EXERCISE SCIENCE — (EXS)

Associate Professors Brian Jones (Chair), Jean Kiernan, and Leslie Stamatis; Assistant Professor Karla Francioni; Visiting Lecturer Meghan Trella; Adjuncts Mike Jones, Randy McGuire, and Drew Park

Students may pursue major and minor programs offered in the Department of Kinesiology and Health Studies that will prepare them both for entry-level professional careers and graduate study in Kinesiology, Exercise Science, Physical Therapy, Occupational Therapy, Athletic Training, and Public Health.

Exercise Science borrows from many parent disciplines in the natural and social sciences in order to understand the phenomenon of exercise and human movement activities, ranging from sport training to injury rehabilitation. Graduates typically work in corporate fitness, cardiac rehabilitations, YMCAs, community recreation programs, commercial health clubs, and other settings. Other graduates have entered graduate programs in physical therapy, nutrition, athletic training, occupational therapy, biomechanics, and exercise physiology. A major and minor are offered in this area.

Graduates of the majors offered in the Kinesiology and Health Science department will demonstrate:

- a basic understanding of the physiological, anatomical, and mechanical foundations of movement;
- the skills associated with planning, implementing, and evaluating developmentally appropriate fitness programs;
- the fundamental understanding of behavior as it applies to adherence to exercise/fitness;
- the knowledge and skills associated with assessing emergency health conditions requiring first aid and/or CPR;
- the knowledge and physical skills associated with health-related fitness activities; and
- a basic understanding of research techniques and tools used in the field of kinesiology and health.

Major
(B.S. degree) **Forty-four or forty-eight hours required.** Thirty-two hours in KHS, which must include KHS214, 220, 304, 306, 320, 322, 400, 410, 423, and 452, and a 1-hour course from courses numbered KHS111-170, plus six hours from any KHS course numbered 180 or above. Students may not enroll in more than 3 hours of internship. Required allied course must include PSY211 (prerequisite PSY111) or MAT111 and BIO100 or 111. With the consent of the KHS Department Chair,
substitutions may be made for allied courses.

Students intending on applying to Physical Therapy, Occupational Therapy, or Physician Assistant programs must take BIO111 (not BIO100) as requirement for applying to the graduate program.

**Minor**

**Twenty-two hours required**, including KHS214, 220, 304, 306, 322, and 423, plus one course from KHS185, 310, 315, 320, 400, 405, and 435.

For the course descriptions for **Exercise Science**, please see **Kinesiology and Health Studies, below**.
KINESIOLOGY AND HEALTH STUDIES — (KHS)

Associate Professors Brian Jones (Chair), Jean Kiernan, and Leslie Stamatis; Assistant Professor Karla Franconi; Visiting Lecturer Meghan Trella; Adjuncts Mike Jones, Randy McGuire, and Drew Park

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- the knowledge and physical skills associated with health-related fitness activities; and
- a basic understanding of research techniques and tools used in the field of kinesiology and health.

For the description of the Athletic Training major, see Athletic Training.

For the description of the Exercise Science major and minor, see Exercise Science.

For the description of the Health Science major, see Health Science.

For the description of the Public Health minor, see Public Health.

100. Lifetime Fitness. (1 hour) Knowledge and skills associated with the relationship of physical activity and nutrition to health and fitness; lecture and lab experiences. Fall and Spring

106. Racquetball. (1 hour) This course is designed to acquaint the student with racquetball. It enhances physical fitness, coordination, agility, and eye/hand coordination. As needed
111. **Conditioning Activities.** (1 hour) This course is designed to teach skills and knowledge about aerobic exercise and weight training.  
   Fall and Spring

113. **Archery.** (1 hour) Fundamental skills, rules, techniques, and etiquette of archery.  
   Fall

120. **Tennis.** (1 hour) Rules, skills, etiquette, and strategy relating to singles and doubles play.  
   Fall

126. **Horsemanship.** (1 hour) Fundamental skills and knowledge necessary for basic horsemanship with emphasis on riding styles and care and maintenance of horses.  
   As needed

132. **Golf.** (1 hour) Rules, basic skills, etiquette, practice, and participation under playing conditions.  
   As needed

134. **Fencing.** (1 hour) Rules, skills, techniques, and etiquette relating to fencing.  
   As needed

136. **Badminton.** (1 hour) Fundamental skills, rules, techniques, and etiquette of badminton.  
   As needed

140. **Basketball.** (1 hour) Fundamental skills, techniques, and rules of basketball.  
   As needed

170. **Introductory Topics in Physical and Recreational Activities.** (1 hour) Selected physical education activity topics.  
   As needed

180. **First Aid, CPR, and Sport Safety.** (3 hours) Emergency treatment and preventive measures for injuries and accidents with emphasis on sport injuries. Successful completion of course requirements will qualify students to receive certification by the American Heart Association.  
   Fall and Spring

185. **Introductory Athletic Training and Sports Medicine.** (3 hours) This course serves as an introduction to the profession of athletic training. The role of the athletic trainer shall be explored in relation to physicians, other allied health care providers, coaches, and patients. Emphasis will be placed on the fundamentals essential for the prevention, recognition, and treatment of injuries to the physically active. Non-orthopedic conditions and topics will also be introduced. In addition, practical experiences will include the application of supportive techniques to the major joints of the body.  
   Fall and Spring

200. **Medical Terminology.** (3 hours) Utilizing an independent method of
workbook/text, weekly quizzes, and audiotape pronunciation, this course provides the student with a working knowledge of common medical terms and abbreviations. This course will use a body systems approach to medical terminology, therefore allowing the student to learn vocabulary as it pertains to each of the systems of the body (respiratory, cardiovascular, musculoskeletal, nervous, etc.). Prerequisite: Must be a declared KHS major or minor or have consent of the instructor. Fall and Spring

214. Foundations of Kinesiology. (3 hours) Survey of principles and perspectives from the humanities, social sciences, and natural sciences related to the study of human movement. Fall and Spring

216. Emergency Care in Athletic Training. (3 hours) An overview of the mechanism and management of trauma experienced during athletics and physical activity. Practical experiences include the application of treatment techniques for such trauma. Prerequisites: KHS185 and declared KHS major/minor or have consent of the instructor. Spring

220. Personal Health. (3 hours) Designed to expose students to a broad range of issues and information relating to the various aspects of personal health. An emphasis is placed on factors that impact health and wellness including prevention and individual health behaviors. Fall and Spring

230. Health and Physical Education in the Elementary School. (2 or 3 hours) Characteristics, physical growth, and needs of children in grades K-6 with games, rhythms, and activities appropriate to their physiological and emotional development. Fall

271. Practicum in Athletic Training I. (1 hour) Field experiences in athletic training under a qualified preceptor in athletic training. Prerequisite: KHS185 and declared Athletic Training major or consent of the instructor. Fall

273. Practicum in Athletic Training II. (1 hour) Field experiences in athletic training under a qualified preceptor in athletic training. Prerequisite: KHS271 and declared Athletic Training major or consent of the instructor. Spring

275. Practicum in Athletic Training III. (1 hour) Field experiences in athletic training under a qualified preceptor in athletic training. Prerequisite: KHS273 and declared Athletic Training major or consent of instructor. Fall

277. Practicum in Athletic Training IV. (1 hour) Field experiences in athletic training under a qualified preceptor in athletic training. Prerequisite: KHS275 and declared Athletic Training major or instructor
279. Practicum in Athletic Training V. (1 hour) Field and clinical competencies in athletic training under the supervision of a qualified preceptor in athletic training. Prerequisite: KHS277 and declared Athletic Training major or consent of the instructor.

281. Practicum in Athletic Training VI. (1 hour) Field experiences in athletic training under a qualified preceptor in athletic training. Prerequisite: KHS279 and declared Athletic Training major or consent of instructor.

285. Evaluation and Assessment of the Lower Extremity. (2 hours) Evaluation, assessment, knowledge, and prevention of injuries related to the lower extremities, including ligamentous and special testing of the major joints. Prerequisite: KHS185 and declared KHS major/minor or consent of the instructor.

287. Evaluation and Assessment of the Upper Extremity. (2 hours) Evaluation, assessment, knowledge, and prevention of injuries related to the upper extremities, including ligamentous and special testing of the major joints. Prerequisite: KHS185, KHS285, and declared KHS major/minor or consent of the instructor.

304. Anatomy for Allied Health. (4 hours) A course in human anatomy for allied health and KHS students, with emphasis on gross anatomy and palpation. The following systems will be covered: musculoskeletal, endocrine, integumentary, and urogenital. Prerequisite: BIO100 or BIO111 and declared KHS major/minor or consent of the instructor.

306. Physiology for Allied Health. (3 hours) A course in human physiology for allied health and KHS students. The following systems will be covered: nervous system, cardiovascular system, lymphatic system, respiratory system, digestive system, temperature regulation, and the reproductive system. Prerequisites: BIO100 or BIO111, KHS304, and declared KHS major/minor or consent of the instructor.

306L. Physiology for Allied Health Lab. (1 hour) A lab course in human physiology for allied health and KHS students. The following systems will be covered: nervous, cardiovascular, lymphatic, respiratory, digestive, temperature regulation, and the reproductive system. Prerequisites: BIO100 or BIO111, KHS304, enrolled in KHS306 and declared KHS major/minor, or consent of the instructor.

310. Healthcare Administration. (3 hours) Introduces methods of policy analysis and concepts of economic theory as a means to understand the
basic issues and trends in the health care system and analyze the impact of changes on the ability of patients to access health services, the practice of health sciences professionals, and the quality and process of care. Spring

315. Epidemiology. (3 hours) Covers the basic concepts and principles of epidemiology and biostatistics. Special emphasis is placed upon application of the epidemiological concepts that are presented. Prerequisites: MAT111 or PSY211 and BIO100 or BIO111. Spring

320. Nutrition. (3 hours) Scientific study of nutrition; application of this knowledge to personal and professional areas. Must be a declared KHS major/minor or Nursing Arts major or have consent of the instructor. Fall and Spring

322. Functional Anatomy and Biomechanics. (3 hours) Application of principles from anatomy, physiology, and physics (mechanics) for the analysis and appreciation of human movement in sport and exercise activities. Prerequisite: KHS304 and declared KHS major/minor or have consent of the instructor. Fall

324. Environmental Health. (3 hours) Covers the effect of environmental factors on the health and well-being of mankind. Prerequisite: KHS220. As needed

352. Techniques of Coaching and Officiating Volleyball. (3 hours) Skills of coaching, officiating, interpretation, and application of rules. As needed

356. Techniques of Coaching and Officiating Football. (3 hours) Intended to familiarize the student with strategy, tactics, and fundamentals of football; methods of officiating. As needed

358. Techniques of Coaching and Officiating Basketball. (3 hours) Designed to acquaint the student with fundamental techniques for coaching basketball; current trends in offense and defense; insights into modern coaching psychology. As needed

360. Techniques of Coaching and Officiating Baseball and Softball. (3 hours) Techniques in coaching baseball and softball; organizational and administrative aspects of coaching; officiating techniques; and rules governing baseball. As needed

387. Evaluation and Assessment of the Head and Spine. (2 hours) Evaluation, assessment, knowledge, and prevention of injuries related to the head and spine, including ligamentous and special testing of the major joints. Prerequisite: KHS287. Fall
390. Therapeutic Modalities. (3 hours) Development of knowledge and practical use regarding the indications, contraindications, actions, and side effects of modalities (ultrasound, electrical muscle stimulation, cold and warm applications, and others). Prerequisite: KHS216 and declared KHS major/minor or have consent of the instructor. Spring

395. Therapeutic Exercise & Rehabilitation. (3 hours) Focus on procedures to develop and apply exercise and rehabilitation programs for athletic injuries. Includes the use of a variety of isometric, isotonic, and isokinetic equipment. Prerequisite: KHS216, KHS390, and declared KHS major/minor or have consent of the instructor. Spring

400. Psycho-social Issues in Kinesiology and Health Studies. (3 hours) Provides an in-depth focus on the conceptual elements of contemporary psychoanalytic, cognitive, social, existential and systematic theories of personality and behavior change as applied to exercise and sport. Fall and Spring

403. General Medical Conditions & Pharmacology for Athletic Training. (3 hours) Advanced course designed to recognize and appreciate various medical conditions of diverse populations, including youth, adolescents, adults, and special needs. This course will also encompass common pharmacological applications used by allied health professionals, including Certified Athletic Trainers. Prerequisites: KHS216, KHS275, and declared Athletic Training major or consent of instructor. Fall

405. Health Behavior Modification. (3 hours) An in-depth study of theories and principles of behavioral science as they related to the study of behavior change and health promotion. Fall

407. Organization & Administration in Athletic Training. (2 hours) Advanced course designed to demonstrate management challenges that Certified Athletic Trainers encounter during daily operation in the field of athletic training. Covers the theories of organization and administration and applies them to real world situations in the profession of athletic training. Prerequisite: KHS216, KHS273, and declared Athletic Training major or consent of instructor. Fall

410. Measurement and Evaluation in Kinesiology and Health Studies. (3 hours) This course is designed to familiarize the student with the various testing procedures used in Kinesiology and instruct him/her on how to use the results. The areas studied will include a wide range, including test of knowledge, skills, fitness, and attitudes. In addition, each student will be introduced to research methods. Students are expected to
423. **Physiology of Exercise.** (3 hours) Nature of neuromuscular activity; physical potential of the human body related to requirements of exercise. Prerequisites: KHS304 and KHS306.

435. **Research in Kinesiology and Health Studies.** (3 hours) Analysis of research being done in selected areas of Kinesiology and Health and conduct of research on an appropriate topic.

440. **Independent Study in Kinesiology and Health Studies.** (1-3 hours) Must be a declared KHS major or have consent of the instructor.

450. **Senior Seminar in Athletic Training.** (2 hours) This course will serve as a comprehensive overview of the field of Athletic Training providing the senior-level Athletic Training student the opportunity to synthesize coursework and discuss the care of athletic injuries from the time of injury until return to play. This course is designed to be the culminating class for those students enrolled in the Athletic Training major.

452. **Senior Seminar in Kinesiology and Health Science.** (3 hours) This course will serve as a comprehensive overview of the field of Kinesiology and Health Science (KHS), providing the senior-level KHS student the opportunity to synthesize coursework and discuss current issues in Kinesiology. This course is designed to be the culminating class for those students enrolled in the Exercise Science and Health Science major.

460. **Internship in Kinesiology and Health Studies.** (1-6 hours) Must be a declared KHS major/minor or have consent of the instructor.

470. **Advanced Topics in Kinesiology and Health Studies.** (3-6 hours)