

Health and Exercise Science-1

Health and Exercise Science

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The Department of Health and Exercise Science prepares students for careers as K–12 teachers and as exercise science professionals.

Students must complete their major required courses within the Department of Health and Exercise Science at The College of New Jersey unless special permission is granted by the student's program director to allow completion of a major required course at another college. The Department of Health and Exercise Science reserves the right to specify certain courses which must be taken at The College of New Jersey before the student will be permitted to enroll in student teaching or a practicum and internship.

The department maintains the right and the responsibility to dismiss students from the major who have not made satisfactory progress by completing the major component of the program, fulfilling department requirements, and/or satisfying teacher certification requirements.

Requirements for the major:

Twelve units within the major are required within the Health and Exercise Science program.

Requirements for the exercise science option are:

HES	099/Emergency Care	0 course unit
HES	160/Current Health and Wellness Issues	1 course unit
HES	172/Foundations of Exercise Science	1 course unit
HES	203/Human Anatomy and Physiology	1 course unit
HES	204/Anatomy and Kinesiology	1 course unit
HES	302/Assessment and Evaluation of Human Performance	1 course unit
HES	311/Applied Physiology	1 course unit
HES	350/Nutrition and Metabolism	1 course unit
HES	405/Guidelines for Allied Health Professionals	1 course unit
HES	410/Exercise Physiology and Exercise Prescription	1 course unit
HES	493/Internship	2 course units
HES	497/Research Seminar in Health and Exercise Science	1 course unit
Total		12 course units

Also required are:

BIO	171/Human Form and Function	1 course unit
STA	115/Statistics	1 course unit

Major core requirements for the teaching option are:

HES	099/Emergency Care	0 course unit
HES	160/Current Health and Wellness Issues	1 course unit
HES	172/Foundations of Health and Exercise Science	1 course unit
HES	182/Lifespan Wellness Activities	1 course unit
HES	203/Human Anatomy and Physiology	1 course unit
HES	204/Anatomy and Kinesiology	1 course unit
HES	282/Sports Concepts and Skills	1 course unit
HES	302/Assessment and Evaluation of Human Performance	1 course unit
HES	304 Adapted Kinetics	1 course unit

Health and Exercise Science-2

HES	311/Applied Physiology	1 course unit
HES	350/Nutrition and Metabolism	1 course unit
HES	371/Outdoor Education	1 course unit
HES	460/Comprehensive School Health	1 course unit
Total		12 course units

Also required are teacher preparation courses:

HES	180/Motor Development and Elementary Movement	1 course unit
HES	292/Methods of Elementary Health and Physical Education	1 course unit
HES	390/Methods of Secondary Health and Physical Education	1 course unit
HES	490/Student Teaching	2 course units
HES	498/Research Seminar in Health and Physical Education	1 course unit
Total		6 course units

Also required are:

BIO	171 Human Form and Function	1 course unit
PSY	220/Development across the Lifespan	1 course unit

Certification—(0–1 course units)

All students are required or recommended to earn certificates in the following:

- Emergency Care (Required)—no credit
- Driver Education Teacher Certification—one course unit
- Teacher Certification

Suggested First-Year Sequence (exercise science option)

FSP	First Seminar	1 course unit
BIO	171/Human Form and Function	1 course unit
HES	160/Current Health and Wellness Issues	1 course unit
HES	172/Foundations of Health and Exercise Science	1 course unit
	Liberal Learning	1 course unit
STA	115/Statistics (Liberal Learning-Quantitative Reasoning)	1 course unit
WRI	102/Academic Writing (if not exempted)*	1 course unit
	Elective or a liberal learning class	1 course unit

**It is recommended that students exempted from this course take other liberal learning courses.*

Total **8 course units**

Suggested First-Year Sequence (teaching option)

FSP	First Seminar	1 course unit
BIO	171/Human Form And Function	1 course unit
HES	160/Current Health and Wellness Issues	1 course unit
HES	172/Foundations of Health and Exercise Science	1 course unit
HES	180/Motor Development and Elementary Movement	1 course unit
	Liberal Learning	1 course unit
WRI	102/Academic Writing (if not exempted)*	1 course unit
HES	182/Lifespan Wellness Activities	1 course unit

Health and Exercise Science-3

**It is recommended that students exempted from these courses take other liberal learning courses.*

Total

8 course units

Program Entrance, Retention, and Exit Standards

Every major program at the College has set standards for allowing students to remain in that program, to transfer within the College from one program to another, and to graduate from a program. The following are the standards for Department of Health and Exercise Science programs. Minimum grades are noted in parentheses.

- Transfer into the program from another program within the College is based upon the following performance standards in these “foundation courses”: HES 160/Current Health and Wellness Issues (C); BIO 171/Human Form (C) and Function HES 172/Foundations in HES (C). In addition, the student must have an overall GPA of at least 2.50 at the time of application.
- Graduation requires a GPA of 2.0.

**Note: All students in teacher preparation programs must have a 2.75 GPA for recommendation for certification to teach in New Jersey. All students in teacher preparation programs must have a 2.75 GPA for recommendation for certification to teach in New Jersey.*

Health and Exercise Science: Teacher Preparation Option

Students are required to attend at least one professional meeting/conference per year. Proof of attendance must be submitted to the student’s advisor.

Students are prepared with a background in liberal learning. Most course work consists of specialized health and physical education subjects. Class work and activity skills are combined in the physical education courses to cover all facets of this major. Practical teaching experience is provided on the elementary and secondary levels. Majors are expected to participate in the intercollegiate, intramural, or club programs and be members of the department majors’ club, as well as state and national professional organizations.

Students who apply for transfer into the department must have established a minimum cumulative average of 2.50 for teacher-education certification preparation.

All teacher-preparation students must apply for admission to teacher education prior to the junior professional experience and:

1. Have a 2.75 overall cumulative average;
2. Have successfully completed HES 292/Introduction to Elementary and Secondary Health and Physical Education;
3. Present evidence of involvement in professional, departmental, campus, and community activities;
4. Have demonstrated ethical and professional behavior; and
5. Earn a C or above in major courses.

Candidates for a teacher-education certificate must have a 2.75 cumulative grade point average prior to student teaching, must meet the state hygiene/physiology requirement, and must pass the appropriate Praxis examination before the New Jersey State Department of Education will issue the appropriate certificate. Teacher-education candidates will receive a “certificate of eligibility with advanced standing” which

Health and Exercise Science-4

requires a candidate to be provisionally certified for his or her first year of teaching. After one year of successful teaching, the candidate is eligible for a permanent certificate.

The teaching option provides not only a high-quality but a cutting-edge program that is consistent with the standards of the National Association for Sport and Physical Education (NASPE) and the National Council for the Accreditation of Teacher Education (NCATE). The program culminates in the preparation of exemplary health and physical education K–12 teachers who collaborate with other professionals to teach the whole child while achieving the goals of content mastery, professionalism, and pedagogical expertise common to the preparation of all teachers. The objectives of the program present TCNJ graduates as reflective, inquiry-oriented, pre-professionals who are cognizant of equity and diversity issues, competent in their subject matter, and able to select instructional strategies best suited for the varying needs of their students.

Health and Exercise Science Professional Option

Students interested in pursuing careers in health promotion, medicine, allied health, wellness, sports medicine, and other related professions such as physical therapy, cardiac rehabilitation, and exercise science will develop their academic programs on an individualized basis with their advisors.

Requirements for the Health and Exercise Science Professional Option:

1. 2.0 cumulative grade point average in major courses.
2. A grade of C or above will be accepted for major courses.
3. A current CPR certification is required for the internship field experience.
4. Present departmental evidence of involvement in departmental or professional activities.

COURSES

HES 099/Emergency Care

0 course unit

(every semester)

Basic safety and emergency first-aid knowledge and skills with opportunity to attain American Red Cross CPR and first-aid certification.

HES 160/Current Health and Wellness Issues

1 course unit

(every semester)

This course is designed so that students learn to explore wellness as an active choice based on understanding of the science of health/wellness and the statistical study of risk factors for mortality and morbidity. Students will develop this understanding through an investigation of lifestyle issues facing college students. They will learn how to assess their lifestyles, interpret indicators and trends, and evaluate choices using the assessment-intervention-reinforcement protocol of health sciences.

HES 172/Foundations of Health and Exercise Science

1 course unit

(every semester)

This course is designed to introduce students to the critical issues in physical education, fitness, sports, and health promotion. Changing philosophies and basic concepts will be discussed. Professions related to physical education, sports, fitness, and health wellness will be included.

Health and Exercise Science-5

HES 180/Motor Development and Elementary Movement **1 course unit**

(spring)

Study of the concept and underlying principles of movement; application of these principles to sports and dance.

HES 182/Lifespan Wellness Activities **1 course unit**

(every semester)

The course will present introductory skills, knowledge, teaching methodology, evaluative techniques, and resources related to conducting at least three team sports activities. Primary emphasis is on knowledge of the skills and methodology.

HES 203/Human Anatomy and Physiology **1 course unit**

(with laboratory)

(every semester)

Prerequisite: BIO 171

Structure and function of the various tissues, organs, and systems of the human body, with applications of structural and functional relationships pertinent to the professions of health and physical education.

HES 204/Anatomy and Kinesiology **1 course unit**

(every semester)

Prerequisite: HES 203

A second-year course for both physical education and exercise science students that prepares the student to understand the science of motion. This course provides students with a foundation in neuromuscular physiology, anatomy, and biomechanics that is essential for the understanding of bodily movements and athletic performance.

HES 205/Applied Anatomy and Physiology II **1 course unit**

(with laboratory)

(spring)

Prerequisites: BIO 171, HES 203

This course is designed to prepare students on the basic scientific principles of human anatomy and physiology. A comprehensive systematic study of "balance" involving all structures and function in the human body will be performed. Course topics will include neural system, skeletal muscular system, growth and development, aging and rehabilitation. Laboratory experiences and dissections are included

HES 282/Sport Concepts and Skills **1 course unit**

(every semester)

The course will present introductory skills, knowledge, teaching methodology, evaluative techniques, and resources related to conducting at least three individual and dual sports activities. Primary emphasis is on knowledge of the skills and methodology. (Suggested sports: golf, tennis, badminton, and racquetball.)

HES 292/Methods of Elementary Health and Physical Education **1 course unit**

(with laboratory)

(every semester)

Observation of methods, techniques, organizational procedures, philosophies, and teaching styles currently used in elementary health and/or physical education classes. Field trips may be required at student expense. Development of competence and ability to teach complex motor skills related

Health and Exercise Science-6

to dance, gymnastics, and elementary games. These experiences develop conceptual understanding.

HES 301: Sports Biomechanics

1 course unit

Prerequisites: HES 203 and 205

(fall)

A junior-level course for Exercise Science students, *Sports Biomechanics* prepares students for a career in a fitness-related field. This course provides students with a foundation in kinesiology, exercise technique, kinetics, and kinematics that is essential for understanding the basic principles of human movement.

HES 302/Assessment and Evaluation of Human Performance

1 course unit

(with laboratory)

(every semester)

Prerequisites: 2.50 GPA. Minimum of five activity courses and formal acceptance into teacher education. Current enrollment in HES 390

An upper-level course for students studying exercise science and physical education. This course is designed to provide the student with a knowledge base in descriptive and inferential statistics and a thorough understanding of both laboratory and field evaluation of various components of fitness.

HES 304/Adapted Kinetics

1 course unit

(every semester)

An upper-level course for students preparing to become physical education teachers. This course is designed to provide students with a foundation to adapt physical education programs for students with disabilities. In addition, the course will provide information concerning the requirements of individualized educational programs.

HES 307/Principles and Problems of Coaching

1 course unit

(every semester)

Focuses on the principles and problems of coaching that are applicable across all sports. Prepares students to critically evaluate and assess the issues and problems that confront coaches who work with athletes of all ages and abilities. This course is based on the American Sport Education Program (ASEP).

HES 311/Applied Physiology

1 course unit

(every semester)

Prerequisites: HES 203, 204

Techniques, principles, and physiological requirements of exercise. Participation in individual fitness teams, development of exercise specificity in individual and group exercise programs, and the use of laboratory sessions and equipment in designing exercise protocol and assessing improved physiological function.

HES 350/Nutrition and Metabolism

1 course unit

(every semester)

Focuses on research processes and communication skills applied to the role of exercise and proper nutrition in regard to their positive influence on weight control. Techniques for evaluating energy balance and planning for weight-loss programs are discussed in light of established scientific principles and procedures.

Health and Exercise Science-7

HES 351/Stress Management **1 course unit**

(every semester)

Designed to help individuals relax, energize, and cope through learning strategies for desensitization to stressful situations, enhancement of self-image, and development of scientific relaxation techniques. A small additional fee may be required.

HES 353/Analysis of Drug Dependencies **1 course unit**

(every semester)

Analysis of drug dependencies and their effect on the individual and society. The use, misuse, and abuse of mood-modifying substances including tobacco, alcohol, and other drugs, both therapeutic and illicit. Implications for instruction in the public schools.

HES 356/Foundations of Sex Education **1 course unit**

(every semester)

Analysis of human sexuality, including human sexual response, value clarification, contraception, abortion, reproduction, social mores, homosexuality, sex research, and sex education. Curriculum design and implementation.

HES 358/Perspectives on Aging, Death, and Dying **1 course unit**

(every semester)

Analysis of personal meanings of aging, death, and dying viewed from biological, psychosocial, medical, and bioethical aspects. Roles of professionals in these areas and appraisal of current trends and research.

HES 370/300-Level Selected Topics in Health **1 course unit**

(occasionally)

In-depth study and/or field experience in current or specialized topics proposed by the faculty and approved by the department. The course may be repeated each time the content changes.

HES 371/Outdoor Education **1 course unit**

(every semester)

Introduction to the development of outdoor recreation and school camping. Theories, practices, educational significance, organization, administration, and basic program concepts. Field trips may be required at student expense.

HES 372/Care and Prevention of Athletic Injuries **1 course unit**

(with laboratory)

(every semester)

Prerequisites: HES 203, 204

Principles, organization, and administration of training room facilities. Preventive and remedial athletic bandaging, analysis of common injuries, first-aid and rehabilitation procedures, athletic training techniques.

HES 390/ Methods of Secondary Health and Physical Education **1 course unit**

(with laboratory)

(every semester)

Prerequisites: Formal acceptance into teacher education and 2.75 GPA

Prepares prospective student teachers in physical education by providing visits to public and private schools of middle and secondary levels. Physical education programs will be observed

Health and Exercise Science-8

and discussed, and some teaching experience may be provided. Field trips may be required at the student's expense.

HES 391/Independent Study in Health and Exercise Science **variable course units**
(every semester)

Prerequisite: Approval of topic by department

For advanced student; in-depth study of a carefully defined area of health, exercise science, or physical education.

HES 405/Exercise Guidelines for Allied Health Professionals **1 course unit**
(every semester)

Prerequisite: HES 311

This course is designed to provide students with a basic understanding of functional changes of human body throughout lifespan as well as pathological process underlying various lifestyle related chronic conditions. Students will also be given the opportunity to learn to develop safe and appropriate exercise programs with an emphasis on special populations including children, elderly, pregnant women as well as those with chronic conditions including heart disease, obesity, and diabetes, etc.

HES 410/Exercise Physiology and Exercise Prescription **1 course unit**
(fall)

Prerequisite: HES 311

This course is designed to provide an in-depth discussion on adaptations of various physiological systems to exercise training. Additional emphasis will be placed on the effects of environmental factors on physiological systems and performance, nutritional concerns, and ergogenic aids. Practical applications are provided to enable students to develop exercise prescriptions for a host of competitive and recreational athletic populations.

HES 450/Physiology of Resistance Training **1 course unit**
(spring semester)

Prerequisites: HES 203, HES 204, HES 311

This senior-level course prepares students for a career in a strength and conditioning-related field by providing students with a foundation in neuromuscular physiology, exercise biomechanics, acute responses and chronic adaptations to resistance training, and advanced program design and training periodization.

HES 459/Counseling for Health Issues **1 course unit**
(every semester)

Basic counseling techniques are applied to health-related areas. The health educator's role is examined as a counselor involved with students, schools, and the community.

HES 460/Comprehensive School Health **1 course unit**
(every semester)

The programs of school and community health including their scopes, functions, organization, and administration, and their relationships to the needs of the total community are reviewed.

HES 470/400-Level Selected Topics in Health **1 course unit**
(occasionally)

In-depth study and/or field experience in current or specialized topics proposed by the faculty and approved by the department. The course may be repeated each time the content changes.

Health and Exercise Science-9

HES 490/Student Teaching

2 course units

(every semester)

Prerequisite: Meeting of all criteria for admission to student teaching

Full semester of student teaching during the senior year with approved teachers in selected schools of the state. Direct supervision by teachers and college supervisors. Observation, participation, and responsible teaching. 2.75 grade point average is required.

HES 493/Internship

2 course units

(every semester)

Prerequisites: HES 204 and current in CPR

Emphasis upon practical experience, research, observation, participation, organization, administration, and supervision in programs of fitness, wellness, cardiac rehabilitation, physical therapy, or other health/wellness and sport promotion programs. Students may not take more than one additional course unit while doing an internship.

HES 497/Seminar in Health and Exercise Science

1 course unit

(spring)

Prerequisites: HES 172, HES 203, HES 204, HES 311, HES 393

This course emphasizes advanced-level study on hot topics in exercise science. It also provides students with the ability to individualize their focus area of advanced study to areas of interest. The course is the capstone course for the non-teaching major and has a heavy emphasis on scientific writing and presentation.

HES 498/Seminar in Health and Physical Education

1 course unit

(every semester)

Prerequisites: 2.75 GPA; concurrent enrollment in HES 490

Program organization and administration in health and physical education. Legal foundations, personnel functions, budget and finance, facilities and equipment, public relations, and professional organizations discussed.