

# BACHELOR OF SCIENCE IN KINESIOLOGY: CONCENTRATION IN EXERCISE AND MOVEMENT SCIENCES

The department offers a Bachelor of Science in Kinesiology with concentrations in Exercise and Movement Sciences, and Physical Education. Both concentrations require a set of pre-major prerequisites and core requirements, some of which may be utilized to fulfill general education requirements, and which establish the framework for the study of movement, skills, and physical activity from a variety of perspectives. In addition, a set of concentration-specific courses serves the purpose of preparing the student for specific careers and graduate study within the field or related disciplines. Students must select one of the two concentrations.

- All courses, including physical activity courses used to satisfy completion of major requirements, must be taken for a letter grade. No CR/NC grades may be used on the major petition for graduation.
- Students majoring in Physical Education and taking courses in Exercise Science Emphasis areas (i.e., Physiology of Fitness and Health; Fitness Programming in Youth and Elderly Populations) are required to show proof of current First Aid/CPR certification upon application for graduation. This can be obtained via receiving off-campus certification by an agency such as the American Red Cross.
- Students majoring in Physical Education must earn a grade of C or higher in all required Kinesiology theory courses and a grade of B or higher in all movement-based courses.
- It is recommended that students graduate with some form of certification to enhance employment opportunities, such as those provided by the American Red Cross, the American College of Sports Medicine, ACE, Senior Fitness Certificate, AFAA, or the National Coaching Association. See an advisor for suggestions and additional possibilities.

## Bachelor of Science

Each concentration within the B.S. commences with a foundation in science, mathematics, and kinesiology, and a sequence of required core courses designed to progressively develop the students' knowledge of movement, skill, and physical activity.

The graduating student will have the skills and knowledge to engage in the observation, analysis, and measurement of movement, fitness, learning, skill, and physical activity; will have the tools and knowledge to engage in synthesis and systematic inquiry; and will be capable of using necessary computerized programs and supporting technologies for systematic inquiry and professional practice.

**The Concentration in Exercise and Movement Sciences** serves students interested in biomechanics, exercise physiology, motor control, motor learning and development, sport and exercise psychology, sport history, sport sociology, socio-cultural studies of physical activity, urban youth development, and physical or occupational therapy. Qualified students will be equipped with the skills and knowledge needed for advanced study in any of the above-mentioned domains or employment in fitness settings, physical activity programming, the sports media, sports industries, and as consultants for agencies developing sports policy.

The program examines those factors that influence the form, function, and effectiveness of movement and physical activity across the lifespan and for special populations, such as the disabled and individuals with chronic diseases. The framework for the degree program encompasses three major subject areas:

- a. Social Science: the socio-cultural and psychological factors that serve to constrain and define human movement, fitness, and physical activity;
- b. Movement Science: the factors that influence the neuromotor control, learning, relearning, and development of motor skills and analysis; and
- c. Exercise Science: the variables involved in the physiology of fitness and health, exercise prescription, and fitness programming in youth and elderly populations.

Toward the end of the program, students will select an emphasis area of study that will introduce them to specialized work within the concentration. In the movement science subject area, students become adept in observation and analysis of movement and in use of video and computer technology to study movement-related questions. Throughout their studies, students apply the knowledge and skills they gain to the analysis of movement problems, which are of personal interest and significance.

In the social science subject area, students will gain an understanding of the psychological, social, and cultural contexts in which physical activity occurs. Students will undertake the study of the origins of modern sport and physical activity, as well as explore such factors as the social, psychological, cultural, economic, and political influences on physical activity participation at all levels.

In the exercise science subject area, students will study the effects of exercise and physical activity on factors influencing work performance, training programs, and adaptations that include the reduction of risk factors for medical conditions such as coronary heart disease, cerebral vascular disease, adult-onset diabetes, obesity, and osteoporosis, as well as special conditions such as pregnancy, and other hypokinetic illnesses, or adaptations that are effective for the aged and disabled populations. The student will also study factors and frameworks for effective programming for fitness and physical activity behaviors in youth and elderly populations.

## Program Learning Outcomes

Students who complete the Exercise and Movement Sciences concentration should be able to:

- a. Define kinesiology and its sub-disciplines.
- b. Explain the value of, and advocate for, physical activity in terms of health, wellness, and quality of life.
- c. Analyze a variety of physical activities and their components from multiple perspectives.
- d. Discuss how and why human performance changes.
- e. Design interventions to maintain and improve human performance.
- f. Critically evaluate information sources in kinesiology.
- g. Effectively communicate information about kinesiology.

- h. Apply their knowledge and skills to problems that confront contemporary society.

## Kinesiology (B.S.): Concentration in Exercise and Movement Sciences – 65 units minimum

A grade of C or better is required for KIN 250, or equivalent, in the major.

CR/NC grading is not accepted for courses in the major.

### General Education Requirements Met in the Major

The requirements below are deemed “met in the major” upon completion of the courses listed (even though the courses and their prerequisites are not approved for GE). This is true whether or not the student completes the major.

- Area B2 (Life Science) is satisfied upon completion of either BIOL 212 and BIOL 220 or BIOL 328.

### Pre-Major Prerequisites (22-24 Units)

Code	Title	Units
Select one:		4-5
BIOL 100 & BIOL 101	Human Biology and Human Biology Laboratory	
BIOL 230	Introductory Biology I	
BIOL 212	Principles of Human Physiology	3
BIOL 213	Principles of Human Physiology Laboratory	1
Select one:		4
BIOL 220	Principles of Human Anatomy	
BIOL 328	Human Anatomy	
Select one:		4
CHEM 101 & CHEM 102	Survey of Chemistry and Survey of Chemistry Laboratory	
CHEM 115	General Chemistry I	
KIN 250	Introduction to Kinesiology	3
Select One:		3-4
ETHS 116	Algebra and Statistics for Social Justice	
ETHS 117	Statistics for Social Justice	
ISED 160	Data Analysis in Education	
MATH 124	Elementary Statistics	
PSY 171	Quantitative Reasoning in Psychology	

### Core Requirements (16 Units)

Code	Title	Units
KIN 384GW	Research Methods in Kinesiology - GVAR	3
KIN 457	Culture, Gender, and Movement	3
KIN 480	Anatomical Kinesiology	4
KIN 482	Exercise Physiology	3
KIN 486	Motor Learning	3

### Required Concentration Courses (14 Units)

Code	Title	Units
KIN 404	Sport and Exercise Psychology	3
KIN 483	Exercise Physiology Laboratory	1
KIN 485	Biomechanics	3
Select one:		4

PHYS 101 & PHYS 102	Conceptual Physics and Conceptual Physics Laboratory	
PHYS 111 & PHYS 112	General Physics I and General Physics I Laboratory	
Select one:		3
KIN 696	Kinesiology Community-Based Internship	
KIN 697 & KIN 698	Integrative Research Seminar and Senior Research Project	
KIN 699	Independent Study	

### Electives (12 Units)

Students must take 12 units of electives. Groupings of electives in three focus areas are provided below, but other groups are possible and students should meet with an advisor to select electives that align with their career path. The [movement science area](#) focuses on the factors that influence the neuromotor control, learning, relearning, and development of motor skills and analysis. The [social science area](#) focuses on the socio-cultural and psychological factors that serve to constrain and define human movement, fitness, and physical activity. The [exercise science area](#) focuses on the physiology of exercise, fitness and health, exercise prescription, and fitness programming in healthy adults, youth, elderly, and clinical populations.

#### Movement Science Focus Area

Code	Title	Units
KIN 325	Computer Applications in Kinesiology	3
KIN 437	Physical Dimensions of Aging	3
KIN 487	Motor Development	3
KIN 538	Therapeutic Exercise	3
KIN 539	Motor Assessment of Individuals with Disabilities	3
KIN 636	Neuromotor Control Processes	3
KIN 680	Musculoskeletal Biomechanics and Human Movement	3

#### Social Science Focus Area

Code	Title	Units
KIN 322	Sport in America	3
KIN 331	Peak Performance	3
KIN 434	Sport-Based Youth Development	3
KIN 489	History and Philosophy of Sport and Physical Activity	3
KIN 502	Sport and Social Issues	3
KIN 510	Sport, Movement, and Screen Culture	3
KIN 604	Advanced Exercise Psychology	3

#### Exercise Science Focus Area

Code	Title	Units
Select one:		3
KIN 310	Youth Development Instructional Analysis I	
KIN 312	Youth Development Instructional Analysis II	
KIN 314	Principles of Strength and Conditioning	3
KIN 437	Physical Dimensions of Aging	3
KIN 490	Introduction to Sport and Fitness Program Management	3
KIN 538	Therapeutic Exercise	3
KIN 555	Exercise Testing and Prescription	3

KIN 683	Advanced Exercise Physiology	3
KIN 690	Internship in Fitness/Wellness	3

### Activity Requirement (1 Unit)

With prior approval of advisor, select one activity course (KIN prefix) representing a fitness-related activity or movement form that complements and enhances the student's personal fitness and movement profile.

Code	Title	Units
KIN 100	Aerobics: Low Impact	1
KIN 103	Aerobics: Steps	1
KIN 136	Hatha Yoga	1
KIN 139	Jogging	1
KIN 148	Elementary Kung Fu	1
KIN 151	Tae Kwon Do	1
KIN 161	Shaolin Chuan: Tan-Tui	1
KIN 164	Elementary Soccer	1
KIN 171	Beginning Swimming: Non-Swimmers	1
KIN 172	Elementary Swimming	1
KIN 175	Elementary Tai-Chi Chuan	1
KIN 189	Weight Training: Beginners Only	1
KIN 191	Individualized Weight Training	1
KIN 272	Intermediate/Advanced Swimming	1

### General Education Requirements

Requirement	Course Level	Units	Area Designation
Oral Communication	LD	3	A1
Written English Communication	LD	3	A2
Critical Thinking	LD	3	A3
Physical Science	LD	3	B1
Life Science	LD	3	B2
Lab Science	LD	1	B3
Mathematics/Quantitative Reasoning	LD	3	B4
Arts	LD	3	C1
Humanities	LD	3	C2
Arts or Humanities	LD	3	C1 or C2
Social Sciences	LD	3	D1
Social Sciences: US History	LD	3	D2
Lifelong Learning and Self-Development (LLD)	LD	3	E
Ethnic Studies	LD	3	F
Physical and/or Life Science	UD	3	UD-B
Arts and/or Humanities	UD	3	UD-C
Social Sciences	UD	3	UD-D

### SF State Studies

Courses certified as meeting the SF State Studies requirements may be upper or lower division in General Education (GE), a major or minor, or an elective.

Course	Division	Units	Code
American Ethnic and Racial Minorities	LD or UD	3	AERM
Environmental Sustainability	LD or UD	3	ES
Global Perspectives	LD or UD	3	GP
Social Justice	LD or UD	3	SJ

Note: LD = Lower-Division; UD = Upper-Division.

### First-Time Student Roadmap (4 Year)

The roadmaps presented in this Bulletin are intended as suggested plans of study and do not replace meeting with an advisor. For a more personalized roadmap, please use the Degree Planner (<https://registrar.sfsu.edu/degreeplanner/>) tool found in your [Student Center](#).

[First-Time Student Roadmap \(http://bulletin.sfsu.edu/colleges/health-social-sciences/kinesiology/bs-kinesiology-concentration-exercise-movement-sciences/roadmap-i-ii-eng/\)](http://bulletin.sfsu.edu/colleges/health-social-sciences/kinesiology/bs-kinesiology-concentration-exercise-movement-sciences/roadmap-i-ii-eng/)

### SF State Scholars

The San Francisco State Scholars program provides undergraduate students with an accelerated pathway to a graduate degree. Students in this program pursue a bachelor's and master's degree simultaneously. This program allows students to earn graduate credit while in their junior and/or senior year, reducing the number of semesters required for completion of a master's degree.

[B.S. and M.S. in Kinesiology SF State Scholars Roadmap \(http://bulletin.sfsu.edu/colleges/health-social-sciences/kinesiology/bs-kinesiology-concentration-exercise-movement-sciences/scholars-roadmap/\)](http://bulletin.sfsu.edu/colleges/health-social-sciences/kinesiology/bs-kinesiology-concentration-exercise-movement-sciences/scholars-roadmap/)

[B.S. in Kinesiology, M.A. in Special Education, and Clinical or Rehabilitative Services: Orientation and Mobility Credential SF State Scholars Roadmap \(http://bulletin.sfsu.edu/colleges/health-social-sciences/kinesiology/bs-kinesiology-concentration-exercise-movement-sciences/scholars-roadmap-sped/\)](http://bulletin.sfsu.edu/colleges/health-social-sciences/kinesiology/bs-kinesiology-concentration-exercise-movement-sciences/scholars-roadmap-sped/)

### Transfer Student Roadmap (2 Year)

For students with an AA-T in Kinesiology.

[KIN ADT Roadmap \(http://bulletin.sfsu.edu/colleges/health-social-sciences/kinesiology/bs-kinesiology-concentration-exercise-movement-sciences/adt-roadmap/\)](http://bulletin.sfsu.edu/colleges/health-social-sciences/kinesiology/bs-kinesiology-concentration-exercise-movement-sciences/adt-roadmap/)

### This degree program is an approved pathway (“similar” major) for students earning the ADT in Kinesiology

California legislation SB 1440 (2009) mandated the creation of the Associate Degree for Transfer (ADT) to be awarded by the California Community Colleges. Two types of ADTs are awarded: Associate in Arts for Transfer (AA-T) and Associate in Science for Transfer (AS-T).

Note: no specific degree is required for admission as an upper-division student. However, the ADT includes specific guarantees related to admission and graduation and is designed to clarify the transfer process and strengthen lower-division preparation for the major.

An ADT totals 60 units and in most cases includes completion of all lower-division General Education requirements and at least 18 units in a specific major. (The Biology, Chemistry, and Environmental Science AS-T degrees defer 3 units in lower-division GE area C and 3 units in lower-division GE area D until after transfer.) Students pursuing an ADT are guaranteed admission to the CSU if minimum eligibility requirements are met, though not necessarily to the CSU campus of primary choice.

Upon verification that the ADT has been awarded prior to matriculation at SF State, students are guaranteed B.A. or B.S. completion in 60 units if pursuing a "similar" major after transfer. Determinations about "similar" majors at SF State are made by faculty in the discipline.

Degree completion in 60 units cannot be guaranteed when a student simultaneously pursues an additional major, a minor, certificate, or credential.

A sample advising roadmap for students who have earned an ADT and continue in a "similar" major at SF State is available on the Roadmaps tab on the degree requirements page for the major. The roadmap displays:

- How many lower-division units required for the major have been completed upon entry based on the award of a specific ADT;
- Which lower-division requirements are considered complete upon entry based on the award of a specific ADT;
- How to complete the remaining 60 units for the degree in four semesters.

Students who have earned an ADT should seek advising in the major department during the first semester of attendance.

## General Advising Information for Transfer Students

- a. Before transfer, complete as many lower-division requirements or electives for this major as possible.
- b. The following courses are not required for admission but are required for graduation. Students are strongly encouraged to complete these units before transfer; doing so will provide more flexibility in course selection after transfer.
  - a course in U.S. History
  - a course in U.S. & California Government

For information about satisfying the requirements described in (1) and (2) above at a California Community College (CCC), please visit <http://www.assist.org> (<http://assist.org>). Check any geographically accessible CCCs; sometimes options include more than one college. Use ASSIST to determine:

- Which courses at a CCC satisfy any lower-division major requirements for this major;
- Which courses at a CCC satisfy CSU GE, US History, and US & CA Government requirements.

Remedial courses are not transferable and do not apply to the minimum 60 semester units/90 quarter units required for admission.

Additional units for courses that are repeated do not apply to the minimum 60 units required for upper-division transfer (for example, if a course was not passed on the first attempt or was taken to earn a better grade).

Before leaving the last California Community College of attendance, obtain a summary of completion of lower-division General Education units (IGETC or CSU GE Breadth). This is often referred to as a GE certification worksheet. SF State does not require delivery of this certification to Admissions, but students should retain this document for verifying degree progress after transfer.

Credit for Advanced Placement, International Baccalaureate, or College-Level Examination Program courses: AP/IB/CLEP credit is not automatically transferred from the previous institution. Units are transferred only when an official score report is delivered to SF State. Credit is based on the academic year during which exams were taken. Refer to the University Bulletin in effect during the year of AP/IB/CLEP examination(s) for details regarding the award of credit for AP/IB/CLEP.

Students pursuing majors in science, technology, engineering, and mathematics (STEM) disciplines often defer 6-9 units of lower-division General Education in Areas C and D until after transfer to focus on preparation courses for the major. This advice does not apply to students pursuing associate degree completion before transfer.

## Transferring From Institutions Other Than CCCs or CSUs

Review SF State's lower-division General Education requirements. Note that, as described below, the four basic skills courses required for admission meet A1, A2, A3, and B4 in the SF State GE pattern. Courses that fulfill the remaining areas of SF State's lower-division GE pattern are available at most two-year and four-year colleges and universities.

Of the four required basic skills courses, a course in critical thinking (A3) may not be widely offered outside the CCC and CSU systems. Students should attempt to identify and take an appropriate course no later than the term of application to the CSU. To review more information about the A3 requirement, please visit [bulletin.sfsu.edu/undergraduate-education/general-education/lower-division/#AEL](http://bulletin.sfsu.edu/undergraduate-education/general-education/lower-division/#AEL).

Waiting until after transfer to take a single course at SF State that meets both US and CA/local government requirements may be an appropriate option, particularly if transferring from outside of California.