

## NASM Entry-level Personal Fitness Training Competencies

### List of Competencies

#### Domain I: Basic and Applied Sciences

	A	Understand Concepts and Structures of Anatomy
	1	Nervous system
	2	Muscular system
	3	Skeletal system
	4	Endocrine system
	5	Cardiorespiratory system
	B	Understand Functions of Exercise Physiology
	1	Nervous system (e.g., motor units, action potential)
	2	Muscular system (e.g., sliding filament theory, muscle action spectrum)
	3	Skeletal system (e.g., arthrokinematics)
	4	Endocrine system (e.g., feedback mechanisms, responses to exercise)
	5	Cardiorespiratory system (e.g., cardiovascular physiology and cardiorespiratory physiology)
	6	Bioenergetics (e.g., energy systems, anaerobic vs aerobic metabolism)
	C	Comprehend Principles of Human Movement Science
	1	Functional biomechanics (e.g., levers, force, torque, planes of motion, joint motion)
	2	Kinesiology
		a. Force couple relationships
		b. Length tension relationships
		c. Reciprocal inhibition
		d. Synergistic dominance
		e. kinetic chain
	3	Motor development
		a. Motor learning
		b. Motor control

### List of Competencies

#### Domain II: Assessment

	A	Perform, Interpret, and Record Subjective Assessments
	1	Types of subjective assessments
		a. PAR-Q
		b. Medical history
		c. Medical risk factors (e.g., medications, surgeries, chronic disease, metabolic syndrome)
		d. Lifestyle questionnaire (e.g., sleeping habits, occupation, hobbies, stress level)
	2	Special populations
		a. Youth
		b. Seniors
		c. Prenatal and postnatal
	B	Perform, Interpret, and Record Objective Assessments
	1	Cardiorespiratory assessment
		a. Maximum heart rate
		b. Heart rate training zones
		c. Sub VO <sub>2</sub> max test (e.g., step test, Rockport Walk test, heart rate monitoring systems, metabolic testing)
	2	Physiologic assessments
		a. Resting heart rate
		b. Blood pressure

	3	Body composition assessments
	4	Strength assessments (e.g., maximal, submaximal)
	5	Performance assessments (e.g., stability, balance, power, speed, agility)
	C	Perform, Interpret, and Record Movement Assessments
	1	Overhead Squat Test
	2	Single-leg Squat Test
	3	Pushing
	4	Pulling
	D	Perform, Interpret, and Record Postural Assessments
	1	Upper extremity
	2	Lumbo-pelvic-hip complex
	3	Lower extremity
List of Competencies		
Domain III: Exercise Technique and Training Instruction		
	A	Exercise Execution Following Kinetic Chain Checkpoints (e.g., starting position, ending position)
	1	Integrated flexibility
		a. Self myofascial release (SMR)
		b. Static
		c. Active
		d. Dynamic
	2	Integrated training components (e.g., stabilization, strength, power)
		a. Core training
		b. Balance training
		c. Reactive (plyometric) training
		d. Speed, agility, and quickness training
		e. Resistance training
	3	Cardiorespiratory stage training (e.g., base, anaerobic threshold, submaximal)
	B	Select Exercise Modification (pro-/regression)
	1	Neurological continuum (e.g., modality selection, extremity symmetry)
	2	Mechanical/movement patterns
	3	Bioenergetics
	C	Implement Safe Training Methods
	1	Spotting techniques
	2	Environment
	3	Exercise risk vs benefit (e.g., behind the neck pulls/presses, dips, upright rows)
	4	Monitor exercise intensity
	5	Medical signs and symptoms that require training modifications
	6	Overtraining and its effects
	D	Understand Cueing Techniques
	1	Kinesthetic
	2	Auditory
	3	Visual
List of Competencies		
Domain IV: Program Design		
	A	Understand and Apply Program Design Fundamentals
	1	Principle of specificity
		a. Mechanical specificity
		b. Neuromuscular specificity
		c. Metabolic specificity

	2	Principle of overload
	3	Principle of variation
	4	Periodization (e.g., linear, undulating)
		a. Stabilization (e.g., stabilization endurance training)
		b. Strength (e.g., strength endurance training, hypertrophy, maximal strength)
		c. Power
	5	General adaptation syndrome
		a. Alarm reaction
		b. Resistance development
		c. Exhaustion
	6	Acute variables
		a. Exercise selection
		b. Sets
		c. Repetitions
		d. Intensity
		e. Tempo
		f. Rest interval
		g. Exercise order
		h. Volume
		i. Duration
		j. Frequency
	7	Integrated training continuum
		a. Warm up
		b. Core training
		c. Balance training
		d. Reactive training
		e. SAQ training
		f. Resistance training
		g. Cardiorespiratory Training
		h. Cool down
	8	Resistance training systems
		a. Single set
		b. Multiple set
		c. Super set
		d. Pyramid set
List of Competencies (Program Design, continued)		
		e. Circuit training
		f. Peripheral heart action
		g. Metabolic density training
		h. Split routines
		i. Horizontal loading
		j. Vertical loading
	B	Design Client-Specific Program Based Upon Assessment Results
	C	Create Client-Specific Cardiorespiratory Programs
	1	Frequency
	2	Intensity
	3	Type
	4	Time
	5	Enjoyment

	D	Understand Special Populations and Considerations for Exercise Program Design
	1	Diabetes
	2	Hypertension
	3	Arthritis
	4	Coronary heart disease
	5	Cancer
	6	PAD
	7	Obesity
	8	Lung disease (e.g., asthma, COPD)
	9	Osteoporosis
	10	Fibromyalgia
	11	Youth
	12	Seniors
	13	Prenatal and postnatal
	E	Design and Apply Program Modifications Based on Training Setting
	1	Small group personal training
	2	Boot camps
	3	30-minute sessions
	4	High altitude
	5	Temperature
	6	Modalities (e.g., free weights, tubing, kettlebells)
	F	Understand Physical Activity Guidelines for Americans
List of Competencies		
Domain V: Considerations in Nutrition		
	A	Understand Basic Nutritional Concepts
	1	Carbohydrates
	2	Protein
	3	Fat
	4	Water (role in diet and exercise)
	5	Vitamins and minerals (e.g., general health, performance enhancement)
	6	Calories (e.g., general health, weight gain/loss, performance enhancement)
	7	Digestion and elimination
	8	Understand Dietary Guidelines for Americans (e.g., food guide pyramid)
	9	Meal timing and frequency (e.g., pre/post/during workout)
	B	Understand Risk and Benefits of Nutritional Supplements and Ergogenic Aids
	1	General health (e.g., multi-vitamin, calcium supplement)
	2	Alter body composition (e.g., fat loss, mass gain)
	3	Performance enhancement (e.g., anabolic steroids, caffeine, creatine)
	C	Understand Weight Management Concepts
	1	Diets
		a. Healthy menu composition
		b. Crash/fad/myth diets
	2	Law of thermodynamics
	3	Metabolic rates (e.g., basal, resting)
	4	Endocrine abnormalities
	5	Nutritional guidelines for body composition alteration
	D	Understand Protocols for Special Dietary Considerations
	1	Vegetarian
	2	Lactose intolerance

	3	Chronic disease
	E	Understand Nutritional Guidelines for Enhancing Athletic Performance (e.g., anaerobic, aerobic)
List of Competencies		
Domain VI: Client Relations and Behavioral Coaching		
	A	Communication Components
	1	Types of communication
		a. Verbal
		b. Nonverbal
	2	Asking questions
		a. Open-ended
		b. Close-ended
	3	Listening (e.g., paraphrasing, active listening)
	4	Rapport building (e.g., showing empathy, validating)
	B	Understand and Facilitate Client Goal Setting Strategies and Procedures
	C	Implement Lifestyle and Behavioral Coaching Strategies
	1	Human behavior (e.g., cognitive, affective, physiological)
	2	Client expectations
	3	Coping strategies
		a. Stress management
		b. Time management
		c. Interpersonal influence (e.g., social settings, work setting, family)
		d. External influence (e.g., media, environment, cultural)
List of Competencies		
Domain VII: Professional Development, Practice, and Responsibility		
	A	Understand and Uphold NASM-BOC Code of Professional Conduct
	1	Competencies through continuing education
	2	Safe and ethical training practices (e.g., OSHA)
	3	Facility maintenance (e.g., equipment, safety, layout, disinfection)
	4	Special considerations for training diverse clientele (e.g., age, gender, cultural background, ability)
	5	Work environment differences (e.g., health club, corporate facility, cruise ship)
	6	Role and professional limitations of personal trainer (e.g., referral to registered dietitians, allied health care professionals)
	7	Professionalism and ethical business practices
		a. Liability insurance
		b. Record keeping
		c. Medical clearance
		d. Physical appearance and attire
		e. Timeliness
		f. Sexual harrassment awareness
		g. Client confidentiality (e.g., HIPAA)
	B	Follow Proper Procedures in an Emergency Situation
	C	Implement Goal Setting Strategies and Procedures
	1	Personal
	2	Professional