

**Committee on Accreditation for the Exercise Sciences (CoAES)**

Commission on Accreditation of Allied Health Education Programs (CAAHEP)

**INSTITUTIONAL JTA MATCHING FORM**

**Exercise Sciences**

	<b>Performance Domains and Associated Job Tasks</b>	<b>Course prefix, number and name</b> Example Course Title: MOV 304 Physiology of Activity
	<b>DOMAIN I: HEALTH AND FITNESS ASSESSMENT</b>	
	<b>A. Implement assessment protocols and preparticipation health screening procedures to maximize participant safety and minimize risk.</b>	
I.A.1.a	Knowledge of pre-activity screening procedures and tools that provide accurate information about the individual's health/medical history, current medical conditions, risk factors, sign/symptoms of disease, current physical activity habits, and medications.	FW 330 - HEALTH RISK APPRAISAL AND FITNESS ASSESSMENT
I.A.1.b	Knowledge of the key components included in informed consent and health/medical history.	FW 330 - HEALTH RISK APPRAISAL AND FITNESS ASSESSMENT
I.A.1.c	Knowledge of the limitations of informed consent and health/medical history.	FW 330 - HEALTH RISK APPRAISAL AND FITNESS ASSESSMENT
	<b>DOMAIN I: HEALTH AND FITNESS ASSESSMENT</b>	
	<b>B. Determine participant's readiness to take part in a health-related physical fitness assessment and exercise program.</b>	
I.B.1.a	Knowledge of risk factor thresholds for ACSM risk stratification including genetic and lifestyle factors related to the development of CVD.	FW 330 - HEALTH RISK APPRAISAL AND FITNESS ASSESSMENT
I.B.1.b	Knowledge of the major signs or symptoms suggestive of cardiovascular, pulmonary and metabolic disease.	FW 330 - HEALTH RISK APPRAISAL AND FITNESS ASSESSMENT
I.B.1.c	Knowledge of cardiovascular risk factors or conditions that may require consultation with medical personnel prior to exercise testing or training (e.g., inappropriate changes in resting heart rate and/or blood pressure, new onset discomfort in chest, neck, shoulder, or arm, changes in the pattern of discomfort during rest or exercise, fainting, dizzy spells, claudication).	FW 330 - HEALTH RISK APPRAISAL AND FITNESS ASSESSMENT
I.B.1.d	Knowledge of the pulmonary risk factors or conditions than may require consultation with medical personnel prior to exercise testing or training (e.g., asthma, exercise-induced asthma/bronchospasm, extreme breathlessness at rest or during exercise, chronic bronchitis, emphysema).	FW 330 - HEALTH RISK APPRAISAL AND FITNESS ASSESSMENT
I.B.1.e	Knowledge of the metabolic risk factors or conditions than may require consultation with medical personnel prior to exercise testing or training (e.g., obesity, metabolic syndrome, diabetes or glucose intolerance, hypoglycemia).	FW 330 - HEALTH RISK APPRAISAL AND FITNESS ASSESSMENT
I.B.1.f	Knowledge of the musculoskeletal risk factors or conditions than may require consultation with medical personnel prior to exercise testing or training (e.g., acute or chronic pain, osteoarthritis, rheumatoid arthritis, osteoporosis, inflammation/pain, low back pain).	FW 330 - HEALTH RISK APPRAISAL AND FITNESS ASSESSMENT
I.B.1.g	Knowledge of ACSM risk stratification categories and their implications for medical clearance before administration of an exercise test or participation in an exercise program.	FW 330 - HEALTH RISK APPRAISAL AND FITNESS ASSESSMENT

I.B.1.h	Knowledge of risk factors that may be favorably modified by physical activity habits.	FW 343-FACILITATING ACTIVE LIVING FW 330 - HEALTH RISK APPRAISAL AND FITNESS ASSESSMENT
I.B.1.i	Knowledge of medical terminology including, but not limited to, total cholesterol (TC), high-density lipoprotein cholesterol (HDL-C), low-density lipoprotein cholesterol (LDL-C), triglycerides, impaired fasting glucose, impaired glucose tolerance, hypertension, atherosclerosis, myocardial infarction, dyspnea, tachycardia, claudication, syncope and ischemia.	FW 343-FACILITATING ACTIVE LIVING FW 330 - HEALTH RISK APPRAISAL AND FITNESS ASSESSMENT
I.B.1.j	Knowledge of recommended plasma cholesterol levels for adults based on National Cholesterol Education Program/ATP Guidelines.	FW 330 - HEALTH RISK APPRAISAL AND FITNESS ASSESSMENT
I.B.1.k	Knowledge of recommended blood pressure levels for adults based on National High Blood Pressure Education Program Guidelines.	FW 330 - HEALTH RISK APPRAISAL AND FITNESS ASSESSMENT
I.B.1.l	Knowledge of medical supervision recommendations for cardiorespiratory fitness testing.	FW 330 - HEALTH RISK APPRAISAL AND FITNESS ASSESSMENT
I.B.1.m	Knowledge of the components of a health-history questionnaire (e.g., past and current medical history, family history of cardiac disease, orthopedic limitations, prescribed medications, activity patterns, nutritional habits, stress and anxiety levels, and smoking and alcohol use).	FW 330 - HEALTH RISK APPRAISAL AND FITNESS ASSESSMENT
I.B.2.a	Skill in the risk stratification of participants using CVD risk factor thresholds, major signs or symptoms suggestive of cardiovascular, pulmonary, or metabolic disease, and/or the presence of known cardiovascular, pulmonary, and metabolic disease status.	FW 330 - HEALTH RISK APPRAISAL AND FITNESS ASSESSMENT
I.B.2.b	Skill in reviewing pre-activity screening documents to determine the need for medical clearance prior to exercise and to select appropriate physical fitness assessment protocols.	FW 330 - HEALTH RISK APPRAISAL AND FITNESS ASSESSMENT
<b>DOMAIN I: HEALTH AND FITNESS ASSESSMENT</b> <b>C. Select and prepare physical fitness assessments for healthy participants and those with controlled disease.</b>		
I.C.1.a	Knowledge of the physiological basis of the major components of physical fitness: cardiorespiratory fitness, body composition, flexibility, muscular strength, and muscular endurance.	BIO 192 – INTRO TO EXERCISE SCIENCE FW 330 - HEALTH RISK APPRAISAL AND FITNESS ASSESSMENT
I.C.1.b	Knowledge of selecting the most appropriate testing protocols for each participant based on preliminary screening data.	FW 330 - HEALTH RISK APPRAISAL AND FITNESS ASSESSMENT
I.C.1.c	Knowledge of calibration techniques and proper use of fitness testing equipment.	FW 330 - HEALTH RISK APPRAISAL AND FITNESS ASSESSMENT
I.C.1.d	Knowledge of the purpose and procedures of fitness testing protocols for the components of health related fitness.	FW 330 - HEALTH RISK APPRAISAL AND FITNESS ASSESSMENT
I.C.1.e	Knowledge of test termination criteria and proper procedures to be followed after discontinuing health fitness tests.	FW 330 - HEALTH RISK APPRAISAL AND FITNESS ASSESSMENT

I.C.1.f	Knowledge of fitness assessment sequencing.	FW 330 - HEALTH RISK APPRAISAL AND FITNESS ASSESSMENT
I.C.1.g	Knowledge of the effects of common medications and substances on exercise testing (e.g., antianginals, antihypertensives, antiarrhythmics, bronchodilators, hypoglycemics, psychotropics, alcohol, diet pills, cold tablets, caffeine, nicotine).	FW 330 - HEALTH RISK APPRAISAL AND FITNESS ASSESSMENT
I.C.1.h	Knowledge of the physiologic and metabolic responses to exercise testing associated with chronic diseases and conditions (e.g., heart disease, hypertension, diabetes mellitus, obesity, pulmonary disease).	FW 330 - HEALTH RISK APPRAISAL AND FITNESS ASSESSMENT
I.C.2.a	Skill in analyzing and interpreting information obtained from assessment of the components of health related fitness.	FW 330 - HEALTH RISK APPRAISAL AND FITNESS ASSESSMENT
I.C.2.b	Skill in modifying protocols and procedures for testing children, adolescents, older adults and individuals with special considerations.	FW 330 - HEALTH RISK APPRAISAL AND FITNESS ASSESSMENT
<b>DOMAIN I: HEALTH AND FITNESS ASSESSMENT</b>		
<b>D. Conduct and interpret cardiorespiratory fitness assessments.</b>		
I.D.1.a	Knowledge of common submaximal and maximal cardiorespiratory fitness assessment protocols.	FW 330 - HEALTH RISK APPRAISAL AND FITNESS ASSESSMENT
I.D.1.b	Knowledge of blood pressure measurement techniques.	FW 330 - HEALTH RISK APPRAISAL AND FITNESS ASSESSMENT
I.D.1.c	Knowledge of Korotkoff sounds for determining systolic and diastolic blood pressure.	FW 330 - HEALTH RISK APPRAISAL AND FITNESS ASSESSMENT
I.D.1.d	Knowledge of the blood pressure response to exercise.	FW 330 - HEALTH RISK APPRAISAL AND FITNESS ASSESSMENT
I.D.1.e	Knowledge of techniques of measuring heart rate and heart rate response to exercise.	FW 330 - HEALTH RISK APPRAISAL AND FITNESS ASSESSMENT
I.D.1.f	Knowledge of the rating of perceived exertion (RPE).	FW 330 - HEALTH RISK APPRAISAL AND FITNESS ASSESSMENT
I.D.1.g	Knowledge of heart rate, blood pressure and RPE monitoring techniques before, during, and after cardiorespiratory fitness testing.	FW 330 - HEALTH RISK APPRAISAL AND FITNESS ASSESSMENT
I.D.1.h	Knowledge of the anatomy and physiology of the cardiovascular and pulmonary systems.	BIO 201 - HUMAN ANATOMY/PHYSIOLOGY I
I.D.1.i	Knowledge of cardiorespiratory terminology including angina pectoris, tachycardia, bradycardia, arrhythmia, and hyperventilation.	FW 330 - HEALTH RISK APPRAISAL AND FITNESS ASSESSMENT
I.D.1.j	Knowledge of the pathophysiology of myocardial ischemia, myocardial infarction, stroke, hypertension, and hyperlipidemia.	BIO 202 - HUMAN ANATOMY/PHYSIOLOGY II
I.D.1.k	Knowledge of the effects of myocardial ischemia, myocardial infarction, hypertension, claudication, and dyspnea on cardiorespiratory responses during exercise.	FW 420 - EXERCISE PROGRAM DESIGN AND MODIFICATION

I.D.1.l	Knowledge of oxygen consumption dynamics during exercise (e.g., heart rate, stroke volume, cardiac output, ventilation, ventilatory threshold).	BIO 192 - INTRODUCTION TO EXERCISE SCIENCE
I.D.1.m	Knowledge of methods of calculating $VO_{2max}$ .	FW 330 - HEALTH RISK APPRAISAL AND FITNESS ASSESSMENT FW 420 EXERCISE PROGRAM DESIGN
I.D.1.n	Knowledge of cardiorespiratory responses to acute graded exercise of conditioned and unconditioned participants.	FW 330 - HEALTH RISK APPRAISAL AND FITNESS ASSESSMENT
I.D.2.a	Skill in interpreting cardiorespiratory fitness test results.	FW 330 - HEALTH RISK APPRAISAL AND FITNESS ASSESSMENT
I.D.2.b	Skill in locating anatomic landmarks for palpation of peripheral pulses and blood pressure.	FW 330 - HEALTH RISK APPRAISAL AND FITNESS ASSESSMENT
I.D.2.c	Skill in measuring heart rate, blood pressure, and RPE at rest and during exercise.	FW 330 - HEALTH RISK APPRAISAL AND FITNESS ASSESSMENT
I.D.2.d	Skill in conducting submaximal exercise tests (e.g., cycle ergometer, treadmill, field testing, step test).	FW 330 - HEALTH RISK APPRAISAL AND FITNESS ASSESSMENT
I.D.2.e	Skill in determining cardiorespiratory fitness based on submaximal exercise test results.	FW 330 - HEALTH RISK APPRAISAL AND FITNESS ASSESSMENT
<b>DOMAIN I: HEALTH AND FITNESS ASSESSMENT</b>		
<b>E. Conduct assessments of muscular strength, muscular endurance and flexibility.</b>		
I.E.1.a	Knowledge of common muscular strength, muscular endurance, and flexibility assessment protocols.	FW 330 - HEALTH RISK APPRAISAL AND FITNESS ASSESSMENT
I.E.1.b	Knowledge of interpreting muscular strength, muscular endurance, and flexibility assessments.	FW 330 - HEALTH RISK APPRAISAL AND FITNESS ASSESSMENT
I.E.1.c	Knowledge of relative strength, absolute strength, and repetition maximum (1-RM) estimation.	FW 330 - HEALTH RISK APPRAISAL AND FITNESS ASSESSMENT
I.E.1.d	Knowledge of the anatomy of bone, skeletal muscle, and connective tissues.	BIO 201 - HUMAN ANATOMY/PHYSIOLOGY I
I.E.1.e	Knowledge muscle action terms including anterior, posterior, inferior, superior, medial, lateral, supination, pronation, flexion, extension, adduction, abduction, hyperextension, rotation, circumduction, agonist, antagonist, and stabilizer.	PE 325 - APPLIED MOVEMENT ANALYSIS AND MOTOR LEARNING
I.E.1.f	Knowledge of the planes and axes in which each movement action occurs.	PE 325 - APPLIED MOVEMENT ANALYSIS AND MOTOR LEARNING
I.E.1.g	Knowledge of the interrelationships among center of gravity, base of support, balance, stability, posture, and proper spinal alignment.	PE 325 - APPLIED MOVEMENT ANALYSIS AND MOTOR LEARNING

I.E.1.h	Knowledge of the normal curvatures of the spine and common assessments of postural alignment.	FW 330 - HEALTH RISK APPRAISAL AND FITNESS ASSESSMENT
I.E.1.i	Knowledge of the location and function of the major muscles (e.g., pectoralis major, trapezius, latissimus dorsi, biceps, triceps, rectus abdominus, internal and external obliques, erector spinae, gluteus maximus, quadriceps, hamstrings, adductors, abductors, and gastrocnemius).	PE 325 - APPLIED MOVEMENT ANALYSIS AND MOTOR LEARNING
I.E.1.j	Knowledge of the major joints and their associated movement.	BIO 201 - HUMAN ANATOMY/PHYSIOLOGY I PE 325 - APPLIED MOVEMENT ANALYSIS AND MOTOR LEARNING
I.E.2.a	Skill in identifying the major bones, muscles, and joints.	BIO 201 - HUMAN ANATOMY/PHYSIOLOGY I
I.E.2.b	Skill in conducting assessments of muscular strength, muscular endurance and flexibility (e.g., 1-RM, hand grip dynamometer, push-ups, curl-ups, sit-and-reach).	FW 330 - HEALTH RISK APPRAISAL AND FITNESS ASSESSMENT
I.E.2.c	Skill in estimating 1-RM using lower resistance (2-10 RM).	FW 330 - HEALTH RISK APPRAISAL AND FITNESS ASSESSMENT PES 100 – STRENGTH TRAINING PROGRAM DESIGN
I.E.2.d	Skill in interpreting results of muscular strength, muscular endurance and flexibility assessments.	FW 330 - HEALTH RISK APPRAISAL AND FITNESS ASSESSMENT
<b>DOMAIN I: HEALTH AND FITNESS ASSESSMENT</b>		
<b>F. Conduct anthropometric and body composition assessments.</b>		
I.F.1.a	Knowledge of the advantages, disadvantages and limitations of body composition techniques (e.g., air displacement plethysmography (BOD POD®), dual-energy x-ray absorptiometry (DEXA), hydrostatic weighing, skinfolds, and bioelectrical impedance).	FW 330 - HEALTH RISK APPRAISAL AND FITNESS ASSESSMENT
I.F.1.b	Knowledge of the standardized descriptions of circumference and skinfold sites.	FW 330 - HEALTH RISK APPRAISAL AND FITNESS ASSESSMENT
I.F.1.c	Knowledge of procedures for determining BMI and taking skinfold and circumference measurements.	FW 330 - HEALTH RISK APPRAISAL AND FITNESS ASSESSMENT
I.F.1.d	Knowledge of the health implications of variation in body fat distribution patterns and the significance of BMI, waist circumference, and waist-to-hip ratio.	FW 330 - HEALTH RISK APPRAISAL AND FITNESS ASSESSMENT
I.F.2.a	Skill in locating anatomic landmarks for skinfold and circumference measurements.	FW 330 - HEALTH RISK APPRAISAL AND FITNESS ASSESSMENT
I.F.2.b	Skill in interpreting the results of anthropometric and body composition assessments.	FW 330 - HEALTH RISK APPRAISAL AND FITNESS ASSESSMENT
<b>Domain II: Exercise Prescription and Implementation</b>		
<b>A. Review preparticipation health screening including self-guided health questionnaires and appraisals, exercise history and fitness assessments</b>		

II.A.1.a	Skill in synthesizing pre-screening results and reviewing them with participants	FW 330 - HEALTH RISK APPRAISAL AND FITNESS ASSESSMENT
<b>Domain II: Exercise Prescription and Implementation</b> <b>B. Determine safe and effective exercise programs to achieve desired outcomes and goals.</b>		
II.B.1.a	Knowledge of strength, aerobic, and flexibility based exercise.	FW 420 - EXERCISE PROGRAM DESIGN AND MODIFICATION
II.B.1.b	Knowledge of the benefits and precautions associated with exercise training in apparently healthy participants and those with controlled disease.	FW 420 - EXERCISE PROGRAM DESIGN AND MODIFICATION
II.B.1.c	Knowledge of program development for specific client needs (e.g., sport specific training, performance, health, lifestyle, functional ability, balance, agility, aerobic, anaerobic).	FW 420 - EXERCISE PROGRAM DESIGN AND MODIFICATION
II.B.1.d	Knowledge of the six motor skill related physical fitness components; agility, balance, coordination, reaction time, speed, and power.	FW 330 - HEALTH RISK APPRAISAL AND FITNESS ASSESSMENT
II.B.1.e	Knowledge of the physiologic changes associated with an acute bout of exercise.	BIO 192 - INTRODUCTION TO EXERCISE SCIENCE FW 420 – EXERCISE PROGRAM DESIGN
II.B.1.f	Knowledge of the physiologic adaptations following chronic exercise training.	BIO 192 - INTRODUCTION TO EXERCISE SCIENCE FW 420 – EXERCISE PROGRAM DESIGN
II.B.1.g	Knowledge of ACSM exercise prescription guidelines for strength, aerobic, and flexibility based exercise for apparently healthy clients, clients with increased risk, and clients with controlled disease.	FW 420 - EXERCISE PROGRAM DESIGN AND MODIFICATION
II.B.1.h	Knowledge of the components and sequencing incorporated into an exercise session (e.g., warm-up, stretching, conditioning or sports related exercise, cool-down).	FW 420 - EXERCISE PROGRAM DESIGN AND MODIFICATION
II.B.1.i	Knowledge of the physiological principles related to warm-up and cool-down.	FW 420 - EXERCISE PROGRAM DESIGN AND MODIFICATION
II.B.1.j	Knowledge of the principles of reversibility, progressive overload, individual differences and specificity of training, and how they relate to exercise prescription.	BIO 192 - INTRODUCTION TO EXERCISE SCIENCE FW 420 – EXERCISE PROGRAM DESIGN
II.B.1.k	Knowledge the role of aerobic and anaerobic energy systems in the performance of various physical activities.	FW 420 - EXERCISE PROGRAM DESIGN AND MODIFICATION
II.B.1.l	Knowledge of the basic biomechanical principles of human movement.	PE 325 - APPLIED MOVEMENT ANALYSIS AND MOTOR LEARNING FW 420 - EXERCISE PROGRAM DESIGN AND MODIFICATION

II.B.1.m	Knowledge of the psychological and physiological signs and symptoms of overtraining.	FW 420 - EXERCISE PROGRAM DESIGN AND MODIFICATION
II.B.1.n	Knowledge of the signs and symptoms of common musculoskeletal injuries associated with exercise (e.g., sprain, strain, bursitis, tendonitis).	FW 420 - EXERCISE PROGRAM DESIGN AND MODIFICATION PES 100 – GROUP FITNESS INSTRUCTOR TRAINING
II.B.1.o	Knowledge of the advantages and disadvantages of exercise equipment (e.g., free weights, selectorized machines, aerobic equipment).	FW 420 - EXERCISE PROGRAM DESIGN AND MODIFICATION PES 100 – GROUP FITNESS INSTRUCTOR TRAINING PES 100 – STRENGTH TRAINING PROGRAM DESIGN
II.B.2.a	Skill in teaching and demonstrating exercises.	FW 420 - EXERCISE PROGRAM DESIGN AND MODIFICATION PES 100 – GROUP FITNESS INSTRUCTOR TRAINING PES 100 – STRENGTH TRAINING PROGRAM DESIGN
II.B.2.b	Skill in designing safe and effective training programs.	FW 420 - EXERCISE PROGRAM DESIGN AND MODIFICATION PES 100 – STRENGTH TRAINING PROGRAM DESIGN
II.B.2.c	Skill in implementing exercise prescription guidelines for apparently healthy clients, clients with increased risk, and clients with controlled disease.	FW 420 - EXERCISE PROGRAM DESIGN AND MODIFICATION
<b>Domain II: Exercise Prescription and Implementation</b> <b>C. Implement cardiorespiratory exercise prescriptions using the FITT principle (frequency, intensity, time, and type) for apparently healthy participants based on current health status, fitness goals and availability of time.</b>		
II.C.1.a	Knowledge of the recommended FITT framework for the development of cardiorespiratory fitness.	FW 420 - EXERCISE PROGRAM DESIGN AND MODIFICATION
II.C.1.b	Knowledge of the benefits, risks and contraindications of a wide variety of cardiovascular training exercises based on client experience, skill level, current fitness level and goals.	FW 420 - EXERCISE PROGRAM DESIGN AND MODIFICATION
II.C.1.c	Knowledge of the minimal threshold of physical activity required for health benefits and/or fitness development.	FW 420 - EXERCISE PROGRAM DESIGN AND MODIFICATION

II.C.1.d	Knowledge of determining exercise intensity using HRR, VO <sub>2</sub> R, peak HR method, peak VO <sub>2</sub> method, peak METs method, and the RPE Scale.	FW 420 - EXERCISE PROGRAM DESIGN AND MODIFICATION
II.C.1.e	Knowledge of the accuracy of HRR, VO <sub>2</sub> R, peak HR method, peak VO <sub>2</sub> method, peak METs method, and the RPE Scale.	FW 420 - EXERCISE PROGRAM DESIGN AND MODIFICATION
II.C.1.f	Knowledge of abnormal responses to exercise (e.g., hemodynamic, cardiac, ventilatory).	FW 420 - EXERCISE PROGRAM DESIGN AND MODIFICATION
II.C.1.g	Knowledge of metabolic calculations (e.g., unit conversions, deriving energy cost of exercise, caloric expenditure).	FW 330 - HEALTH RISK APPRAISAL AND FITNESS ASSESSMENT
II.C.1.h	Knowledge of calculating the caloric expenditure of an exercise session (kcal-session <sup>1</sup> ).	FW 420 - EXERCISE PROGRAM DESIGN AND MODIFICATION
II.C.1.i	Knowledge of methods for establishing and monitoring levels of exercise intensity, including heart rate, RPE, and METs.	FW 330 - HEALTH RISK APPRAISAL AND FITNESS ASSESSMENT
II.C.1.j	Knowledge of the applications of anaerobic training principles.	FW 420 - EXERCISE PROGRAM DESIGN AND MODIFICATION
II.C.1.k	Knowledge of the anatomy and physiology of the cardiovascular and pulmonary systems including the basic properties of cardiac muscle.	BIO 202 - HUMAN ANATOMY/PHYSIOLOGY II
II.C.1.l	Knowledge of the basic principles of gas exchange.	FW 330 - HEALTH RISK APPRAISAL AND FITNESS ASSESSMENT
II.C.2.a	Skill in determining appropriate exercise frequency, intensity, time and type for clients with various fitness levels.	FW 420 - EXERCISE PROGRAM DESIGN AND MODIFICATION
II.C.2.b	Skill in determining the energy cost, absolute and relative oxygen costs (VO <sub>2</sub> ), and MET levels of various activities and applying the information to an exercise prescription.	FW 420 - EXERCISE PROGRAM DESIGN AND MODIFICATION
II.C.2.c	Skill in identifying improper technique in the use of cardiovascular equipment.	PE 325 - APPLIED MOVEMENT ANALYSIS AND MOTOR LEARNING
II.C.2.d	Skill in teaching and demonstrating the use of a variety of cardiovascular exercise equipment.	FW 420 - EXERCISE PROGRAM DESIGN AND MODIFICATION PES 100 – GROUP FITNESS INSTRUCTOR TRAINING
<b>Domain II: Exercise Prescription and Implementation</b> <b>D. Implement exercise prescriptions using the FITT principle (frequency, intensity, time, and type) for flexibility, muscular strength, and muscular endurance for apparently healthy participants based on current health status, fitness goals and availability of time.</b>		



II.D.1.a	Knowledge of the recommended FITT framework for the development of muscular strength, muscular endurance and flexibility.	FW 420 - EXERCISE PROGRAM DESIGN AND MODIFICATION
II.D.1.b	Knowledge of the minimal threshold of physical activity required for health benefits and/or fitness development.	FW 343 - FACILITATING ACTIVE LIVING
II.D.1.c	Knowledge of safe and effective exercises designed to enhance muscular strength and/or endurance of major muscle groups.	FW 420 - EXERCISE PROGRAM DESIGN AND MODIFICATION
II.D.1.d	Knowledge of safe and effective stretches that enhance flexibility.	FW 420 - EXERCISE PROGRAM DESIGN AND MODIFICATION
II.D.1.e	Knowledge of indications for water based exercise (e.g., arthritis, obesity).	FW 420 - EXERCISE PROGRAM DESIGN AND MODIFICATION
II.D.1.f	Knowledge of the types of resistance training programs (e.g., total body, split routine) and modalities (e.g., free weights, variable resistance equipment, pneumatic machines, bands).	FW 420 - EXERCISE PROGRAM DESIGN AND MODIFICATION
II.D.1.g	Knowledge of acute (e.g., load, volume, sets, repetitions, rest periods, order of exercises) and chronic training variables (e.g., periodization).	FW 420 - EXERCISE PROGRAM DESIGN AND MODIFICATION
II.D.1.h	Knowledge of the types of muscle contractions (e.g., eccentric, concentric, isometric).	PE 325 - APPLIED MOVEMENT ANALYSIS AND MOTOR LEARNING
II.D.1.i	Knowledge of joint movements (e.g., flexion, extension, adduction, abduction) and the muscles responsible for them.	PE 325 - APPLIED MOVEMENT ANALYSIS AND MOTOR LEARNING
II.D.1.j	Knowledge of acute and delayed onset muscle soreness (DOMS).	BIO 192 - INTRODUCTION TO EXERCISE SCIENCE
II.D.1.k	Knowledge of the anatomy and physiology of skeletal muscle fiber, the characteristics of fast-and slow-twitch muscle fibers, and the sliding filament theory of muscle contraction.	BIO 192 - INTRODUCTION TO EXERCISE SCIENCE PE 325 - APPLIED MOVEMENT ANALYSIS AND MOTOR LEARNING
II.D.1.l	Knowledge of the stretch reflex, proprioceptors, golgi tendon organ (GTO), muscle spindles, and how they relate to flexibility.	BIO 192 - INTRODUCTION TO EXERCISE SCIENCE PE 325 - APPLIED MOVEMENT ANALYSIS AND MOTOR LEARNING
II.D.1.m	Knowledge of muscle-related terminology including atrophy, hyperplasia, hypertrophy.	BIO 192 - INTRODUCTION TO EXERCISE SCIENCE
II.D.1.n	Knowledge of the Valsalva maneuver and its implications during exercise.	FW 420 - EXERCISE PROGRAM DESIGN AND MODIFICATION
II.D.1.o	Knowledge of the physiology underlying plyometric training and common plyometric exercises (e.g., box jumps, leaps, bounds).	FW 420 - EXERCISE PROGRAM DESIGN AND MODIFICATION

II.D.1.p	Knowledge of the contraindications and potential risks associated with muscular conditioning activities (e.g., straight-leg sit-ups, double leg raises, squats, hurdler's stretch, yoga plough, forceful back hyperextension, and standing bent-over toe touch, behind neck press/lat pull-down).	FW 420 - EXERCISE PROGRAM DESIGN AND MODIFICATION
II.D.1.q	Knowledge of prescribing exercise using the calculated %1-RM.	FW 420 - EXERCISE PROGRAM DESIGN AND MODIFICATION
II.D.1.r	Knowledge of spotting positions and techniques for injury prevention and exercise assistance.	FW 420 - EXERCISE PROGRAM DESIGN AND MODIFICATION
II.D.1.s	Knowledge of periodization (e.g., macro, micro, mesocycles) and associated theories.	FW 420 - EXERCISE PROGRAM DESIGN AND MODIFICATION
II.D.1.t	Knowledge of safe and effective Olympic weight lifting exercises.	FW 420 - EXERCISE PROGRAM DESIGN AND MODIFICATION PES 100 – STRENGTH TRAINING PROGRAM DESIGN
II.D.1.u	Knowledge of safe and effective core stability exercises (e.g., planks, crunches, bridges, cable twists).	FW 420 - EXERCISE PROGRAM DESIGN AND MODIFICATION PES 100 – GROUP FITNESS INSTRUCTOR TRAINING PES 100 – STRENGTH TRAINING PROGRAM DESIGN
II.D.2.a	Skill in identifying improper technique in the use of resistive equipment (e.g., stability balls, weights, bands, resistance bars, and water exercise equipment).	PE 325 - APPLIED MOVEMENT ANALYSIS AND MOTOR LEARNING PES 100 – GROUP FITNESS INSTRUCTOR TRAINING PES 100 – STRENGTH TRAINING PROGRAM DESIGN
II.D.2.b	Skill in teaching and demonstrating appropriate exercises for enhancing musculoskeletal flexibility.	FW 420 - EXERCISE PROGRAM DESIGN AND MODIFICATION PES 100 – GROUP FITNESS INSTRUCTOR TRAINING PES 100 – STRENGTH TRAINING PROGRAM DESIGN

II.D.2.c	Skill in teaching and demonstrating safe and effective muscular strength and endurance exercises (e.g., free weights, weight machines, resistive bands, Swiss balls, body weight and all other major fitness equipment).	FW 420 - EXERCISE PROGRAM DESIGN AND MODIFICATION PES 100 – GROUP FITNESS INSTRUCTOR TRAINING PES 100 – STRENGTH TRAINING PROGRAM DESIGN
<b>Domain II: Exercise Prescription and Implementation</b> <b>E. Establish exercise progression guidelines for resistance, aerobic and flexibility activity to achieve the goals of apparently healthy participants.</b>		
II.E.1.a	Knowledge of the basic principles of exercise progression.	FW 420 - EXERCISE PROGRAM DESIGN AND MODIFICATION
II.E.1.b	Knowledge of adjusting the FITT framework in response to individual changes in conditioning.	FW 420 - EXERCISE PROGRAM DESIGN AND MODIFICATION
II.E.1.c	Knowledge of the importance of performing periodic reevaluations to assess changes in fitness status.	FW 330 - HEALTH RISK APPRAISAL AND FITNESS ASSESSMENT
II.E.1.d	Knowledge of the training principles that promote improvements in muscular strength, muscular endurance, cardiorespiratory fitness, and flexibility.	FW 420 - EXERCISE PROGRAM DESIGN AND MODIFICATION
II.E.2.a	Skill in recognizing the need for progression and communicating updates to exercise prescriptions.	FW 420 - EXERCISE PROGRAM DESIGN AND MODIFICATION
<b>Domain II: Exercise Prescription and Implementation</b> <b>F. Implement a weight management program as indicated by personal goals that are supported by preparticipation health screening, health history, and body composition/anthropometrics.</b>		
II.F.1.a	Knowledge of exercise prescriptions for achieving weight management, including weight loss, weight maintenance and weight gain goals.	FW 343 - FACILITATING ACTIVE LIVING
II.F.1.b	Knowledge of energy balance and basic nutritional guidelines (e.g., MyPyramid, USDA Dietary Guidelines for Americans).	FW 343 - FACILITATING ACTIVE LIVING
II.F.1.c	Knowledge of weight management terminology including, but not limited to, obesity, overweight, percent fat, BMI, lean body mass (LBM), anorexia nervosa, bulimia, binge eating, metabolic syndrome, body fat distribution, adipocyte, bariatrics, ergogenic aid, fat-free mass (FFM), resting metabolic rate (RMR) and thermogenesis.	FW 343 - FACILITATING ACTIVE LIVING
II.F.1.d	Knowledge of the relationship between body composition and health.	FW 343 - FACILITATING ACTIVE LIVING
II.F.1.e	Knowledge of the unique dietary needs of participant populations (e.g., women, children, older adults, pregnant women).	FW 343 - FACILITATING ACTIVE LIVING
II.F.1.f	Knowledge of common nutritional ergogenic aids, their purported mechanisms of action, and associated risks and benefits (e.g., protein/amino acids, vitamins, minerals, herbal products, creatine, steroids, caffeine).	FW 420 - EXERCISE PROGRAM DESIGN AND MODIFICATION
II.F.1.g	Knowledge of methods for modifying body composition including diet, exercise, and behavior modification.	FW 343 - FACILITATING ACTIVE LIVING

II.F.1.h	Knowledge of fuel sources for aerobic and anaerobic metabolism including carbohydrates, fats and proteins.	FW 343 - FACILITATING ACTIVE LIVING
II.F.1.i	Knowledge of the effects of overall dietary composition on healthy weight management.	FW 343 - FACILITATING ACTIVE LIVING
II.F.1.j	Knowledge of the importance of maintaining normal hydration before, during and after exercise.	FW 343 - FACILITATING ACTIVE LIVING
II.F.1.k	Knowledge of the consequences of inappropriate weight loss methods (e.g., saunas, dietary supplements, vibrating belts, body wraps, over exercising, very low calorie diets, electric stimulators, sweat suits, fad diets).	FW 343 - FACILITATING ACTIVE LIVING
II.F.1.l	Knowledge of the kilocalorie levels of carbohydrate, fat, protein, and alcohol.	FW 343 - FACILITATING ACTIVE LIVING
II.F.1.m	Knowledge of the relationship between kilocalorie expenditures and weight loss.	FW 343 - FACILITATING ACTIVE LIVING
II.F.1.n	Knowledge of published position statements on obesity and the risks associated with it (e.g., National Institutes of Health, American Dietetic Association, ACSM).	FW 343 - FACILITATING ACTIVE LIVING
II.F.1.o	Knowledge of the relationship between body fat distribution patterns and health.	FW 330 - HEALTH RISK APPRAISAL AND FITNESS ASSESSMENT
II.F.1.p	Knowledge of the physiology and pathophysiology of overweight and obese participants.	FW 420 - EXERCISE PROGRAM DESIGN AND MODIFICATION
II.F.1.q	Knowledge of the recommended FITT framework for participants who are overweight or obese.	FW 343 - FACILITATING ACTIVE LIVING
II.F.1.r	Knowledge of comorbidities and musculoskeletal conditions associated with overweight and obesity that may require medical clearance and/or modifications to exercise testing and prescription.	FW 420 - EXERCISE PROGRAM DESIGN AND MODIFICATION
II.F.2.a	Skill in applying behavioral strategies (e.g., exercise, diet, behavioral modification strategies) for weight management.	FW 406 - HEALTH COACHING SKILLS
II.F.2.b	Skill in modifying exercises for individuals limited by body size.	FW 420 - EXERCISE PROGRAM DESIGN AND MODIFICATION PES 100 – GROUP FITNESS INSTRUCTOR TRAINING PES 100 – STRENGTH TRAINING PROGRAM DESIGN
II.F.2.c	Skill in calculating the volume of exercise in terms of kcal-session <sup>-1</sup> .	FW 420 - EXERCISE PROGRAM DESIGN AND MODIFICATION
	<b>Domain II: Exercise Prescription and Implementation</b> <b>G. Prescribe and implement exercise programs for participants with controlled cardiovascular, pulmonary, and metabolic diseases and other clinical populations.</b>	
II.G.1.a	Knowledge of ACSM risk stratification and exercise prescription guidelines for participants with cardiovascular, pulmonary, and metabolic diseases and other clinical populations.	FW 330 - HEALTH RISK APPRAISAL AND FITNESS ASSESSMENT
II.G.1.b	Knowledge of ACSM relative and absolute contraindications for initiating exercise sessions or exercise testing, and indications for terminating exercise sessions and exercise testing.	FW 330 - HEALTH RISK APPRAISAL AND FITNESS ASSESSMENT

II.G.1.c	Knowledge of physiology and pathophysiology of cardiac disease, arthritis, diabetes mellitus, dyslipidemia, hypertension, metabolic syndrome, musculoskeletal injuries, overweight and obesity, osteoporosis, peripheral artery disease, and pulmonary disease.	FW 420 - EXERCISE PROGRAM DESIGN AND MODIFICATION
II.G.1.d	Knowledge of the effects of diet and exercise on blood glucose levels in diabetics.	FW 420 - EXERCISE PROGRAM DESIGN AND MODIFICATION
II.G.1.e	Knowledge of the recommended FITT principle for the development of cardiorespiratory fitness, muscular fitness and flexibility for participants with cardiac disease, arthritis, diabetes mellitus, dyslipidemia, hypertension, metabolic syndrome, musculoskeletal injuries, overweight and obesity, osteoporosis, peripheral artery disease, and pulmonary disease.	FW 420 - EXERCISE PROGRAM DESIGN AND MODIFICATION
II.G.2.a	Skill in progressing exercise programs, according to the FITT principle, in a safe and effective manner.	FW 420 - EXERCISE PROGRAM DESIGN AND MODIFICATION
II.G.2.b	Skill in modifying the exercise prescription and/or exercise choice for individuals with cardiac disease, arthritis, diabetes mellitus, dyslipidemia, hypertension, metabolic syndrome, musculoskeletal injuries, overweight and obesity, osteoporosis, peripheral artery disease, and pulmonary disease.	FW 420 - EXERCISE PROGRAM DESIGN AND MODIFICATION
II.G.2.c	Skill in identifying improper exercise techniques and modifying exercise programs for participants with low back, neck, shoulder, elbow, wrist, hip, knee and/or ankle pain.	PE 325 - APPLIED MOVEMENT ANALYSIS AND MOTOR LEARNING PES 100 – GROUP FITNESS INSTRUCTOR TRAINING PES 100 – STRENGTH TRAINING PROGRAM DESIGN
<b>Domain II: Exercise Prescription and Implementation</b> <b>H. Prescribe and implement exercise programs for healthy special populations (i.e., older adults, youth, pregnant women).</b>		
II.H.1.a	Knowledge of normal maturational changes, from childhood to old age, and their effects on the skeletal muscle, bone, reaction time, coordination, posture, heat and cold tolerance, maximal oxygen consumption, strength, flexibility, body composition, resting and maximal heart rate, and resting and maximal blood pressure.	FW 420 - EXERCISE PROGRAM DESIGN AND MODIFICATION
II.H.1.b	Knowledge of techniques for the modification of cardiovascular, flexibility, and resistance exercises based on age, functional capacity and physical condition.	FW 420 - EXERCISE PROGRAM DESIGN AND MODIFICATION
II.H.1.c	Knowledge of techniques for the development of exercise prescriptions for children, adolescents and older adults with regard to strength, functional capacity, and motor skills.	FW 420 - EXERCISE PROGRAM DESIGN AND MODIFICATION
II.H.1.d	Knowledge of the unique adaptations to exercise training in children, adolescents, and older participants with regard to strength, functional capacity, and motor skills.	FW 420 - EXERCISE PROGRAM DESIGN AND MODIFICATION
II.H.1.e	Knowledge of the benefits and precautions associated with exercise training across the lifespan.	FW 420 - EXERCISE PROGRAM DESIGN AND MODIFICATION
II.H.1.f	Knowledge of the recommended FITT framework for the development of cardiorespiratory fitness, muscular fitness and flexibility in apparently healthy children and adolescents.	FW 420 - EXERCISE PROGRAM DESIGN AND MODIFICATION
II.H.1.g	Knowledge of the effects of the aging process on the musculoskeletal and cardiovascular structures and functions during rest, exercise, and recovery.	FW 420 - EXERCISE PROGRAM DESIGN AND MODIFICATION

II.H.1.h	Knowledge of the recommended FITT framework necessary for the development of cardiorespiratory fitness, muscular fitness, balance, and flexibility in apparently healthy, older adults.	FW 420 - EXERCISE PROGRAM DESIGN AND MODIFICATION
II.H.1.i	Knowledge of common orthopedic and cardiovascular exercise considerations for older adults.	FW 420 - EXERCISE PROGRAM DESIGN AND MODIFICATION
II.H.1.j	Knowledge of the relationship between regular physical activity and the successful performance of activities of daily living (ADLs) for older adults.	FW 420 - EXERCISE PROGRAM DESIGN AND MODIFICATION
II.H.1.k	Knowledge of the recommended frequency, intensity, type, and duration of physical activity necessary for the development of cardiorespiratory fitness, muscular fitness and flexibility in apparently healthy pregnant women.	FW 420 - EXERCISE PROGRAM DESIGN AND MODIFICATION
II.H.2.a	Skill in teaching and demonstrating appropriate exercises for healthy populations with special considerations.	FW 420 - EXERCISE PROGRAM DESIGN AND MODIFICATION PES 100 – GROUP FITNESS INSTRUCTOR TRAINING PES 100 – STRENGTH TRAINING PROGRAM DESIGN
II.H.2.b	Skill in modifying exercises based on age, physical condition, and current health status.	FW 420 - EXERCISE PROGRAM DESIGN AND MODIFICATION PES 100 – GROUP FITNESS INSTRUCTOR TRAINING PES 100 – STRENGTH TRAINING PROGRAM DESIGN
<b>Domain II: Exercise Prescription and Implementation</b>		
<b>I. Modify exercise prescriptions based on environmental conditions.</b>		
II.I.1.a	Knowledge of the effects of a hot, cold, or high altitude environment on the physiologic response to exercise.	FW 420 - EXERCISE PROGRAM DESIGN AND MODIFICATION
II.I.1.b	Knowledge of special precautions and program modifications for exercise in a hot, cold, or high altitude environment.	FW 420 - EXERCISE PROGRAM DESIGN AND MODIFICATION
II.I.1.c	Knowledge of the role of acclimatization when exercising in a hot or high altitude environment.	FW 420 - EXERCISE PROGRAM DESIGN AND MODIFICATION
II.I.1.d	Knowledge of appropriate fluid intake during exercise in a hot, humid environments as well as cold, and altitude.	FW 420 - EXERCISE PROGRAM DESIGN AND MODIFICATION
<b>Domain III: Exercise Counseling and Behavioral Strategies</b>		
<b>A. Optimize adoption and adherence to exercise programs and other healthy behaviors by applying effective communication techniques.</b>		

III.A.1.a	Knowledge of the effective and timely uses of communication modes (e.g., email, telephone, web site, newsletters).	FW 405 - WORKSITE HEALTH PROMOTION FW 406 – HEALTH COACHING SKILLS
III.A.1.b	Knowledge of verbal and non-verbal behaviors that communicate positive reinforcement and encouragement (e.g., eye contact, targeted praise, empathy).	FW 405 - WORKSITE HEALTH PROMOTION FW 406 – HEALTH COACHING SKILLS
III.A.1.c	Knowledge of group leadership techniques for working with participants of all ages.	FW 405 - WORKSITE HEALTH PROMOTION FW 406 – HEALTH COACHING SKILLS
III.A.1.d	Knowledge of active listening techniques.	FW 406 – HEALTH COACHING SKILLS
III.A.1.e	Knowledge of learning modes (auditory, visual, kinesthetic).	FW 406 – HEALTH COACHING SKILLS
III.A.1.f	Knowledge of types of feedback (e.g., evaluative, supportive, descriptive).	FW 406 – HEALTH COACHING SKILLS
III.A.2.a	Skill in using active listening techniques.	FW 406 – HEALTH COACHING SKILLS
III.A.2.b	Skill in applying teaching and training techniques to optimize participant training sessions.	FW 406 – HEALTH COACHING SKILLS
III.A.2.c	Skill in using feedback to optimize participant training sessions.	FW 406 – HEALTH COACHING SKILLS
III.A.2.d	Skill in applying verbal and non-verbal communications with diverse participant populations.	FW 406 – HEALTH COACHING SKILLS
	<b>Domain III: Exercise Counseling and Behavioral Strategies</b> <b>B. Optimize adoption of and adherence to exercise programs and other healthy behaviors by applying effective behavioral and motivational strategies.</b>	
III.B.1.a	Knowledge of behavior change models and theories (e.g., health belief model, theory of planned behavior, socio-ecological model, transtheoretical model, social cognitive theory, cognitive evaluation theory).	FW 406 – HEALTH COACHING SKILLS
III.B.1.b	Knowledge of the basic principles involved in Motivational Interviewing.	FW 343 – FACILITATING ACTIVE LIVING FW 406 – HEALTH COACHING SKILLS
III.B.1.c	Knowledge of intervention strategies and stress management techniques.	FW 311 – TRANSFORMATIONAL CHANGE PRACTICES FW 321 – STRESS MANAGEMENT
III.B.1.d	Knowledge of the stages of motivational readiness (e.g., Transtheoretical model).	FW 406 – HEALTH COACHING SKILLS
III.B.1.e	Knowledge of behavioral strategies for enhancing exercise and health behavior change (e.g., reinforcement, S.M.A.R.T. goal setting, social support).	FW 343 – FACILITATING ACTIVE LIVING FW 406 – HEALTH COACHING SKILLS

III.B.1.f	Knowledge of behavior modification terminology including, but not limited to, self-esteem, self-efficacy, antecedents, cues to action, behavioral beliefs, behavioral intentions, and reinforcing factors.	FW 343 – FACILITATING ACTIVE LIVING FW 406 – HEALTH COACHING SKILLS
III.B.1.g	Knowledge of behavioral strategies (e.g., exercise, diet, behavioral modification strategies) for weight management.	FW 343 – FACILITATING ACTIVE LIVING FW 406 – HEALTH COACHING SKILLS
III.B.1.h	Knowledge of the role that affect, mood and emotion play in exercise adherence.	FW 311 – TRANSFORMATIONAL CHANGE PRACTICES FW 406 – HEALTH COACHING SKILLS
III.B.1.i	Knowledge of common barriers to exercise initiation and compliance (e.g., time management, injury, fear, lack of knowledge, weather).	FW 406 – HEALTH COACHING SKILLS
III.B.1.j	Knowledge of techniques that facilitate motivation (e.g., goal setting, incentive programs, achievement recognition, social support).	FW 406 – HEALTH COACHING SKILLS
III.B.1.k	Knowledge of the role extrinsic and intrinsic motivation plays in the adoption and maintenance of behavior change.	FW 406 – HEALTH COACHING SKILLS
III.B.1.l	Knowledge of relapse prevention strategies and plans of action.	FW 406 – HEALTH COACHING SKILLS
III.B.1.m	Knowledge of applying health coaching principles and lifestyle management techniques related to behavior change.	FW 406 – HEALTH COACHING SKILLS
III.B.1.n	Knowledge of strategies that increase non-structured physical activity levels (e.g., stair walking, parking farther away, bike to work).	FW 405 – WORKSITE WELLNESS
III.B.2.a	Skill in explaining the purpose and value of understanding perceived exertion.	FW 420 – EXERCISE PROGRAM DESIGN
III.B.2.b	Skill in using imagery as a motivational tool.	FW 406 – HEALTH COACHING SKILLS
III.B.2.c	Skill in evaluating behavioral readiness to optimize exercise adherence.	FW 406 – HEALTH COACHING SKILLS
III.B.2.d	Skill in applying the theories related to behavior change to diverse populations.	FW 406 – HEALTH COACHING SKILLS
III.B.2.e	Skill in developing intervention strategies to increase self-efficacy and self-confidence.	FW 406 – HEALTH COACHING SKILLS
III.B.2.f	Skill in developing reward systems that support and maintain program adherence.	FW 406 – HEALTH COACHING SKILLS
III.B.2.g	Skill in setting effective behavioral goals.	FW 406 – HEALTH COACHING SKILLS
	<b>Domain III: Exercise Counseling and Behavioral Strategies</b> <b>C. Provide educational resources to support clients in the adoption and maintenance of healthy lifestyle behaviors.</b>	
III.C.1.a	Knowledge of the relationship between physical inactivity and common chronic diseases (e.g., Atherosclerosis, type II diabetes, obesity, dyslipidemia, arthritis, low back pain, hypertension).	FW 343 – FACILITATING ACTIVE LIVING
III.C.1.b	Knowledge of the dynamic inter-relationship between fitness level, body composition, stress and overall health.	FW 321 – STRESS MANAGEMENT
III.C.1.c	Knowledge of modifications necessary to promote healthy lifestyle behaviors for diverse populations.	FW 420 – EXERCISE PROGRAM DESIGN



III.C.1.d	Knowledge of stress management techniques and relaxation techniques (e.g., progressive relaxation, guided imagery, massage therapy).	FW 321 – STRESS MANAGEMENT
III.C.1.e	Knowledge of the activities of daily living (ADLs) and how they relate to overall health.	FW 343 – FACILITATING ACTIVE LIVING
III.C.1.f	Knowledge in accessing and disseminating scientifically-based, relevant health, exercise, nutrition, and wellness-related resources and information.	FW 343 – FACILITATING ACTIVE LIVING FW 420 – EXERCISE PROGRAM DESIGN
III.C.1.g	Knowledge of specific, age-appropriate leadership techniques and educational methods to increase client engagement.	FW 406 – HEALTH COACHING SKILLS
III.C.1.h	Knowledge of community-based exercise programs that provide social support and structured activities (e.g., walking clubs, intramural sports, golf leagues, cycling clubs).	FW 343 – FACILITATING ACTIVE LIVING
III.C.2.a	Skill in accessing and delivering health, exercise, and wellness-related information.	FW 420 – EXERCISE PROGRAM DESIGN
III.C.2.b	Skill in educating clients about benefits and risks of exercise and the risks of sedentary behavior.	FW 406 – HEALTH COACHING SKILLS
<b>Domain III: Exercise Counseling and Behavioral Strategies</b> <b>D. Provide support within the scope of practice of a Health Fitness Specialist and refer to other health professionals as indicated.</b>		
III.D.1.a	Knowledge of the side effects of common over-the-counter and prescription drugs that may impact a client's ability to exercise.	FW 420 – EXERCISE PROGRAM DESIGN
III.D.1.b	Knowledge of signs and symptoms of mental health states (e.g., anxiety, depression, eating disorders) that may necessitate referral to a medical or mental health professional.	FW 406 – HEALTH COACHING SKILLS
III.D.1.c	Knowledge of symptoms and causal factors of test anxiety (i.e., performance, appraisal threat during exercise testing) and how they may affect physiological responses to testing.	FW 330 – HEALTH RISK APPRAISAL AND FITNESS ASSESSMENT
III.D.1.d	Knowledge of client needs and learning styles that may impact exercise sessions and exercise testing procedures.	FW 406 – HEALTH COACHING SKILLS
III.D.1.e	Knowledge of conflict resolution techniques that facilitate communication among exercise cohorts.	FW 406 – HEALTH COACHING SKILLS
III.D.2.a	Skill in communicating the need for medical, nutritional, or mental health intervention.	FW 406 – HEALTH COACHING SKILLS
<b>Domain IV: Legal/Professional</b> <b>A. Create and disseminate risk management guidelines for a health/fitness facility, department or organization to reduce member, employee and business risk.</b>		
IV.A.1.a	Knowledge of employee criminal background checks, child abuse clearances and drug and alcohol screenings.	FW 405 – WORKSITE HEALTH PROMOTION
IV.A.1.b	Knowledge of employment verification requirements mandated by state and federal laws.	FW 405 – WORKSITE HEALTH PROMOTION
IV.A.1.c	Knowledge of safe handling and disposal of body fluids and employee safety (OSHA guidelines).	FW 405 – WORKSITE HEALTH PROMOTION

IV.A.1.d	Knowledge of insurance coverage common to the health/fitness industry including general liability, professional liability, workers' compensation, property, and business interruption.	<b>FW 405 – WORKSITE HEALTH PROMOTION FW 430 – PROFESSIONAL PRACTICE AND RESPONSIBILITIES</b>
IV.A.1.e	Knowledge of sexual harassment policies and procedures.	<b>FW 405 – WORKSITE HEALTH PROMOTION</b>
IV.A.1.f	Knowledge of interviewing techniques.	<b>FW 430 – PROFESSIONAL PRACTICE AND RESPONSIBILITIES</b>
IV.A.1.g	Knowledge of basic precautions taken in an exercise setting to ensure participant safety.	<b>FW 430 – PROFESSIONAL PRACTICE AND RESPONSIBILITIES</b>
IV.A.1.h	Knowledge of pre-activity screening, medical release and waiver of liability for normal and at-risk participants.	<b>FW 430 – PROFESSIONAL PRACTICE AND RESPONSIBILITIES</b>
IV.A.1.i	Knowledge of emergency response systems and procedures (EAP).	<b>FW 430 – PROFESSIONAL PRACTICE AND RESPONSIBILITIES</b>
IV.A.1.j	Knowledge of the use of signage.	<b>FW 430 – PROFESSIONAL PRACTICE AND RESPONSIBILITIES</b>
IV.A.1.k	Knowledge of preventive maintenance schedules and audit	<b>FW 430 – PROFESSIONAL PRACTICE AND RESPONSIBILITIES</b>
IV.A.1.l	Knowledge of techniques and methods of evaluating the condition of exercise equipment to reduce the potential risk of injury.	<b>FW 430 – PROFESSIONAL PRACTICE AND RESPONSIBILITIES</b>
IV.A.1.m	Knowledge of the legal implications of documented safety procedures, the use of incident documents, and ongoing safety training documentation for the purpose of safety and risk management	<b>FW 430 – PROFESSIONAL PRACTICE AND RESPONSIBILITIES</b>
IV.A.1.n	Knowledge of documentation procedures for CPR and AED certification for employees.	<b>FW 430 – PROFESSIONAL PRACTICE AND RESPONSIBILITIES</b>
IV.A.1.o	Knowledge of AED guidelines for implementation.	<b>FW 430 – PROFESSIONAL PRACTICE AND RESPONSIBILITIES</b>

IV.A.1.p	Knowledge of the components of the ACSM Code of Ethics and the ACSM Certified Health Fitness Specialist scope of practice.	FW 430 – PROFESSIONAL PRACTICE AND RESPONSIBILITIES
IV.A.2.a	Skill in developing and disseminating a policy and procedures manual.	FW 430 – PROFESSIONAL PRACTICE AND RESPONSIBILITIES
IV.A.2.b	Skill in developing and implementing confidentiality policies.	FW 430 – PROFESSIONAL PRACTICE AND RESPONSIBILITIES
IV.A.2.c	Skill in maintenance of a safe exercise environment (e.g., equipment operation, proper sanitation, safety and maintenance of exercise areas, and overall facility maintenance).	FW 430 – PROFESSIONAL PRACTICE AND RESPONSIBILITIES
IV.A.2.d	Skill in the organization, communication, and human resource management required to implement risk management policies and procedures.	FW 430 – PROFESSIONAL PRACTICE AND RESPONSIBILITIES
IV.A.2.e	Skill in training employees to identify high risk situations.	FW 430 – PROFESSIONAL PRACTICE AND RESPONSIBILITIES
<b>Domain IV: Legal/Professional</b>		
<b>B. Create an effective injury prevention program and ensure that emergency policies and procedures are in place.</b>		
IV.B.1.a	Knowledge of emergency procedures (i.e., telephone procedures, written emergency procedures (EAP), personnel responsibilities) in a health and fitness setting	FW 430 – PROFESSIONAL PRACTICE AND RESPONSIBILITIES
IV.B.1.b	Knowledge of basic first-aid procedures for exercise-related injuries, such as bleeding, strains/sprains, fractures, and exercise intolerance (dizziness, syncope, heat and cold injuries).	FW 430 – PROFESSIONAL PRACTICE AND RESPONSIBILITIES
IV.B.1.c	Knowledge of the Health Fitness Specialist's responsibilities and limitations, and the legal implications of carrying out emergency procedures.	FW 430 – PROFESSIONAL PRACTICE AND RESPONSIBILITIES
IV.B.1.d	Knowledge of safety plans, emergency procedures and first-aid techniques needed during fitness evaluations, exercise testing, and exercise training	FW 430 – PROFESSIONAL PRACTICE AND RESPONSIBILITIES
IV.B.1.e	Knowledge of potential musculoskeletal injuries (e.g., contusions, sprains, strains, fractures), cardiovascular/pulmonary complications (e.g., tachycardia, bradycardia, hypotension/hypertension, dyspnea) and metabolic abnormalities (e.g., fainting/syncope, hypoglycemia/hyperglycemia, hypothermia/hyperthermia).	FW 430 – PROFESSIONAL PRACTICE AND RESPONSIBILITIES

IV.B.1.f	Knowledge of the initial management and first-aid techniques associated with open wounds, musculoskeletal injuries, cardiovascular/pulmonary complications, and metabolic disorders.	FW 430 – PROFESSIONAL PRACTICE AND RESPONSIBILITIES
IV.B.1.g	Knowledge of emergency documentation and appropriate document utilization.	FW 430 – PROFESSIONAL PRACTICE AND RESPONSIBILITIES
IV.B.2.a	Skill in applying basic first-aid procedures for exercise-related injuries, such as bleeding, strains/sprains, fractures, and exercise intolerance (dizziness, syncope, heat and cold injuries).	FW 430 – PROFESSIONAL PRACTICE AND RESPONSIBILITIES
IV.B.2.b	Skill in applying basic life support, first aid, cardiopulmonary resuscitation, and automated external defibrillator techniques.	FW 430 – PROFESSIONAL PRACTICE AND RESPONSIBILITIES
IV.B.2.c	Skill in designing an evacuation plan.	FW 430 – PROFESSIONAL PRACTICE AND RESPONSIBILITIES
IV.B.2.d	Skill in demonstrating emergency procedures during exercise testing and/or training.	FW 430 – PROFESSIONAL PRACTICE AND RESPONSIBILITIES
<b>Domain V: Management</b> <b>A. Manage human resources in accordance with leadership, organization, and management techniques.</b>		
V.A.1.a	Knowledge of industry benchmark compensation and employee benefit guidelines.	FW 405 – WORKSITE HEALTH PROMOTION FW 430 – PROFESSIONAL PRACTICE AND RESPONSIBILITIES
V.A.1.b	Knowledge of federal, state and local laws pertaining to staff qualifications and credentialing requirements.	FW 405 – WORKSITE HEALTH PROMOTION FW 430 – PROFESSIONAL PRACTICE AND RESPONSIBILITIES
V.A.1.c	Knowledge of techniques for tracking and evaluating member retention.	FW 405 – WORKSITE HEALTH PROMOTION FW 430 – PROFESSIONAL PRACTICE AND RESPONSIBILITIES
V.A.2.a	Skill in applying policies, practices and guidelines to efficiently hire, train, supervise, schedule and evaluate employees.	FW 430 – PROFESSIONAL PRACTICE AND RESPONSIBILITIES

V.A.2.b	Skill in applying conflict resolution techniques.	FW 430 – PROFESSIONAL PRACTICE AND RESPONSIBILITIES
<b>Domain V: Management</b> <b>B. Manage fiscal resources in accordance with leadership, organization, and management techniques.</b>		
V.B.1.a	Knowledge of fiduciary roles and responsibilities inherent in managing an exercise and health promotion program.	FW 405 – WORKSITE HEALTH PROMOTION FW 430 – PROFESSIONAL PRACTICE AND RESPONSIBILITIES
V.B.1.b	Knowledge of principles of financial planning and goal setting, institutional budgeting processes, forecasting, and allocation of resources.	FW 405 – WORKSITE HEALTH PROMOTION FW 430 – PROFESSIONAL PRACTICE AND RESPONSIBILITIES
V.B.1.c	Knowledge of basic software systems that facilitate accounting (e.g., Excel).	FW 405 – WORKSITE HEALTH PROMOTION FW 430 – PROFESSIONAL PRACTICE AND RESPONSIBILITIES
V.B.1.d	Knowledge of industry benchmarks for budgeting and finance.	FW 405 – WORKSITE HEALTH PROMOTION FW 430 – PROFESSIONAL PRACTICE AND RESPONSIBILITIES
V.B.1.e	Knowledge of basic sales techniques that promote health, fitness, and wellness services.	FW 405 – WORKSITE HEALTH PROMOTION FW 430 – PROFESSIONAL PRACTICE AND RESPONSIBILITIES
V.B.2.a	Skill in efficiently managing financial resources and performing related tasks (e.g., planning, budgeting, resource allocation, revenue generation).	HS 408C – FIELD WORK EXPERIENCE
V.B.2.b	Skill in administering fitness- and wellness-related programs within established budgetary guidelines.	HS 408C – FIELD WORK EXPERIENCE
<b>Domain V: Management</b> <b>C. Establish policies and procedures for the management of health fitness facilities based on accepted safety and legal guidelines, standards and regulations.</b>		

V.C.1.a	Knowledge of accepted guidelines, standards, and regulations used to establish policies and procedures for the management of health fitness facilities.	FW 430 – PROFESSIONAL PRACTICE AND RESPONSIBILITIES
V.C.1.a	Knowledge of facility design and operation principles.	FW 430 – PROFESSIONAL PRACTICE AND RESPONSIBILITIES
V.C.1.a	Knowledge of facility and equipment maintenance guidelines.	FW 430 – PROFESSIONAL PRACTICE AND RESPONSIBILITIES
V.C.1.a	Knowledge of documentation techniques for health fitness facility management.	FW 430 – PROFESSIONAL PRACTICE AND RESPONSIBILITIES
V.C.1.a	Knowledge of federal, state, and local laws as they relate to health fitness facility management.	FW 405 – WORKSITE HEALTH PROMOTION FW 430 – PROFESSIONAL PRACTICE AND RESPONSIBILITIES
	<b>Domain V: Management</b> <b>D. Develop and execute a marketing plan to promote programs, services and facilities.</b>	
V.D.1.a	Knowledge of lead generation techniques.	FW 430 – PROFESSIONAL PRACTICE AND RESPONSIBILITIES
V.D.1.b	Knowledge of the four Ps of marketing: product, price, placement, and promotion.	FW 430 – PROFESSIONAL PRACTICE AND RESPONSIBILITIES
V.D.1.c	Knowledge of public relations, community awareness, and sponsorship and their relationship to branding initiatives.	FW 430 – PROFESSIONAL PRACTICE AND RESPONSIBILITIES
V.D.1.d	Knowledge of advertising techniques.	FW 430 – PROFESSIONAL PRACTICE AND RESPONSIBILITIES
V.D.1.e	Knowledge of target market (internal) assessment techniques.	FW 430 – PROFESSIONAL PRACTICE AND RESPONSIBILITIES
V.D.1.f	Knowledge of target market (external) assessment techniques.	FW 430 – PROFESSIONAL PRACTICE AND RESPONSIBILITIES

V.D.2.a	Skill in applying marketing techniques that promote client retention.	HS 408C – FIELD WORK EXPERIENCE
V.D.2.b	Skill in applying marketing techniques that attract new clients.	HS 408C – FIELD WORK EXPERIENCE
V.D.2.c	Skill in designing and writing promotional materials	HS 408C – FIELD WORK EXPERIENCE
V.D.2.d	Skill in collaborating with community and governmental agencies and organizations.	HS 408C – FIELD WORK EXPERIENCE
V.D.2.e	Skill in providing customer service.	HS 408C – FIELD WORK EXPERIENCE
	<b>Domain V: Management</b> <b>E. Use effective communication techniques to develop professional relationships with other allied health professionals (e.g., nutritionists, physical therapists, physicians, nurses).</b>	
V.E.1.a	Knowledge of communication styles and techniques.	FW 405 – WORKSITE HEALTH PROMOTION FW 406 – HEALTH COACHING SKILLS
V.E.1.b	Knowledge of networking techniques.	FW 405 – WORKSITE HEALTH PROMOTION
V.E.2.a	Skill in planning meetings.	FW 405 – WORKSITE HEALTH PROMOTION