SCHOOL OF HEALTH PROMOTION AND KINESIOLOGY

Web Site: https://twu.edu/health-promotion-kinesiology/

Interim Director: *Dr. Rhett Rigby, Professor*
Location: *Pioneer Hall 208D*
Phone: *940-898-2575*

Graduate Degrees Offered

- Master of Public Health (https://catalog.twu.edu/graduate/health-sciences/health-promotion-kinesiology/master-public-health-mph/)
- M.S. in Health Studies (https://catalog.twu.edu/graduate/health-sciences/health-promotion-kinesiology/health-studies-ms/)
- M.S. in Health Studies (Dental Hygiene) (https://catalog.twu.edu/graduate/health-sciences/health-promotion-kinesiology/health-studies-dental-hygiene-ms/)
- Dual Degree: M.S. in Health Studies and M.L.S. (https://catalog.twu.edu/graduate/health-sciences/health-promotion-kinesiology/dual-degree-health-studies-ms-mls/)
- Ph.D. in Health Studies (https://catalog.twu.edu/graduate/health-sciences/health-promotion-kinesiology/health-studies-phd/)
- M.S. in Exercise and Sports Nutrition (https://catalog.twu.edu/graduate/health-sciences/health-promotion-kinesiology/exercise-sports-nutrition-ms/)
- M.S. in Kinesiology (Adapted Physical Activity) (https://catalog.twu.edu/graduate/health-sciences/health-promotion-kinesiology/kinesiology-ms-adapted-physical-activity/)
- M.S. in Kinesiology (Biomechanics and Motor Behavior) (https://catalog.twu.edu/graduate/health-sciences/health-promotion-kinesiology/kinesiology-ms-biomechanics/)
- M.S. in Kinesiology (Coaching) (https://catalog.twu.edu/graduate/health-sciences/health-promotion-kinesiology/kinesiology-ms-coaching-general/)
- M.S. in Kinesiology (Exercise Physiology) (https://catalog.twu.edu/graduate/health-sciences/health-promotion-kinesiology/kinesiology-ms-exercise-physiology/)
- M.S. in Kinesiology (Sport Management) (https://catalog.twu.edu/graduate/health-sciences/health-promotion-kinesiology/kinesiology-ms-sports-management/)
- Ph.D. in Kinesiology (Adapted Physical Activity) (https://catalog.twu.edu/graduate/health-sciences/health-promotion-kinesiology/kinesiology-adapted-physical-activity-phd/)
- Ph.D. in Kinesiology (Biomechanics & Motor Behavior) (https://catalog.twu.edu/graduate/health-sciences/health-promotion-kinesiology/kinesiology-biomechanics-motor-behavior-phd/)
- Ph.D. in Kinesiology (Exercise Physiology) (https://catalog.twu.edu/graduate/health-sciences/health-promotion-kinesiology/kinesiology-exercise-physiology-phd/)
- Ph.D. in Kinesiology (Sport Management) (https://catalog.twu.edu/graduate/health-sciences/health-promotion-kinesiology/kinesiology-sport-management-phd/)
- Graduate Certificate in Adapted Physical Education (https://catalog.twu.edu/graduate/health-sciences/health-promotion-kinesiology/post-baccalaureate-certificate-adapted-physical-education/)
- Graduate Certificate in Leadership in Education and Sport (https://catalog.twu.edu/graduate/health-sciences/health-promotion-kinesiology/post-baccalaureate-certificate-leadership-education-sport/)

Master of Science in Data Science and Informatics

Data Science and Informatics is the study and application of information, computer, cognitive, and organizational sciences to the arts, sciences, and professions. The Master of Science in Data Science and Informatics (https://catalog.twu.edu/graduate/arts-sciences/computer-science/informatics-data-science-analytics-ms/) program at TWU provides students with an adaptable, inter-professional, and interdisciplinary approach to the study of data science and informatics in a hybrid learning environment. The program will provide students with the skills needed for success in high-demand professions and careers in the areas of Clinical Informatics, Data Science/Data Analytics, Cybersecurity, Health Studies, Sports Informatics, and Community Informatics. The program is delivered collaboratively by academic components, including Computer Science, Nursing, Health Studies, Kinesiology, and Library and Information Studies.

Graduate Research and Teaching Facilities

The School of Health Promotion and Kinesiology is housed in Pioneer Hall. This state-of-the-art facility contains accessible classrooms, multimedia centers, dance studios, laboratories, a large gymnasium, an indoor track, a weight training room, an athletic training room, racquetball courts, dressing rooms, and administrative and faculty offices. A natatorium is located on the first floor. The pool includes eight lanes for lap swimming and a separate large shallow end used for water aerobics, exercise physiology, and adapted physical activity programming. Water treadmills provide added research opportunities for cross-disciplinary projects.

Biomechanics and motor behavior, exercise physiology, biochemistry, and pedagogy laboratories are dedicated to teaching and research. These well-equipped facilities permit research studies, including persons with and without disabilities, across various emphasis areas.

The Exercise Physiology Laboratory comprises a 950-square-foot Human Exercise Testing Laboratory and a 600-square-foot Biochemistry Laboratory. The Exercise Physiology and Biochemistry labs contain treadmills, cycle ergometers, a Velotron ergometer, metabolic carts, Cosmed portable metabolic analyzers, automated and ambulatory blood pressure cuffs, a hydrostatic weighing tank, spectrophotometer, microplate reader and washer, refrigerated centrifuge, ultra-low temp freezers, chromatography refrigerator, MAGPIX multi-plex analyzer, and glucose/lactate analyzer. This range of equipment facilitates research in stress testing, body composition assessment, bone density, cardiovascular respiratory analysis, and blood biochemistry analysis. Additionally, the exercise biochemistry laboratory utilizes skeletal muscle cell culture models, gene expression analysis, and immunohistochemistry techniques to investigate the physiological mechanisms affecting skeletal muscle growth and atrophy in exercise and pathology.

The Biomechanics Laboratory (6,300 square feet) is one of the best-equipped in the state and nation and contains motion analysis systems, four force plates, a 16-channel wireless EMG, and an isokinetic dynamometer system. The Motion Analysis Laboratory houses a full line of motion analysis equipment and accessories. Advanced computerized

data collection and analysis systems are available for motor learning and control studies. The available equipment supports research in isokinetic, isometric, and isotonic strength testing, anthropometry, telemetry, and high-speed motion analysis.

The Adapted Physical Education emphasis area provides programmatic opportunities in the Kitty Magee Arena and the indoor swimming pool, designed for easy access and accommodations for individuals with special needs. The Teacher Analysis Lab is designed to enhance the student learning environment by capturing audio and video into a computer that merges with analytical software. The Sherrill Teaching and Research (STAR) lab is a multipurpose room used by Pedagogy-teacher preparation and Adapted Physical Education.

Outdoor facilities include playing fields, tennis courts, a softball diamond, and a soccer field.

Minor

The School of Health Promotion and Kinesiology (SHPK) offers doctoral minors in Health Studies and four Kinesiology emphasis areas (Adapted Physical Education, Biomechanics and Motor Behavior, Exercise Physiology, and Sport Management).

Health Studies

A Health Studies minor requires 12-18 semester credit hours of coursework. The minor coursework requirements are customizable and determined in consultation with the student's advisory committee and the minor committee member.

Kinesiology

A minor is offered to doctoral students within each of the four emphasis areas in the doctoral program in Kinesiology: Adapted Physical Education, Biomechanics and Motor Behavior, Exercise Physiology, and Sport Management. Students wishing to pursue a minor in Kinesiology should meet with a faculty member from the chosen area of emphasis to determine the appropriate coursework. Undergraduate prerequisites may be necessary depending on the emphasis area. A Kinesiology minor requires a minimum of 12 semester credit hours of coursework.

Faculty

*AMUTA, ANN O., Associate Professor of Health Studies, M.P.H., Texas A & M University; Ph.D., Texas A & M University

*BIGGERSTAFF, KYLE D., Associate Professor of Kinesiology, B.A., Southern Methodist University; M.S., University of North Texas; Ph.D., Florida State University

*DILLON, SUZANNA, Professor of Kinesiology, B.S., Alma College; M.A., Western Michigan University; Ph.D., Texas Woman's University

*FERRER, MICHELLE, Associate Clinical Professor, B.S., Salem State College; M.S., Texas Woman's University; Ph.D., Texas Woman's University

*GOLD, JOSHUA, Assistant Professor of Health Studies, B.A., University of California-Santa Barbara; M.A., California State University-Northridge; M.P.H., University of Iowa; Ph.D., University of Iowa

*GOLMAN, MANDY A., Professor of Health Studies, B.A., University of Texas, Austin; M.S., Texas Woman's University; Ph.D., Texas Woman's University

*KING, GEORGE, Professor of Kinesiology; Director of the School of Health Promotion and Kinesiology, B.S., Colorado State University; M.S., Colorado State University; Ph.D., University of Tennessee-Knoxville

*KWON, YOUNG-HOO, Professor of Kinesiology, B.S., Seoul National University; M.Ed., Seoul National University; Ph.D., Pennsylvania State University, University Park

*MANN, MARK D., Associate Professor of Kinesiology, B.A., Southwestern University; M.A., Southern Nazarene University; M.S., Nova Southeastern University; M.S., Pittsburg State University; Ed.D., Oklahoma State University; Ph.D., University of Arkansas

*MASSEY-STOKES, MARILYN, Professor of Health Studies, B.S., Southwestern Oklahoma State University; M.Ed., Southwestern Oklahoma State University; Ed.D., Oklahoma State University

*MENN, MINDY, Associate Professor of Health Studies, B.A., Texas A&M University; M.S., Texas A&M University; Ph.D., University of Florida, Gainesville

*MILOCH, KIMBERLY S., Professor of Kinesiology, Vice Provost for Faculty Success, B.A., Southwest Texas State University; M.S., Baylor University; Ph.D., Florida State University

*RAY, CHRISTOPHER T., Professor of Kinesiology; Dean of the College of Health Science, B.S., University of Tennessee; M.S. University of Tennessee; Ph.D., University of Georgia

*RIGBY, BRANDON RHETT, Professor of Kinesiology, B.S., LeTourneau University; M.S., Baylor University; Ph.D., Baylor University

*SA, JAESIN, Assistant Professor, M.S., University of Wisconsin-Whitewater; Ph.D., Indiana University-Bloomington

*STAPLES, KERRI, Assistant Professor of Kinesiology, B.S., University of Saskatchewan; M.A., McGill University; Ph.D., McGill University

*YOSHIKAWA, AYA, Assistant Professor of Health Studies, B.A., University of Toledo; M.A., University of Toledo; D.P.H., Texas A&M University-College Station; Ph.D., Texas A&M University-College Station

Courses

Contact hours identified in the course descriptions are based on a 15-week term. Students who enroll in Summer or mini-terms are expected to meet the same total number of contact hours as a 15-week term.

HS 5003. Internship/Professional Affiliation in Health Promotion. Completion of 250 internship hours with a health education/promotion agency by students who have passed the Certified Health Education Specialist Exam, or 350 hours by students who do not take/pass the exam. Prerequisites: Completion of 24 semester credit hours including required courses and approval of internship site and responsibilities by the School of Health Promotion and Kinesiology. Credit: Three hours.

HS 5006. Practicum in Health Education. Internship experiences with health-related agencies or in the development of an original contribution to teaching and learning materials. Twelve practicum hours a week. Credit: Six hours.

HS 5013. Data Collection and Analysis. Overview of data collection and analysis including public health and health education/promotion concepts such as age-adjustment, relative risk, vital statistics, life tables, and health surveys. Analysis of retrospective and prospective studies in public health and health education/promotion. Three lecture hours a week. Credit: Three hours.

HS 5023. Health Promotion Research Methods. Basic research skills including use of library resources, reading and interpretation of research, writing style, research planning and design, and methodologies with a focus on public health and health education/promotion. Prerequisite or Co-requisite: One graduate-level statistics course. Three lecture hours a week. Credit: Three hours.

HS 5053. Psychosocial Aspects of Health. Emphasis on theory, research, and application of the interrelationships of the social and psychological aspects of health and wellness, including concepts of stress management and the impact of organizational factors. Three lecture hours a week. Credit: Three hours.

HS 5063. Aging and Health. Aging as part of the life cycle; special health concerns of the elderly; current life extending research and technology for successful aging. Three lecture hours a week. Credit: Three hours.

HS 5103. Principles and Methods of Teaching for Health Professionals. Development of classroom and clinical teaching competencies with emphasis on identification of resources, planning and implementation of instructional units, and instructional strategies for health professionals. Three lecture hours a week. Credit: Three hours.

HS 5113. Curriculum Development for Health Professionals. Theoretical concepts of curricular design; identification and implementation of unique factors that determine health curricula. Three lecture hours a week. Credit: Three hours.

HS 5343. Risk Reduction. Identification and analysis of risk-taking behaviors and application of health risk assessment theory, tools, data sources, and methodology. Use of risk assessments, demographic data, and behavior-change theories to determine appropriate health risk reduction and health enhancement strategies for various populations and settings. Three lecture hours a week. Credit: Three hours.

HS 5353. Epidemiology. Study of disease occurrence in human populations and the understanding of the various methods used in the study of disease. Three lecture hours a week. Credit: Three hours.

HS 5363. Population Health. Dimensions of population health; application of community health concepts through the use of multicultural approaches; effective capacity building in coalitions and other populations. Community health agency organization, role, and structure. Three lecture hours a week. Credit: Three hours.

HS 5383. Program Planning and Implementation in Health Promotion. Development and evaluation of community and worksite health education/promotion programs. Review of approaches to program design, criteria for content selection, writing of programs, and community resources and support. Prerequisite: HS 5423. Three lecture hours a week. Credit: Three hours.

HS 5413. Current Issues in Health Promotion. Introduction to the profession of health education/promotion within the field of public health: role, credentialing, ethics, journals, associations and organizations, leaders in the field, and current and future trends in health education/promotion and public health. Three lecture hours a week. Credit: Three hours.

HS 5423. Ethnic and Cultural Factors in Health Decisions. Consideration of major chronic, degenerative, and communicable diseases in light of socio-cultural influences; exploration of myths and misconceptions in ethnic groups and the related health implications; alternative strategies for minorities to improve health through education. Three lecture hours a week. Credit: Three hours.

HS 5453. Community-Based Health Informatics. Use of informatics to promote community health; basic technological tools needed to develop and manage public health data collection systems that meet analytical needs of community-based organizations. Three lecture hours a week. Credit: Three hours.

HS 5563. Consumer Health. Aspects of the marketplace related to the purchase and use of health products and services. Use of scientific method to determine health-related facts and identify common misconceptions and quackery related to health products and services. Problems and trends within health-related advertisements. Three lecture hours a week. Credit: Three hours.

HS 5613. Worksite Health Promotion. Design and management of effective worksite health promotion programs; organizational aspects of healthy work environments; critical issues related to health behavior change and intervention programs in the workplace setting. Three lecture hours a week. Credit: Three hours.

HS 5703. Applied Statistics in Health Promotion. Descriptive and inferential statistics in health promotion; selection of appropriate statistical tests for specific health research problems. Critical evaluation of statistics used in published peer-reviewed literature. Development of terminology and skills for communicating statistical concepts. Three lecture hours a week. Credit: Three hours.

HS 5713. Dental Hygiene Leadership and Advocacy. Appraisal of selected theories of leadership and identification of practical methods to inspire excellence in individuals, in community, and/or in organizations; to create and communicate a shared vision; and to successfully manage change both to attain individual and organizational strategic goals and successful performance. Develop advocacy skills from local, state, and national perspectives to contribute to the advancement of the profession and to the improvement of oral health. Prerequisite: Registered Dental Hygienist. Three lecture hours a week. Credit: Three hours.

HS 5723. Health Care in a Culture of Poverty. Research and development of healthcare or oral healthcare plans for under-served populations throughout the world based on the synthesis of the worldview of stakeholders including political, economic and other relevant factors affecting healthcare and oral healthcare delivery. Three lecture hours a week. Credit: Three hours.

HS 5733. Dental Hygiene Clinical Education. Study of educational methodology as it applies to the clinical education environment or for self-evaluation and improvement of clinical skills in the practice of dental hygiene. Access to a dental hygiene program clinic, clinical facility, or dental office is required; however, no clinical treatment of human subjects will be required. Prerequisite: Registered Dental Hygienist. Three lecture hours a week. Credit: Three hours.

HS 5753. Interprofessional Collaboration and Health Promotion. Approaches to health care promotion and effective collaboration among members of the healthcare community with emphasis on the diversity of expertise in interprofessional collaborative teams and basic concepts of effective teamwork. Three lecture hours a week. Credit: Three hours.

HS 5763. Alternative Dental Health Careers. Critical examination of professional roles, responsibilities, and structure of various alternate career paths within the discipline of dental hygiene; legal and functional requirements of alternative career paths; cross-cutting principles of leadership within alternative career paths. Three lecture hours a week. Credit: Three hours.

HS 5773. Social and Organizational Issues in Health Informatics. Overview of social and organizational challenges in health informatics. Development of decision-making strategies about access to and use of health informatics for research and public health. Development of ethical decision-making guidelines and tools for the role of health information management in organizations. Three lecture hours a week. Credit: Three hours.

HS 5783. Research in Dental Hygiene. Process of inquiry and research methodologies applied to dental hygiene. Integrative culminating research experience with a professional presentation of the results. Three lecture hours a week. Credit: Three hours.

HS 5803. Writing for Professional Publications. Concepts and techniques for effective writing practices within health education/promotion and public health. Analysis of professional writing and strategies to improve written communication in a range of writing genres including basic correspondence, systematic literature reviews, abstracts, and research-based writing. Three lecture hours a week. Credit: Three hours.

HS 5901. Special Topics. Concentrated study of a particular topic in health education. May be repeated for credit when topic varies. One lecture hour a week. Credit: One hour.

HS 5903. Special Topics. Concentrated study of a particular topic in health education. May be repeated for credit when topic varies. Three lecture hours a week. Credit: Three hours.

HS 5911. Independent Study. Advanced study in a selected area of health education leading to the solution of a problem of professional interest and significance. May be repeated for additional credit when topic varies. Credit: One hour.

HS 5913. Independent Study. Advanced study in a selected area of health education leading to the solution of a problem of professional interest and significance. May be repeated for additional credit when topic varies. Credit: Three hours.

HS 5923. Capstone in Informatics. Culminating organization and/or community-based interdisciplinary/interprofessional project supported through informatics and technology and applied to a specific domain to demonstrate knowledge and skills acquired in the informatics program. Immersive, investigative, and reflective opportunity for deep study on a selected area of practice/application domain. Prerequisite: Completion of 24 semester credit hours. Credit: Three hours.

HS 5983. Thesis. Credit: Three hours.

HS 5993. Thesis. Prerequisite: HS 5983. Credit: Three hours.

HS 6043. Quantitative Research Methods in Health Promotion. Review of library skills and writing style, research planning and design, methodologies, and research reporting in preparation for dissertation proposal and prospectus; advanced research skills in health behavior and community-based participatory research. Prerequisites: HS 5013, HS 6483, HS 6073, and six hours of statistics. Three lecture hours a week. Credit: Three hours.

HS 6053. Qualitative Research Methods in Health Promotion. Overview of epistemological and theoretical perspectives underlying qualitative methods in health science research; techniques for gathering and analyzing qualitative data; and issues relative to publishing qualitative research in health education/promotion and public health. Prerequisite: HS 6043. Three lecture hours a week. Credit: Three hours.

HS 6073. Seminar in Health Education. Capstone course that draws from skills learned in other courses throughout the program; synthesis of theory and methods of health education; needs assessment and program planning; implementation; and evaluation into advanced application through grant writing activities; seven areas of responsibility of a graduate level health education specialist. Prerequisites: HS 5423, HS 6453, and HS 5383. Co-requisite: HS 6483. Three seminar hours a week. Credit: Three hours.

HS 6353. Social Epidemiology. Epidemiological methods with focus on social determinants of diseases, including the theoretical foundation and processes involved in conducting social epidemiological research. Prerequisite: HS 5353 or permission of instructor. Three lecture hours a week. Credit: Three hours.

HS 6403. Environmental Health. Basic principles of ecology as they apply to the health of human beings; analysis of modern developments in technology and science and their resultant effects on human beings; development of community efforts in establishing environmental quality. Three lecture hours a week. Credit: Three hours.

HS 6423. Global Health. Health status, health delivery systems, and health policy issues affecting human populations around the world; roles of selected international organizations in advancing the health status of certain populations. Three lecture hours a week. Credit: Three hours.

HS 6433. History of Medicine, Public Health, and Health Promotion. Significant historical events with emphasis upon ideas, personalities, institutions, and cultural factors of each era as they affected the origin and development of health education/promotion. Three lecture hours a week. Credit: Three hours.

HS 6443. Theoretical Foundations of Health Promotion. Theories and concepts related to health education/promotion and public health. Historical and current health behavior theories and models, rational, psychodynamic, and behavioral theories from education, psychology, and sociology. Applications of theory to health education/promotion practice and research. Three lecture hours a week. Credit: Three hours.

HS 6453. Strategies in Health Promotion Planning and Delivery. Identification of the various entities within the health education system which influence decisions about accepting health information and changing unhealthful lifestyles. Development of strategies for effective utilization of health information. Prerequisite: HS 5423. Three lecture hours a week. Credit: Three hours.

HS 6483. Evaluation in Health Promotion. Evaluative tools for individuals, groups, and programs in health education/promotion; methods for selecting instruments and collecting data; advanced interpretation and reporting evaluation results through a formal evaluation plan. Prerequisites: HS 5353, HS 5383, HS 5423, and HS 6443. Co-requisite: HS 6453. Three lecture hours a week. Credit: Three hours.

HS 6563. Advocacy and Leadership in Health Promotion. Exploration of advocacy, including building coalitions, creating media messages, meeting with decision-makers, and impacting health policy. Three lecture hours a week. Credit: Three hours.

HS 6901. Special Topics. Concentrated study of a particular topic of current interest in health education. May be repeated for credit when topic varies. One lecture hour a week. Credit: One hour.

HS 6903. Special Topics. Concentrated study of a particular topic of current interest in health education. May be repeated for credit when topic varies. Three lecture hours a week. Credit: Three hours.

HS 6911. Independent Study. Individual study in health studies leading to the solution of a problem of professional interest and significance. May be repeated for credit. Credit: One hour.

HS 6913. Independent Study. Individual study in health studies leading to the solution of a problem of professional interest and significance. May be repeated for credit. Credit: Three hours.

HS 6983. Dissertation. Credit: Three hours.

HS 6993. Dissertation. Prerequisite: HS 6983. Credit: Three hours.

KINS 5023. Methods of Research. Types of research; development of research designs; procedures for collection and treatment of data; application of introductory statistics for planning research designs, analyzing data, and interpreting findings; critical analysis of research. Three lecture hours a week. Credit: Three hours.

KINS 5033. Applied Statistical Principles. Statistical principles and their applications to problems in kinesiology and other related areas. Three lecture hours a week. Credit: Three hours.

KINS 5113. Professional Internship in Sport Management. A 350-hour internship with a sports entity or program related to sports management. Prerequisite: Completion of 24 semester credit hours (including core courses) and approval by the School of Health Promotion and Kinesiology. Credit: Three hours.

KINS 5123. Professional Affiliation. Practicum experience in educational, clinical, or recreational settings. A minimum of nine hours a week will be spent in the practicum setting. Two semesters are required of students specializing in adapted and developmental physical education. Nine laboratory hours a week. Credit: Three hours.

KINS 5203. Theory of Coaching. Theoretical base with practical application for teaching sport and sport skills; sport coaching responsibilities including developing a coaching philosophy and establishing an effective coaching style; effective communication, management responsibilities, skill development, sport physiology, and productive planning. Designed for coaches at all levels and for all sports. Three lecture hours a week. Credit: Three hours.

KINS 5243. Sport Injury Prevention and First Aid. Recognition and emergency treatment of sports injuries; roles, responsibilities, and limitations of coaches concerning sport injuries; prevention of and response to sports injury; developing a medical emergency plan; includes CPR certification. Three lecture hours a week. Credit: Three hours.

KINS 5253. Organization and Administration for Effective Team Management. Organization and administration of staff, budgeting, personnel, and effective team function. Topics include risk management, recruiting, safety positive learning environment, technology, and legal concerns. Three lecture hours a week. Credit: Three hours.

KINS 5263. Sport Psychology. Sport psychology principles utilized in a coaching environment; enhancing athletic performance through psychological assessment and goal setting; coach-athlete relationships; various psychological problems of athletes. Three lecture hours a week. Credit: Three hours.

KINS 5273. Sport Conditioning and Nutrition. Planning and monitoring strength and conditioning training programs by coaches; development of resistance training programs to improve sport performance; nutritional concepts tailored for athletes in any sport. Three lecture hours a week. Credit: Three hours.

KINS 5293. Technical Skills Analysis. Sport skill analysis; use of biomechanical principles to analytical sport movement; effective communication, feedback, and cues for skill teaching. Three lecture hours a week. Credit: Three hours.

KINS 5303. Coaching Tactical Skills. Competitive tactics and strategies for all sports; analysis of tactical skills and games approach strategies; developing effective practice plans; developing effective decision making for athletes. Three lecture hours a week. Credit: Three hours.

KINS 5403. Leadership Theory and Practice in Sport and the Health Sciences. Leadership theory and models with a focus on personal and organizational effectiveness within the context of sport and the health sciences. Leadership self-assessment; design of a leadership self-development plan; and individual/group problem solving, decision-making, conflict resolution, and performance appraisal. Three lecture hours a week. Credit: Three hours.

KINS 5413. The Sport Industry. Sport-related industries and organizations; examination of dimensions of structure, design processes, theories, and behaviors related to the sport domain. Three lecture hours a week. Credit: Three hours.

KINS 5423. Governance, Policy Development, and Ethics in Sport. Ethical issues, theory, and decision making as applied to the sport industry. Analysis of governance structures and policy development utilized within sport agencies with an emphasis on the organizational structure, strategic management, ethics, politics, policy, and influence of governing bodies. Three lecture hours a week. Credit: Three hours.

KINS 5443. Sport for Development. Social issues, sport for development, and the use of sport as a means of improving individuals and local and global communities. Examination of social development goals and program theory, development, and assessment with emphasis on sport intervention, volunteerism, and evidence-based decision making. Three lecture hours a week. Credit: Three hours.

KINS 5453. Financing the Sport Enterprise. Funding principles and financial practices in the organization and operation of a sport enterprise. Three lecture hours a week. Credit: Three hours.

KINS 5463. Legal Issues in Sport. Application of legal theories to the sport industry with specific focus on tort law, constitutional law, contract law, negligence and risk management, and Title IX. Three lecture hours a week. Credit: Three hours.

KINS 5473. Sport Media and Marketing. Concepts, theories, and trends in sport media, marketing, and sales; current developments in sport communication technologies, models, and modes of delivery for effective delivery of marketing messages to diverse target audiences. Three lecture hours a week. Credit: Three hours.

KINS 5493. Sport Venue and Event Management. Practical knowledge and skill competencies needed for facility and event management within the sport industry. Sport facility and venue trends; planning, designing, budgeting, and management for sport facilities, facility, and event operations; legal issues related to sport facility and event management; and risk evaluation and assessment. Three lecture hours a week. Credit: Three hours.

KINS 5503. Physiological Responses During Alternative Modes of Exercise. Examination of acute physiological responses to alternative modes of exercise and therapies, including hippotherapy, whole-body vibration, dance, functional electrical stimulation, aquatic exercise, and crossfit exercise. Three lecture hours a week. Credit: Three hours.

KINS 5513. Mechanical Analysis of Human Motion. Kinematics and kinetics of human motion with emphasis on the principles describing human motion and the effects of external and internal forces on the human body and motion. Three lecture hours a week. Credit: Three hours.

KINS 5553. Advanced Exercise Physiology. Energy production and control of energy systems; effect of lactate accumulation during exercise; control of the cardiovascular system; adaptations to aerobic and anaerobic exercise training; influence of drugs on exercise performance. Prerequisite: An undergraduate course in exercise physiology. Three lecture hours a week. Credit: Three hours.

KINS 5573. Graded Exercise Testing. Administration and evaluation of graded exercise tests and electrocardiograph results. Two lecture and three laboratory hours a week. Credit: Three hours.

KINS 5583. Hormonal Responses during Exercise. Hormonal control of fuel mobilization and utilization during exercise; effect of exercise on catecholamine, insulin, glycogen, and steroid hormone response; effect of exercise on hormonal response of women. Three lecture hours a week. Credit: Three hours.

KINS 5593. Environmental Exercise Physiology. Examination of the acute physiological responses to head, cold, microgravity, altitude, aquatic environments, and air pollution; how to properly adapt to these environments with regard to training; and how the circadian cycle affects exercise performance. Three lecture hours a week. Credit: Three hours.

KINS 5603. Growth and Perceptual Motor Development for Individuals with Low Incidence Disabilities. Hereditary and environmental determinants of motor development; perceptual motor behavior in infants, children, adolescents, adults, and senior citizens; characteristic changes in size, body build, fitness, and motor performance. Focus on universal design for learning and instruction. Development of competencies directed toward achievement of the Adapted Physical Education National Standards (APENS). Three lecture hours a week. Credit: Three hours.

KINS 5613. Cardiovascular Response to Exercise. General and specific effects of exercise upon the cardiovascular system of the human body, with emphasis upon research techniques relevant to the testing of these systems. Two lecture and three laboratory hours a week. Credit: Three hours.

KINS 5683. Exercise Evaluation and Prescription. Measurement of health-related physical fitness and exercise capacity in healthy individuals and populations requiring special considerations; population-appropriate exercise prescription; underlying physiological mechanisms controlling physical fitness and exercise capacity. Prerequisite: Undergraduate course in exercise physiology. Two lecture and two laboratory hours a week. Credit: Three hours.

KINS 5693. Applied Techniques in Biomechanics and Exercise Physiology. Application of principles of biomechanics and exercise physiology using novel equipment in a field setting. Three lecture hours a week. Credit: Three hours.

KINS 5723. Sport in American Society. Role of sports and games in American culture as expressive of meanings and values; cognizance of the feminine role in sports; contributions of sports and games to human welfare. Three lecture hours a week. Credit: Three hours.

KINS 5753. Capstone in Informatics. Culminating organization and/or community-based interdisciplinary/interprofessional project supported through informatics and technology and applied to a specific domain to demonstrate knowledge and skills acquired in the informatics program. Immersive, investigative, and reflective opportunity for deep study on a selected area of practice/application domain. Prerequisite: Completion of 24 semester credit hours. Credit: Three hours.

KINS 5793. Pedagogy I: Behavior Management in APE Environments. Techniques of effectively managing behavior and promoting learning of individuals of all ages and levels of abilities who have disabilities and are at risk. Underlying theories and research applications. Three lecture hours a week. Credit: Three hours.

KINS 5813. Research in Kinesiology. Individualized research in a specific area of kinesiology. May be repeated for additional credit. Eight laboratory hours a week. Credit: Three hours.

KINS 5843. Pedagogy III: APA and the APENS Theory to Practice. Assessment, planning, and implementation of evidence-based physical education classes for students with low-incidence disabilities. Focus on competencies guided by the Adapted Physical Education National Standards (APENS). Three lecture hours a week. Credit: Three hours.

KINS 5853. Assessment in Adapted Physical Education. Conditions which impede psychomotor functioning; application and evaluatation of assessment instruments pertaining to the motor domain; determination of educational placement; role of the physical educator for the Admission, Review, and Dismissal (ARD) / Individualized Education Program (IEP) Committee; and development of Full Individual Evaluation (FIE) and appropriate goals and objectives for the IEP. Focus on evidence-based research and universal design for learning and instruction. Development of competencies directed toward achievement of the Adapted Physical Education National Standards (APENS). Three lecture hours a week. Credit: Three hours.

KINS 5863. Pedagogy II: Instructional Strategies in APE Environments. Selecting and presenting appropriate intervention strategies for individuals with varying disabling conditions. Techniques for modifying environmental conditions to increase attending behaviors. Three lecture hours a week. Credit: Three hours.

KINS 5883. APA II: Disability Sport and Fitness. Developmental and competitive sports in school/community settings; Paralympics, Special Olympics, and deaf sport; wheelchair and ambulatory sports for all groups/ability levels; assessment, athletic training, coaching, organization, and administration. Three lecture hours a week. Credit: Three hours.

KINS 5903. Special Topics. Specially scheduled course on topic of current interest. May be repeated for additional credit when topic varies. Three lecture hours a week. Credit: Three hours.

KINS 5911. Independent Study. Study of a specific topic in physical education leading to the solution of a problem of interest to the profession or the student. May be repeated for additional credit. Prerequisite: Permission of the instructor. Credit: One hour.

KINS 5913. Independent Study. Study of a specific topic in physical education leading to the solution of a problem of interest to the profession or the student. May be repeated for additional credit. Prerequisite: Permission of the instructor. Credit: Three hours.

KINS 5963. APA I: Disability Sport and Fitness. Fitness assessment, program development, and implementation for individuals with disabilities and/or related conditions in a clinical setting leading to preparation for the Certified Inclusive Fitness Trainer Exam (CIFT). Two lecture and two laboratory hours a week. Credit: Three hours.

KINS 5973. Professional Paper and Project. Credit: Three hours.

KINS 5981. The Professional Portfolio. Development of a professional portfolio by students in the Master of Arts in Teaching program demonstrating the student's growth in the Learner-Centered Competencies. Pass-fail grade only. May be repeated. Credit: One hour.

KINS 5983. Thesis. Prerequisite: KINS 5023 or equivalent. Credit: Three hours.

KINS 5993. Thesis. Prerequisite: KINS 5983. Credit: Three hours.

KINS 6043. Statistical Inference. Application of analysis of variance and covariance, factorial analysis of variance, and multiple regression to research design problems in Kinesiology and other related areas. Special emphasis will be given to repeated measures designs used in conjunction with between subjects designs, as well as to multivariate designs. Prerequisite: KINS 5033 or equivalent. Three lecture hours a week. Credit: Three hours.

KINS 6113. Seminar. Informal, individual, or small group study of a special problem or current issue in physical education. May be repeated for additional credit. Three seminar hours a week. Credit: Three hours.

KINS 6133. Professional Internship. Guided field experience in administrative, supervisory, consultant, or similar level positions. Field experiences may not be part of the student's regular job responsibilities. May be repeated for three additional credit hours. One lecture and eight practicum hours a week. Credit: Three hours.

KINS 6143. Research Design in Kinesiology. Considerations of research designs with emphasis upon statistics involving multi-group models. Prerequisites: KINS 5023, KINS 5033, and KINS 6043; or permission of instructor. Three lecture hours a week. Credit: Three hours.

KINS 6223. Neuromuscular Physiology. The neuromuscular system's physiological response to acute and chronic exercise. Organization and structure of skeletal muscle, neurological control of skeletal muscle, subcellular and macrocellular pathways of muscle hypertrophy, and factors related to pathophysiological muscle atrophy. Three lecture hours a week. Credit: Three hours.

KINS 6413. Research Seminar in Sport Management. Research intensive doctoral seminar analyzing the sport industry. May be repeated for credit when topic varies. Three seminar hours a week. Credit: Three hours.

KINS 6523. Advanced Biomechanics. Advanced biomechanical issues such as inertial properties of the human body, mathematical body modeling, numerical methods in biomechanics, advanced joint kinematics and kinetics, and musculoskeletal modeling. Prerequisite: KINS 5513. Three lecture hours a week. Credit: Three hours.

KINS 6563. Human Motor Control. Control and coordination of human movement from theoretical perspectives. Exploration of how sensory and motor systems integrate information to perform motor functions including postural control, gait, and reaching and grasping in healthy and diseased populations. Prerequisite: KINS 4573 or permission of instructor. Three lecture hours a week. Credit: Three hours.

KINS 6573. Motor Learning and Performance. Examination of how humans learn, relearn, and perform motor skills. Foundational theory and current research in human motor learning and frameworks for explaining why certain behaviors emerge in both typically developing and special populations. The "researcher-practitioner" model, including interpretation of theory, proposal of basic experiments, and application to fields such as coaching, physical therapy, occupational therapy, and rehabilitation. Three lecture hours a week. Credit: Three hours.

KINS 6611. College Level Instructional Design and Delivery in Kinesiology. Design and implement course, instructional strategies, and evaluation techniques. Prerequisite: Master's degree in Kinesiology or advisor approval. Three laboratory hours a week. Credit: One hour.

KINS 6623. Biomechanical Analysis I: Motion Analysis. Advanced motion and analysis techniques including human body modeling, high-speed videography, manual and automatic marker tracking, data reduction and processing, 2- and 3-dimensional analysis, inverse dynamics, and computer procedures. Prerequisite: KINS 5513 or approval of instructor. Two lecture and two laboratory hours a week. Credit: Three hours.

KINS 6643. Biomechanical Analysis II: Data Acquisition and Instrumentation. Advanced data acquisition issues including A/D conversion, device interface, programming, force plate and ground reaction force analysis, electrode placement and EMG analysis, EMG normalization and force processing, and biomechanical instrumentation. Prerequisite: KINS 6623. Two lecture and two laboratory hours a week. Credit: Three hours.

KINS 6711. Advanced Research in Adapted Physical Activity Doctoral Seminar. Research involving development of scholarship (manuscripts, presentations, and grants) to share with other researchers. Variable content will be related to problems of professional significance. Prerequisite: Master's degree in Kinesiology or consent from student's program advisory committee chair. One seminar hour a week. Credit: One hour.

KINS 6811. Advanced Research in Kinesiology. In-depth research involving literature review, identification of research question, research design, development of research tools and analysis protocols, data collection and analysis, report writing, and presentation. May be repeated for additional credit. Credit: One hour.

KINS 6813. Advanced Research in Kinesiology. Kinesiology research involving literature review, identification of the research question, research design, development of research tools and analysis protocols, data collection and analysis, manuscript writing, and presentation. May be repeated for additional credit. Eight laboratory hours a week. Credit: Three hours.

KINS 6821. Research in Exercise Physiology. Research in exercise physiology involving literature review, identification of the research questions, research design, laboratory techniques, data collection and analysis, manuscript writing, and presentation. May be repeated for additional credit. Credit: One hour.

KINS 6853. Practicum: Appraisal in Adapted Physical Education. Administration of tests of psychomotor functioning; interpretation of findings; writing the I.E.P's; participation in multidisciplinary staffing. May be repeated for up to six credit hours. Six practicum hours a week. Credit: Three hours.

KINS 6903. Special Topics. Specially scheduled course on topic of current interest. May be repeated for additional credit when topic varies. Three lecture hours a week. Credit: Three hours.

KINS 6911. Independent Study. Study of a specific topic in physical education leading to the solution of a problem of interest to the profession or the student. May be repeated for additional credit. Prerequisite: Permission of the instructor. Credit: One hour.

KINS 6913. Independent Study. Study of a specific topic in physical education leading to the solution of a problem of interest to the profession or the student. May be repeated for additional credit. Prerequisite: Permission of the instructor. Credit: Three hours.

KINS 6983. Dissertation. Credit: Three hours.

KINS 6993. Dissertation. Prerequisite: KINS 6983. Credit: Three hours.

PUBH 5113. Racial and Ethnic Disparities. Major chronic, degenerative, and communicable diseases in relation to bio-cultural influences; exploration of myths and misconceptions in ethnic groups and related health implications; alternative strategies for minorities to improve health through education. Three semester credit hours. Credit: Three hours.

PUBH 5123. Biostatistics. Research designs and statistical methods in public health research and practice, descriptive statistics, probability and probability distributions, estimation and hypothesis testing, simple linear regression, and analysis of variance. Three lecture hours a week. Credit: Three hours.

PUBH 5163. Social and Behavioral Health. Theoretical foundations, determinants of health, socio-cultural context of health, health disparities and ethics, and theoretical applications to real-world public health challenges. Three lecture hours a week. Credit: Three hours.

PUBH 5173. Environmental Health. Environmental health determinants, environmental law, standards, risk assessment, sustainability and health, and environmental health ethics. Three lecture hours a week. Credit: Three hours.

PUBH 5213. Applied Research Methods. Principles of research, research ethics, interpretation of research, systematic literature reviews, scientific and technical writing, research planning, design, and methodologies related to public health. Three lecture hours a week. Credit: Three hours.

PUBH 6133. Theoretical Foundations of Public Health. Examination of public health concepts and applications of theory to practice and research in the health sciences. Three lecture hours a week. Credit: Three hours.

PUBH 6143. Assessment, Planning, and Evaluation I. Foundations of needs assessment, program planning, and program evaluation. Three lecture hours a week. Credit: Three hours.

PUBH 6153. Assessment, Planning, and Evaluation II. Advanced principles of needs assessment, program planning, and program evaluation. Prerequisite: PUBH 6143. Three lecture hours a week. Credit: Three hours.

PUBH 6163. Epidemiology. Disease distribution and determinants in human populations, surveillance of diseases, application of surveillance methods used to measure disease, interpretation of epidemiologic data. Three lecture hours a week. Credit: Three hours.

PUBH 6183. Health Communication. Health communication theory and practice. Design, implementation and evaluation of health communication interventions that influence decisions about accepting health information and improved public health outcomes. Credit: Three hours.

PUBH 6223. Health Advocacy and Leadership. Advocacy and coalition building, creation of media messages, meetings with decision-makers, and impacting health policy. Three lecture hours a week. Credit: Three hours.

PUBH 6973. Public Health Practicum. Supervised field experience in public health including 350 hours of work site experience. Hours per week may vary by practicum site location. Prerequisite: Completion of 18 semester credit hours and permission of instructor. Credit: Three hours.