

Exercise Physiologist Job Task Analysis

Domain I: Health and Fitness Assessment		
A. Implement assessment protocols and preparticipation health screening procedures to maximize participant safety and minimize risk.		
Knowledge or Skill Statement		Course
<p>Knowledge of preactivity 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</p>		BIOL 215/216 – Human Anatomy & Physiology 2/Lab EXSC 101 – Intro to Exercise Science EXSC 320 – Meas/Eval in HLTH & KINE EXSC 410 – Applied Exercise Physiology EXSC 433 - Ex. Prescription for Special Pop. EXSC 460 – Exer Testing, Eval, & Prescript EXSC 461 – Exercise Leadership EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert KINE 225 – Weight Training/Conditioning
<p>Knowledge of the key components included in informed consent and health /medical history</p>		EXSC 101 – Intro to Exercise Science EXSC 320 – Meas/Eval in HLTH & KINE EXSC 410 – Applied Exercise Physiology EXSC 433 - Ex. Prescription for Special Pop EXSC 460 – Exer Testing, Eval, & Prescript EXSC 461 – Exercise Leadership
<p>Knowledge of the limitations of informed consent and health/medical history</p>		EXSC 320 – Meas/Eval in HLTH & KINE EXSC 410 – Applied Exercise Physiology EXSC 433 - Ex. Prescription for Special Pop EXSC 460 – Exer Testing, Eval, & Prescript EXSC 461 – Exercise Leadership
B. Determine participant's readiness to take part in a health-related physical fitness assessment and exercise program.		
Knowledge or Skill Statement		Course
<p>Knowledge of risk factor thresholds for American College of Sports Medicine (ACSM) risk stratification including genetic and lifestyle factors related to the development of cardiovascular disease (CVD)</p>		BIOL 215/216 – Human Anatomy & Physiology 2/Lab EXSC 101 – Intro to Exercise Science EXSC 320 – Meas/Eval in HLTH & KINE EXSC 410 – Applied Exercise Physiology EXSC 433 - Ex. Prescription for Special Pop EXSC 460 – Exer Testing, Eval, & Prescript EXSC 485 – Exercise Physiologist Workshop/Cert HLTH 333 – Exercise & Sports Nutrition
<p>Knowledge of the major signs or symptoms suggestive of cardiovascular, pulmonary, and metabolic disease</p>		BIOL 215/216 – Human Anatomy & Physiology 2/Lab EXSC 320 – Meas/Eval in HLTH & KINE EXSC 410 – Applied Exercise Physiology EXSC 433 - Ex. Prescription for Special Pop EXSC 460 – Exer Testing, Eval, & Prescript EXSC 485 – Exercise Physiologist Workshop/Cert
<p>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 (BP); new onset discomfort in chest, neck, shoulder, or arm; changes in the pattern of discomfort during rest or exercise, fainting, dizzy spells, claudication)</p>		BIOL 215/216 – Human Anatomy & Physiology 2/Lab EXSC 320 – Meas/Eval in HLTH & KINE EXSC 410 – Applied Exercise Physiology EXSC 433 - Ex. Prescription for Special Pop EXSC 460 – Exer Testing, Eval, & Prescript EXSC 485 – Exercise Physiologist Workshop/Cert

<p>Knowledge of pulmonary risk factors or conditions that may require consultation with medical personnel prior to exercise testing or training (<i>e.g.</i>, asthma, exercise-induced asthma/bronchospasm, extreme breathlessness at rest or during exercise, chronic bronchitis, emphysema)</p>		<p>BIOL 215/216 – Human Anatomy & Physiology 2/Lab EXSC 320 – Meas/Eval in HLTH & KINE EXSC 410 – Applied Exercise Physiology EXSC 433 - Ex. Prescription for Special Pop EXSC 460 – Exer Testing, Eval, & Prescript EXSC 485 – Exercise Physiologist Workshop/Cert</p>
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<p>Knowledge of the metabolic risk factors or conditions that may require consultation with medical personnel prior to exercise testing or training (<i>e.g.</i>, obesity, metabolic syndrome, diabetes, or glucose intolerance, hypoglycemia)</p>	<p>BIOL 215/216 – Human Anatomy & Physiology 2/Lab EXSC 101 – Intro to Exercise Science EXSC 320 – Meas/Eval in HLTH & KINE EXSC 410 – Applied Exercise Physiology EXSC 433 - Ex. Prescription for Special Pop EXSC 460 – Exer Testing, Eval, & Prescript HLTH 333 – Exercise & Sports Nutrition</p>
<p>Knowledge of the musculoskeletal risk factors or conditions that may require consultation with medical personnel prior to exercise testing or graining (<i>e.g.</i>, acute or chronic pain, osteoarthritis, rheumatoid arthritis, osteoporosis, inflammation/pain, low back pain)</p>	<p>BIOL 213/214 – Human Anatomy & Physiology 1/Lab EXSC 320 – Meas/Eval in HLTH & KINE EXSC 410 – Applied Exercise Physiology EXSC 433 - Ex. Prescription for Special Pop EXSC 460 – Exer Testing, Eval, & Prescript EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert HLTH 333 – Exercise & Sports Nutrition</p>
<p>Knowledge of ACSM risk classification categories and their implications for medical clearance before administration of an exercise test or participation in an exercise program.</p>	<p>EXSC 101 – Intro to Exercise Science EXSC 320 – Meas/Eval in HLTH & KINE EXSC 410 – Applied Exercise Physiology EXSC 433 - Ex. Prescription for Special Pop EXSC 460 – Exer Testing, Eval, & Prescript</p>
<p>Knowledge of risk factors that may be favorably modified by physical activity habits.</p>	<p>BIOL 215/216 – Human Anatomy & Physiology 2/Lab EXSC 101 – Intro to Exercise Science EXSC 320 – Meas/Eval in HLTH & KINE EXSC 410 – Applied Exercise Physiology EXSC 433 - Ex. Prescription for Special Pop EXSC 460 – Exer Testing, Eval, & Prescript HLTH 333 – Exercise & Sports Nutrition</p>
<p>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</p>	<p>BIOL 213/214 – Human Anatomy & Physiology 1/Lab BIOL 215/216 – Human Anatomy & Physiology 2/Lab EXSC 320 – Meas/Eval in HLTH & KINE EXSC 410 – Applied Exercise Physiology EXSC 433 - Ex. Prescription for Special Pop EXSC 460 – Exer Testing, Eval, & Prescript EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert HLTH 333 – Exercise & Sports Nutrition</p>
<p>Knowledge of recommended plasma cholesterol levels for adults based on National Cholesterol Education Program (NCEP)/Adult Treatment Panel (ATP) Guidelines</p>	<p>BIOL 215/216 – Human Anatomy & Physiology 2/Lab EXSC 320 – Meas/Eval in HLTH & KINE EXSC 410 – Applied Exercise Physiology EXSC 433 - Ex. Prescription for Special Pop EXSC 460 – Exer Testing, Eval, & Prescript HLTH 333 – Exercise & Sports Nutrition</p>
<p>Knowledge of recommended BP levels for adults based on National High Blood Pressure Education Program Guidelines</p>	<p>BIOL 215/216 – Human Anatomy & Physiology 2/Lab EXSC 101 – Intro to Exercise Science EXSC 320 – Meas/Eval in HLTH & KINE EXSC 410 – Applied Exercise Physiology EXSC 433 - Ex. Prescription for Special Pop EXSC 460 – Exer Testing, Eval, & Prescript</p>
<p>Knowledge of medical supervision recommendations for cardiorespiratory fitness testing</p>	<p>EXSC 101 – Intro to Exercise Science EXSC 320 – Meas/Eval in HLTH & KINE EXSC 410 – Applied Exercise Physiology EXSC 433 - Ex. Prescription for Special Pop EXSC 460 – Exer Testing, Eval, & Prescript EXSC 461 – Exercise Leadership EXSC 499 – Internship in EXSC</p>
<p>Knowledge of the components of a health history questionnaire (<i>e.g.</i> past and current medical history, family history of cardiac disease, orthopedic limitations, prescribed medications, activity patterns,</p>	<p>EXSC 101 – Intro to Exercise Science EXSC 410 – Applied Exercise Physiology EXSC 433 - Ex. Prescription for Special Pop EXSC 460 – Exer Testing, Eval, & Prescript</p>

nutritional habits, stress and anxiety levels, and smoking and alcohol use)

EXSC 461 – Exercise Leadership
EXSC 499 – Internship in EXSC

Skill in risk classification 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		BIOL 215/216 – Human Anatomy & Physiology 2/Lab EXSC 320 – Meas/Eval in HLTH & KINE EXSC 410 – Applied Exercise Physiology EXSC 433 - Ex. Prescription for Special Pop EXSC 460 – Exer Testing, Eval, & Prescript EXSC 461 – Exercise Leadership
Skill in reviewing preactivity screening documents to determine the need for medical clearance prior to exercise and to select appropriate physical fitness assessment protocols.		EXSC 410 – Applied Exercise Physiology EXSC 433 - Ex. Prescription for Special Pop EXSC 460 – Exer Testing, Eval, & Prescript EXSC 461 – Exercise Leadership KINE 225 – Weight Training/Conditioning
C. Select and prepare physical fitness assessments for healthy participants and those with controlled disease		
Knowledge or Skill Statement		Course
Knowledge of the physiological basis of the major components of physical fitness – cardiorespiratory fitness, body composition, flexibility, muscular strength, and muscular endurance		BIOL 213/214 – Human Anatomy & Physiology 1/Lab BIOL 215/216 – Human Anatomy & Physiology 2/Lab EXSC 101 – Intro to Exercise Science EXSC 310 – Physiology of Exercise EXSC 320 – Meas/Eval in HLTH & KINE EXSC 340 – Essentials Strength Train/Cond EXSC 410 – Applied Exercise Physiology EXSC 433 - Ex. Prescription for Special Pop EXSC 460 – Exer Testing, Eval, & Prescript EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert KINE 225 – Weight Training/Conditioning KINE 101 – Physical Fitness
Knowledge of selecting the most appropriate testing protocols for each participant based on preliminary screening data		EXSC 320 – Meas/Eval in HLTH & KINE EXSC 410 – Applied Exercise Physiology EXSC 433 - Ex. Prescription for Special Pop EXSC 460 – Exer Testing, Eval, & Prescript EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert
Knowledge of calibration techniques and proper use of fitness testing equipment		EXSC 410 – Applied Exercise Physiology EXSC 460 – Exer Testing, Eval, & Prescript KINE 225 – Weight Training/Conditioning
Knowledge of the purpose and procedures of fitness testing protocols for the components of health – related fitness		EXSC 101 – Intro to Exercise Science EXSC 410 – Applied Exercise Physiology EXSC 433 - Ex. Prescription for Special Pop EXSC 460 – Exer Testing, Eval, & Prescript KINE 225 – Weight Training/Conditioning
Knowledge of the test termination criteria and proper procedures to be followed after discontinuing health fitness tests		EXSC 410 – Applied Exercise Physiology EXSC 433 - Ex. Prescription for Special Pop EXSC 460 – Exer Testing, Eval, & Prescript EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert
Knowledge of fitness assessment sequencing		EXSC 320 – Meas/Eval in HLTH & KINE EXSC 410 – Applied Exercise Physiology EXSC 433 - Ex. Prescription for Special Pop EXSC 460 – Exer Testing, Eval, & Prescript EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert KINE 225 – Weight Training/Conditioning
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)		BIOL 215/216 – Human Anatomy & Physiology 2/Lab EXSC 433 - Ex. Prescription for Special Pop EXSC 460 – Exer Testing, Eval, & Prescript

Knowledge of the physiologic and metabolic responses to exercise testing associated with each chronic diseases, and conditions (e.g., heart disease, hypertension, diabetes mellitus, obesity, pulmonary disease)	BIOL 215/216 – Human Anatomy & Physiology 2/Lab EXSC 433 – Exercise Prescription for Special Pop. HLTH 333 – Exercise & Sports Nutrition
Skill in analyzing and interpreting information obtained from assessment of the components of health – related fitness.	EXSC 460 – Exer Testing, Eval, & Prescript EXSC 499 – Internship in EXSC KINE 225 – Weight Training/Conditioning
Skill in modifying protocols and procedures for testing children, adolescents, older adults, and individuals with special considerations	EXSC 410 – Applied Exercise Physiology EXSC 433 – Exer Testing, Eval, & Prescript EXSC 411 – Applied Exercise Physio Lab EXSC 315 - Group Exercise Instruction

D. Conduct and interpret cardiorespiratory fitness assessments.

Knowledge or Skill Statement	Course
Knowledge of common submaximal and maximal cardiorespiratory assessment protocols	BIOL 215/216 – Human Anatomy & Physiology 2/Lab EXSC 101 – Intro to Exercise Science EXSC 410 – Applied Exercise Physiology EXSC 411 – Applied Exercise Physio Lab EXSC 460 – Exer Testing, Eval, & Prescript EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert EXSC 499 – Internship in EXSC
Knowledge of blood pressure (BP) measurement techniques	BIOL 215/216 – Human Anatomy & Physiology 2/Lab EXSC 320 – Meas/Eval in HLTH & KINE EXSC 410 – Applied Exercise Physiology EXSC 411 – Applied Exercise Physio Lab EXSC 460 – Exer Testing, Eval, & Prescript EXSC 499 – Internship in EXSC
Knowledge of Korothoff sounds for determining systolic BP (SBP) and diastolic BP (DBP)	BIOL 215/216 – Human Anatomy & Physiology 2/Lab EXSC 410 – Applied Exercise Physiology EXSC 460 – Exer Testing, Eval, & Prescript
Knowledge of BP response to exercise	BIOL 215/216 – Human Anatomy & Physiology 2/Lab EXSC 310- Physiology of Exercise EXSC 340 – Essentials Strength Train/Cond EXSC 410 – Applied Exercise Physiology EXSC 411 – Applied Exercise Physio Lab EXSC 433 – Exercise Prescription for Special Pop. EXSC 460 – Exer Testing, Eval, & Prescript EXSC 315 - Group Exercise Instruction
Knowledge of techniques of measuring heart rate (HR) and HR response to exercise	BIOL 215/216 – Human Anatomy & Physiology 2/Lab EXSC 410 – Applied Exercise Physiology EXSC 411 – Applied Exercise Physio Lab EXSC 433 – Exercise Prescription for Special Pop. EXSC 460 – Exer Testing, Eval, & Prescript
Knowledge of the rating of perceived exertion (RPE)	EXSC 410 – Applied Exercise Physiology EXSC 411 – Applied Exercise Physio Lab EXSC 433 – Exercise Prescription for Special Pop. EXSC 460 – Exer Testing, Eval, & Prescript EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert
Knowledge of HR, BP, and RPE monitoring techniques before, during and after cardiorespiratory fitness testing	BIOL 215/216 – Human Anatomy & Physiology 2/Lab EXSC 410 – Applied Exercise Physiology EXSC 411 – Applied Exercise Physio Lab EXSC 460 – Exer Testing, Eval, & Prescript
Knowledge of the anatomy and physiology of the cardiovascular and pulmonary systems	BIOL 215/216 – Human Anatomy & Physiology 2/Lab EXSC 310 – Physiology of Exercise EXSC 340 – Essentials Strength Train/Cond EXSC 433 – Exercise Prescription for Special Pop. EXSC 460 – Exer Testing, Eval, & Prescript EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert

<p>Knowledge of cardiorespiratory terminology including angina pectoris, tachycardia, bradycardia, arrhythmia, and hyperventilation</p>		<p>BIOL 215/216 – Human Anatomy & Physiology 2/Lab EXSC 310- Physiology of Exercise EXSC 410 – Applied Exercise Physiology EXSC 433 – Exercise Prescription for Special Pop. EXSC 460 – Exer Testing, Eval, & Prescript</p>
<p>Knowledge of the pathophysiology of myocardial ischemia, myocardial infarction (MI), stroke, hypertension, and hyperlipidemia</p>		<p>BIOL 215/216 – Human Anatomy & Physiology 2/Lab EXSC 460 – Exer Testing, Eval, & Prescript</p>
<p>Knowledge of the effects of myocardial ischemia, MI, hypertension, claudication, and dyspnea on cardiorespiratory responses during exercise</p>		<p>BIOL 215/216 – Human Anatomy & Physiology 2/Lab EXSC 433 – Exercise Prescription for Special Pop. EXSC 460 – Exer Testing, Eval, & Prescript</p>
<p>Knowledge of oxygen consumption dynamics during exercise (<i>e.g.</i>, HR, stroke volume, cardiac output, ventilation, ventilatory threshold)</p>		<p>BIOL 215/216 – Human Anatomy & Physiology 2/Lab EXSC 310 – Exercise Physiology EXSC 410 – Applied Exercise Physiology EXSC 411 – Applied Exercise Physio Lab EXSC 433 – Exercise Prescription for Special Pop. EXSC 460 – Exer Testing, Eval, & Prescript EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert</p>

Knowledge of methods of calculating maximal volume of oxygen consumed per unit of time (VO_{2max})		EXSC 410 – Applied Exercise Physiology EXSC 411 – Applied Exercise Physio Lab EXSC 433 – Exercise Prescription for Special Pop. EXSC 460 – Exer Testing, Eval, & Prescript EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert
Knowledge of cardiorespiratory responses to acute graded exercise of conditioned and unconditioned participants		EXSC 340 – Essentials Strength Train/Cond EXSC 410 – Applied Exercise Physiology EXSC 411 – Applied Exercise Physio Lab EXSC 433 – Exercise Prescription for Special Pop.
Skill in interpreting cardiorespiratory fitness test results		EXSC 410 – Applied Exercise Physiology EXSC 411 – Applied Exercise Physio Lab EXSC 460 – Exer Testing, Eval, & Prescript EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert EXSC 499 – Internship in EXSC
Skill in locating anatomic landmarks for palpation of peripheral pulses and BP		BIOL 215/216 – Human Anatomy & Physiology 2/Lab EXSC 410 – Applied Exercise Physiology EXSC 411 – Applied Exercise Physio Lab EXSC 315 – Group Exercise Instruction
Skill in measuring HR, BP, and RPE at rest and during exercise		BIOL 215/216 – Human Anatomy & Physiology 2/Lab EXSC 410 – Applied Exercise Physiology EXSC 411 – Applied Exercise Physio Lab EXSC 460 – Exer Testing, Eval, & Prescript
Skill in determining cardiorespiratory fitness based on submaximal exercise test results		EXSC 410 – Applied Exercise Physiology EXSC 411 – Applied Exercise Physio Lab EXSC 460 – Exer Testing, Eval, & Prescript
E. Conduct assessments of muscular strength, muscular endurance, and flexibility.		
Knowledge or Skill Statement		Course
Knowledge of common muscular strength, muscular endurance, and flexibility assessment protocols		EXSC 101 – Intro to Exercise Science EXSC 320 – Meas/Eval in HLTH & KINE EXSC 340 – Essentials Strength Train/Cond EXSC 433 – Exercise Prescription for Special Pop. EXSC 460 – Exer Testing, Eval, & Prescript EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert KINE 225 – Weight Training/Conditioning KINE 101 – Physical Fitness EXSC 315 - Group Exercise Instruction
Knowledge of interpreting muscular strength, muscular endurance, and flexibility assessments		EXSC 320 – Meas/Eval in HLTH & KINE EXSC 340 – Essentials Strength Train/Cond EXSC 460 – Exer Testing, Eval, & Prescript EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert KINE 225 – Weight Training/Conditioning KINE 101 – Physical Fitness EXSC 315 - Group Exercise Instruction
Knowledge of relative strength, absolute strength, and one repetition maximum (1-RM) estimation		EXSC 340 – Essentials Strength Train/Cond EXSC 460 – Exer Testing, Eval, & Prescript KINE 225 – Weight Training/Conditioning
Knowledge of the anatomy of bone, skeletal muscle, and connective tissues		BIOL 213/214 – Human Anatomy & Physiology 1/Lab EXSC 350 – Biomechanics EXSC 351 – Biomechanics Lab EXSC 311 – Analysis of Human Movement
Knowledge of muscle action terms including anterior, posterior, inferior, superior, medial, lateral, supination, pronation, flexion, extension, adduction, abduction, hyperextension, rotation, circumduction, agonist, antagonist, and stabilizer		BIOL 213/214 – Human Anatomy & Physiology 1/Lab EXSC 350 – Biomechanics EXSC 351 – Biomechanics Lab EXSC 311 – Analysis of Human Movement EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert

<p>Knowledge of the planes and axes in which movement action occurs</p>	<p>BIOL 213/214 – Human Anatomy & Physiology 1/Lab EXSC 311 – Analysis of Human Movement EXSC 350 – Biomechanics EXSC 351 – Biomechanics Lab EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert</p>
<p>Knowledge of the interrelationships among center of gravity, base of support, balance, stability posture, and proper spinal alignment</p>	<p>EXSC 350 – Biomechanics EXSC 351 – Biomechanics Lab EXSC 311 – Analysis of Human Movement KINE 225 – Weight Training/Conditioning EXSC 315 – Group Exercise Instruction</p>
<p>Knowledge of the normal curvatures of the spine and common assessments of postural alignment</p>	<p>BIOL 213/214 – Human Anatomy & Physiology 1/Lab EXSC 350- Biomechanics EXSC 351- Biomechanics Lab</p>

Knowledge of location and function of the major muscles (<i>e.g.</i> , pectoralis major, trapezius, latissimus dorsi, biceps, triceps, rectus abdominis, internal and external obliques, erector spinae, gluteus maximus, quadriceps, hamstrings, adductors, abductors, and gastrocnemius)		BIOL 213/214 – Human Anatomy & Physiology 1/Lab EXSC 311 – Analysis of Human Movement EXSC 350 – Biomechanics EXSC 351 – Biomechanics Lab EXSC 340 – Essentials Strength Train/Cond KINE 225 – Weight Training/Conditioning
Knowledge of the major joints and their associated movement		BIOL 213/214 – Human Anatomy & Physiology 1/Lab EXSC 302 – Exercise and Sports Injuries EXSC 311 – Analysis of Human Movement EXSC 350 – Biomechanics EXSC 351- Biomechanics Lab EXSC 340 – Essentials Strength Train/Cond EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert
Skill in identifying the major bones, muscles, and joints		BIOL 213/214 – Human Anatomy & Physiology 1/Lab EXSC 311 – Analysis of Human Movement EXSC 340 – Essentials Strength Train/Cond EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert EXSC 351- Biomechanics Lab
Skill in conducting assessments of muscular strength, muscular endurance and flexibility (<i>e.g.</i> , 1-RM, hand grip dynamometer, push-ups, curl-ups, sit-and-reach)		EXSC 320 – Meas/Eval in HLTH & KINE EXSC 340 – Essentials Strength Train/Cond EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert KINE 225 – Weight Training/Conditioning KINE 101 – Physical Fitness
Skill in estimating 1-RM using lower resistance (2-10 RM)		EXSC 340 – Essentials Strength Train/Cond
Skill in interpreting results of muscular strength, muscular endurance, and flexibility assessments		EXSC 340 – Essentials Strength Train/Cond KINE 225 – Weight Training/Conditioning KINE 101 – Physical Fitness EXSC 315 – Group Fitness Instruction

F. Conduct anthropometric and body composition assessments.

Knowledge or Skill Statement	Course
Knowledge of the advantages , disadvantages, and limitations of composition techniques (<i>e.g.</i> , air displacement plethysmography [BOD POD], dual-energy X-ray absorptiometry [DEXA], hydrostatic weighing, skinfolds, and bioelectrical impedance)	EXSC 101 – Intro to Exercise Science EXSC 410 – Applied Exercise Physiology EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert
Knowledge of the standardized descriptions of circumference and skinfold sites	EXSC 320 – Meas/Eval in HLTH & KINE EXSC 340 – Essentials Strength Train/Cond EXSC 410 – Applied Exercise Physiology EXSC 411 – Applied Exercise Physio Lab EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert
Knowledge of procedures for determining body mass index (BMI) and taking skinfold and circumference measurements	BIOL 213/214 – Human Anatomy & Physiology 1/Lab BIOL 215/216 – Human Anatomy & Physiology 2/Lab EXSC 320 – Meas/Eval in HLTH & KINE EXSC 340 – Essentials Strength Train/Cond EXSC 410 – Applied Exercise Physiology EXSC 460 – Exer Testing, Eval, & Prescript HLTH 333 – Exercise & Sports Nutrition KINE 225 – Weight Training/Conditioning
Knowledge of the health implications of variation in body fat distribution patterns and the significance of BMI, waist circumference, and waist-to-hip ratio	EXSC 320 – Meas/Eval in HLTH & KINE EXSC 340 – Essentials Strength Train/Cond EXSC 433 – Exercise Prescription for Special Pop. EXSC 460 – Exer Testing, Eval, & Prescript HLTH 333 – Exercise & Sports Nutrition
Skill in locating anatomic landmarks for skinfold and circumference measurements	BIOL 213/214 – Human Anatomy & Physiology 1/Lab EXSC 320 – Meas/Eval in HLTH & KINE EXSC 340 – Essentials Strength Train/Cond

	EXSC 410 – Applied Exercise Physiology EXSC 411 – Applied Exercise Physio Lab EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert KINE 225 – Weight Training/Conditioning
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Skill in interpreting the results of anthropometric and body composition assessments		EXSC 320 – Meas/Eval in HLTH & KINE EXSC 340 – Essentials Strength Train/Cond EXSC 410 – Applied Exercise Physiology EXSC 411 – Applied Exercise Physio Lab EXSC 460 – Exer Testing, Eval, & Prescript EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert

Domain II: Exercise Prescription and Implementation

A. Review preparticipation health screening including self-guided health questionnaires and appraisals, exercise history, and physical fitness assessments.

Knowledge or Skill Statement	Course
Skill in synthesizing prescreening results and reviewing them with participants	EXSC 410 – Applied Exercise Physiology

B. Determine safe and effective exercise programs to achieve desired outcomes and goals.

Knowledge or Skill Statement	Course
Knowledge of strength, cardiovascular, and flexibility-based exercise	EXSC 101 – Intro to Exercise Science EXSC 310- Exercise Physiology EXSC 410 – Applied Exercise Physiology EXSC 433 – Exercise Prescription for Special Pop. EXSC 460 – Exer Testing, Eval, & Prescript EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert EXSC 499 – Internship in EXSC EXSC 421 – Practicum KINE 101 – Physical Fitness EXSC 315 – Group Exercise Instruction
Knowledge of the benefits and precautions associated with exercise training in apparently healthy participants and those with controlled disease	EXSC 101 – Intro to Exercise Science EXSC 320 – Meas/Eval in HLTH & KINE EXSC 340 – Essentials Strength Train/Cond EXSC 410 – Applied Exercise Physiology EXSC 433 – Exercise Prescription for Special Pop. EXSC 460 – Exer Testing, Eval, & Prescript
Knowledge of program development for specific client needs (e.g., sports-specific training, performance, health, lifestyle, functional ability, balance, agility, aerobic, anaerobic)	EXSC 101 – Intro to Exercise Science EXSC 310- Physiology of Exercise EXSC 340 – Essentials Strength Train/Cond EXSC 421- Practicum EXSC 433 – Exercise Prescription for Special Pop. EXSC 499- Internship
Knowledge of the six motor skill-related physical fitness components: agility, balance, coordination, reaction time, speed, and power	EXSC 340 – Essentials Strength Train/Cond EXSC 350- Biomechanics EXSC 351 – Biomechanics Lab KINE 101 – Physical Fitness EXSC 315 – Group Exercise Instruction
Knowledge of the physiologic changes associated with an acute bout of exercise	EXSC 101 – Intro to Exercise Science EXSC 310 – Physiology of Exercise EXSC 340 – Essentials Strength Train/Cond EXSC 410 – Applied Exercise Physiology EXSC 411 – Applied Exercise Physio Lab EXSC 433 – Exercise Prescription for Special Pop. EXSC 460 – Exer Testing, Eval, & Prescript EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert KINE 101 – Physical Fitness EXSC 315 – Group Exercise Instruction
Knowledge of the physiologic adaptations following chronic exercise training	EXSC 101 – Intro to Exercise Science EXSC 310- Physiology of Exercise EXSC 340 – Essentials Strength Train/Cond EXSC 410 – Applied Exercise Physiology EXSC 433 – Exercise Prescription for Special Pop. EXSC 460 – Exer Testing, Eval, & Prescript EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert HLTH 333 – Exercise & Sports Nutrition KINE 101 – Physical Fitness EXSC 315 – Group Exercise Instruction
Knowledge of American College of Sports Medicine (ACSM) exercise prescription guidelines for strength,	EXSC 340 – Essentials Strength Train/Cond EXSC 433 – Exercise Prescription for Special Pop.

cardiovascular, and flexibility-based exercise for apparently health clients, clients with increased risk, and clients with controlled disease		EXSC 460 – Exer Testing, Eval, & Prescript EXSC 310- Physiology of Exercise
Knowledge of the components and sequencing incorporated into an exercise session (e.g., warm-up, stretching, conditioning or sports-related exercise, cool-down)		EXSC 101 – Intro to Exercise Science EXSC 310- Physiology of Exercise EXSC 340 – Essentials Strength Train/Cond EXSC 433 – Exercise Prescription for Special Pop. EXSC 460 – Exer Testing, Eval, & Prescript EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert KINE 225 – Weight Training/Conditioning KINE 101 – Physical Fitness EXSC 315 – Group Exercise Instruction
Knowledge of the physiological principles related to warm-up and cool-down		EXSC 310- Physiology of Exercise EXSC 340 – Essentials Strength Train/Cond EXSC 460 – Exer Testing, Eval, & Prescript EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert KINE 101 - Physical Fitness EXSC 315 – Group Exercise Instruction
Knowledge of the principles of reversibility, progressive overload, individual differences and specificity of training, and how they relate to exercise prescription		EXSC 310- Physiology of Exercise EXSC 340 – Essentials Strength Train/Cond EXSC 433 – Exercise Prescription for Special Pop. EXSC 460 – Exercise Prescription EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert KINE 101- Physical Fitness EXSC 315 – Group Exercise Instruction

Knowledge of the role of aerobic and anaerobic energy systems in the performance of various physical activities		EXSC 101 – Intro to Exercise Science EXSC 310- Physiology of Exercise EXSC 340 – Essentials Strength Train/Cond EXSC 410 – Applied Exercise Physiology EXSC 411 – Applied Exercise Physio Lab EXSC 460 – Exer Testing, Eval, & Prescript EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert HLTH 333 – Exercise & Sports Nutrition KINE 101 – Physical Fitness EXSC 315 – Group Exercise Instruction
Knowledge of the basic biomechanical principles of human movement		EXSC 350- Biomechanics EXSC 351- Biomechanics Lab EXSC 311 – Analysis of Human Movement EXSC 340 – Essentials Strength Train/Cond EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert
Knowledge of the psychological and physiological signs and symptoms of overtraining		EXSC 101 – Intro to Exercise Science EXSC 310- Physiology of Exercise EXSC 340 – Essentials Strength Train/Cond EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert
Knowledge of the signs and symptoms of common musculoskeletal injuries associated with exercise (e.g., sprain, strain, bursitis, tendonitis)		EXSC 302 – Exercise & Sports Injuries EXSC 340 – Essentials Strength Train/Cond EXSC 350 - Biomechanics EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert
Knowledge of the advantages and disadvantages of exercise equipment (e.g., free weights, selectorized machine, cardiovascular equipment)		EXSC 101 – Intro to Exercise Science EXSC 340 – Essentials Strength Train/Cond EXSC 461 – Exercise Leadership EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert KINE 225 – Weight Training/Conditioning
Skill in teaching and demonstrating exercises		EXSC 340 – Essentials Strength Train/Cond EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert KINE 225 – Weight Training/Conditioning KINE 101 – Physical Fitness EXSC 315 – Group Exercise Instruction
Skill in designing safe and effective training programs		EXSC 340 – Essentials Strength Train/Cond EXSC 460 – Exer Testing, Eval, & Prescript KINE 225 – Weight Training/Conditioning EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert
Skill in implementing exercises prescription guidelines for apparently healthy clients, clients with increased risk, and clients with controlled disease		EXSC 340 – Essentials Strength Train/Cond EXSC 499 – Internship in EXSC

C. Implement cardiorespiratory exercise prescriptions using the frequency, intensity, time, and type (FITT) principle for apparently health participants based on current health status, fitness goals, and availability of time.

Knowledge or Skill Statement	Course
Knowledge of the recommended FITT framework for the development of cardiorespiratory fitness	EXSC 460 – Exer Testing, Eval, & Prescript EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert KINE 101 – Physical Fitness EXSC 315 – Group Exercise Instruction
Knowledge of the benefits, risks, and contraindications of a wide variety of cardiovascular training exercise based on client experience, skill level, current fitness level, and goals	KINE 101 – Physical Fitness EXSC 340 – Essentials Strength Train/Cond EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert EXSC 499 – Internship in EXSC

		EXSC 315 – Group Exercise Instruction
Knowledge of the minimal threshold of physical activity required for health benefits and/or fitness development		EXSC 340 – Essentials Strength Train/Cond EXSC 460 – Exer Testing, Eval, & Prescript
Knowledge of the determining exercise intensity using heart rate reserve (HRR), oxygen uptake reserve (VO_2R), peak heart rate (HR_{peak}) method, peak volume of oxygen consumed per unit of time (VO_{2peak}) method, peak metabolic equivalents (MET) method, and the rate of perceived exertion (RPE) scale		EXSC 460 – Exer Testing, Eval, & Prescript EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert
Knowledge of the accuracy of HRR VO_2R , HR_{peak} method, VO_{2peak} method, peak MET method, and the RPE method		EXSC 460 – Exer Testing, Eval, & Prescript EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert
Knowledge of abnormal responses to exercise (e.g., hemodynamic, cardiac, ventilatory)		EXSC 310 Physiology of Exercise EXSC 433 Exercise Prescription for Special Populations
Knowledge of metabolic calculations (e.g., unit conversions, deriving energy cost of exercise, caloric expenditure)		EXSC 410 – Applied Exercise Physiology EXSC 460 – Exer Testing, Eval, & Prescript HLTH 333 – Exercise & Sports Nutrition
Knowledge of calculation the caloric expenditure of an exercise session (kilocalories per session)		EXSC 460 – Exer Testing, Eval, & Prescript
Knowledge of methods for establishing and monitoring levels of exercise intensity including hear rate (HR), RPE, and MET		EXSC 410 – Applied Exercise Physiology EXSC 460 – Exer Testing, Eval, & Prescript EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert
Knowledge of the applications of anaerobic training principles		EXSC 315 – Group Exercise Instruction EXSC 340 – Essentials Strength Train/Cond EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert
Knowledge of the anatomy and physiology of the cardiovascular and pulmonary systems including the basic properties of cardiac muscle		BIOL 213/214/215/216 – A&P EXSC 310- Physiology of Exercise EXSC 311 – Analysis of Human Movement EXSC 340 – Essentials Strength Train/Cond EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert
Knowledge of the basic principles of gas exchange		BIOL 213/214/215/216 – A&P EXSC 310- Physiology of Exercise EXSC 340 – Essentials Strength Train/Cond EXSC 410 – Applied Exercise Physiology EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert
Skill in determining appropriate exercise frequency, intensity, time, and type for clients with various fitness levels		EXSC 340 – Essentials Strength Train/Cond EXSC 460 – Exer Testing, Eval, & Prescript EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert
Skill in determining the energy cost, absolute and relative oxygen cost (VO_2), and MET levels of various activities and apply the information to an exercise prescription		EXSC 460 – Exer Testing, Eval, & Prescript
Skill in identifying improper technique in the use of cardiovascular equipment		EXSC 315 – Group Exercise Instruction EXSC 410 – Applied Exercise Physiology EXSC 411 – Applied Exercise Physio Lab
Skill in teaching and demonstrating the use of various cardiovascular exercise equipment		EXSC 315 – Group Exercise Instruction EXSC 410 – Applied Exercise Physiology EXSC 411 – Applied Exercise Physio Lab EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert
D. Implement exercise prescriptions using the frequency, intensity, time, and type (FITT) principle for flexibility, muscular strength, and muscular endurance for apparently health participants based on current health status, fitness goals, and availability of time.		
Knowledge or Skill Statement		Course

<p>Knowledge of the recommended FITT framework for the development of muscular strength, muscular endurance, and flexibility</p>		<p>EXSC 101 – Intro to Exercise Science EXSC 310- Physiology of Exercise EXSC 340 – Essentials Strength Train/Cond EXSC 460 – Exer Testing, Eval, & Prescript EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert EXSC 499 – Internship in EXSC EXSC 421- Practicum KINE 225 – Weight Training/Conditioning KINE 101 – Physical Fitness EXSC 315 – Group Exercise Instruction</p>
<p>Knowledge of the minimal threshold of physical activity required for health benefits and/or fitness development</p>		<p>EXSC 101 – Intro to Exercise Science KINE 101 – Physical Fitness EXSC 315 – Group Exercise Instruction EXSC 310- Physiology of Exercise EXSC 340 – Essentials Strength Train/Cond EXSC 460 – Exer Testing, Eval, & Prescript EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert</p>
<p>Knowledge of safe and effective exercises designed to enhance muscular strength and/or endurance of major muscle groups</p>		<p>EXSC 340 – Essentials Strength Train/Cond EXSC 460 – Exer Testing, Eval, & Prescript EXSC 351 – Biomechanics Lab EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert KINE 225 – Weight Training/Conditioning KINE 101 – Physical Fitness EXSC 315 – Group Exercise Instruction</p>
<p>Knowledge of safe and effective stretches that enhance flexibility</p>		<p>KINE 101 – Physical Fitness EXSC 315 – Group Exercise Instruction EXSC 311 – Analysis of Human Movement EXSC 351- Biomechanics Lab EXSC 320 – Meas/Eval in HLTH & KINE EXSC 340 – Essentials Strength Train/Cond EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert</p>
<p>Knowledge of indication for water based exercises (<i>e.g.</i>, arthritis, obesity)</p>		<p>EXSC 350- Biomechanics</p>
<p>Knowledge of the types of resistance training programs (<i>e.g.</i>, total body, split routine) and modalities (<i>e.g.</i>, free weights, variable resistance equipment, pneumatic machine, bands)</p>		<p>EXSC 310 – Physiology of Exercise EXSC 340 – Essentials Strength Train/Cond EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert</p>

Knowledge of acute (<i>e.g.</i> , load, volume, sets, repetitions, rest periods, order of exercises) and chronic training variables (<i>e.g.</i> , periodization)		KINE 225 – Weight Training/Conditioning EXSC 310 – Physiology of Exercise EXSC 340 – Essentials Strength Train/Cond EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert
Knowledge of the types of muscle contractions (<i>e.g.</i> , eccentric, concentric, isometric)		EXSC 101 – Intro to Exercise Science EXSC 310 – Physiology of Exercise EXSC 311 – Analysis of Human Movement EXSC 340 – Essentials Strength Train/Cond EXSC 350- Biomechanics EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert KINE 225 – Weight Training/Conditioning
Knowledge of the joint movements (<i>e.g.</i> , flexion, extension, adduction, abduction) and the muscles responsible for them		BIOL 213/214 A&P EXSC 311 – Analysis of Human Movement EXSC 350- Biomechanics EXSC 340 – Essentials Strength Train/Cond EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert KINE 225 – Weight Training/Conditioning
Knowledge of acute and delayed onset muscle soreness (DOMS)		EXSC 302 – Exercise and Sports Injury EXSC 310 – Physiology of Exercise EXSC 340 – Essentials Strength Train/Cond EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert
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		BIOL 213/214 A&P EXSC 310 – Physiology of Exercise EXSC 311 – Analysis of Human Movement EXSC 340 – Essentials Strength Train/Cond EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert
Knowledge of the stretch reflex, proprioceptors, Golgi tendon organ (GTO), muscle spindles, and how they relate to flexibility		BIOL 213/214 A&P EXSC 310 – Physiology of Exercise EXSC 311 – Analysis of Human Movement EXSC 340 – Essentials Strength Train/Cond EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert
Knowledge of muscle –related terminology including atrophy, hyperplasia, and hypertrophy		BIOL 213/214 A&P EXSC 310 – Physiology of Exercise EXSC 311 – Analysis of Human Movement EXSC 340 – Essentials Strength Train/Cond
Knowledge of the Valsalva maneuver and its implications during exercise		EXSC 310 – Physiology of Exercise EXSC 340 – Essentials Strength Train/Cond EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert
Knowledge of the physiology underlying plyometric training and common plyometric exercises (<i>e.g.</i> , box jumps, leaps, bounds)		EXSC 310 – Physiology of Exercise EXSC 340 – Essentials Strength Train/Cond
Knowledge of the contraindications and potential risks associated with muscular conditioning activities (<i>e.g.</i> , 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)		KINE 225- Weight Training/Conditioning EXSC 302 – Exercise and Sports Injuries EXSC 340 – Essentials Strength Train/Cond

Knowledge of prescribing exercise using the calculated % 1-RM		EXSC 340 – Essentials Strength Train/Cond EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert
Knowledge of spotting positions and techniques for injury prevention and exercise assistance		KINE 225 - Weight Training/Conditioning EXSC 340 – Essentials Strength Train/Cond
Knowledge of periodization (e.g., macrocycles, microcycles, mesocycles) and associated theories		EXSC 340 – Essentials Strength Train/Cond EXSC 310- Physiology of Exercise
Knowledge of safe and effective Olympic weighting exercises		EXSC 340 – Essentials Strength Train/Cond KINE 225 – Weight Training/Conditioning
Knowledge of safe and effective core stability exercises (e.g., planks, crunch, bridges, cable twists)		EXSC 340 – Essentials Strength Train/Cond

Skill in identifying improper technique in the use of resistance equipment (<i>e.g.</i> , stability balls, weights, bands, resistance bars, and water exercise equipment)		EXSC 340 – Essentials Strength Train/Cond
Skill in teaching and demonstrating appropriate exercises for enhancing musculoskeletal flexibility		EXSC 340 – Essentials Strength Train/Cond KINE 101 – Physical Fitness
Skill in teaching and demonstrating safe and effective muscular strength and endurance exercises (<i>e.g.</i> , free weights, weight machines, resistive bands, Swiss balls, body weight, and all other major fitness equipment)		EXSC 340 – Essentials Strength Train/Cond KINE 225 – Weight Training/Conditioning
E. Establish exercise progression guidelines for resistance, aerobic, and flexibility activity to achieve the goals of apparently healthy participants.		
Knowledge or Skill Statement		Course
Knowledge of the basic principles of exercise progression		EXSC 101 – Intro to Exercise Science EXSC 340 – Essentials Strength Train/Cond EXSC 460 – Exer Testing, Eval, & Prescript KINE 225 – Weight Training/Conditioning EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert
Knowledge of adjusting the frequency, intensity, time, and type (FITT) framework in response to individual changes in conditioning		EXSC 340 – Essentials Strength Train/Cond EXSC 460 – Exer Testing, Eval, & Prescript KINE 225 – Weight Training/Conditioning EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert
Knowledge of the importance of performing periodic reevaluations to assess changes in fitness status		EXSC 340 – Essentials Strength Train/Cond EXSC 460 – Exer Testing, Eval, & Prescript KINE 101 – Physical Fitness
Knowledge of the training principles that promote improvements in muscular strength, muscular endurance, cardiorespiratory fitness, and flexibility		EXSC 101 – Intro to Exercise Science EXSC 310 – Exercise Physiology EXSC 340 – Essentials Strength Train/Cond EXSC 460 – Exer Testing, Eval, & Prescript KINE 225 – Weight Training/Conditioning KINE 101 – Physical Fitness
Skill in recognizing the need for progression and communicating updates to exercise prescriptions		EXSC 340 – Essentials Strength Train/Cond EXSC 460 – Exer Testing, Eval, & Prescript EXSC 499 - Internship
F. Implement a weight management program as indicated by personal goals that are supported by preparticipation health screening, health history, and body composition/anthropometric.		
Knowledge or Skill Statement		Course
Knowledge of exercise prescriptions for achieving weight management, including weight loss, weight maintenance, and weight gain goals		EXSC 101 – Intro to Exercise Science EXSC 460 – Exer Testing, Eval, & Prescript EXSC 433- Exercise Prescription for Special Pop. HLTH 333- Exercise and Sports Nutrition
Knowledge of energy balance and basic nutritional guidelines (<i>e.g.</i> , MyPyramid, United States Department of Agriculture [USDA] Dietary Guidelines for Americans)		EXSC 101 – Intro to Exercise Science EXSC 310 – Exercise Physiology EXSC 433- Exercise Prescription for Special Pop. HLTH 333 – Exercise & Sports Nutrition
Knowledge of weight management terminology including but not limited to obesity, overweight, percent fat, body mass index (BMI), lean body mass (LBM),		EXSC 101 – Intro to Exercise Science EXSC 310 – Exercise Physiology EXSC 340 – Essentials Strength Train/Cond

anorexia nervosa, bulimia, binge eating, metabolic syndrome, body fat distribution, adipocyte, bariatrics, ergogenic aid, fat-free mass (FFM), resting metabolic rate (RMR), and thermogenesis		EXSC 433- Exercise Prescription for Special Pop. EXSC 460 – Exer Testing, Eval, & Prescript HLTH 333 – Exercise & Sports Nutrition
Knowledge of the relationship between body composition and health		EXSC 101 – Intro to Exercise Science EXSC 320 – Meas/Eval in HLTH & KINE EXSC 433- Exercise Prescription for Special Pop. EXSC 460 – Exer Testing, Eval, & Prescript EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert HLTH 333 – Exercise & Sports Nutrition
Knowledge of the unique dietary needs of participant populations (<i>e.g.</i> , women, children, older adults, pregnant women)		EXSC 101 – Intro to Exercise Science HLTH 333 – Exercise & Sports Nutrition EXSC 433- Exercise Prescription for Special Pop.
Knowledge of common nutritional ergogenic aids, their purported mechanisms of action, and associated risks and benefits (<i>e.g.</i> , protein/amino acids, vitamins, minerals, herbal products, creatine, steroids, caffeine)		EXSC 310 – Exercise Physiology EXSC 101 – Intro to Exercise Science EXSC 340 – Essentials Strength Train/Cond HLTH 333 – Exercise & Sports Nutrition
Knowledge of methods for modifying body composition including diet, exercise, and behavior modification		EXSC 101 – Intro to Exercise Science EXSC 320 – Meas/Eval in HLTH & KINE EXSC 460 – Exer Testing, Eval, & Prescript HLTH 333 – Exercise & Sports Nutrition
Knowledge of fuel sources for aerobic and anaerobic metabolism including carbohydrates, fats, and proteins		EXSC 310 – Exercise Physiology EXSC 101 – Intro to Exercise Science EXSC 320 – Meas/Eval in HLTH & KINE EXSC 410 – Applied Exercise Physiology EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert HLTH 333 – Exercise & Sports Nutrition
Knowledge of the effects of overall dietary composition on healthy weight management		EXSC 101 – Intro to Exercise Science EXSC 310 – Exercise Physiology EXSC 320 – Meas/Eval in HLTH & KINE EXSC 460 – Exer Testing, Eval, & Prescript EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert HLTH 333 – Exercise & Sports Nutrition
Knowledge of the importance of maintaining normal hydration, before, during, and after exercise		EXSC 101 – Intro to Exercise Science EXSC 310 – Exercise Physiology EXSC 340 – Essentials Strength Train/Cond HLTH 333 – Exercise & Sports Nutrition
Knowledge of the consequences of inappropriate weight loss methods (<i>e.g.</i> , saunas, dietary supplements, vibrating belts, body wraps, over exercising, very low calorie diets, electric stimulators, sweat suits, fad diets)		EXSC 101 – Intro to Exercise Science EXSC 310 – Exercise Physiology HLTH 333 – Exercise & Sports Nutrition KINE 101 – Physical Fitness
Knowledge of the kilocalorie levels of carbohydrates, fat, protein, and alcohol		EXSC 460 – Exer Testing, Eval, & Prescript EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert HLTH 333 – Exercise & Sports Nutrition
Knowledge of the relationship between kilocalorie expenditures and weight loss		EXSC 101 – Intro to Exercise Science EXSC 460 – Exer Testing, Eval, & Prescript EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert HLTH 333 – Exercise & Sports Nutrition KINE 101 – Physical Fitness
Knowledge of published position statements on obesity and the risks associated with it (<i>e.g.</i> , National Institutes of Health, American Dietetic Association, American College of Sports Medicine [ACSM])		EXSC 101 – Intro to Exercise Science EXSC 433- Exercise Prescription for Special Pop. HLTH 333 – Exercise & Sports Nutrition
Knowledge of the relationship between body fat distribution patterns and health		EXSC 101 – Intro to Exercise Science EXSC 320 – Meas/Eval in HLTH & KINE

		EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert HLTH 333 – Exercise & Sports Nutrition
Knowledge of the physiology and pathophysiology of overweight and obese participants		HLTH 333 – Exercise & Sports Nutrition EXSC 433 – Exercise Prescription for Special Pop.
Knowledge of the recommended frequency, intensity, time, and type (FITT) framework for participants who are overweight and obese		EXSC 460 – Exer Testing, Eval, & Prescript EXSC 433 – Exercise Prescription for Special Pop.
Knowledge of comorbidities and musculoskeletal conditions associated with overweight and obesity that may require medical clearance and/or modifications to exercise testing and prescription		EXSC 433 – Exercise Prescription for Special Pop. EXSC 460 – Exer Testing, Eval, & Prescript
Skill in applying behavioral strategies (<i>e.g.</i> , exercise , diet, behavioral medication strategies) for weight management		EXSC 460 – Exer Testing, Eval, & Prescript HLTH 333 – Exercise & Sports Nutrition
Skill in modifying exercises for individuals limited by body size		EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert EXSC 499- Internship
Skill in calculating the volume of exercise in terms of kilocalories per session		EXSC 460 – Exer Testing, Eval, & Prescript HLTH 333 – Exercise & Sports Nutrition

G. Prescribe and implement exercise programs for participants with controlled cardiovascular, pulmonary, and metabolic diseases and other clinical populations.

Knowledge or Skill Statement		Course
Knowledge of American College of Sports Medicine (ACSM) risk stratification and exercise prescription guidelines for participants with cardiovascular, pulmonary, and metabolic diseases and other clinical populations		EXSC 320 – Meas/Eval in HLTH & KINE EXSC 410 – Applied Exercise Physiology EXSC 433 – Exercise Prescription for Special Pop. EXSC 460 – Exer Testing, Eval, & Prescript
Knowledge of ACSM relative and absolute contraindications for initiating exercise sessions or exercise testing and indications for terminating exercise sessions and exercise testing		EXSC 410 – Applied Exercise Physiology EXSC 433 – Exercise Prescription for Special Pop. EXSC 460 – Exer Testing, Eval, & Prescript
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		EXSC 433 – Exercise Prescription for Special Pop. HLTH 333 – Exercise & Sports Nutrition
Knowledge of the effects of diet and exercise on blood glucose levels in diabetics		EXSC 101 – Intro to Exercise Science EXSC 433 – Exercise Prescription for Special Pop. HLTH 333 – Exercise & Sports Nutrition
Knowledge of the recommended frequency, intensity, time, and type (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		EXSC 460 – Exer Testing, Eval, & Prescript EXSC 433 – Exercise Prescription for Special Pop.
Skill in progressing exercise programs, according to the FITT principle, in a safe and effective manner		EXSC 460 – Exer Testing, Eval, & Prescript EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert KINE 225 – Weight Training/Conditioning
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		EXSC 433 – Exercise Prescription for Special Pop. EXSC 460 – Exer Testing, Eval, & Prescript
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		EXSC 302 Exercise and Sport Injuries

H. Prescribe and implement exercise programs for healthy special populations (i.e. older adults, youth, pregnant women).

Knowledge or Skill Statement		Course
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		EXSC 310 – Exercise Physiology EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert EXSC 433 – Exercise Prescription for Special Pop.
Knowledge of techniques for the modification of cardiovascular, flexibility, and resistance exercises based on age, functional capacity, and physical condition		EXSC 310 – Exercise Physiology EXSC 433 – Exercise Prescription for Special Pop. EXSC 460 – Exer Testing, Eval, & Prescript EXSC 433- Exercise Prescription for Special Populations

		EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert
Knowledge of techniques for the development of exercise prescriptions for children, adolescents, and older adults regarding strength, functional capacity, and motor skills		EXSC 433- Exercise Prescription for Special Populations EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert

Knowledge of the unique adaptations to exercise training in children, adolescents, and older adults regarding strength, functional capacity, and motor skills		EXSC 433- Exercise Prescription for Special Populations EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert
Knowledge of the benefits and precautions associated with exercise training across the lifespan		EXSC 101 – Intro to Exercise Science EXSC 310- Physiology of Exercise EXSC 433- Exercise Prescription for Special Populations EXSC 460 – Exer Testing, Eval, & Prescript EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert
Knowledge of the recommended frequency, intensity, time, and type (FITT) framework for the development of cardiorespiratory fitness, muscular fitness, and flexibility in apparently healthy children and adolescents		EXSC 460 – Exer Testing, Eval, & Prescript EXSC 485 – Exercise Physiologist Workshop/Cert EXSC 433- Exercise Prescription for Special Populations
Knowledge of the effects of the aging process on the musculoskeletal and cardiovascular structures and functions during rest, exercise, and recovery		EXSC 310- Physiology of Exercise EXSC 433- Exercise Prescription for Special Populations EXSC 460 – Exer Testing, Eval, & Prescript HLTH 333 – Exercise & Sports Nutrition
Knowledge of the recommended FITT framework necessary for the development of cardiorespiratory fitness, muscular fitness, balance, and flexibility in apparently healthy older adults		EXSC 310- Physiology of Exercise EXSC 433- Exercise Prescription for Special Populations EXSC 460 – Exer Testing, Eval, & Prescript EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert
Knowledge of common orthopedic and cardiovascular exercise considerations for older adults		EXSC 433- Exercise Prescription for Special Populations EXSC 460 – Exer Testing, Eval, & Prescript
Knowledge of the relationship between regular physical activity and the successful performance of activities of daily living (ADL) for older adults		EXSC 310- Physiology of Exercise EXSC 433- Exercise Prescription for Special Populations EXSC 460 – Exer Testing, Eval, & Prescript
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		EXSC 433- Exercise Prescription for Special Populations
Skill in teaching and demonstrating appropriate exercises for healthy populations with special considerations		EXSC 433- Exercise Prescription for Special Populations EXSC 499 - Internship
Skill in modifying exercises based on age, physical condition, and current health status		EXSC 433- Exercise Prescription for Special Populations EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert EXSC 499- Internship
I. Modify exercise prescriptions based on environmental conditions.		
Knowledge or Skill Statement		Course
Knowledge of the effects of a hot, cold, or high-altitude environment on the physiologic responses to exercise		EXSC 310 – Physiology of Exercise EXSC 320 – Meas/Eval in HLTH & KINE EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert
Knowledge of special precautions and program modifications for exercise in a hot, cold, or high-altitude environment		EXSC 320 – Meas/Eval in HLTH & KINE EXSC 410 – Applied Exercise Physiology EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert
Knowledge of the role of acclimations when exercising in a hot or high-altitude environment		EXSC 320 – Meas/Eval in HLTH & KINE EXSC 410 – Applied Exercise Physiology EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert

Knowledge of appropriate fluid intake during exercise in a hot, humid environment as well as cold, and high altitude		EXSC 310 – Physiology of Exercise EXSC 320 – Meas/Eval in HLTH & KINE EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert

Domain III: Exercise Counseling and Behavioral Strategies

A. Optimize adoption and adherence to exercise programs and other healthy behaviors by applying effective communication techniques.

Knowledge or Skill Statement		Course
Knowledge of the effective and timely uses of communication modes (<i>e.g.</i> , e-mail, telephone, Web site, newsletter)		EXSC 461 – Exercise Leadership
Knowledge of verbal and nonverbal behaviors that communicate positive reinforcement and encouragement (<i>e.g.</i> , eye contact, targeted praise, empathy)		EXSC 461 – Exercise Leadership HLTH 333 – Exercise & Sports Nutrition KINE 225 – Weight Training/Conditioning
Knowledge of group leadership techniques for working with participants of all ages		EXSC 461 – Exercise Leadership
Knowledge of active listening techniques		EXSC 461 – Exercise Leadership
Knowledge of learning modes (auditory, visual, kinesthetic)		EXSC 461 – Exercise Leadership
Knowledge of types of feedback (<i>e.g.</i> , evaluative, supportive, descriptive)		EXSC 461 – Exercise Leadership
Skill in using active listening techniques		EXSC 461 – Exercise Leadership
Skill in applying teaching and training techniques to optimize participant training sessions		KINE 225 – Weight Training/Conditioning EXSC 315 – Group Exercise Instruction EXSC 499- Internship
Skill in using feedback to optimize participant training sessions		EXSC 499 - Internship
Skill in applying verbal and nonverbal communications with diverse participant populations		EXSC 499 – Internship EXSC 421 - Practicum

B. Optimize adoption of and adherence to exercise programs and other healthy behaviors by applying effective behavioral and motivational strategies.

Knowledge or Skill Statement		Course
Knowledge of the role extrinsic and intrinsic motivation plays in the adoption and maintenance of behavior change		EXSC 101 – Intro to Exercise Science EXSC 461- Exercise Leadership HLTH 333 – Exercise & Sports Nutrition KINE 225 – Weight Training/Conditioning
Knowledge of relapse prevention strategies and plans of action		EXSC 101 – Intro to Exercise Science EXSC 461- Exercise Leadership HLTH 333 – Exercise & Sports Nutrition
Knowledge of applying health coaching principles and lifestyle management techniques related to behavior change		EXSC 101 – Intro to Exercise Science EXSC 461- Exercise Leadership EXSC 460 – Exer Testing, Eval, & Prescript EXSC 499 – Internship in EXSC
Knowledge of strategies that increase nonstructured physical activity levels (<i>e.g.</i> , stair walking, parking farther away, bike to work)		EXSC 101 – Intro to Exercise Science EXSC 460 – Exer Testing, Eval, & Prescript EXSC 461- Exercise Leadership
Skill in explaining the purpose and value of understanding perceived exertion		EXSC 410 – Applied Exercise Physiology EXSC 460 – Exer Testing, Eval, & Prescript
Skill in using imagery as a motivational tool		
Skill in evaluating behavioral readiness to optimize exercise adherence		EXSC 499 – Internship in EXSC
Skill in applying the theories related to behavior change to diverse populations		EXSC 499 – Internship in EXSC
Skill in developing intervention strategies to increase self-efficacy and self-confidence		EXSC 499 – Internship in EXSC
Skill in developing reward systems that support and maintain program adherence		EXSC 499 – Internship in EXSC
Skill in setting effective behavioral goals		EXSC 499 – Internship in EXSC KINE 225 – Weight Training/Conditioning

C. Provide educational resources to support clients in the adoption and maintenance of healthy lifestyle behaviors.

Knowledge or Skill Statement		Course
Knowledge of the relationship between physical inactivity and common chronic diseases (<i>e.g.</i> , atherosclerosis, Type 2 diabetes, obesity, dyslipidemia, arthritis, low back pain, hypertension)		EXSC 101 – Intro to Exercise Science EXSC 433- Exercise Prescription for Special Populations
Knowledge of the dynamic interrelationship between fitness level, body composition, stress, and overall health		HLTH 333 – Exercise & Sports Nutrition EXSC 461 – Exercise Leadership
Knowledge of modifications necessary to promote healthy lifestyle behaviors for diverse populations		EXSC 460 – Exer Testing, Eval, & Prescript EXSC 433- Exercise Prescription for Special Populations EXSC 499 – Internship in EXSC EXSC 421- Practicum
Knowledge of stress management techniques and relaxation techniques (<i>e.g.</i> , progressive relaxation, guided imagery, massage therapy)		EXSC 101 – Intro to Exercise Science EXSC 461 – Exercise Leadership
Knowledge of the activities of daily living (ADL) and how they relate to overall health		EXSC 433- Exercise Prescription for Special Pop. EXSC 460- Exercise Prescription EXSC 461 – Exercise Leadership
Knowledge of accessing and disseminating scientifically based, relevant health, exercise, nutrition, and wellness-related resources and information		EXSC 461 – Exercise Leadership HLTH 333 – Exercise & Sports Nutrition
Knowledge of specific, age-appropriate leadership techniques and educational methods to increase client engagement		EXSC 461 – Exercise Leadership
Knowledge of community-based exercise programs that provide social support and structured activities (<i>e.g.</i> , walking clubs, intramural sports, golf leagues, cycling clubs)		EXSC 461 – Exercise Leadership
Skill in accessing and delivering health, exercise, and wellness-related information		EXSC 461 – Exercise Leadership HLTH 333 – Exercise & Sports Nutrition EXSC 499- Internship
Skill in educating clients about benefits and risks of exercise and the risks of sedentary behavior		EXSC 461 – Exercise Leadership EXSC 499- Internship

D. Provide support within the scope of practice of a health fitness specialist (HFS) and refer to the other health professionals as indicated.

Knowledge or Skill Statement		Course
Knowledge of the side effect of common over-the-counter and prescription drugs that may impact a client’s ability to exercise		EXSC 433- Exercise Prescription for Special Populations
Knowledge of signs and symptoms of mental health states (<i>e.g.</i> , anxiety, depression, eating disorders) that may necessitate referral to a medical or mental health professional		EXSC 302 – Exercise & Sports Injuries EXSC 433- Exercise Prescription for Special Populations
Knowledge of symptoms and causal factors of test anxiety (<i>i.e.</i> , performance, appraisal threat during exercise testing) and how they may affect physiological responses to testing		EXSC 320 – Measurement and Evaluation in Health and Kinesiology
Knowledge of client needs and learning styles that may impact exercise sessions and exercise testing procedures		EXSC 320 – Measurement and Evaluation in Health and Kinesiology
Knowledge of conflict resolution techniques that facilitate communication among exercise cohorts		EXSC 461 – Exercise Leadership
Skill in communicating the need for medical, nutritional, or mental health intervention		EXSC 499- Internship

Domain IV: Legal/Professional

A. Create and disseminate risk management guidelines for health/fitness facility, department, or organization to reduce member, employee, and business risk.

Knowledge or Skill Statement	Course
Knowledge of employee criminal background checks, child abuse clearance, and drug and alcohol screenings	EXSC 461 – Exercise Leadership
Knowledge of employment verification requirements mandated by state and federal laws	EXSC 461 – Exercise Leadership
Knowledge of safe handling and disposal of body fluids and employee safety (Occupational Safety and Health Administration [OSHA] guidelines)	EXSC 461 – Exercise Leadership
Knowledge of insurance coverage common to the health/fitness industry including general liability, professional liability, workers' compensation, property, and business interruption	EXSC 302 – Exercise & Sports Injuries EXSC 461 – Exercise Leadership
Knowledge of sexual harassment policies and procedures	EXSC 461 – Exercise Leadership
Knowledge of interviewing techniques	EXSC 461 – Exercise Leadership
Knowledge of basic precautions taken in an exercise setting to ensure participant safety	EXSC 461 – Exercise Leadership
Knowledge of preactivity screening medical release, and waiver of liability for normal and at-risk participants	EXSC 461 – Exercise Leadership
Knowledge of emergency response systems and procedures employee assistance program	EXSC 302 - Exercise & Sports Injuries EXSC 461 – Exercise Leadership
Knowledge of the use of signage	EXSC 461 – Exercise Leadership
Knowledge of preventive maintenance schedules and audits	EXSC 461 – Exercise Leadership
Knowledge of techniques and methods of evaluating the condition of exercise equipment to reduce the potential risk of injury	EXSC 461 – Exercise Leadership
Knowledge of documentation procedures for cardiopulmonary resuscitation (CPR) and automated external defibrillator (AED) certification for employees	EXSC 461 – Exercise Leadership
Knowledge of AED guidelines for implementation	EXSC 461- Exercise Leadership
Knowledge of the components of the American College of Sports Medicine (ACSM) Code of Ethics and the ACSM Certified HFS scope of practice	EXSC 461 – Exercise Leadership
Skill in developing and disseminating a policy and procedures manual	EXSC 461 – Exercise Leadership
Skill in developing and implementing confidentiality policies	EXSC 461 – Exercise Leadership
Skill in maintenance of a safe exercise environment (e.g., equipment operation, proper sanitation, safety and maintenance of exercise areas, and overall facility maintenance)	EXSC 410 – Applied Exercise Physiology EXSC 461 – Exercise Leadership
Skill in the organization, communication, and human resource management required to implement risk management policies and procedures	EXSC 461 – Exercise Leadership
Skill in training employees to identify high-risk situations	EXSC 461 – Exercise Leadership

B. Create an effective injury prevention program and ensure that emergency policies and procedures are in place.

Knowledge or Skill Statement	Course
Knowledge of emergency procedures (i.e., telephone procedures, written emergency procedures, personnel responsibilities) in a health and fitness setting	EXSC 302 – Exercise & Sports Injuries EXSC 461 – Exercise Leadership
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)	EXSC 302 – Exercise & Sports Injuries (EXCEPT dizziness and syncope)

Knowledge of the HFS responsibilities and limitations and the legal implications of carrying out emergency procedures	EXSC 461 – Exercise Leadership
Knowledge of safety plans, emergency procedures, and first aid techniques needed during fitness evaluation, exercise testing, and exercise training	EXSC 461 – Exercise Leadership
Knowledge of potential musculoskeletal injuries (<i>e.g.</i> , contusions, sprains, strains, fractures), cardiovascular/pulmonary complication (<i>e.g.</i> , tachycardia, bradycardia, hypotension/hypertension, dyspnea) and metabolic abnormalities (<i>e.g.</i> , fainting/syncope, hypoglycemia/hyperglycemia, hypothermia/hyperthermia)	EXSC 302 – Exercise & Sports Injuries (ONLY musculoskeletal injuries) EXSC 310 – Physiology of Exercise
Knowledge of the initial management and first aid techniques associated with open wounds, musculoskeletal injuries, cardiovascular/pulmonary complications, and metabolic disorders	EXSC 302 – Exercise & Sports Injuries
Knowledge of emergency documentation and appropriate document use	EXSC 461 – Exercise Leadership
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)	EXSC 302 – Exercise & Sports Injuries (EXCEPT exercise intolerance)
Skill in applying basic life support, first aid, cardiopulmonary resuscitation (CPR), and automated external defibrillator (AED) techniques	EXSC 302 – Exercise & Sports Injuries
Skill in designing an evacuation plan	EXSC 461 – Exercise Leadership
Skill in demonstrating emergency procedures during exercise testing and/or training	EXSC 499- Internship

Domain V: Management		
A. Manage human resources in accordance with leadership, organization, and management techniques.		
Knowledge or Skill Statement		Course
Knowledge of industry benchmark compensation and employee benefit guidelines		EXSC 461 – Exercise Leadership
Knowledge of federal, state, and local laws pertaining to staff qualifications and credentialing requirements		EXSC 461 – Exercise Leadership
Knowledge of techniques for tracking and evaluating member retention		EXSC 461 – Exercise Leadership
Skill in applying policies, practices, and guidelines to efficiently hire, train, supervise, schedule, and evaluate employees		EXSC 461 – Exercise Leadership
Skill in applying conflict resolution techniques		EXSC 461 – Exercise Leadership
B. Manage fiscal resources in accordance with leadership, organization, and management techniques.		
Knowledge or Skill Statement		Course
Knowledge of fiduciary roles and responsibilities inherent in managing an exercise and health promotion program		EXSC 461 – Exercise Leadership
Knowledge of principles of financial planning and goal setting, institutional budgeting processer, forecasting, and allocation of resources		EXSC 461 – Exercise Leadership
Knowledge of basic software systems that facilitate accounting (e.g., Excel)		EXSC 461 – Exercise Leadership
Knowledge of industry benchmarks for budgeting and finance		EXSC 461 – Exercise Leadership
Knowledge of basic sales techniques that promote health, fitness, and wellness services		EXSC 461 – Exercise Leadership
Skill in efficiently managing financial resources and performing related tasks (e.g., planning, budgeting, resource allocation, revenue generation)		EXSC 461 – Exercise Leadership
Skill in administering fitness- and wellness-related programs within established budgetary guidelines		EXSC 461 – Exercise Leadership
C. Establish policies and procedures for the management of health/fitness facilities based on accepted safety and legal guidelines, standards, and regulations.		
Knowledge or Skill Statement		Course
Knowledge of accepted guidelines, standards, and regulations used to establish policies and procedures for the management of health/fitness facilities		EXSC 461 – Exercise Leadership
Knowledge of facility design and operation principles		EXSC 461 – Exercise Leadership
Knowledge of facility and equipment maintenance guidelines		EXSC 461 – Exercise Leadership
Knowledge of documentation techniques for health/fitness facility management		EXSC 461 – Exercise Leadership
Knowledge of federal, state, and local laws as they relate to health/fitness facility management		EXSC 461 – Exercise Leadership
D. Develop and execute a marketing plan to promote programs, services, and facilities.		
Knowledge or Skill Statement		Course
Knowledge of lead generation techniques		EXSC 461 – Exercise Leadership
Knowledge of the four Ps of marketing: product price, placement, and promotion		EXSC 461 – Exercise Leadership
Knowledge of public relations, community awareness, and sponsorship and their relationship to branding initiatives		EXSC 461 – Exercise Leadership
Knowledge of advertising techniques		EXSC 461 – Exercise Leadership
Knowledge of target market (internal) assessment techniques		EXSC 461 – Exercise Leadership

Knowledge of target market (external) assessment techniques		EXSC 461 – Exercise Leadership
Skill in applying marketing techniques that promote client retention		EXSC 461 – Exercise Leadership EXSC 499- Internship
Skill in applying marketing techniques that attract new clients		EXSC 461 – Exercise Leadership EXSC 499- Internship
Skill in designing and writing promotional materials		EXSC 461 – Exercise Leadership EXSC 499- Internship
Skill in collaborating with community and governmental agencies and organizations		EXSC 461 – Exercise Leadership
Skill in providing customer service		EXSC 499 - Internship
E. Use effective communication techniques to develop professional relationships with other allied health professionals (e.g., nutritionists, physical therapists, physicians, nurses).		
Knowledge or Skill Statement		Course
Knowledge of communication styles and techniques		EXSC 461 – Exercise Leadership
Knowledge of networking techniques		EXSC 461 – Exercise Leadership
Skill in planning meetings		EXSC 461 – Exercise Leadership EXSC 499 - Internship