

KINESIOLOGY

COURSE CONCENTRATIONS

A concentration is a specific area of classes within Kinesiology that help prepare you for specific career interests. You should declare a concentration before or during your first semester as a Kinesiology major. This guide can be used as a tool to help you customize your college experience based on your career goals. The Department of Kinesiology currently has three areas of concentration 1) Health Science Pre-Professional, 2) Applied Exercise, and 3) Physical Activity and Health Promotion.

CONCENTRATION: HEALTH SCIENCE PRE-PROFESSIONAL

The Health Science Pre-professional (HSP) concentration is a pre-professional program dealing specifically with the application of science to the study of health and physical activity. In the HSP concentration, graduates are directed to courses that provide excellent preparation for the further education required for careers as physicians, physical therapists, occupational therapists, physician assistants, chiropractors, nurses, respiratory therapists and other allied health professionals.

Students in this emphasis will complete a lower level core of Kinesiology courses that cover the field of Kinesiology, research, and introduce the areas of exercise physiology and exercise behavioral science. Students in the HSP emphasis area will complete two exercise physiology and one exercise behavioral science course in the upper level core. These upper level courses build upon the foundation of the introductory course in each discipline and give students skills in both the physical system and human interaction and behavior. For the nine hours of Kinesiology electives, students in this emphasis are recommended to take at least one additional upper level physiology or behavioral course to provide a strong foundation for professional school. Courses in motor learning, biomechanics, exercise training, exercise testing, and nutrition and exercise are also recommended as additional electives to provide students with key elements for understanding the human system.

Students in this emphasis will also work with the pre-health advisors to complete the required courses for professional school as unrestricted electives. A variety of minors or secondary majors also integrate well with this emphasis as does the combined BS/MS degree and the combined BS/MPH degree. Research experience, internships, and study abroad experience provide additional value to this emphasis.

Core: 36 hours

Lower level core: 18 hours

Upper level core: 18 hours

Exercise Physiology Core (Select at least 2)

KIN 601 – Cardiorespiratory Exercise Physiology: An examination of the structure and function of the respiratory system

KIN 603 – Cardiovascular Exercise Physiology: Study of the structure and function of the cardiovascular system

KIN 607 – Muscle Exercise Physiology: Subcellular, cellular, and tissue structure of skeletal muscle and the relationship of these structural characteristics to the functioning of the muscle.

KIN 609 – Environmental Physiology: Study of the physiological adaptations to acute and chronic challenges imposed by the environment.

KIN 611 – Neurological Exercise Physiology: Study of the structure and function of the nervous system as it pertains to health and disease.

KIN 617 - Signaling Pathways in Physiology: Current concepts of biological signaling transduction and its role in controlling genes expression and protein synthesis in health and disease.

Exercise Behavioral Science Core (Select at least 1)

KIN 600 – Interpersonal Aspects of Physical Activity: An examination of theory and research related to interpersonal aspects of physical activity.

KIN 602 - Social Structural Determinants of Physical Activity: An examination of how social structural determinants influences participation in physical activity.

KIN 610 – Program Planning and Evaluation: Theories and models and the stages and activities of planning, implementing, and evaluating health promotion programs.

KIN 612 - Policy, Built Environment and Physical Activity: Examination of the characteristics of active living policies and neighborhood/community design that contribute to improved health.

KIN 655 – Individual Physical Activity Promotion: A study of determinants and behavior change strategies that can be applied to promote physical activity among individuals.

Kinesiology Electives (Includes the above courses (Exercise Physiology Core and Exercise Behavioral Science Core) and those outlined below) (9 credits)

KIN 320 - Motor Learning and Development: Issues of motor learning and development as they relate to the application of instructional techniques.

KIN 330 – Biomechanics: Mechanical and anatomical aspects of human movement.

KIN 380 - Principles of Exercise Training: This course is designed to cover the application of current scientific research on program design for healthy athletes competing in any sport or physically active individuals.

KIN 398- Exercise and Chronic Disease: Explores the pathophysiology, testing protocols, exercise responses, and benefits of exercise specific to many of the most prevalent chronic diseases impacting our society

KIN 597 - Research Experience in Kinesiology: Exposure to and assisting with current research projects in a laboratory setting

KIN 625 - Exercise Testing and Prescription: Benefits and risks of exercise testing and prescription with healthy populations, individuals at risk, and patients with cardiovascular and metabolic diseases.

KIN 635 - Nutrition and Exercise: The interrelationships between diet, nutrition, and exercise.

KIN 792 - Health-Fitness Instructor Internship: Supervised field experience in settings such as Hospital Wellness Centers, YMCA, YWCA, municipal recreation agency, or industrial fitness agency.

Sample Course Progression for Major Courses (120 Hours minimum)

Fall Semester Courses		Hours		Spring Semester Courses		Hours
FRESHMAN						
KIN 220		4		CHM 210		4
BIOL 198		4		MATH 100		3
PSYCH 110		3		SOCIO 211		3
GNHE 210		1		ENGL 200		3
ENGL 100		3		FNDH 132		3
Total		15		Total		16
SOPHOMORE						
CHM 230		4		KIN 360		8
KIN 310		3		KIN 345		5
COMM 106		3				
STAT 325		3				
CIS 101-104 or CIS 111		4/3				
Total		16		Total		13
JUNIOR						
KIN 335/336		4/1		KIN Physiology Core **		3
Professional Science Course***		4		KIN Elective **		3
Professional Science Course***		3		Professional Science Course***		4
Humanity Elective*		3		ECON 110		3
				CIS 101-104 or CIS 111		4/3
Total		15		Total		16/17
SENIOR						
KIN Physiology Core**		3		KIN Elective**		3
KIN Behavioral Core***		3		Professional Science Course***		3
KIN Elective**		3		Humanity Elective*		3
KIN Elective**		3		Unrestricted Elective		3
Unrestricted Elective		3		Unrestricted Elective		3
Total		15		Total		15

*Humanities electives are to be selected from the approved Human Ecology list.

** Suggested KIN electives and their role in preparing students for health science professions is outlined above

*** Professional science course would include courses required courses for professional schools