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Course Outline for KIN PPA1

POWER PLATFORM AEROBICS

Effective: Fall 2015

I. CATALOG DESCRIPTION:
KIN PPA1 — POWER PLATFORM AEROBICS — 1.00 - 2.00 units

This kinesiology movement course is an intense and dynamic platform (step) workout. It will improve the student's aerobic fitness, muscular strength, muscular endurance and body composition. The student will use platforms at different heights and tempo to increase the intensity of the workout. The proper technique and safety guidelines, aerobic principles, stepping basics and physiological benefits will be presented.

1.00 - 2.00 Units Lab

Grading Methods:
Letter Grade

Discipline:

Family: Kinesiology Aerobics

	MIN	MAX
Lab Hours:	54.00	108.00
Total Hours:	54.00	108.00

II. NUMBER OF TIMES COURSE MAY BE TAKEN FOR CREDIT: 1

III. PREREQUISITE AND/OR ADVISORY SKILLS:

IV. MEASURABLE OBJECTIVES:

Upon completion of this course, the student should be able to:

A. Demonstrate setting up the platforms correctly and movement safety
B. Calculate Target Heart Range for safe exercising
C. Assessment of exercise intensity and physiological recovery by monitoring heart rate response.
D. Execute proper platform techniques:Basic Platform Steps, Platform Lunges & Platform Squats
E. List and discuss physiological benefits of warm up, aerobic exercise and cool down

V. CONTENT:

A. Stepping Safety:
1. Platform Height Safety: 4-12 inches max
2. Platform seeded into risers to secure platform from flipping
3. Keep eyes on platform when stepping for proper foot placement initially; stay close to platform
4. Step to the CENTER of the platform; don't step on edges with heels off the platform
5. Complete foot should land flat on top of the platform.
6. Caution with 'overstressing' the knees: Don't lock knees at end of ROM when on top of platform and keep "soft" when stepping on and off platform.
7. If student fatigues, have moves done on floor without stepping up or reduce platform height
8. Teach complicated patterns on floor before stepping on platform
9. Tempo no more than 120 BPM

B. Intensity Assessment
1. Target Heart Rate Range will be calculated by the Karvonen Formula; used to assess aerobic intensity and recorded to monitor improvement in aerobic capacity (VO2 uptake).
2. Heart Rate post workout will be used to determine student's physiological recovery from intense workouts and documented for physical conditioning improvements.

C. Warm-up Properly for Injury Prevention
1. Begin with pre-cardio warm up off the platform-march &/or rhythmic movements-for 3-5 minutes to increase blood flow to skeletal muscles and enhance joint movement.
2. Standing: pre-stretch the achilles tendon, gastrocnemius, soleus, quadriceps, hamstrings and abductor/adductors.

D. Basic Steps:
1. Basic Steps: Box Step; Wide Step: Up and Over, Slice & Dice, Press Up, "L" Step; Turn Step, Split Step, Knee ups
2. Basic Lunges: Stationary Lunge, Diagonal Lunge , Reverse Lunge
3. Squats: Stationary, Step Out, Squat w/abduction

E. Cooldown Principles
1. Promotes safe recovery and prevents delayed onset of temporary muscle soreness
2. Lower the intensity of rhythmic movement
3. Ab workout to prevent muscle imbalance in posture

4. Supine Stretching and Pursed-lip Breathing

F. Physiological Benefits
1. Sustain the integrity of the Musculoskeletal Anatomy
2. Reduction in muscular imbalances and improvement in joint stability
3. Develops strength & endurance for activities of daily living and good health
4. Improvement in Cardiopulmonary function: higher ejection fraction, lower resting heart rate, lower pulmonary rate, reduced recovery rates
5. Maintains &/or improves appropriate body weight and body composition
6. Increases the basal metabolic rate to increase caloric expenditure
7. Controls glucose in management of diabetes and prevention of hypoglycemia

VI. METHODS OF INSTRUCTION:
A. **Observation and Demonstration** -
B. **Lecture** -
C. **Individualized Instruction** -
D. **Classroom Activity** -

VII. TYPICAL ASSIGNMENTS:
A. Read and interpret materials assigned in required text. Chapters such as:
1. Chapter 7 - Pages 127-141-Physiology of Fitness-Muscles, O2 and Energy
2. Chapter 8 - Pages 143-165- Aerobic Fitness-Stamina and Efficiency
3. Chapter 9 - Pages 167-185 - Muscular Fitness- Strength & Endurance
4. Chapter 13 -Pages 305-346 - Weight Control

B. Read and discuss handouts presented in class and posted in Blackboard. Topics such as:
1. Exercises for improving musculoskeletal strength and endurance
2. Karvonen Formula Calculation Sheet
3. Exercise Physiology of Aerobic Conditioning & Cardiopulmonary Function
4. Body Composition Assessment Sheet
5. Aerobic activity to control body weight and composition

VIII. EVALUATION:
A. **Methods**

1. Exams/Tests
2. Class Participation
3. Class Performance
4. Other:
   a. Pre and Post Physical Evaluations will be conducted to determine improvement in physiological conditioning.
   b. Resting Heart Rate will be assessed for improvement in cardiopulmonary function and overall body conditioning.
   c. Body Composition will be measured pre and post.

B. **Frequency**

1. Comprehensive Final Exam given during finals week
2. Attendance will be recorded each class period
3. Observation of active participation and skill execution will be documented each class period
4. Physical Evaluations & Body Composition will be done the 3rd week of class and the last week of instruction

IX. TYPICAL TEXTS:
1. Sharkey, Brian , and Steven Gaskill. *Fitness & Health.* 7th ed., Human Kinetics, 2013.
2. Sharkey, Brian . *Fitness Illustrated.*, Human Kinetics, 2011.

X. OTHER MATERIALS REQUIRED OF STUDENTS:
A. Students will be required to wear appropriate exercise attire and footwear.
B. Students should have internet and Blackboard access for copies of discussion notes, data sheets, study guides, and reference materials. Students will be sent email messages and reminders via Blackboard.