

Group Exercise Instructor Study Guide

If you are studying for the Group Fitness Instructor Certification Exam, you will want to read and study the following sections and chapters of the **NETA Fitness Professional Manual** prior to attending the Group Exercise Instructor Certification Workshop, and/or sitting for the Group Exercise Instructor Certification Exam.

Section 1 – Exercise Related Sciences

Chapter 1 -Exercise Physiology

- A. Terminology
- B. Energy Systems -Bioenergetics
 - B.1 Phosphagen System
 - B.2 Anaerobic Glycolysis
 - B.3 Aerobic Glycolysis
 - B.4 Fatty Acid Oxidation
- C. Metabolic Responses to Exercise
 - C.1 Short Term
 - C.2 Long Term
 - C.3 Transition
- D. Cardiorespiratory Adaptations
 - D.1 Terminology
 - D.2 Anatomy of the Heart
 - D.3 Respiratory Adaptations
- E. Muscle Physiology
 - E.1 Muscle Fiber Type
 - E.2 Neuromuscular System

Chapter 2 – Anatomy

- A. Skeletal
 - A.1 Joint Articulations
 - A.2 Spine
- B. Muscular
 - B.1 Muscle Classification and Structure
 - B.2 Terminology for Location
 - B.3 Muscle Functions
 - B.4 Muscle Contraction

Chapter 3 – Kinesiology

- A. Joint Actions and Descriptions
- B. Muscles of the Shoulder Complex
- C. Muscles of the Upper Arm
- D. Muscles of the Trunk
- E. Muscles of the Hip and Knee
- F. Muscles of the Lower Leg

Chapter 4 – Biomechanics

- G. Postural Alignment
 - G.1 Alignment Viewed from a Profile
 - G.2 Alignment and the Pull of Gravity

Chapter 5 – Nutrition

- A. Terminology
- B. Dietary Guidelines
 - B.1 Adequate Nutrients within Calorie Needs
 - B.2 Weight Management
 - B.3 Physical Activity
 - B.4 Food Groups to Encourage

- B.5 Fats
- B.6 Carbohydrates
- B.7 Sodium and Potassium
- B.8 Alcohol
- B.9 Food Safety

C. USDA Food Pyramid

D. Healthy Eating Pyramid

E. Six Essential Nutrients

- E.1 Carbohydrates
- E.2 Protein
- E.3 Fats
- E.4 Vitamins
- E.5 Minerals
- E.6 Water

F. Nonessential Nutrients

- F.1 Fiber
- F.2 Cholesterol
- F.3 Alcohol

G. Food Labeling

- G.1 Nutrition Panels
- G.2 Percent Daily Value (%DV)
- G.3 Common Serving Sizes
- G.4 Nutritional Claims
- G.5 Serving Percentages

H. Weight Management

I. Eating Disorders

- I.1 Anorexia Nervosa
- I.2 Bulimia Nervosa
- I.3 Binge Eating Disorder
- I.4 Professional Ethics
- I.5 Resources

Section 1 Review

Section 2 – Injury Management and Medical Considerations

Chapter 6 -Injury Prevention

- A. Terminology
- B. Principles of Injury Prevention
 - B.1 Proper Warm-up
 - B.2 Biomechanics
 - B.3 Do Not Exercise Through Pain
 - B.4 Program Design
 - B.5 Muscular Balance
 - B.6 Equipment
 - B.7 Shoes
 - B.8 Flooring
 - B.9 Workout Pace
 - B.10 Cool-down
 - B.11 Stretching

Chapter 7 – Common Exercise Related Injuries

- A. Strain
- B. Sprains
- C. Closed Wounds

- D. Open Wounds
- E. Fractures
- F. Shin Splints
- G. Plantar Facitis
- H. Patella Injuries
- I. Achilles Injuries
- J. Meniscus Tears
- K. Tendinitis
- L. Low Back Injuries
- M. Delayed Onset Muscle Soreness

Chapter 8 – Responding to Injuries

- A. P.R.I.C.E.
- B. Physician Prescribed Treatment
- C. Long Term Injury Management
- D. Emergency Procedures
- E. Recognizing Warning Signs
- F. CPR

Chapter 9 – Medical Considerations

- A. Asthma
- B. Arthritis
- C. Diabetes
- D. Hypertension
- E. Osteoporosis
- F. Coronary Artery Disease
- G. Heat Stress
 - G.1 Heat Cramps
 - G.2 Heat Exhaustion
 - G.3 Heat Stroke

Section 3 – Legal Issues and Professionalism

Chapter 10 – Documentation

- A. Informed Consent
- B. Waivers
- C. Medical Clearance
- D. Health History

Chapter 11 – Legal Issues

- A. Liability
- B. Negligence
- C. Waivers
- D. Liability Insurance
- E. Potential Sources of Liability
- F. Scope of Practice

Group Exercise Instructor Study Guide

If you are studying for the Group Fitness Instructor Certification Exam, you will want to read and study the following sections and chapters of the **NETA Fitness Professional Manual** prior to attending the Group Exercise Instructor Certification Workshop, and/or sitting for the Group Exercise Instructor Certification Exam.

G. Environmental Safety Concerns

Chapter 12 – Music Licensing & Copyright Laws

- A. Copyright Laws
- B. Music Licensing

Chapter 13 – Professional Code of Ethics

- B. Group Exercise Instructor

Chapter 14 – Communication and Leadership

- A. Effective Communication Skills
 - A.1 The Message
 - A.2 Verbal – Active Listening Skills
 - A.3 Non-Verbal Active Listening Skills
- B. Goal Setting Strategies
 - B.1 Establishing Reasonable Goals
 - B.2 Short Term Goals
 - B.3 Long Term Goals
- C. Behavior Modification
 - C.1 Keys to Change
 - C.2 Stages of Change
 - C.3 Roles of a Fitness Professional
 - C.4 Characteristics to Assist Change
- D. Adult Learning
 - D.1 Learning Patterns
 - D.2 Personal Learning Philosophies
 - D.3 Stages of Learning
- E. Exercise Adherence and Motivation Strategies
 - E.1 Strategies to Promote Exercise Adherence
 - E.2 Motivation Strategies
- F. Stress Management
 - F.1 Personality Variables
 - F.2 Responses to Stressors
 - F.3 Stress Management Strategies

Section 4 – Health and Fitness Assessment

Chapter 15 – Health Risk Assessment

- A. Common Screening Tools – PAR-Q
- D. Risk Factors for CAD

Section 5 – Fitness Programming

Chapter 17 – Physical Fitness

- A. Fitness Components
 - A.1 CRE
 - A.2 Muscular Endurance
 - A.3 Muscular Strength
 - A.4 Flexibility
 - A.5 Body Composition

B. Training Principles

- B.1 Overload Principle
- B.2 Specificity Principle
- B.3 Progression Principle
- B.4 Reversibility Principle

C. Monitoring Exercise Intensity

- C.1 Metabolic Method
- C.2 Heart Rate Method
- C.3 Counting Heart Rate
- C.4 Target Heart Rate Ranges
- C.5 Resting Heart Rate
- C.6 Maximal Heart Rate
- C.7 Maximal Target Heart Rate Formula
- C.8 Karvonen or Heart Rate Reserve Target Heart Rate Formula
- C.9 Recovery Heart Rate
- C.10 Perceived Exertion
- C.11 Rate of Perceived Exertion
- C.12 Dyspnea Scale and Talk Test

D. Physical Activity and Fitness

- D.1 Guidelines to Improve Fitness
- D.2 CRE Training
- D.3 Resistance Training
- D.4 Flexibility Training

E. Physical Activity and Health

- E.1 Guidelines to Improve Overall Health

Chapter 18 –Weight Management

- A. Guidelines for Safe Weight Loss
- B. Fad Diets

Chapter 19 –Flexibility

- A. Benefits of Stretching
- B. Stretching Guidelines
- C. Types of Flexibility Exercises
- D. Common Flexibility Exercises

Chapter 20 –Resistance Training

- A. Benefits of Resistance Training
- B. Types of Resistance Training
- C. Resistance Training Guidelines
- D. Common Exercises

Chapter 21 –Cardiorespiratory Endurance (CRE)

- A. Warm-Up
- B. Guidelines for CRE Training
- C. Interval Training
- D. Cool-Down

Chapter 22 –Special Populations

- A. Pre-and Post-Natal
- B. Mature Adults
- C. Children

Section 6 – Group Exercise

Chapter 23 -Teaching Skills

- A. Music Structure
- B. Cueing
- C. Choreography Development
- D. Cautionary Exercises
- E. Exercise Analysis

Chapter 24 –Class Structure & Content

- A. First Things First
- B. Warm-Up
- C. CRE Training
- D. Muscle Conditioning
- E. Cool-Down

Chapter 25 –Optional Group Exercise Formats

- A. Cardio Dance
- B. Step
- C. Water Fitness
- D. Group Resistance
- E. Circuit
- F. Interval
- G. Cross Training
- H. Pilates