



PHYSICAL EDUCATION

BACHELOR OF SCIENCE
SUBJECT MATTER PROGRAM
MINOR
MASTER OF SCIENCE

PROGRAM DESCRIPTION

Physical Education is an academic area of study concerned with the art and science of human movement. The Department offers a BS degree with four options of study (Teaching, Athletic Training/Pre-Physical Therapy, Exercise Science and Dance) and an MS with two options of study (Exercise Physiology and Sport Performance). An Adapted Physical Education Specialist Credential and three minor programs (Coaching, Secondary Teaching, and Elementary Teaching) are available.

The undergraduate **Teaching Option** prepares students for teaching careers in elementary school through 12th grade. The **Athletic Training Option/Pre-Physical Therapy** prepares students for careers in physical, corrective, or occupational therapy, sports medicine, athletic training and other paramedical areas. Admissions to professional therapy schools is competitive, therefore, advisor consultation for program planning is critical. Careful selection of courses enables students to attain certifications as athletic trainers. The **Exercise Science Option** prepares students for graduate work in the areas of exercise and sport science, as well as focusing on careers in personal training, cardiac rehabilitation, wellness, fitness consultants in business/industry and health clubs, and other paramedical and health related fields. The **Dance Option** prepares students to pursue careers in television, film, or theater, teach in private studios, or to elect specialized training as a dance therapist or dance educator. The Adapted Physical Education Specialist Credential is for students preparing to work with children with disabilities. A number of certifications are available through selected coursework.

FACULTY

Pamela Milchrist, *Department Chair*
Fred Baldini; Bruce Drummond; William Edwards; Louis Elfenbaum; Irvin Faria; Doris Flores; Fred Furukawa; Linda Goodrich; William Kutzer; John Maxwell; Joan Neide; Ronald Peek; Robin Reese; Rick Robertson; Karen Scarborough; Dale Scholl; John Skube; Maureen Smith; Jayne Willett

Department Office, SLN-3002, 278-6441

FEATURES

The Physical Education facility includes 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 a new dance, weight training and gymnastics room. Outside facilities include a diving and racing pool, racquetball and tennis courts, jogging trails, sports fields and putting green and driving range.

Physical Education majors at CSUS have opportunities for unique intern experiences. For instance, at the undergraduate level, **Exercise Science** students gain useful experience through their work in the UCD Medical Center with its cardiac rehabilitation program. Students interested in **Therapy** build a valuable background of experience in community hospitals and rehabilitation centers. Students concentrating in the **Athletic Training** area serve their internship under certified athletic trainers in the community colleges and on the campus. CSUS is the only institution in Northern California that offers an accredited undergraduate **Athletic Training Option**. At the graduate level, students engage in a variety of research projects, both on and off campus.

Students interested in majoring or minoring in Physical Education are encouraged to go to the Physical Education Department office for an assignment to a faculty advisor.

CAREER POSSIBILITIES

Teacher • Athletic Trainer • Corrective Therapist • Exercise Test Technologist • Recreation Specialist • Community Center Leader • Personal Trainer • Rehabilitation • Sportscaster • Coach • Resort Sports Coordinator • Dance Choreographer • Wellness Coordinator • Cardiac Rehabilitator • Fitness Consultant

MAJOR REQUIREMENTS • BS

Total units required for BS: 132

Total units required for Major: 56-81

Courses in parentheses are prerequisites.

Bachelor of Science Teaching Option (68 units)

A. Required Common Core (28 units)

- (3) BIO 10 Basic Biological Concepts **OR**
BIO 20 Biology: A Human Perspective
- (4) BIO 22 Introductory Human Anatomy (BIO 10 or 20)
- (4) BIO 31 Introductory Human Physiology (BIO 10 or 20, CHEM 6A)
- (5) CHEM 6A Introduction to General Chemistry
- (3) PE 151 Kinesiology (BIO 10 or 20; and BIO 22 or equivalent)
- (3) PE 151A Biomechanics (PE 151)
- (3) PE 152 Physiology of Exercise (BIO 31 or 131)
- (3) PE 158 Motor Learning (BIO 22)

B. Required Upper Division Courses (17 units)

- (2) PE 130 Physical Education for Children (PE 138, 149)
- (3) PE 134 Historical & Philosophical Foundations of Physical Education
- (3) PE 135 Evaluation in Physical Education
- (3) PE 137 Sociology of Sport
- (3) PE 138 Strategies in Physical Education
- (3) PE 160 Sport & Exercise Psychology

C. Physical Education Electives (3 units)

- (3) Select a total of three units from the following:
 - PE 110 Women & Sport
 - PE 121 Peak Performance Through Psychological Skills
 - PE 139 Leadership & Communication
 - PE 156 Care of Athletic Injuries
 - PE 161 Organization & Administration of PE & Intramurals
 - PE 170 An Interdisciplinary Approach to PE
 - PE 171 Adapted PE: Basic Skill/Fitness Activities & Assessment
 - PE 173 Creative Dance for Children
 - PE 176 Perceptual Motor Development
 - PE 176A Lifespan Motor Development
 - PE 194A Assigned Field Experience in Physical Education **OR**
 - PE 195A Directed Field Experience in Physical Education

D. Skill Analysis (20 units)

- (1) PE 73 Slow Pitch Softball
- (2) PE 140 Analysis of Tumbling & Gymnastics
- (2) PE 141 Analysis of Swimming
- (2) PE 142 Analysis of Folk, Square & Ballroom Dance
- (2) PE 143 Analysis of Track & Field
- (2) PE 144 Analysis of Weight Training
- (1) PE 145 Analysis of Soccer
- (1) PE 146 Analysis of Volleyball
- (1) PE 147 Analysis of Basketball
- (1) PE 148 Analysis of Nontraditional Games & Outdoor Activities
- (1) PE 149 Analysis of Health-Related Fitness

- (1) Select one of the following:
 - PE 67 Beginning Tennis
 - PE 16E Intermediate Tennis
 - PE 106B Advanced Tennis
- (1) Select one of the following:
 - PE 63 Beginning Badminton
 - PE 16C Intermediate Badminton
- (1) Select one of the following:
 - PE 64 Beginning Golf
 - PE 16D Intermediate Golf
 - PE 106A Advanced Golf
- (1) Select one of the following:
 - PE 31 Beginning Judo
 - PE 32 Uechi-Ryu Karate
 - PE 33 Women's Self Defense
 - PE 34 Beginning Tae Kwon Do
 - PE 35 Self Defense & Conditioning

Note: Students seeking a teaching credential also must complete the Professional Education Program in the School of Education in addition to other requirement. Consult a Physical Education Department Credential Advisor for details. Information about the Professional Education Program may be obtained from the Education Student Center (Education Building, Room 216, 278-6147).

Dance Option (56-60 units)

A. Required Core (16 units)

- (3) BIO 10 Basic Biological Concepts **OR**
BIO 20 Biology: A Human Perspective
- (4) BIO 22 Introductory Human Anatomy (BIO 10 or 20)
- (3) PE 150 Exercise & Sport Physiology
- (3) PE 151 Kinesiology
- (3) PE 158 Motor Learning (BIO 22)

B. Required Lower Division Courses (6 units)

- (2) PE 14D Intermediate Ballet
- (2) PE 14E Intermediate Jazz
- (2) PE 44 Beginning Tap

C. Required Upper Division Courses (25-29 units)

- (2) PE 104A Advanced Modern Dance
- (2) PE 104B Choreographic Forms & Styles
- (2) PE 104D Advanced Jazz
- (2) PE 114A Principles of Choreography
- (3) PE 124 Appreciation & History of Dance **OR**
PE 125 Dance Cultures in America
- (3) PE 126 African-Caribbean Dance
- (4-8) PE 127A* Dance Performance & Production
- (3) PE 128 Dance Theory
- (2) PE 173 Creative Dance for Children
- (2) PE 195A Directed Field Experience in Physical Education **OR**
PE 195E Directed Field Experience in Dance

*PE 127A may be taken twice for credit.

D. Electives (9 units)

- (9) Select three of the following:
 - DRAM 9 Appreciation of Acting
 - DRAM 20 Lighting **OR**
 - DRAM 143 Makeup
 - MUSC 8 Basic Music
 - MUSC 118 Topics in Music Appreciation

Athletic Training/Pre-Physical Therapy Option (70-72 units)

A. Required Common Core (28 units)

- (3) BIO 10 Basic Biological Concepts **OR**
BIO 20 Biology: A Human Perspective
- (4) BIO 22* Introductory Human Anatomy (BIO 10 or 20)
- (4) BIO 131* Systemic Physiology (BIO 10, 20 or 22 and one year of college chemistry)
- (5) CHEM 1A General Chemistry **OR**
CHEM 6A Introduction to General Chemistry
- (3) PE 151* Kinesiology (BIO 10 or 20; and BIO 22 or equivalent)
- (3) PE 151A Biomechanics (PE 151)
- (3) PE 152* Physiology of Exercise (BIO 31 or 131)
- (3) PE 158 Motor Learning (BIO 22)

B. Required Lower Division Courses (12 units)

- (5) CHEM 6B Introduction to Organic & Biological Chemistry (CHEM 1A or 6A) **OR**
CHEM 1B General Chemistry (CHEM 1A) or See Advisor
- (3) HUES 10* Nutrition & Wellness
- (4) PHYS 5A General Physics: Mechanics, Heat, Sound

C. Required Upper Division Courses (11 Units)

- (3) PE 154A* Principles & Techniques in a Clinical Setting
- (2) PE 155* Neuromuscular Evaluation (PE 156, 154A, BIO 22)
- (3) PE 156* Care of Athletic Injuries
- (3) PE 157* Therapeutic Exercise (BIO 22, PE 151, 155)

D. Required Electives (19-21 Units)

- (3) PE 153+ Cardiovascular Testing & Exercise Prescription (PE 152) **OR**
PE 160* Sport & Exercise Psychology
- (3) PE 194C Assigned Field Experiences in Pre-Physical Therapy **OR**
PE 195D* Practicum in Athletic Training
- (4-6) Select from the following:
 - (3) PE 139 Leadership & Communication
 - (3) PE 152A Fundamentals of Exercise Programs (PE 152)
 - (3) PE 153 Cardiovascular Testing & Exercise Prescription (PE 152)
 - (2) PE 156A* Advanced First Aid
 - (3) PE 176 Perceptual Motor Development **OR**
PE 176A Lifespan Motor Development (Anatomy and Physiology)
 - (2) HS 136* School Health Education
- (9) Select from the following:
 - (3) PE 152A Fundamentals of Exercise Programs (PE 152)
 - (1-2) PE 194C Assigned Field Experiences in Pre-Physical Therapy
 - (9) PE 195D* Practicum in Athletic Training
 - (4) PHYS 5B General Physics: Light, Electricity & Magnetism, Modern Physics (PHYS 5A)
 - (4) BIO 122 Adv. Human Anatomy (BIO 22)
 - (3) BIO 123 Neuroanatomy (BIO 22)
 - (4) BIO 139 General Microbiology (BIO 10, 11, 12, and CHEM 20 or 6B)
 - (3) PSYC 168 Abnormal Psychology (PSYC 5) or see advisor

* Required to meet NATA certification (see Program Director for all requirements)

+ Required for all Pre-Physical Therapy Majors

Athletic Training Credential

Athletic Training students interested in teaching must meet the California Teaching Commission Standards prior to entrance into a credential program. Courses to meet standards can be taken concurrently with the Athletic Training courses. See Program Director for appropriate coursework.

Exercise Science Option (80-81 units)

A. Required Common Core (28 units)

- (3) BIO 10 Basic Biological Concepts **OR**
BIO 20 Biology: A Human Perspective
- (4) BIO 22 Introductory Human Anatomy (BIO 10 or 20)
- (4) BIO 131 Systemic Physiology (BIO 10, 20 or 22 and one year of college chemistry)
- (5) CHEM 6A Introduction to General Chemistry
- (3) PE 151 Kinesiology (BIO 10 or 20; and BIO 22 or equivalent)
- (3) PE 151A Biomechanics (PE 151)
- (3) PE 152 Physiology of Exercise (BIO 31 or 131)
- (3) PE 158 Motor Learning (BIO 22)

B. Required Lower Division Courses (15 units)

- (5) CHEM 6B Introduction to Organic & Biological Chemistry (CHEM 6A)
- (3) HUES 10 Nutrition & Wellness
- (4) PHYS 2 Topics in Elementary Physics
- (3) PSYC 1 Introductory Psychology: Basic Processes

C. Required Upper Division Courses (32 units)

- (3) EDS 140 Introductory Behavior Statistics
- (3) HUES 113 Nutrition & Metabolism (BIO 10 or 20; CHEM 1A or 6A. Passing score on WPE.)
- (3) PE 137 Sociology of Sport **OR**
PE 160 Sport & Exercise Psychology
- (3) PE 139 Leadership & Communication
- (3) PE 132 Planning, Designing & Managing A Fitness Center
- (2) PE 144 Analysis of Weight Training
- (3) PE 153 Cardiovascular Testing & Exercise Prescription (PE 152)
- (3) PE 154A Principles & Techniques in the Clinical Setting
- (3) PE 156 Care of Athletic Injuries
- (3) PE 194B Assigned Internship in Exercise Science **OR**
PE 195B Directed Internship in Exercise Science
- (3) Select one of the following:
 - HS 150 Aging & Health
 - NURS 163 Holistic Approach to Aging (Passing score on WPE.)
 - PE 136 Sport & Aging
 - PSYC 150 Psychological Aspects of Aging (PSYC 1 or 5)

D. Electives (5-6 units)

- (5-6) Select from the following:
 - (3) PE 152A Fundamentals of Exercise Programs (PE 152)
 - (2) PE 152B Exercise Physiology of Women
 - (2) PE 152C Prolonged Exercise (an introductory college course in Biology or Zoology)
 - (2) PE 152D Blood Lactate & Exercise (PE 152)
 - (2) PE 153C Exercise Mini Series: Electrocardiography
 - (2) PE 196D Exercise Energetics & Substrate Metabolism

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

Adapted Physical Education Specialist Credential

The Adapted Physical Education Specialist Credential consists of a minimum of 20 units. 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 (20 units)

- (2) PE 171 Adapted Physical Education: Basic Skill/Fitness Activities & Assessment (PE 130 or 172)
- (3) PE 176 Perceptual Motor Development
- (3) PE 177 Adapted Physical Education: Historical & Philosophical Development
- (3) PE 179 Adapted Physical Education: Program Planning (PE 171; may be taken concurrently)
- (3) PE 194E Assigned Internship in Adapted Physical Education
- (3) RLS 125 Therapeutic Recreation & Persons with Physical Disabilities
- (3) EDS 212 Psychoeducational Problems of Exceptional Children: Severely Handicapped

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

- (4) BIO 22 Introductory Human Anatomy
- (2-3) PE 130 Physical Education for Children (PE 138, 149) **OR**
- PE 172 Movement Education
- (3) PE 151 Kinesiology (a Physics course or permission of instructor; BIO 22 or equivalent)
- (3) PE 151A Biomechanics (PE 151)
- (3) PE 158 Motor Learning (BIO 22 or equivalent)
- (2) HS 136 School Health Education

- (1) PE 147 Analysis of Basketball (PE 138)
- (1) PE 148 Analysis of Nontraditional Games & Outdoor Activities (PE 138)

3. Area 3

- (2) PE 142 Analysis of Folk, Square & Ballroom Dance (PE 138)
- (2) PE 170 An Interdisciplinary Approach to Physical Education
- (2) PE 171 Adapted PE: Basic Skill/Fitness Activities & Assessment (PE 130 or 172)
- (2) PE 173 Creative Dance for Children
- (3) PE 177 Adapted PE: Historical & Philosophical Development
- (1-2) PE 194A Assigned Field Experience in Physical Education **OR**
- PE 195A Directed Field Experience in Physical Education

Secondary Teaching Minor Option (21 Units)

- (3) PE 138 Strategies in Physical Education
- (9) PE 140 series or ATIC 160 Series
- (3) PE 150 Exercise & Sport Physiology
- (3) PE 158 Motor Learning (BIO 22 or equivalent)
- (3) Select one of the following:
 - PE 110 Women & Sport
 - PE 137 Sociology of Sport
 - PE 160 Sport & Exercise Psychology

Coaching Minor Option (19-20 Units)

- (3) PE 150 Exercise & Sport Physiology
- (3) PE 156 Care of Athletic Injuries
- (3) Select one of the following:
 - PE 110 Women & Sport
 - PE 137 Sociology of Sport
 - PE 160 Sport & Exercise Psychology
- (4) ATIC 160 Coaching Series
- (2-3) PE 140 Analysis Series
- (4) Select from the following:
 - (2) PE 156A Advanced First Aid
 - (2) PE 161 Managements of Interscholastics & Intramurals
 - (1-3) PE 140 Analysis Series
 - (3) ATIC 160 Coaching Series
 - (1-4) PE 194D Assigned Field Experience in Coaching

MINOR REQUIREMENTS

The Minor requires from 19 to 21 units depending upon the option selected.

Elementary Teaching Minor Option (20 units)

- (3) PE 138 Strategies in Physical Education
- (3) PE 172 Movement Education
- (3) PE 176 Perceptual Motor Development **OR**
- PE 176A Lifespan Motor Development (Anatomy and Physiology)
- (3) PE 158 Motor Learning (BIO 22 or equivalent) **OR**
- PE 150 Exercise & Sport Physiology
- (3) Select from the following:
 - PE 137 Sociology of Sport
 - PE 139 Leadership & Communication
 - PE 160 Sport & Exercise Psychology

Select at least one course from each of the following areas to total at least 5 units.

1. Area 1

- (1) PE 63 Beginning Badminton
- (1) PE 67 Beginning Tennis
- (2) PE 140 Analysis of Tumbling & Gymnastics (PE 138)
- (2) PE 143 Analysis of Track & Field (PE 138)
- (1) PE 149 Analysis of Health-Related Fitness (PE 138)

2. Area 2

- (1) PE 73 Slow Pitch Softball
- (1) PE 145 Analysis of Soccer (PE 138)
- (1) PE 146 Analysis of Volleyball (PE 138)

PERSONAL TRAINER/STRENGTH & CONDITIONING CERTIFICATE

The program includes a minimum of 28 units of specified coursework:

- (3) PE 120 Scientific Bases of Physical Conditioning
- (3) PE 132 Planning, Designing & Managing a Fitness Center
- (3) PE 139 Leadership & Communication
- (2) PE 144 Analysis of Weight Training
- (3) PE 151 Kinesiology (BIO 22)
- (3) PE 152 Physiology of Exercise (BIO 31 or 131)
- (3) PE 153 Cardiovascular Testing & Exercise Prescription (PE 152)
- (3) PE 156 Care of Athletic Injuries
- (2) PE 194A Assigned Field Experience in Physical Education **OR**
- PE 195A Directed Field Experience in Physical Education (with approval of certification advisor)
- (3) HUES 113 Nutrition & Metabolism (BIO 10 or 20; CHEM 1A or 6A. Passing score on WPE.)

GRADUATE PROGRAM

The graduate program leading to the Master of Science degree in physical education 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 physical education; 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 Physical Education, 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
- courses equivalent to COMS 129 and EDC 148B.

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. Coursework 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 coursework, but no more than six units as an unclassified student or twelve 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 physical education
- A copy of recent research paper and/or a creative project
- Letters of recommendation that speak specifically to academic ability.

Students applying for admission to the physical education graduate program who **do not have a major in physical education**, are required to take a minimum of 20 specified units in Physical Education. 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 April 1 for the following Fall or October 1 for the following Spring in order to allow time for admission before Computer Access Student Phone Entry Registration (CASPER). All prospective graduate students, including CSUS graduates, must file the following with the Graduate Center:

- an application for admission and a supplemental application for graduate admission (Forms A & B in the CSU application booklet)
- two sets of official transcripts from all colleges and universities attended, other than CSUS.

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 at the same time as the thesis or project proposal is submitted to the Graduate Center.

Advancement to Candidacy forms are available in the Graduate Center.

Degree Requirements

The Master of Science Degree in Physical Education consists of a minimum of thirty (30) units. A fourteen unit core of courses is required of all students; 10 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 Physical Education. 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 Physical Education. Within the remaining sixteen units, the student is focused in an area of special interest by selecting an option: Exercise Physiology and Sport Performance. Each option 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, will not be counted for graduate credit. Only rarely are undergraduate Physical Education 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 (10 units)

- | | | |
|-----|--------|--|
| (3) | PE 210 | Research Methods in Physical Education |
| (1) | PE 211 | Research Seminar |
| (3) | PE 260 | Psychology of Sport & Exercise |
| (3) | PE 270 | Instructional Strategies for Physical Activity & Sport |

B. Option Requirements (16 units)

Select one of the following options:

1. Exercise Physiology Option

- (3) PE 250 Advanced Exercise Physiology Lab
- (3) PE 254 Advanced Biomechanics
- (3) PE 259 Research in Exercise Physiology
- (7) Electives selected in consultation with an advisor

2. Sport Performance Option

Select two of the following:

- (3) PE 203 Specificity of Conditioning
- (3) PE 236 Sport & Society
- (3) PE 245 Administration of Physical Education & Athletics
- (3) PE 262 Psychological Aspects of Peak Performance
- (10) Electives selected in consultation with an advisor

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

C. Culminating Requirement (4 units)

- (4) PE 500 Culminating Experience

Note: The first time the student registers for PE 500, he/she must also register for PE 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 PE 211 another semester.

LOWER DIVISION COURSES

The following activity-based courses are designed for 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 for the current semester.

12A. Intermediate Swimming. Development of physical skills involving strokes, turns, safety and survival techniques. 1 unit.

12B. Intermediate Sailing. Continuation of PE 25, using our fleet of C-15s, Laser and Hobie Turbo 14s. Covers rigging, boating safety, sailing, theory and racing tactics. 1 unit.

12C. Sport Scuba Diving. The Sport Scuba course is designed for those divers who wish to increase their understanding and enjoyment of safe diving. Emphasis is placed on student participation and practical application of knowledge in open water after a classroom introduction to each selected subject. The objective of the course is to provide an opportunity for the diver to gain a variety of safe experiences under controlled conditions. Leads to NAUI certification. **Prerequisites:** PE 27 or certification from National Scuba Diving Organization, pass medical examination. 2 units.

13A. Intermediate Self-Defense for Women. Prepares women psychologically, sociologically and physically to deal with an assailant carrying a deadly weapon. An in-depth study of firearms, knives, etc., and fears surrounding these weapons. Physical tactics taught enable the student to disarm the assailant. 1 unit.

13B. Intermediate Tae Kwon Do. An extension of the beginning Tae Kwon Do class. Students will be taught the importance of traditions in Tae Kwon Do training. Emphasis will be on intermediate skills of performance, including transition to dynamic movement through patterns and forms. An extended knowledge of the philosophical aspects of Tae Kwon Do, including the influence of the Asian culture, will be explored. The class will include mental and physical exercises geared towards self defense. **Prerequisite:** PE 34 or equivalent, or permission of instructor. 1 unit.

13C. Intermediate Tai Chi. Explores the ancient traditions of Tai Chi in a much greater depth. Asks the student to physically experience the discipline and structure of Tai Chi to enhance his/her understanding of the next level of training. **Prerequisite:** PE 31 or prior experience in Tai Chi.

14A. Intermediate Modern Dance. Examines the theories of traditional modern dance and is designed to develop proficiency in performing intermediate level modern dance techniques. Students will gain an intellectual and kinesthetic understanding of different modern styles. Performance qualities and creative movement explorations are an important aspect of the class. 2 units.

14B. Men's Intermediate Ballroom Dance. Development of intermediate skills in foxtrot, waltz, swing, cha cha cha, and basic skills in tango, rumba, samba, and dance routines. 1 unit.

14C. Women's Intermediate Ballroom Dance. 1 unit.

14D. Intermediate Ballet. Examines the theories and traditional styles of ballet. Students will develop proficiency in performing intermediate level ballet techniques and gain an intellectual and kinesthetic understanding of different ballet styles. 2 units.

14E. Intermediate Jazz. Developing theory and practice of modern jazz techniques and enlarging the movement vocabulary with an emphasis on the different jazz styles. **Prerequisite:** PE 48 or permission of the instructor. 2 units.

14F. Intermediate Tap. Development and refinement of intermediate tap skills and vocabulary through the study of historical and current tap styles. **Prerequisite:** PE 44 or permission of instructor. 2 units.

15A. Intermediate Trampoline and Tumbling. Designed to develop proficiency in performing intermediate skills such as front and back flips on the trampoline and handsprings and flip flops on the tumbling mat. Special flexibility and strength exercises are also included. 1 unit.

16B. Intermediate Target Archery. Emphasis will be on improvement in shooting proficiency, individual technical form definition and style; introduction to types of equipment, bow tuning, arrow pattern analysis, competition rounds and mental preparation methods which enhance the individual enjoyment of archery as a lifetime activity. 1 unit.

16C. Intermediate Badminton. Development of movement skills, strokes, tactics in singles and doubles at a more advanced level. Emphasis on "cut" or deceptive strokes, rotation or diagonal system of doubles play, increased ability to move on the court, application of laws to move difficult playing situations. Singles, doubles and mixed doubles play in tournaments. 1 unit.

- 16D. Intermediate Golf.** Continued development of the fundamental mechanics involved in the golf swing with emphasis on individual swing analysis and correction; introduction to play on a nine-hole golf course using U.S.G.A. rules and accepted rules of etiquette. 1 unit.
- 16E. Intermediate Tennis.** Development and refinement of skills at the intermediate level in all strokes. Development and refinement of playing techniques and strategies. Learning how to enjoy competitive situations and to relate well to others in competition. Adjustment to stressful competitive conditions and improvement of personal responses under stress. 1 unit.
- 16F. Intermediate Weight Training.** Weight training as a lifetime fitness activity; emphasis on going beyond the beginning level through development of an individualized program designed to meet the needs of each individual. 1 unit.
- 16G. Intermediate Racquetball.** Development of proficiency at the intermediate level. Course includes service and return, backwall play, offensive and defensive shots with emphasis on techniques, strategy and tactics of competition. 1 unit.
- 17A. Intermediate Basketball.** The advancement of basketball skills and strategy. Emphasis is given to individual and team concepts as they relate to performance competition and officiating basketball. 1 unit.
- 17B. Intermediate Volleyball.** Refine and improve proficiency in fundamental skills, strategies, multiple offenses and defenses, transitions, interchanges and international rules. Emphasis on teamwork and communication in competition situations which enhances continued involvement in volleyball as a physical activity. 1 unit.
- 20. Basic Windsurfing.** Introduces the student to the basic fundamentals of windsurfing. Covers rigging, terminology, balance, stance, sail adjustment, safety, rescue skills, and tricks. 1 unit.
- 21. Beginning Swimming.** Development of physical and mental adjustment to the water. Basic instruction in front crawl, back crawl, elementary backstroke, breast and side strokes and survival is stressed. 1 unit.
- 21A. Bicycling.** Cycling as a lifetime sport; physiological benefits derived from bicycle riding; individual functional evaluation and conditioning, cycle touring. Lecture one hour; activity two hours. 2 units.
- 22A. Life Guard Training.** Leads to certification in American Red Cross Emergency Water Safety. **Prerequisite:** proficiency in crawl, breast, side and elementary backstroke. 1 unit.
- 24. Water Skiing.** A basic course in water skiing, boat and boating safety and in the fundamental skills in water skiing. Additional charge for off-campus services. **Prerequisite:** 50 yards swimming ability. 1 unit.
- 25. Beginning Sailing.** Instruction in the fundamentals of sailing including safety and a discussion of terminology and technology of sailing. Additional charge for off-campus services. **Prerequisite:** 50 yards swimming ability. 1 unit.
- 27. Basic Scuba Diving.** Basic instruction using self-contained underwater breathing apparatus. Course to include lecture, pool work, and open water diving in lake and ocean. **Prerequisites:** pass swimming ability test, medical exam. 3 units.
- 29. Basic Olympic Rowing.** Teaches the novice rower oar control, basic commands, and correct style. Students will begin rowing on a modern eight-oared racing shell and be introduced to the one person rowing single. 1 unit.
- 31. Beginning Judo.** Instruction in beginning judo tactics including throws and falls, conditioning, and protective devices for self-defense. 1 unit.
- 32. Uechi-Ryu Karate.** Examines the historical, philosophical, and physical aspects of Uechi-Ryu Karate. Students will be asked to learn the basic techniques and skills used in this Okinawan system as well as to develop and improve in body strength, flexibility and coordination. 1 unit.
- 33. Beginning Self-Defense for Women.** Prepares women to deal psychologically, sociologically and physically with rape and violent assault. The physical tactics taught are based on the use of hands and feet as weapons. They are simple yet an effective use of one's strength and mental attitude. 1 unit.
- 34. Beginning Tae Kwon Do.** Primary emphasis on throwing, blocking, punching and kicking. The philosophy of Truism and Confucianism is explored. 1 unit.
- 35. Self Defense and Conditioning.** Multifaceted conditioning course that utilizes self defense techniques to develop self discipline, confidence and respect for physical capabilities and limitations of others. 1 unit.
- 36. Tai Chi.** Examines the historical, philosophical, psychological and physiological aspects of Tai Chi. Students will be provided the opportunity to experience a wide range of movement patterns that focus on the integration of mind and body. The form and structure of technique as well as breathing exercises will be included. 1 unit.
- 40. Beginning Country Western Dance.** Development of proficiency in Country Western Dance to include history, vocabulary, etiquette, and basic steps for Country 2-Step, Waltz, West Coast Swing, plus choreographed couple and line dance. 1 unit.
- 41A. Men's Beginning International Folk Dance.** Development of skill in folk dances from countries of the world, dance vocabulary, interest in these dances for use throughout life. 1 unit.
- 41B. Women's Beginning International Folk Dance.** See PE 41A.
- 42. Beginning Modern Dance.** Introduces students to the history and techniques of the modern dance tradition. Students will study basic modern dance principles and aesthetics and learn modern movement to develop and improve strength, flexibility, balance, coordination and creative expression. 2 units.
- 43A. Men's Beginning Ballroom Dance.** Development of proficiency in ballroom dance, including history, vocabulary, ballroom dance etiquette and basic steps for foxtrot, waltz, swing and cha cha cha. 1 unit.
- 43B. Women's Beginning Ballroom Dance.** See PE 43A.
- 44. Beginning Tap.** An introduction to fundamental tap dance skills, including basic steps, history and vocabulary. 2 units.
- 46. Beginning Ballet.** Introduces the student to the history and development of traditional ballet techniques. Students will study ballet principles and aesthetics and learn basic ballet movement vocabulary and skills. 2 units.
- 48. Beginning Jazz.** Developing the theory and practice of jazz techniques. 2 units.
- 51. Gymnastics Body Shaping.** Designed for students who want to develop the strength, suppleness, and figure of a gymnast without increasing bulk. Involves the use of men's and women's gymnastic equipment for conditioning purposes and will appeal to those who don't want to learn intricate skills or routines. 1 unit.

52. 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.

53. 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.

61. Beginning Target Archery. Emphasis will be on the development of basic shooting techniques and basic knowledge of target archery. Introduction to modern archery equipment, technical shooting methods and opportunities available for the enjoyment of archery as a lifetime activity. 1 unit.

62. Exercise for Fitness. Designed to encourage self-improvement through posture evaluation, biomechanic analysis of exercises performed and through participation in varied exercise forms. Students will develop a personalized repertoire of strength, suppleness and stamina exercises calculated to improve possible deficiencies in posture or movement to optimize enjoyment of living. 1 unit.

63. Beginning Badminton. Development of fundamentals in badminton including beginning skills, offensive and defensive tactics and strategy; singles, doubles and mixed doubles tournament play. 1 unit.

64. Beginning Golf. Development of sufficient basic proficiency in golf to recognize and enjoy it as a lifetime activity; including U.S.G.A. rules, etiquette and the fundamental mechanics involved in the use of irons and woods. 1 unit.

67. Beginning Tennis. Development toward proficiency in tennis, including basic court skills, knowledge, and elementary strategies. Development of enjoyable and appropriate cooperative and competitive modes of behavior, including etiquette and self-awareness. Attention is given to healthful approaches to vigorous lifetime physical activity. 1 unit.

68. Beginning Weight Training. Weight training as a lifetime fitness activity; emphasis on total body development through the use of different weight training systems. 1 unit.

68A. Beginning Olympic Weight Lifting. Introduces the lifter to the sport of weight lifting which consists of the two lifts (two hands snatch and the two hands clean & jerk) used in Olympic competition. It includes the complete breakdown of the two lifts, the assistive lifts necessary to learn the parts of the two lifts, and the proper training sequence. The students will also be introduced to training cycles, proper diet, and the use of assistive equipment. **Prerequisites:** PE 16F or equivalent. 1 unit.

69. 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.

71A. Beginning Basketball. Development of fundamental skills and tactics of the game, knowledge of basic strategy and rules. Emphasis given to individual and team concepts as they relate to performance and competition. 1 unit.

72. Beginning Volleyball. Develop basic skills, basic offensive and defensive systems of team play, basic strategies and rules. Emphasis on team work and developing supportive attitudes and behavior which encourages continued involvement in volleyball as a physical activity. 1 unit.

73. Slow Pitch Softball. Develop fundamental skills, knowledge and techniques necessary to enjoy playing the game of softball as a leisure time activity. Includes the factors that lead to team cohesiveness, a sense of self-worth and psychological preparedness for competition. Emphasizes the inter-relationship of social, psychological and physiological skills required to achieve success in individual and/or team performances. 1 unit.

74. Beginning Soccer. Development of basic skills of ball handling, passing, dribbling, trapping, tackling, individual and team tactics and strategies; rules interpretation and officiating; promotion of bio-psychosocial well being. 1 unit.

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

90. Jogging. Jogging will expose the student to the fundamentals of jogging/running, its potential physiological and sociological benefits as a lifetime activity, fitness testing and individualized conditioning programs. 1 unit.

91. Creative Aerobic Fitness I. Provides student with a wide range of flexibility, strength, muscular endurance and creative cardiovascular endurance (aerobic) exercises that promote physical fitness, positive changes in body composition and stress reduction when performed regularly. 1 unit.

93. Aqua Aerobics. Using the unique buoyancy and resistance properties of water, the course includes aquatic exercises for flexibility, strength, and cardiovascular endurance to promote general fitness, body conditioning, and stress reduction. As the course will take place in shallow water, swimming proficiency is not required. 1 unit.

UPPER DIVISION COURSES

Admission to intermediate and advanced level courses will require successful completion of beginning coursework or approval of the instructor. A few upper division courses are designed for the general student. Those courses approved for general education credit may be taken twice as follows: (a) once for general education credit and once for elective credit; or, (b) twice for elective credit. The only exception is PE 124 which may be taken only once for credit. Some courses not approved for general education credit may be taken twice for elective credit toward graduation. All other upper division courses are designed primarily for physical education majors, and may be taken only once for credit.

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.

104A. Advanced Modern Dance. Stresses the theory and practice of modern dance through a development of style and musicality. 2 units.

104B. Choreographic Forms and Styles. **Prerequisite:** one of the following — PE 42, 46, 14A, 14D, 104A; or permission of instructor. 2 units.

104C. Advanced Ballet. Designed for the student who is already proficient in intermediate ballet skills and ballet terminology vocabulary. The course develops a knowledge and understanding of ballet aesthetics and technique. 2 units.

104D. Advanced Jazz. Advanced training in the theory and practice of jazz techniques. 2 units.

106A. Advanced Golf. More technical level of swing analysis and instruction; enhancement of golf skills under actual playing conditions with emphasis on strategical shot placement, club selection, shot selection, etiquette and U.S.G.A. rules. 1 unit.

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. Course covers evaluation of rules and different scoring systems, singles, and doubles play with an emphasis on competitive strategy and techniques. 1 unit.

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.

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

110. Women and Sport. The 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.

114A. Principles of Choreography. **Prerequisite:** one of the following — PE 42, 46, 14A, 14D; or permission of instructor. 2 units.

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.

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

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

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.

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. **Prerequisites:** medical clearance prior to beginning of the course; thirty (30) years of age or older. 3 units.

121. Peak Performance Through Psychological Skills. An 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.

122A. Water Safety Instructor. This course is designed to prepare and certify qualified instructors to teach all levels of swimming and the Water Safety programs of the American Red Cross. Lecture one hour, laboratory two hours. **Prerequisites:** valid certification in American Red Cross Advanced Lifesaving, and Lifeguarding or Emergency Water Safety and Swimmers certification or equivalent skill proficiency. 2 units.

122B. Cardiopulmonary Resuscitation. Course designed to meet American Red Cross or American Heart Association Certification in CPR. Graded Credit/No Credit. 1 unit.

123A. Weight Training for Lifelong Fitness. This course is 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 permission of instructor. 1 unit.

123B. Aerobics for Lifelong Fitness. This course is 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:** PE 91 or permission of instructor. 1 unit.

123C. Weight Training and Aerobics for Lifelong Fitness. This course is 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.) **Prerequisites:** PE 91 and a weight training class or permission of instructor. 1 unit.

124. Appreciation and History of Dance. A survey course in the appreciation and history of dance and the relationship of dance to the fine and liberal arts in Western civilization, Asian, African and European cultures. Emphasis is on the history of ballet; American modes of expression: modern and jazz forms; and Asian and African traditions. Films, guest speakers, performing artists, readings, discussions, research papers, attendance at dance productions, exams. 3 units.

125. Dance Cultures of America. A survey course in the appreciation and understanding of dance cultures in America. The relationship of dance to the identity and expression of difference groups in the United States will be examined. Jazz, modern, ballet and multi-cultural dance forms will be the focus of the class. The course includes films, videos, guest lecturers, performing artists, readings, discussions, research papers and attendance of dance performances. 3 units.

126. African-Caribbean Dance: Beginning Dunham Technique. Introduces the rich dance cultures of the Caribbean. Students will learn the different dances of Haiti, Cuba, Jamaica and Trinidad as they relate to their function in secular and religious culture. Students will also study the Dunham Dance Technique as codified by distinguished dancer, choreographer, and anthropologist, Ms. Katherine Dunham, from her philosophical tenets that the technique is a way of life as well as a dance technique. 3 units.

127A. Dance Production and Performance. Analysis of dance composition to further creative expression with intensive technical instruction to develop the dancer's instrument. Participation in lecture-demonstrations, master classes, and concerts. Lecture two hours, laboratory four hours. **Prerequisites:** PE 14A, 104A, 104B, and/or permission of instructor. 4 units.

128. Dance Theory. An exploration of contemporary theories of movement and dance. Includes Alexander technique, effort-shape analysis, and post-modern, jazz, and improvisational dance. Lecture one hour, laboratory four hours. 3 units.

130. Physical Education for Children. Introduces students to developmentally appropriate physical education for children. Concepts and skills will be analyzed and utilized progressively as a means of developing, refining and applying the physical, social and cognitive abilities of young children. Emphasis is on maximum participation, success, challenge, cooperative learning, healthy competition, fitness for life and enhanced self-esteem. **Prerequisites:** PE 138, 149. 2 units.

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.

134. Historical and Philosophical Foundations of Physical Education. An 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.

135. Evaluation in Physical Education. The selection, analysis, construction and administration of norm referenced and criterion referenced tests to be used for formative and summative evaluation in the physical education public school setting. Includes use of computers for data collection and statistical analysis. 3 units.

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.

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

138. Strategies in Physical Education. Designed to prepare physical education majors in strategic planning, organization, management, communication skills and self awareness necessary to facilitate learning in physical education and to develop sensitivity to diversity. A focus on concepts with transfer value is included, and latter reinforced in each of the required skill analysis courses. 3 units.

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.

Analysis Series

The following courses in the analysis series are designed to provide for the development of the physical skills involved in each sport and for the cognitive skills associated with the history, rules, and skill analysis related to performance.

Prerequisite: PE 138.

140. Analysis of Tumbling and Gymnastics. Provides experience in both performing and teaching fundamental gymnastics skills which are relevant at the elementary or secondary levels. Attention is given to the effective analysis of skills, appropriate progressions, spotting techniques, safety and methods of organization. 2 units.

141. Analysis of Swimming. Develops the physical and cognitive skills involved in swimming. Students are expected to complete requirements for Basic Water safety and Emergency Water Safety Red Cross certification. 2 units.

142. Analysis of Folk, Square and Ballroom Dance. Provides opportunities for developing physical, social and psychological skills related to folk, square and ballroom dance. Historical and multicultural concepts related to folk and square dance are emphasized. 2 units.

143. Analysis of Track and Field. Presents fundamental skills and knowledge in track and field events. A clinical experience is provided for children in the community. 2 units.

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.

145. Analysis of Soccer. Introduces skill techniques, strategy and rules required for performance in soccer. Application of movement principles, including components of motor learning, exercise physiology, and biomechanics are included. 1 unit.

146. Analysis of Volleyball. Introduces fundamental skills in volleyball. Includes progressions, skill analysis and motivation techniques, evaluation methods, and other knowledge associated with the game. 1 unit.

147. Analysis of Basketball. Introduces skill techniques, strategy, and rules required for performance in basketball. The history of the game is also addressed. 1 unit.

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.

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.

150. Exercise and Sport Physiology. A course in 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.

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 2 hours, laboratory three hours.

Prerequisites: a physics course or permission of instructor, BIO 22 or equivalent. 3 units.

151A Biomechanics. An 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 locomotory 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: PE 151. 3 units.

151B. Clinical Kinesiology. Functional anatomy of the musculoskeletal system. Application of the principles of biomechanics, arthrology and tissue mechanics in combination with functional anatomy to the study of normal and pathological motion. Open to Physical Therapy majors only. 3 units.

152. Physiology of Exercise. The 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 31 or 131. 3 units.

152A. Fundamentals of Exercise Programs. A 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:** PE 152. 3 units.

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.

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.

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:** PE 152. 2 units.

152E. Clinical Exercise Physiology. The study of circulatory, respiratory and metabolic response to exercise in humans under various physiological and ambient conditions. There will be a special emphasis placed on application of principles in the clinical setting. Open to Physical Therapy majors only. 3 units.

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:** PE 152 or permission of instructor. 3 units.

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

154. Current Issues in Athletic Training. Designed to provide students with in-depth study in selected current topics in athletic training including nutrition, school and public relations, legal aspects of athletic training, certification and licensure, interpersonal relationships, problems of selected athletic populations, psychological aspects of athletic training, ergogenic aids, ethics, and professional conduct, organization and administration of athletic training programs, students will identify issues within each topic and examine research and current solutions related to those issues. 3 units.

154A. Principles and Techniques in a Clinical Setting. An 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.

154B. Management of Athletic Training Programs. A study of the different aspects of the organization and administration of athletic training programs. Includes budget, facility design and management, legal aspects, drug testing, pharmacology, education, computer use, insurance and record keeping, personnel, professional and governing organizations, athletic injury reporting systems, procedures for emergency care and blood-borne pathogens, pre-participation exam management and fundraising. 1 unit.

155. Neuromuscular Evaluation Procedures. Analysis and performance of evaluation procedures including patient interviewing, objective articular and muscle skeletal evaluation of extremities, spine and gait. Includes basic peripheral and central nervous system assessment. Lecture one hour, laboratory two hours. **Prerequisites:** PE 156, 175, BIO 22. 2 units.

155A. Advanced Clinical Evaluations. Provides advanced knowledge of the principles and effects of injury, and advanced knowledge and skill in the evaluation and management of acute and chronic athletic injuries. **Prerequisite:** PE 155. 3 units.

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.

156A. Advanced First Aid. Underlying principles and applied techniques of first aid. Meets the requirements for the Advanced First Aid Certificate of the American Red Cross. Lecture one hour, laboratory three hours. 2 units.

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. **Prerequisites:** PE 151, 155, BIO 22; or equivalent. 3 units.

158. Motor Learning. A 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 22 or equivalent. 3 units.

159. Introduction to Modalities. The biophysical and physiological rationale underlying the therapeutic application of modalities. The principles of physics applied to the treatment of clients. Methods of administering heat, cold, electricity, sound, light and water. Includes contraindications, stabilization techniques, graded exercises used in pool therapy. **Prerequisites:** PE 155, 156, PHYS 2. 2 units.

160. Sport and Exercise Psychology. The 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.

161. Organization & 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.

162. Officiating Fall Sports. Exposes students to rules, mechanics and officiating procedures in several types of sports found in interscholastic, intercollegiate, intramural programs such as football, basketball, soccer, volleyball and wrestling; practical experiences in officiating in wide variety of sports provided. 2 units.

Elementary Physical Education Series

The following courses in the 170-series deal with the teaching of physical education in the elementary schools. They are open to students throughout the university.

170. An Interdisciplinary Approach to Physical Education. Reinforcing classroom subjects through movement experiences. Emphasis on theory, research, and practical application. 2 units.

171. Adapted Physical Education: Basic Skill/Fitness Activities & Assessment. Provides developmental basic skill and fitness activities that can be adapted to special populations. Emphasis is on the relationship of movement to social interaction of the individual in small and large group activities. **Prerequisite:** PE 130 or 172. 2 units.

172. Movement Education. An 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.

173. Creative Dance for Children. Explores creative dance as it applies to young children, includes an exploration of non-locomotor and locomotor movement patterns through problem solving and guided discovery techniques. 2 units.

175. Introduction to Therapeutic Techniques. Several units introduce the student to professional ethics and attire, to the allied health care team, transfers, wheelchair and ambulation aids, medical terminology and medical record keeping. Includes the traditional massage techniques supplemented by connective tissue massage, Shiatsu, accupressure, etc. 2 units.

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.

176A. Lifespan Motor Development. Study of the processes and mechanisms underlying motor development over a life span, biological and environmental factors affecting motor development; application of motor development knowledge to physical activity programs. **Prerequisite:** Anatomy and Physiology. 3 units.

177. Adapted Physical Education: History & Philosophy. 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.

178. Methods of Teaching Physical Education. Overview of the total physical education curriculum from kindergarten through eighth grade, including: movement exploration, educational gymnastics, creative rhythms, perceptual motor activities, low organized games, and lead-up games. Focus will be on reinforcement of classroom learning through movement activities. Must be taken in Phase II of the Ryan Act Professional Education Program. Lecture two hours, laboratory two hours. 3 units.

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:** PE 171; may be taken concurrently. 3 units.

194A. Assigned Field Experience in Physical Education. 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.

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. May be repeated for a total of 3 units. **Prerequisites:** PE 151 and/or 152; or permission of instructor. Graded Credit/No Credit. 1-3 units.

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. May be repeated up to a total of 6 units. **Note:** open to Physical Education majors in the pre-physical therapy option. Graded Credit/No Credit. 1-2 units.

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. May be repeated for a total of 6 units. Graded Credit/No Credit. 1-2 units.

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. **Prerequisites:** any two of the following: PE 171, 176, 177, or 179; permission of Adapted Credential Advisor. Graded Credit/No Credit. 1-2 units.

194F. Assigned Field Experience in Allied Health. Practical experience in Occupational Therapy, Chiropractics 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. May be repeated up to a total of 6 units. Graded Credit/No Credit. 1-2 units.

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. 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.

195A. Directed Field Experience in Physical Education. 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.

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. May be repeated for a total of 3 units. **Prerequisites:** PE 151 and/or 152; or permission of instructor. Graded Credit/No Credit. 1-3 units.

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.

195D. Practicum in Athletic Training. Supervised athletic training experience in the athletic training room under the direct supervision of a 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. **Prerequisites:** PE 156, BIO 22, prior approval of the Program Director. Graded Credit/No Credit. 3-4 units.

195E. Directed Field Experience in Dance. Directed experience in dance with a full-time dance instructor on campus. Students keep record of their experiences. Registration requires prior approval of a dance advisor. Student receives one unit of credit for every three hours of work per week for one semester. Graded Credit/No Credit. 1-2 units.

196. Experimental Offerings in Physical Education. 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.

198. Curriculum and Instruction in Physical Education (7-12). This course will examine the 7-12 school environment and the role of the student teacher. Concepts of effective teaching in physical education will be used in order to help student teachers improve upon their teaching skills. The class will also focus on specific teacher behavior and teaching strategies that are needed daily in the school setting. Open to HPE Phase III students only. 2 units.

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

GRADUATE COURSES

The following graduate courses are designed primarily to meet the needs of graduate students seeking a teaching credential of a Master of Science degree. To be eligible to enroll in these courses, students should have completed an undergraduate major or minor in physical education, or should have attained comparable educational experience.

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.

210. Research Methods in Physical Education. Various methods and techniques of educational research as they are commonly applied in the field of physical education; 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.

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

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.

245. Administration of Physical Education and Athletics. The organization and administration of physical education and athletic programs and the functional considerations involved. Primary areas include: personnel, curriculum, budgeting, contract management, public relations, liability and safety, critical issues, and procedures essential to quality programs. 3 units.

250. Advanced Exercise Physiology Laboratory. Course will describe, explain, and practice 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:** PE 152 or permission of instructor. 3 units.

254. Advanced Biomechanics. The intent of this course is to 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. **Prerequisites:** PE 151, 210; or permission of instructor. 3 units.

257. Motor Development and Motor Control. The study of the neurological processes involved in motor development and motor control, including sensory integration, perceptual motor development, attention, memory, modes of motor control and motor programs. 3 units.

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. **Prerequisites:** PE 158 210; or permission of instructor. 3 units.

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. **Prerequisites:** PE 152, 210; or permission of instructor. 3 units.

260. Psychology of Sport and Exercise. The in-depth study of parameters of human behavior as specifically related to sport and exercise, including motivational techniques, personality factors, aggression, arousal, stress control, cognitive intervention strategy, exercise therapy, psychological status and health/injury cohesion, and attention. 3 units.

262. Psychological Aspects of Peak Performance. An 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.

270. Instructional Strategies for Physical Activity and Sport. A 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, the course 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.

274. Program Planning: The Learner. Study of selected neuropsychological, psychosocial and biophysical variables which lead to the flow of learning in the Physical Education school setting. 3 units.

275. Program Planning: Design and Content. Study of selected cultural and educational variables which affect program planning strategies and content; principles and processes used in the planning, designing and evaluation of Physical Education programs. 3 units.

276. Teaching and Coaching Effectiveness. A 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.

295. Practicum. Graduate experiences in a practical setting. 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.

296. Experimental Offerings in Physical Education. 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.

299. Directed Individual Study. Individual research, project, or directed reading. 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.

500. Culminating Experience. Completion of a thesis or project under the direction of a department committee. Open only to graduate students advanced to candidacy. **Prerequisite:** Completion of PE 211 or concurrent enrollment. Graded Credit/No Credit. 1-4 units.