, and assist employees and their families in

behavioral change. Other job opportunities are found in the medical field in hospitals and clinics, where the health educator works with patient rehabilitation and medical compliance. Health educators are also employed at many of the nonprofit agencies to plan programs, conduct workshops, and initiate fund-raising events.

## **LEISURE SERVICES/RECREATION**

(Major: Health Behavior Science/Leisure Service Management)

- **Recreational Administration**  
Study of the administrative practices in recreation and parks, including legal aspects, principles of planning and operation of parks and recreation facilities, financial and business procedures, public relations, and personnel practices and evaluations.
- **Therapeutic Recreation**  
Recreation Therapists work with mentally, physically, emotionally, or socially disabled individuals requiring special attention. Through a wide range of activities designed to enhance an independent lifestyle, recreation therapists strive to improve an individual's physical, mental, and emotional well-being. Therapeutic recreation can be used in both a clinical, such as a hospital, or non-clinical, such as an adult day care center, setting. Both have the objective of enhancing an individual's ability to participate in everyday life in a self-satisfying manner. Comprehensive therapeutic recreation services involve a continuum of care as varied as the interests and abilities of the people served, incorporating therapy, leisure education, and recreation participation in order to remediate or rehabilitate functional abilities and assist in diagnosis; acquire skills, knowledge and attitudes that facilitate an independent lifestyle; enhance health, personal growth, and development through intrinsically rewarding leisure behavior.
- **Leisure/Tourism/Commercial Recreation**  
Focuses on the establishment, organization, management, and marketing of various leisure, tourism, and commercial recreation services. Areas addressed include travel and tourism, entertainment services, leisure services in the outdoor environment, hospitality/food services, and retail outlets.
- **Recreation Leader**  
An understanding of the dynamics of group interaction and theories, principles, and practices in leadership. Applications, methods, and techniques are implemented for experiences working with individuals and in group settings.
- **Facility/Park Manager**  
Principles and procedures involved in planning for parks and recreation resources, land acquisition and utilization, maintenance of park and recreation areas, facilities, and equipment.
- **Outdoor Adventure Leadership**  
Recreation leadership in outdoor adventure activities. Attention directed toward conceptual and technical aspects of adventure programs.
- **Aquatic Management**  
Area which equips individuals with the knowledge, techniques, and skills required to operate an aquatic facility as a manager or director.

## **SPORT MANAGEMENT**

(Major: Sport Management)

- Sport Management  
Theories and philosophies associated with the management of the sport industry. Emphasis is placed on the application of subject areas such as marketing, law, finance, public relations and leadership to the sport industry. These competency areas are applied to sport industry segments such as professional sports, intercollegiate athletics, event/facility management, sport agencies, and sporting goods manufacturers.

## **NUTRITIONAL SCIENCES**

(Major: Applied Nutrition, Dietetics, Nutritional Sciences)

- Registered Dietitian  
Works in hospitals, nursing and retirement homes, and dialysis centers; may be specialized in enteral/parenteral nutrition, pediatrics or gerontology.
- Community/Public Health  
Counseling and advising the public to improve their quality of life through healthy lifestyles, including healthful eating habits.
- Universities and Medical Centers as a Health Educator  
Teaching students, physicians, nurses and other the science of nutrition, conducting research. This usually requires an advanced degree.
- Schools, Day-care centers, and Correctional facilities  
Managing food service operations, overseeing food purchasing and preparation, and managing staff.
- Sports Nutrition and Corporate Wellness Programs  
Educating clients about the connection between food, fitness and health. This can be done as a personal trainer or a sports nutritionist (usually requires advance degree).
- Related Graduate-Level Studies and Options for Nutritional Science Majors  
Students can pursue professional careers in medicine, pharmaceuticals, physician assistant, physical and occupational therapy, chiropractic, and optometry.

For more extensive information regarding the Department of Health, Nutrition & Exercise Sciences, please visit our website at the following address: <http://www.udel.edu/HNES>

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