

# KINESIOLOGY (KIN)

## Degree Offered: M.S., M.S./M.S.W., Graduate Certificate

*This program is offered in Durham.*

The Department of Kinesiology offers a master of science degree with the following areas of concentration: exercise science, outdoor education, and sport studies. In addition, the Departments of Kinesiology and Social Work offer a dual degree program, which consists of a master of science in kinesiology with a concentration in outdoor education, as well as a master in social work (M.S.W.).

Additionally, a graduate certificate in adapted physical education is offered.

## Admission Requirements

Admission is based on undergraduate preparation, academic record, and letters of recommendation. Applicants must be above-average students and show adequate preparation in the basic support courses of the selected concentration area. Applicants who have not met specific course prerequisites should expect to take additional undergraduate work without receiving graduate credit.

Students applying for the dual degree program must meet both the admission requirements for kinesiology and for social work and be admitted to both programs (applications to each program required). See social work for their admission requirements.

<https://chhs.unh.edu/kinesiology/academics>

## Programs

- [Adapted Physical Education \(Graduate Certificate\)](#)
- [Kinesiology \(M.S.\)](#)
- [Kinesiology and Social Work Dual Degree \(M.S./M.S.W.\)](#)

## Courses

### Kinesiology (KIN)

#### KIN 802 - Health Content and Youth Risk Behaviors

**Credits:** 4

This course explores topics related to adolescent health, well-being, and risk behaviors that are relevant in the health education classroom today. Grounded in health behavior theories and behavior change, students explore ten dimensions of wellness: Cultural, Emotional, Environmental, Financial, Intellectual, Occupational, Physical, Sexual, Social, and Spiritual. Students develop a content base for teaching Standard 1 (Core Concepts) of the National Health Education Standards and better understand how health behaviors affect individual health and health instructions.

**Grade Mode:** Letter Grading

#### KIN 804 - Electrocardiography

**Credits:** 4

This course is designed to provide students exposure regarding basic interpretation and identification of electrocardiograms (ECGs). Included in this is detailed heart anatomy, coronary circulation, cardiac conduction system, electrocardiogram development, and all aspects pertaining to normal and abnormal ECGs. Open to Kinesiology majors only.

**Grade Mode:** Letter Grading

#### KIN 805 - Topics in Applied Physiology

**Credits:** 4

Advanced exercise physiology course dealing with topics both current and relevant to exercise science majors. Includes: genetics, environmental influences, immune system, detraining and over-training, epidemiology, ergogenic aids and the influence of age and gender.

**Grade Mode:** Letter Grading

#### KIN 806 - Neurology

**Credits:** 4

A detailed study of the development, morphology, internal configuration, physiology, histology, function, and pathology of the human nervous system. Labs consist of clinical case studies, brain dissections, and videos/slides to enhance the understanding of material. Prereq: human anatomy and physiology. Lab.

**Co-requisite:** KIN 807

**Grade Mode:** Letter Grading

#### KIN 807 - Neurology Lab

**Credits:** 2

Basic histology, neuroanatomy and neurophysiology of the human nervous system. Use of brain specimens, videos and pathology case studies to elucidate cell structure, sensory and motor systems, and spinal cord, brainstem, and cortical organization and anatomy. Prereq: ZOO 507 - ZOO 508 or COMM 521 or equivalent. Special fee. Cr/F.

**Co-requisite:** KIN 806

**Grade Mode:** Graduate Credit/Fail grading

#### KIN 812 - Health Education Practicum

**Credits:** 4

The purpose of this practicum is to provide students with an opportunity to observe, develop, and teach in a health education classroom. Students are required to accumulate 60 hours of teaching experience in the schools over the course of the semester. Weekly seminars will integrate field experience with content knowledge in health, nutrition and physical activity. Prereq: HPE 648.

**Grade Mode:** Letter Grading

#### KIN 820 - Science and Practice of Strength Training

**Credits:** 4

Designed to provide graduate students exposure to the knowledge and practical experience necessary for establishing strength development programs in a variety of populations, including healthy, athletic, and higher risk individuals. Program design, correct lifting techniques, physiological adaptations, and organization and administration of programs are highlighted. Includes fundamentals regarding the selection of programs and equipment, spotting techniques, as well as ways to assess strength and power in humans without expensive equipment.

**Grade Mode:** Letter Grading

**KIN 822 - Applied Biomechanics****Credits:** 4

This course provides students with a background in the fundamental biomechanical principles that describe and govern human movement. Topics of the course include friction, linear and angular motion, tissue material properties, conservation of energy, work and power, fluid mechanics, stability and center of gravity, mechanics of injury, walking and running gait analysis. These topics are taught through the lens of modern biomechanical analyses including dynamometry, electromyography, accelerometry, and optical motion analysis.

**Grade Mode:** Letter Grading**KIN 824 - Exercise Metabolism: Acute and Chronic Adaptations****Credits:** 4

An overview of the metabolic processes that occur during exercise and metabolic changes that occur as a result of exercise training. Topics covered include glycogenolysis and glycolysis in muscle, cellular oxidation of pyruvate, lipid metabolism, metabolism of proteins and amino acids, neural and endocrine control of metabolism, and fatigue during muscular exercise. Prereq: physiology of exercise and general chemistry.

**Grade Mode:** Letter Grading**KIN 831 - Inclusive Teaching Through Sport****Credits:** 4

This hybrid course examines the practical application of inclusion through Paralympic and adapted sports including wheelchair basketball, sitting volleyball, goalball, boccia, table-top games and "traditional" sports. In-class sessions will be held the first three weeks while an on-line/independent portion will be conducted the last two weeks of the course. A variety of sporting activities will be introduced that provide educators with the needed tools to develop and implement physical and recreational programs for all.

**Grade Mode:** Letter Grading**KIN 836 - Fitness and Graded Exercise Test and Prescription****Credits:** 4

This course is designed to provide students exposure to the knowledge and practical experience necessary for establishing exercise programs in apparently healthy populations. Topics include fitness testing, test interpretation, and exercise prescription. Prereq: KIN: Exercise Science major.

**Grade Mode:** Letter Grading**KIN 837 - Exercise Prescription and Leadership in Healthy and Special Populations****Credits:** 4

Provides exposure to the knowledge and practical experience necessary for establishing exercise and health promotion programs in a variety of populations. Includes fundamentals regarding personal training and program selection, implementation and equipment, legal issues, and budget establishment. Aerobic and strength training programs in special populations are highlighted. Prereq: KIN 836.

**Grade Mode:** Letter Grading**KIN 840 - Athletic Administration****Credits:** 4

Introduces basic management components and processes used in the successful administration of school and college athletic programs. Topics include planning, organizing, and managing sports programs, personnel and policies; game scheduling; finances and facilities; equipment and event management; student services; and key legal issues. Prereq: permission.

**Grade Mode:** Letter Grading**KIN 841 - Social Issues in Contemporary Sports****Credits:** 4

An investigation into interrelationships among sport, culture, and society in an attempt to understand better the role and function of sport in contemporary society. Broad overview of selected socio-cultural factors that influence participation and result from participation in sports. Prereq: introduction to sociology or permission.

**Grade Mode:** Letter Grading**KIN 842 - PE Practicum for Students with Disabilities****Credits:** 4

This experience is part of the required coursework for the Adapted Physical Education (APE) certificate through the Graduate School. As a bi-weekly seminar integrates the field experiences with general physical education (GPE) and adapted physical education contexts through class discussion, readings, and written assignments. The seminar format provides an opportunity for refinement and continued development of teacher skills and practices for working with students with disabilities. A primary focus will be on assessment, planning, and implementation of physical education and physical activity programming for students with disabilities.

**Grade Mode:** Letter Grading**KIN 848 - Skill Development and Assessment in Health Education****Credits:** 4

Preparing students to face health challenges of the 21st century requires teaching health education in ways that increases individual health literacy and self-efficacy to lead a health-enhancing life. Teaching students the necessary skills is not enough, we must also assess student learning in authentic and meaningful ways that measure growth and levels of skill proficiency. Using the Performance Indicators of the National Health Education Standards as a guide, we will explore how to teach health education in a skills-based way and to develop formative & summative assessments that measure student learning & resulting proficiency. We will discuss strategies to develop health literate individuals who have the capacity & competence to make health-enhancing choices across the lifespan. Coursework includes readings, in-class work time, & development of tools you can use in your classroom.

**Grade Mode:** Letter Grading**KIN 864 - Advanced Sport Marketing****Credits:** 4

An advanced course covering sport marketing, which includes a review of key sport marketing terms/concepts, in-depth experience writing as a sport marketer, and practical experience acting as a sport marketer. This course will instruct students on how to complete all aspects of an in-depth marketing plan. This is an undergraduate/graduate dual student course.

**Grade Mode:** Letter Grading**KIN 865 - Advanced Topics in Coaching****Credits:** 4

This course goes beyond the basic principles of coaching and addresses advanced topics in coaching (talent identification, talent development) from both the science and the art of coaching technique and strategies. This course is structured as an upper division course in Sports Studies. Content includes topics related to the development of the field of coaching. The class makes extensive use of case studies and analysis of practical coaching situations for the betterment of coach development. This course combines lecture, small group discussion and practical application of material. Prereq: SPST 565.

**Grade Mode:** Letter Grading

**KIN 871 - Health Education Pedagogy****Credits:** 4

This graduate-level course provides a pedagogical foundation for teaching health education in K-12 school settings. Class members will learn how to create a positive classroom environment that is conducive to teaching and assessment of the National Health Education Standards. Aligned with the CDC Characteristics for Effective Health Education Curricula, and through a culturally-responsive lens, the course builds on previous experience and prepares pre-service teachers to develop age and developmentally appropriate learning experiences. Prereq: KIN 848 (or HPE 648 at the undergraduate level).

**Grade Mode:** Letter Grading**KIN 880 - Psychological Factors in Sport****Credits:** 4

Factors of outstanding athletic achievement; psychological variables in competition; the actions and interactions of sport, spectator, and athlete. Special attention to directed to strategies for coaches, teachers, and athletic trainers to utilize sport psychology in their professional practice. Prereq: introduction to psychology.

**Grade Mode:** Letter Grading**KIN 881 - Inclusion in Physical Education****Credits:** 4

The course examines the needs of individuals with disabilities in school based and physical activity settings. Legal mandates that define school policy and student placement are addressed while discussing the various teaching orientations that inform practice. This course also includes hands-on teaching experiences across a range of ages and disabilities that shape teaching competencies.

**Grade Mode:** Letter Grading**KIN 882 - Therapeutic Applications of Adventure Programming****Credits:** 4

A study of theory, practice, and research of adventure experiences in therapeutic settings. Incorporates theoretical seminars and associated practical experiences. (Also listed as SW 882).

**Equivalent(s):** SW 882**Grade Mode:** Letter Grading**KIN 883 - Psych Factors of Adventure Ed****Credits:** 4

Adventure educators are often called to work with people facing short-term psychological challenges like being effective in a group or managing fear and discomfort in a vigorous learning environment. Because the adventure environment can be psychologically demanding, an understanding of basic psychology is an advantage both for effective practice and research. Course emphasizes the history of psychological research to provide a foundation for the adventure educator's work leading, designing and evaluating adventure-based programs.

**Grade Mode:** Letter Grading**KIN 884 - Historical Foundations of Outdoor Experiential Education****Credits:** 4

Reviews the historical, conceptual, and political foundations of major 20th century educational reform initiative. It focuses in particular on the educational philosophy of John Dewey, the social reforms advanced by German educator Kurt Hahn (founder of Outward Bound), humanistic 'encounter' programs of the 1960s and 1970s, and scholarship on contemporary reforms. Class follows a seminar format; students complete independent presentations and a comprehensive final exam.

**Repeat Rule:** May be repeated up to 4 times.**Grade Mode:** Letter Grading**KIN 885 - Program Models and Evaluation in Outdoor Education****Credits:** 4

Provides an understanding of the major outdoor education program models currently being used. Students also analyze the principles underlying program development and examine current trends and program evaluation approaches. Topics include research methods, evidenced-based practices, and ethics.

**Grade Mode:** Letter Grading**KIN 886 - Organization and Administration of Outdoor Education Programs****Credits:** 4

Study of administration of outdoor education programs using a variety of organizational models. Students use simulated exercises and work with outdoor agencies on special projects to learn the key factors necessary to manage a program. Field experience. Special fee.

**Grade Mode:** Letter Grading**KIN 894 - Cardiopulmonary Pathologies****Credits:** 4

Lecture study of the anatomy, physiology, and pathophysiology of the cardiac, vascular, and pulmonary systems. Particular emphasis on the study of cardiovascular function in diseased and stressed states. Clinical assessment of the cardiopulmonary patient. Course offering includes the addition of teaching experiences and real-patient case study assignments to better prepare the graduate student through increased application of knowledge and experiences to real-world situations.

**Grade Mode:** Letter Grading**KIN 895 - Advanced Studies****Credits:** 2-4

Independent study problems. Prereq: permission of graduate adviser.

**Repeat Rule:** May be repeated for a maximum of 8 credits.**Grade Mode:** Letter Grading**KIN 896 - Advanced Research in Exercise Science****Credits:** 3 or 6

Students design and conduct original research that culminates in a paper of publishable quality. Completion of either this course or KIN #899 satisfies the department's research requirement for the master's degree. May be taken for 3 credits per semester in each of two semesters or 6 credits in one semester. Kinesiology majors only. Cr/F. IA (continuous grading).

**Repeat Rule:** May be repeated for a maximum of 6 credits.**Grade Mode:** Graduate Credit/Fail grading**KIN 897 - Advanced Topics in Outdoor Education****Credits:** 2-6

Meets regularly to support students integrating advanced knowledge into independent projects that culminate in a substantial professional product, a paper of publishable quality, or a presentation to an outside professional audience. Completion of either this course or KIN #899 (thesis) satisfies the department's requirement for culmination of the master's degree. May be taken in combinations of 2, 3, or 4 credits over multiple semesters, or up to 6 credits in one semester. Kinesiology majors only. Cr/F. IA (Continuous grading).

**Repeat Rule:** May be repeated for a maximum of 6 credits.**Grade Mode:** Graduate Credit/Fail grading**KIN 898 - Special Topics****Credits:** 1-4

New or specialized courses not normally covered in regular course offerings. Prereq: permission. Special fee on some sections.

**Repeat Rule:** May be repeated for a maximum of 8 credits.**Grade Mode:** Letter Grading

**KIN #899 - Master's Thesis**

**Credits:** 1-6

May be repeated up to a maximum of 6 credits. Cr/F.

**Repeat Rule:** May be repeated for a maximum of 6 credits.

**Grade Mode:** Graduate Credit/Fail grading

**KIN 901 - Analysis of Professional Literature**

**Credits:** 4

Critical interpretation of professional literature. This course focuses on the appropriate use of research methodologies and techniques.

**Grade Mode:** Letter Grading

**KIN 902 - Colloquium**

**Credits:** 1-2

Seminar format with readings, discussions, laboratory tutorials, and presentations of current research topics. A) exercise science; B) outdoor education; C) special physical education; D) sport studies. Cr/F.

**Repeat Rule:** May be repeated for a maximum of 8 credits.

**Grade Mode:** Graduate Credit/Fail grading

**KIN 910 - Curricular Issues in Health Pedagogy**

**Credits:** 4

This course examines health education and curricular issues as they affect the teaching of health in social settings. Specific curricula designed to focus on health topics are discussed as well as appropriate and relevant teaching methods for elementary, middle and high school students. Students develop units (including lesson plans, handouts and assessments) for selected grade levels. Student also engage in peer teaching episodes related to various health content.

**Grade Mode:** Letter Grading

**KIN 950 - Internship**

**Credits:** 2-4

Experiential learning in a setting appropriate to the student's objectives. A 4-credit internship requires a minimum of 300 hours experience. Fewer credits require proportionally fewer hours. A) Exercise Science. Clinical work, normally in a hospital or laboratory setting, involving exercise physiology, graded exercise testing, exercise prescription, and/or cardiac rehabilitation. Must have completed all required coursework except thesis. B) Special Physical Education C) Sport Studies. Cr/F.

**Grade Mode:** Graduate Credit/Fail grading

**KIN 993 - Teaching Practicum**

**Credits:** 2

Students work with a faculty mentor to investigate, observe, and practice teaching methods using current pedagogical and assessment methods and theories. Includes use of various instructional technologies as tools to enhance the teaching/learning process. Designed for graduate students who wish to gain experience teaching at the collegiate level in KIN fields upon completion of the Master's or Ph.D. degree. Prereq: instructor permission. Cr/F.

**Repeat Rule:** May be repeated for a maximum of 6 credits.

**Grade Mode:** Graduate Credit/Fail grading

## Faculty

See <https://chhs.unh.edu/directory/all> for faculty.