

# EXAM CONTENT OUTLINE

## PURPOSE

### THE AIM OF THE AMERICAN COUNCIL ON EXERCISE® (ACE®) PERSONAL

Trainer Certification examination is to evaluate if individuals have the knowledge and skills necessary to perform tasks that are critical for safe and competent practice as ACE Certified Personal Trainers. To ensure the ACE Personal Trainer Certification stays relevant and current, ACE conducts a role delineation study (RDS) every five years to update the composition and focus of the ACE Personal Trainer Certification program and exams.

In September 2016, ACE and Castle Worldwide, Inc., a certification and licensure design, development, and testing service company, conducted an RDS for the ACE Personal Trainer Certification to identify the primary tasks performed by personal trainers on a regular basis. The fundamental purpose of this RDS was to establish and validate appropriate content areas for the ACE Personal Trainer Certification examination. The result of this process includes this exam content outline, which serves as a blueprint for each ACE Personal Trainer Certification examination. As you prepare for the exam, it is important to remember that all exam questions are based on this outline.

The blueprint is comprised of tasks, knowledge, and skills necessary for a personal trainer to perform job responsibilities at the entry-level of competence for the profession. These tasks, knowledge, and skills were established by the RDS panel of personal training subject matter experts, and then sent out to thousands of ACE Certified Personal Trainers for validation.

It is the position of ACE that the recommendations outlined here are not exhaustive to the qualifications of a personal trainer, but represent a minimum level of proficiency and theoretical knowledge required to practice as a competent and safe personal trainer. All tasks are assessed on every exam; however, it is important to note that not all knowledge and skill statements listed in the exam content outline will be addressed on each exam administration.

### ATTENTION EXAM CANDIDATES!

When preparing for an ACE certification exam, be aware that the material presented in this manual, or any text, may become outdated due to the evolving nature of the fitness industry, as well as new developments in current and ongoing research. These exams are based on an in-depth job analysis and an industry-wide validation survey. By design, these exams assess a candidate's knowledge and application of the most current scientifically based professional standards and guidelines. The dynamic nature of this field requires that ACE certification exams be regularly updated to ensure that they reflect the latest industry findings and research. Therefore, the knowledge and skills required to pass these exams are not solely represented in this or any industry text. In addition to learning the material presented in this manual, ACE strongly encourages all exam candidates and fitness professionals to keep abreast of new developments, guidelines, and standards from a variety of valid industry sources.

For the most up-to-date version of the Exam Content Outline, please go to [www.ACEfitness.org/PTexamcontent](http://www.ACEfitness.org/PTexamcontent) and download a free PDF.

## DESCRIPTION

**THE 2016 PERSONAL TRAINER ROLE DELINEATION STUDY DEFINED THE** task, knowledge, and skill statements in the current exam content outline. Tasks are the individual functions, whether mental or physical, required for certain aspects of a job or profession. Domains are the major areas of responsibilities or activities of a job or profession, and they represent the logical grouping of tasks.

Knowledge and skill statements list the knowledge and/or skills necessary to perform a given task. They include information, actions, or other learnable skills a candidate must possess in order to perform a specific task. An organized body of factual or procedural information is called knowledge, while the proficient physical, verbal, or mental manipulation of data, people, or objects is called skill.

The exam content outline for the ACE Personal Trainer Certification examination has 15 tasks grouped into four domains. Through the RDS process, each domain was assigned a weight that represents the approximate percentage of exam questions that will fall within that domain on each exam. The ACE Personal Trainer Certification exam content outline is presented below, with each domain and associated percentage weight, the tasks that fall within each domain, and the knowledge and skill statements that are associated with performing each task.

*Note:* All abbreviations used in the Exam Content Outline are defined on page 725.

## DOMAIN I: INTERVIEWS AND ASSESSMENTS

**23%**

**DEVELOP RAPPORT WITH CLIENTS TO OBTAIN RELEVANT HEALTH AND LIFESTYLE INFORMATION NECESSARY FOR SUCCESSFUL PROGRAM DESIGN AND OUTCOMES.**

**TASK 1: Obtain comprehensive health, medical, exercise, and lifestyle information using questionnaires, interviews, and appropriate documents to determine risk for exercise participation, identify the need for medical clearance and referrals, and facilitate program design.**

### Knowledge of:

1. Effective communication strategies (e.g., active listening, verbal and nonverbal)
2. Impact of age, culture, and other demographic factors on the ability to build rapport and gather relevant health and lifestyle information
3. Tools and methods used to gather information required for program design and implementation (e.g., pre-participation health screening, motivational interviewing, waivers)
4. Appropriate dietary evaluation methods, purposes, inherent risks, and benefits (e.g., dietary recall, food logs, questionnaires)
5. Population- and condition-specific health and exercise considerations and contraindications (e.g., older adult, prenatal/postpartum, youth, low-back issues)
6. Risk factors for cardiovascular and other chronic diseases or conditions for effective risk stratification and exercise participation
7. Effects of common medications on heart-rate and other physiological responses to exercise

### Skill in:

1. Building rapport, establishing credibility, and developing trust
2. Conducting effective interviews to gather relevant health and lifestyle information.
3. Interpreting interview and questionnaire responses to determine risk factors for exercise participation using industry standards and guidelines (e.g., PAR-Q, ACSM guidelines) and facilitate program design.
4. Obtaining medical clearance and referrals when appropriate

**TASK 2: Assess client readiness for behavior change and evaluate exercise attitudes and beliefs through effective communication to build rapport and establish appropriate goals.**

**Knowledge of:**

1. Effective communication strategies (e.g., active listening, verbal and nonverbal)
2. Tools and methods for determining client attitudes, preferences, and readiness for behavior change (e.g., exercise history and attitude questionnaire, motivational interviewing)
3. Common barriers and motivators for exercise participation and behavior change
4. Theories of behavior change (e.g., transtheoretical model, health belief model)
5. Types of goals and goal-setting processes (e.g., SMART)

**Skill in:**

1. Building rapport, establishing credibility, and developing trust
2. Applying effective interviewing strategies (e.g., open-ended questions, clarification, probing)
3. Determining client attitudes, preferences, and readiness for behavior change and appropriate strategies to motivate program adoption and adherence

**TASK 3: Identify and evaluate the quality of foundational movements through observations and assessments to develop appropriate exercise programming that enhances function, health, fitness, and performance.**

**Knowledge of:**

1. Exercise-related anatomy and kinesiology (e.g., major muscle groups, joint actions)
2. Physical laws of motion (e.g., force production, momentum)
3. Biomechanics, joint mobility and stability, and their impact on posture and movement
4. Foundational movement patterns (e.g., squat, single-leg, push, pull, rotation)
5. Effective methods for assessing joint position, stability, and mobility to determine their impact on posture and movement

**Skill in:**

1. Identifying the effect of daily activities on movement efficiency (e.g., lifestyle, occupational, athletic)
2. Observing and identifying exaggerated postural deviations
3. Selecting and administering appropriate methods for assessing joint mobility and stability
4. Selecting and administering appropriate methods for assessing movement and balance
5. Interpreting results of postural observation and movement screens and assessments to facilitate program design

**TASK 4: Select and conduct baseline physiological assessments based on client interviews, questionnaires, and standardized protocols to facilitate safe and effective program design and monitor changes over time.**

**Knowledge of:**

1. Exercise testing protocols and methods (e.g., administration, reporting, data collection, test termination criteria)
2. Appropriate application and sequencing of fitness assessments
3. Physiological responses to acute exercise participation and variations in workload
4. Variables that affect acute physiological responses to exercise (e.g., age, gender, health status, environmental conditions, hydration, medications)

**Skill in:**

1. Selecting and administering appropriate fitness assessments (e.g., cardiorespiratory, muscular strength and endurance, flexibility, body composition)
2. Applying test termination criteria
3. Evaluating and interpreting fitness assessment results to facilitate program design
4. Communicating fitness assessment results

**DOMAIN II: PROGRAM DESIGN AND IMPLEMENTATION 31%****CREATE INDIVIDUALIZED PROGRAMS THAT PROMOTE HEALTHY BEHAVIORS THROUGH EXERCISE, NUTRITION, EDUCATION, AND COACHING.**

**TASK 1: Establish appropriate functional, health, fitness, or performance goals by interpreting client interview and assessment data to design personalized exercise programs.**

**Knowledge of:**

1. Exercise-related anatomy, physiology, and biomechanics (e.g., major muscle groups, joint actions, cardiorespiratory response)
2. Nutrition and weight-management principles and guidelines (e.g., energy and hydration requirements)
3. Established norms and guidelines for interpreting client health history, risk factor, and other assessment data
4. Effective goal-setting strategies used to elicit behavior change (e.g., SMART)
5. Factors influencing exercise participation and adherence (e.g., personal attributes, environment, physical activity)

**Skill in:**

1. Interpreting responses to assessments and exercise (e.g., physiological, psychological, emotional)
2. Interpreting responses to interviews and assessments
3. Interpreting findings from various assessments (e.g., cardiorespiratory fitness, flexibility, muscular strength and endurance, body composition, blood pressure)
4. Communicating assessment results effectively
5. Facilitating effective goal setting (e.g., SMART goals, process, outcome)
6. Designing individualized exercise programs based on interviews, assessments, and goals

**TASK 2: Design personalized exercise programs by applying appropriate exercise principles and guidelines to enhance cardiorespiratory fitness, muscular strength and endurance, and flexibility.**

**Knowledge of:**

1. Exercise-related anatomy, physiology, and biomechanics (e.g., major muscle groups, joint actions, cardiorespiratory response)
2. Components of fitness (e.g., cardiorespiratory, body composition, muscular strength and endurance, flexibility)
3. General exercise and program-design principles (e.g., overload, specificity, diminishing returns, recovery, reversibility, progression)
4. Appropriate methods for monitoring individualized responses to cardiorespiratory exercise (e.g., heart rate, ventilatory thresholds, RPE)
5. Acute and chronic physiological and psychological adaptations to exercise
6. Industry guidelines for exercise program variables (e.g., frequency, intensity, time, type, volume, pattern, progression)
7. Appropriate pre- and post-exercise protocols and techniques (e.g., warm-up, cool-down, movement preparation, recovery, myofascial release)
8. Joint-specific range of motion
9. Professional organizations and government agencies that establish and publish evidence-based standards and guidelines for exercise (e.g., ACSM, ACOG, ADA, AHA, NIH, CDC)

**Skill in:**

1. Designing individualized exercise programs in accordance with program goals (e.g., cardiorespiratory, muscular strength and endurance, mobility, stability, flexibility, body composition)

2. Selecting and sequencing appropriate exercises based on individualized health, fitness, movement, and goals
3. Designing appropriate cardiorespiratory programs based on individualized exercise responses (e.g., heart rate, ventilatory thresholds)
4. Implementing appropriate program components (e.g., warm-up, cardiorespiratory, muscular strength and endurance, cool-down) and effective exercise techniques
5. Modifying exercise technique as needed to promote safe exercise participation and goal attainment
6. Modifying instruction and program components to accommodate individual differences in health and/or fitness status

**TASK 3: Select appropriate exercises and equipment and integrate them into client programs in accordance with evidence-based research to improve function, health, fitness, and performance.**

**Knowledge of:**

1. General exercise and program design principles (e.g., overload, specificity, diminishing returns, recovery, reversibility, progression)
2. Appropriate exercise and equipment selection needed to achieve task- and goal-specific outcomes
3. Appropriate methods for monitoring individualized responses to cardiorespiratory exercise (e.g., heart rate, ventilatory thresholds, RPE)
4. Acute and chronic physiological and psychological adaptations to exercise
5. Physical laws of motion (e.g., inertia, acceleration, momentum, impact and reaction forces, lever classes, force production)
6. Optimal joint stability and mobility, movement patterns, and their relation to posture and the kinetic chain (e.g., joint alignment, significant muscle imbalances)
7. Strategies and techniques for progressing or regressing the intensity or complexity of movement (e.g., modification of base of support, amount of load, line of pull, velocity, center of gravity)

**Skill in:**

1. Identifying deviations from optimal movement patterns
2. Identifying physiological demands of activities of daily living
3. Identifying physiological responses based on observation and feedback during assessments and exercise
4. Modifying instruction and program components to accommodate health and/or fitness status
5. Designing appropriate cardiorespiratory programs based on individualized exercise responses (e.g., heart rate, ventilatory thresholds)
6. Incorporating appropriate exercises and equipment into program design
7. Implementing safe and effective exercise programs to address muscle imbalances

**TASK 4: Instruct clients on safe and effective equipment use and exercise techniques using verbal, visual, and kinesthetic cues to achieve program goals.**

**Knowledge of:**

1. Appropriate exercise technique using a variety of equipment and modalities
2. Communication strategies (e.g., active listening, verbal and nonverbal communication)
3. Forms of cueing (e.g., exercise demonstration, verbal instruction, tactile correction)
4. Educational strategies used to promote client safety and program success
5. Methods for measuring and monitoring exercise intensity

**Skill in:**

1. Personalizing communication strategies to accommodate client characteristics (e.g., learning style, sensory limitations, educational background, attitudes, beliefs)

2. Modifying exercise technique as needed to promote goal attainment
3. Recognizing and correcting compensatory movement patterns
4. Teaching safe and effective exercise technique using a variety of equipment, modalities, and feedback

## DOMAIN III: PROGRAM MODIFICATION AND PROGRESSION 26%

### MONITOR, EVALUATE, AND MODIFY PROGRAMS TO PROMOTE CLIENT ADHERENCE AND ENSURE PROGRESS TOWARD GOALS.

**TASK 1: Promote program adherence through motivation, education, and modification to achieve client goals.**

**Knowledge of:**

1. Current health and fitness methods, products, and services (e.g., diets, supplements, equipment, apparel, small-group training) and their associated risks and benefits
2. Factors that impact adherence to behavior-change programs
3. Communication styles and techniques that promote adherence to client goals
4. Acute and chronic physiological and psychological adaptations to exercise
5. Strategies and techniques for progressing or regressing the intensity or complexity of exercise movements (e.g., modification of base of support, amount of load, line of pull, velocity, center of gravity), cardiorespiratory exercise, and total workload
6. Credible resources that support healthy lifestyle modifications (e.g., evidence-based online exercise libraries, nutrition information)

**Skill in:**

1. Maintaining rapport, credibility, and trust
2. Educating clients about basic nutrition and weight-management guidelines
3. Educating clients on how to manage the frequency, intensity, and complexity of various exercises
4. Educating clients on how to manage external factors that impact adherence (e.g., time, socioeconomic, social)
5. Modifying exercise technique, selection, and intensity as needed to ensure safety and promote goal attainment
6. Motivating clients to adhere to exercise programs

**TASK 2: Recognize and respond to lapses in program adherence by identifying barriers and providing solutions to ensure consistent client engagement.**

**Knowledge of:**

1. Biological, psychological, physiological, and social factors that influence program participation and adherence
2. Personal factors or characteristics that may influence communication, lifestyle, and preferences
3. Strategies to prevent lapses and overcome common barriers to exercise program adherence

**Skill in:**

1. Identifying potential barriers that influence program adherence and goal attainment
2. Implementing strategies to help clients overcome barriers
3. Adjusting program variables (e.g., sets, repetitions, intensity, rest, tempo) to promote adherence
4. Using appropriate verbal and nonverbal communication techniques
5. Identifying the need for referral to appropriate allied health professionals

**TASK 3: Routinely evaluate progress by using data, observations, and client feedback to modify programs as needed.**

**Knowledge of:**

1. Appropriate nutrition assessments and protocols (e.g., recall, food logs, questionnaires) that are within the exercise professional's scope of practice
2. Appropriate frequency and sequencing of fitness assessments
3. Appropriate modifications to program components based upon assessment data
4. Industry guidelines for appropriate progressions and regressions (e.g., frequency, intensity, duration, type) for cardiorespiratory, muscular strength and endurance, and flexibility programs

**Skill in:**

1. Selecting and administering appropriate assessments (e.g., physiological, nutritional, behavioral)
2. Gathering and interpreting client data and feedback
3. Reevaluating and adjusting program goals as necessary
4. Recognizing changes in cardiorespiratory fitness and muscle function, weakness, and imbalances
5. Recognizing signs and symptoms of overtraining (e.g., decline in physical performance, change in appetite, excessive fatigue)
6. Selecting exercises, equipment, and workloads to progress and regress exercise programs as needed based on client performance, health, and fitness

## DOMAIN IV: PROFESSIONAL CONDUCT, SAFETY, AND RISK MANAGEMENT

20%

**FULFILL PROFESSIONAL RESPONSIBILITIES THROUGH CONTINUING EDUCATION, COLLABORATION WITH ALLIED HEALTH PROFESSIONALS, AND ADHERENCE TO INDUSTRY STANDARDS AND PRACTICES NECESSARY TO PROTECT CLIENTS, FACILITY OPERATORS, AND THE PERSONAL TRAINER.**

**TASK 1: Apply risk-management strategies in accordance with recognized standards, guidelines, laws, and regulations to protect the client, personal trainer, and other relevant parties to minimize liability.**

**Knowledge of:**

1. Applicable guidelines, standards, laws, and regulations (e.g., IHRSA, ACSM, OSHA, FLSA, NCCA, CREP, HIPAA)
2. Basic procedures for emergency response within the scope of practice (e.g., CPR, AED, first aid, emergency action plans)
3. Basic guidelines for injury prevention and safety (e.g., equipment condition, spotting, exercise environment)
4. Factors contributing to negligence (e.g., acts of commission, acts of omission)
5. Scope of practice, ACE Code of Ethics, and professional conduct
6. Professional liability insurance requirements

**Skill in:**

1. Documenting and securing confidential information (e.g., incident reports, accident reports, waivers, informed consent, SOAP notes)
2. Conducting risk analyses to minimize liability (e.g., identification, evaluation, management)
3. Referring clients to appropriate allied health professionals

**TASK 2: Document and secure client data, communications, and progress in accordance with legal and regulatory requirements to maintain confidentiality and minimize liability.****Knowledge of:**

1. Legal and regulatory requirements (e.g., HIPAA, FERPA)
2. Methods for maintaining confidentiality through secured data storage
3. Professional conduct regarding communication platforms, protection of privacy, and the proper use of technology (e.g., social media, email, text messaging, applications, wearable devices)

**Skill in:**

1. Identification and protection of confidential documents and information (e.g., personal health information)
2. Documenting and securing confidential information (e.g., incident reports, accident reports, waivers, informed consent, SOAP notes)
3. Identifying and implementing proper protocols for secure use of technology (e.g., communication, marketing, data tracking, consent)

**TASK 3: Enhance competency by using credible resources to stay current with evidence-based research, theories, and practices.****Knowledge of:**

1. Professional organizations and government agencies that establish and publish evidence-based research and guidelines (e.g., ACOG, ACSM, DHHS, USDA, NIH, CDC)
2. Credible continuing education providers, programs, and resources (e.g., certifying organizations, conferences, live and virtual courses, scientific and professional journals)
3. Continuing education and recertification requirements

**Skill in:**

1. Identifying appropriate continuing education providers and courses
2. Applying appropriate knowledge and skills obtained through continuing education and professional development
3. Identifying appropriate products and services using information obtained from credible resources

**TASK 4: Prevent injury by identifying and reporting potential hazards in accordance with recommended industry or facility protocols.****Knowledge of:**

1. Basic procedures for emergency response within the scope of practice (e.g., CPR, AED, first aid, emergency action plans)
2. Basic guidelines for injury prevention and safety (e.g., equipment condition, spotting, exercise environment)
3. Industry guidelines for exercising in various environmental conditions (e.g., altitude, hazardous weather, temperature, humidity)

**Skill in:**

1. Identifying, responding to, and documenting emergency situations
2. Identifying, responding to, and documenting safety hazards
3. Instructing and supervising safe and effective use of exercise equipment in various settings
4. Modifying exercise sessions based on extreme environmental conditions (e.g., altitude, hazardous weather, temperature, humidity)

*Note:* PAR-Q = Physical Activity Readiness Questionnaire; ACSM = American College of Sports Medicine; SMART = Specific, measurable, attainable, relevant, time-bound; RPE = Ratings of perceived exertion; ACOG = American College of Obstetricians and Gynecologists; ADA = American Diabetes Association; AHA = American Heart Association; NIH = National Institutes of Health; CDC = Centers for Disease Control and Prevention; IHRSA = International Health, Racquet and Sportsclub Association; OSHA = Occupational Safety and Health Administration; FLSA = Fair Labor Standards Act; NCCA = National Commission for Certifying Agencies; CREP = Coalition for the Registration of Exercise Professionals; HIPAA = Health Insurance Portability and Accountability Act; CPR = Cardiopulmonary resuscitation; AED = Automated external defibrillator; FERPA = Family Educational Rights and Privacy Act; DHHS = U.S. Department of Health & Human Services