



kinesiology

bachelor of science: physical education concentration, blended credential option, general physical education option, athletic training education program, exercise science concentration, exercise science option, therapeutic, exercise and rehabilitation option ■ supplementary authorization in physical education minor ■ coaching minor ■ adapted physical education specialist credential ■ personal trainer/strength and conditioning certificate ■ master of science: exercise science concentration, sports performance concentration, strength/conditioning option

Program Description

Kinesiology is an academic area of study concerned with the art and science of human movement. The department offers a Bachelor of Science degree with three concentrations of study (Physical Education, Athletic Training Education Program, and Exercise Science), a Master of Science with two concentrations of study (Exercise Science and Sport Performance), and a Personal Trainer/Strength and Conditioning Certificate. Completion of the Physical Education Blended Credential Option qualifies students for entry into the Single Subject Credential Student Teaching Phase. An Adapted Physical Education Specialist Credential, a Personal Trainer/Strength and Conditioning Certificate program, and two minor programs (Coaching and Supplementary Authorization in Physical Education) are also available.

Concentrations

- **Physical Education:** The undergraduate physical education concentration contains two options, a general physical education option and a blended credential option. The general physical education option is designed for students who wish to pursue careers in physical education other than teaching or who wish to earn their teaching credential at other institutions. The blended credential option is an accredited, blended program that meets the standards from the California Commission on Teacher Credentialing for subject matter preparation and teacher credentialing in physical education (K-12).

Faculty

Fred Baldini, Lois Boulgarides, Bruce Drummond, William Edwards, Louis Elfenbaum, Doris Flores, Alan Hreljac, Rodney Imamura, Julie Kuehl-Kitchen, William Kutzer, Paula McNeil-Shelby, Pamela Milchrist, Scott Modell, Joan Neide, Jennifer Park, Daryl Parker, Ronald Peek, Roberto Quintana, Robin Reese, Maureen Smith, Gloria Solomon, Harry Theodor, Lindy Valdez, Jayne Willett, Michael Wright

Upon completion of this program, students take additional units of student teaching and student teaching seminars to be certified to teach physical education in California.

- **Athletic Training Education Program:** This program is accredited by the Commission on the Accreditation of Allied Health Education Programs (CAAHEP). Completion of the Athletic Training Education Program prepares students for careers in athletic training, sports medicine, and other paramedical areas. Upon completion of the degree, students are qualified to take the national certification exam to become an NATABOC Certified Athletic Trainer. Students are also encouraged to pursue a teaching credential.
- **Exercise Science:** This concentration has two options: 1) Exercise Science, and 2) Therapeutic Exercise and Rehabilitation. The Exercise Science option prepares students for graduate work in the areas of exercise and sport science, as well as for careers in personal training, cardiac rehabilitation, wellness, fitness consulting in business/industry and health clubs, and other paramedical and health related fields. The Therapeutic Exercise and Rehabilitation option provides students with in-depth science-based course work which meets the prerequisite requirements for most Physical Therapy, Occupational Therapy, and other health related professional preparation programs. Admission to professional preparation programs is competitive and it is critical that students work closely with an assigned advisor to plan course work.

Contact Information

Fred Baldini, *Department Chair* ■ Gwen Captain, *Administrative Support Coordinator* ■ Solano Hall 3002 ■ (916) 278-6441 ■ www.bhs.csus.edu/KHS

Career Possibilities

Teacher ■ Athletic Trainer ■ Corrective Therapist ■ Exercise Test Technologist ■ Community Center Leader ■ Personal Trainer ■ Rehabilitation ■ Sportscaster ■ Coach ■ Resort Sports Coordinator ■ Wellness Coordinator ■ Cardiac Rehabilitator ■ Fitness Consultant

Special Features

- The Kinesiology facilities include state of the art high tech laboratories for motor learning, biomechanics, exercise physiology, sport performance, physical therapy and athletic training.
- Several activity spaces are available, including dance, weight training and gymnastics rooms. Outside facilities include a diving and lap pool, racquetball and tennis courts, jogging trails, sports fields, putting green and driving range.
- Kinesiology majors at CSUS have opportunities for unique experiences at the undergraduate level. In the Physical Education Concentration, students observe and teach children in both on and off campus field sites. Students concentrating in the Athletic Training area serve internships under NATABOC certified athletic trainers in the community colleges and on the campus with Division I athletes.
- CSUS is an accredited CAAHEP undergraduate Athletic Training Education Program.
- Exercise Science students gain useful experience through their internships at various on and off campus locations.
- Students interested in Physical Therapy build a valuable background of experience in community hospitals and rehabilitation centers.
- At the graduate level, students engage in a variety of research projects, both on and off campus in the areas of Exercise Science and Sports Performance.

Note: Students interested in majoring or minoring in Kinesiology are encouraged to go to the Department of Kinesiology and Health Science office for an assignment to a faculty advisor.

Undergraduate Programs

Requirements ■ Bachelor of Science Degree – Physical Education Concentration

Units required for Major: 66-75, all of which must be completed with a grade of “C” or better.

Minimum total units for the BS: 120

Note: Additional units may be required to meet the CSUS foreign language requirement.

Courses in parentheses are prerequisites.

The physical education concentration is designed mainly to prepare students for a teaching career in physical education. The student who completes the program in physical education will have the breadth and depth of knowledge regarding developmentally appropriate physical education. Students will understand the aesthetics of movement and human performance and the meaningfulness of physical activity in lifelong learning. Additionally,

the student will gain knowledge of the historical and philosophical factors that relate to performance, fitness, and wellness.

There are two options within the concentration that are available to all students. First, the Blended Credential option provides students with the course work for both subject matter content and pedagogy for teaching physical education at the K-12 level. Students who choose this option will graduate with the course work necessary for a Single Subject Physical Education California Teaching Credential, except for the student teaching requirement and seminars. Second, the General Physical Education option meets the standards for subject matter preparation and will allow students to pursue the Physical Education Teaching Credential at other institutions or alternative careers.

Note: Due to policy changes from the California Commission on Teacher Credentialing and the Federal No Child Left Behind mandate, the Physical Education Concentration, at the time of catalog print, was under review. Consult a Physical Education Concentration Advisor for details and course requirements once they are available; please see <http://aaweb.csus.edu/catalog/>.

A. Required Core (17 units)

- (3) KINS 151D Applied Kinesiology and Biomechanics (BIO 025 or equivalent)
- (3) KINS 152 Physiology of Exercise (BIO 025 and BIO 026 or equivalent)
- (3) KINS 158 Motor Learning (BIO 025 or equivalent)
- (4) BIO 025 Human Anatomy and Physiology I
- (4) BIO 026 Human Anatomy and Physiology II (BIO 025 or equivalent)

B. Required Upper Division Courses (26 units)

- (3) KINS 130 Elementary Physical Education Curriculum and Content (KINS 138)
- (2) KINS 131 Secondary Physical Education Curriculum (KINS 138)
- (3) KINS 133 Integration of Concepts
- (3) KINS 134 Historical and Philosophical Foundations of Physical Education
- (3) KINS 135 Assessment Strategies in Physical Education
- (3) KINS 137 Sociology of Sport
- (3) KINS 138 Teaching Strategies in Physical Education
- (3) KINS 160 Sport and Exercise Psychology
- (3) KINS 177 Introduction to Adapted Physical Education

C. Skill Analysis (15 units)

- (1) KINS 140 Analysis of Tumbling and Gymnastics
- (2) KINS 141 Analysis of Net Games
- (2) KINS 142 Analysis of Rhythm and Dance (KINS 138)
- (2) KINS 143 Analysis of Field Sports
- (2) KINS 144 Analysis of Weight Training
- (2) KINS 145 Analysis of Team Passing Games
- (1) KINS 146 Analysis of Aquatics
- (1) KINS 147 Analysis of Self-Defense
- (1) KINS 148 Analysis of Nontraditional Games and Outdoor Activities
- (1) KINS 149 Analysis of Health-Related Fitness

General Physical Education Option

Total units for Bachelor of Science Degree: 120

Students who do not apply to the Physical Education Blended Credential Option will automatically be considered enrolled in the Physical Education General Option. Students must complete 8 elective units of upper division KINS units with approval of Physical Education Concentration advisor. **This option does not permit the 9-unit GE upper division and GE Area exemptions.**

Blended Credential Option

Total units for Bachelor of Science Degree: 120

Students must complete 17 units of required credential units. During the semester that a student registers for the completion of 40 major units (2nd semester junior year) he/she must apply for admission to the Physical Education Blended Credential Option. After submission of application the student will be able to register for credential classes with the prefix EDTE. Last date to submit application is: fall semester, the first Tuesday in October; spring semester, the first Tuesday in March.

- (3) HLSC 136 School Health Education
- (3) EDBM 170 Introduction to Bilingual Education
- (3) EDTE 116* Psychology of Instruction
- (3) EDTE 372** Anthropology of Education
- (3) EDTE 384** Academic Literacy
- (3) KINS 380 Methods of Teaching Physical Education

* Fall semester senior year only.

** Spring semester senior year only.

Note: Students must achieve a 3.0 GPA in Blended Credential classes.

Students who choose this option will be exempt from the following GE Area requirements and the 9-unit GE upper division requirement upon completion of the major courses listed below.

Area B5 (3 units) – KINS 152 Physiology of Exercise

Area D2 (3 units) – KINS 137 Sociology of Sport

Area E (3 units) – KINS 160 Sport and Exercise Psychology

Requirements for a Single Subject Teaching Credential in Physical Education K-12

Blended Credential Option students must formally apply to the Teacher Preparation Program for acceptance into the credential option. A separate application and requirements are required for admission to the student teaching phase. Consult a Physical Education Concentration Advisor for details.

- (1) KINS 198A Seminar in Physical Education - Elementary
- (1) KINS 198B Seminar in Physical Education - Secondary
- (7) EDTE 471A Elementary Student Teaching - Single Subject Credential
- (6) EDTE 471B Secondary Student Teaching - Single Subject Credential

Note: The following must be attained before student teaching can begin:

- Standard First Aid Certification
- Current CPR Certification
- Receive a passing score on the California Basic Educational Skills Test (CBEST)

Requirements ■ Bachelor of Science – Athletic Training Education Program

Units required for Major: 80-83

Minimum total units for the BS: 120

Note: Additional units may be required to meet the CSUS foreign language requirement.

Courses in parentheses are prerequisites.

A. Required Core (20 units)

- (3) KINS 151* Kinesiology (BIO 022 or equivalent)
- (3) KINS 151A* Biomechanics (KINS 151)
- (3) KINS 152* Physiology of Exercise (BIO 131 or equivalent)
- (3) KINS 158 Motor Learning (BIO 022 or equivalent)
- (4) BIO 022* Introductory Human Anatomy (BIO 010 or BIO 020 or instructor permission)
- (4) BIO 131* Systemic Physiology (BIO 010 or BIO 020 or BIO 022 and one year of college chemistry)

B. Required Lower Division Courses (18 units)

- (3) BIO 010 Basic Biological Concepts **OR**
- BIO 020 Biology: A Human Perspective
- (5) CHEM 001A General Chemistry (High school algebra (two years) and high school chemistry; or equivalent) **OR**
- CHEM 006A Introduction to General Chemistry (One year high school algebra)
- (5) CHEM 006B Introduction to Organic and Biological Chemistry (CHEM 001A or CHEM 006A or a high school chemistry course and passing a qualifying exam given in the first laboratory period) **OR**
- CHEM 001B General Chemistry (CHEM 001A)
- (3) FACS 010* Nutrition and Wellness
- (2) NURS 014* Pharmacology (BIO 131, or equivalent [may be taken concurrently])

C. Required Upper Division Courses (42-45 units)

- (2) KINS 144 Analysis of Weight Training
- (3) KINS 154A* Principles and Techniques in a Clinical Setting
- (3) KINS 154B* Management and Health Care Administration in Athletic Training
- (1) KINS 154C* Therapeutic Modalities Laboratory (BIO 022, KINS 154, KINS 156, prior instructor permission)
- (2) KINS 155A* Clinical Evaluation of the Upper Extremity (BIO 022, KINS 154A, KINS 156)
- (2) KINS 155B* Clinical Evaluation of the Lower Extremity (BIO 022, KINS 154A, KINS 156)
- (3) KINS 156* Care of Athletic Injuries
- (2) KINS 156A* Emergency Response
- (3) KINS 157* Therapeutic Exercise (BIO 022, KINS 151, KINS 155A or KINS 155B; or equivalent)
- (3) KINS 160* Sport and Exercise Psychology
- (1-3) KINS 194H* Assigned Field Experience in Athletic Training (BIO 022, KINS 156, KINS 195C or equivalent)
- (1-2) KINS 195C* Observation in Athletic Training (Phase I)
- (4) KINS 195D*+ Practicum in Athletic Training (Phase II)
- (4) KINS 195D*+ Practicum in Athletic Training (Phase III)

- (4) KINS 195D*+ Practicum in Athletic Training (Phase IV)
 (4) KINS 195D*+ Practicum in Athletic Training (Phase V)

*Required to meet CAAHEP accreditation. (See Program Director for all requirements.)

+**Prerequisite:** BIO 022, KINS 156, prior approval of the Program Director

Note: Students must formally apply for admission into the clinical program. Criteria for admission includes a 2.8 GPA, student information sheet, typed statement on goals, current first aid and CPR certification, two letters of recommendation, a physical exam, Hepatitis B immunization and technical standards form. For an admissions packet and more detailed information, check the web site, www.hhs.csus.edu/KHS/AthleticTraining. See the Program Director for details and dates.

Requirement ■ Bachelor of Science Degree – Exercise Science Concentration

Units required for Major: 74-78

Minimum total units for the BS: 120

Note: Additional units may be required to meet the CSUS foreign language requirement.

Courses in parentheses are prerequisites.

A. Required Core (20 units) plus choice of one of the two options listed below:

- (3) KINS 151* Kinesiology (BIO 022 or equivalent)
 (3) KINS 151A* Biomechanics (KINS 151)
 (3) KINS 152* Physiology of Exercise (BIO 131 or equivalent)
 (3) KINS 158 Motor Learning (BIO 022 or equivalent)
 (4) BIO 022* Introductory Human Anatomy (BIO 010 or BIO 020)
 (4) BIO 131* Systemic Physiology (BIO 010, or BIO 020 or BIO 022 and one year of college chemistry)

Exercise Science Option

The following courses are required in addition to the core courses above (see Section A):

B. Required Lower Division Courses (17 units)

- (3) BIO 010 Basic Biological Concepts **OR**
 BIO 020 Biology: A Human Perspective
 (5) CHEM 006A Introduction to General Chemistry (One year high school algebra)
 (5) CHEM 006B Introduction to Organic and Biological Chemistry (CHEM 001A or CHEM 006A or a high school chemistry course and passing a qualifying exam given in the first laboratory period)
 (4) PHYS 002 Topics in Elementary Physics (A recent one year course in high school algebra and one year of plane geometry or a college course in algebra [MATH 009])

C. Required Upper Division Courses (32 units)

- (3) KINS 132 Planning, Designing and Managing a Fitness Center
 (3) KINS 137 Sociology of Sport **OR**
 KINS 160 Sport and Exercise Psychology
 (3) KINS 139 Leadership and Communication
 (2) KINS 144 Analysis of Weight Training
 (3) KINS 153 Cardiovascular Testing and Exercise Prescription (KINS 152 or instructor permission)

- (3) KINS 154A Principles and Techniques in a Clinical Setting
 (3) KINS 156 Care of Athletic Injuries
 (3) KINS 194B Assigned Internship in Exercise Science (KINS 151 and/or KINS 152; or instructor permission) **OR**
 KINS 195B Directed Internship in Exercise Science (KINS 151 and/or KINS 152; or instructor permission)
 (3) EDS 140 Introductory Behavioral Statistics
 (3) FACS 113 Nutrition and Metabolism (BIO 010 or BIO 020; CHEM 001A or CHEM 006A. Passing score on WPE)
 (3) Select one of the following:
 KINS 136 Sport and Aging
 HLSC 150 Aging and Health
 NURS 163 Holistic Approach to Aging (passing score on WPE)
 PSYC 150 Psychological Aspects of Aging (PSYC 001 or PSYC 005)

D. Electives (5-6 units)

(5-6) Select five-six units from the following:

- KINS 152A Fundamentals of Exercise Programs (KINS 152)
 KINS 152B Exercise Physiology of Women
 KINS 152C Prolonged Exercise (an introductory college course in Biology or Zoology)
 KINS 152D Blood Lactate and Exercise (KINS 152)
 KINS 153C Exercise Mini Series: Electrocardiography
 KINS 196 Experimental Offerings in Kinesiology

Note: Other elective courses can be used with the permission of an advisor.

Therapeutic Exercise And Rehabilitation Option (formerly pre-Physical Therapy)

The following courses are required in addition to the core courses above (see Section A):

B. Required Lower Division Courses (17 units)

- (3) BIO 010* Basic Biological Concepts **OR**
 BIO 020* Biology: A Human Perspective
 (5) CHEM 006A* Introduction to General Chemistry (One year high school algebra) **OR**
 CHEM 001A General Chemistry
 (5) CHEM 006B* Introduction to Organic and Biological Chemistry (CHEM 001A or CHEM 006A or a high school chemistry course and passing a qualifying exam given in the first laboratory period) **OR**
 CHEM 001B General Chemistry (CHEM 001A)
 (4) PHYS 005A* General Physics: Mechanics, Heat, Sound (Recently completed three years of high school algebra and geometry; and a college course in algebra and trigonometry (MATH 009 recommended) for those having an inadequate mathematics background)

C. Required Upper Division Courses (11 units)

- (3) KINS 153 Cardiovascular Testing and Exercise Prescription (KINS 152 or instructor permission)
 (3) KINS 154A Principles and Techniques in a Clinical Setting
 (2) KINS 155A Clinical Evaluation of the Upper Extremity (BIO 022, KINS 154A, KINS 156) **OR**

- KINS 155B Clinical Evaluation of the Lower Extremity (BIO 022, KINS 154A, KINS 156)
- (3) KINS 194F Assigned Internship in Allied Health
- D. Required Therapeutic Exercise and Rehabilitation Electives (6 units)**
- (6) Select two of the following:
- KINS 139 Leadership and Communication
- KINS 156 Care of Athletic Injuries
- KINS 157 Therapeutic Exercise (KINS 151, KINS 155A or KINS 155B, BIO 022; or equivalent)
- KINS 176+ Perceptual Motor Development

E. Additional Therapeutic Exercise and Rehabilitation Electives (22 units)

Select from the following:

- (3) KINS 152A Fundamentals of Exercise Programs (KINS 152)
- (1-3) KINS 194F Assigned Field Experience in Allied Health
- (4) BIO 122+ Advanced Human Anatomy (BIO 022)
- (3) BIO 123+ Neuroanatomy (BIO 022)
- (3) BIO 132+ Neurophysiology (BIO 010 or BIO 020, and one year of college chemistry)
- (4) BIO 139 General Microbiology (BIO 010, BIO 011, BIO 012; CHEM 006B or CHEM 020)
- (3) MATH 030 Calculus I (MATH 029 or four years of high school mathematics which includes two years of algebra, one year of geometry, and one year of mathematical analysis; completion of ELM requirement and Pre-Calculus Diagnostic Test)
- (2) NURS 014* Pharmacology (BIO 131 or equivalent [may be taken concurrently])
- (2) NURS 130* Pathophysiology (BIO 022 or equivalent, BIO 131 or equivalent)
- (4) PHYS 005B* General Physics: Light, Electricity and Magnetism, Modern Physics (PHYS 005A or instructor permission)
- (3) PSYC 168* Abnormal Psychology (PSYC 005)
- (3) STAT 001* Introduction to Statistics (MATH 009 or three years of high school mathematics which includes two years of algebra and one year of geometry; completion of ELM requirement and the Intermediate Algebra Diagnostic Test)

Note: Other elective courses can be used with the permission of an advisor.

*Prerequisite for CSUS MS in Physical Therapy

+Recommended for CSUS MS in Physical Therapy

Requirements ■ Minor – Coaching

Units required for minor: 19-20

- (3) KINS 150 Exercise and Sport Physiology
- (3) KINS 156 Care of Athletic Injuries
- (3) Select one of the following:
- KINS 110 Women and Sport
- KINS 137 Sociology of Sport
- KINS 160 Sport and Exercise Psychology
- (4) ATIC 160 Coaching Series
- (2-3) KINS 140-149 Analysis Series
- (4) Select 4 units from the following:
- KINS 156A Emergency Response

- KINS 161 Organization and Administration of Physical Education and Intramurals
- KINS 140 Analysis Series
- KINS 194D Assigned Field Experience in Coaching

Requirements ■ Minor – Supplementary Authorization in Physical Education

Units required for Minor: 18

This minor will fulfill the California Commission on Teacher Credentialing requirements for a supplementary authorization to teach Introductory Physical Education, K-9. A grade of "C" or better is required in every course used to meet this requirements.

- (3) KINS 138 Teaching Strategies in Physical Education
- (2) KINS 142 Analysis of Rhythm and Dance (KINS 138)
- (3) KINS 172 Movement Education
- (3) Select one of the following:
- KINS 150 Exercise and Sport Physiology
- KINS 176 Perceptual Motor Development
- KINS 177 Adapted Physical Education
- (2) KINS 143 Analysis of Field Sports **OR**
- KINS 145 Analysis of Team Passing Games
- (2-4) Select two of the following:
- KINS 141 Analysis of Net Games
- KINS 144 Analysis of Weight Training
- KINS 146 Analysis of Aquatics
- KINS 147 Analysis of Self Defense
- KINS 148 Analysis of Non-Traditional Games and Outdoor Activities
- KINS 149 Analysis of Health Related Fitness
- (3) Select one of the following:
- KINS 131 Curriculum Methods Secondary
- KINS 134 Historical and Philosophical Foundation of Physical Education
- KINS 135 Assessment Strategies
- KINS 137 Sociology of Sport
- KINS 160 Sport and Exercise Psychology

Requirements ■ Subject Matter Program – Athletic Training (pre-credential preparation)

Athletic Training students interested in teaching must meet the Commission on Teacher Credentialing standards prior to entrance into a credential program. Courses to meet standards can be taken concurrently with the Athletic Training courses.

Note: The program is currently under review by the Commission on Teacher Credentialing and students are strongly encouraged to consult the Program Director for appropriate course work

Requirements ■ Credential – Adapted Physical Education Specialist

Units required for Credential: 21

Note: It is intended that the courses in this specialty be taken in addition to or concurrent with the courses required for the Single Subject Teaching Credential in Physical Education.

A. Required Courses (21 units)

- (3) KINS 171 Adapted Physical Education: Basic Skill/Fitness Activities and Assessment (KINS 177)

- (3) KINS 176 Perceptual Motor Development
- (3) KINS 177 Intro to Adapted Physical Education
- (3) KINS 179 Adapted Physical Education: Program Planning (KINS 171, KINS 177)
- (3) KINS 194E Assigned Internship in Adapted Physical Education (Any two of the following: KINS 171, KINS 176, KINS 177 or KINS 179; permission of Adapted Credential Advisor)
- (2) EDS 120A Management of Learning and Teaching (Corequisite: EDS 120B)
- (1) EDS 120B Management of Learning and Teaching Lab (Corequisite: EDS 120A)
- (3) RLS 125 Therapeutic Recreation and Persons with Physical Disabilities (RLS 106 or instructor permission; RLS 106 may be taken concurrently)

B. Prerequisite courses for students who are not Physical Education Teaching Concentration Majors:

- (3) KINS 130 Physical Education for Children (KINS 138. Corequisites: KINS 135, KINS 149) **OR**
- KINS 172 Movement Education
- (3) KINS 151 Kinesiology (BIO 022 or equivalent)
- (3) KINS 151D Applied Biomechanics (Corequisite: KINS 138)
- (3) KINS 158 Motor Learning (BIO 022 or equivalent)
- (2) HLSC 136 School Health Education (CPR training; may be taken concurrently)
- (4) BIO 022 Introductory Human Anatomy (BIO 010, BIO 020, or instructor permission)

Requirements ■ Personal Trainer/ Strength and Conditioning Certificate

Units required: 28

- (3) KINS 120 Scientific Bases of Physical Conditioning
- (3) KINS 132 Planning, Designing and Managing a Fitness Center
- (3) KINS 139 Leadership and Communication
- (2) KINS 144 Analysis of Weight Training
- (3) KINS 151 Kinesiology (BIO 022)
- (3) KINS 152 Physiology of Exercise (BIO 131 or equivalent)
- (3) KINS 153 Cardiovascular Testing and Exercise Prescription (KINS 152 or instructor permission)
- (3) KINS 156 Care of Athletic Injuries
- (2) KINS 194A Assigned Field Experience in Kinesiology **OR**
- KINS 195A Directed Field Experience in Kinesiology
- (3) FACS 113 Nutrition and Metabolism (BIO 010 or BIO 020; CHEM 001A or CHEM 006A)

Graduate Program

The graduate program leading to the Master of Science degree in Kinesiology is designed to expand the students' knowledge and to augment their qualifications for leadership in their chosen profession.

The objectives of the program are to increase the students' breadth and depth of knowledge relative to the discipline of Kinesiology; to provide the opportunity for

students to engage in scholarly activity that includes creative and analytical thinking, interpreting, evaluating and reporting published research, designing and conducting research; and to provide a focus of study that will enhance career commitment and allow for experiences that will lead to continued self development and growth.

Admission Requirements

For students **with an undergraduate major** in Kinesiology, admission to the MS program as a classified graduate student requires:

- an overall GPA of 2.8; or 3.0 in the last 60 semester units; and
- EDS 140 or equivalent upper division statistics course. Students who have deficiencies in admission requirements which can be removed by specific additional preparation may be admitted to unclassified or conditionally classified graduate status for the purpose of removing deficiencies. Course work taken to qualify for classified graduate status is in addition to and not counted toward the master's program. While completing admission deficiencies, students may, if they possess the necessary prerequisites, enroll also in degree course work, but no more than 6 units as an unclassified student or 12 units as a conditionally classified student can be applied toward the MS degree. Students must remove all admission deficiencies before being considered for classified status.

Students with deficiencies in admission requirements are requested to submit additional documentation in support of their application. These materials may include:

- GRE or MAT scores;
- a letter stating reasons for pursuing graduate study in Kinesiology;
- a copy of recent research paper and/or a creative project; and
- letters of recommendation that speak specifically to academic ability.

Students applying for admission to the Kinesiology graduate program who **do not have a degree in Kinesiology**, are required to take a minimum of 20 specified units in Kinesiology. These students should see the graduate coordinator or a graduate advisor for details.

Admission Procedures

Applications are accepted as long as room for new students exists. However, students are strongly urged to apply by March 1 for the following fall or October 1 for the following spring in order to allow time for admission before Computer Access to Student Personal and Enrollment Records (CASPER). All prospective graduate students, including CSUS graduates, must file the following with the Office of Graduate Studies, River Front Center 206, (916) 278-6470:

- an online application for admission;
- two sets of official transcripts from all colleges and universities attended, *other than CSUS*; and
- two letters of recommendation.

Approximately six weeks after receipt of all items listed above, a decision regarding admission will be mailed to the applicant. Upon admission, the student will select a graduate advisor.

Advancement to Candidacy

Each student must file an application for Advancement to Candidacy indicating a proposed program of graduate study. The procedure may begin as soon as the classified graduate student has:

- removed any deficiencies in admission requirements;
- completed at least 12 units of 200-level courses with a minimum 3.0 GPA; and
- passed the Writing Proficiency Examination (WPE) or secured approval for a WPE waiver.

This application must be filed no later than the semester prior to enrolling in KINS 211. If a student chooses to enroll in KINS 299, the application is filed at that time. Advancement to Candidacy forms are available in the Office of Graduate Studies. See the department's graduate coordinator for more information about this process.

Requirements ■ Master of Science Degree

Units required for the MS: 30, including 19 units for concentrations (see below)

Note: An 11-unit core of courses is required of all students; seven units of required courses and four units that are earned through the completion of a thesis or project. The thesis or project is required of all candidates for the Master of Science in Kinesiology. The courses in the core are designed to focus on an advanced study of the knowledge which is of common interest and concern to all graduate students pursuing a degree in Kinesiology. Within the remaining 19 units, the student is focused in an area of special interest by selecting a concentration: Exercise Science or Sport Performance. Each concentration includes a set of required courses and a specified number of elective units.

Six semester units of graduate work taken at other accredited institutions may be approved by the Graduate Coordinator or the student's graduate advisor. Prerequisite units, units taken for undergraduate majors/minors and units taken to qualify for fully classified graduate status, and will not be counted for graduate credit. Only rarely are undergraduate Kinesiology courses approved for graduate credit. A maximum of six elective units may be taken in upper division undergraduate courses with advisor approval. A maximum of four units of graduate Practicum or Directed Individual Study may be taken for degree credit with advisor approval.

A. Required Courses (7 units)

- (3) KINS 210 Research Methods in Kinesiology
- (1) KINS 211 Research Seminar
- (3) KINS 260 Psychology of Sport and Exercise

B. Culminating Requirement (4 units)

- (4) KINS 500 Culminating Experience (Completion of KINS 211 or concurrent enrollment)

Note: The first time the student registers for KINS 500, he/she must also register for KINS 211. During this semester, the student develops his/her proposal with assistance from others in the seminar, the seminar professor and the student's committee. When the proposal is completed, formal written and oral presentations are

made to the seminar with the student's committee in attendance. If the student does not complete the proposal and have it approved, he/she must enroll and attend KINS 211 another semester.

Additional Requirements for Concentrations (19 units)

Select one of the following two concentrations:

Exercise Science Concentration

- (3) KINS 250 Advanced Exercise Physiology Lab (KINS 152 or instructor permission)
- (3) KINS 252 Advanced Exercise Physiology (1 year of General Chemistry, BIO 131 or equivalent, KINS 152 or equivalent, KINS 153 or equivalent)
- (3) KINS 254 Advanced Biomechanics (KINS 151, KINS 210; or instructor permission)
- (3) KINS 259 Research in Exercise Physiology (KINS 152, KINS 210, or instructor permission)
- (7) Electives selected in consultation with an advisor.

Sport Performance Concentration

- (6) Select two of the following:
 - KINS 203 Specificity of Conditioning
 - KINS 236 Sport and Society
 - KINS 262 Psychological Aspects of Peak Performance
- (13) Electives selected in consultation with an advisor.

Strength/Conditioning Option

- (3) KINS 203 Specificity of Conditioning
- (3) Select one of the following:
 - KINS 236 Sport and Society
 - KINS 258 Research in Motor Learning (KINS 158, KINS 210, or instructor permission)
 - KINS 262 Psychological Aspects of Peak Performance
- (4) KINS 295 Practicum (Approval of graduate faculty advisor and graduate coordinator)
- (6) Electives selected in consultation with an advisor. Can include no more than 3 units of KINS 299.

Note: Student teaching, extension courses, undergraduate fieldwork, and 300-numbered methods or workshop courses may not be applied to the MS program requirements.

Lower Division Courses

The following activity-based courses are designed from the general student (non-physical education majors). These courses are designed to enhance the student's understanding of the development of the individual as an integrated physiological, psychological, and social being. Courses include a study of how internal and external influences interact in human development and behavior within the context of the human life span.

Those courses that have been approved for general education may be taken twice as follows: (a) once for general education credit and once for elective credit; or, (b) twice for elective credit. Courses not approved for general education credit may be taken twice for elective credit toward graduation. Check the current schedule of classes for approved general education courses of the current semester.

KINS 002. Adapted Physical Fitness. Weight training and fitness designed for students with disabilities who wish to increase their fitness levels. Includes programs of physical fitness exercises to develop strength, flexibility, and cardiorespiratory endurance. 1 unit.

KINS 091. Alpine Skiing and Snowboarding. Designed to develop proficiency at all skill levels of alpine skiing, beginner through expert, while promoting appreciation of the sport as socio cultural phenomena and lifetime pursuits. Sessions will take place at a scheduled Sierra ski area as well as on campus. Additional fee. 1 unit.

KINS 092. Beginning Racquetball. Fundamental theory and practice of the game of racquetball including service, receiving the service, back wall play, basic shots, variations, court positioning and general tactics; history rules, and safety precautions. 1 unit.

KINS 097. Beginning Trampoline and Tumbling. Involves beginning level skills ranging from forward rolls to handsprings in tumbling and feet bouncing to full twisting movements (without flips) on trampoline. In addition, students learn appropriate flexibility and strength exercises. 1 unit.

KINS 098. Beginning Gymnastics. Open to men and women who would like to learn skills or routines on one or more selected events (four women's/six men's). Student will learn appropriate flexibility and strength exercises as well as principles of fitness involving physiological, psychological, and social variables. No experience required. 1 unit.

Upper Division Courses

KINS 101. Exercise for Healthy Living. Expose students to a broad range of information related to understanding personal fitness and health. Offers a well-rounded examination of lifestyle components elemental to lifelong healthful living. Explores a variety of personal choice options for developing and maintaining lifetime wellness from physiological, psychological, and sociological perspectives. Encourages students to participate in a wide variety of physical activities. Provides a comprehensive understanding of elements for successful participation in physical activities. **Prerequisite:** One unit skill or fitness class; may be taken concurrently. 2 units.

KINS 106B. Advanced Tennis. Develop a proficiency at the advanced level in all strokes, including forehand, backhand, serve and service return, volley, half-volley, overhead, lob, slice spin and drop shots. Covers evaluation of rules and different scoring systems, singles, and doubles play with an emphasis on competitive strategy and techniques. 1 unit.

KINS 106C. Advanced Weight Training. Advanced instruction in weight lifting including Olympic weight lifting, power lifting, body building, lifting for athletic competition and lifting for physical fitness. 1 unit.

KINS 107B. Advanced Volleyball. Instruction in advanced skills, strategies, and techniques. Emphasis on various offensive and defensive patterns of play. 1 unit.

KINS 110. Women and Sport. Role of women in sport; an inquiry into traditional and contemporary attitudes and practices regarding the woman's role in the sporting world. 3 units.

KINS 118A. Martial Arts: Karate. Explores the ancient tradition of the Asian martial arts in conjunction with actual participation in a selected martial arts course. Asks the student to critically examine the cultural contributions of specific Asian communities such as Japan, China, and Korea, to the Martial Arts as practiced in the United States. 3 units.

KINS 118B. Martial Arts: Tae Kwon Do. 3 units.

KINS 118C. Martial Arts: Tai Chi. 3 units.

KINS 120. Scientific Bases of Physical Conditioning. Examines physical fitness through the following activities: swimming, cross country running, running games, and weight training. Emphasis is placed on the lifelong carry-over value of these and related activities. Special attention is given to scientific understanding of physical fitness and the role of physical fitness in maintaining good health. 3 units.

KINS 120A. Health Maintenance Program for Adults. Offers a personalized program of nutrition and physical activity emphasizing weight control and the development and maintenance of the individual's cardiovascular system. Active participation will be supplemented by instruction in the physiological bases of physical activity. **Prerequisite:** Medical clearance prior to beginning of the course; thirty (30) years of age or older. 3 units.

KINS 121. Peak Performance Through Psychological Skills. Examination of, and practical experience in, techniques for maximizing sport and creative performance through the development of mental skills and strategies for stress control, imagery, goal setting and concentration. 3 units.

KINS 122B. Cardiopulmonary Resuscitation. Designed to meet American Red Cross or American Heart Association Certification in CPR. **Note:** May be repeated for credit. Graded Credit/No Credit. 1 unit.

KINS 123A. Weight Training for Lifelong Fitness. Designed to provide participants with a process oriented approach to lifelong fitness by developing exercise adherence that builds on knowledge and basic skills related to weight training. Individual assessment of body composition, as well as other measures, are determined to establish baseline data for improving exercise adherence. (Additional charge for assessment and computer analysis.) **Prerequisite:** Weight training course or instructor permission. 1 unit.

KINS 123B. Aerobics for Lifelong Fitness. Designed to provide participants with a process oriented approach to lifelong fitness by developing exercise adherence that builds on knowledge and basic skills related to aerobic fitness. Individual assessment of body composition, as well as other measures, are determined to establish baseline data for improving exercise adherence. (Additional charge for assessment and computer analysis.) **Prerequisite:** KINS 091 or instructor permission. 1 unit.

KINS 123C. Weight Training and Aerobics for Lifelong Fitness. Designed to provide participants with a process oriented approach to lifelong fitness by developing exercise adherence that builds on knowledge and basic skills related to weight training and aerobics. Individual assessment of body composition, as well as other measures, are determined to establish baseline data for improving exercise adherence. (Additional charge for assessment and computer analysis.) **Prerequisite:** KINS 091 and a weight training class or instructor permission. 1 unit.

KINS 130. Elementary Physical Education Curriculum and Content. Overview of the total elementary physical education curriculum. The course is designed specifically for physical education concentration students. The primary focus will be placed on cooperative activities, movement education, development of locomotor, manipulative skills, perceptual motor activities, fitness, games and the correlation of classroom subjects with physical education. This course introduces students to developmentally and instructionally appropriate physical education for children. Students will be able to develop a scope and sequence for an elementary physical education curriculum. **Note:** Restricted to junior or senior Kinesiology major-Physical Education concentration. **Prerequisite:** KINS 138. 3 units.

KINS 131. Secondary Physical Education Curriculum. KINS 131 is designed for senior level students in the Kinesiology Major, Physical Education Option, Credential Concentration who wish to deliver an effective, meaningful physical education curriculum to diverse students. This course covers curriculum components that include content, content organization, distinctive curriculum models and aspects of curriculum application. Students will learn how to sustain a positive learning experience, conceive and plan meaningful curricula for school based instruction, and to link the school program to opportunities for adolescents outside of school. **Prerequisite:** KINS 138. 2 units.

KINS 132. Planning, Designing and Managing a Fitness Center. Designed to provide students with the basic guidelines for starting and managing multiple health and fitness centers in the private setting; focus on initial start-up of a health and fitness center and operating procedures with emphasis on equipment selection and arrangement, employee training, program planning for safe and optimally beneficial health and fitness results. 3 units.

KINS 133. Integration of Concepts. Critical perspective of how theoretical concepts and integrated knowledge can be applied to the teaching of physical education. Emphasis is on a coherent understanding of the interrelationships that exist in the subdisciplines of physical education and other subject areas. This capstone experience for students in the Physical Education Teaching Option meets the writing intensive requirement. 3 units.

KINS 134. Historical and Philosophical Foundations of Physical Education. Examination of historical events that have influenced the philosophy of physical education, past and present, including a study of selected leaders of physical education; the identification of societal forces in cultures which lead to philosophical beliefs and concepts relative to the structure of the discipline of physical education. 3 units.

KINS 135. Assessment Strategies in Physical Education. Selection, analysis, construction and administration of norm-referenced and criterion-referenced tests used for formative and summative evaluation in the physical education public school setting. Includes both traditional and alternative assessment strategies. Computers are used for data collection, development of assessment instruments, development of grading programs, and for descriptive statistical analysis. 3 units.

KINS 136. Sport and Aging. Considers the positive and negative aspects of vigorous exercise and/or sport activity throughout the aging process. Included will be inquiry into the opportunities for activity among adults over the age of thirty, through the active career years, and beyond. 3 units.

KINS 137. Sociology of Sport. Analyzes sport as a social institution and the interrelations between sport and societal subsystems. Consideration of the attitudes, values, and behaviors associated with sport. Analyzes contemporary problems associated with sport: race relations, the traditional and emergent role of women, leisure behavior, aggression and violence, and political and economic concerns. Analyzes a sociological problem within the context of sport. 3 units.

KINS 138. Teaching Strategies in Physical Education. Introduction to teaching in K-12 schools for physical education majors. Topics include: professionalism, philosophy, the CA framework, lesson/unit planning, class management, organization techniques, communication skills, teaching styles and effective teaching skills. (Students will be required to complete four observations off campus and two peer-teaching assignments on campus.) Serves as a

prerequisite or corequisite for all skill analysis classes in the major. **Note:** Physical Education Majors, Minors and Liberal Studies KINS Concentration. 3 units.

KINS 139. Leadership and Communication. Social actions and behavioral patterns as influenced by the communication process; experiential approaches to techniques of interpersonal and small group relationships and leadership; the constantly evolving communication media as instruments of behavioral change. 3 units.

KINS 140. Analysis of Tumbling and Gymnastics. An introduction to fundamental tumbling and gymnastics skills which are relevant to the elementary or secondary levels. Emphasis is given to learning how to perform and effectively analyze tumbling and gymnastics skills. Students will learn about history, philosophy and the value of gymnastics as well as appropriate progressions, spotting techniques, and safety. **Corequisite:** KINS 138. 1 unit.

KINS 141. Analysis of Net Games. This course is designed to prepare physical education students to analyze and teach net games in the public school setting. Students will be given the opportunity to learn and apply the basic techniques of tennis, badminton, pickleball, and volleyball as well as the offensive and defensive net strategies for game play. Emphasis will be given to skill acquisition and analysis. **Corequisite:** KINS 138. 2 units.

KINS 142. Analysis of Rhythm and Dance. Introduction to basic rhythm and dance. Activities may include, but are not limited to: basic locomotor skill development; basic rhythm activities; and contemporary, line, square, round, contra, folk country and western and ballroom dance. Historical and multi-cultural concepts related to dance are emphasized. Designed to prepare students to teach rhythm and dance in K-12 settings. **Note:** Physical Education Majors, Minors and Liberal Studies KINS Concentration. **Prerequisite:** KINS 138. 2 units.

KINS 143. Analysis of Field Sports. KINS 143 is an introductory course designed for students within the Kinesiology Major, Physical Education Concentration, to analyze the teaching of field sports in school settings. This course provides the students the opportunity to learn the basic techniques, strategies, and rules of track & field, flag football, softball and golf. Emphasis will be given to skill development, teaching methodology, skill analysis, lead-up activities and sport participation. **Prerequisite:** KINS 138. 2 units.

KINS 144. Analysis of Weight Training. Prepares students in the analysis of skills and concepts of weight training. Emphasis is on kinesiology/biomechanics principles, human anatomy, and physiological adaptations to training. Addresses class organization as applied to school populations, and program design as applied to athletics and equipment selection related to modes or resistance. 2 units.

KINS 145. Analysis of Team Passing Games. This course is designed, using technical and tactical models, to provide Kinesiology majors in the Physical Education Concentration with the knowledge, skills practice and sound strategies for successfully participating and teaching in team passing games. Instruction will focus on performance, skill analysis, methods of teaching and evaluation of skills utilized in the following team sports; Basketball, Team Handball, Ultimate Frisbee, Rugby, Lacrosse, Hockey, and Soccer. **Prerequisite:** KINS 138. 2 units.

KINS 146. Analysis of Aquatics. This course is designed to provide Kinesiology major in the physical education concentration with knowledge, skills practice and sound strategies for successfully participating and teaching in aquatic activities. Instruction will focus

on performance, analysis, methods of teaching and evaluation of skills utilized in aquatic activities, including swimming, water polo, synchronized swimming, water aerobics, and water games.

Corequisite: KINS 138. 1 unit.

KINS 147. Analysis of Self Defense. Basic defensive and offensive movements used in self defense. Emphasis is on analysis of skills and teaching strategies that can be used to present skills safely and effectively in K-12 settings. Instructor permission. 1 unit.

KINS 148. Analysis of Nontraditional Games and Outdoor Activities. Introduces a variety of nontraditional games and outdoor activities. A clinical experience is provided for middle school students in the community. 1 unit.

KINS 149. Analysis of Health-Related Fitness. Presents a variety of exercises and conditioning programs that encompass the components of health-related physical fitness. Emphasis is on application of exercise physiology principles, physical fitness testing, computer analysis of fitness test results, and field experiences. 1 unit.

KINS 150. Exercise and Sport Physiology. Sports physiology with special emphasis on studying the various systems in the body that are involved in work, exercise and sport. Training programs to improve these systems and their responses will be discussed in a wide variety of settings including exercise for health, fitness, recreation, and sports competition. Lecture two hours; laboratory three hours. 3 units.

KINS 151. Kinesiology. Anatomical concepts and physical laws as applied to human movement emphasizing the effects of individual and environmental variables. Includes analysis of normal and pathological gait. Lecture two hours; laboratory three hours.

Prerequisite: BIO 022 or equivalent. 3 units.

KINS 151A. Biomechanics. Introduction to fundamental mechanical concepts as they apply to human movement. A broad range of human movement will be explored including activities from sport, industrial settings, normal and pathological locomotor skills, and movements involved in manipulating the environment in which we live. Laws of physics, mechanical principles and mathematical concepts will be integrated in studying man as a biological entity. Lecture two hours; laboratory three hours. **Prerequisite:** KINS 151. 3 units.

KINS 151C. Dance Kinesiology. Human musculoskeletal and neurological systems, energy production, and biomechanical interrelationships of human motion applied to dance. Emphasis on the nervous, muscular and tendinous structures and the mechanical function of levers and force application and injury prevention for the dancer. **Prerequisite:** BIO 022 or equivalent. 3 units.

KINS 151D. Applied Kinesiology and Biomechanics. Fundamentals of human movement patterns with an emphasis on applied anatomy, movement principles, movement sequences, applied biomechanics, developmental motor stages and basic movement analysis. **Prerequisite:** BIO 025. 3 units.

KINS 152. Physiology of Exercise. Study of circulatory, respiratory and metabolic response to exercise in humans under various physiological and ambient conditions. Lecture two hours; laboratory three hours. **Prerequisite:** BIO 131 or equivalent. 3 units.

KINS 152A. Fundamentals of Exercise Programs. Study of current training programs used in different types of activity. Emphasis will be placed on specific training techniques, nutritional needs, methods of testing/evaluating, and special considerations needed for various populations. **Prerequisite:** KINS 152. 3 units.

KINS 152B. Exercise Physiology of Women. Examines the general physiology of women, how physical activity affects women's physiological functions, and how physiological functions affect women in sport and exercise performance. A comprehensive review of scientific literature is included. 2 units.

KINS 152C. Prolonged Exercise. Extensive review of the energy metabolism, cardiovascular and pulmonary function, endocrine response, nutritional need, training effect, and biochemical response to prolonged exercise of 1-6 hours in duration. **Prerequisite:** An introductory college biology or zoology course. 2 units.

KINS 152D. Blood Lactate and Exercise. Reviews the basic aspects of lactate formation, release, and uptake by skeletal muscle and blood during exercise and training. Presents recent clinical and research findings related to physical performance. **Prerequisite:** KINS 152. 2 units.

KINS 153. Cardiovascular Testing and Exercise Prescription. Designed to train exercise leaders, exercise test technologists, and exercise program directors. Focus is upon development of basic skills, both administrative and technical, needed to develop a program of graded exercise testing and exercise prescription for asymptomatic and symptomatic populations. Lecture two hours; laboratory three hours. **Prerequisite:** KINS 152 or instructor permission. 3 units.

KINS 153C. Exercise Mini-Series: Electrocardiography. Introduction to electrocardiography, reviews the basic concepts and its application during rest and graded exercise testing. 2 units.

KINS 154A. Principles and Techniques in a Clinical Setting. Introduction to professional ethics and attire, the allied health care system, patient transfers, wheelchair and ambulation aids, medical terminology and record keeping. Fundamental principles and concepts underlying the therapeutic application of modalities, including methods of administering heat, cold, electricity, sound, light and water are covered. 3 units.

KINS 154B. Management and Health Care Administration in Athletic Training. Organization, management and health care administration of athletic training programs. Includes communication skills, budget, facility design and management, legal aspects, drug testing, education, computer use, insurance and record keeping, personnel development (job search, CEUs, licensure), professional and governing organizations, athletic training reporting systems, emergency action plans, blood borne pathogen procedures, preparticipation exam management, health care issues and fundraising. 3 units.

KINS 154C. Therapeutic Modalities Laboratory. Techniques and clinical skills in the treatment of injuries using therapeutic modalities. Hands-on experience in the clinical application of contemporary therapeutic modalities (electrotherapeutic modalities, hydrotherapeutic modalities, cryotherapy, radiant energy, paraffin, intermittent compression units, traction units, massage) including patient preparation, set-up, dosage determination and operational procedures. Lab two hours. **Prerequisite:** BIO 022, KINS 154, KINS 156, prior instructor permission. 1 unit.

KINS 155A. Clinical Evaluation of the Upper Extremity. Analyzes and performance of evaluation procedures of the upper extremity, head and spine. Includes the development of skills in a patient interviewing, palpation methods, manual muscle testing, neurological and orthopedic assessments and special tests. **Prerequisite:** BIO 022, KINS 154A, KINS 156. 2 units.

KINS 155B. Clinical Evaluation of the Lower Extremity.

Analyzes and performance of evaluation procedures of the lower extremity, trunk and low back. Includes the development of skills in patient interviewing, palpation methods, manual muscle testing, neurological and orthopedic assessments and special tests. **Prerequisite:** BIO 022, KINS 154A, KINS 156. 2 units.

KINS 156. Care of Athletic Injuries. Application and methods of caring for and preventing athletic injuries through strapping, padding, conditioning, etc.; practical application of first aid and a basic introduction to treatment and rehabilitation of common athletic injuries. 3 units.

KINS 156A. Emergency Response. Underlying principles and applied techniques of first aid. Meets the requirements for the Emergency Response and CPR for the Professional Rescuer certificates of the American Red Cross. Lecture one hour, laboratory two hours. 2 units.

KINS 157. Therapeutic Exercise. Biomechanical principles in the prescription of musculoskeletal rehabilitation exercises. Topics include passive, active and resistive range of motion, manual muscle testing, and exercises for strength, stamina and suppleness for every part of the body. **Prerequisite:** KINS 151, KINS 155A or KINS 155B, BIO 022; or equivalent. 3 units.

KINS 158. Motor Learning. Study of the motor and cognitive characteristics of individuals involved in learning and controlling motion skills and the conditions that can influence that learning and control. Lecture two hours; laboratory three hours. **Prerequisite:** BIO 022 or equivalent. 3 units.

KINS 160. Sport and Exercise Psychology. Application of research findings as they apply to psychological performance factors in sport, physical education and exercise settings, such as motivation/adherence, stress management, personality and psychological skills training. 3 units.

KINS 161. Organization and Administration of Physical Education and Intramurals. Presents information on the efficient and effective organization and administration of instruction and intramural programs in physical education. Topics include legal liability, budget and facilities. 2 units.

KINS 167. The African American Sport Experience. Examination of the experiences of the African American athlete in sport and society, from the period of enslavement to the contemporary era. Topics include gender experiences, intercollegiate experiences, professional sport, and the Olympic games, as well as the interconnections between African American communities and the role of sport. The experiences of African Americans will be compared to those of other ethnic and cultural groups. 3 units.

KINS 171. Adapted Physical Education: Basic Skill/Fitness Activities and Assessment. Development of competencies for planning, developing, and evaluating effective skill and fitness activities for students with disabilities. Emphasis will be placed on basic skill development, fitness and traditional and alternative assessment strategies and postures assessment and programming for students with disabilities. Information regarding the application of specific standardized assessment instruments for placement decisions will be examined. Students will be required to participate in 15 hours of service learning. Class meets for 2 hours lecture and 2 hours activity. **Prerequisite:** KINS 177. 3 units.

KINS 172. Movement Education. Examination of activities and theoretical concepts that relate to the physical, social, emotional and intellectual development of the individual. Content includes: health-

related physical fitness, movement concepts, stability, locomotor and manipulative skills, rhythms and dance, gymnastics, games and sport activities. 3 units.

KINS 176. Perceptual Motor Development. Study of the genetic, prenatal, perinatal and postnatal factors affecting the sequential perceptual motor development of children. Inquiry is made into reflexes, sensory motor testing and stimulation, perceptual motor testing and remedial activities in motor development. 3 units.

KINS 177. Introduction to Adapted Physical Education Historical and philosophical bases for adapted physical education, including the development and management of programs with emphasis on the psychomotor, affective and cognitive domains. The impact of federal and state legislation, legal liability and special health and safety problems will be studied in relationship to the role of the adapted physical education teacher, the interdisciplinary team, the parent and the pupil. 3 units.

KINS 179. Adapted Physical Education: Program Planning. Study of the variables in physical education curriculum and program planning - assessment, goals and objectives, development of program content, and evaluation - as related to individuals with disabilities. **Prerequisite:** KINS 171 and KINS 177. 3 units.

KINS 194A. Assigned Field Experience in Kinesiology. Assigned experience in the conduct of physical education. Students keep records of daily experiences and prepare periodic progress reports. Students receive one unit of credit for three hours per week for one semester of field experience. **Note:** Registration requires prior approval of the department coordinator. May be repeated for a total of five units. Graded Credit/No Credit. 1-2 units.

KINS 194B. Assigned Internship in Exercise Science. Assigned internship other than in the Human Performance Lab. The student will assist in laboratory experiments and other special procedures; will learn the operation of equipment and sequentially will be expected to administer tests and interpret the results. Interns will be expected to attend monthly conferences. **Note:** May be repeated for a total of 3 units. **Prerequisite:** KINS 151 and/or KINS 152; or instructor permission. Graded Credit/No Credit. 1-3 units.

KINS 194C. Assigned Field Experiences in Pre-Physical Therapy. Assigned experience under the direction of a physical therapist. Students keep records of their experiences. Registration requires prior approval of the pre-physical therapy coordinator. **Note:** May be repeated up to a total of 6 units. Open to Physical Education majors in the pre-physical therapy option. Graded Credit/No Credit. 1-2 units.

KINS 194D. Assigned Field Experience in Coaching. Assigned experience in coaching (two hours daily for the full schedule of the sport for two units of credit). Students keep records of daily experiences and prepare periodic progress reports. Succeeding enrollments should be in different sports. **Note:** May be repeated for a total of 6 units. Graded Credit/No Credit. 1-2 units.

KINS 194E. Assigned Internship in Adapted Physical Education. Assigned experience in the conduct of Adapted Physical Education Programs. Students will keep records of their experiences. Three clock hours per week per unit of credit. Credential candidates may not use in lieu of Phase III requirements. **Prerequisite:** Any two of the following: KINS 171, KINS 176, KINS 177, or KINS 179; permission of adapted credential advisor. Graded Credit/No Credit. 1-3 units.

KINS 194F. Assigned Field Experience in Allied Health. Practical experience in Occupational Therapy, Chiropractic or other allied health professions. Students keep records of their experiences while working under the direct supervision of a licensed clinician. Registration requires prior approval of a Pre-Physical Therapy advisor. **Note:** May be repeated up to a total of 6 units. Graded Credit/No Credit. 1-2 units.

KINS 194G. Assigned Professional Experience. Assigned professional experience in organization and evaluation of physical education, athletic training, exercise or pre-therapy. Students work closely with a CSUS faculty member and receive one unit of credit for three hours of work per week for one semester. **Note:** May be repeated for a total of 3 units toward graduation. These units may not be applied to the major. Graded Credit/No Credit. 1-2 units.

KINS 194H. Assigned Field Experience in Athletic Training. Practical experience in athletic training under the direct supervision of an NATABOC Certified Athletic Trainer in one of the following settings: professional athletics, high school, clinic, industrial or private business. **Note:** Registration requires prior approval of the program director. May be repeated up to a total of 3 units. **Prerequisite:** BIO 022, KINS 156, KINS 195C or equivalent. Graded Credit/No Credit. 1-3 units.

KINS 195A. Directed Field Experience in Kinesiology. Directed experience in the conduct of physical education. Students keep records of daily experiences and prepare periodic progress reports. Students receive one unit of credit three hours per week for one semester of field experience. **Note:** Registration requires prior approval of the department coordinator. May be repeated for a total of 5 units. Graded Credit/No Credit. 1-2 units.

KINS 195B. Directed Internship in Exercise Science. Directed internship in the Human Performance Laboratory under the supervision of one or more members of the faculty. The student will assist in laboratory experiments and other special procedures; will learn the operation of equipment and sequentially will be expected to administer tests and interpret the results. Interns will be expected to attend monthly conferences. **Note:** May be repeated for a total of 3 units. **Prerequisite:** KINS 151 and/or KINS 152; or instructor permission. Graded Credit/No Credit. 1-3 units.

KINS 195C. Directed Observation in Athletic Training. Planned student observation of the health care practices of the Athletic Trainer and other sports medicine personnel in a clinical setting. Selected NATA competencies may be completed on site. 60 hours per unit. Registration requires prior approval of Program Director. Graded Credit/No Credit. 1-2 units.

KINS 195D. Practicum in Athletic Training. Supervised athletic training experience in the athletic training room under the direct supervision of a NATABOC Certified Athletic Trainer. Included are a series of guest lecturers from the medical and paramedical field presenting lectures and demonstrations on topics in sports medicine. 200 hours plus all lectures are 3 units; 300 hours plus all lectures are 4 units. **Prerequisite:** BIO 022, KINS 156, prior approval of the program director. Graded Credit/No Credit. 4 units.

KINS 196. Experimental Offerings in Kinesiology. Guided study and discussion of problems and topics in physical education. Supplemental readings, reports, and term projects are included. Proseminars dealing with specific topics or problems will be scheduled when the need exists. 2-3 units.

KINS 196E. Introduction to Physical Activity and Aging: Principles and Assessment. Covers the potential of seniors for improving and maintaining health-related physical fitness. Normal and pathological age-related changes in the various systems of the human body are addressed. Assessment topics to be covered include health risk evaluation, fitness testing, and fitness test interpretation for older adults. Begins to prepare students to work with older adults in various health, fitness and wellness settings. Lecture 2 hours; laboratory 2 hours. **Prerequisite:** BIO 10 or BIO 20, BIO 22, BIO 131 (or equivalent) or BIO 120 3 units.

KINS 198A. Seminar in Physical Education - Elementary. Designed to accompany a nine-week elementary physical education student teaching experience. Focuses on helping student teachers implement developmentally appropriate lessons that are philosophically aligned with the Physical Education Framework for CA Public Schools while utilizing a variety of teaching methodologies, assessment strategies and effective teaching skills. **Note:** Open to Phase II physical education single subject credential candidates only. 1 unit.

KINS 198B. Seminar in Physical Education - Secondary. Examines the 7-12 school environment and the role of the student teacher. Emphasis will be on the problems and issues facing credential candidates in physical education. **Note:** Open to Physical Education Phase II students only. 1 unit.

KINS 199. Directed Individual Study. Individual research, project or directed reading. Open only to majors who appear competent to carry on individual work. Approval of the faculty under whom the individual work is to be conducted, and approval of the Department Chair required. Formal written report required. **Note:** May be repeated for credit. 1-3 units.

Graduate Courses

KINS 203. Specificity of Conditioning. Survey of current research in training regimen of conditioning programs designed to optimize physical conditioning in preparation for specific athletic competitions. 3 units.

KINS 210. Research Methods in Kinesiology. Various methods and techniques of educational research as they are commonly applied in the field of Kinesiology; study of examples of their use in published research; practice in applying them to problems of interest to the student; analyzing data and writing research reports. 3 units.

KINS 211. Research Seminar. Students develop and defend research proposals. Students registering for KINS 500 for the first time must register for KINS 211 concurrently. **Note:** Student must re-enroll if proposal is not completed and accepted during the first registration. Graded Credit/No Credit. 1 unit.

KINS 236. Sport and Society. Society and the institution of sport interact in a variety of ways. Students are given the opportunity to investigate and discuss in-depth a wide range of topics linking sport and society. Among these topics are violence and aggression, politics, racism, sexism, counter-cultures, mass media and the future of sport. The application of research to the real world is an integral part of the course. 3 units.

KINS 250. Advanced Exercise Physiology Laboratory. Describes, explains, and practices the application of selected measurement techniques in the laboratory as they relate to pertinent research in the areas of exercise physiology. Emphasis will be placed on the use and calibration of equipment as well as adaptation of equipment to different research settings. Lecture two hours; laboratory three hours. **Prerequisite:** KINS 152 or instructor permission. 3 units.

KINS 252. Advanced Exercise Physiology. Human physiological responses, from the cellular level to organ system level, to both acute and chronic exercise will be studied in detail with an emphasis on integrative physiological responses to exercise. The course will emphasize a complex regulatory systems approach to the changes and adaptations that occur with exercise. Specifically, how the regulatory systems dictate these changes. The course will aid in the understanding of both theoretical and integrative concepts in the area of exercise physiology. The course will provide a solid foundation that is needed to review and understand complex research in exercise physiology. **Prerequisite:** 1 year of General Chemistry, BIO 131 or equivalent, KINS 152 or equivalent, and KINS 153 or equivalent. 3 units.

KINS 254. Advanced Biomechanics. Study human movement from a mechanical perspective utilizing laws of physics and relevant functional anatomical principles. Human movement will be looked at from a broad perspective, including basic movements to more complex skills. Students will use a variety of techniques to study the biomechanical principles of movement production including laboratory work, library research and examination of the appropriate theoretical constructs. Lecture two hours; laboratory three hours. **Prerequisite:** KINS 151, KINS 210; or instructor permission. 3 units.

KINS 258. Research in Motor Learning. Designed to provide students with a solid foundation experience in motor learning; focus is on an intensive examination of a selected topic in motor learning; directed individual pilot study and the nature of original laboratory research. **Prerequisite:** KINS 158, KINS 210, or instructor permission. 3 units.

KINS 259. Research in Exercise Physiology. Provides students with a solid foundation experience in human performance research. Primary focus is on intensive examination of selected advanced topics in exercise physiology. **Prerequisite:** KINS 152, KINS 210, or instructor permission. 3 units.

KINS 260. Psychology of Sport. The in-depth study of parameters of human behavior as specifically related to sport including personality factors, motivational techniques, expectancy effects, group dynamics, leadership issues, aggression, arousal, concentration, and goal setting. 3 units.

KINS 261. Exercise Psychology. Overview a number of topics germane to the relationship between psychological processes and exercise. Two general questions will be explored: (a) how do social and psychological factors influence exercise outcomes? and (b) how does exercise participation influence psychological outcomes? Emphasis will be placed on theoretical perspectives in exercise psychology, related research support for these perspectives, and resultant practical implications. Also topics will be examined from a lifespan developmental perspective. 3 units.

KINS 262. Psychological Aspects of Peak Performance. In-depth examination of current research relating to theories of and techniques for performance enhancement in sport and dance through psychological skills strategies. 3 units.

KINS 270. Instructional Strategies for Physical Activity and Sport. Study of theoretical concepts, models and research that relates to organizational and instructional strategies for physical activity and sport. Along with developing problem solving and critical thinking skills, provides the student with the opportunity to partake in self-directed and cooperative learning experiences, and develops communications skills that will enhance staff development and teaching of individuals and groups in a variety of physical activity and sport environments. 3 units.

KINS 276. Teaching and Coaching Effectiveness. Study of the research methodology, systematic observation, and findings that relate to effective teaching and coaching in the school environment. Provides an analytical approach to the investigation of teaching and coaching behaviors by examining models and critical variables involved in describing, analyzing and interpreting the instructional process. 3 units.

KINS 294A. Contemporary Topics in Sport Performance. Advanced research seminars on topics of contemporary interest. Specific topics will vary. **Note:** May be taken more than once for credit, provided topic is not repeated. **Prerequisite:** KINS 210. 1-3 units.

KINS 294B. Contemporary Topics in Exercise Physiology. Advanced research seminars on topics of contemporary interest. Specific topics will vary. **Note:** May be taken more than once for credit, provided topic is not repeated. **Prerequisite:** KINS 210. 1-3 units.

KINS 294C. Special Topics in Biomechanics. Advanced research seminars on varied topics of contemporary interest. **Note:** May be taken more than once for credit, provided topic is not repeated. **Prerequisite:** KINS 254. 1-3 units.

KINS 295. Practicum. Graduate experiences in a practical setting. **Note:** Open only to graduate students within the Physical Education Department. **Prerequisite:** Approval of graduate faculty advisor and graduate coordinator. Graded Credit/No Credit. 1-3 units.

KINS 296. Experimental Offerings in Kinesiology. Guided study in selected topics. Previous offerings have included motor development, current issues and problems, sports psychology, corrective physical education and physical education for the educationally handicapped. 2-3 units.

KINS 299. Directed Individual Study. Individual research, project, or directed reading. **Note:** Open only to majors who appear competent to carry on individual work. Admission to this course requires approval of the graduate advisor and the graduate coordinator. Formal written report required. May be repeated for credit. Graded Credit/No Credit. 1-3 units.

KINS 380. Methods of Teaching Physical Education. KINS 380 is designed for the future physical educator who wishes to deliver an effective, meaningful physical education curriculum to a diverse population of students. Emphasis is on physical education pedagogy – the skills and techniques that successful teachers use to ensure student learning. Students in KINS 380 will engage in guided teaching and systematic observation experiences at the elementary, middle school and secondary school levels in an effort to improve their teaching skills. **Note:** Senior Kinesiology Majors in the Physical Education Concentration pursuing the Blended Credential Option who are in their last semester of coursework and/or Candidates who have been accepted into the two-semester Teacher Preparation Program. **Prerequisite:** KINS 138, KINS 130 and KINS 131 or equivalent. 3 units.

KINS 500. Culminating Experience. Completion of a thesis or project under the direction of a department committee. **Prerequisite:** Advanced to candidacy. Completion of KINS 211 or concurrent enrollment. Graded Credit/No Credit. 1-4 units.