

ACSM Certified Exercise Physiologist

Job Tasks and Related Knowledge and Skills

Domain I: Health and Fitness Assessment		
A. Administer and interpret preparticipation health screening procedures to maximize client safety and minimize risk.		
Knowledge or Skill Statement		Course
<p>a. Knowledge the preparticipation screening algorithm and tools that provide accurate information about the client's health/medical history, current medical conditions, risk factors, sign/symptoms of disease, current physical activity habits, and medications.</p>		ATTR 205- Musculoskeletal Terminology & Clinical Doc 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 PHED 225 – Weight Training/Conditioning
<p>b. Knowledge of the key components included in informed consent and health /medical history.</p>		ATTR 205- Musculoskeletal Terminology & Clinical Doc 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>c. Knowledge of the limitations of informed consent and health/medical history.</p>		ATTR 205- Musculoskeletal Terminology & Clinical Doc 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 client's readiness to participate in a health-related physical fitness assessment and exercise program.		
Knowledge or Skill Statement		Course
<p>a. Knowledge the preparticipation screening algorithm as delineated in the current edition of ACSM's Guidelines for Exercise Testing and Prescription.</p>		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>b. 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).</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>c. Knowledge of 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).</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>d. Knowledge of 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>e. Knowledge of musculoskeletal risk factors or conditions that may require consultation with medical personnel prior to exercise testing or training (<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>f. Knowledge of ACSM preparticipation screening algorithm and the implications for medical clearance before 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>g. 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>h. Knowledge of medical terminology (<i>e.g.</i>, 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, 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>i. Knowledge of recommended plasma cholesterol levels (<i>e.g.</i>, National Cholesterol Education Program/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>j. Knowledge of recommended blood pressure levels.</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>k. Knowledge of recommendations for medical clearance before initiating 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 EXSC 461 – Exercise Leadership EXSC 499 – Internship in EXSC</p>
<p>l. Knowledge of the components of a health history questionnaire (<i>e.g.</i> past and current medical history, family history of disease, orthopedic limitations, prescribed medications, activity patterns, nutritional habits, stress and anxiety levels, and smoking and alcohol use).</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 EXSC 461 – Exercise Leadership EXSC 499 – Internship in EXSC</p>

Skill in the administration of the preparticipation screening algorithm and recognition of major signs or symptoms suggestive of cardiovascular, pulmonary, or metabolic disease, and/or the presence of known cardiovascular, pulmonary, and metabolic disease status.	EXSC 410 – Applied Exercise Physiology EXSC 411- Applied Exercise Physiology Lab EXSC 433 - Ex. Prescription for Special Pop EXSC 460 – Exer Testing, Eval, & Prescript EXSC 461 – Exercise Leadership EXSC 499- Internship in Exercise Science
Skill in the administration of the preparticipation screening algorithm to determine the need for medical clearance prior to initiating an exercise program 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 EXSC 499- Internship in Exercise Science
C. Determine and administer physical fitness assessments for apparently healthy clients and those with controlled disease.	
Knowledge or Skill Statement	Course
a. Knowledge of the physiological basis of the major components of health-related physical fitness (cardiorespiratory fitness, muscular strength, muscular endurance, flexibility, body composition).	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 PHED 225 – Weight Training/Conditioning PHED 101 – Physical Fitness
b. Knowledge of selecting the most appropriate testing protocols for each client 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
c. Knowledge of calibration techniques and proper use of fitness testing equipment.	EXSC 410 – Applied Exercise Physiology EXSC 460 – Exer Testing, Eval, & Prescript PHED 225 – Weight Training/Conditioning
d. 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 PHED 225 – Weight Training/Conditioning
e. Knowledge of test termination criteria and best practice procedures to be followed after stopping an exercise test.	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
f. 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 PHED 225 – Weight Training/Conditioning
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).	BIOL 215/216 – Human Anatomy & Physiology 2/Lab EXSC 433 - Ex. Prescription for Special Pop EXSC 460 – Exer Testing, Eval, & Prescript
h. Knowledge of the physiologic and metabolic responses to exercise testing associated with chronic diseases and conditions (e.g., heart disease,	BIOL 215/216 – Human Anatomy & Physiology 2/Lab EXSC 433 – Exercise Prescription for Special Pop. HLTH 333 – Exercise & Sports Nutrition

hypertension, diabetes mellitus, obesity, pulmonary disease).		
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 PHED 225 – Weight Training/Conditioning EXSC 499- Internship in Exercise Science
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 Prescript for Special Populations EXSC 411 – Applied Exercise Physio Lab EXSC 499- Internship in Exercise Science
D. Conduct and interpret cardiorespiratory fitness assessments.		
Knowledge or Skill Statement		Course
a. 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
b. Knowledge of blood pressure 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
c. Knowledge of Korotkoff sounds for determining systolic and diastolic blood pressure.		BIOL 215/216 – Human Anatomy & Physiology 2/Lab EXSC 410 – Applied Exercise Physiology EXSC 460 – Exer Testing, Eval, & Prescript
d. Knowledge of blood pressure 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
e. Knowledge of techniques of measuring heat rate and heart rate 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
f. 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
g. Knowledge of heart rate, blood pressure, 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
h. 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
i. Knowledge of cardiorespiratory terminology (e.g., angina pectoris, tachycardia, bradycardia, arrhythmia, and hyperventilation).		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
j. Knowledge of the pathophysiology of myocardial ischemia, myocardial infarction, stroke, hypertension, and hyperlipidemia.		BIOL 215/216 – Human Anatomy & Physiology 2/Lab EXSC 460 – Exer Testing, Eval, & Prescript
k. Knowledge of the effects of myocardial ischemia, myocardial infarction, hypertension, claudication, and dyspnea on cardiorespiratory responses during exercise.		BIOL 215/216 – Human Anatomy & Physiology 2/Lab EXSC 433 – Exercise Prescription for Special Pop. EXSC 460 – Exer Testing, Eval, & Prescript
l. Knowledge of oxygen consumption dynamics during exercise (<i>e.g.</i> , heart rate, stroke volume, cardiac output, ventilation, ventilatory threshold).		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

m. Knowledge of methods of calculating $\dot{V}O_{2max}$.	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
n. Knowledge of cardiorespiratory responses to acute graded exercise of conditioned and unconditioned clients.	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 analyzing and documenting 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 Exercise Science
Skill in locating anatomic landmarks for palpation of peripheral pulses and blood pressure.	BIOL 215/216 – Human Anatomy & Physiology 2/Lab EXSC 410 – Applied Exercise Physiology EXSC 411 – Applied Exercise Physio Lab EXSC 499- Internship in Exercise Science
Skill in measuring heart rate, blood pressure, 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 EXSC 499- Internship in Exercise Science
Skill in conducting submaximal exercise tests (e.g., cycle ergometer, treadmill, field testing, step test).	EXSC 410 – Applied Exercise Physiology EXSC 411 – Applied Exercise Physio Lab EXSC 499- Internship in Exercise Science
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 EXSC 499- Internship in Exercise Science

E. Conduct and interpret assessments of muscular strength, muscular endurance, and flexibility.

Knowledge or Skill Statement	Course
a. 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 PHED 225 – Weight Training/Conditioning
b. 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 PHED 225 – Weight Training/Conditioning
c. Knowledge of the anatomy of bone, skeletal muscle, and connective tissues.	ATTR 205- Musculoskeletal Terminology & Clinical Doc BIOL 213/214 – Human Anatomy & Physiology 1/Lab EXSC 350 – Biomechanics EXSC 351 – Biomechanics Lab
d. Knowledge of the following terms: anterior, posterior, inferior, superior, medial, lateral, supination, pronation, flexion, extension, adduction, abduction, hyperextension, rotation, circumduction, agonist, antagonist, and stabilizer.	ATTR 205- Musculoskeletal Terminology & Clinical Doc BIOL 213/214 – Human Anatomy & Physiology 1/Lab EXSC 350 – Biomechanics EXSC 351 – Biomechanics Lab EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert
e. Knowledge of the planes and axes in which movement action occurs.	ATTR 205- Musculoskeletal Terminology & Clinical Doc BIOL 213/214 – Human Anatomy & Physiology 1/Lab EXSC 350 – Biomechanics EXSC 351 – Biomechanics Lab EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert

f. Knowledge of the interrelationships among center of gravity, base of support, balance, stability posture, and proper spinal alignment.

EXSC 350 – Biomechanics
EXSC 351 – Biomechanics Lab
PHED 225 – Weight Training/Conditioning

g. Knowledge of location and function of muscles (e.g., pectoralis major, trapezius, internal and external obliques, gastrocnemius).		BIOL 213/214 – Human Anatomy & Physiology 1/Lab EXSC 350 – Biomechanics EXSC 351 – Biomechanics Lab EXSC 340 – Essentials Strength Train/Cond PHED 225 – Weight Training/Conditioning
h. Knowledge of joints and their associated movement.		BIOL 213/214 – Human Anatomy & Physiology 1/Lab 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 conducting muscular strength, muscular endurance, and flexibility assessments (e.g., 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 PHED 225 – Weight Training/Conditioning EXSC 499- Internship in Exercise Science
Skill in estimating 1-RM using lower resistance (2-10 RM).		EXSC 340 – Essentials Strength Train/Cond PHED 225 – Weight Training/Conditioning EXSC 499- Internship in Exercise Science
F. Conduct and interpret anthropometric and body composition assessments.		
Knowledge or Skill Statement		Course
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, 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
b. 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
c. 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 PHED 225 – Weight Training/Conditioning
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.		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 PHED 225 – Weight Training/Conditioning EXSC 499- Internship in Exercise Science

<p>Skill in analyzing and documenting the results of anthropometric and body composition assessments.</p>		<p>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 EXSC 499- Internship in Exercise Science</p>

Domain II: Exercise Prescription and Implementation

A. Determine safe and effective exercise programs to achieve desired outcomes and goals, and translate assessment results into appropriate exercise prescriptions.

Knowledge or Skill Statement	Course
a. Knowledge of strength-, aerobic-, and flexibility-based exercise.	EXSC 101 – Intro to Exercise Science EXSC 310- Exercise Physiology EXSC 321 – Practicum 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
b. Knowledge of the benefits and precautions associated with exercise training in apparently healthy clients 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
c. Knowledge of program development for specific client needs (<i>e.g.</i> , sports-specific training, performance, health, lifestyle, functional ability, balance, agility, aerobic, anaerobic).	EXSC 101 – Intro to Exercise Science EXSC 310- Physiology of Exercise EXSC 321- Practicum EXSC 340 – Essentials Strength Train/Cond EXSC 433 – Exercise Prescription for Special Pop. EXSC 499- Internship
d. 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
e. 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
f. 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
g. Knowledge of the FITT-VP principle for apparently healthy clients, clients with increased risk, and clients with controlled disease.	EXSC 340 – Essentials Strength Train/Cond EXSC 433 – Exercise Prescription for Special Pop. EXSC 460 – Exer Testing, Eval, & Prescript EXSC 310- Physiology of Exercise
h. Knowledge of the components and sequencing incorporated into an exercise session (<i>e.g.</i> , 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 PHED 225 – Weight Training/Conditioning
i. 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
j. 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

k. 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
l. Knowledge of the basic biomechanical principles 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
m. 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
n. Knowledge of the signs and symptoms of common musculoskeletal injuries associated with exercise equipment (<i>e.g.</i> , sprain, strain, bursitis, tendonitis).		EXSC 340 – Essentials Strength Train/Cond EXSC 350 - Biomechanics EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert
o. Knowledge of the advantages and disadvantages of exercise equipment (<i>e.g.</i> , 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 PHED 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 PHED 225 – Weight Training/Conditioning EXSC 499- Internship in Exercise Science
Skill in designing safe and effective training programs.		EXSC 340 – Essentials Strength Train/Cond EXSC 460 – Exer Testing, Eval, & Prescript PHED 225 – Weight Training/Conditioning EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert EXSC 499- Internship in Exercise Science
Skill in implementing the FITT-VP principle for apparently healthy clients, clients with increased risk, and clients with controlled disease.		EXSC 340 – Essentials Strength Train/Cond EXSC 499 – Internship in Exercise Science

B. Implement cardiorespiratory exercise prescriptions for apparently healthy clients and those with controlled disease based on current health status, fitness goals, and availability of time.

Knowledge or Skill Statement		Course
a. Knowledge of the recommended FITT-VP principle 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
b. 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.		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
c. 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
d. Knowledge of determining exercise intensity using heart rate reserve (HRR), oxygen uptake reserve (VO ₂ R), peak heart rate (HR _{peak}) method, peak VO ₂ method, peak metabolic equivalents (METs) 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

e. Knowledge of the accuracy of HRR VO_{2R} , HR_{peak} method, VO_{2peak} method, peak MET method, and the RPE scale.		EXSC 460 – Exer Testing, Eval, & Prescript EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert
f. Knowledge of abnormal responses to exercise (e.g., hemodynamic, cardiac, ventilatory).		EXSC 310 Physiology of Exercise EXSC 433 Exercise Prescription for Special Populations
g. 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
h. Knowledge of calculation the caloric expenditure of an exercise session (kcal·session ⁻¹).		EXSC 460 – Exer Testing, Eval, & Prescript
i. Knowledge of methods for establishing and monitoring levels of exercise intensity including heart rate (HR), RPE, and METs.		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
j. Knowledge of the applications of anaerobic training principles.		EXSC 340 – Essentials Strength Train/Cond EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert
k. 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 340 – Essentials Strength Train/Cond EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert
l. 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 FITT-VP principle 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 EXSC 499- Internship in Exercise Science
Skill in determining the energy cost, absolute and relative oxygen costs (VO_2), and MET levels of various activities and applying the information to an exercise prescription.		EXSC 410 – Applied Exercise Physiology EXSC 411 – Applied Exercise Physio Lab EXSC 460 – Exer Testing, Eval, & Prescript EXSC 499- Internship in Exercise Science
Skill in identifying improper technique in the use of cardiovascular equipment.		EXSC 410 – Applied Exercise Physiology EXSC 411 – Applied Exercise Physio Lab EXSC 499- Internship in Exercise Science
Skill in teaching and demonstrating the use of various cardiovascular exercise equipment.		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 EXSC 499- Internship in Exercise Science
C. Implement exercise prescriptions for flexibility, muscular strength, muscular endurance, balance, agility, and reaction time for apparently healthy clients and those with controlled disease based on current health status, fitness goals and availability of time.		
Knowledge or Skill Statement		Course
a. Knowledge of the recommended FITT-VP principle for the development of muscular strength, muscular endurance, and flexibility.		EXSC 101 – Intro to Exercise Science EXSC 310- Physiology of Exercise EXSC 321- Practicum 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 PHED 225 – Weight Training/Conditioning
b. Knowledge of the minimal threshold of physical activity required for health benefits and/or fitness development.		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
c. Knowledge of safe and effective exercises designed to enhance muscular strength and/or endurance of major muscle groups.		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 PHED 225 – Weight Training/Conditioning
d. Knowledge of safe and effective stretches that enhance flexibility.		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
e. Knowledge of indication for water based exercises (<i>e.g.</i> , arthritis, obesity)		EXSC 350- Biomechanics EXSC 433 – Exercise Prescription for Special Pop.
f. 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).		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

g. 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).		PHED 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
h. 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 340 – Essentials Strength Train/Cond EXSC 350- Biomechanics EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert PHED 225 – Weight Training/Conditioning
i. 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 350- Biomechanics EXSC 340 – Essentials Strength Train/Cond EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert PHED 225 – Weight Training/Conditioning
j. Knowledge of acute and delayed onset muscle soreness (DOMS).		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
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.		BIOL 213/214 A&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
l. 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 340 – Essentials Strength Train/Cond EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert
m. Knowledge of muscle –related terminology including atrophy, hyperplasia, and hypertrophy.		BIOL 213/214 A&P EXSC 310 – Physiology of Exercise EXSC 340 – Essentials Strength Train/Cond
n. 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
o. 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
p. 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).		PHED 225- Weight Training/Conditioning EXSC 340 – Essentials Strength Train/Cond
q. Knowledge of spotting positions and techniques for injury prevention and exercise assistance.		PHED 225 - Weight Training/Conditioning EXSC 340 – Essentials Strength Train/Cond
r. Knowledge of periodization (<i>e.g.</i> , macro, micro, mesocycles) and associated theories.		EXSC 340 – Essentials Strength Train/Cond EXSC 310- Physiology of Exercise
s. Knowledge of safe and effective Olympic weight lifting exercises.		EXSC 340 – Essentials Strength Train/Cond PHED 225 – Weight Training/Conditioning
t. Knowledge of safe and effective core stability exercises (<i>e.g.</i> , planks, crunch, bridges, cable twists).		EXSC 340 – Essentials Strength Train/Cond PHED 225- Weight Training/Conditioning

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 PHED 225 - Weight Training/Conditioning EXSC 499- Internship in Exercise Science
Skill in teaching and demonstrating appropriate exercises for enhancing musculoskeletal flexibility.		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 Exercise Science
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 PHED 225 – Weight Training/Conditioning EXSC 499- Internship in Exercise Science
Skill in prescribing exercise using the calculated %1-RM.		EXSC 340 – Essentials Strength Train/Cond PHED 225 – Weight Training/Conditioning EXSC 499- Internship in Exercise Science

D. Establish exercise progression guidelines for flexibility, muscular strength, muscular endurance, balance, agility, and reaction time for apparently healthy clients and those with controlled disease based on current health status, fitness goals and availability of time.

Knowledge or Skill Statement		Course
a. 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 PHED 225 – Weight Training/Conditioning EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert
b. Knowledge of adjusting the FITT-VP principle in response to individual changes in conditioning.		EXSC 340 – Essentials Strength Train/Cond EXSC 460 – Exer Testing, Eval, & Prescript PHED 225 – Weight Training/Conditioning EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert
c. 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
d. 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 PHED 225 – Weight Training/Conditioning
Skill in recognizing the need for progression and communicating exercise prescription updates to clients.		EXSC 340 – Essentials Strength Train/Cond EXSC 460 – Exer Testing, Eval, & Prescript EXSC 499 – Internship in Exercise Science

E. Implement a general weight management program as indicated by personal goals, as needed.

Knowledge or Skill Statement		Course
a. Knowledge of exercise prescriptions for achieving weight related goals, including weight gain, weight loss, and weight maintenance.		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
b. Knowledge of energy balance and basic nutritional guidelines (<i>e.g.</i> , MyPlate, 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
c. Knowledge of weight management terminology (<i>e.g.</i> , obesity, overweight, percent fat, body mass index (BMI), lean body mass (LBM), anorexia nervosa, bulimia nervosa, binge eating, metabolic syndrome, body fat distribution, adipocyte, bariatrics, ergogenic aid, fat-free mass (FFM), resting metabolic rate (RMR), and thermogenesis).		EXSC 101 – Intro to Exercise Science EXSC 310 – Exercise Physiology EXSC 340 – Essentials Strength Train/Cond EXSC 433- Exercise Prescription for Special Pop. EXSC 460 – Exer Testing, Eval, & Prescript HLTH 333 – Exercise & Sports Nutrition
d. 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
e. 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.
f. 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
g. 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
h. 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
i. 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
j. 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
k. 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
l. 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
m. 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
n. 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
o. 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
p. Knowledge of the physiology and pathophysiology of overweight and obese clients.		HLTH 333 – Exercise & Sports Nutrition EXSC 433 – Exercise Prescription for Special Pop.
q. Knowledge of the recommended FITT-VP principle for clients who are overweight or obese.		EXSC 460 – Exer Testing, Eval, & Prescript EXSC 433 – Exercise Prescription for Special Pop.
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.		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 EXSC 499- Internship in Exercise Science
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 in Exercise Science
Skill in calculating the volume of exercise in terms of kcal-session-1.		EXSC 460 – Exer Testing, Eval, & Prescript HLTH 333 – Exercise & Sports Nutrition EXSC 499- Internship in Exercise Science

F. Prescribe and implement exercise programs for clients with controlled cardiovascular, pulmonary, and metabolic diseases and other clinical populations and work closely with clients' healthcare providers, as needed.

Knowledge or Skill Statement		Course
a. Knowledge of ACSM preparticipation screening algorithm and the FITT-VP principle for clients 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
b. Knowledge of 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
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.		EXSC 433 – Exercise Prescription for Special Pop. HLTH 333 – Exercise & Sports Nutrition
d. 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
e. Knowledge of the recommended FITT-VP principle for the development of cardiorespiratory fitness, muscular fitness, and flexibility for participants with cardiac diseases and conditions (e.g., 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-VP principle, in a safe and effective manner.		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 PHED 225 – Weight Training/Conditioning EXSC 499- Internship in Exercise Science
Skill in modifying the exercise prescription and/or exercise choice for clients with diseases and conditions (e.g., 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 EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert EXSC 499- Internship in Exercise Science
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 499- Internship in Exercise Science

G. Prescribe and implement exercise programs for healthy special populations (e.g., older adults, children, adolescents, pregnant women).

Knowledge or Skill Statement		Course
a. Knowledge of normal maturational changes across the lifespan and their effects (e.g., 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.
b. Knowledge of techniques for the modification of cardiovascular, flexibility, and resistance exercises		EXSC 310 – Exercise Physiology EXSC 433 – Exercise Prescription for Special Pop. EXSC 460 – Exer Testing, Eval, & Prescript

based on age, functional capacity, and physical condition.		EXSC 433- Exercise Prescription for Special Populations EXSC 485 OR 486 – Exercise Physiologist Workshop/Cert OR Strength and Conditioning Specialist Workshop/Cert
c. 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

d. 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
e. 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
f. Knowledge of the recommended FITT-VP principle 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
g. 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
h. Knowledge of the recommended FITT-VP principle 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
i. Knowledge of common orthopedic and cardiovascular exercise considerations for older adults.		EXSC 433- Exercise Prescription for Special Populations EXSC 460 – Exer Testing, Eval, & Prescript
j. 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
k. Knowledge of the recommended FITT-VP principle 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 in Exercise Science
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 in Exercise Science
H. Modify exercise prescriptions based on environmental conditions.		
Knowledge or Skill Statement		Course
a. Knowledge of the effects of various environmental conditions on the physiologic response to exercise (e.g., altitude, variable ambient temperatures, humidity, environmental pollution).		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
b. Knowledge of special precautions and program modifications for exercise in various environmental conditions (e.g., altitude, variable ambient temperatures, humidity, environmental pollution).		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
c. Knowledge of the role of acclimations when exercising in various environmental conditions (e.g., altitude, variable ambient temperatures, humidity, environmental pollution).		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
d. Knowledge of appropriate fluid intake during exercise in various environmental conditions (e.g., altitude, variable ambient temperatures, humidity, environmental pollution).		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 Behavior Modification

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

Knowledge or Skill Statement		Course
a. Knowledge of verbal and nonverbal behaviors that communicate positive reinforcement and encouragement (e.g., eye contact, targeted praise, empathy).		EXSC 461 – Exercise Leadership HLTH 333 – Exercise & Sports Nutrition KINE 225 – Weight Training/Conditioning
b. Knowledge of group leadership techniques for working with clients of all ages.		EXSC 461 – Exercise Leadership
c. Knowledge of learning preferences (auditory, visual, kinesthetic) and how to apply teaching and training techniques to optimize training sessions.		EXSC 461 – Exercise Leadership
Skill in applying active listening techniques		EXSC 461 – Exercise Leadership EXSC 499- Internship in Exercise Science
Skill in using feedback to optimize a client’s training sessions.		EXSC 499 – Internship in Exercise Science
Skill in effective use of a variety of communication modes (e.g., telephone, newsletters, email, social media).		EXSC 499 – Internship in Exercise Science EXSC 321 - Practicum

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

Knowledge or Skill Statement		Course
a. Knowledge of behavior change models and theories (e.g., transtheoretical model, social cognitive theory, social ecological model, health belief model, theory of planned behavior, self-determination theory, cognitive evaluation theory).		EXSC 101 – Intro to Exercise Science EXSC 461- Exercise Leadership HLTH 333 – Exercise & Sports Nutrition
b. Knowledge of the basic principles involved in motivational interviewing (MI).		EXSC 461- Exercise Leadership
c. Knowledge of intervention strategies and stress management techniques.		EXSC 461- Exercise Leadership
d. Knowledge of behavioral strategies to enhance exercise and health behavior change (e.g., reinforcement, S.M.A.R.T. goal setting, social support).		EXSC 460 – Exer Testing, Eval, & Prescript EXSC 461- Exercise Leadership
e. Knowledge of behavior modification terminology (e.g., self-esteem, self-efficacy, antecedents, cues to action, behavioral beliefs, behavioral intentions, reinforcing factors).		EXSC 461- Exercise Leadership
f. Knowledge of behavioral strategies (e.g., exercise, diet, behavioral modification strategies) for weight management.		EXSC 460 – Exer Testing, Eval, & Prescript EXSC 461- Exercise Leadership HLTH 333 – Exercise & Sports Nutrition
g. Knowledge of the role that affect, mood and emotion play in exercise adherence.		EXSC 460 – Exer Testing, Eval, & Prescript EXSC 461- Exercise Leadership
h. Knowledge of barriers to exercise adherence and compliance (e.g., time management, injury, fear, lack of knowledge, weather).		EXSC 460 – Exer Testing, Eval, & Prescript EXSC 461- Exercise Leadership
i. Knowledge of techniques that facilitate intrinsic and extrinsic motivation (e.g., goal setting, incentive programs, achievement recognition, social support).		EXSC 460 – Exer Testing, Eval, & Prescript EXSC 461- Exercise Leadership
j. Knowledge of the role extrinsic and intrinsic motivation plays in the adoption and maintenance of behavior change.		EXSC 460 – Exer Testing, Eval, & Prescript EXSC 461- Exercise Leadership
k. Knowledge of 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
l. Knowledge of strategies to increase non-structured physical activity (e.g., 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 EXSC 499- Internship in Exercise Science
Skill in using imagery as a motivational tool.		EXSC 499- Internship in Exercise Science
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 PHED 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
a. 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 310 Physiology of Exercise EXSC 433- Exercise Prescription for Special Populations
b. Knowledge of the dynamic interrelationship between fitness level, body composition, stress, and overall health.		HLTH 333 – Exercise & Sports Nutrition EXSC 310- Physiology of Exercise EXSC 461 – Exercise Leadership
c. 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 321- Practicum
d. 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
e. 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
f. Knowledge of specific, age-appropriate leadership techniques and educational methods to increase client engagement.		EXSC 461 – Exercise Leadership
g. 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 disseminating scientifically-based, relevant fitness-, nutrition-, and wellness-related resources and 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 an ACSM Certified Exercise Physiologist and refer to the other health professionals as indicated.

Knowledge or Skill Statement		Course
a. 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
b. Knowledge of signs and symptoms of mental health states (<i>e.g.</i> , anxiety, depression, eating disorders) that may		EXSC 433- Exercise Prescription for Special Populations

necessitate referral to a medical or mental health professional.		
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.		EXSC 320 – Measurement and Evaluation in Health and Kinesiology EXSC 410- Applied Exercise Physiology
d. 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 EXSC 410- Applied Exercise Physiology
e. 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: Risk Management and Professional Responsibilities

A. Develop and disseminate risk management guidelines for health/fitness facility to reduce member, employee, and business risk.

Knowledge or Skill Statement	Course
a. Knowledge of employee criminal background checks, child abuse clearance, and drug and alcohol screenings.	EXSC 461 – Exercise Leadership
b. Knowledge of employment verification requirements mandated by state and federal laws.	EXSC 461 – Exercise Leadership
c. Knowledge of safe handling and disposal of body fluids and employee safety (OSHA guidelines).	EXSC 461 – Exercise Leadership
d. Knowledge of insurance coverage common to the health/fitness industry including general liability, professional liability, workers’ compensation, property, and business interruption.	EXSC 461 – Exercise Leadership
e. Knowledge of sexual harassment policies and procedures.	EXSC 461 – Exercise Leadership
f. Knowledge of interviewing techniques.	EXSC 461 – Exercise Leadership
g. Knowledge of basic precautions taken in an exercise setting to ensure participant safety.	EXSC 461 – Exercise Leadership
h. Knowledge of preparticipation screening algorithm, medical release, and waiver of liability for normal and at-risk clients.	EXSC 461 – Exercise Leadership
i. Knowledge of emergency action plan (EAP); response systems and procedures.	EXSC 461 – Exercise Leadership
j. Knowledge of the legal implications of documented safety procedures, the use of incident report documents, and ongoing safety training documentation.	EXSC 461 – Exercise Leadership
k. Knowledge of maintaining employee records/documents (CPR/AED certification, certifications for maintaining job position).	EXSC 461 – Exercise Leadership
l. Knowledge of the components of the ACSM Code of Ethics and the ACSM Certified Exercise Physiologist scope of practice.	EXSC 461 – Exercise Leadership
Skill in developing and/or modifying policies and procedures manual.	EXSC 461 – Exercise Leadership
Skill in enforcing confidentiality policies.	EXSC 461 – Exercise Leadership EXSC 499 – Internship in Exercise Science
Skill in maintaining a safe exercise environment (<i>e.g.</i> , equipment operation and regular maintenance schedules, safety and scheduled maintenance of exercise areas, overall facility maintenance, proper sanitation, proper signage).	EXSC 410 – Applied Exercise Physiology EXSC 461 – Exercise Leadership EXSC 499 – Internship in Exercise Science
Skill in clearly communicating human resource risk management policies and procedures.	EXSC 461 – Exercise Leadership EXSC 499 – Internship in Exercise Science
Skill in training employees to identify and limit/reduce high-risk situations.	EXSC 461 – Exercise Leadership EXSC 499 – Internship in Exercise Science

B. Ensure that emergency policies and procedures are in place.

Knowledge or Skill Statement	Course
a. Knowledge of emergency procedures (i.e., telephone procedures, written emergency procedures, personnel responsibilities) in a health fitness setting.	EXSC 461 – Exercise Leadership
b. Knowledge of the initial management and first-aid procedures for exercise-related injuries (<i>e.g.</i> , bleeding, strains/sprains, fractures, shortness of breath, palpitations, hypoglycemia, allergic reactions, fainting/syncope).	First Aid Certification requirement for all students in the EXSC program

c. Knowledge of the responsibilities, limitations, and legal implications for the ACSM Certified Exercise Physiologist of carrying out emergency procedures.	EXSC 461 – Exercise Leadership
d. Knowledge of safety plans, emergency procedures, and first aid techniques needed during fitness evaluation, exercise testing, and exercise training.	EXSC 461 – Exercise Leadership
e. 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 310 – Physiology of Exercise EXSC 350 - Biomechanics
Knowledge of appropriate documentation of emergencies.	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).	First Aid Certification Requirement for all students in the EXSC program
Skill in applying basic life support, first aid, cardiopulmonary resuscitation (CPR), and automated external defibrillator (AED) techniques.	CPR Certification Requirement for all students in the EXSC program
Skill in developing and/or modifying an evacuation plan.	EXSC 461 – Exercise Leadership
Skill in demonstrating emergency procedures during exercise testing and/or training.	EXSC 499- Internship in Exercise Science