

KINESIOLOGY (KHS)

KHS 110 My Best Life: Strategies for Wellness 3 credits

Want to learn how to live your best your life? This course will provide you with the opportunity to assess your current lifestyle while examining major public health issues. You will be exposed to a broad range of consumer issues and information relating to various aspects of healthy living. Through critical analysis and reflection of engaging in health-conscious behaviors, you will learn how to develop strategies for improving your own wellness. Come join this wellness journey!

KHS 126 Cross Country-Intercollegiate Men 1 credit

KHS 127 Cross Country-Intercollegiate Women 1 credit

KHS 128 Football-Intercollegiate 1 credit

KHS 129 Volleyball-Intercollegiate 1 credit

KHS 130 Cheerleading 1 credit

KHS 132 Soccer-Intercollegiate Women 1 credit

KHS 133 Golf-Intercollegiate Women 1 credit

KHS 134 Golf-Intercollegiate Men 1 credit

KHS 136 Basketball-Intercollegiate Men 1 credit

KHS 137 Basketball-Intercollegiate Women 1 credit

KHS 138 Baseball-Intercollegiate 1 credit

KHS 139 Softball-Intercollegiate 1 credit

KHS 140 Indoor Track & Field-Intercollegiate Men 1 credit

KHS 141 Indoor Track & Field-Intercollegiate Women 1 credit

KHS 142 Outdoor Track & Field-Intercollegiate Men 1 credit

KHS 143 Outdoor Track & Field-Intercollegiate Women 1 credit

KHS 144 Lacrosse-Intercollegiate Women 1 credit

KHS 145 Swimming & Diving 1 credit

KHS 146 ESports 1 credit

KHS 230 Foundations of Exercise and Sports Science 3 credits

In this course, students will start their mentoring journey, learn the basics of being a successful KHS student, explore professional qualities and skills for success in the field, understand the sub-disciplines of kinesiology, and create a personal development plan. This is the first course in the major and can be taken with other KHS course.

KHS 301 Research Methods 3 credits

This course is designed to expose students to the principles and concepts necessary for understanding the basic elements of research in kinesiology and allied health. Students will learn about the research process, types of measurement and research, and proper writing style. Emphasis will also be placed on locating and evaluating credible evidence from various sources. Concepts from this course will assist students in applying research methods to topics within their own fields of interest.

KHS 310 Drug Education 2 credits

Pharmacological and etiological foundations, schedules, classifications, theoretical approaches to dependency, addiction and tolerance together with intervention and prevention strategies are studied. This course is designed to provide students with applicable knowledge and role playing experience in the area of drug use and abuse. Students will develop a broad based knowledge of the various types of drugs and how they are being used today medically and on the street. The students will also be asked to participate in discussions designed to raise their awareness of drug use/abuse and assist them in developing the skills and habits necessary to refrain from the negative impacts of use/abuse.

KHS 318 Applied Nutrition 3 credits

The study of the interaction of humans with food. Nutritional concepts, current consumer issues in nutrition, nutritional needs through the life cycle, and international nutritional concerns and issues are studied.

KHS 320 Human Life Experience 3 credits

This is a survey course designed to enable students to understand the biological, physiological, psychological, social, and cultural aspects of sexuality and human sexual behavior. Students will approach much of the material from a variety of different learning strategies including, research, games, small and large groups discussions, guest speakers, group activities, small assignments/worksheets, etc.

KHS 325 Exploring the Science of Sport, Health, and Wellness 3 credits

This overview course in kinesiology, designed to meet the general education social science requirement, explores the dynamic relationship between human movement and societal factors. Students will investigate and gain an appreciation for how movement impacts individual and community health. The curriculum covers various topics, including the history of sport, health, and wellness, the role these play in different cultures, and the socio-economic factors that influence access. Students will explore contemporary issues such as the impact of technology on physical health, the psychology of exercise, and the role of physical education.

KHS 340 Functional Anatomy 3 credits

This course employs a regional approach to human anatomy and emphasizes the role of the musculoskeletal system in producing movement. Elements of the nervous, cardiovascular, and respiratory systems are also considered. Kinematic features of common athletic movements are explored.

KHS 345 Sport Business 3 credits

This course will include a comprehensive analysis of issues related to sports business. Topics will include finance, accounting, and budgeting as it relates to the world of sports business.

KHS 360 Sociology of Sport and Exercise 3 credits

This course is designed to provide the student with a working knowledge about a number of topics regarding the sociological aspects of sport and physical activity. This course engages the students on the impact of sport and exercise in our lives and to make them aware of the social processes which either influence the institution of sport or are influenced by the institution of sport. Concepts covered will include: sport and exercise within and among societies and nations, social organizations, economics, education, the family unit, governments, religions, social differentiation (e.g., status, ethnicity, gender, age, careers, ethical), and social problems (e.g., honesty and violence).

KHS 370 Law & Sport 3 credits

This course is an overview of legal aspects relevant to managers in the sport and recreation environment. Areas of study include tort law, contract law, constitutional law, legislation and administrative law related to the operation and administration of sport, recreation and athletic programs. Risk management strategies and sport management applications of legal issues are also addressed.

KHS 380 Planning & Managing Sport Facilities 3 credits

This course helps students understand how to plan, design, and maintain sport facilities. In addition, event management and programming will be examined within the context of stadium and arena management.

KHS 385 Sport Marketing & Fundraising 3 credits

Sport marketing and fundraising presents an overview of the various techniques and strategies used in meeting the needs of consumers in the sport industry as well as understanding how sport can be used to assist in the marketing of other companies and products. Areas to be addressed are the uniqueness of sport marketing, an overview of the segments of the sport industry, the importance of market research and segmentation in identifying the right sport consumer, the use of data-based marketing in researching the sport consumer the overview of the marketing mix as individual units and the relationship between those units, and the development and endorsement packages.

KHS 395 Sport Management 3 credits

Sport Management theories and practices will be examined using a multi-disciplinary approach. Topic areas to be examined include: organization and management, marketing and promotion, special event management, facility management and design, management forecasting, and career opportunities.

KHS 405 Health Psychology 3 credits

Health Psychology is designed to help students learn those skills necessary in forging a bridge between the client-learner's thoughts, feelings and actions by integrating thought and behavior into one synergistic approach to the delivery of health education that can accommodate the whole person. Cognitive techniques, such as lecture discussion, readings, presentations, collection of data, and specific planning combined with the behavioral components of emotion and action will help in bringing about this synergistic process.

KHS 420 Program Administration 2 credits

Organization of health science education and physical education programs in schools, work sites, medical care settings, community, private and public settings is studied together with needs assessment and evaluation strategies. Emphases on management, assessment, planning of health promotion enhance such study. This course is designed to give students a broad based exposure to the many organizational and administrative duties that accompany Physical Education, Sport, and various Health Program Management. We will start by looking to understand the characteristics of an effective leader and the ability to tap into those characteristics with the people one works with.

KHS 425 Exercise & Sport Psychology 3 credits

Psychology of sport and exercise and its applications for performance enhancement are examined. Special attention is given to theory and techniques for developing and refining psychological skills to enhance performance and personal growth. Content examines personality traits, anxiety, aggression vs. assertion, motivation, and other individual and group variables. (Suggested prerequisite: PSY 101)

KHS 436 Motor Development, Control & Motor Learning 4 credits

This course examines the growth and development patterns of the child from infant, adolescence, adulthood, and through late adulthood. The purpose of the course is to enhance student insight into the fundamental role that the motor system plays in the human condition. There are four broad topic areas: 1) nature and mechanisms of the expression and control of motor behavior; 2) concepts, principles and measurement of motor learning; 3) factors that influence skill and proficiency in motor performance; and 4) practical approaches to studying and learning motor skills. Content will follow motor control through motor development across the life span with special emphasis on early childhood development and late adulthood.

KHS 439 Physical Dimensions of Aging 3 credits

This course is designed to provide students interested in the gerontology population the knowledge base of physical aging. Physical aging is central to most daily activities and permeates through all aspects of life. Throughout this class, students will study the biomechanical, physiological, and motor effects associated with aging. Students will understand that when society encourages older individuals to stop being active, professions should be encouraging activity, while understanding their physical abilities.

KHS 472 Athletic Training, Injury Prevention, and Safety 4 credits

The practical study of procedures for the care and prevention of injuries sustained during physical activity, including First Aid and Safety principles as dictated by the American Heart Association and the American Red Cross. Designed as a course for students pursuing careers in athletic training, teaching, coaching, physical therapy, or other related fields. Instruction will include lectures, informational presentations, and hands on experience.

KHS 473 Biomechanics 4 credits

This course examines the physics of human movement. Content areas include the structural mechanics of bone construction, muscle contraction, ligament, and tendon plasticity and elasticity. Sport implement mechanics and the mechanics of environmental conditions (e.g. friction, air, and water resistance) are also explored. Sport performance issues will also be analyzed for mechanical efficiency.

KHS 474 Exercise Physiology 4 credits

The physiological basis for human performance and the effects of physical activity on the body's functions are examined in theory and application. Content areas include cardiovascular and respiratory response to exercise, metabolism, body composition, temperature regulation, principles of training and conditioning and the resulting adaptations of the human body, special populations, and exercise prescription.

KHS 475 Applied Exercise Prescription 4 credits

This course integrates important principles and theories in exercise physiology, kinesiology, nutrition, psychology, and measurement, and then applies them to physical fitness testing and individualized exercise program design for team and individual athletes. Students will learn how to select physical fitness tests, conduct physiological assessments, and design individualized exercise programs and prescriptions. (Prerequisite: KHS 474)

KHS 478 Intro to Sport Analytics and AI 3 credits

This course will educate students on the utilization of AI technologies and data to make objective and measured decisions when it comes to managing athletes, fans, or entire sport-related organizations.

KHS 479 Coaching Pedagogy 2 credits

This course offers some realistic guidelines and principles that should enable the coach to conduct his/her coaching program successfully. Course content explains the principles of coaching through discussion of the techniques that encompass the philosophical, psychological, and moral issues involved in the administration of athletic programs.

KHS 480 Exercise Assessment 3 credits

This course will focus on exercise testing and prescription with regard to stress testing and fitness evaluations. Indications and applications for clinical exercise testing and contraindications to exercise testing will be addressed, as well as special populations. (Prerequisite: KHS 474)

KHS 485 Advanced Athletic Training 3 credits

This course is geared for the athletic training student pursuing NATA certification or students further interest in knowledge of injury prevention and management. Advanced knowledge and techniques of athletic assessment, treatment/rehabilitation, administration of an athletic training programs and sports medicine experience outside of the classroom will be stressed. (Preferred prerequisite: KHS 472)

KHS 488 Kinesiology Independent Study 1-4 credits**KHS 490 Senior Professional Seminar 1 credit**

This seminar course serves as the senior outcomes exam for all KHS majors. The course emphasizes professionalism, teamwork, and leadership, as it provides final preparation for student transition to job or graduate school. (Prerequisite: senior status)

KHS 498 Internship 1-12 credits

This course provides students with practical experience in applying their knowledge and skills, and the opportunity to reflect on the relevance and application of their studies to professional practice.

KHS 503 Coaching Theory and Practice 3 credits

This course introduces students to theories, models, and practices of coaching as well as coaching principles and practice and how they contribute to effective coaching. Students will explore the context of coaching within the broader professions of team sports and one-on-one training.

KHS 510 Human Resource Management 3 credits

Discusses critical aspects of human resource management as it relates to sport organizations. An overview is given of major functions and concepts regarding the management and administration of human resources in the organization including: recruitment, development, motivation, compensation, benefits administration, employee relations, and human resource information systems.

KHS 513 Scientific Principles of Strength and Conditioning 3 credits

The course provides an in-depth examination of the principles and practices of strength and conditioning as they apply to athletic performance. Throughout the course, the student will learn advanced concepts in exercise physiology, functional anatomy, sports nutrition, and risk management, and will be exposed to the latest research and trends in the field. The course will equip the student to become a leader in the field of strength and conditioning and apply ethical standards in high stakes performance environments.

KHS 514 Exercise and Fitness Assessment 3 credits

This course is designed to provide the student with advanced knowledge in the theory and practice of evaluating physical fitness. The course will cover a range of techniques for assessing cardiovascular fitness, muscular strength and endurance, flexibility, and body composition, as well as the selection and maintenance of the equipment or advanced technology used for these assessments. In addition to these advanced skills, the course will also delve into more specialized areas such as the assessment of special populations including athletes and individuals with disabilities.

KHS 515 Management and Leadership 3 credits

Different theories of leadership and management styles are introduced and what their impact is on organizational structure, productivity, and decision making. Students will examine their individual management and leadership styles as they relate to sport management administration. This course will analyze how leadership is not only different from management but also more effective in today's workplace.

KHS 520 Sport Finance 3 credits

The practical aspects of the strategic and operational roles of accounting and finance are explored, including applications of strategic planning, budgeting, financial performance, and fiscal and ethical responsibility in a sport management setting.

KHS 523 Scouting and Recruiting 3 credits

This course provides insight as to what it takes to identify, qualify, and recruit prospects for a sport team. Students will examine effective recruiting operations from identifying prospects to recruiting players while maintaining compliance with rules and regulations.

KHS 524 Advanced Program Design for Special Populations 3 credits

This course is designed to give students an understanding of exercise principles and programming for special populations such as children, aging adults, and clients with temporary or permanent physical or cognitive conditions. The student will gain the knowledge and skills needed to design customized programs with modifications, progressions, and regressions based on individual needs. Additionally, students will learn how to evaluation tools and the resulting data to assess a program's effectiveness. The guidelines for training special populations provided by the American College of Sports Medicine (ACSM) and the National Strength and Conditioning Association (NSCA) will be highlighted in this course.

KHS 525 Facility and Event Management in Sport 3 credits

This course takes a multi-disciplinary approach to the theories and practices of facility design, construction, and operations. The course will examine a wide variety of both indoor and outdoor sports facilities including stadiums, gymnasiums, golf courses, fitness centers, and athletic fields. Students will also examine event management and programming within the context of stadium and arena management.

KHS 530 Research Methods 3 credits

This course examines the various research methodologies used in organizational settings. It provides an overview of quantitative and qualitative research methodologies including research design, data collection and analysis, interviewing, case studies, and action science. The philosophy, ethics, and politics of management research are introduced.

KHS 533 Sport Media and Technology 3 credits

This course will examine the relationships between the sport industry, media, and technology. The course will explore various mediums such as radio, television, online forums, blogs, and social media, in terms of their history, function, impact, and ethical implications in the sport industry. Students will also examine the importance of technology in sport and how to integrate this knowledge into sport business.

KHS 535 Sport Marketing 3 credits

This course will examine the application of marketing principles in the sport industry. Elements of corporate partnerships related to sport marketing will also be explored along with business strategies of sponsorships, branding, promotions, and event marketing.

KHS 540 Legal Aspects of Sport 3 credits

Legal Aspects of Sports is an overview of legal aspects that will be relevant to sport managers in areas of recreation, athletics, facilities, and business. The course will examine risk management strategies along with law related to operation and administration of sport-related programs. Students will explore case studies relating to the legal aspects of sports.

KHS 545 Ethics and Sociology in Sport Management 3 credits

This course explores the ethical and sociological issues in sport and recreation settings. Students will critically analyze problems and issues from an ethical and sociological perspective. Students will further examine contemporary case studies to think reflectively about the topics presented in the course in relation to present life experiences and future plans.

KHS 550 Sport Sales and Fundraising 3 credits

Sales is an essential revenue producing function for any commercial organization. Sport and recreations have a unique marketing relationship of product and inventory with the consumer and marketplace. The course is designed for the student to learn the theoretical concepts and the application of skills and practices associated with the sports sales process. Through readings and lectures, the course will examine the rationale regarding the benefits and disadvantages of various sales and promotional methodologies. This course will then concentrate on promotional and sales strategies, campaigns, and techniques.

KHS 553 Data Analytics for Sport 3 credits

This course explores the theory, development, and application of analytics in sports. Students will learn about analyzing and interpreting sport data through exploratory data analysis and presentation graphics, showing real world implications for athletes, coaches, team managers, and the sports industry. The class will discuss the application of analytics in sports for purposes of in-game strategy, player performance, team management, sports operations, among many other topics.

KHS 565 Capstone 3 credits

The capstone course provides the sport professional with the opportunity to synthesize the learning which has taken place throughout the program. It further focuses upon the practical application of knowledge within the industry. The capstone will serve as an assessment of student learning within the Master of Arts in Sport Management and Master of Science in Coaching and Athletic Administration.

KHS 570 Ethics and Sociology in Sport and Exercise Science 3 credits

In this course, the student will examine the complex ethical issues that arise in the field, including issues of fairness, equality, and social justice. In addition, the student will explore ways in which social and cultural factors shape our understanding and experience of physical activity and sports. Topics will include issues related to gender, race, class, and disability in sport and exercise, as well as the ethical implications of research and practice in the field. The student will critically analyze problems and issues from an ethical and sociological perspective.

KHS 575 Statistics in Kinesiology 3 credits

Students will examine the concepts, methods, and usage of statistical data within the context of kinesiology research.

KHS 580 Mechanisms of Skilled Neuromuscular Behavior 3 credits

This course examines the integration of thought processes with the human body to produce skilled motor performance. Theoretical perspectives and mechanisms of motor behavior are examined and applied to significant systems involving gross motor learning and control in sport and exercise.

KHS 585 Advanced Functional Anatomy & Biomechanics in Exercise Science 3 credits

In this course, the student will delve into the complex relationships between the structure and function of the human body and how it moves. The course will cover a wide range of topics, including the anatomy of the musculoskeletal system, the mechanics of movement, and the principles of biomechanics. The student will also learn about the various forces that act on the body and how they affect movement and function.

KHS 590 Psychology of Sport and Exercise 3 credits

This course is designed to provide advanced training in the psychological factors that influence participation and performance in sport and exercise settings. The course will cover topics such as the psychological impact of injuries and other setbacks. In addition, the course will delve into more specialized areas such as the psychological effects of competition, psychological skills training, and the role of emotions in sport and exercise performance.

KHS 595 Clinical Exercise Assessment 3 credits

In this course, students will learn how to select appropriate physical fitness tests and conduct physiological assessments on members of diverse populations. Students will further study the procedures involved in screening individuals from diverse populations with varying levels of functional work capacity.

KHS 600 Advanced Exercise Physiology 3 credits

Exercise physiology is the scientific study of the physiological responses to physical activity and the effects of exercise on health and performance. In this course, the student will engage in detailed exploration of physiological and biochemical responses to exercise, including changes in cardiovascular, respiratory, and metabolic systems and the advanced use of technology. The course will also cover advanced topics on the effects of physical activity on various health outcomes, including weight management, cardiovascular disease, diabetes, and mental health.

KHS 605 Advanced Nutrition and Metabolism 3 credits

This course builds upon the foundational concepts of nutrition to explore more advanced topics in the field. The student will delve into the complex relationships between nutrients and the body's metabolism. The course will cover a wide range of topics including the metabolism of individual nutrients such as carbohydrates, proteins, lipids, vitamins, and minerals. The student will also learn about the various metabolic pathways and how they work to produce energy, synthesize biomolecules, and maintain homeostasis. Additionally, the student will learn about the principles of nutrition and how to apply them to real-world situations, such as designing healthy nutrition plans for different populations. The course will also delve into the role of nutrition in various diseases and conditions, including obesity, diabetes, cardiovascular disease, and cancer. The student will learn about the relationship between nutrition and these diseases, as well as strategies for preventing and managing them through nutrition and lifestyle interventions.

KHS 610 Research Methods 3 credits

This course is designed to provide the student with a thorough understanding of the research methodologies used in the field of kinesiology. The course will cover both quantitative and qualitative research methodologies, including topics such as research design, data collection and analysis, interviewing techniques, case studies, and action science. In addition to these technical skills, the course will also introduce students to the philosophy, ethics, and politics of research, helping them to understand the broader context in which research is conducted. The student will be well-equipped to design and conduct research in the field of kinesiology, and to critically evaluate the research of others.

KHS 615 Advanced Exercise Prescription 3 credits

This course will delve into the complex relationships between exercise, physical activity, and health. The course will cover a wide range of topics, including the physiological and psychological effects of exercise, the principles of exercise prescription, and the factors that influence exercise adherence. In addition to discussing the effects of exercise on health and well-being, the course will also cover the role of exercise in the management and prevention of various diseases and conditions, such as cardiovascular disease, diabetes, and obesity with diverse populations. The student will learn about the evidence-based guidelines for exercise prescription in these and other conditions, and how to apply these guidelines to develop safe and effective exercise programs for individuals with these conditions.

KHS 620 Master's Capstone 3 credits

This capstone course in kinesiology provides students with the opportunity to apply their knowledge and skills throughout the graduate program to current, real-world situations. The course will focus on the practical application of kinesiology concepts within the industry and will serve as a culminating assessment of student learning. Students will have the opportunity to analyze and synthesize theoretical and research concepts from multiple perspectives, integrate scientific research to identify and analyze problems or trends, and model ethical decision-making in their work.

KHS 7000 Current Issues and Trends in Kinesiology 3 credits

This course prepares students to analyze current problems, issues, and trends impacting kinesiology professions. The emphasis is on selecting and discussing emerging and controversial topics from research and everyday experiences that lead to action. Leadership principles are examined as students develop and identify leadership strategies, tools and applications to successfully implement a personal mission and vision statement.

KHS 7010 Medical Aspects of Exercise and Disease Prevention 3 credits

This course utilizes an epidemiological approach to examine the relationship between physical activity and health and/or disease outcomes. Emphasis is on the role of exercise in preventative medicine. Topics include the impact of exercise on various diseases, and the effect of various medical conditions on the ability to participate in vigorous exercise and competitive sports.

KHS 7020 Exercise and Health Behavior Change 3 credits

Advanced analysis of theoretical health behavior models and their application to physical activity behavior. Includes practical techniques, tools and interventions (e.g., counseling skills, motivational interviewing) to enhance exercise adherence and motivation across the lifespan.

KHS 7030 Professional Ethics and Program Management in Kinesiology 3 credits

This course examines ethical and socio-cultural issues that kinesiology students will face during their training and professional practice emphasizing conceptual frameworks needed to articulate concerns and engage in meaningful dialogue with others. Topics include the application of ethical program management, financial management, legal issues, and evaluation and planning.

KHS 7100 Cardiovascular Responses to Exercise 3 credits

This course examines the effects of acute and chronic exercise on the cardiovascular system, with an emphasis on understanding the regulatory mechanism that controls the cardiovascular system at rest and in response to aerobic and resistance exercises.

KHS 7110 Neuromuscular Aspects of Exercise Physiology 3 credits

This course provides an in-depth analysis of the structural basis for muscular contraction, regulation of energy metabolism during exercise, and adaptations of the neuromuscular system in response to aerobic and resistance exercise.

KHS 7120 Advanced Exercise & Sports Nutrition 3 credits

This course examines the role of nutrient selection, metabolism, and timing play in supporting and improving health and human performance. Topics include nutrient bioenergetics, optimizing nutrient timing, micronutrients and macronutrients, ergogenic aids, thermoregulation, fluid balance, and weight management.

KHS 7130 Advanced Exercise and Sport Psychology 3 credits

This course is designed to prepare students to apply practical and theoretical psychological principles to individuals participating in exercise and sport. Emphasis is placed on theory and research on motivation, personality, cognition, self-efficacy, leadership effectiveness, attributions, attitudes, and group dynamics.

KHS 7200 Advanced Biomechanics in Exercise Science 3 credits

This course examines qualitative and quantitative elements and physics of human movement. Content areas include the structural mechanics of bone physiology, muscle mechanics, and connective tissue principles. Sport techniques and environmental conditions (e.g., friction, air, and water resistance) are also explored. Biomechanical implications of sport and fitness skill performance will be analyzed for mechanical efficiency and effectiveness.

KHS 7210 Advanced Exercise Physiology 3 credits

The physiological responses to exercise performance and the effects of physical activity on the body's functions are examined in theory and application.

KHS 7220 Advanced Mechanisms of Skilled Neuromuscular Behavior 3 credits

This course examines the integration of thought processes with the human body to produce skilled motor performance. Theoretical perspectives and mechanisms of motor behavior are examined and applied to significant systems involving gross motor learning and control in sport and exercise.

KHS 7230 Advanced Exercise Prescription 3 credits

This course focuses upon the design of individualized exercise programs and prescriptions in health and disease. Knowledge of skills necessary for safe and effective application of these prescriptions for members of diverse populations as well as the prevention and maintenance of chronic disease are emphasized.

KHS 7240 Advanced Strength & Conditioning 3 credits

Students examine the essential physiological and biomechanical basis of resistance training principles and how they can influence training and program design. Topics include exercise techniques (resistance training, flexibility exercises, plyometrics, speed and agility), training adaptations, program design, structure and function of body systems, and techniques for evaluating various aspects of fitness.

KHS 7501 Nutrition for the General Population 3 credits

This course will introduce students to the biochemical, physiological, and microbiological basics of general human nutrition. Students will gain an understanding of the relationship between nutrition and health by reviewing topics such as the nutritional needs of special populations, sociocultural influences of nutrition, community nutritional applications, and major public health concerns related to nutrition. Students will learn how to evaluate nutritional information or misinformation to create goals and apply publicly available guidelines or tools to dietary plans.

KHS 7511 Vitamins and Minerals 3 credits

This explores the metabolism of vitamins and minerals essential for health throughout the lifespan. Specific topics will include nutrient bioavailability, absorption, and proper micronutrient intake. The health effects of inadequate or excessive micronutrient intake will be covered along with methods to estimate nutrient requirements and upper limit levels.

KHS 7513 Scientific Principles of Strength and Conditioning 3 credits

This course focuses on the scientific principles of exercise physiology, biomechanics, and motor behavior behind foundational training principles and how they can influence performance for athletic populations and individual exercisers. Students will critically analyze scientific literature to develop evidence-based training and program design to enhance sport performance and fitness.

KHS 7514 Exercise and Fitness Assessment 3 credits

Students will learn how to select appropriate physical fitness tests and conduct physiological assessments on members of diverse populations and varying levels of work capacities. Topics covered will include muscular strength and endurance testing, cardiovascular endurance testing, flexibility assessments, body composition analysis, and posture assessments.

KHS 7521 Nutrition Assessments and Analysis 3 credits

In this course, students will gain an understanding of the methods and approaches to conducting nutrition assessments of individuals throughout a lifecycle. Students will learn best practices and applications in evidence-based dietary, biochemical, and anthropometric assessments. An in-depth overview of the rationale of use, advantages, disadvantages, and validity of each assessment will be completed.

KHS 7524 Program Design for Special Populations 3 credits

This course provides in-depth study on variety of special populations, including older adults, individuals with chronic conditions such as cardiovascular disease and diabetes, individuals with disabilities, and individuals who are recovering from injury. Topics will include an overview of the health conditions and physical limitations associated with each special population, as well as the best practices for designing safe and effective exercise programs.

KHS 7531 Nutrition for Weight Management 3 credits

This course will review current evidence-based strategies to manage overweight and underweight individuals. The genetic, metabolic, and psychological factors affecting weight management will be covered. Students will gain knowledge and skills in assessment techniques, treatment options, and prevention strategies.

KHS 7541 Dietary Trends and Special Populations 3 credits

This course will provide students with an understanding of the ever-changing aspects of nutrition science, including emerging diets and controversies such as fad diets and supplementation. Additionally, students will learn about nutrition applications for special populations such as athletes and those with infectious or chronic diseases. Students will develop skills in the evaluation and interpretation of nutrition-related claims in both popular media and scientific studies.

KHS 7550 Qualitative Research in Kinesiology 3 credits

This course provides an in-depth examination of qualitative research, including research designs, data collection strategies, analysis, interpretation, and evaluation methods.

KHS 7595 Clinical Exercise Assessment 3 credits

This is a comprehensive course designed to equip students with the knowledge and skills necessary to perform assessments and design exercise programs for patients with various medical conditions. The course covers the principles of exercise physiology and provides an overview of the assessment process, including history-taking, physical examination, and functional testing.

KHS 7600 Quantitative Research in Kinesiology 3 credits

This course provides an overview of quantitative research, including research designs, data collection strategies, analysis, interpretation, and evaluation methods.

KHS 7606 Physiology of Skeletal Muscle 3 credits

This course will provide students with an in-depth understanding of the structure and function of skeletal muscle. This course covers the anatomy and physiology of muscle fibers, myofibrils, and sarcomeres, as well as the role of motor neurons in muscle contraction. Students will learn about the mechanisms underlying muscle function and the effects of different types of exercise and physical activity on skeletal muscle. The course also covers strategies for measuring and monitoring skeletal muscle function, including muscle strength and endurance, muscle size, and muscle activation.

KHS 7608 Exercise and the Endocrine System 3 credits

This course will examine exercise and endocrine system physiology. Basic principles about the endocrine system will be covered as well as the effects of exercise training, detraining, and disease on this system. The physiological principles and mechanisms of the endocrine system will be reviewed including endocrine organs and hormone classifications. The influence of exercise, nutrition, and disease on endocrine function will also be covered.

KHS 7650 Mixed Methods Research in Kinesiology 3 credits

This course provides an overview of mixed methods research, including research designs, data collection strategies, analysis, interpretation, and evaluation methods.

KHS 7700 Advanced Topics in Statistics (Experimental Design) 3 credits

This course covers a selected advanced topic in statistics. This course examines various designs that can be applied to a study that results in valid and objective conclusions.

KHS 7800 Action Research in Kinesiology 3 credits

This course provides an overview of action research methods in order to solve a kinesiology problem. Students examine unique and emerging proactive and responsive action research that generates knowledge and results in practical outcomes for participants.

KHS 7810 Applied Measurement and Evaluation Techniques in Kinesiology 3 credits

This course examines advanced testing procedures for collecting and analyzing data while applying results to real-life situations in kinesiology. Topics including testing techniques for knowledge, skill, fitness, and attitudes. The emphasis is on evidence-based decision making that can be applied to professions in kinesiology.

KHS 7820 Research Methods in Kinesiology 3 credits

This course explores important practical considerations for applying quantitative and qualitative kinesiology research. Emphasis is placed on real-world examples of how research is effectively accessed, interpreted, and used in professional kinesiology settings.

KHS 7830 Advanced Research Seminar in Kinesiology 3 credits

This course builds on the previous course, but with an intentional focus on the dissertation topic of interest for each student. In-depth research strategies, data reliability and credibility, and the IRB process are discussed and completed during this course. Students schedule the dissertation proposal during this course.

KHS 7900 Seminar 1 - Drafting the Dissertation Introduction 1 credit

This course provides students the opportunity to make progress on their dissertation in collaboration with a faculty mentor. Special focus is placed on selecting the dissertation topic, identifying a dissertation advisor, and drafting an Introduction.

KHS 7901 Seminar 2 - Drafting the Dissertation Literature Review 1 credit

This course provides students the opportunity to make progress on their dissertation in collaboration with a faculty mentor. Special focus is placed on forming the dissertation committee and drafting the Literature Review.

KHS 7902 Seminar 3 - Drafting the Dissertation Methodology 1 credit

This course provides students the opportunity to make progress on their dissertation in collaboration with a faculty mentor. Special focus is placed on drafting the Methodology.

KHS 7903 Seminar 4 - Finalizing the Written Dissertation Prospectus 1 credit

This course provides students the opportunity to make progress on their dissertation in collaboration with a faculty mentor, placing special focus on drafting a dissertation prospectus.

KHS 7950 Dissertation 3-12 credits

The dissertation is an independent, scholarly work of research completed by the doctoral candidate, under the guidance of a dissertation committee. A dissertation demonstrates a candidate's ability to undertake scholarship in his or her field through intellectual endeavor and the application of research skills. The completion of a dissertation requires a scholarly mindset involving ongoing evaluation, analysis, and synthesis of previous, relevant research as well as one's own work. A dissertation involves exploring an important problem that warrants investigation due to its centrality to issues of practice and application.

KHS 8000 Dissertation 1-12 credits

The dissertation is an independent, scholarly work of research completed by the doctoral candidate, under the guidance of a dissertation committee. The dissertation will create knowledge and/or test a theory through the demonstration of scientific inquiry, investigative skills, methodological and analysis skills, scientific writing and presentation skills, and ethical behavior.