

Physical Education Subject Matter Requirements

Part I: Content Domains for Subject Matter Understanding and Skill in Physical Education

Domain 1. Professional Foundations

Candidates demonstrate an understanding of the philosophical, historical, and legal/ethical foundations of physical education. To plan and implement programs that are aligned with the approved Physical Education Framework or other approved state documents and the Challenge Standards for Student Success: Physical Education (1998), candidates must have a broad and deep understanding of issues that affect the field, of the professional responsibilities of physical educators, and of the past and present philosophies of physical education and their impact on contemporary programs.

1.1 Philosophies of Physical Education

- a. Demonstrate knowledge of past and present philosophies of physical education and their impact on the goals, scope, and components of physical education programs.
- b. Demonstrate an understanding of the organization, purposes, and goals of contemporary physical education programs.

1.2 Historical Development

Demonstrate knowledge of the historical development of physical education, including contributions of noteworthy physical educators of various backgrounds, races, ethnicities, genders, and national origins.

1.3 Current Research, Trends, and Issues

Analyze current research, trends, and issues that affect physical education (e.g., inclusion, lifelong fitness, the sharp increase in obesity-related diseases among U.S. youth) and their impact on physical education programs and goals.

1.4 Legal and Ethical Issues

Demonstrate an understanding of legal and ethical issues in physical education, such as those related to supervision, liability, confidentiality, equity, disability, and diversity.

1.5 Interrelationships of the Subdisciplines of Kinesiology

Demonstrate an understanding of the interrelationships of the subdisciplines of kinesiology.

1.6 Professional Responsibilities, Organizations, and Resources

- a. Demonstrate knowledge of professional responsibilities, organizations, and resources that support physical education (e.g., AAHPERD, American College of Sports Medicine, National Council for the Exceptional Individual).
- b. Demonstrate knowledge of current state and national standards for physical education.

1.7 Relationship Between Human Movement Activities and Values

- a. Demonstrate an understanding of human movement activities as instruments for maintaining traditional values and/or for examining and changing traditional values.
- b. Analyze the role of physical education in promoting equity for diverse groups.

(Challenge Standards for Student Success: Physical Education, Kindergarten Through High School (1998), Standards 1,2, 3, and 7. Physical Education Teacher Preparation in California: Standards of Quality and Effectiveness for Subject Matter Programs (1994), Standards 4, 7, 8, and 9.)

Domain 2. Growth, Motor Development, and Motor Learning

Candidates must demonstrate an understanding of human growth and development processes, as well as how these processes interact with and influence motor learning, in order to teach the movement knowledge and skills contained in the Challenge Standards for Student Success: Physical Education (1998). Foundational knowledge of physical growth, motor development, and motor learning helps ensure that candidates are prepared to provide students, including students with disabilities, with an appropriate, safe, and effective physical education program.

2.1 Individual Differences

- a. Demonstrate knowledge of individual motor and physical fitness variables such as agility, balance, flexibility, coordination, strength, and speed.
- b. Analyze individual physical changes and their impact on mechanical and physiological aspects of motor performance.

2.2 Perceptual-Motor Development

Know components of perceptual-motor development such as visual, auditory, tactile, and kinesthetic discrimination and how they relate to skill acquisition and performance.

2.3 Physical and Developmental Changes

Demonstrate an understanding of physical changes that occur with growth, development, and age, and analyze their impact on mechanical and physiological aspects of motor performance.

2.4 Motor Learning

Relate classical and current theories and models of motor learning to fundamental concepts underlying skill acquisition such as transfer, feedback, retention, practice, readiness, and observational learning.

2.5 Motor Task Analysis

Apply knowledge of motor task analysis as it relates to motor development, enabling students to select or design motor tasks that are appropriate to the process of learning movement skills.

2.6 Conditions Affecting Growth, Motor Development, and Motor Learning

Analyze conditions that affect growth, motor development, and motor learning such as diseases, disabilities, and social, emotional, and environmental factors.

2.7 Developmental Differences Affecting Motor Skills Acquisition

Demonstrate an understanding of developmental differences in motor learning and factors that affect motor skills acquisition for individuals with disabilities.

(Challenge Standards for Student Success: Physical Education, Kindergarten Through High School (1998), Standards 1 and 2. Physical Education Teacher Preparation in California: Standards of Quality and Effectiveness for Subject Matter Programs (1994), Standard 2.)

Domain 3. The Science of Human Movement

Candidates demonstrate an understanding of the scientific bases of human movement. To guide students in meeting the goals identified in the Challenge Standards for Student Success: Physical Education (1998), candidates must be able to analyze motion according to scientific principles and apply that knowledge with consideration for individual differences, including disabilities. A broad and deep understanding of the sciences involved in human movement, including anatomy, physiology, kinesiology/biomechanics, exercise physiology, and health-related fitness, enables candidates to understand and explain motion; recognize changes in body systems resulting from practice, development, and response to exercise; and provide instruction in safe and efficient body mechanics.

3.1 Body Systems

Demonstrate knowledge of the skeletal system, the general organization of the nervous system, the actions of muscles and major muscle groups, and the interaction of these systems with one another and with the external environment in producing motion.

3.2 Basic Kinematic and Kinetic Principles of Motion

Apply knowledge of basic kinematic and kinetic principles of motion including, but not limited to, summation of forces of equilibrium, vectors, and force-velocity relationships.

3.3 Biomechanical Principles

- a. Apply knowledge of biomechanical principles (e.g., Newton's laws of motion, center of gravity) to a broad range of movement activities.
- b. Apply knowledge of biomechanical principles in relation to individual differences and to body mechanics for safe and efficient movement/motion.

3.4 Movement Analysis

Apply knowledge of movement analysis to movement patterns, including technologies for movement analysis.

3.5 Effects of Exercise

Demonstrate knowledge of acute and chronic effects of exercise on body systems (e.g., pulmonary, cardiorespiratory, muscular, skeletal, neural, endocrine) and on energy systems utilized during exercise.

3.6 Components of Wellness

- a. Demonstrate an understanding of components of wellness, such as nutrition, stress management, cardiorespiratory risk reduction, and physical fitness (i.e., cardiorespiratory endurance, flexibility, muscular strength and endurance, and body composition).
- b. Analyze the effects of factors such as gender, age, disability, environment, and substance abuse on physical fitness.

3.7 Physical Fitness Testing and Prescription

Demonstrate knowledge of physical fitness testing, exercise prescription, and fitness programs for all individuals, including those with disabilities, as well as the components of health-related fitness and technologies for fitness testing and training.

3.8 Factors Affecting Physical Performance

Analyze the effects of factors such as gender, age, disability, environment, and substance abuse on physical performance.

3.9 Safety, Injury Prevention, and First Aid

Demonstrate an understanding of safety-related topics such as the prevention and care of injuries, cardiopulmonary resuscitation, and first aid.

3.10 Physiological Principles of Fitness

Apply knowledge of physiological principles (e.g., overload, specificity, FIT, reversibility) to the components of physical fitness.

(Challenge Standards for Student Success: Physical Education, Kindergarten Through High School (1998), Standards 1, 2, 3, and 4. Physical Education Teacher Preparation in California: Standards of Quality and Effectiveness for Subject Matter Programs (1994), Standards 3, 5, and 10.)

Domain 4. The Sociology and Psychology of Human Movement

Candidates demonstrate an understanding of the sociology and psychology of human movement. Physical activity provides a context for a broad range of experiences that can be used to promote the personal and social developmental concepts and skills contained in the Challenge Standards for Student Success: Physical Education (1998). A broad and deep understanding of the sociological and psychological aspects of movement activities helps ensure that candidates are prepared to promote students' motivation for physical activity, regardless of students' abilities, and their development of positive, responsible personal and social behaviors that encourage lifelong physical activity.

4.1 Personal Development

Analyze the relationship of movement to the development of individual identity, including the development of self-awareness, self-concept, self-discipline, self-expression, and body image.

4.2 Theories Related to Motivation

Demonstrate an understanding of contemporary theories such as attribution, social learning, competence, learned helplessness, self-efficacy, and other social/psychological theories as they relate to motivation in physical activities.

4.3 Social Development

- a. Analyze the relationship of movement to social interaction and the development of group member identity through physical education activities.
- b. Identify strategies and activities for promoting appropriate skills and behaviors for cooperation, competition, problem solving, trust building, and risk taking.

4.4 Role of Movement Activities in Society

- a. Demonstrate knowledge of the role of movement activities in society and the relationship of movement activities to social norms, ethics, values, and institutions.
- b. Demonstrate knowledge of the role of movement activities in the development of social interaction skills, a sense of group identity, and a sense of productive participation with others.
- c. Demonstrate knowledge of the role of movement activities in promoting positive social behaviors and traits (e.g., loyalty; compassion; fairness; understanding and appreciation of similarities, differences, and abilities).

4.5 Factors Influencing Activity Choices

Analyze factors that influence an individual's activity choices (e.g., gender, age, ethnicity, culture, disability).

(Challenge Standards for Student Success: Physical Education, Kindergarten Through High School (1998), Standards 4, 5, and 6. Physical Education Teacher Preparation in California: Standards of Quality and Effectiveness for Subject Matter Programs (1994), Standards 4 and 8.)

Domain 5. Movement Concepts and Forms

Candidates demonstrate an understanding of the movement concepts and forms contained in the Challenge Standards for Student Success: Physical Education (1998). These include but are not limited to aquatics; dance; fitness activities; fundamental and creative movement skills; individual, dual, and team sports; nontraditional activities and games; outdoor education activities; and gymnastics. To develop a balanced program that will address a variety of ability levels and create challenging, appropriate tasks in a variety of movement forms, candidates must have a broad and deep understanding of movement and fitness activities as well as an ability to integrate and apply movement concepts to a broad range of physical education activities and environments.

5.1 Fundamental and Creative Movement Skills

- a. Demonstrate knowledge of fundamental movement skills such as basic locomotor and non-locomotor skills, movement patterns, manipulative skills, and basic rhythmic movement, as well as knowledge of elements and qualities of movement (e.g., space, time, force, flow, level).
- b. Demonstrate knowledge of creative movement such as exploration, improvisation, and problem solving.

5.2 Dance Concepts and Forms

- a. Demonstrate knowledge of skills used in rhythmic activities, creative dance, and structured dance forms (e.g., modern, ballet, jazz, tap, social, folk, country, ethnic, classical).
- b. Demonstrate an understanding of the use of dance to express perceptions, feelings, images, and thoughts.
- c. Demonstrate an understanding of dance concepts, forms, and basic vocabulary.

5.3 Gymnastic Movements

- a. Demonstrate knowledge of gymnastic forms such as rhythmic gymnastics and educational gymnastics.
- b. Demonstrate knowledge of gymnastic movements such as stunts, tumbling, apparatus work, and floor exercise.

5.4 Aquatic Skills

Demonstrate knowledge of aquatic skills such as water safety, swimming strokes, diving, and water fitness activities and games.

5.5 Individual, Dual, and Team Sports and Games

- a. Demonstrate knowledge of techniques, skills, critical elements, scientific principles, and equipment for individual, dual, and team sports and games.
- b. Apply knowledge of developmental progressions for sports activities.
- c. Demonstrate an understanding of principles of game strategies.
- d. Demonstrate knowledge of safety, etiquette, fair play, and fair competition.
- e. Apply knowledge of how to promote critical-thinking, decision-making, problem-solving, collaboration, communication, leadership, conflict-resolution, and teamwork skills through participation in sports and games.
- f. Demonstrate knowledge of the application of motor learning principles (e.g., transfer, game-like conditions) in instruction for sports and games.

5.6 Outdoor Education

- a. Demonstrate knowledge of techniques, skills, and safety issues for outdoor education activities.
- b. Identify long-term psychological, physiological, and lifestyle benefits of participation in outdoor education activities.

5.7 Nontraditional and Cooperative Activities

- a. Identify examples of nontraditional, global, and cooperative games and activities (e.g., Pickle ball, bocce ball, team juggling).
- b. Apply knowledge of how to promote critical thinking, decision making, problem solving, collaboration, cooperation, leadership, and communication through participation in non-traditional and cooperative activities.

5.8 Combative Activities

Demonstrate knowledge of one or more basic combative activities (e.g., fencing, wrestling, self-defense) and related safety issues.

5.9 Fitness Activities

Demonstrate an understanding of fitness activities such as aerobic conditioning, resistance and weight training, and stretching that increase cardiovascular efficiency, muscular strength and endurance, and flexibility.

(Challenge Standards for Student Success: Physical Education, Kindergarten Through High School (1998), Standards 1, 2, 3, and 4. Physical Education Teacher Preparation in California: Standards of Quality and Effectiveness for Subject Matter Programs (1994), Standard 5.)

Domain 6. Assessment and Evaluation Principles

Candidates must demonstrate an understanding of assessment principles and procedures in order to be able to evaluate the effectiveness of physical education strategies and activities in promoting student achievement of the goals presented in the Challenge Standards for Student Success: Physical Education (1998). A rigorous knowledge of assessment helps ensure that candidates can determine whether individuals, including those with diverse backgrounds, varying abilities, and special needs, have progressed and achieved specified goals in physical education. Candidates must be able to select, adapt, and develop appropriate assessment instruments and strategies based on sound research principles related to physical, motor, and fitness attributes and needs of individuals and classes.

6.1 Evaluation Methods in Physical Education

Demonstrate knowledge of evaluation methods used for the various domains of learning in physical education (e.g., physical, psychomotor, cognitive, social, affective).

6.2 Techniques of Test Construction, Evaluation, and Administration

Demonstrate knowledge of basic strategies of test construction, evaluation, and administration for traditional, holistic, and authentic assessments such as developing and using criteria to assess attainment of goals and objectives.

6.3 Test Characteristics

Apply knowledge of test characteristics such as validity, reliability, and objectivity.

6.4 Assessment Techniques and Tools

Apply knowledge of assessment strategies and instruments, including technology, that are appropriate for individuals with diverse backgrounds, special needs, and disabilities.

6.5 Types of Evaluation

- a. Demonstrate an understanding of types of evaluation such as norm-referenced, criterion-referenced, content-referenced, and authentic assessment.
- b. Demonstrate knowledge of formative and summative evaluation strategies.

6.6 Basic Statistical Applications

Demonstrate knowledge of basic statistical applications, including central tendency and variability, standard scores, norms, and correlations.

6.7 Interpretation and Communication of Assessment Data

Apply skills for interpreting assessment data and for communicating test results, performance profiles, and assessment data to various audiences (e.g., students, parents, school board members).

(Challenge Standards for Student Success: Physical Education, Kindergarten Through High School (1998), Standards 1, 2, and 5. Physical Education Teacher Preparation in California: Standards of Quality and Effectiveness for Subject Matter Programs (1994), Standards 6, 10, and 11.)

Domain 7. Integration of Concepts

Candidates must demonstrate an understanding of the integration of themes and concepts in physical education and the interrelationships between physical education and other subject areas in order to create effective learning environments and experiences that provide students with opportunities to achieve the goals contained in the Challenge Standards for Student Success: Physical Education (1998).

7.1 Interpretation and Application of the Subdisciplines of Kinesiology

Interpret and apply knowledge of the subdisciplines of kinesiology to facilitate student skill acquisition and performance.

7.2 Selecting, Adapting, and Modifying Activities

Use developmental information to appropriately select, adapt, and modify sports and games based on goals, skill levels, individual needs, and disabilities.

7.3 Developmental Progressions

Demonstrate knowledge of appropriate developmental progressions within and between individual movement skills.

7.4 Learning Concepts and Principles

Use concepts and principles of learning to analyze observed individual differences.

7.5 Connections Between Physical Education and Other Disciplines

Demonstrate knowledge of connections between physical education and other subject areas such as life and physical sciences, social science, health, mathematics, language arts, and visual and performing arts.

(Challenge Standards for Student Success: Physical Education, Kindergarten Through High School (1998), Standards 2, 3, 4, 6, and 7. Physical Education Teacher Preparation in California: Standards of Quality and Effectiveness for Subject Matter Programs (1994), Standards 5, 7, 9, 10, and 11.)

Part II: Subject Matter Skills and Abilities

Applicable to the Content Domains in Physical Education

Candidates apply knowledge of the theoretical and scientific bases of human movement to design, select, and modify physical activities that reflect students' developmental characteristics and individual differences. They draw upon knowledge of the subdisciplines of kinesiology to ensure that students are able to participate safely and effectively in physical education activities designed to develop and enhance their movement skills and movement knowledge.

Candidates understand significant factors and influences in developing, analyzing, and assessing basic motor skills. They know how to structure developmentally appropriate activities to promote maximum participation, inclusion, and active engagement in a wide range of movement forms, including traditional and nontraditional games, sports, dance, and fitness activities. They select and create cooperative and competitive activities that promote trust building, problem solving, collaboration, leadership, and strategic planning. They design fitness programs and recommend exercises and activities that are based on sound physiological and fitness training principles. Candidates understand the short-term and long-term benefits of a healthy, active lifestyle and know how to demonstrate and communicate these benefits to students.

Candidates apply knowledge of the sociological, psychological, philosophical, historical, and cultural dimensions of physical education to select and develop activities and approaches that promote students' development of positive personal and social behaviors, including social interaction and communication skills. They are aware of the role of movement activities in helping participants develop a sense of individual identity and group member identity. Candidates use knowledge of historical and cultural influences on games, sports, dance, and other physical activities to enhance student awareness and appreciation of cultural and artistic diversity, the role of movement in society, and the use of physical activity for enjoyment and self-expression. They recognize the importance of inclusion, fair play, and etiquette, as well as respect and consideration for self and others. Candidates understand that many factors influence an individual's activity choices and carefully evaluate the appropriateness of activities in terms of participants' age and developmental levels, motor proficiency, gender, cultural background, and physical strengths and limitations. Candidates apply knowledge of student development and learning to select activities and approaches that help students experience the benefits of individual challenges and successes, and they use principles of learning and motivation to spark students' interest in physical activity and their desire to engage in lifelong physical activity.

Candidates use their knowledge of assessment principles and procedures to collect, analyze, interpret, and summarize assessment data. They know physical fitness testing principles, technologies, and techniques and are prepared to administer the state-mandated physical fitness assessment. Candidates are able to interpret and communicate test results, performance profiles, and other types of assessment information in a meaningful and sensitive way.

Candidates understand connections among the subdisciplines of kinesiology, as well as connections between physical education and other subject areas and use this understanding to provide learning activities that promote student skill acquisition and performance. Candidates select, adapt, and modify activities based on program goals, individual differences, and individual needs so that all students have an opportunity to develop their understanding and application of movement skills and concepts and to use this knowledge in exploring other academic and life skills areas.