Candidates for the Add Authorization in Adapted Physical Education must hold a teaching credential in one of the following: Physical Education Single Subject, Multiple Subject or Special Education — with 12 units of prerequisites that include the following coursework or equivalent:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Units</th>
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<tbody>
<tr>
<td>KIN 487</td>
<td>Motor Development</td>
<td>3</td>
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<tr>
<td>KIN 485</td>
<td>Biomechanics</td>
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<td>KIN 580</td>
<td>Instructional Strategies for Middle and High School Physical Education, Grades 6-12</td>
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<tr>
<td>KIN 581</td>
<td>Practicum in Middle and High School Physical Education</td>
<td>1</td>
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An instructional analysis upon the advisor’s approval

### Minor/Certificate in Athletic Coaching

This area of study provides students in academic areas other than kinesiology with the knowledge and skills required for coaching interscholastic or community athletic teams.

### Therapeutic and Allied Health Profession Preparation

The B.S. in Kinesiology supports preparation for advanced study in graduate or certificate programs in therapeutic or rehabilitation areas including physical or occupational therapy, chiropractic, and allied health professions. With the addition of specific courses required for admission to various graduate programs, the student will graduate with a strong foundation in the movement sciences as well as with most of the prerequisites necessary for entry into a program of their choice.

Kinesiology programs include a number of courses typically required for the admission to physical or occupational therapy programs, and may provide the graduate with more than one career/graduate path. Students are strongly advised to identify the specific requirements of each program to which they plan to apply. Some additional courses may be substituted for parallel courses in the major, upon approval of the student’s major advisor. Others courses may be taken as free electives or, in some cases, to fulfill General Education requirements. To stay informed and to optimize planning, students must work closely with a departmental advisor, and should become involved in the Kinesiology Student Association.

### Advising

Students in all the programs must work closely with an advisor to select the proper degree program, concentration, and configuration of courses to support career and scholarly interest related to the study of human movement and physical activity. Students seeking to major in or change their major to kinesiology must consult with the undergraduate advisor in Gymnasium Room 137 to be officially accepted into the major.

Undergraduate students interested in pursuing a master's degree in kinesiology should speak to their academic advisor after completing core requirements in the program (KIN 251, KIN 384GW, KIN 457, KIN 480, KIN 486, and KIN 504). Many of the courses listed in the major patterns have prerequisites or co-requisites and must be taken in a particular sequence. See "Duplicate Use of Credit Between the Major and GE" in the (bulletin.sfsu.edu/undergraduate-education/#Major)Bulletin page Undergraduate Degree: Overview. Prior approval by the student's major advisor is required for all individually tailored groups of courses and course substitutions.
The course of study in the major requires that the student complete all basic subjects requirements (GE Areas A and B4) and pre-major prerequisites, all with a grade of C or better, prior to enrolling in the major upper division courses. The major upper division courses, projects, internships, and culminating experiences require competence in written and oral communication, quantitative reasoning, logical and critical thinking, computer facility, and a thorough grounding in biological and physical science. The B.S. in Kinesiology is science intensive. Successful and timely progress through this program requires careful planning and organization. Students must show proof of completion of prerequisites to the instructor at the start of all applicable courses.

Transfer students are encouraged to visit the department prior to enrollment at SF State, or as soon as possible thereafter, to learn about the major and the expectations for student performance. Students having academic difficulty for any reason are encouraged to seek assistance immediately by speaking to their major advisor, a peer counselor (kin.sfsu.edu/content/advising), and/or the Student Resources Center (chss.sfsu.edu/src (http://chss.sfsu.edu/src)) in the College of Health and Social Sciences.

**Master of Science in Kinesiology**

Students in the M.S. Kinesiology program apply multiple perspectives to problems related to exercise, fitness, motor skill and development in the contexts of activities of daily living, play, games, sport, and other forms of human physical activity. Graduates exit the program with strong theoretical and problem-solving skills, experience in the evaluation of current research in the field, and knowledge in the field of kinesiology. They are able to apply these skills in a wide variety of careers as well as further graduate study. The curriculum allows for an emphasis in exercise physiology, movement science, or physical activity with social scientific perspectives.

**Exercise Physiology**

An emphasis in exercise physiology is intended for students who are interested in furthering their understanding of how the physiological systems of the human body respond to exercise. Exercise physiology is a multi-disciplinary field with strong ties to basic research, life sciences, and medicine. This emphasis offers a comprehensive study of the acute and chronic cardiovascular, respiratory, and metabolic responses to exercise; and the application of these concepts to exercise testing, prescription, and supervision in both healthy and diseased populations. Furthermore, an objective of the exercise physiology emphasis is to assist in preparation for certification as Health Fitness SpecialistSM or Clinical Exercise Specialist through the American College of Sports Medicine. Upon completion of the program, students will be prepared to further their education in a doctoral program, or seek employment in a rehabilitation clinic, health club, wellness center or other fitness setting. Kinesiology graduate students may earn a Certificate in Exercise Physiology by completing all requirements including three courses (nine units) in the emphasis that are marked with a number (1). This certificate is only for graduate students in the Kinesiology program.

**Movement Science**

An emphasis in movement science provides an advanced degree that prepares students to work in a variety of movement and health care settings, teach in community colleges or high schools, or continue postgraduate studies leading to a doctoral degree. Students explore the multitude of factors that influence the control of human movement and the way in which that control changes over time. In addition, students develop skill critiquing and analyzing movement using techniques from the neurosciences and biomechanics. Students ultimately apply their knowledge and skill in areas such as sports, dance, recreation, rehabilitation, teaching, coaching, and ergonomics. Kinesiology graduate students may earn a Certificate in Movement Science by completing all requirements including three courses (nine units) in the emphasis that are marked with a number (1). This certificate is only for graduate students in the Kinesiology program.

**Physical Activity: Social Scientific Perspectives**

The emphasis in physical activity: social scientific perspectives is intended for students interested in advanced study of physical activity from within the sociocultural, psychological, pedagogical or at-risk youth development areas. Students who have been active in the fields of education and physical education and who are interested in or are currently pursuing a teaching credential will also find the program relevant to their career goals. The curriculum is designed so that students who are currently enrolled in the credential program can apply 12 units towards the master’s program. In addition, students who previously received their teaching credential and are returning to school for the M.S. degree can design, with advisement, a program of studies from the courses listed below and other electives. Lastly, students can plan, with advisement, a program of studies within adapted physical education. Kinesiology graduate students may earn a Certificate in Physical Activity: Social Scientific Perspectives by completing three courses (nine units) in the emphasis that are marked with a number (1). This certificate is only for graduate students in the Kinesiology program.

Successful completion of the master degree requires that students demonstrate knowledge and skill in the following areas:

1. Able to apply multiple perspectives to the study of various forms of physical activity (e.g., exercise, fitness, movement, and skill) across the lifespan and in a variety of contexts
2. Gain an in-depth understanding of the body of knowledge related to one or more of the sub-disciplines in the field of kinesiology
3. Able to identify and search for information associated with problems or topics in Kinesiology.
4. Able to use appropriate methodologies and technologies to address specific problems or topics in Kinesiology
5. Exit the program with an understanding of dominant theories, models, and systems in the study of Kinesiology
6. Become critical consumers of the literature in Kinesiology and will have the skills and knowledge to make contributions to that literature

**Career Outlook**

Graduates from our program can gain immediate entry into a number of physical activity, exercise, and human movement related jobs or can seek advanced study leading to careers in: teaching, adapted physical education, coaching, athletic training, physical therapy, occupational therapy, exercise leadership, fitness program management, sports media, consulting, community-based program development, cardiac rehabilitation, biomechanical analysis of movement, ergonomics, sports-related endeavors, research in movement and skill development and learning, research in exercise physiology, research in sociocultural and psychological factors associated with sports, physical activity, and/or urban youth development, or careers in technical writing or computer technology.
Notes for Prospective Applicants for Undergraduate

Interested freshmen desiring a Bachelor of Science in Kinesiology should apply to the program as Undeclared with an Interest in Kinesiology. Upper division applicants will be considered for admission to the major. To be admitted to the major, students must have upper division status (earned at least 60 units by the preceding semester) and are recommended to complete prerequisite courses (Human Biology, Human Anatomy, Human Physiology, Elementary Statistics and Introduction to Kinesiology), all with grades of C or better. The applicants should choose their concentration (either Exercise and Human Movement or Physical Education) at the time of their application. Further instructions to apply the programs can be found at kin.sfsu.edu/impaction (http://kin.sfsu.edu/impaction).

Impaction Information

Effective fall 2014, both concentrations in the B.S. program are impacted. This means that there are more students interested in studying kinesiology than the program can accommodate. Therefore, entrance into the program is a selective and competitive process. Prospective students will need to apply to the program and students will only be accepted for the fall semester of each academic year. Transfer applicants not admitted to the major, but who meet GE and University admissions requirements, will be admitted to their alternate non-impacted majors. Continuing SF State students not admitted to the program will remain in their current majors or will be admitted to their alternate non-impacted majors.

Professors

Anderson, Kern, Kim, Lee, Mitchell, Schleihauf, Walsh, Zieff

Associate Professors

Guedes, Hamel, Hughes, Veri

Assistant Professors

Bolter, Bagley

Majors

- Bachelor of Science in Kinesiology: Concentration in Exercise and Movement Sciences (bulletin.sfsu.edu/colleges/health-social-sciences/kinesiology/bs-kinesiology-concentration-exercise-movement-sciences)
- Bachelor of Science in Kinesiology: Concentration in Physical Education (bulletin.sfsu.edu/colleges/health-social-sciences/kinesiology/bs-kinesiology-concentration-physical-education)

Minor/Certificate

- Minor/Certificate in Athletic Coaching (bulletin.sfsu.edu/colleges/health-social-sciences/kinesiology/minor-certificate-athletic-coaching)

Masters

- Master of Science in Kinesiology (bulletin.sfsu.edu/colleges/health-social-sciences/kinesiology/ms-kinesiology)

KIN 100 Aerobics: Low Impact (Unit: 1)
Prerequisite: Priority enrollment is given to Kinesiology majors.
Students in other majors may be admitted on a space available basis.
Physical activity course.

KIN 103 Aerobics: Steps (Unit: 1)
Prerequisite: Priority enrollment is given to Kinesiology majors.
Students in other majors may be admitted on a space available basis.
Physical activity course.

KIN 124 Fitness and Conditioning (Units: 2)
Prerequisite: Priority enrollment is given to Kinesiology majors.
Students in other majors may be admitted on a space available basis.
Physical activity course.

KIN 127 Personalized Fitness Programs (Unit: 1)
Prerequisite: Priority enrollment is given to Kinesiology majors.
Students in other majors may be admitted on a space available basis.
Physical activity course.

KIN 136 Hatha Yoga (Unit: 1)
Physical activity course.

KIN 139 Jogging (Unit: 1)
Prerequisite: Priority enrollment is given to Kinesiology majors. Students in other majors may be admitted on a space available basis.
Physical activity course.

KIN 142 Elementary Judo (Unit: 1)
Physical activity course.

KIN 145 Elementary Karate (Unit: 1)
Physical activity course.

KIN 148 Elementary Kung Fu (Unit: 1)
Physical activity course.

KIN 151 Tae Kwon Do (Unit: 1)
Study in the Korean martial art form of Tae Kwon Do. Focus upon learning the movement forms, the historical and cultural significance of this art form, and the modern evolution of Taekwondo.
Prerequisite: Priority enrollment is given to Kinesiology majors. Students in other majors may be admitted on a space available basis.
Physical activity course.

KIN 158 Personal Defense (Units: 2)
Prerequisite: Priority enrollment is given to Kinesiology majors. Students in other majors may be admitted on a space available basis.
Physical activity course.

KIN 161 Shaolin Chuan: Tan-Tui (Unit: 1)
Physical activity course.

KIN 164 Elementary Soccer (Unit: 1)
Prerequisite: Priority enrollment is given to Kinesiology majors. Students in other majors may be admitted on a space available basis.
Physical activity course.

KIN 171 Beginning Swimming: Non-Swimmers (Unit: 1)
Prerequisite: Priority enrollment is given to Kinesiology majors. Students in other majors may be admitted on a space available basis.
Physical activity course.

KIN 172 Elementary Swimming (Unit: 1)
Prerequisite: Priority enrollment is given to Kinesiology majors. Students in other majors may be admitted on a space available basis.
Physical activity course.
KIN 173 Aquatic Fitness (Unit: 1)
Prerequisite: Ability to execute basic strokes with comfort in deep water. Priority enrollment is given to Kinesiology majors. Students in other majors may be admitted on a space available basis.

Physical activity course.

KIN 175 Elementary Tai-Chi Chuan (Unit: 1)
Physical activity course.

KIN 178 Elementary Tennis (Unit: 1)
Prerequisite: Priority enrollment is given to Kinesiology majors. Students in other majors may be admitted on a space available basis.

Physical activity course.

KIN 189 Weight Training: Beginners Only (Unit: 1)
Prerequisite: Priority enrollment is given to Kinesiology majors. Students in other majors may be admitted on a space available basis.

Physical activity course.

KIN 190 Weight Training (Unit: 1)
Prerequisite: Priority enrollment is given to Kinesiology majors. Students in other majors may be admitted on a space available basis.

Physical activity course.

KIN 191 Individualized Weight Training (Unit: 1)
Prerequisite: Priority enrollment is given to Kinesiology majors. Students in other majors may be admitted on a space available basis.

Weight training conducted in an open gym format. Students clock in and work out, under supervision, according to an approved program of 100 minutes per week distributed in at least two sessions. Assessment of strength of various muscle groups. Attend lectures on various approaches to strength training.

KIN 236 Intermediate/Advanced Hatha Yoga (Units: 2)
Prerequisite: KIN 136 or consent of instructor.


KIN 242 Intermediate/Advanced Judo (Unit: 1)
Prerequisite: Priority enrollment is given to Kinesiology majors. Students in other majors may be admitted on a space available basis.

Physical activity course.

KIN 250 Introduction to Kinesiology (Units: 3)
Prerequisites: Completion of GE Areas A and B4 requirements [formerly GE Segment I] with grades of C or better; priority given to undeclared with interest in KIN or declared KIN major.

Introduction to and examination of kinesiology and its various subfields; exploration of career opportunities. Classwork, 2 units; laboratory, 1 unit.

KIN 251 Success in the Kinesiology Major (Units: 2)
Prerequisites: Restricted to Kinesiology major; must be taken concurrently with KIN 384GW.

A quality advising experience in a learning-centered environment that will prepare students to be active learners engaged in their educational and life goals while teaching them to become self-sufficient lifelong learners. (Plus-minus ABC/NC)

KIN 255 Health-related Fitness and Wellness (Units: 3)
Prerequisite: Completion of GE Areas A and B4 requirements [formerly GE Segment I] with grades of C or better; enrollment in activity class recommended.

Exploration of the roles of regular exercise, healthy eating habits, and stress management in the maintenance of health related fitness and wellness over the lifespan. Classwork, 2 units; laboratory, 1 unit. (Plus-minus ABC/NC)

Course Attributes:
- E1: Lifelong Learning Develop
- D1: Social Sciences
- Environmental Sustainability
- Global Perspectives
- Social Justice

KIN 257 Wellness, Fitness and the Global Perspective (Units: 3)
Introduction to human anatomy, physiology, the basic principles of exercise and wellness, and to the benefits and limitations of wellness practices around the world; blending physical movement and fitness training with academic skills including critical reading, research, and scholarly presentations. Classwork, 2 units; activity, 1 unit. (Plus-minus ABC/NC)

Course Attributes:
- E1: Lifelong Learning Develop
- Global Perspectives

KIN 272 Intermediate/Advanced Swimming (Unit: 1)
Prerequisite: Priority enrollment is given to Kinesiology majors. Students in other majors may be admitted on a space available basis.

Physical activity course.

KIN 275 Intermediate/Advanced Tai-Chi Chuan (Units: 2)
Physical activity course.

KIN 278 Intermediate/Advanced Cardiovascular Exercise (Unit: 1)
Physical activity course.

KIN 294 CPR (Unit: 1)
Prerequisite: Priority enrollment is given to Kinesiology majors. Students in other majors may be admitted on a space available basis.

General instructions and specific procedures for providing cardiopulmonary resuscitation and basic life saving techniques. Certification in CPR for adults, children, and infants.

KIN 295 First Aid and Cardiopulmonary Resuscitation (CPR) (Units: 2)
Prerequisite: Priority enrollment is given to Kinesiology majors. Students in other majors may be admitted on a space available basis.

Instruction and specific procedures for providing immediate care to a person who has been injured or is experiencing a medical emergency. Certification in CPR of adults, children, and infants and Standard First Aid are provided.

KIN 298 Practicum in Kinesiology (Unit: 1)
Prerequisites: Consent of instructor and associate chair.

Individually directed experiences as leadership assistants in movement activities.

KIN 299 Practicum in Kinesiology (Unit: 1)
Prerequisites: Consent of instructor and associate chair.

Individually directed experiences as leadership assistants in movement activities.
KIN 305 Instructional Analysis: Track, Field, and Gymnastics Floor Activities (Units: 2)
Prerequisites: KIN 340 or consent of instructor. Sufficient experience to demonstrate basic proficiency in performing the fundamental skills of the activities in this course; otherwise, it is recommended that the student take the corresponding activity course(s) prior to enrolling in this class.

Analysis of fundamental skills and strategies in track and field and in gymnastics floor activities, for teaching and coaching beginning and intermediate learners. Progressions, feedback, structuring effective learning environments in various teaching situations, individual differences.

KIN 306 Instructional Analysis: Racquet Sports (Units: 2)
Prerequisites: KIN 340 or consent of instructor. Sufficient experience to demonstrate basic proficiency in performing the fundamental skills of the activities in this course; otherwise, it is recommended that the student take the corresponding activity course(s) prior to enrolling in this class.

Analysis of fundamental skills and strategies in badminton and tennis for teaching and coaching beginning and intermediate learners. Skill progressions, feedback, structuring effective learning environments, individual differences. Classwork, 1 unit; laboratory, 1 unit.

KIN 307 Instructional Analysis: Basketball and Volleyball (Units: 2)
Prerequisites: KIN 340 or consent of instructor. Sufficient experience to demonstrate basic proficiency in performing the fundamental skills of the activities in this course; otherwise, it is recommended that the student take the corresponding activity course(s) prior to enrolling in this class.

Analysis of fundamental skills and strategies in basketball and volleyball for teaching and coaching beginning and intermediate learners. Skill progressions, feedback, structuring effective learning environments, individual differences. Classwork, 1 unit; laboratory, 1 unit.

KIN 308 Instructional Analysis: Fitness Activities (Units: 2)
Prerequisites: KIN 255 (may be taken concurrently); successful completion of fitness assessment; or consent of instructor.

Analysis of fundamental skills and strategies in teaching a variety of fitness activities. Classwork, 1 unit; laboratory, 1 unit.

KIN 309 Instructional Analysis: Soccer and Softball (Units: 2)
Prerequisites: KIN 340 or consent of instructor. Sufficient experience to demonstrate basic proficiency in performing the fundamental skills of the activities in this course; otherwise, it is recommended that the student take the corresponding activity course(s) prior to enrolling in this class.

Analysis of fundamental skills and strategies in soccer and softball for teaching and coaching beginning and intermediate learners. Skill progressions, feedback, structuring effective learning environments, addressing individual differences. Classwork, 1 unit; laboratory, 1 unit.

KIN 322 Sport in America (Units: 3)
Prerequisites: Upper division standing or consent of instructor; completion of GE Area A4 requirement and two additional courses in GE Areas A and B4 (formerly GE Segment I).

Interpretation of contemporary issues in sport from the perspective of American society. Professional sport, women in sport, and youth sport using a multimedia approach that includes film, print media, literature and historical texts.

KIN 325 Computer Applications in Kinesiology (Units: 3)
Prerequisites: Restricted to students with upper division standing or consent of instructor; KIN 250 with a grade of C or better; and GE completion of Area A and GE Area B4. Enrollment priority to kinesiology majors.

Information management for kinesiology applications using computerized word processing, spreadsheets, graphics, outlining, and databases. Classwork, 2 units; laboratory, 1 unit.

KIN 331 Peak Performance (Units: 3)
Prerequisites: Upper division standing or consent of instructor; completion of GE Area A4 requirement and two additional courses in GE Areas A and B4.

Examination and understanding of the stress process, assessments of stress and the application of psychological intervention strategies to help bring about optimum performance in human movement as well as other endeavors. Practical application for maximizing human potential.

Course Attributes:
- E1: Lifelong Learning Develop
- UD-D: Social Sciences
- Global Perspectives
- Social Justice

KIN 340 Orientation to Teaching Physical Education (Units: 3)
Prerequisites: Upper division standing or consent of instructor; KIN 250 with a grade of C or better; and GE completion of Area A and GE Area B4.

Professionalism in school-based physical education. Contemporary view of physical education, guided observation in K-12 schools, self-assessment, and plan for professional development as a prospective teacher. Physical education as a career choice. (Plus-minus letter grade only)

KIN 355 Science, Sport, and Fitness (Units: 3)
Prerequisites: Upper division standing or consent of instructor; completion of GE Area A4 requirement and two additional courses in GE Areas A and B4 (formerly Segment I).

Physiological and mechanical principles of sport and fitness. Evaluation of myths and truths about sport science, nutrition, injury prevention, physiology of exercise, sport, and individualizing training programs.

Course Attributes:
- E1: Lifelong Learning Develop
- UD-B: Physical Life Science

KIN 384GW Research Methods in Kinesiology - GWAR (Units: 3)
Prerequisites: Restricted to upper division Kinesiology major; ENG 214 or equivalent with a grade of C- or better; KIN 250 and MATH 124 or equivalent all with grades of C or better; must be taken concurrently with KIN 251.

Understanding and applying research methods and statistics relevant for studying kinesiology. Topics include sampling, validity, reliability, experimental design, qualitative approaches, and statistical analyses. Development of students’ critical thinking and writing abilities specific to the discipline of kinesiology. (Plus-minus ABC/NC)

Course Attributes:
- Graduation Writing Assessment
KIN 401 Elementary School Physical Education, K-5 (Units: 3)
Prerequisites: Upper division standing or consent of instructor; completion of GE Area A4 requirement and two additional courses in GE Areas A and B4 [formerly Segment I]. Physical education majors must take concurrently with KIN 402.

Movement, fitness, and skill programs for children. Objectives, organization, and conduct of successful physical education programs. Classwork, 2 units; laboratory, 1 unit.

KIN 402 Practicum in Physical Education, N-5 (Unit: 1)
Prerequisites: Upper division standing or consent of instructor; completion of GE Area A4 requirement and two additional courses in GE Areas A and B4 [formerly Segment I]. Physical education majors must take concurrently with KIN 401.

Directed experiences as teaching assistants of physical education in preschool and elementary school programs.

KIN 437 Physical Dimensions of Aging (Units: 3)
Prerequisites: Restricted to upper division Kinesiology majors; KIN 250, BIOL 220 or BIOL 328, and BIOL 212, all with grades of C or better; and GE completion of Area A and GE Area B4.

Study of the physical aspects of aging from a developmental perspective in the adult years; the role of exercise/activity in the maintenance of functionality; hypotheses of physical decline, implications of age-related physical changes for daily living and activity patterns. (KIN 737/KIN 437 is a paired course offering. Students who complete the course at one level may not repeat the course at the other level.)

KIN 457 Culture, Gender, and Movement (Units: 3)
Prerequisites: Restricted to upper division Kinesiology majors; KIN 250 with a grade of C or better; and GE completion of Area A and GE Area B4.

Transmission of culture, values, and gender roles through a variety of movement forms. Interpretation of the cultural dimension of movement. Course Attributes:

- Global Perspectives

KIN 480 Anatomical Kinesiology (Units: 4)
Prerequisites: Restricted to upper division Kinesiology majors; KIN 250, BIOL 220 or BIOL 328, all with grades of C or better; and GE completion of Area A and GE Area B4.

Structure and function of the musculoskeletal system in movement; relation to external forces; principles of aggregate muscle function. Application to exercise, skill, activities of daily living. Classwork, 3 units; laboratory, 1 unit. (Plus-minus letter grade only)

KIN 482 Exercise Physiology (Units: 3)
Prerequisites: Restricted to upper division Kinesiology majors; completion of KIN 250, BIOL 212 and BIOL 213, or equivalent, all with grades of C or better. Must be taken concurrently with KIN 483.

Examination of the acute physiological responses to exercise and the adaptations that occur with systematic exercise training.

KIN 483 Exercise Physiology Laboratory (Unit: 1)
Prerequisites: Upper division standing or consent of instructor; completion of KIN 250, BIOL 212 and BIOL 213, or equivalent, all with grades of C or better; must be taken concurrently with KIN 482.

Effects of various types of exercise on the body’s physiological systems. Laboratory. (Plus-minus letter grade only)

KIN 485 Biomechanics (Units: 3)
Prerequisites: Restricted to upper division Kinesiology majors; completion of GWAR requirements; completion of GE Area A and B4 requirements; PHYS 101/PHYS 102 or PHYS 111/PHYS 112, BIOL 220 or BIOL 328, KIN 250, KIN 480, all with grades of C or better.

Mechanical principles applied to analyzing human movement. Interaction of mover and physical environment, efficiency in tasks of daily living, work settings, sport, and exercise. (Plus-minus letter grade only)

KIN 486 Motor Learning (Units: 3)
Prerequisites: Restricted to upper division Kinesiology majors; KIN 250 with a grade of C or better; and GE completion of Area A and GE Area B4. Concurrent enrollment in an activity course is recommended.

Acquisition and development of motor skill with application to teaching and therapeutic intervention. Coordination, perception, task analysis, learning, and the facilitation of skill acquisition.

KIN 487 Motor Development (Units: 3)
Prerequisites: Restricted to upper division Kinesiology majors; KIN 250 with a grade of C or better; and GE completion of Area A and GE Area B4.

Developmental perspective on the physical, psychological, and social factors which contribute to the acquisition of motor control and movement performance from the prenatal stage through old age.

KIN 488 Assessment in Physical Education (Units: 3)
Prerequisite: Completion of quantitative reasoning requirement with a grade of C or better or consent of instructor.

Testing and measuring performance; history of test construction and use; selected statistical methods; test administration and evaluation. Classwork, 2 units; laboratory, 1 unit.

KIN 489 History and Philosophy of Sport and Physical Activity (Units: 3)
Prerequisites: Restricted to upper division Kinesiology majors; KIN 250 with a grade of C or better; and GE completion of Area A and GE Area B4.

History and philosophy of physical activity from ancient times to the early 20th century. Evolution of attitudes towards exercise and physical fitness.

KIN 490 Introduction to Sport and Fitness Program Management (Units: 3)
Prerequisites: Restricted to upper division Kinesiology majors; KIN 250 with a grade of C or better; and GE completion of Area A and GE Area B4.

Introduction to the academic and professional field of sport and fitness administration and management by grounding students in the history, socio-cultural context, and structure of community and private fitness clubs and university, elite amateur, and professional sports organizations.

KIN 502 Sport and Social Issues (Units: 3)
Prerequisites: Upper division standing or consent of instructor; completion of GE Area A4 requirement and two additional courses in GE Areas A and B4 [formerly Segment I].

Influences of media, politics, economy, social attitudes on sport institutions from childhood practices to professional athletics. Race, gender, and social class perspectives.
KIN 504 Sport and Exercise Psychology (Units: 3)
Prerequisites: Restricted to upper division Kinesiology majors; KIN 250 with a grade of C or better; and GE completion of Area A and GE Area B4.

Psychological factors influencing performance of physical activity in sport, exercise, educational, and rehabilitative settings, including social implications, theoretical perspectives, and application of research findings in the areas of sport and exercise psychology. (Plus-minus letter grade only)

KIN 510 Sport, Movement, and Screen Culture (Units: 3)
Prerequisites: Upper division standing or consent of instructor; completion of GE Area A4 requirement and two additional courses in GE Areas A and B4 [formerly GE Segment I].

Examination of how the cultural, political, psychological, and historical dimensions of sport and other forms of movement are portrayed in feature films and documentaries. Presentations of identity, power, performance, social justice, and the body are also analyzed.

KIN 536 Movement for Individuals with Mild Disabilities (Units: 4)
Prerequisites: Upper division standing or consent of instructor; KIN 250 with a grade of C or better and six units of upper division Kinesiology courses; and GE completion of Area A and GE Area B4.

Mild and moderate disabling conditions throughout the lifespan as they relate to the development and efficiency of movement. Implications for design and conduct of movement programs, inclusion and evaluation of individual needs. Classwork, 3 units; laboratory, 1 unit.

KIN 537 Movement for Individuals with Severe Disabilities (Units: 3)
Prerequisites: Upper division standing or consent of instructor; KIN 250 with a grade of C or better and six units of upper division Kinesiology courses; and GE completion of Area A and GE Area B4.

Severe and profound disabling conditions throughout the lifespan as they relate to the development and efficiency of movement. Implications for design and conduct of movement programs, inclusion, and evaluation of individual needs.

KIN 538 Therapeutic Exercise (Units: 3)
Prerequisites: Restricted to upper division standing; KIN 250 with a grade of C or better, KIN 482/KIN 483 or KIN 355, KIN 480; and GE completion of Area A and GE Area B4.

Fitness programming, conditioning, and stress reduction for individuals who are disabled. Factors that influence exercise and the disabled include positioning, use of assistive devices, specifically designed equipment, wheelchairs, and utilization of personal aids.

KIN 539 Motor Assessment of Individuals with Disabilities (Units: 3)
Prerequisites: Restricted to upper division standing; KIN 250 with a grade of C or better, KIN 536, KIN 537 recommended; and GE completion of Area A and GE Area B4.

Evaluation and diagnosis of motor ability problems for individuals with disabilities. Evaluation methods and the development of individual education plans.

KIN 555 Exercise Testing and Prescription (Units: 3)
Prerequisites: Upper division standing; KIN 189 or equivalent, KIN 480, KIN 482, KIN 483; or consent of instructor.

Principles and practices of prescribing exercise to healthy individuals, and individuals with conditions such as cardiac problems, asthma, diabetes, pregnancy, and physical disabilities. Assists in preparation for ACSM certification. Classwork, 2 units; laboratory, 1 unit. (Plus-minus letter grade only.)

KIN 570 Directed Coaching Experience (Unit: 1)
Prerequisites: Upper division standing or consent of instructor; completion of the GE Area A4 requirement and two additional courses in GE Areas A and B4 [formerly GE Segment I]; completion of six units in the coaching sequence.

Assistant coaching experience, recreation leagues, youth, interscholastic or intercollegiate athletics. Site must be approved in advance. (CR/NC grading only)

KIN 580 Instructional Strategies for Middle and High School Physical Education, Grades 6-12 (Units: 3)
Prerequisites: Restricted to upper division standing; KIN 250 with a grade of C or better, KIN 486 or KIN 487, and ENG 214; and GE completion of Area A and GE Area B4. Must be taken concurrently with KIN 581.

Strategies and teaching styles to establish the environment for learning motor skills. Long- and short-term planning, class management and communication techniques, evaluation procedures, and basic legal considerations.

KIN 581 Practicum in Middle and High School Physical Education (Unit: 1)
Prerequisites: Restricted to upper division standing; KIN 250 with a grade of C or better; and GE completion of Area A and GE Area B4. Enrollment in teaching credential program. Must be taken concurrently with KIN 580.

Directed experiences in teaching and coaching youth and adolescents in activities common to middle and high school physical education programs. (Plus-minus letter grade only)

KIN 620 Advanced Practicum in Kinesiology (Units: 2)
Prerequisites: Restricted to upper division standing or consent of instructor and associate chair; KIN 250 with a grade of C or better; and GE completion of Area A and GE Area B4.

Individually directed experiences as student trainers, varsity sport managers, or special leadership assistants in kinesiology. [CSL may be available]

KIN 621 Advanced Practicum in Kinesiology (Units: 2)
Prerequisites: Restricted to upper division standing or consent of instructor and associate chair; KIN 250 with a grade of C or better; and GE completion of Area A and GE Area B4.

Individually directed experiences as student trainers, varsity sport managers, or special leadership assistants in kinesiology.

KIN 630 Internship in Adapted Physical Education (Units: 3)
Prerequisites: Upper division standing or consent of instructor; completion of GWAR requirement; KIN 250 with a grade of C or better; and two additional courses of the GE Segment I requirements; KIN 536, KIN 537, KIN 538. Recommended: KIN 538 (may be taken concurrently).

Directed experiences with exceptional individuals participating in PE programs in schools or other agencies; supervised development of individual plans. Includes weekly seminars.
KIN 636 Neuromotor Control Processes (Units: 3)
Prerequisites: Upper division standing or consent of instructor; completion of GE Area A and B4 requirements; completion of GWAR requirement; KIN 486 with a grade of C or better.

Neuromuscular processes underlying coordination and control of movement in the context of skill. (Plus-minus letter grade only)

KIN 680 Quantitative Analysis of Human Movement (Units: 3)
Prerequisites: Upper division standing or consent of instructor; KIN 485 with a grade of C or better.

Quantitative analytic tools and techniques applied to movement identification and measurement of bio-mechanical correlates as means of understanding coordination and movement strategies in the context of development, learning, performance, and rehabilitation. (Plus-minus letter grade only)

KIN 681 Muscle Mechanics (Units: 3)
Prerequisites for KIN 781: Graduate standing; KIN 480 and KIN 482 or equivalent; or consent of instructor.
Prerequisites for KIN 681: Restricted to upper division standing; KIN 480, KIN 482/KIN 483, and KIN 485.

Basic and applied physiological properties of skeletal muscles, tendons and ligaments, in the context of the physiological adaptations from disuse, injury, and training. (Plus-minus letter grade only)

(KIN 781/KIN 681 is a paired course offering. Students who complete the course at one level may not repeat the course at the other level.)

KIN 683 Applied Exercise Physiology (Units: 3)
Prerequisites: Upper division standing or consent of instructor; BIOL 220 or BIOL 328, BIOL 212, BIOL 213, KIN 384GW, KIN 482, and KIN 483 with grades of C or better; and GE completion of Area A and GE Area B4.

Application of basic exercise physiology principles to the enhancement of energy capacity, work tolerance under environmental stress, metabolic basis for weight and body composition control, and aging/health-related aspects of exercise. Classwork, 2 units; laboratory, 1 unit.

KIN 685 Projects in the Teaching of Kinesiology (Units: 1-3)
Prerequisites: Upper division standing in kinesiology; approval of associate chair and supervising instructor; and a grade of B or better in a course in which student will be an instructional aide.

Teaching experiences in kinesiology through assigned instructional projects in a classroom or laboratory, and under the guidance of a faculty member. Training in pedagogical principles, including supervised classroom teaching activities. Units may not be applied towards fulfilling major requirements. (Students may earn a maximum of 4 units toward the baccalaureate degree for any course(s) numbered 685 regardless of discipline.)

KIN 690 Internship in Fitness/Wellness (Units: 3)
Prerequisites: Upper division standing or consent of instructor; KIN 384GW, KIN 482, KIN 483, and KIN 490; and GE completion of Area A and GE Area B4. Prior completion of KIN 555 is strongly recommended. Attendance at MANDATORY meeting at the end of the semester PRIOR to enrollment is required. Dates and times will be posted in the gymnasium.

Work as a trainee with professionals in the field of fitness/wellness, and extend learning experiences beyond those acquired on campus.

KIN 696 Kinesiology Community-Based Internship (Units: 3)
Prerequisites: Upper division standing or consent of instructor; KIN 384GW, KIN 482, KIN 483, KIN 485, KIN 486, and KIN 504. Enrollment preference given to graduating seniors.

Kinesiology community-based internship with youth in underserved communities coupled with a theory-practice project. (Plus-minus letter grade only) [CSL may be available]

KIN 697 Integrative Research Seminar (Units: 2)
Prerequisites: Upper division standing; or consent of instructor; ENG 214, KIN 384GW, KIN 482, KIN 485, KIN 486; and GE completion of Area A and GE Area B4. Must be taken concurrently with KIN 698. Enrollment preference given to graduating seniors.

Critical analysis and research design to explore a topic in exercise and movement science from multidisciplinary perspective. (Plus-minus letter grade only)

KIN 698 Senior Research Project (Unit: 1)
Prerequisites: Upper division standing or consent of instructor; KIN 384GW, KIN 482, KIN 483, KIN 485, and KIN 486; and GE completion of Area A and GE Area B4. Must be taken concurrently with KIN 697. Enrollment preference given to graduating seniors.

Conduct an appropriate research study in the student's area of concentration. (Plus-minus letter grade only)

KIN 699 Independent Study (Units: 1-3)
Prerequisites: Upper division standing; overall GPA of 3.0 or above; consent of associate chair and supervising instructor.

Intensive study of a particular problem under the direction of an instructor of the department. May be repeated for a total of 6 units. [CSL may be available]

KIN 710 Research in Kinesiology (Units: 3)
Prerequisites: Graduate standing; undergraduate degree in kinesiology; a computer and a statistics course; or consent of instructor.

Descriptive, quasi-experimental, experimental, and qualitative research in kinesiology. (Plus-minus letter grade only)

KIN 715 Research Designs and Analysis (Units: 3)
Prerequisite: KIN 710 or consent of instructor.

Designs and statistics in descriptive, experimental, quasi-experimental, and qualitative research. (Plus-minus letter grade only)

KIN 730 Advanced Biomechanics (Units: 3)
Prerequisites: Graduate standing; undergraduate course in biomechanics or kinesiology; or consent of instructor.

Techniques for qualitative and quantitative analysis of movement as a mean of understanding movement processes.

KIN 733 Motor Learning (Units: 3)
Prerequisites: Graduate standing; KIN 486 or equivalent, or consent of instructor.

Factors influencing the development and acquisition of motor skill from a multidisciplinary perspective. Current theory and research in motor skill is discussed with implications for practice. (Plus-minus letter grade only)
KIN 734 Physical Activity Programs for Underserved Youth (Units: 3)
Prerequisite: Graduate standing or consent of instructor.
A survey of the theory and practice of physical activity-based programs for underserved youth that emphasize life skills and active learning. Understanding the theoretical dynamics of physical activity on youth development and its potential for practical application. (Plus-minus letter grade only)

KIN 736 Advanced Neuromotor Control (Units: 3)
Prerequisite: Graduate standing or consent of instructor.
Advanced neuromotor control will cover the current theories and underlying neurophysiology of motor control and learning. (Plus-minus letter grade only)

KIN 737 Physical Dimensions of Aging (Units: 3)
Prerequisites: Restricted to upper division Kinesiology majors; KIN 250, BIOL 220 or BIOL 328, and BIOL 212, all with grades of C or better; and GE completion of Area A and GE Area B4.
Study of the physical aspects of aging from a developmental perspective in the adult years; the role of exercise/activity in the maintenance of functionality; hypotheses of physical decline, implications of age-related physical changes for daily living and activity patterns. (KIN 737/KIN 437 is a paired course offering. Students who complete the course at one level may not repeat the course at the other level.)

KIN 740 Advanced Exercise Metabolism (Units: 3)
Prerequisites: Graduate standing; KIN 482 or equivalent; or consent of instructor.
Historical and contemporary evaluation of energy metabolism, nutrition, and neuromuscular functions.

KIN 742 Exercise and Cardiovascular Dynamics (Units: 3)
Prerequisites: Graduate standing; KIN 482 or equivalent; or consent of instructor.
Understanding the regulation of the cardiovascular system as it relates to regulatory mechanisms for acute and chronic exercise. (Plus-minus letter grade only)

KIN 746 Clinical Exercise Physiology (Units: 3)
Prerequisites: Graduate Standing; KIN 482 or equivalent; or consent of instructor.
Examination of acute and chronic responses to exercise in patients with various cardiac, pulmonary, metabolic, and musculoskeletal diseases. Emphasis is placed on physical activity epidemiology, the pathophysiology of the disease process, assessment of disease severity, and current literature examining the effectiveness of physical activity/exercise training as a treatment strategy. (Plus-minus letter grade only)

KIN 750 Curriculum and Instruction I: Physical Education (Units: 3)
Prerequisite: Admission to credential program or consent of instructor.
Principles and practices for teaching physical education, including planning of content and instruction with consideration of student learning and state standards. (Plus-minus letter grade only)

Course Attributes:
- Teacher Credential Program Crs

KIN 751 Curriculum and Instruction II: Physical Education (Units: 3)
Prerequisites: KIN 750; must be taken concurrently with S ED 660 or S ED 751.
Principles and practices for teaching physical education to all learners, with additional emphases on assessment, reflective practice, and technology. (Plus-minus letter grade only)

Course Attributes:
- Teacher Credential Program Crs

KIN 755 Exercise Electrocardiography, Testing, and Prescription (Units: 3)
Prerequisites: Graduate standing; KIN 482 or equivalent; or consent of instructor.
In-depth theoretical background for exercise, electrocardiography, testing, and prescription for individuals and groups in clinical, corporate, community and occupational settings. (Plus-minus letter grade only)

KIN 763 Motivation and Performance (Units: 3)
Prerequisite: Graduate standing; KIN 504 or equivalent; or consent of instructor.
Psychological perspectives of human performance and research findings in the areas of sport and exercise psychology; awareness of literature focused on the psychological dimension. (Not open to students who have completed KIN 663.) (Plus-minus letter grade only)

KIN 766 Sociocultural Bases of Physical Activity (Units: 3)
Prerequisite: Graduate standing or consent of instructor.
Sociocultural factors underlying participation in physical activity, sport, and exercise. Implications for the practitioner.

KIN 781 Muscle Mechanics (Units: 3)
Prerequisites for KIN 681: Restricted to upper division standing; KIN 480, KIN 482/KIN 483, and KIN 485.
Basic and applied physiological properties of skeletal muscles, tendons and ligaments, in the context of the physiological adaptations from disuse, injury, and training. (Plus-minus letter grade only)
(KIN 781/KIN 681 is a paired course offering. Students who complete the course at one level may not repeat the course at the other level.)

KIN 795 Seminar in Kinesiology (Units: 3)
Prerequisites: Completion of 15 advancement to candidacy (ATC) units; and completion of KIN 710 and KIN 715.
Interdisciplinary seminar on relevant kinesiology issues, areas of interest, problems, and future directions. Involves extensive analysis of recent and significant research. (Plus-minus letter grade only)

KIN 895 Master's Project in Kinesiology (Units: 3)
Prerequisite: Completion of core and concentration requirements; consent of instructor and approval of Advancement to Candidacy (ATC) and Culminating Experience (CE) forms by Graduate Studies.
Development of a research question on a topic approved by faculty with literature review, methodology and statistical analysis. Includes proposal and oral presentation. Advancement to Candidacy and Proposal for Culminating Experience Requirement must be approved by Graduate Studies before registration. (CR/NC grading only)
KIN 896 Directed Reading in Kinesiology (Units: 3)
Prerequisites: Completion of 21 units on the ATC; consent of adviser and instructor.

Integrating information in movement and exercise science or a significant issue. May be repeated once for a total of 6 units.

KIN 897 Independent Research in Kinesiology (Units: 3)
Prerequisites: KIN 710, KIN 715 or equivalent; twelve graduate units completed in M.A. program; and consent of graduate adviser.

Independent, original research investigation supervised by a graduate adviser. For students who selected the thesis culminating experience. (CR/NC grading only)

KIN 898 Master's Thesis (Units: 3)
Prerequisites: Classified graduate status for the Master of Arts; KIN 897; and consent of graduate major adviser and instructor; and approval of Advancement to Candidacy (ATC) and Culminating Experience (CE) forms by Graduate Studies. Advancement to Candidacy and Proposal for Culminating Experience Requirement forms must be approved by the Graduate Division before registration. (CR/NC grading only)

KIN 899 Independent Study (Units: 1-3)
Prerequisites: Graduate standing with demonstrated ability to do independent work and consent of adviser and supervising instructor.

Independent study or research is planned, developed, and completed under the direction of a faculty member. May be repeated for a total of six units. (CR/NC grading only)