

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.

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CONCENTRATION: APPLIED EXERCISE

The Applied Exercise (AE) concentration provides content and experience in promoting positive health behaviors such as physical activity, weight and stress management, and personal and performance exercise training. Students are prepared for a variety of careers in the allied health fields including personal training, corporate wellness, coaching, cardiac rehabilitation, recreation directors, and health and fitness clubs. The Kinesiology program at Kansas State University has alumni in professional settings across the country working in these areas, including strength and conditioning coaches, trainers for professional athletes, fitness club managers, and fitness facility owners. Based on population demographics, opportunities in this emphasis will grow at an above average rate in the next 10 years (www.bls.gov/ooh).

Students in this concentration 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 behavior. Students in the AP concentration will complete one required exercise physiology and one required exercise behavioral science course in the upper level core, as well as Exercise Testing and Prescription, which provides students with an understanding of how to effectively assess and prescribe exercise in healthy populations, individuals at risk, and patients with cardiovascular and metabolic diseases. The upper level courses build upon the foundation of the introductory course in each discipline and give students skills in both the physical systems and human interaction and behavior. Courses in motor learning, biomechanics, exercise training, exercise testing, and nutrition and exercise are recommended as additional electives to provide students with key elements for understanding the human system. Students can also prepare for the Certified Strength and Conditioning Specialist (CSCS) with the Kin 108 course. An internship experience is an outstanding opportunity to get real world experience while earning elective hours. Students in the AP concentration may benefit from a number of minors including business, entrepreneurship and marketing. Internships, research experience, and study abroad experience provide additional value to this concentration.

Lower level core (KIN 220, 310, 335/6, 345): 18 credits

Upper level core: 18 credits

Kin 625 – Exercise Testing and Prescription (3 credits)

Upper Level Exercise Physiology Core (Select at least 1)

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.

Upper Level 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 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.

Minor in business, entrepreneurship, or marketing

Sample Course Progression for Major Courses (120 hours minimum)

Fall Semester Courses	Hours	Spring Semester Courses	Hours
FRESHMAN			
KIN 220	4	BIOL 198	4
Humanity Elective*	3	MATH 100	3
PSYCH 110	3	SOCIO 211	3
GNHE 210	1	ENGL 200	3
ENGL 100	3	FNDH 132	3
Total	14	Total	16
SOPHOMORE			
CHM/PHYS or BIOCHM	4	KIN 360 or BIOL 340	8
KIN 310	3	KIN 345	5
COMM 106	3		
STAT 325	3		
Minor Elective***	3		
Total	16	Total	13
JUNIOR			
KIN 335/336	5	KIN Physiology Core **	3
Humanity Elective*	3	KIN 625	3
KIN Behavioral Core**	3	CIS 101-104 or CIS 111	4/3
Minor Elective***	3	KIN 108	2
Unrestricted Elective	3	Minor Elective***	3
Total	17	Total	14/15
SENIOR			
KIN 600 level Elective**	3	KIN 792	6
KIN Elective**	3	Minor Elective***	3
Minor Elective***	3	Unrestricted Elective	3
Econ 110	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

*** Minor elective course would include courses required for a given minor in business, entrepreneurship and marketing