Department of Kinesiology

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Graduate Degrees Offered

- M.S. in Kinesiology (http://catalog.twu.edu/archives/2014-2015/graduate/health-sciences/kinesiology/kinesiology-ms) (with instruction available in the support areas of Sport Management, Biomechanics, Exercise Physiology, Adapted Physical Education, and Coaching)
- Ph.D. in Kinesiology (http://catalog.twu.edu/archives/2014-2015/graduate/health-sciences/kinesiology/kinesiology-phd) (with instruction available in the support areas of Adapted Physical Education, Sport Management, Biomechanics, and Exercise Physiology)

Graduate courses in the Department of Kinesiology are designed to provide qualified individuals with the opportunity to pursue advanced study beyond the baccalaureate level. Objectives in the degree programs are:

1. to ensure that students have a broad philosophical, educational, and scientific background on which to base their work as professionals;
2. to acquaint students with current thinking, practices, trends, and problems related to physical education and kinesiology;
3. to prepare students to assume leadership roles in educational, industrial, business, public, or private agency settings;
4. to provide students with the evaluative, statistical, research methodologies, and critical thinking strategies that will enable them to contribute to the advancement of the field; and
5. to offer sequences of coursework leading to specialization in a particular subdiscipline of kinesiology.

The particular objective of non-degree graduate study is to provide personal and professional enrichment opportunities for the individual. For the persons who wish to become qualified to teach in the public schools of Texas, a certification program is also available. See the General Catalog for requirements.

Facilities for Graduate Instruction and Research

The Pioneer Hall was completed in the Spring of 1998. This state-of-the-art facility contains accessible classrooms, multimedia centers, dance studios, laboratories, a large gymnasium, an 8-lane natatorium, an indoor track, a weight training room, an athletic training room, racquetball courts, climbing wall, dressing rooms, and administrative and faculty offices.

Biomechanics, exercise physiology, biochemistry, and motor behavior/pedagogy laboratories have been dedicated specifically for teaching and research. These well equipped facilities permit research studies on persons with and without disabilities in the areas of stress testing, body composition assessment, bone density, cardiovascular respiratory analysis, blood biochemistry analysis that includes glucose, lactate, insulin, C-peptide, and a variety of other hormones and metabolites; isokinetic, isometric, and isotonic strength testing; anthropometry; telemetry; and high speed motion analysis, among others. Portable and online computer capabilities facilitate analysis of digital kinetic and kinematic data gathered with a three-dimensional high speed video system, electromyographic equipment, and electronic forceplates. Computerized data collection and analysis systems are available for motor learning studies.

Outdoor facilities include playing fields, tennis courts, softball diamond, a swimming pool, an 18 hole par 71 golf course, and soccer field.

Computer facilities of the University are extensively utilized by the department programs as are the many other fine features of the campus and Metroplex, including the Cooper Aerobic Center and the Tom Landry Center.

Admissions

Admission Requirements

Please see the admission section (http://catalog.twu.edu/archives/2014-2015/graduate/graduate-school/admission-graduate-school) of this catalog. In addition to these general requirements, the Department of Kinesiology requires the following.

All written materials (application, transcripts, letters of recommendation, vita, statement of intent, and designation of an area of specialization) need to be submitted according to the following deadlines:

- For admission for the following fall semester – July 15
- For admission for the following spring semester – November 1
- For admission for the following summer semester – April 1
• International students are admitted only in the fall (deadline is April 1) or spring (deadline is August 1) semesters. Admission documents for international students must be submitted by the deadline stated on the Office of International Education Website (http://www.twu.edu/international-education).

The application and transcripts are submitted to the Office of Admissions Processing (http://www.twu.edu/admissions-processing). The remaining written materials to be presented by graduate degree-seeking individuals are to be submitted to the Graduate Coordinator of the Department of Kinesiology (http://www.twu.edu/kinesiology).

**Master of Science in Kinesiology**

1. The applicant will submit two satisfactory letters of recommendation that may include one from the last employer if the student has had work experience and one from the last school attended.
2. For applicants without an undergraduate degree in kinesiology, undergraduate prerequisites may be required. Each specialization will determine the appropriateness of additional requirements for the student.
3. The applicant will submit a vita/resume with special emphasis on training and work experience in kinesiology or related areas.
4. The applicant will specify an area of specialization (Adapted Physical Education, Biomechanics, Coaching, Exercise Physiology, or Sport Management).
5. Any applicant may submit additional materials that they deem appropriate to his/her application.
6. The appropriate faculty admissions committee will review the total application.

**Master of Science in Exercise and Sports Nutrition**

The Master’s of Science in Exercise and Sports Nutrition program is administered through the Department of Nutrition and Food Sciences (http://catalog.twu.edu/archives/2014-2015/graduate/health-sciences/nutrition-food-sciences).

**Doctor of Philosophy in Kinesiology**

1. The applicant will submit three satisfactory letters of recommendation that may include one from the last employer if the student has had work experience and others from the last school attended.
2. For applicants without an undergraduate degree in kinesiology, undergraduate prerequisites may be required. Each specialization will determine the appropriateness of additional requirements for the student.
3. The applicant will submit a vita with special emphasis on training and work experience in kinesiology or related areas.
4. The applicant will submit a statement of intent that briefly describes his/her background, personal growth and development, future goals, and reasons for applying to the Department of Kinesiology doctoral program.
5. The applicant will specify an area of specialization (Adapted Physical Education, Sport Management, Biomechanics, Exercise Physiology).
6. The applicant will have a formal interview with the Doctoral Admission Committee (or its designated representatives).
7. Students who have not written a master’s thesis will complete an original research project with an individual faculty member during the first year in the doctoral program. A total of 3 semester credit hours may be earned.
8. Any applicant may submit additional materials that they deem appropriate to his/her application.
9. The appropriate Doctoral Admissions Committee will review the total application and forward their decision to the Graduate Coordinator.

**Certificates**

**Certificates in Kinesiology**


**Minors**

**Minors Offered to Students from Other Departments**

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

BEN-EZRA, VICTOR, Professor of Kinesiology. B.S., City University of New York System: City College; M.S., Springfield College; Ph.D., University of Maryland System: College Park.

DAVIS, RONALD W., Professor of Kinesiology. B.S., University of Wisconsin System: Oshkosh; M.S., University of Wisconsin System: LaCrosse; Ph.D., Texas Woman's University.

FRENCH, RONALD W., Cornaro Professor of Kinesiology. B.A., California State University System: Humboldt State University; M.A., California State University System: Humboldt State University; Ed.D., University of California System: Los Angeles.

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

MYERS, BETTYE B., Cornaro Professor of Kinesiology. B.S., Texas Woman's University; M.A., Texas Woman's University; Ph.D., University of Michigan System: Ann Arbor.

NICHOLS, DAVID L., Professor of Kinesiology. B.S., Central State University, Oklahoma; M.S., Texas Woman's University; Ph.D., Texas Woman's University.

SANBORN, CHARLOTTE F., Professor of Kinesiology; Chair of the Department of Kinesiology. B.S., Pennsylvania State System of Higher Education; M.S., University of Colorado System: Boulder; Ph.D., University of Colorado System: Boulder.

Associate Professors

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

SILLIMAN-FRENCH, LISA M., Associate Professor of Kinesiology. B.S., State University of New York System: College at Cortland; M.A., Texas Woman's University; Ph.D., Texas Woman's University.

Assistant Professor

MANN, MARK D., Assistant 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: Fayetteville.

Visiting Professor

GRAHAM, LESLIE W., Visiting Assistant Professor of Kinesiology. M.S., Florida State University; Ph.D., Texas Woman's University.

Lecturer

BROWN, KATHRYN G., Senior Lecturer of Kinesiology. B.S., Oklahoma Panhandle State University; M.S., Oklahoma State University; M.Ed., Northwestern Oklahoma State University.

Courses

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. Application of sport management knowledge in varied environments under the supervision of a mentor. Completion of 120 clock hours of experience required. Eight practicum hours a week. 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 5133. Professional Internship for Exercise and Sports Nutrition. Application of exercise and sports nutrition knowledge in varied practice settings. Student is required to complete 150 clock hours of supervised practice during a minimum of eight weeks. Ten practicum hours a week. Credit: Three hours.

KINS 5143. Group Dynamics in the Professions. Principles and theories of group dynamics in relation to special needs of professional recreation personnel and teachers; basic issues and assumptions, cohesiveness, leadership and group performance, group pressures and group standards, and structural properties of groups. Three lecture 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 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 5433. Sport Promotion and Publicity. Principles of organizing and promoting events and activities associated with the sport industry. 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 Stakeholder Relations. Application of communication and sport information practices to the sport enterprise; examination of persuasion techniques and strategies for the sport enterprise with a special focus on key stakeholders. Three lecture hours a week. Credit: Three hours.

KINS 5483. Sport Sales, Sponsorship, and Fundraising. The application of ticketing and sponsorship sales strategies to the sport industry. Examination of sport sponsorship retention strategies and sponsorship evaluation methods in sport. 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 5603. Growth and Perceptual Motor Development. Hereditary and environment determinants of motor development; perceptual motor behavior of infants, children, adolescents, adults, and senior citizens; characteristic changes in size, body build, fitness, and motor performance. 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 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 5783. Learning and Teaching Styles in Physical Education and Sport. Learning and teaching styles to promote physical and sport performance. Techniques for analyzing and enhancing learning environments. Three lecture hours a week. Credit: Three hours.

KINS 5793. Enhancing Behavior and Performance in Adapted Physical Activity. 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 addressed. 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. Adapted Physical Activity and the APENS: From Theory to Practice. Historical and contemporary issues in adapted physical activity in relation to unique attributes of learners with disabilities. Curriculum theory and development, instruction design, and ethical issues. Three lecture hours a week. Credit: Three hours.

KINS 5853. Assessment in Adapted Physical Education. Administration of standardized, criterion-referenced, and alternative assessments for determining appropriate placement and services for students with disabilities; the referral process, ARD process, and the development of the IIE and IEP to determine the most appropriate placement for physical education. Three lecture hours a week. Credit: Three hours.

KINS 5863. Pedagogy in Adapted Physical Education. Selecting and presenting appropriate intervention strategies for individuals with varying disabling conditions. Techniques for modifying environment condition to increase attending behaviors. Three lecture hours a week. Credit: Three hours.

KINS 5873. Aquatics for Special Populations. Swimming and water related activities adapted to the needs of special populations including movement exploration, facilities and equipment, and research. Three lecture hours a week. Credit: Three hours.

KINS 5883. Disability and Sport. Developmental, recreational, and competitive sports in school and community settings; Paralympics, Special Olympics, and deaf sport; wheelchair and ambulatory sports for all age groups and 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. Exercise Programming for Special Populations. Fitness assessment, program development, and implementation for individuals with disabilities and/or related conditions in a clinical setting. 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 6053. Adapted Physical Education. 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 6103. Advanced Seminar in Group Dynamics: Research and Theory. Forces which influence the interaction potentials of individuals in a variety of group structures; evaluation of the practical application of these theories utilizing research designs common to the field of group dynamics. Prerequisite: KINS 5143. 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 6413. Research Seminar in Sport Management. Research intensive doctoral seminar analyzing the sport industry. Prerequisite: KINS 5413. Three lecture hours a week. Credit: Three hours.

KINS 6423. Research Seminar in Sport Promotion and Sponsorship. Research intensive doctoral seminar analyzing the field of sport promotion and sport sponsorship. Three lecture hours a week. Credit: Three hours.
KINS 6443. Research Seminar in Electronic Sport Information. Research intensive doctoral examination of electronic sport information as it relates to sport management. Three lecture 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 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 6993. Dissertation. Prerequisite: KINS 6983. Credit: Three hours.