

## Bachelor's Programs

### Movement Science Program

The Movement Science major's theoretical and experiential approach enables students to develop the knowledge, skills, and abilities required for careers and graduate education in fitness, wellness, movement science, kinesiology, exercise science, and human performance. In addition, it provides students with the undergraduate degree and courses required for admission to graduate health professional education programs including, but not limited to: medicine, osteopathic medicine, dental medicine, physician's assistant, physical therapy, occupational therapy, chiropractics, podiatry, entry level Masters Certification programs in athletic training, etc. and graduate education in exercise science, movement science, kinesiology, motor behavior, and human performance. Regardless of the selected concentration, students are provided with opportunities to shape and practice ethical behaviors relative to fitness and allied health professions. The goal of the experiential component is to provide students with an opportunity to develop "applied skills" and acquire best practices in a service-oriented manner.

The Movement Science Bachelor of Science degree offers two concentrations: 1) Fitness and Strength Certification Concentration, which prepares students to sit for and successfully pass certification exams required for immediate employment in senior positions in the field upon graduation and 2) Pre-Health Professional Concentration, which provides students with the requirements necessary for admission to a variety of graduate health professional programs. Upon graduation students are expected to possess the professional knowledge, skills, values, dispositions, and experiences required in allied health professions where under-represented populations are not found in large numbers.

The Movement Science major consists of a combination of classroom lectures, laboratory work, service-learning, and community outreach experiences. Students learn the most current technologies and techniques used in the profession and engage in more than 150 hours of experiential learning via course-embedded laboratory practice, service-learning, internships, and volunteer experiences. The students gain practical, workplace-ready skills, including: health and fitness appraisals, exercise testing and prescription, risk management, interpersonal communication, socio-cultural competency, and teamwork. Students are provided with opportunities to work with individuals of different ages and cultures, skill levels, fitness status, and physical capabilities. Graduates of the Fitness and Strength Certification Concentration are fully prepared to sit for and successfully pass the certification exams of the American College of Sports Medicine and the National Strength and Conditioning Association. In addition, students in this track are prepared for admission to graduate programs in Kinesiology and Movement/Exercise Science disciplines, such as Exercise Physiology, Biomechanics, Motor Behavior, entry level Masters programs in Athletic Training Certification,

and Occupational Therapy. Graduates of the Pre-Health Professional Concentration are prepared to meet admission requirements for Health Professional graduate education including, Physical Therapy, Physician's Assistant, Chiropractics, and Medicine. In addition to acquisition of prerequisites typically required by graduate health education programs, graduates of the Pre-Health Professional Concentration gain experience in the use of instrumentation typically used to assess injury, injury mechanisms, proprioception, rehabilitation progress, and performance.

Movement Science students in both concentrations are encouraged to participate in research and publication. While on campus, students have access to the Exercise Physiology, Rehabilitation, and Movement Analysis Research Laboratories, as well as the newly opened, state-of-the-art Recreation and Wellness Center.

## **Requirements for Admission to the Program.**

Students seeking admission to the major are required to have a 2.5 GPA.

## **Lifetime Fitness & Wellness**

All Delaware State University students must successfully complete a Lifetime Fitness and Wellness course during their first year of study. This course combines instruction in and practice of physical activity, healthier food selection, sexual wellness, mental health, and the effects of chronic disease, stress, drugs and alcohol. Students are assessed for baseline health using the Polar Tri-Fit system at the beginning of the semester and are followed for the remainder of the stay at Delaware State University\*. Students are required to participate in and document physical activity. Health risk appraisals and ongoing assessments are integrated into the course, which carries two hours of graded academic credit. This course is a required course in the General Education core and is applied toward the credit total for graduation regardless of major. An ancillary activity of Lifetime Fitness and Wellness, *Healthy Hornets*, provides all students, faculty, staff, and administrators with access to baseline health risk appraisals and personal training consultations.

## **Laboratories**

The *Movement Analysis Laboratory*, which is located in Delaware Hall, Room 130, provides students with opportunities to engage in Movement Science course encumbered activities and research. The research conducted in this laboratory includes biomechanical and neuromuscular factors associated with musculoskeletal function, postural stability, musculoskeletal injury, disease, and rehabilitation. The laboratory houses a 12-camera motion capture system, 2-force platforms, 2 8-channel EMG systems, force instrumented treadmill, virtual reality system, isokinetic machine, gait trainer, offset unweighing device, energy expenditure monitors, and balance Trainer.

This *Exercise Physiology Laboratory*, which is located in Memorial Hall, Room 101, is designed to enhance teaching and learning with the more applied aspects of exercise physiology in the Movement Science program. It contains a variety of equipment that is commonly used in clinical fitness and wellness settings. Equipment includes: BodPod, 2-metabolic carts and spirometry units, 2-electrocardiography carts, Holter monitors, treadmills, cycle ergometers, skinfold calipers, heart watch monitors, pressure cuffs, sphygmomanometers, etc.

## **Research**

The faculty is engaged in a variety of research activities including: neuromechanical aspects of injury prevention and rehabilitation, chronic disease prevention, physical activity interventions, overweight and obesity prevention and intervention across the lifespan, physical activity intervention across the lifespan, and behavioral aspects of exercise participation and compliance.

## **Community Engagement**

The Department participates in a variety of community outreach activities, including, but not limited to: community health fairs and health education workshops, sports nutrition education, strength and speed conditioning workshops, and in-depth health, fitness, and biomechanical assessments. These services are offered by the Department faculty and as student service learning activities that are supervised by the Department faculty.

## **Health Promotion Program**

The Health Promotion graduate possesses a unique marketable set of skills required for employment in public health agencies, private and non-profit agencies, worksite health promotion offices, HIV prevention, and many other public health related careers.

The Health Promotion major equips students with the knowledge, skills, dispositions and qualities required for work in diverse public and community health career settings. Graduates of this program can apply the science, theory, and practice of public health toward the enhancement of health status in the community. Health Promotion students participate in academic and applied training in program planning and implementation, program evaluation, policy analysis, research and management.

This major gives students the strong foundation needed for careers in private and public sectors, particularly public health agencies, volunteer programs, business and industry. It prepares students for graduate education in Public Health, epidemiology, Community Health Education, School Health Education, Occupational Health, and Chronic Disease Prevention. This Bachelor of Science in Health Promotion degree provides a solid background in health science, including public health education and policy, public health informatics, community health promotion in the work place, chronic disease management, health issues, human sexuality, mental health, nutrition, disease and injury prevention, substance use and abuse, environmental health, consumer health, personal health, and epidemiology. This major provides opportunities for students to acquire skills in: advocacy, health education and health promotion services coordination; resource management; policy, and research.

## **Requirements for Admission to the Program**

Students seeking admission to the major are required to have a 2.5 GPA. International students must submit a satisfactory TOEFL score.

## **Community Engagement**

The Department participates in a variety of community outreach activities, including, but not

limited to: community health fairs and health education workshops, sports nutrition education, strength and speed conditioning workshops, and in-depth health, fitness, and biomechanical assessments. These services are offered by the Department faculty and as student service learning activities that are supervised by the Department faculty.

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