

# Exercise and Nutritional Sciences

In the College of Professional Studies and Fine Arts

**OFFICE: Exercise and Nutritional Sciences 351**

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Accredited by the Commission on Accreditation of Athletic Training Education for Athletic Training.

Accredited by the Commission on Accreditation of Allied Health Education Programs for Kinesiotherapy.

Accredited by the California Commission on Teacher Credentialing for Physical Education.

## Faculty

Emeritus: Andrus, Barone, Benton, Broadbent, Carter, Cave, Cullen, Fox, Francis, P., Franz, Friedman, Grawunder, Gutowski, Kasch, King, Landis, McKenzie, T., Moore, Phillips, Quinn, Rushall, Schwob, Selder, Sleet, Smith, Sucec, Tollefsen, Wells, Wilhelm, Williamson, Ziegenfuss

Director: Harris

Professors: Aufesser, Buono, Harris, Kolkhorst, LaMaster, Mechikoff, Nichols-Bernhard, Patterson, Simmons, Verity, Yaggie

Associate Professors: Kahan, Levy, Wiksten

Assistant Professors: Cipriani, Marshall

Lecturers: Barba, Butler, Klaiber, Thurman, Voigt

## Offered by the School

Master of Arts degree in kinesiology.

Master of Science degree in exercise physiology.

Master of Science degree in nutritional science and Master of Science degree in exercise physiology (concurrent program).

Major in kinesiology with the B.S. degree in applied arts and sciences.

Emphasis in athletic training.

Emphasis in fitness, nutrition, and health.

Emphasis in physical education.

Emphasis in prephysical therapy.

## The Major

Kinesiology is the study of the processes through which individuals obtain optimal health, physical skill, and fitness. The professional, whether in a laboratory, school, medical or business setting, is ultimately concerned with improving the health and well-being of people.

The uniqueness of the academic area known as kinesiology is the study of human movement. The academic foundation for the study of human movement is covered by courses that explore movement as it affects and is affected by physiological, psychological, developmental, sociocultural, and mechanical parameters. Application of movement concepts evolves from an academic foundation and is covered by courses that study how movement is quantified, how learning experiences are sequenced to modify movement behaviors, and how movement is modified for special needs.

The degree name was changed to kinesiology to better reflect the diversity of subject matter and breadth of career opportunities available to today's students. Some of the typical fields open to kinesiology majors include:

**Athletic Training.** The athletic training emphasis is a CAATE accredited undergraduate athletic training program. The program leads students to a career in athletic training and eligibility to sit for the Board of Certification (BOC) athletic training examination. Certified athletic trainers are responsible for the prevention, management, and rehabilitation of athletic injuries. They work in such diverse areas as high schools, community colleges, universities, sports medicine clinics, corporate/industrial settings; and professional athletics. The athletic training program is comprised of two components of study, a preprofessional program and a professional program. The professional program requires application to the program and includes a clinical education component. The clinical education component is an intensive hands-on service learning program that provides students with the opportunity to apply psychomotor skills in a real athletic environment

under the direct supervision of a certified athletic trainer. Students are given the opportunity to practice what they learn in a variety of clinical education settings including, but not limited to, the Department of Athletics at San Diego State University, University of California, San Diego, University of San Diego, Grossmont Community College, and San Diego Mesa Community College. Due to the required supervision of the clinical education component, there are a limited number of spaces for students in the professional program per year. Therefore, the application process is competitive and based upon a variety of criteria as outlined below under "Standards for Admission." Students interested in the athletic training emphasis should meet with the program director as soon as possible in their academic career for the most current information.

## Standards for Admission

### Admission to the University

Applicants must be eligible for admission to the university. See "Regulations: Admission and Registration" section of this catalog. Once accepted to the university, students interested in the athletic training emphasis are subject to further screening by the School of Exercise and Nutritional Sciences and the athletic training professional program.

### Admission to the Kinesiology Major

Refer to "Impacted Programs" section of the Exercise and Nutritional Sciences section of this catalog. Please note, that as part of these criteria, students must be accepted into the athletic training professional program in order to be admitted to the kinesiology major with an emphasis in athletic training.

### Admission to the Athletic Training Professional Program

The application packet for the athletic training professional program is available on the program Web site at: <http://www-rohan.sdsu.edu/dept/athletic/athletictraining/> or can be obtained from the athletic training advising office.

- 1. Application Deadlines.** For fall admission, athletic training professional program applications are due the third Monday in March. Spring admission is allowed under special circumstances only. See program director for specified criteria for spring admission. Spring applications are due the third Monday in November.
- 2. Prerequisite Courses.** The following courses, or their equivalents, are required for admission to the athletic training professional program:

BIOL 212	Human Anatomy.....	4
ENS 265	Techniques in Athletic Training.....	1
ENS 265L	Techniques of Athletic Training Laboratory .....	1
ENS 289	Preprofessional Practicum in Athletic Training ..	1
- 3. Minimum Overall Grade Point Average.** Applicants must have a minimum overall grade point average of 2.5. Please note that having the minimum grade point average does not guarantee admittance.
- 4. Prerequisite Grade Point Average.** Applicants must have a minimum prerequisite grade point average of 3.0. Prerequisite courses included BIOL 212, ENS 265, 265L, 289.
- 5. CPR and First Aid Certification.** Students are required to have current CPR and first aid certification at the time of application, and are expected to maintain current certification throughout the time of enrollment in the program.
- 6. Technical Standards for Admission.** All students upon admission to the athletic training professional program must have medical clearance by a physician, nurse practitioner, or physician assistant for the following abilities and expectations. In the event a student is unable to fulfill these technical standards, with or without reasonable accommodation, the student will not be admitted into the program. The Student Disability Services office will evaluate a student who states he/she could meet the program's technical

standards with accommodation and confirm that the stated condition qualifies as a disability under applicable laws. If a student states he/she can meet the technical standards with accommodation, the university will determine whether it agrees that the student can meet the technical standards with reasonable accommodation; this includes a review of whether the accommodations requested are reasonable, taking into account whether accommodation should jeopardize clinician/patient safety, or the educational process of the student or the institution, including all coursework, clinical experiences, and internships deemed essential to graduation.

Candidates for selection must demonstrate:

- The mental capacity to assimilate, analyze, synthesize, integrate concepts and problem solve to formulate assessment and therapeutic judgments and to be able to distinguish deviations from the norm.
- Sufficient postural and neuromuscular control, sensory function, and coordination to perform CPR, primary and secondary surveys, emergency transport and transfers, appropriate physical examinations, and manual therapeutic exercise procedures; including the safe and efficient use of equipment and materials during the assessment and treatment of patients.
- The ability to communicate effectively and sensitively with patients and colleagues, including individuals from different cultural and social backgrounds; this includes, but is not limited to, the ability to establish rapport with patients and communicate judgments and treatment information effectively. Students must be able to understand and speak the English language at a level consistent with the competent professional practice.
- The ability to write effectively as it relates to the discipline.

### Athletic Training Professional Program Expectations

If accepted to the athletic training professional program, the following expectations apply:

- Become a student member of the National Athletic Trainers' Association within four months of program admittance. Student membership rate is \$125 per year.
- Become a member of the Future Athletic Trainers Society within four months of program admittance. Membership rate is \$20 per year.
- Obtain Student Professional Liability Insurance. Student rate is \$20 per year.
- Provide own transportation to off-campus clinical education sites.
- Be enrolled as a full-time student (at least 12 units), unless special circumstances are approved for part-time enrollment by the program director.
- Maintain current CPR certification through the American Heart Association (AHA), health care provider course or American Red Cross (ARC) professional rescuer course.
- Engage in a clinical education program that averages 20 hours per week at a designated clinical site for a minimum of four semesters. Clinical exposure may commence in early August and might extend into December or January.
- Adhere to designated policies and procedures for program retention and progression. A copy of the policies and procedures manual is available on the program Web site or can be obtained from the advising office.

**Fitness, Nutrition, and Health.** Persons pursuing this emphasis often find employment in the private and public sectors concerned with the fitness and health of employees. This emphasis prepares students to meet the academic requirements necessary to (1) evaluate and program exercises for apparently healthy persons in diverse fitness and health settings, and (2) pursue certifications that reflect knowledge of the scientific principles that govern leadership in exercise and health enhancement programs. Graduates work as

fitness experts and managers in adult and corporate fitness programs of business, industry, public agencies, and schools. There are also career opportunities for employment in the business sector to include fitness clubs, cardiac rehabilitation, and human efficiency research.

**Physical Education.** The graduate in kinesiology may find employment in public and private schools, specializing at either the elementary or secondary level. Kinesiology majors teach activities and sports skills, health and fitness classes, and act as physical education resource specialists. Students may also prepare for careers in athletic coaching. Opportunities for both men and women exist at the interscholastic level as well as with community and commercial sports clubs.

**Prephysical Therapy.** Students in this emphasis may choose either (a) Rehabilitative Science or (b) Kinesiotherapy.

**Rehabilitative Science.** This specialization prepares students to meet the academic requirements necessary for entry to postgraduate education in physical therapy, chiropractic, occupational therapy, physician assistant, and podiatry. Students find employment in a broad range of medical environments. Students wishing to meet all requirements for postgraduate education for a professional degree should meet with the undergraduate adviser as well as contact potential postgraduate education sites to obtain specific entry requirements.

**Kinesiotherapy.** This specialization is designed to prepare students to meet the academic requirements for national registration in kinesiotherapy. The kinesiotherapist is academically and clinically prepared to provide rehabilitative exercise and education, in an appropriate setting, under the prescription of a licensed physician. Kinesiotherapists are accountable to the referring physician for their actions and those of their subordinates. The academic and clinical basis of kinesiotherapy is founded on the modalities of exercise and education. Kinesiotherapists are qualified to implement exercise programs designed to reverse or minimize debilitation and to enhance the functional capacity of medically stable patients in wellness, sub-acute or extended care settings.

### Impacted Programs

The kinesiology major with emphases in athletic training; fitness, nutrition, and health; physical education; and prephysical therapy are impacted programs.

To be admitted to a kinesiology major emphasis, students must meet the following criteria:

- Complete with a grade of C or higher: Exercise and Nutritional Sciences 210 and Biology 212. These courses cannot be taken for credit/no credit (Cr/NC);
- Complete a minimum of 60 semester units applicable to the lower division General Education requirements to include all Preparation for the Major requirements for kinesiology major emphasis, and electives to reach 60 units. Exercise and Nutritional Sciences 210 and Biology 212 must be completed before taking upper division major courses. Preparation for the Major courses cannot be taken for credit/no credit (Cr/NC);
- Have a cumulative GPA of 2.50 or higher;
- For athletic training or kinesiotherapy majors, students must be accepted into the professional program.
- For athletic training emphasis, complete with a minimum overall grade point average of 3.0: Biology 212, Exercise and Nutritional Sciences 265, 265L, 289. These courses cannot be taken for credit/no credit (Cr/NC).

To complete the major, students must fulfill the degree requirements for the major emphasis described in the catalog in effect at the time they are accepted into the premajor at SDSU (assuming continuous enrollment).

### Major Academic Plans (MAPs)

Visit <http://www.sdsu.edu/mymap> for the recommended courses needed to fulfill your major requirements. The MAPs Web site was created to help students navigate the course requirements for their majors and to identify which General Education course will also fulfill a major preparation course requirement.

## **Kinesiology Major**

**With the B.S. Degree in Applied Arts and Sciences  
(Major Code: 08351)**

All candidates for a degree in applied arts and sciences must complete the requirements listed in the section of this catalog on "Graduation Requirements."

Preparation for the Major courses cannot be taken for Credit/No Credit (Cr/NC). Exercise and Nutritional Sciences 210 and Biology 212 must be completed with a grade of C or higher. Exercise and Nutritional Sciences 265, 265L, 289 and Biology 212 must have a minimum overall grade point average of 3.0.

### **Emphasis in Athletic Training**

**Preparation for the Major.** Exercise and Nutritional Sciences 104A or 104B, 210, 265, 265L, 289; Biology 201A, 212; Chemistry 200; Nutrition 201; Physics 180A; Psychology 101, 260; Sociology 101; and one of the following: Biology 215, Economics 201, Psychology 270, Sociology 201, Statistics 119. (37 units)

**Graduation Writing Assessment Requirement.** Passing the Writing Proficiency Assessment with a score of 10 or above or completing one of the approved upper division writing courses (W) with a grade of C (2.0) or better. See "Graduation Requirements" section for a complete listing of requirements.

**Major.** Acceptance into the athletic training professional program is required for major status in the athletic training emphasis. Application to the program is competitive and limited in number. Applications are due the third Monday in March each year. Those students interested in the athletic training program should contact the athletic training program director. A minimum of 55 upper division units to include Exercise and Nutritional Sciences 301, 302, 303, 304, 304L, 305, 306, 307, 365, 367, 367L, 368, 368L, 388 (1 unit), 389A, 389B, 389C, 389D, 401A, 401B, 461, 462, 463, 463L, 465, 466; Biology 336. Biology 336 will also satisfy three units of the General Education requirement in IV.A. Recommended: Students should take Sociology 355 to satisfy the General Education requirement in IV.B.

### **Emphasis in Fitness, Nutrition, and Health**

**Preparation for the Major.** Exercise and Nutritional Sciences activities (2 units), Exercise and Nutritional Sciences 104A or 104B, 210, 265, 265L; Biology 100, 100L, 212; Chemistry 100; Nutrition 201; Psychology 101; Sociology 101; and three units selected from Biology 215, Economics 201, Psychology 270, Sociology 201, Statistics 119. (31 units)

**Graduation Writing Assessment Requirement.** Passing the Writing Proficiency Assessment with a score of 10 or above or completing one of the approved upper division writing courses (W) with a grade of C (2.0) or better. See "Graduation Requirements" section for a complete listing of requirements.

**Major.** A minimum of 48 upper division units to include Exercise and Nutritional Sciences 301, 302, 303, 304, 304L, 305, 306, 307, 347A, 347B, 363, 388 (1 unit), 401A, 401B, 412, 431, 432, 432L, 433, 434; Biology 336; Nutrition 309; Biology 336 will also satisfy three units of the General Education requirement (IV.A). Recommended: Students should take Sociology 355 to satisfy the General Education requirement (IV.B).

### **Emphasis in Physical Education**

This program must be elected by students who wish to be a candidate for a single subject teaching credential at San Diego State University.

All requirements as outlined in this section and the sections titled Policy Studies in Language and Cross-Cultural Education or Teacher Education in this catalog must be completed.

This major may be used by students in policy studies or teacher education as an undergraduate major for the B.S. degree in applied arts and sciences.

**Preparation for the Major.** Exercise and Nutritional Sciences 210, 265, 265L; Biology 100, 212; Chemistry 100; Nutrition 201; Psychology 101; Sociology 101; and one of the following: Biology 215, Economics 201, Psychology 270, Sociology 201, Statistics 119. (27 units)

**Graduation Writing Assessment Requirement.** Passing the Writing Proficiency Assessment with a score of 10 or above or completing one of the approved upper division writing courses (W) with a grade of C (2.0) or better. See "Graduation Requirements" section for a complete listing of requirements.

**Major.** A minimum of 52 upper division units to include Exercise and Nutritional Sciences 301, 302, 303, 304, 304L, 305, 306, 307, 335, 341, 347A, 347B, 348, 401A, 401B, 441A, 441B, 442A, 442B, 445, 446A, 446B, 461; Biology 336. Biology 336 will also satisfy three units of the General Education requirement (IV.A.). Recommended: Students should take Sociology 355 to satisfy the General Education requirement (IV.B.).

### **Emphasis in Prephysical Therapy**

Students interested in applying to postgraduate allied health programs are advised to follow (a) Rehabilitative Science, while those interested in kinesiotherapy should follow (b) Kinesiotherapy.

**Preparation for the Major.** Exercise and Nutritional Sciences 104A or 104B, 210, 265, 265L; Biology 201A, 212; Chemistry 200; Nutrition 201; Physics 180A, 182A; Psychology 101; Sociology 101; and one of the following: Biology 215, Economics 201, Psychology 270, Sociology 201, Statistics 119. (34 units)

**Graduation Writing Assessment Requirement.** Passing the Writing Proficiency Assessment with a score of 10 or above or completing one of the approved upper division writing courses (W) with a grade of C (2.0) or better. See "Graduation Requirements" section for a complete listing of requirements.

**Major.** A minimum of 40 upper division units to include Exercise and Nutritional Sciences 301, 302, 303, 304, 304L, 305, 306, 307, 363, 365, 388 (1 unit), 401A, 401B, 460; Biology 336, 436, Psychology 350. Biology 336 will also satisfy three units of the General Education requirement (IV.A.). Recommended: Students should take Sociology 355 to satisfy the General Education requirement (IV.B.).

#### **(a) Rehabilitative Science**

**Additional Preparation for the Major.** Biology 210; Chemistry 201; Physics 180B, 182B. (13 units)

**Major.** No additional major upper division units required.

#### **(b) Kinesiotherapy**

**Additional Preparation for the Major.** Exercise and Nutritional Sciences 211, 288; Psychology 260. (5 units)

**Additional Major Courses.** Application to the kinesiotherapy professional program is required for major status in the kinesiotherapy specialization. Those interested in entering the kinesiotherapy specialization must apply to the kinesiotherapy professional program prior to achieving major status. Application to the program is competitive and limited in number. Applications are accepted every fall and spring semester. Those students interested in the kinesiotherapy professional program should contact the program director. Students in the kinesiotherapy professional program must complete these additional courses: Exercise and Nutritional Sciences 463, 463L, 477, 478, 487A, 487B, 487C, 487D, 487E, 487F.

## **Types of Activity Courses**

The department offers a wide variety of physical activity courses ranging from adapted physical education through intermediate level classes. The purpose of the physical activity program is to:

1. Provide quality physical activity skill instruction at the beginning and intermediate levels in a wide variety of sport and dance activities.
2. Provide a vehicle for vigorous physical activity in an instructional setting.
3. Provide knowledge about various sport and dance activities.
4. Provide knowledge about the value of physical activity as it relates to an improved quality of life.
5. Provide opportunity for physical activity instruction to all segments of the student population, including those with temporary or permanent disabilities.