

APPLIED EXERCISE SCIENCE MINOR

College of Agriculture and Life Sciences, College of Human Ecology

Program Website (<https://www.human.cornell.edu/dns/>)

Program Description

The Applied Exercise Science minor – available only to Division of Nutritional Sciences (DNS) majors – is a partnership between DNS and Ithaca College's Department of Exercise and Sport Sciences, School of Health Sciences and Human Performance that is helpful to students seeking positions in nutrition and physical fitness or pursuing careers in sports medicine and related fields.

Students who complete all specified courses receive a certification letter from Ithaca College (IC), which is a useful credential for job and school applications. Program completion is good preparation for the examination for Fitness Instructor Certification by the American College of Sports Medicine (a certification that also requires American Red Cross Cardiopulmonary Resuscitation (CPR) Certification or the equivalent).

For advising questions about the Applied Exercise Science minor or Nutritional Sciences (NS) course enrollment questions, please contact dnsstudentservices@cornell.edu.

Minor Requirements

The Applied Exercise Science minor requires 6 prerequisite course credits at Cornell followed by 12 course credits at Ithaca College. Students can choose to complete all the requirements for the minor or take some courses as long as they have met the course prerequisites. Applied Exercise Science students must take both prerequisites (NS 3410 Human Anatomy and Physiology and NS 3420 Human Anatomy and Physiology Laboratory before enrolling in three required Ithaca College courses:

1. Kinesiology: Examines the anatomical structures and mechanical aspects of human movement. Emphasis is placed on the functional anatomy of the musculoskeletal and articular systems.
2. Exercise Physiology: Examines physiological changes during exercise, after exercise, and during a training period. Also considers efficiency, needs, and limitations of body systems, and their interrelationships.
3. Biomechanical Principles of Human Movement: The study of biological and mechanical factors that affect humans as they move in exercise and sport. Kinematic and kinetic descriptions of selected motor skills receive careful consideration. Note: Prerequisite is Physics (was formerly Kinesiology).

Further information about the program and courses may be found at the Ithaca College Course Catalog (<https://catalog.ithaca.edu/undergrad/coursesaz/>); search for Exercise and Sport Sciences. In addition, a physics sequence is required for advanced study in most related areas.

Students should take the Ithaca College courses as early as possible once pre-requisites are completed (see sequence below), and check for conflicts between Cornell and Ithaca College courses in advance and plan accordingly. Careful planning of course schedules is required to complete both the minor and major, and students are responsible for all logistical arrangements (e.g. city buses or carpooling arrangements).

Minor Course Sequence

First Year: Introductory biology courses (Cornell)

Sophomore:

- NS 3410 Human Anatomy and Physiology (Spring, 4 cr) (Cornell)
- NS 3420 Human Anatomy and Physiology Laboratory (Spring, 2 cr) (Cornell; also counts as advanced NS elective or HBHS selective)

Junior / Senior:

- Kinesiology (F/S, 4 cr) (Ithaca College)
- Exercise Physiology (F/S, 4 cr) (Ithaca College)
- Biomechanical principles of Human Movement* (Ithaca College) (Fall/Spring, 4 cr; prerequisite: Physics [formerly Kinesiology])
- * Advanced Biomechanics also available (Spring, 4 cr; prerequisites: Kinesiology and Physics)