
Department of Kinesiology

I Educational Goal

The Department of Kinesiology creates new and up-to-date knowledge related to the current trends in the field of physical activity, physical education, and sport. It prepares scholars and researchers in physical therapy, athletic training, fitness rehabilitation, and other movement science fields, and physical education teachers and sport specialists to deliver specialized physical education programs based on the needs and interests of the participants and rehabilitative services for all segments of society.

II Educational Objective

(1) By end of the graduate course in Department of Kinesiology, the student will be able to teach quality physical education programs that incorporate sensitivity to unique characteristics and needs of each learner to maximize active learning and life-long physical activity participation via effective teaching strategies and scientific knowledge of human physical performance.

(2) Students will be able to demonstrate professional educator behaviors at all times and the graduate program in Kinesiology can lead to a variety of careers in the field of physical activity, physical education, and sport.

(3) Students will be able to become an expert nationally and internationally recognized for their research and expertise

III**List of Full-time Faculty**

Name	Position	Degree(University)	Field of Instruction	Area of Research
Jeong, Il Gyu	Professor	Ph.D. (Korea University)	Kinesiology	Exercise Physiology
Yoon, Jin Hwan	Professor	Ph.D. (Korea University) & M.D. (Kyung Hee University)	Kinesiology	Research Methods in Physical Education
Choi, Seung Oh	Professor	Ph. D. (Texas University)	Kinesiology	Adapted Physical Education
Lee, Hee hyuk	Associate Professor	Ph.D. (Korea University) & M.D. (Kyung Hee University)	Kinesiology	Exercise Prescription
Han, dong Yu	Associate Professor	Ph.D. (University of Louisville)	Kinesiology	Sport Sociology
Sunhwi Kim	Associate Professor	Ph. D. (University of Georgia)	Kinesiology	Sport Pedagogy

IV Course Description

SS601 (Human Anatomy)

This course is designed to enable students to understand the figure and structure of the human body. In this course, students will explore the structure of joints, characteristics of exercise, function of muscles, and transmission of nerve cells.

SS602 (Sport Sociology)

This course is designed to enable students to build in-depth knowledge in topics about the structure and function of sport associated with social changes. The topics covered in this course include current issues and problems in the field of sport sociology (e.g., politics, economics, gender/race, and the media). Students will explore how sport, society, and culture have been interrelated and analyze social issues through reading the assigned journal articles.

SS603 (Principles of Physical Education)

This course is designed to enable students to build the foundation of kinesiology and knowledge of human movement. The topics covered in this course include curricular components, motor behavior components, historical background, philosophical basis and related concepts which are applicable to the field of physical education. Students will be introduced to the skills and knowledge required to become a successful professions related to physical education.

SS604 (Exercise Physiology)

This course is designed to enable students to understand the fundamental principles of exercise physiology. The topics covered in this course include the measurement of metabolic energy level, principles of respiratory and circulatory system function, and nerve and muscle groups related to the human movement. Students will learn how to apply exercise physiology to sport and physical activity.

SS605 (Sport Psychology)

This course is designed to enable students to understand the sociological approach to sports and examine the relationship between sport and contemporary society. The topics covered in this course include introduction of sports psychology, sports and training, practice, perception, psychology, sports and personality, sports and achievement behavior, sports and violence, and sport leadership.

SS606 (Biomechanics)

This course is designed to enable students to understand the fundamental principles of biomechanics and apply biomechanics to sport and physical activity. The topics covered in

this course include analyses of projectile-related activities, aerodynamics in sport, balance related activities, throw and push patterns, and qualitative and quantitative analysis of sport activities.

SS607 (Sport Nutrition)

This course is designed to prepare the students to understand the fundamental knowledge of sport nutrition. The topics covered in this course include digestion, absorption and metabolism, well-balanced diet and participation in sport and physical activity, nutrient requirement, body composition and physical activity, nutrition management, and principles of sport training.

SS608 (Exercise Prescription)

This course is designed to enable students to learn fundamental knowledge in order to assess and prescribe exercise program. for the healthy person. In this course, students will have an opportunity to demonstrate the ability to evaluate and interpret fitness testing data and develop individualized exercise prescriptions according to the assessment data, goals and objectives of the fitness training, and health history information of each individual. Furthermore, students are required to conduct the research and collect the up-to-dated information via world wide web (www) about exercise prescription and assessment.

SS609 (Statistics in Physical Education)

This course is designed to enable students to understand the statistics for the successful research experience in the area of physical education and sport. The topics covered in this course include population, elements, sampling units, sampling frame, and sample. Additional topics such as simple random sampling, stratified random sampling, cluster sampling, systematic sampling, size of sample, and scale will be covered.

SS610 (Training Methodology)

This course is designed to enable students to develop physical education curriculum and training program for each individual. The topics covered in this course include principles of training methodology, goals and objectives of training, various training methods according to the characteristics of individuals, environment and exercise training, and the components of health-related physical fitness. Current trends and issues about exercise training and utilizing alternative instructional strategies to provide appropriate exercise training program to maintain and/or improve the fitness levels will be mainly emphasized.

SS611 (History of Physical Education)

This course is designed to enable students to investigate the transition of sport from its pre-modern to its modern form. The topics covered in this course include the historical forces and the modern development of sport, philosophical views of successful practitioners and researchers, historical background in sport and physical activity of Republic of Korea.

SS612 (Histology Lab)

This course is designed to enable students to learn diverse tissue preparation methods and observing methods by conducting the laboratory experience under the direction of faculty. The topics covered in this course include clinical and histopathologic features, components of cell, and intercellular substance.

SS613 (Seminar in Special Topics of Physical Education)

This course may be a seminar and includes current issues and various topics in the field of physical education and sport studies. Course content includes life-long physical activity participation, purpose of quality physical education programs in current society, and practical application of sport and leisure. Moreover, in-depth discussion will be provided to the students for the practical knowledge application in a specified field.

SS614 (Sport Management)

This course is designed to enable students to learn advanced management issues in diverse sport settings. Emphasis will be on planning, communicating, controlling, and decision making. In addition, this course will provide students with the pertinent knowledge to analyze several issues in sport management through reading the relevant journal articles.

SS615 (Physical Education for The Handicapped)

Students are exposed to those impairments addressed in idea as they relate to physical education. Assessment, Individualized Education Program (IEP) development, and other elements necessary to successful inclusion are addressed. In addition, physical activities for special populations outside the school setting are also addressed. By end of this course, the students will be able to modify curricula, instruction, activities, and assessments (strategies, language, application, equipment, organization, etc.) for developmental appropriateness and maximum participation and match learning and teaching styles for individuals with disabilities.

SS616 (Exercise Physiology Lab.)

This course is designed to enable students to examine the human physiological response to exercise. Course content is designed to provide an introduction to the study of the physiological adjustments to acute and chronic exercise. The topics covered in this course include metabolic, muscular, circulatory and respiratory physiology.

SS617 (Philosophy of Physical Education)

This course is designed to enable students to examine the values of sport and major philosophical perspectives in the field of physical education and sport. The topics covered in this course include development of a philosophy of sport, the establishment of a personal code of ethics, philosophical perspectives in the field of modern sport, and diverse ethical issues in physical education and sport, roles of physical educators, and current issues in the

real school setting.

SS618 (Research Methods in Physical Education)

This course is designed to enable students to learn various research methods in the field of sport and physical education. The topics covered in this course include difference between qualitative and quantitative research, the components of a research proposal, research methodologies (descriptive, analytical, experimental, philosophical, and historical), reliability and internal and external validity, and descriptive and inferential statistics as related to movement sciences, and the data analysis methods.

SS619 (Sport Medicine)

This course is designed to enable students to understand the biomechanics of joints and pathomechanics of orthopedic injuries. The topics covered in this course include prevention of athletic injuries, recognition, evaluation, and immediate care of athletic injuries, rehabilitation and management skills, taping and wrapping techniques, first aid/CPR/AED, emergency procedures, nutrition, sports psychology, human anatomy and physiology, therapeutic modalities, and therapeutic exercise.

SS620 (Studies of Leisure And Recreation)

This course provides students with in-dept knowledge in relation to leisure and recreation. This course covers both theoretical and practical aspects in leisure and recreation. Emphasis will be on socio-psychological approaches, leisure management, and recreational leadership.

SS701 (Principle of Body and Movement)

This course is designed to enable students to understand the principles of body and human movement. The topics covered in this course include kinematics, kinetics, neuromuscular activation patterns, energetics, and musculotendon mechanics.

SS702 (Advanced Measurement & Evaluation in Physical Education)

This course is designed to enables students to understand the significance of teaching effectiveness and interpret and analyze the evaluation data in the field of physical education. The topics covered in this course include roles and characteristics of effective teacher, national standards of physical education, instructional formats, influencing variables of quality physical education program, and the learning environment.

SS703 (Philosophy of Physical Education)

This course may be a seminar and includes the values of sport and major philosophical perspectives in the field of physical education and sport. The topics covered in this course include development of a philosophy of sport, the establishment of a personal code of ethics, philosophical perspectives in the field of modern sport, and diverse ethical issues in physical

education and sport, roles of physical educators, and current issues in the real school setting.

SS704 (Topics in Statistics in Physical Education)

This course is designed to enable students to understand the statistics for the successful research experience in the area of physical education. The topics covered in this course include analytics software program, correlational analysis, canonical correlation analysis, regression analysis, t-test, ANOVA, MANOVA, and discriminant analysis.

SS705 (Topics in Exercise Physiology)

This course is designed to enable students to understand the physiological principles of exercise. The topics covered in this course include regulation of energy metabolism, cardiovascular physiology, neuromuscular and neuroendocrine systems, skeletal muscle, exercise training, environmental influences, nutrition, weight control, and the impact of exercise on health and disease.

SS706 (Topics in Human Anatomy)

This course focuses on functional anatomy of the human musculoskeletal system. Students will learn the names and major landmarks of the major bones, the structure and kinematic characteristics of the major joints, as well as the names and functions of all the major muscles in the human body.

SS707 (Topics in Sports Psychology)

This course is designed to enable students to understand the interdisciplinary science and discuss the current trends in the field of kinesiology and psychology. The topics covered in this course include applied sport psychology, common areas of study, commonly used techniques such as arousal regulation, goal setting, and motor imagery.

SS708 (Topics in Sports Biomechanics)

This course is designed to enable students to develop competences in applying the principles of biomechanics to the analyses of sport, training, and conditioning of athletes. The topics covered in this course include analyses of projectile-related activities, aerodynamics in sport, balance related activities, throw and push patterns, and qualitative and quantitative analysis of sport activities.

SS709 (Topics in Sports Pedagogy)

In this course, students will develop an understanding of the tools of inquiry of both primary and secondary physical education; the ability to design, deliver, and evaluate a variety of instructional strategies and processes that incorporate learning resources, materials, technologies, and national standards appropriate to physical education; the ability to assess student learning in both primary and secondary physical education; and to apply these knowledge, skills, and attitudes to real life situations and experiences.

SS710 (Topics in Sports Marketing)

This course includes several major topics in sport marketing. Emphasis will be on recognizing how a marketing plan is linked to the mission statement and core values of the organization, analyzing sport products (e.g., sporting events), and assessing the current/future market climate for a sport or event by means of using major strategic planning tools (e.g., a PESTEL and SWOT analysis).

SS711 (Topics in Administration for Physical Education)

This course consists of various administrative aspects in sport organizations. Students will understand the general nature of sport administration and identify skills needed by sport administrators at each level. Additional major topics in sport administration (e.g., organizing, motivating, staffing, and leading) will be addressed. In addition, this course will provide students with knowledge to analyze advanced issues in sport administration through reading the relevant journal articles.

SS712 (Topics in Curriculum of Physical Education) 3

This course includes curriculum development, methods, and evaluation strategies for teaching physical education in middle and high school. In order to equally highlight the physical education objectives - cognitive, affective, and psychomotor domain - and apply national standards into the curriculum, the goal of this course is for students to plan units, lessons, and teach groups of diverse students in both middle and high school physical education classes.

SS713 (Topics in Sports Sociology)

This course is designed to aid students in the understanding the various areas of sport and current society. The topics covered in this course include influence of sport on values, attitudes, behaviors, cultural practices and a number of critical issues about the relationships between sociology, physical education, and sport sociology.

SS714 (Topics in Adapted Physical Education)

This course is designed to enable students to compare public laws and educational mandates that directly impact individuals with disabilities and explain how sensorimotor and perceptual motor development differs for adapted individuals. In this course, components of adapted physical education, roles of physical educator, guidelines for implementing the inclusion philosophy, history of adapted physical education, and long-term benefits of quality adapted physical education program for individuals with disabilities will be discussed.

SS715 (Topics in Motor Development)

This course is designed to enable students to explore human motor growth and developmental characteristics. The topics covered in this course include skill acquisition, the relationship between development to motor learning and performance, performance

assessment, movement skill development, assessment, remediation, and adaptation of physical activities.

SS716 (Practise of Sports Medicine)

This course is designed to provide the students with a broad understanding of sports medicine. The topics covered in this course include muscle trauma, injury of tendon, joint injury, ligament injury, bone fracture, prevention of athletic injuries, recognition, evaluation, and immediate care of athletic injuries, rehabilitation and management skills, taping and wrapping techniques, first aid/CPR/AED, emergency procedures, nutrition, high blood pressure and sports, type II diabetes and physical activity, osteoporosis and sports, sports psychology, human anatomy and physiology, therapeutic modalities, and therapeutic exercise.

SS717 (Topics of Research Method in Physical Education)

This course is designed to help students acquire the fundamental skills needed to become an effective researcher. This course will provide students with experiences in conducting thorough reviews of research, and reading and interpreting research articles. Students will be introduced to a variety of types of research conducted in along with basic research procedures.

SS718 (Exercise and Circulatory Physiology)

This course is designed to provide students with the current state of knowledge in the physiology of exercise. In this course, students will figure out how the body responds to exercise. Critical analysis of the acute physiological responses to exercise and the chronic adaptations that occur with systematic exercise training will be discussed. Furthermore, additional topics will be covered with a major emphasis on mechanisms underlying how the different systems of the body respond to exercise stress. The topics covered in this course include bioenergetics and metabolism, measurement of work, power and energy expenditure, respiratory system, cardiovascular system, endocrine system, muscular system, physiology of training, conditioning, and performance.

SS719 (Exercise and Hormone Metabolism)

This course is designed to enable students to understand the production of hormones and actions of hormones. The topics covered in this course include the relationship between physical activity participation patterns and changing hormone production levels.

SS720 (Topics in Motor Learning)

This course is designed to enable students to learn theories including conventional information, progressing theories, and connectionist (neural networks) models, theories of motor learning, the effects of different practice regimens, feedback, context and other effects of learning environments. Neural basis of motor learning and adaptation will be also covered.

SS721 (Topics in Exercise Biochemistry)

This course is designed to provide a comprehensive overview of exercise biochemistry and methods used in research to assess biochemical adaptations. By the end of this course, the student will be able to overview the effects of exercise on various metabolic pathways, understand how training affects biochemical markers, learn how standard biochemical markers in blood, urine, and muscle tissue can be used to assess the impact of exercise, nutrition, and training, realize basic clinical chemistry techniques used in exercise physiology research, and understand contemporary research areas within exercise biochemistry.

S722 (Topics in Sports Clothing)

This course is designed to enable students to learn fundamental knowledge about characteristics of sportswear fiber/textile and understand technological developments in the field of fiber/textile. In this course, various topics such as range of textiles, diverse textile materials, synthetic fibers, cotton thread and yarn, applications of textiles, and finish materials of the textile product will be covered.

SS723 (Topics in Exercise and Energy Metabolism)

This course is designed to enable students to understand how human body stores, delivers, and uses the energy. The topics covered in this course include include adenosine triphosphatase (ATP), hormonal regulation of energy balance and substrate utilization, level of physical activity participation and percent of body fat, body composition and weight-control, obesity, insulin resistance, energy balance, etc. Through classroom lecture and in-class discussion, students will evaluate scientific information related to energy intake, energy expenditure and health.

SS724 (Topics in Neurophysiology and Exercise)

This course is designed to enable students to understand the muscular system and nervous system. The topics covered in this course include the central nervous system (C. N. S), brain, spinal cord, sensory organs, muscle spindle, tendon spindle, and joint.

SS725 (Topics in Multivariate Statistical Analysis)

This course is designed to enable students to understand in-depth statistical methods for data analysis. The topics covered in this course include dimension reduction using principal components analysis and factor analysis, case reduction using cluster analysis, supervised classification with neural networks and trees. Inferential methods based on the assumption of multivariate normally distributed population will be also discussed.

SS726 (Topics in Growth and Development)

This course is designed to enable students to understand the growth and developmental stages of prenatal, birth, childhood, adolescence, young and middle adulthood, old age and death. The topics covered in this course include biological/genetic and environmental influences on

cognitive, physical/psychomotor, and affective developmental domains. In the course, students are required to complete systematic observation and in-depth interview with the individuals at each developmental stage and design sequential and developmentally appropriate exercise program for the participants.

SS727 (Topics in Muscular Physiology)

This course is designed to enable students to learn fundamental knowledge of skeletal muscle physiology from the perspective of internal function and review the current research trends. The topics covered in this course include aerobic and anaerobic metabolism during muscular function, muscle contraction, neuromuscular function, muscle metabolism, muscle adaptation to exercise, injury, and aging.

SS728 (Topics in Exercise and Nutrition)

This course is designed to enable students to understand the diverse topics and current issues about the field of sport nutrition. The topics covered in this course include digestion, absorption and metabolism, well-balanced diet and participation in sport and physical activity, nutrient requirement, body composition and physical activity, nutrition management, and principles of sport training. Additional topics such as weight-control and obesity, exercise and dehydration, dietary supplements for athletic performance improvement will be discussed.

SS729 (Topics in Motor Control)

This course is designed to enable students to understand the mechanisms of hormone release and hormone action. The topics covered in this course include the effects of different types of acute exercise (high resistance, intermittent, endurance), the adaptation to habitual exercise on release of endocrine paracrine, and autocrine humoral agents and the functional significance of such release.

SS730 (Practice of Exercise Prescription)

This course is designed to enable students to apply the concepts and techniques for evaluating physical fitness. The topics covered in this course include health and medical histories, liability concerns, blood pressure, graded exercise stress testing, ECG recording and basic interpretation, strength assessment, body composition analysis, pulmonary function tests, CHD risk-factor analysis, and health risk appraisal. Students will learn how to write exercise prescriptions by using the lab results and data from the case studies.

SS731 (Exercise Physiology)

This course is designed to enable students to learn research methods and participate in the scientific process at the exercise physiology lab under the supervision of academic advisor. The topics covered in this course include appropriate usage and maintenance of laboratory equipment and gas analyzer, fundamental principle of an electromyogram (EMG) and its application, methods of obtaining blood specimens and hemanalysis, and enzymatic analysis,

electrolyte analysis.

SS732 (Studies in Motor Learning & Controlling Experimental)

This course is designed to enable students to learn and analyze the scientific principles related to the motor performance. The topics covered in this course include motor skill control, variables influencing the overall motor learning, and the recent perspectives of neurophysiology and psychophysiology. Students will learn the current research trends and issues by reviewing the research articles and find out the appropriate experimental methods related to the research topic.

SS733 (Prevention and Treatment for Sports Injury)

The course is designed to enable students to understand the prevention and treatment of various sports injuries including tennis elbow, shin splints, ligament sprains, and muscular strains. The topics covered in this course include the physiological and biochemical principles of exercise physiology and its application, aspects of training for strength, flexibility, endurance and rehabilitation, and additional controversial exercise prescription issues.

SS734 (Exercise Nutrition)

Concepts and directed laboratory experiences will enable students to understand the nutrition and physical activity intervention for health promotion and disease prevention. The topics covered in this course include digestion, absorption and metabolism, well-balanced diet and participation in sport and physical activity, nutrient requirement, body composition and physical activity, nutrition management, and principles of sport training.

SS735 (Biomechanics)

This course is designed to enable students to learn various instrumentation and methodology techniques used in biomechanics and apply biomechanical principles of human movement and structure of the human body via laboratory activities. The topics covered in this course include analyses of projectile-related activities, aerodynamics in sport, balance related activities, throw and push patterns, and qualitative and quantitative analysis of sport activities.

SS736 (Practice of Statistic Analysis)

This course is designed to enable students to understand the statistics for the successful research experience in the field of sport and physical education and apply statistical techniques to the areas of expertise. The topics covered in this course include analytics software program, correlational analysis, canonical correlation analysis, regression analysis, t-test, ANOVA, MANOVA, and discriminant analysis.

SS737(Comparison among the Sports Cultures of Societies)

This course includes comparative perspectives based on European-derived models and/or American-derived models in education, physical education and sport in South Korea. This

course examines education, physical education, and sport in varying historical, cultural, social, and geographical environments including sport participation and entrepreneur sport business activities and sport communications, and the purpose of this course is for students to prepare their future roles in the areas of physical education and propose roles of physical education programs and proper future direction as leaders in the field of physical education and sport.

SS738 (Exercise Nutrition)

This class may be a seminar and includes the current trends and issues about sport nutrition. The topics covered in this course include digestion, absorption and metabolism, non-balanced diets and its effect to motor performance, nutrient requirement, body composition and physical activity, nutrition management and sport participation, physical activity and dehydration, dietary supplements and motor performance, and principles of sport training.

SS739 (Teaching Theories of Physical Education)

This class may be a seminar and includes various theories, instructional strategies, and models in the field of physical education and sport studies. This course includes objectives and implications of various instructional strategies and models of teaching sport and physical activity, positive learning environment, student-centered curriculum, and analytic skills that will foster professional self-development.

SS740 (Sports Administration and Management)

This course includes several critical aspects in sport administration and management. Emphasis will be on analyzing the underlying processes of sport management, and studying the roles and skills used by leaders in sport organizations (e.g., sport administrators and managers). In addition, other aspects including behavior, attitudes, and loyalty related to sport consumers will be discussed.

SS741 (Comparative Physical Education)

This class may be a seminar and includes comparative perspectives based on European-derived models and/or American-derived models in education, physical education and sport in Republic of Korea. Students will compare the educational system among 15 countries or more and examine education, physical education, and sport in varying historical, cultural, social, and geographical environments including sport participation and entrepreneur sport business activities and sport communications. The purpose of this course is for students to prepare their future roles in the areas of sport and physical education and propose roles of physical education programs and proper future direction as leaders in the field of sport and physical education.

SS742 (Sports and Social Problems)

This class may be a seminar. The purpose of this course is to provide students with

sociological perspectives necessary to critically analyze several social issues in relation to sport. This course consists of contemporary issues including power, ideology, culture, and gender connected with sport.

SS743 (Curriculum of Physical Education)

This class may be a seminar. In this course, students develop an understanding of the tools of inquiry of primary and secondary physical education; the ability to design, deliver, and evaluate various teaching methods and processes that incorporate scope and sequence of the curriculum, content, resources, materials, and national physical education standards; the ability to utilize instructional technology and media; the ability to assess student learning in physical education; and to apply these knowledge, skills, and attitudes to real life situations and experiences.

SS744 (History of Physical Education Thoughts)

This class may be a seminar and this course examines philosophical perspectives related to physical education and sport, cultural and social aspects of affecting an individual's involvement in sport, and proposes the future direction.

SS745 (Health Education)

This class may be a seminar and students will develop the sequential design of health education manual according to the age, gender, health condition, and developmental characteristics of the participants.

Research for the Master's Degree I

Research while enrolled for a master's degree under the direction of faculty.

Research for the Master's Degree II

Thesis writing under the direction of the major professor.

Research for the Doctoral Degree I

Research while enrolled for a doctoral degree under the direction of faculty.

Research for the Doctoral Degree II

Dissertation writing under the direction of the major professor.

Research for the Doctoral Degree III

Dissertation writing under the direction of the major professor.

