

TABLE OF CONTENTS

Pg.

**PART I: CONTENT DOMAINS FOR SUBJECT MATTER
UNDERSTANDING AND SKILL IN PHYSICAL EDUCATION**

***DOMAIN 1. PROFESSIONAL FOUNDATIONS*..... 1**

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.

***COMPETENCY 1.0 PHILOSOPHIES OF PHYSICAL EDUCATION*..... 1**

SKILL 1.1 Demonstrate knowledge of past and present philosophies of physical education and their impact on the goals, scope, and components of physical education programs 1

SKILL 1.2 Demonstrate an understanding of the organization, purposes, and goals of contemporary physical education programs 2

***COMPETENCY 2.0 HISTORICAL DEVELOPMENT*..... 3**

SKILL 2.1 Demonstrate knowledge of the historical development of physical education, including contributions of noteworthy physical educators of various backgrounds, races, ethnicities, genders, and national origins 3

***COMPETENCY 3.0 CURRENT RESEARCH, TRENDS, AND ISSUES*..... 8**

SKILL 3.1 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 8

SKILL 3.2
Demonstrate an understanding of legal and ethical issues in physical education, such as those related to supervision, liability, confidentiality, equity, disability, and diversity 11

TEACHER CERTIFICATION STUDY GUIDE

COMPETENCY 4.0 INTERRELATIONSHIPS OF THE SUBDISCIPLINES OF KINESIOLOGY..... 18

SKILL 4.1 Demonstrate an understanding of the interrelationships of the subdisciplines of kinesiology 18

COMPETENCY 5.0 PROFESSIONAL RESPONSIBILITIES, ORGANIZATIONS, AND RESOURCES 19

SKILL 5.1 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) 19

SKILL 5.2 Demonstrate knowledge of current state and national standards for physical education 20

COMPETENCY 6.0 RELATIONSHIP BETWEEN HUMAN MOVEMENT ACTIVITIES AND VALUES..... 21

SKILL 6.1 Demonstrate an understanding of human movement activities as instruments for maintaining traditional values and/or for examining and changing traditional values 21

SKILL 6.2 Analyze the role of physical education in promoting equity for diverse groups 22

DOMAIN 2. GROWTH, MOTOR DEVELOPMENT, AND MOTOR LEARNING..... 23

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.

COMPETENCY 1.0 INDIVIDUAL DIFFERENCES..... 23

SKILL 1.1 Demonstrate knowledge of individual motor and physical fitness variables such as agility, balance, flexibility, coordination, strength, and speed 23

TEACHER CERTIFICATION STUDY GUIDE

SKILL 1.2 Analyze individual physical changes and their impact on mechanical and physiological aspects of motor performance 24

COMPETENCY 2.0 PERCEPTUAL-MOTOR DEVELOPMENT 25

SKILL 2.1 Know components of perceptual-motor development such as visual, auditory, tactile, and kinesthetic discrimination and how they relate to skill acquisition and performance 25

COMPETENCY 3.0 PHYSICAL AND DEVELOPMENTAL CHANGES 26

SKILL 3.1 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 26

COMPETENCY 4.0 MOTOR LEARNING 29

SKILL 4.1 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 29

SKILL 4.2 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 31

SKILL 4.3 Analyze conditions that affect growth, motor development, and motor learning such as diseases, disabilities, and social, emotional, and environmental factors 32

SKILL 4.4 Demonstrate an understanding of developmental differences in motor learning and factors that affect motor skills acquisition for individuals with disabilities 34

DOMAIN 3. THE SCIENCE OF HUMAN MOVEMENT 38

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.

TEACHER CERTIFICATION STUDY GUIDE

COMPETENCY 1.0 BODY SYSTEMS	38
<i>SKILL 1.1</i> 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	38
COMPETENCY 2.0 BASIC KINEMATIC AND KINETIC PRINCIPLES OF MOTION	49
<i>SKILL 2.1</i> 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.....	49
COMPETENCY 3.0 BIOMECHANICAL PRINCIPLES	51
<i>SKILL 3.1</i> Apply knowledge of biomechanical principles (e.g., Newton's laws of motion, center of gravity) to a broad range of movement activities	51
<i>SKILL 3.2</i> Apply knowledge of biomechanical principles in relation to individual differences and to body mechanics for safe and efficient movement/motion	55
COMPETENCY 4.0 MOVEMENT ANALYSIS	59
<i>SKILL 4.1</i> Apply knowledge of movement analysis to movement patterns, including technologies for movement analysis	59
<i>SKILL 4.2</i> 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	61
COMPETENCY 5.0 COMPONENTS OF WELLNESS	65
<i>SKILL 5.1</i> 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)	65
<i>SKILL 5.2</i> Analyze the effects of various factors on physical fitness.....	71

TEACHER CERTIFICATION STUDY GUIDE

COMPETENCY 6.0 PHYSICAL FITNESS TESTING AND PRESCRIPTION 74

SKILL 6.1 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 74

COMPETENCY 7.0 FACTORS AFFECTING PHYSICAL PERFORMANCE 78

SKILL 7.1 Analyze the effects of factors such as gender, age, disability, environment, and substance abuse on physical performance 78

COMPETENCY 8.0 SAFETY, INJURY PREVENTION, AND FIRST AID 79

SKILL 8.1 Demonstrate an understanding of safety-related topics such as the prevention and care of injuries, cardiopulmonary resuscitation, and first aid 79

COMPETENCY 9.0 PHYSIOLOGICAL PRINCIPLES OF FITNESS..... 85

SKILL 9.1 Apply knowledge of physiological principles (e.g., overload, specificity, FIT, reversibility) to the components of physical fitness 85

DOMAIN 4. THE SOCIOLOGY AND PSYCHOLOGY OF HUMAN MOVEMENT 90

Candidates demonstrate an understanding of the sociology and psychology of human movement. Physical activity provides a context for a broad range of experiences that instructors can use 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.

COMPETENCY 1.0 PERSONAL DEVELOPMENT 90

SKILL 1.1 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 90

SKILL 1.2 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 96

TEACHER CERTIFICATION STUDY GUIDE

COMPETENCY 2.0 SOCIAL DEVELOPMENT..... 98

SKILL 2.1 Analyze the relationship of movement to social interaction and the development of group member identity through physical education activities..... 98

SKILL 2.2 Identify strategies and activities for promoting appropriate skills and behaviors for cooperation, competition, problem solving, trust building, and risk taking 99

COMPETENCY 3.0 ROLE OF MOVEMENT ACTIVITIES IN SOCIETY 101

SKILL 3.1 Demonstrate knowledge of the role of movement activities in society and the relationship of movement activities to social norms, ethics, values, and institutions 101

SKILL 3.2 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 102

SKILL 3.3 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)..... 103

COMPETENCY 4.0 FACTORS INFLUENCING ACTIVITY CHOICES 105

SKILL 4.1 Analyze factors that influence an individual's activity choices (e.g., gender, age, ethnicity, culture, disability) 105

DOMAIN 5. MOVEMENT CONCEPTS AND FORMS 106

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.

TEACHER CERTIFICATION STUDY GUIDE

COMPETENCY 1.0 FUNDAMENTAL AND CREATIVE MOVEMENT SKILLS	106
<i>SKILL 1.1</i> Demonstrate knowledge of fundamental movement skills such as basic locomotor and nonlocomotor 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)	106
<i>SKILL 1.2</i> Demonstrate knowledge of creative movement such as exploration, improvisation, and problem solving	110
COMPETENCY 2.0 DANCE CONCEPTS AND FORMS	111
<i>SKILL 2.1</i> 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)	111
<i>SKILL 2.2</i> Demonstrate an understanding of the use of dance to express perceptions, feelings, images, and thoughts	115
<i>SKILL 2.3</i> Demonstrate an understanding of dance concepts, forms, and basic vocabulary	115
COMPETENCY 3.0 GYMNASTIC MOVEMENTS	116
<i>SKILL 3.1</i> Demonstrate knowledge of gymnastic forms such as rhythmic gymnastics and educational gymnastics	116
<i>SKILL 3.2</i> Demonstrate knowledge of gymnastic movements such as stunts, tumbling, apparatus work, and floor exercise	118
COMPETENCY 4.0 AQUATIC SKILLS	119
<i>SKILL 4.1</i> Demonstrate knowledge of aquatic skills such as water safety, swimming strokes, diving, and water fitness activities and games	119
COMPETENCY 5.0 INDIVIDUAL, DUAL, AND TEAM SPORTS AND GAMES	121
<i>SKILL 5.1</i> Demonstrate knowledge of techniques, skills, critical elements, scientific principles, and equipment for individual, dual, and team sports and games	121
<i>SKILL 5.2</i> Apply knowledge of developmental progressions for sports activities	154

TEACHER CERTIFICATION STUDY GUIDE

<i>SKILL 5.3</i> Demonstrate an understanding of principles of game strategies.....	156
<i>SKILL 5.4</i> Demonstrate knowledge of safety, etiquette, fair play, and fair competition	160
<i>SKILL 5.5</i> 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	161
<i>SKILL 5.6</i> Demonstrate knowledge of the application of motor learning principles (e.g., transfer, game-like conditions) in instruction for sports and games	163
COMPETENCY 6.0 OUTDOOR EDUCATION	165
<i>SKILL 6.1</i> Demonstrate knowledge of techniques, skills, and safety issues for outdoor education activities	165
<i>SKILL 6.2</i> Identify long-term psychological, physiological, and lifestyle benefits of participation in outdoor education activities	169
COMPETENCY 7.0 NONTRADITIONAL AND COOPERATIVE ACTIVITIES	171
<i>SKILL 7.1</i> Identify examples of nontraditional, global, and cooperative games and activities (e.g., Pickle ball, bocce ball, team juggling)	171
<i>SKILL 7.2</i> Apply knowledge of how to promote critical thinking, decision making, problem solving, collaboration, cooperation, leadership, and communication through participation in nontraditional and cooperative activities	172
COMPETENCY 8.0 COMBATIVE ACTIVITIES	173
<i>SKILL 8.1</i> Demonstrate knowledge of one or more basic combative activities (e.g., fencing, wrestling, self-defense) and related safety issues	173
COMPETENCY 9.0 FITNESS ACTIVITIES	175
<i>SKILL 9.1</i> 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	175

TEACHER CERTIFICATION STUDY GUIDE

DOMAIN 6. ASSESSMENT AND EVALUATION PRINCIPLES 197

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.

COMPETENCY 1.0 EVALUATION METHODS IN PHYSICAL EDUCATION 197

SKILL 1.1 Demonstrate knowledge of evaluation methods used for the various domains of learning in physical education (e.g., physical, psychomotor, cognitive, social, affective) 197

COMPETENCY 2.0 TECHNIQUES OF TEST CONSTRUCTION, EVALUATION, AND ADMINISTRATION 202

SKILL 2.1 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 202

SKILL 2.2 Test Characteristics: Apply knowledge of test characteristics such as validity, reliability, and objectivity 203

SKILL 2.3 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 204

SKILL 2.4 Types of Evaluation: Demonstrate an understanding of types of evaluation such as norm-referenced, criterion referenced, content-referenced, and authentic assessment 205

SKILL 2.5 Types of Evaluation: Demonstrate knowledge of formative and summative evaluation strategies 205

TEACHER CERTIFICATION STUDY GUIDE

COMPETENCY 3.0 BASIC STATISTICAL APPLICATIONS..... 207

SKILL 3.1 Demonstrate knowledge of basic statistical applications, including central tendency and variability, standard scores, norms, and correlations 207

COMPETENCY 4.0 INTERPRETATION AND COMMUNICATION OF ASSESSMENT DATA 208

SKILLS 4.1 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)..... 208

DOMAIN 7. INTEGRATION OF CONCEPTS..... 209

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).

COMPETENCY 1.0 INTERPRETATION AND APPLICATION OF THE SUBDISCIPLINES OF KINESIOLOGY 209

SKILL 1.1 Interpret and apply knowledge of the subdisciplines of kinesiology to facilitate student skill acquisition and performance 209

COMPETENCY 2.0 SELECTING, ADAPTING, AND MODIFYING ACTIVITIES 211

SKILL 2.1 Use developmental information to appropriately select, adapt, and modify sports and games based on goals, skill levels, individual needs, and disabilities 211

COMPETENCY 3.0 DEVELOPMENTAL PROGRESSIONS..... 214

SKILL 3.1 Demonstrate knowledge of appropriate developmental progressions within and between individual movement skills 214

COMPETENCY 4.0 LEARNING CONCEPTS AND PRINCIPLES 216

SKILL 4.1 Use concepts and principles of learning to analyze observed individual differences 216

TEACHER CERTIFICATION STUDY GUIDE

COMPETENCY 5.0 CONNECTIONS BETWEEN PHYSICAL EDUCATION AND OTHER DISCIPLINES	218
<i>SKILL 5.1</i> 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	218
ANNOTATED LIST OF RESOURCES	220
SAMPLE TEST	222
ANSWER KEY	249
RATIONALES WITH SAMPLE QUESTIONS	250
SAMPLE WRITTEN ASSIGNMENT & RESPONSE	291