

DEPARTMENT OF KINESIOLOGY

THE DEPARTMENT OF
KINESIOLOGY EMPHASIZES
THE STUDY OF MOVEMENT
AS IT RELATES TO PHYSICAL
ACTIVITY, HEALTH AND
DISEASE PREVENTION,
EXERCISE AND SPORT.

Kinesiology is a discipline emphasizing the study of movement as it relates to physical activity, health and disease prevention, exercise and sport. Using both human and animal models and reflecting research ranging from basic to applied, it draws from an interdisciplinary body of knowledge grounded in the biological, psychological, physical and social sciences. Undergraduate students in the program gain disciplinary knowledge of anatomical, biomechanical, developmental, physiological, psychological and sociological aspects of human movement and physical activity. The department's graduate programs, at both the master's and doctoral levels, are highly regarded nationally and internationally and have a strong interdisciplinary emphasis.



NUMBER OF FACULTY: 15
NUMBER OF UNDERGRADUATE MAJORS: 849
NUMBER OF GRADUATE STUDENTS: 28
NUMBER OF DEGREES AWARDED
LAST ACADEMIC YEAR:
Bachelors of Science: 93
Masters: 4
Ph.D: 3

DEGREES AND MAJORS OFFERED:

B.S. in Kinesiology
M.S. in Kinesiology
Ph.D. in Exercise Science

MAJOR RESEARCH EMPHASIS

BIOMECHANICS: applying the laws of mechanics to the study of human movement, with special focus on kinematic and kinetic determinants of locomotion patterns in walking, running, cycling and swimming; neuromusculoskeletal modeling and computer simulation of locomotion in clinical and sport applications; ergonomics; mechanisms underlying upper extremity repetitive strain injuries.

EXERCISE PHYSIOLOGY: the study of physiologic systems (cardiovascular, respiratory, muscular, endocrine, metabolic) under conditions of stress, particularly exercise stress, with special focus on how dietary nutrients influence resting and exercise

metabolism; subcellular systems involved in the provision and regulation of energy transfer during exercise; the interrelationships of exercise and training with stress, hormones, neurotransmitters and the immune system. The interaction between exercise and insulin action, and the effects of exercise on insulin sensitivity in Type 2 diabetes are major interests.

MOTOR CONTROL: how movement is regulated and controlled via the nervous system in normal and pathological populations, especially those with motor deficits attributed to basal ganglia dysfunction and upper extremity coordination, particularly finger and hand posture, in reaching and prehensile movements.

MOTOR DEVELOPMENT STUDIES: how human movement is generated and evolves throughout the life span, with special focus on learning and developing children, persons with Down's syndrome and adults, to investigate cerebral asymmetries and specificity of learning.

SPORT AND EXERCISE PSYCHOLOGY: the relationship between psychological constructs and physical activity and the influence of participation in physical activity on psychological phenomenon, with special focus on the influence of physical activity, fitness and particular sport practices on psychophysiological mechanisms and cognitive functioning; the effect of psychological skills for performance enhancement; motivational aspects of physical activity across the life span; and the effects of exercise on mental health

FOR MORE INFORMATION:

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lawrence.mandarino@asu.edu | www.asu.edu/clas/kines/

Kinesiology

ENRICHMENT OPPORTUNITIES:

The university, the college and the department offer a wealth of opportunities for enriching your educational experience through internships, service learning, undergraduate research and/or international study. Financial support is available for some of these enrichment activities. Contact the department or visit the ASU Web site to learn more.

SCHOLARSHIPS OFFERED BY THE DEPARTMENT:

- Douglas L. Conley Memorial Fellowship
- Kathy Gibbons Jackson Scholarship
- Rudy L. Lavik Memorial Award
- Dean's Circle Scholarship

CAREER POSSIBILITIES:

Kinesiology graduates have a wide range of career options in health professions, the fitness industry and the sports industry. Some typical job paths include physical/occupational therapy, medicine, dentistry, pharmacy, cardiac rehabilitation, pharmaceutical sales and exercise equipment manufacturing.

SPECIAL FACILITIES:

Exercise and Sport Research Institute

MAJOR EXTERNAL FUNDING SOURCES:

National Institutes of Health
National Science Foundation
National Institute of Aging
National Institute of Diabetes, Digestive, & Kidney Diseases

ALUMNI ACHIEVEMENT:

Wendy M. Kohrt
(Ph.D. Exercise Science, 1986),
Professor of Geriatric Medicine,
University of Colorado Health Sciences
Center

Min Qi Wang
(Ph.D. Exercise Science, 1987),
Professor of Public Health, University of
Maryland

Andrew Gardner
(Ph.D. Exercise Science, 1990),
Professor of Health & Sport Science,
University of Oklahoma

FACULTY:

Regents' Professor
Daniel Landers

Professors
Lawrence Mandarino
Kathleen Matt
George Stelmach

Associate Professor
Richard Hinrichs
Shannon Ringenbach
Marco Santello
Wayne Willis

Assistant Professors
Natalia Dounskaia
Pamela Hodges Kulinna

Senior Lecturer
Donna Landers

Lecturers
Tannah Broman
Donna Cataldo
Jennifer Fay
Kristinn Heinrichs