

Basic Training Module Specifications

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| <u>Functional Area:</u> | IV. Police Skills |
| <u>Subject Area:</u> | E. Fitness and Wellness |
| <u>Module Title:</u> | 1. PHYSICAL FITNESS |
| <u>Hours:</u> | Not less than 36 hours |

Notes to Instructor:

The MCOLES *Physical Fitness Training Instructor Manual* shall be the primary resource for the material taught in this module.

An educational segment of 10 minutes or less shall precede the practical aspects of the physical fitness training. An Educational Component is included with each Fitness Module, but the instructor can change the sequence of educational components as needed. Use the information contained in each section by discussing important facts and concepts and allowing for questions, comments, or discussion. Also, use any of the material contained in the Educational Component as handouts for the student. The students should be able to demonstrate an understanding of the educational concepts and components of fitness related to exercise, safety, and nutrition.

Examples of related workouts, all of which are designed for a large group of exercisers such as your academy class, are included. The approximate time for each workout is one hour. Should the group complete the suggested exercises prior to the session being complete, the remaining time can be filled with activities that benefit the student's performance on the 4-event test. However, care should be taken to pay attention to work-out activities on days immediately preceding the current day, to allow for muscle recovery, repair, and growth. Instructors should also be aware of the activity scheduled for the following day for the same reasons.

For example, if on day 1 the class participates in high intensity interval sprint activities, the instructor should not follow-up on day 2 with other anaerobic power activities involving the legs. A more appropriate choice would be to have the trainee complete his/her personal score of 60 second maximum activities (push ups, sit ups) multiplied by 1.5, with no time limit, and with the instructor emphasizing and coaching on correct form.

The Educational Components are:

- (1) principles of exercise and thresholds of training,
- (2) components of a workout,
- (3) monitoring exercise intensity,
- (4) cardiovascular, strength, and flexibility training guidelines,
- (5) guidelines for circuit, interval and plyometric training,
- (6) principles of PNF (proprioceptive neuromuscular facilitation) stretching,
- (7) guidelines for cold and hot weather training
- (8) hydration and sports drinks,

- (9) risky exercises, overtraining, and danger signals,
- (10) shin splints, plantar fasciitis, and IT (iliotibial) band syndrome,
- (11) RICE (rest, ice, compress, elevate) principle, muscle strains and sprains,
- (12) calorie expenditure and body composition,
- (13) ergogenic aids,
- (14) antioxidants, herbs, and supplements,
- (15) other health and fitness related information particularly as it relates to law enforcement.

A proper warm up and cool down period of approximately five minutes should be included before and after intense activity including aerobic, anaerobic and strength training.

Module Objectives start on the following page:

Module Objectives:

- IV.E.1.1. Establish Physical Fitness Baseline with Goals for Improvement.
- a. Completes a fitness profile and goal setting chart using scores from the 4-event physical fitness test for the following: (Fitness Module: Introduction):
 - (1) muscular endurance (pushups, sit ups)
 - (2) anaerobic power (vertical jump), and
 - (3) cardio-respiratory (1/2-mile shuttle run)
- IV.E.1.2. Determines Body Fat by using a Circumference Technique and Plots on the Fitness Profile Chart. (Fitness Module: Introduction)
- IV.E.1.3. Demonstrate an Understanding of the Thresholds of Training for Cardiovascular Fitness to Improve and/or Maintain Cardiovascular Fitness.
- a. Monitors exercise intensity during cardiovascular training by the following (Fitness Module 1):
 - (1) calculates exercise target heart rate (THR) by:
 - (a) taking one-minute pulse,
 - (b) using Karvonen formula to determine THR, and
 - (c) dividing THR by 6 to determine 10 second THR; and
 - (2) monitors THR during the following:
 - (a) after 5 minutes of walking for a warmup,
 - (b) after 5 minutes of walking briskly,
 - (c) after 5 minutes of jogging,
 - (d) after 5 minutes of running, and
 - (e) after alternating between 60% & 80% PMHR (predicted maximum heart rate) for 3 minutes each.
 - b. Participates in cardiovascular activities about 10 minutes each using at least three different modes, such as (Fitness Module 9):
 - (1) stair climbing,
 - (2) rope jumping,
 - (3) step training, or
 - (4) jogging.
 - c. Participates in cardiovascular activities for cross training using two of the following for about 15 to 20 minutes in each activity (Fitness Module 18):
 - (1) cycling,
 - (2) jogging,
 - (3) swimming,
 - (4) stair climbing or steppers,
 - (5) rope jumping,
 - (6) rowing, elliptical trainers or other cardiovascular equipment available.

IV.E.1.3. Demonstrate an Understanding of the Thresholds of Training for Cardiovascular Fitness to Improve and/or Maintain Cardiovascular Fitness (continued).

- d. Participates in a 30-to-40-minute outdoor group jog, or if weather does not permit, will participate in a Continuous Rhythmical Workout to achieve a “steady state” during aerobic training (Fitness Module 26).

IV.E.1.4. Demonstrate an Understanding of the Thresholds of Training for Muscular Endurance to Improve and/or Maintain Muscular Endurance Fitness.

- a. Tests on several calisthenics to determine a baseline for using the Calisthenics Chart, including (Fitness Module 2):
 - (1) half squats,
 - (2) push ups,
 - (3) pull ups.
 - (4) chin ups,
 - (5) sit ups/crunches,
 - (6) back extensions, and
 - (7) heel raises.
- b. Participates in exercises listed on Calisthenics Chart (Fitness Module 10).
- c. Participates in Calisthenics Circuit using baseline scores assessed in Fitness Module 2 (Fitness Module 19).
- d. Participates in activities to build muscle endurance by using rubber resistance, if available, (otherwise use what is available) for muscle groups, such as (Fitness Module 27):
 - (1) biceps/triceps,
 - (2) pectorals/rhomboids & trapezius,
 - (3) quadriceps/hamstrings,
 - (4) deltoids/latissimus dorsi,
 - (5) adductors/abductors,
 - (6) abdominals/erector spinae, and
 - (7) anterior tibialis/gastrocnemius.

IV.E.1.5. Demonstrate an Understanding of the Thresholds of Training for Flexibility to Improve and/or Maintain Appropriate Range of Motion.

- a. Tests flexibility using a sit and reach test and participates in a general warm up, including (Fitness Module 3):
 - (1) dynamic stretches,
 - (2) static stretches, and
 - (3) calisthenics that can be used in a general warm up.

IV.E.1.5. Demonstrate an Understanding of the Thresholds of Training for Flexibility to Improve and/or Maintain Appropriate Range of Motion (continued).

- b. Participates in PNF (proprioceptive neuromuscular facilitation) stretching exercises (Fitness Module 11):
- c. Articulates the concept of muscle balance and participates in stretch work for opposing muscle groups to include (Fitness Module 20):
 - (1) biceps/triceps,
 - (2) pectorals/rhomboids & trapezius,
 - (3) quadriceps/hamstrings,
 - (4) adductors/abductors,
 - (5) abdominals/erector spinae, and
 - (6) tibialis anterior/gastrocnemius.
- d. Participates in sports specific stretches, such as one or more of the following (Fitness Module 28):
 - (1) basketball,
 - (2) cycling,
 - (3) martial arts,
 - (4) running,
 - (5) volleyball, and
 - (6) weight training.

IV.E.1.6. Demonstrate an Understanding of the Benefits of Circuit Training and Various Designs of Circuit Prototypes.

- a. Participates in a Physical Fitness Circuit that incorporates physical fitness skills needed by an officer, including (Fitness Module 4):
 - (1) vertical jump,
 - (2) sit-ups,
 - (3) push-ups, and
 - (4) ½ mile shuttle run.
- b. Participates in a boxing circuit designed to increase fitness and practice combative skills to include stations, such as (Fitness Module 12):
 - (1) rope jumping,
 - (2) shadow boxing,
 - (3) isometric abdominal contractions,
 - (4) punching bag/front punches
 - (5) rope climbing,
 - (6) partner pushes/pulls, and
 - (7) sidekicks/front snap kicks/bag kicks.

IV.E.1.6. Demonstrate an Understanding of the Benefits of Circuit Training and Various Designs of Circuit Prototypes (continued).

- c. Participates in the Super Circuit workout designed to increase strength and cardiovascular fitness within the same workout including jogging interspersed with strength stations, such as (Fitness Module 21):
 - (1) leg press,
 - (2) leg extension,
 - (3) leg curl,
 - (4) lat pull,
 - (5) high row,
 - (6) bench press,
 - (7) shoulder press,
 - (8) tricep press,
 - (9) arm curls,
 - (10) calf raises,
 - (11) abdominal, and
 - (12) back extension.
- d. Participates in the Physical Fitness Circuit and improves performance from prior performance using this circuit (Fitness Module 29).

IV.E.1.7. Demonstrate an Understanding of the Thresholds of Training for Muscle Strength to Improve and/or Maintain Muscle Strength (absolute strength).

- a. Tests on 1RM (repetition max) for various exercises (under qualified supervision) to establish a baseline for strength training programming to include (Fitness Module 5):
 - (1) leg press,
 - (2) leg extension,
 - (3) leg curl,
 - (4) lat pull (in front of body to avoid injury),
 - (5) high row,
 - (6) bench press,
 - (7) shoulder press,
 - (8) tricep press,
 - (9) arm curls,
 - (10) calf raises,
 - (11) abdominal, and
 - (12) back extension.
- b. Uses the Beginning Weight Training Chart as a guideline for participating in a strength training workout (Fitness Module 13).
- c. Uses the Weight Training Chart with the goal of improving from the prior performance (Fitness Module 22).

IV.E.1.7. Demonstrate an Understanding of the Thresholds of Training for Muscle Strength to Improve and/or Maintain Muscle Strength (absolute strength) (continued).

- d. Participates in a basic weight training workout by using the Weight Training Chart (Fitness Module 30).

IV.E.1.8. Demonstrate the Concept of Interval Training.

- a. Participates in interval training according to the program outlined in the Interval Training Chart (Fitness Module 6).
- b. Participates in activity that alternates two minutes of moderate activity with two minutes of more intense activity, such as (Fitness Module 14):
 - (1) stair jogging/walking,
 - (2) stadium seat jogging/regular climbing,
 - (3) hill running/slow jogging, or
 - (4) running/slow jogging (sprints).
- c. Participates in two or three cross-training activities that 30 seconds of moderate activity with 60 seconds of high intensity, such as (Fitness Module 23):
 - (1) running,
 - (2) stair climbing,
 - (3) rope jumping,
 - (4) cycling, and/or
 - (5) available cardiovascular machines.
- d. Participates in interval training according to the program outlined in the Interval Training Chart with the goal of improving from the prior workout (Fitness Module 31).

IV.E.1.9. Demonstrate an Understanding of Plyometric Exercise.

- a. Uses the plyometric training chart and participates in selected exercises, such as (Fitness Modules 7 & 24):
 - (1) box jumps,
 - (2) split squat jump,
 - (3) double leg vertical power jump,
 - (4) single leg hop,
 - (5) double leg hop,
 - (6) alternate leg hop,
 - (7) medicine ball, clap, or box push up, and
 - (8) drop push up.

IV.E.1.9. Demonstrate an Understanding of Plyometric Exercise (continued).

- b. Participates in plyometric activities that incorporate cardiovascular training, such as (Fitness Modules 15 & 32):
 - (1) running with knees to waist,
 - (2) running with heels to buttocks,
 - (3) running laterally,
 - (4) running in short chopping steps,
 - (5) running backwards with forward lean,
 - (6) skipping with long strides,
 - (7) skipping high with arms in air,
 - (8) moving sideways alternating heel over heel, and
 - (9) performing wind sprints.

IV.E.1.10. Demonstrate Fitness Skills by Participating in a Variety of Activities in a Setting of Friendly Competition.

- a. Participates in sports activities emphasizing personal safety, fun, and friendly competition, such as (Fitness Modules 8, 16, 25, 33):
 - (1) basketball or related games,
 - (2) volleyball,
 - (3) soccer, touch football, or related games,
 - (4) ultimate Frisbee,
 - (5) decathlons, relays or “Super Star” competitions,
 - (6) indoor or outdoor kickball, or
 - (7) other creative team sports.

IV.E.1.11. Practice the 4-event Physical Fitness Test Items to Adjust Fitness Goals for Needed Improvement.

- a. Performs test items to include (Fitness Modules 17, 34):
 - (1) vertical jump,
 - (2) sit ups,
 - (3) push ups, and
 - (4) ½ mile shuttle run.

IV.E.1.12. Demonstrate the Importance of Maintaining Proper Fat-to-Lean Body Composition for Health-Related Reasons and for Maintaining Professional Image.

- a. Determines body fat by using a circumference technique conducted during the Introduction Module for comparison (Fitness Module 35).
- b. Determines BMI (body mass index) and waist circumference to compare to standards.
- c. Completes a sample weight loss chart.

IV.E.1.12. Demonstrate the Importance of Maintaining Proper Fat-to-Lean Body Composition for Health-Related Reasons and for Maintaining Professional Image

- d. Participates in a workout, such as walking to burn approximately 100 calories per mile.