Commission on Accreditation of Allied Health Education Programs

Standards and Guidelines for the Accreditation of Educational Programs in Exercise Sciences

Standards initially adopted in 2004; revised in 2006, 2017

Adopted by the
American College of Sports Medicine
American Council on Exercise
American Kinesiotherapy Association
American Red Cross
National Academy of Sports Medicine
National Council on Strength & Fitness
Committee on Accreditation for the Exercise Sciences and
Commission on Accreditation of Allied Health Education Programs

The Commission on Accreditation of Allied Health Education Programs (CAAHEP) accredits programs upon the recommendation of the Committee on Accreditation for the Exercise Sciences (CoAES).

These accreditation **Standards and Guidelines** are the minimum standards of quality used in accrediting programs that prepare individuals to enter the Exercise Sciences profession. Standards are the minimum requirements to which an accredited program is held accountable. Guidelines are descriptions, examples, or recommendations that elaborate on the Standards. Guidelines are not required, but can assist with interpretation of the Standards.

Standards are printed in regular typeface in outline form. *Guidelines* are printed in italic typeface in narrative form.

Preamble

The Commission on Accreditation of Allied Health Education Programs (CAAHEP), the Committee on Accreditation for the Exercise Sciences, and the American College of Sports Medicine, the American Council on Exercise, the American Kinesiotherapy Association, the American Red Cross, the National Academy of Sports Medicine, and the National Council on Strength & Fitness cooperate to establish, maintain and promote appropriate standards of quality for educational programs in the Exercise Sciences, and to provide recognition for educational programs that meet or exceed the minimum standards outlined in these accreditation **Standards and Guidelines**. Lists of accredited programs are published for the information of students, employers, educational institutions agencies, and the public.

These **Standards and Guidelines** are to be used for the development, evaluation, and self-analysis of Exercise Science programs. On-site review teams assist in the evaluation of a program's relative compliance with the accreditation Standards.

Description of the Profession
Graduates of Exercise Sciences programs are trained to assess, design, and implement individual and group exercise and fitness programs for individuals who are apparently healthy and those with controlled disease. They are skilled in evaluating health behaviors and risk factors, conducting fitness assessments, writing appropriate exercise prescriptions, and motivating individuals to modify negative health habits and maintain positive lifestyle behaviors for health promotion. The Exercise Sciences professional has demonstrated competence as a leader of health and fitness programs in the university, corporate, commercial or community settings in which their clients participate in health promotion and fitness-related activities.

I. Sponsorship

A. Sponsoring Educational Institution

A sponsoring institution must be one of the following:

1. A post-secondary academic institution accredited by an institutional accrediting agency that is recognized by the U.S. Department of Education, and authorized under applicable law or other acceptable authority to provide a post-secondary program, which awards a minimum of a bachelor's degree at the completion of the program.

2. A foreign post-secondary academic institution acceptable to CAAHEP.

B. Consortium Sponsor

1. A consortium sponsor is an entity consisting of two or more members that exists for the purpose of operating an educational program. In such instances, at least one of the members of the consortium must meet the requirements of a sponsoring educational institution as described in I, A.

2. The responsibilities of each member of the consortium must be clearly documented as a formal affiliation agreement or memorandum of understanding, which includes governance and lines of authority.

C. Responsibilities of Sponsor

The Sponsor must assure that the provisions of these **Standards and Guidelines** are met.

II. Program Goals

A. Program Goals and Outcomes

There must be a written statement of the program's goals and learning domains consistent with and responsive to the demonstrated needs and expectations of the various communities of interest served by the educational program. The communities of interest that are served by the program include, but are not limited to, students, graduates, faculty, sponsor administration, employers, physicians, and the public.

Program-specific statements of goals and learning domains provide the basis for program planning, implementation, and evaluation. Such goals and learning domains must be compatible with both the mission of the sponsoring institution(s), the expectations of the communities of interest, and nationally accepted standards of roles and functions. Goals and learning domains are based upon the substantiated needs of health care providers and employers, and the educational needs of the students served by the educational program.

B. Appropriateness of Goals and Learning Domains

The program must regularly assess its goals and learning domains. Program personnel must identify and respond to changes in the needs and/or expectations of its communities of interest.

An advisory committee, which is representative of at least each of the communities of interest named in these **Standards,** must be designated and charged with the responsibility of meeting at least annually, to assist program and sponsor personnel in formulating and periodically revising appropriate goals and learning domains, monitoring needs and expectations, and ensuring program responsiveness to change.

Advisory committee meetings may include participation by synchronous electronic means.

C. Minimum Expectations
The program must have the following goal defining minimum expectations: "To prepare competent entry-level Exercise Science professionals in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains."

Programs adopting educational goals beyond entry-level competence must clearly delineate this intent and provide evidence that all students have achieved the basic competencies prior to entry into the field.

Nothing in this Standard restricts programs from formulating goals beyond entry-level competence.

III. Resources

A. Type and Amount
Program resources must be sufficient to ensure the achievement of the program's goals and outcomes. Resources must include, but are not limited to: faculty; clerical and support staff; curriculum; finances; offices; classroom, laboratory, and, ancillary student facilities; clinical affiliates, equipment; supplies; computer resources; instructional reference materials; and faculty/staff continuing education.

B. Personnel
The sponsor must appoint sufficient faculty and staff with the necessary qualifications to perform the functions identified in documented job descriptions and to achieve the program's stated goals and outcomes.

1. Program Director

a. Responsibilities
The Program Director must assure achievement of the program's goals and outcomes, and is responsible for all aspects of the program, including the organization, administration, continuous review, planning, development and general effectiveness of the program. The Program Director must provide supervision, administration and coordination of the instructional staff in the academic and practical phases of the educational program.

Administrative and supervisory responsibilities of the Program Director should be recognized as a department assignment. The amount of time devoted to these responsibilities should be consistent with departmental or institutional policy, but should be deemed appropriate in view of the administrative responsibilities of the Program Director.

b. Qualifications
The Program director must possess a minimum of an earned master's degree and work related experience that exceeds that for which the students in the program are being prepared.

A qualified Program Director should be a full-time employee of the sponsoring institution and should possess a minimum of three years of work-related experience in Exercise Sciences.

2. Faculty and/or Instructional Staff

a. Responsibilities
In classrooms, laboratories, and all applied instructional settings where a student is assigned, there must be (a) qualified individual(s) clearly designated as liaison(s) to the program to provide instruction, supervision, and timely assessments of the student's progress in meeting program requirements.

All faculty members, regardless of the extent of their participation, should be familiar with the goals of the program and should be able to demonstrate the ability to develop an organized plan of instruction and evaluation.

b. Qualifications

Instructors must possess appropriate credentials and knowledge in subject matter by virtue of training and/or experience, in teaching their assigned subjects.

Qualified faculty and/or instructional staff should possess a minimum of two years of work-related experience in Exercise Science.

C. Curriculum

The curriculum must ensure the achievement of program goals and learning domains. Instruction must be an appropriate sequence of classroom, laboratory, and clinical/practical activities. Instruction must be based on clearly written course syllabi that include course description, course objectives, methods of evaluation, topic outline, and competencies required for graduation.

The program must demonstrate by comparison that the curriculum offered meets or exceeds the competencies specified in Appendix B of these Standards and Guidelines.

The program should end in a culminating experience, such as an internship and a national credentialing examination.

D. Resource Assessment

The program must, at least annually, assess the appropriateness and effectiveness of the resources described in these **Standards**. The results of resource assessment must be the basis for ongoing planning and appropriate change. An action plan must be developed when deficiencies are identified in the program resources. Implementation of the action plan must be documented and results measured by ongoing resource assessment.

IV. Student and Graduate Evaluation/Assessment

A. Student Evaluation

1. Frequency and purpose

Evaluation of students must be conducted on a recurrent basis and with sufficient frequency to provide both the students and program faculty with valid and timely indications of the students' progress toward and achievement of the competencies and learning domains stated in the curriculum.

2. Documentation

Records of student evaluations must be maintained in sufficient detail to document learning progress and achievements.

B. Outcomes Assessment

1. Outcomes Assessment

The program must periodically assess its effectiveness in achieving its stated goals and learning domains. The results of this evaluation must be reflected in the review and timely revision of the program.

Outcomes assessments must include, but are not limited to: national credentialing examination(s) performance; programmatic retention/attrition; graduate satisfaction; employer satisfaction; job (positive) placement; and programmatic summative measures. The program must meet the outcomes assessment thresholds.

Programmatic summative measures, if used, should contribute to assessing effectiveness in specific learning domains.

"Positive placement" means that the graduate is employed full or part-time in the profession or in a related field; or continuing his/her education; or serving in the military. A related field is one in which the individual is using cognitive, psychomotor, and affective competencies acquired in the educational program.

"National credentialing examinations" are those accredited by the National Commission for Certifying Agencies (NCCA). Participation rates on national credentialing examination(s) performance may be considered in determining whether or not a program meets the designated threshold, provided the credentialing examination or an alternative examination is available to be administered prior to graduation from the program. Results from an alternative examination may be accepted, if designated as equivalent by the organization whose credentialing examination is so accredited.

2. Outcomes Reporting

The program must periodically submit to the CoAES the program goal(s), learning domains, evaluation systems (including type, cut score, and appropriateness), outcomes, its analysis of the outcomes, and an appropriate action plan based on the analysis.

Programs not meeting the established thresholds must begin a dialogue with the CoAES to develop an appropriate plan of action to respond to the identified shortcomings.

V. Fair Practices

A. Publications and Disclosure

1. Announcements, catalogs, publications, and advertising must accurately reflect the program offered.

2. At least the following must be made known to all applicants and students: the sponsor's institutional and programmatic accreditation status as well as the name, mailing address, web site address, and phone number of the accrediting agencies; admissions policies and practices, including technical standards (when used); policies on advanced placement, transfer of credits, and credits for experiential learning; number of credits required for completion of the program; tuition/fees and other costs required to complete the program; and policies and processes for withdrawal and for refunds of tuition/fees.

3. At least the following must be made known to all students: academic calendar; student grievance procedure; criteria for successful completion of each segment of the curriculum and for graduation; and policies and processes by which students may perform clinical work while enrolled in the program.

4. The sponsor must maintain, and make available to the public, current and consistent information about student/graduate achievement that includes the results of one or more of the outcomes assessments required in these **Standards**.

   The sponsor should develop a suitable means of communicating to the communities of interest the achievement of students/graduates (e.g. through a website or electronic or printed documents).

B. Lawful and Non-discriminatory Practices

All activities associated with the program, including student and faculty recruitment, student admission, and faculty employment practices, must be non-discriminatory and in accord with federal and state statutes, rules, and regulations. There must be a faculty grievance procedure made known to all paid faculty.

C. Safeguards

The health and safety of patients, students, faculty, and other participants associated with the educational activities of the students must be adequately safeguarded.

All activities required in the program must be educational and students must not be substituted for staff.

D. Student Records

Satisfactory records must be maintained for student admission, advisement, counseling, and evaluation. Grades and credits for courses must be recorded on the student transcript and permanently maintained by the sponsor in a safe and accessible location.

E. Substantive Change

The sponsor must report substantive change(s) as described in Appendix A to CAAHEP/CoAES in a timely manner. Additional substantive changes to be reported to CoAES within the time limits prescribed include:

1. the institution's mission or objectives if these will affect the program;
2. the institution's legal status or form of control;
3. the addition of courses that represent a significant departure in content or in method of delivery;
4. the degree awarded;
5. a substantial increase in clock or credit hours for successful completion of a program or in the length of a program.

F. Agreements

There must be a formal affiliation agreement or memorandum of understanding between the sponsor and all other entities that participate in the education of the students describing the relationship, role, and responsibilities between the sponsor and that entity.

APPENDIX A

Application, Maintenance, and Administration of Accreditation

A. Program and Sponsor Responsibilities

1. Applying for Initial Accreditation

a. The chief executive officer or an officially designated representative of the sponsor completes a "Request for Accreditation Services" form and returns it electronically or by mail to:

Committee on Accreditation for the Exercise Sciences
c/o American College of Sports Medicine
401 W. Michigan Street
Indianapolis, IN 46202

The "Request for Accreditation Services" form can be obtained from the CAAHEP website at https://www.cognitoforms.com/CAAHEP2/RequestForAccreditationServices.

Note: There is **no** CAAHEP fee when applying for accreditation services; however, individual committees on accreditation may have an application fee.

b. The program undergoes a comprehensive review, which includes a written self-study report and an on-site review.

The self-study instructions and report form are available from the Committee on Accreditation for the Exercise Sciences (CoAES). The on-site review will be scheduled in cooperation with the program and the CoAES once the self-study report has been completed, submitted, and accepted by the CoAES.

2. Applying for Continuing Accreditation

a. Upon written notice from the CoAES, the chief executive officer or an officially designated representative of the sponsor completes a "Request for Accreditation Services" form, and returns it electronically or by mail to:

Committee on Accreditation for the Exercise Sciences
c/o American College of Sports Medicine
401 W. Michigan Street
Indianapolis, IN 46202

The "Request for Accreditation Services" form can be obtained from the CAAHEP website at https://www.cognitoforms.com/CAAHEP2/RequestForAccreditationServices.

b. The program may undergo a comprehensive review in accordance with the policies and procedures of the CoAES.

If it is determined that there were significant concerns with the conduct of the on-site review, the sponsor may request a second site visit with a different team.

After the on-site review team submits a report of its findings, the sponsor is provided the opportunity to comment in writing and to correct factual errors prior to the CoAES forwarding a recommendation to CAAHEP.

3. Administrative Requirements for Maintaining Accreditation

a. The program must inform the CoAES and CAAHEP within a reasonable period of time (as defined by the committee on accreditation and CAAHEP policies) of changes in chief executive officer, dean of health professions or equivalent position, and required program personnel (Refer to Standard III.B.).

b. The sponsor must inform CAAHEP and the CoAES of its intent to transfer program sponsorship. To begin the process for a Transfer of Sponsorship, the current sponsor must submit a letter (signed by the CEO or designated individual) to CAAHEP and the CoAES that it is relinquishing its sponsorship of the program. Additionally, the new sponsor must submit a "Request for Transfer of Sponsorship Services" form. The CoAES has the discretion of requesting a new self-study report with or without an on-site review. Applying for a transfer of sponsorship does not guarantee that the transfer will be granted.

c. The sponsor must promptly inform CAAHEP and the CoAES of any adverse decision affecting its accreditation by recognized institutional accrediting agencies and/or state agencies (or their equivalent).

d. Comprehensive reviews are scheduled by the CoAES in accordance with its policies and procedures. The time between comprehensive reviews is determined by the CoAES and based on the program's on-going compliance with the Standards, however, all programs must undergo a comprehensive review at least once every ten years.

e. The program and the sponsor must pay CoAES and CAAHEP fees within a reasonable period of time, as determined by the CoAES and CAAHEP respectively.

f. The sponsor must file all reports in a timely manner (self-study report, progress reports, probation reports, annual reports, etc.) in accordance with CoAES policy.

g. The sponsor must agree to a reasonable on-site review date that provides sufficient time for CAAHEP to act on a CoAES accreditation recommendation prior to the "next comprehensive review" period, which was designated by CAAHEP at the time of its last accreditation action, or a reasonable date otherwise designated by the CoAES.

Failure to meet any of the aforementioned administrative requirements may lead to administrative probation and ultimately to the withdrawal of accreditation. CAAHEP will immediately rescind administrative probation once all administrative deficiencies have been rectified.

4. Voluntary Withdrawal of a CAAHEP- Accredited Program

Notification of voluntary withdrawal of accreditation from CAAHEP must be made by the Chief Executive Officer or an officially designated representative of the sponsor by writing to CAAHEP indicating: the desired effective date of the voluntary withdrawal, and the location where all records will be kept for students who have completed the program.

5. Requesting Inactive Status of a CAAHEP- Accredited Program

Inactive status for any accredited program may be requested from CAAHEP at any time by the Chief Executive Officer or an officially designated representative of the sponsor writing to CAAHEP indicating the desired date to become inactive. No students can be enrolled or matriculated in the program at any time during the time period in which the program is on inactive status. The maximum period for inactive status is two years. The sponsor must continue to pay all required fees to the CoAES and CAAHEP to maintain its accreditation status.

To reactivate the program the Chief Executive Officer or an officially designated representative of the sponsor must provide notice of its intent to do so in writing to both CAAHEP and the CoAES. The sponsor will be notified by the CoAES of additional requirements, if any, that must be met to restore active status.

If the sponsor has not notified CAAHEP of its intent to re-activate a program by the end of the two-year period, CAAHEP will consider this a "Voluntary Withdrawal of Accreditation."

B. CAAHEP and Committee on Accreditation Responsibilities – Accreditation Recommendation Process

1. After a program has had the opportunity to comment in writing and to correct factual errors on the on-site review report, the CoAES forwards a status of public recognition recommendation to the CAAHEP Board of Directors. The recommendation may be for any of the following statuses: initial accreditation, continuing accreditation, transfer of sponsorship, probationary accreditation, withhold of accreditation, or withdrawal of accreditation.

   The decision of the CAAHEP Board of Directors is provided in writing to the sponsor immediately following the CAAHEP meeting at which the program was reviewed and voted upon.

2. Before the CoAES forwards a recommendation to CAAHEP that a program be placed on probationary accreditation, the sponsor must have the opportunity to request reconsideration of that recommendation or to request voluntary withdrawal of accreditation. The CoAES' reconsideration of a recommendation for probationary accreditation must be based on conditions existing both when the committee arrived at its recommendation as well as on subsequent documented evidence of corrected deficiencies provided by the sponsor.

   The CAAHEP Board of Directors' decision to confer probationary accreditation is not subject to appeal.

3. Before the CoAES forwards a recommendation to CAAHEP that a program's accreditation be withdrawn or that accreditation be withheld, the sponsor must have the opportunity to request reconsideration of the recommendation, or to request voluntary withdrawal of accreditation or withdrawal of the accreditation application, whichever is applicable. The CoAE'S reconsideration of a recommendation of withdraw or withhold accreditation must be based on conditions existing both when the CoAES arrived at its recommendation as well as on subsequent documented evidence of corrected deficiencies provided by the sponsor.

   The CAAHEP Board of Directors' decision to withdraw or withhold accreditation may be appealed. A copy of the CAAHEP "Appeal of Adverse Accreditation Actions" is enclosed with the CAAHEP letter notifying the sponsor of either of these actions.

At the completion of due process, when accreditation is withheld or withdrawn, the sponsor's Chief Executive Officer is provided with a statement of each deficiency. Programs are eligible to re-apply for accreditation once the sponsor believes that the program is in compliance with the accreditation Standards.

Note: Any student who completes a program that was accredited by CAAHEP at any time during his/her matriculation is deemed by CAAHEP to be a graduate of a CAAHEP-accredited program.

Appendix B
Curriculum for Educational Programs in Exercise Sciences

Performance Domains and Associated Competencies

The curriculum for programs in Exercise Sciences must include the performance domains and associated competencies listed below.

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

I.B.1.i	i) Knowledge of medical terminology including, but not limited to, total cholesterol (TC), high-density lipoprotein cholesterol (HDL-C), low-density lipoprotein cholesterol (LDL-C), triglycerides, impaired fasting glucose, impaired glucose tolerance, hypertension, atherosclerosis, myocardial infarction, dyspnea, tachycardia, claudication, syncope and ischemia.
I.B.1.j	j) Knowledge of recommended plasma cholesterol levels for adults based on National Cholesterol Education Program/ATP Guidelines.
I.B.1.k	k) Knowledge of recommended blood pressure levels for adults based on National High Blood Pressure Education Program Guidelines.
I.B.1.l	l) Knowledge of medical supervision recommendations for cardiorespiratory fitness testing.
I.B.1.m	m) Knowledge of the components of a health-history questionnaire (e.g., past and current medical history, family history of cardiac disease, orthopedic limitations, prescribed medications, activity patterns, nutritional habits, stress and anxiety levels, and smoking and alcohol use).
I.B.2.a	n) Skill in the risk stratification of participants using CVD risk factor thresholds, major signs or symptoms suggestive of cardiovascular, pulmonary, or metabolic disease, and/or the presence of known cardiovascular, pulmonary, and metabolic disease status.
I.B.2.b	o) Skill in reviewing pre-activity screening documents to determine the need for medical clearance prior to exercise and to select appropriate physical fitness assessment protocols.
	DOMAIN I: HEALTH AND FITNESS ASSESSMENT **C. Select and prepare physical fitness assessments for healthy participants and those with controlled disease.**
I.C.1.a	Knowledge of the physiological basis of the major components of physical fitness: cardiorespiratory fitness, body composition, flexibility, muscular strength, and muscular endurance.
I.C.1.b	Knowledge of selecting the most appropriate testing protocols for each participant based on preliminary screening data.
I.C.1.c	Knowledge of calibration techniques and proper use of fitness testing equipment.
I.C.1.d	Knowledge of the purpose and procedures of fitness testing protocols for the components of health related fitness.
I.C.1.e	Knowledge of test termination criteria and proper procedures to be followed after discontinuing health fitness tests.
I.C.1.f	Knowledge of fitness assessment sequencing.
I.C.1.g	Knowledge of the effects of common medications and substances on exercise testing (e.g., antianginals, antihypertensives, antiarrhythmics, bronchodilators, hypoglycemics, psychotropics, alcohol, diet pills, cold tablets, caffeine, nicotine).
I.C.1.h	Knowledge of the physiologic and metabolic responses to exercise testing associated with chronic diseases and conditions (e.g., heart disease, hypertension, diabetes mellitus, obesity, pulmonary disease).
I.C.2.a	Skill in analyzing and interpreting information obtained from assessment of the components of health related fitness.
I.C.2.b	Skill in modifying protocols and procedures for testing children, adolescents, older adults and individuals with special considerations.
	DOMAIN I: HEALTH AND FITNESS ASSESSMENT **D. Conduct and interpret cardiorespiratory fitness assessments.**

I.D.1.a	Knowledge of common submaximal and maximal cardiorespiratory fitness assessment protocols.
I.D.1.b	Knowledge of blood pressure measurement techniques.
I.D.1.c	Knowledge of Korotkoff sounds for determining systolic and diastolic blood pressure.
I.D.1.d	Knowledge of the blood pressure response to exercise.
I.D.1.e	Knowledge of techniques of measuring heart rate and heart rate response to exercise.
I.D.1.f	Knowledge of the rating of perceived exertion (RPE).
I.D.1.g	Knowledge of heart rate, blood pressure and RPE monitoring techniques before, during, and after cardiorespiratory fitness testing.
I.D.1.h	Knowledge of the anatomy and physiology of the cardiovascular and pulmonary systems.
I.D.1.i	Knowledge of cardiorespiratory terminology including angina pectoris, tachycardia, bradycardia, arrhythmia, and hyperventilation.
I.D.1.j	Knowledge of the pathophysiology of myocardial ischemia, myocardial infarction, stroke, hypertension, and hyperlipidemia.
I.D.1.k	Knowledge of the effects of myocardial ischemia, myocardial infarction, hypertension, claudication, and dyspnea on cardiorespiratory responses during exercise.
I.D.1.l	Knowledge of oxygen consumption dynamics during exercise (e.g., heart rate, stroke volume, cardiac output, ventilation, ventilatory threshold).
I.D.1.m	Knowledge of methods of calculating VO_{2max}.
I.D.1.n	Knowledge of cardiorespiratory responses to acute graded exercise of conditioned and unconditioned participants.
I.D.2.a	Skill in interpreting cardiorespiratory fitness test results.
I.D.2.b	Skill in locating anatomic landmarks for palpation of peripheral pulses and blood pressure.
I.D.2.c	Skill in measuring heart rate, blood pressure, and RPE at rest and during exercise.
I.D.2.d	Skill in conducting submaximal exercise tests (e.g., cycle ergometer, treadmill, field testing, step test).
I.D.2.e	Skill in determining cardiorespiratory fitness based on submaximal exercise test results.
	DOMAIN I: HEALTH AND FITNESS ASSESSMENT **E. Conduct assessments of muscular strength, muscular endurance and flexibility.**
I.E.1.a	Knowledge of common muscular strength, muscular endurance, and flexibility assessment protocols.
I.E.1.b	Knowledge of interpreting muscular strength, muscular endurance, and flexibility assessments.
I.E.1.c	Knowledge of relative strength, absolute strength, and repetition maximum (1-RM) estimation.
I.E.1.d	Knowledge of the anatomy of bone, skeletal muscle, and connective tissues.
I.E.1.e	Knowledge muscle action terms including anterior, posterior, inferior, superior, medial, lateral, supination, pronation, flexion, extension, adduction, abduction, hyperextension, rotation, circumduction, agonist, antagonist, and stabilizer.
I.E.1.f	Knowledge of the planes and axes in which each movement action occurs.
I.E.1.g	Knowledge of the interrelationships among center of gravity, base of support, balance, stability, posture, and proper spinal alignment.
I.E.1.h	Knowledge of the normal curvatures of the spine and common assessments of postural alignment.

I.E.1.i	Knowledge of the location and function of the major muscles (e.g., pectoralis major, trapezius, latissimus dorsi, biceps, triceps, rectus abdominus, internal and external obliques, erector spinae, gluteus maximus, quadriceps, hamstrings, adductors, abductors, and gastrocnemius).
I.E.1.j	Knowledge of the major joints and their associated movement.
I.E.2.a	Skill in identifying the major bones, muscles, and joints.
I.E.2.b	Skill in conducting assessments of muscular strength, muscular endurance and flexibility (e.g., 1-RM, hand grip dynamometer, push-ups, curl-ups, sit-and-reach).
I.E.2.c	Skill in estimating 1-RM using lower resistance (2-10 RM).
I.E.2.d	Skill in interpreting results of muscular strength, muscular endurance and flexibility assessments.
	DOMAIN I: HEALTH AND FITNESS ASSESSMENT **F. Conduct anthropometric and body composition assessments.**
I.F.1.a	Knowledge of the advantages, disadvantages and limitations of body composition techniques (e.g., air displacement plethysmography (BOD POD®), duel-energy x-ray absorptiometry (DEXA), hydrostatic weighing, skinfolds, and bioelectrical impedance.
I.F.1.b	Knowledge of the standardized descriptions of circumference and skinfold sites.
I.F.1.c	Knowledge of procedures for determining BMI and taking skinfold and circumference measurements.
I.F.1.d	Knowledge of the health implications of variation in body fat distribution patterns and the significance of BMI, waist circumference, and waist-to-hip ratio.
I.F.2.a	Skill in locating anatomic landmarks for skinfold and circumference measurements.
I.F.2.b	Skill in interpreting the results of anthropometric and body composition assessments.
	Domain II: Exercise Prescription and Implementation **A. Review pre-participation health screening including self-guided health questionnaires and appraisals, exercise history and fitness assessments**
II.A.1.a	Skill in synthesizing pre-screening results and reviewing them with participants
	Domain II: Exercise Prescription and Implementation **B. Determine safe and effective exercise programs to achieve desired outcomes and goals.**
II.B.1.a	Knowledge of strength, aerobic, and flexibility based exercise.
II.B.1.b	Knowledge of the benefits and precautions associated with exercise training in apparently healthy participants and those with controlled disease.
II.B.1.c	Knowledge of program development for specific client needs (e.g., sport specific training, performance, health, lifestyle, functional ability, balance, agility, aerobic, anaerobic).
II.B.1.d	Knowledge of the six motor skill related physical fitness components; agility, balance, coordination, reaction time, speed, and power.
II.B.1.e	Knowledge of the physiologic changes associated with an acute bout of exercise.
II.B.1.f	Knowledge of the physiologic adaptations following chronic exercise training.
II.B.1.g	Knowledge of ACSM exercise prescription guidelines for strength, aerobic, and flexibility based exercise for apparently healthy clients, clients with increased risk, and clients with controlled disease.
II.B.1.h	Knowledge of the components and sequencing incorporated into an exercise session (e.g., warm-up, stretching, conditioning or sports related exercise, cool-down).
II.B.1.i	Knowledge of the physiological principles related to warm-up and cool-down.

II.B.1.j	Knowledge of the principles of reversibility, progressive overload, individual differences and specificity of training, and how they relate to exercise prescription.
II.B.1.k	Knowledge the role of aerobic and anaerobic energy systems in the performance of various physical activities.
II.B.1.l	Knowledge of the basic biomechanical principles of human movement.
II.B.1.m	Knowledge of the psychological and physiological signs and symptoms of overtraining.
II.B.1.n	Knowledge of the signs and symptoms of common musculoskeletal injuries associated with exercise (e.g., sprain, strain, bursitis, and tendonitis).
II.B.1.o	Knowledge of the advantages and disadvantages of exercise equipment (e.g., free weights, selectorized machines, aerobic equipment).
II.B.2.a	Skill in teaching and demonstrating exercises.
II.B.2.b	Skill in designing safe and effective training programs.
II.B.2.c	Skill in implementing exercise prescription guidelines for apparently healthy clients, clients with increased risk, and clients with controlled disease.
	Domain II: Exercise Prescription and Implementation **C. Implement cardiorespiratory exercise prescriptions using the FITT principle (frequency, intensity, time, and type) for apparently healthy participants based on current health status, fitness goals and availability of time.**
II.C.1.a	Knowledge of the recommended FITT framework for the development of cardiorespiratory fitness.
II.C.1.b	Knowledge of the benefits, risks and contraindications of a wide variety of cardiovascular training exercises based on client experience, skill level, current fitness level and goals.
II.C.1.c	Knowledge of the minimal threshold of physical activity required for health benefits and/or fitness development.
II.C.1.d	Knowledge of determining exercise intensity using HRR, VO_2R, peak HR method, peak VO_2 method, peak METs method, and the RPE Scale.
II.C.1.e	Knowledge of the accuracy of HRR, VO_2R, peak HR method, peak VO_2 method, peak METs method, and the RPE Scale.
II.C.1.f	Knowledge of abnormal responses to exercise (e.g., hemodynamic, cardiac, ventilatory).
II.C.1.g	Knowledge of metabolic calculations (e.g., unit conversions, deriving energy cost of exercise, caloric expenditure).
II.C.1.h	Knowledge of calculating the caloric expenditure of an exercise session ($\text{kcal}\cdot\text{session}^{1}$).
II.C.1.i	Knowledge of methods for establishing and monitoring levels of exercise intensity, including heart rate, RPE, and METs.
II.C.1.j	Knowledge of the applications of anaerobic training principles.
II.C.1.k	Knowledge of the anatomy and physiology of the cardiovascular and pulmonary systems including the basic properties of cardiac muscle.
II.C.1.l	Knowledge of the basic principles of gas exchange.
II.C.2.a	Skill in determining appropriate exercise frequency, intensity, time and type for clients with various fitness levels.
II.C.2.b	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.
II.C.2.c	Skill in identifying improper technique in the use of cardiovascular equipment.
II.C.2.d	Skill in teaching and demonstrating the use of a variety of cardiovascular exercise equipment.

	Domain II: Exercise Prescription and Implementation **D. Implement exercise prescriptions using the FITT principle (frequency, intensity, time, and type) for flexibility, muscular strength, and muscular endurance for apparently healthy participants based on current health status, fitness goals and availability of time.**
II.D.1.a	Knowledge of the recommended FITT framework for the development of muscular strength, muscular endurance and flexibility.
II.D.1.b	Knowledge of the minimal threshold of physical activity required for health benefits and/or fitness development.
II.D.1.c	Knowledge of safe and effective exercises designed to enhance muscular strength and/or endurance of major muscle groups.
II.D.1.d	Knowledge of safe and effective stretches that enhance flexibility.
II.D.1.e	Knowledge of indications for water based exercise (e.g., arthritis, obesity).
II.D.1.f	Knowledge of the types of resistance training programs (e.g., total body, split routine) and modalities (e.g., free weights, variable resistance equipment, pneumatic machines, bands).
II.D.1.g	Knowledge of acute (e.g., load, volume, sets, repetitions, rest periods, order of exercises) and chronic training variables (e.g., periodization).
II.D.1.h	Knowledge of the types of muscle contractions (e.g., eccentric, concentric, isometric).
II.D.1.i	Knowledge of joint movements (e.g., flexion, extension, adduction, abduction) and the muscles responsible for them.
II.D.1.j	Knowledge of acute and delayed onset muscle soreness (DOMS).
II.D.1.k	Knowledge of the anatomy and physiology of skeletal muscle fiber, the characteristics of fast- and slow-twitch muscle fibers, and the sliding filament theory of muscle contraction.
II.D.1.l	Knowledge of the stretch reflex, proprioceptors, golgi tendon organ (GTO), muscle spindles, and how they relate to flexibility.
II.D.1.m	Knowledge of muscle-related terminology including atrophy, hyperplasia, hypertrophy.
II.D.1.n	Knowledge of the Valsalva maneuver and its implications during exercise.
II.D.1.o	Knowledge of the physiology underlying plyometric training and common plyometric exercises (e.g., box jumps, leaps, bounds).
II.D.1.p	Knowledge of the contraindications and potential risks associated with muscular conditioning activities (e.g., straight-leg sit-ups, double leg raises, squats, hurdler's stretch, yoga plough, forceful back hyperextension, and standing bent-over toe touch, behind neck press/lat pull-down).
II.D.1.q	Knowledge of prescribing exercise using the calculated %1-RM.
II.D.1.r	Knowledge of spotting positions and techniques for injury prevention and exercise assistance.
II.D.1.s	Knowledge of periodization (e.g., macro, micro, mesocycles) and associated theories.
II.D.1.t	Knowledge of safe and effective Olympic weight lifting exercises.
II.D.1.u	Knowledge of safe and effective core stability exercises (e.g., planks, crunches, bridges, cable twists).
II.D.2.a	Skill in identifying improper technique in the use of resistive equipment (e.g., stability balls, weights, bands, resistance bars, and water exercise equipment).
II.D.2.b	Skill in teaching and demonstrating appropriate exercises for enhancing musculoskeletal flexibility.

II.D.2.c	Skill in teaching and demonstrating safe and effective muscular strength and endurance exercises (e.g., free weights, weight machines, resistive bands, Swiss balls, body weight and all other major fitness equipment).
	Domain II: Exercise Prescription and Implementation **E. Establish exercise progression guidelines for resistance, aerobic and flexibility activity to achieve the goals of apparently healthy participants.**
II.E.1.a	Knowledge of the basic principles of exercise progression.
II.E.1.b	Knowledge of adjusting the FITT framework in response to individual changes in conditioning.
II.E.1.c	Knowledge of the importance of performing periodic reevaluations to assess changes in fitness status.
II.E.1.d	Knowledge of the training principles that promote improvements in muscular strength, muscular endurance, cardiorespiratory fitness, and flexibility.
II.E.2.a	Skill in recognizing the need for progression and communicating updates to exercise prescriptions.
	Domain II: Exercise Prescription and Implementation **F. Implement a weight management program as indicated by personal goals that are supported by pre-participation health screening, health history, and body composition/anthropometrics.**
II.F.1.a	Knowledge of exercise prescriptions for achieving weight management, including weight loss, weight maintenance and weight gain goals.
II.F.1.b	Knowledge of energy balance and basic nutritional guidelines (e.g., MyPyramid, USDA Dietary Guidelines for Americans).
II.F.1.c	Knowledge of weight management terminology including, but not limited to, obesity, overweight, percent fat, BMI, lean body mass (LBM), anorexia nervosa, bulimia, binge eating, metabolic syndrome, body fat distribution, adipocyte, bariatrics, ergogenic aid, fat-free mass (FFM), resting metabolic rate (RMR) and thermogenesis.
II.F.1.d	Knowledge of the relationship between body composition and health.
II.F.1.e	Knowledge of the unique dietary needs of participant populations (e.g., women, children, older adults, pregnant women).
II.F.1.f	Knowledge of common nutritional ergogenic aids, their purported mechanisms of action, and associated risks and benefits (e.g., protein/amino acids, vitamins, minerals, herbal products, creatine, steroids, caffeine).
II.F.1.g	Knowledge of methods for modifying body composition including diet, exercise, and behavior modification.
II.F.1.h	Knowledge of fuel sources for aerobic and anaerobic metabolism including carbohydrates, fats and proteins.
II.F.1.i	Knowledge of the effects of overall dietary composition on healthy weight management.
II.F.1.j	Knowledge of the importance of maintaining normal hydration before, during and after exercise.
II.F.1.k	Knowledge of the consequences of inappropriate weight loss methods (e.g., saunas, dietary supplements, vibrating belts, body wraps, over exercising, very low calorie diets, electric stimulators, sweat suits, fad diets).
II.F.1.l	Knowledge of the kilocalorie levels of carbohydrate, fat, protein, and alcohol.
II.F.1.m	Knowledge of the relationship between kilocalorie expenditures and weight loss.

II.F.1.n	Knowledge of published position statements on obesity and the risks associated with it (e.g., National Institutes of Health, American Dietetic Association, ACSM).
II.F.1.o	Knowledge of the relationship between body fat distribution patterns and health.
II.F.1.p	Knowledge of the physiology and pathophysiology of overweight and obese participants.
II.F.1.q	Knowledge of the recommended FITT framework for participants who are overweight or obese.
II.F.1.r	Knowledge of comorbidities and musculoskeletal conditions associated with overweight and obesity that may require medical clearance and/or modifications to exercise testing and prescription.
II.F.2.a	Skill in applying behavioral strategies (e.g., exercise, diet, behavioral modification strategies) for weight management.
II.F.2.b	Skill in modifying exercises for individuals limited by body size.
II.F.2.c	Skill in calculating the volume of exercise in terms of $kcal \cdot session^{-1}$.
	Domain II: Exercise Prescription and Implementation **G. Prescribe and implement exercise programs for participants with controlled cardiovascular, pulmonary, and metabolic diseases and other clinical populations.**
II.G.1.a	Knowledge of ACSM risk stratification and exercise prescription guidelines for participants with cardiovascular, pulmonary, and metabolic diseases and other clinical populations.
II.G.1.b	Knowledge of ACSM relative and absolute contraindications for initiating exercise sessions or exercise testing, and indications for terminating exercise sessions and exercise testing.
II.G.1.c	Knowledge of physiology and pathophysiology of cardiac disease, arthritis, diabetes mellitus, dyslipidemia, hypertension, metabolic syndrome, musculoskeletal injuries, overweight and obesity, osteoporosis, peripheral artery disease, and pulmonary disease.
II.G.1.d	Knowledge of the effects of diet and exercise on blood glucose levels in diabetics.
II.G.1.e	Knowledge of the recommended FITT principle for the development of cardiorespiratory fitness, muscular fitness and flexibility for participants with cardiac disease, arthritis, diabetes mellitus, dyslipidemia, hypertension, metabolic syndrome, musculoskeletal injuries, overweight and obesity, osteoporosis, peripheral artery disease, and pulmonary disease.
II.G.2.a	Skill in progressing exercise programs, according to the FITT principle, in a safe and effective manner.
II.G.2.b	Skill in modifying the exercise prescription and/or exercise choice for individuals with cardiac disease, arthritis, diabetes mellitus, dyslipidemia, hypertension, metabolic syndrome, musculoskeletal injuries, overweight and obesity, osteoporosis, peripheral artery disease, and pulmonary disease.
II.G.2.c	Skill in identifying improper exercise techniques and modifying exercise programs for participants with low back, neck, shoulder, elbow, wrist, hip, knee and/or ankle pain.
	Domain II: Exercise Prescription and Implementation **H. Prescribe and implement exercise programs for healthy special populations (i.e., older adults, youth, and pregnant women).**
II.H.1.a	Knowledge of normal maturational changes, from childhood to old age, and their effects on the skeletal muscle, bone, reaction time, coordination, posture, heat and cold tolerance, maximal oxygen consumption, strength, flexibility, body composition, resting and maximal heart rate, and resting and maximal blood pressure.
II.H.1.b	Knowledge of techniques for the modification of cardiovascular, flexibility, and resistance exercises based on age, functional capacity and physical condition.

II.H.1.c	Knowledge of techniques for the development of exercise prescriptions for children, adolescents and older adults with regard to strength, functional capacity, and motor skills.
II.H.1.d	Knowledge of the unique adaptations to exercise training in children, adolescents, and older participants with regard to strength, functional capacity, and motor skills.
II.H.1.e	Knowledge of the benefits and precautions associated with exercise training across the lifespan.
II.H.1.f	Knowledge of the recommended FITT framework for the development of cardiorespiratory fitness, muscular fitness and flexibility in apparently healthy children and adolescents.
II.H.1.g	Knowledge of the effects of the aging process on the musculoskeletal and cardiovascular structures and functions during rest, exercise, and recovery.
II.H.1.h	Knowledge of the recommended FITT framework necessary for the development of cardiorespiratory fitness, muscular fitness, balance, and flexibility in apparently healthy, older adults.
II.H.1.i	Knowledge of common orthopedic and cardiovascular exercise considerations for older adults.
II.H.1.j	Knowledge of the relationship between regular physical activity and the successful performance of activities of daily living (ADLs) for older adults.
II.H.1.k	Knowledge of the recommended frequency, intensity, type, and duration of physical activity necessary for the development of cardiorespiratory fitness, muscular fitness and flexibility in apparently healthy pregnant women.
II.H.2.a	Skill in teaching and demonstrating appropriate exercises for healthy populations with special considerations.
II.H.2.b	Skill in modifying exercises based on age, physical condition, and current health status.
	Domain II: Exercise Prescription and Implementation **I. Modify exercise prescriptions based on environmental conditions.**
II.I.1.a	Knowledge of the effects of a hot, cold, or high altitude environment on the physiologic response to exercise.
II.I.1.b	Knowledge of special precautions and program modifications for exercise in a hot, cold, or high altitude environment.
II.I.1.c	Knowledge of the role of acclimatization when exercising in a hot or high altitude environment.
II.I.1.d	Knowledge of appropriate fluid intake during exercise in a hot, humid environments as well as cold, and altitude.
	Domain III: Exercise Counseling and Behavioral Strategies **A. Optimize adoption and adherence to exercise programs and other healthy behaviors by applying effective communication techniques.**
III.A.1.a	Knowledge of the effective and timely uses of communication modes (e.g., email, telephone, web site, newsletters).
III.A.1.b	Knowledge of verbal and non-verbal behaviors that communicate positive reinforcement and encouragement (e.g., eye contact, targeted praise, empathy).
III.A.1.c	Knowledge of group leadership techniques for working with participants of all ages.
III.A.1.d	Knowledge of active listening techniques.
III.A.1.e	Knowledge of learning modes (auditory, visual, kinesthetic).
III.A.1.f	Knowledge of types of feedback (e.g., evaluative, supportive, descriptive).
III.A.2.a	Skill in using active listening techniques.
III.A.2.b	Skill in applying teaching and training techniques to optimize participant training sessions.

III.A.2.c	Skill in using feedback to optimize participant training sessions.
III.A.2.d	Skill in applying verbal and non-verbal communications with diverse participant populations.
	Domain III: Exercise Counseling and Behavioral Strategies **B. Optimize adoption of and adherence to exercise programs and other healthy behaviors by applying effective behavioral and motivational strategies.**
III.B.1.a	Knowledge of behavior change models and theories (e.g., health belief model, theory of planned behavior, socio-ecological model, transtheoretical model, social cognitive theory, and cognitive evaluation theory).
III.B.1.b	Knowledge of the basic principles involved in Motivational Interviewing.
III.B.1.c	Knowledge of intervention strategies and stress management techniques.
III.B.1.d	Knowledge of the stages of motivational readiness (e.g., Transtheoretical model).
III.B.1.e	Knowledge of behavioral strategies for enhancing exercise and health behavior change (e.g., reinforcement, S.M.A.R.T. goal setting, social support).
III.B.1.f	Knowledge of behavior modification terminology including, but not limited to, self-esteem, self-efficacy, antecedents, cues to action, behavioral beliefs, behavioral intentions, and reinforcing factors.
III.B.1.g	Knowledge of behavioral strategies (e.g., exercise, diet, behavioral modification strategies) for weight management.
III.B.1.h	Knowledge of the role that affect, mood and emotion play in exercise adherence.
III.B.1.i	Knowledge of common barriers to exercise initiation and compliance (e.g., time management, injury, fear, lack of knowledge, weather).
III.B.1.j	Knowledge of techniques that facilitate motivation (e.g., goal setting, incentive programs, achievement recognition, social support).
III.B.1.k	Knowledge of the role extrinsic and intrinsic motivation plays in the adoption and maintenance of behavior change.
III.B.1.l	Knowledge of relapse prevention strategies and plans of action.
III.B.1.m	Knowledge of applying health coaching principles and lifestyle management techniques related to behavior change.
III.B.1.n	Knowledge of strategies that increase non-structured physical activity levels (e.g., stair walking, parking farther away, bike to work).
III.B.2.a	Skill in explaining the purpose and value of understanding perceived exertion.
III.B.2.b	Skill in using imagery as a motivational tool.
III.B.2.c	Skill in evaluating behavioral readiness to optimize exercise adherence.
III.B.2.d	Skill in applying the theories related to behavior change to diverse populations.
III.B.2.e	Skill in developing intervention strategies to increase self-efficacy and self-confidence.
III.B.2.f	Skill in developing reward systems that support and maintain program adherence.
III.B.2.g	Skill in setting effective behavioral goals.
	Domain III: Exercise Counseling and Behavioral Strategies **C. Provide educational resources to support clients in the adoption and maintenance of healthy lifestyle behaviors.**
III.C.1.a	Knowledge of the relationship between physical inactivity and common chronic diseases (e.g., Atherosclerosis, type II diabetes, obesity, dyslipidemia, arthritis, low back pain, hypertension).
III.C.1.b	Knowledge of the dynamic inter-relationship between fitness level, body composition, stress and overall health.

III.C.1.c	Knowledge of modifications necessary to promote healthy lifestyle behaviors for diverse populations.
III.C.1.d	Knowledge of stress management techniques and relaxation techniques (e.g., progressive relaxation, guided imagery, massage therapy).
III.C.1.e	Knowledge of the activities of daily living (ADLs) and how they relate to overall health.
III.C.1.f	Knowledge in accessing and disseminating scientifically-based, relevant health, exercise, nutrition, and wellness-related resources and information.
III.C.1.g	Knowledge of specific, age-appropriate leadership techniques and educational methods to increase client engagement.
III.C.1.h	Knowledge of community-based exercise programs that provide social support and structured activities (e.g., walking clubs, intramural sports, golf leagues, cycling clubs).
III.C.2.a	Skill in accessing and delivering health, exercise, and wellness-related information.
III.C.2.b	Skill in educating clients about benefits and risks of exercise and the risks of sedentary behavior.
	Domain III: Exercise Counseling and Behavioral Strategies **D. Provide support within the scope of practice of a Health Fitness Specialist and refer to other health professionals as indicated.**
III.D.1.a	Knowledge of the side effects of common over-the-counter and prescription drugs that may impact a client's ability to exercise.
III.D.1.b	Knowledge of signs and symptoms of mental health states (e.g., anxiety, depression, eating disorders) that may necessitate referral to a medical or mental health professional.
III.D.1.c	Knowledge of symptoms and causal factors of test anxiety (i.e., performance, appraisal threat during exercise testing) and how they may affect physiological responses to testing.
III.D.1.d	Knowledge of client needs and learning styles that my impact exercise sessions and exercise testing procedures.
III.D.1.e	Knowledge of conflict resolution techniques that facilitate communication among exercise cohorts.
III.D.2.a	Skill in communicating the need for medical, nutritional, or mental health intervention.
	Domain IV: Legal/Professional **A. Create and disseminate risk management guidelines for a health/fitness facility, department or organization to reduce member, employee and business risk.**
IV.A.1.a	Knowledge of employee criminal background checks, child abuse clearances and drug and alcohol screenings.
IV.A.1.b	Knowledge of employment verification requirements mandated by state and federal laws.
IV.A.1.c	Knowledge of safe handling and disposal of body fluids and employee safety (OSHA guidelines).
IV.A.1.d	Knowledge of insurance coverage common to the health/fitness industry including general liability, professional liability, workers' compensation, property, and business interruption.
IV.A.1.e	Knowledge of sexual harassment policies and procedures.
IV.A.1.f	Knowledge of interviewing techniques.
IV.A.1.g	Knowledge of basic precautions taken in an exercise setting to ensure participant safety.
IV.A.1.h	Knowledge of pre-activity screening, medical release and waiver of liability for normal and at-risk participants.
IV.A.1.i	Knowledge of emergency response systems and procedures (EAP).
IV.A.1.j	Knowledge of the use of signage.

IV.A.1.k	Knowledge of preventive maintenance schedules and audit
IV.A.1.l	Knowledge of techniques and methods of evaluating the condition of exercise equipment to reduce the potential risk of injury.
IV.A.1.m	Knowledge of the legal implications of documented safety procedures, the use of incident documents, and ongoing safety training documentation for the purpose of safety and risk management
IV.A.1.n	Knowledge of documentation procedures for CPR and AED certification for employees.
IV.A.1.o	Knowledge of AED guidelines for implementation.
IV.A.1.p	Knowledge of the components of the ACSM Code of Ethics and the ACSM Certified Health Fitness Specialist scope of practice.
IV.A.2.a	Skill in developing and disseminating a policy and procedures manual.
IV.A.2.b	Skill in developing and implementing confidentiality policies.
IV.A.2.c	Skill in maintenance of a safe exercise environment (e.g., equipment operation, proper sanitation, safety and maintenance of exercise areas, and overall facility maintenance).
IV.A.2.d	Skill in the organization, communication, and human resource management required to implement risk management policies and procedures.
IV.A.2.e	Skill in training employees to identify high risk situations.
	Domain IV: Legal/Professional **B. Create an effective injury prevention program and ensure that emergency policies and procedures are in place.**
IV.B.1.a	Knowledge of emergency procedures (i.e., telephone procedures, written emergency procedures (EAP), personnel responsibilities) in a health and fitness setting
IV.B.1.b	Knowledge of basic first-aid procedures for exercise-related injuries, such as bleeding, strains/sprains, fractures, and exercise intolerance (dizziness, syncope, heat and cold injuries).
IV.B.1.c	Knowledge of the Health Fitness Specialist's responsibilities and limitations, and the legal implications of carrying out emergency procedures.
IV.B.1.d	Knowledge of safety plans, emergency procedures and first-aid techniques needed during fitness evaluations, exercise testing, and exercise training
IV.B.1.e	Knowledge of potential musculoskeletal injuries (e.g., contusions, sprains, strains, fractures), cardiovascular/pulmonary complications (e.g., tachycardia, bradycardia, hypotension/hypertension, dyspnea) and metabolic abnormalities (e.g., fainting/syncope, hypoglycemia/hyperglycemia, hypothermia/hyperthermia).
IV.B.1.f	Knowledge of the initial management and first-aid techniques associated with open wounds, musculoskeletal injuries, cardiovascular/pulmonary complications, and metabolic disorders.
IV.B.1.g	Knowledge of emergency documentation and appropriate document utilization.
IV.B.2.a	Skill in applying basic first-aid procedures for exercise-related injuries, such as bleeding, strains/sprains, fractures, and exercise intolerance (dizziness, syncope, heat and cold injuries).
IV.B.2.b	Skill in applying basic life support, first aid, cardiopulmonary resuscitation, and automated external defibrillator techniques.
IV.B.2.c	Skill in designing an evacuation plan.
IV.B.2.d	Skill in demonstrating emergency procedures during exercise testing and/or training.

	Domain V: Management **A. Manage human resources in accordance with leadership, organization, and management techniques.**
V.A.1.a	Knowledge of industry benchmark compensation and employee benefit guidelines.
V.A.1.b	Knowledge of federal, state and local laws pertaining to staff qualifications and credentialing requirements.
V.A.1.c	Knowledge of techniques for tracking and evaluating member retention.
V.A.2.a	Skill in applying policies, practices and guidelines to efficiently hire, train, supervise, schedule and evaluate employees.
V.A.2.b	Skill in applying conflict resolution techniques.
	Domain V: Management **B. Manage fiscal resources in accordance with leadership, organization, and management techniques.**
V.B.1.a	Knowledge of fiduciary roles and responsibilities inherent in managing an exercise and health promotion program.
V.B.1.b	Knowledge of principles of financial planning and goal setting, institutional budgeting processes, forecasting, and allocation of resources.
V.B.1.c	Knowledge of basic software systems that facilitate accounting (e.g., Excel).
V.B.1.d	Knowledge of industry benchmarks for budgeting and finance.
V.B.1.e	Knowledge of basic sales techniques that promote health, fitness, and wellness services.
V.B.2.a	Skill in efficiently managing financial resources and performing related tasks (e.g., planning, budgeting, resource allocation, revenue generation).
V.B.2.b	Skill in administering fitness- and wellness-related programs within established budgetary guidelines.
	Domain V: Management **C. Establish policies and procedures for the management of health fitness facilities based on accepted safety and legal guidelines, standards and regulations.**
V.C.1.a	Knowledge of accepted guidelines, standards, and regulations used to establish policies and procedures for the management of health fitness facilities.
V.C.1.b	Knowledge of facility design and operation principles.
V.C.1.c	Knowledge of facility and equipment maintenance guidelines.
V.C.1.d	Knowledge of documentation techniques for health fitness facility management.
V.C.1.e	Knowledge of federal, state, and local laws as they relate to health fitness facility management.
	Domain V: Management **D. Develop and execute a marketing plan to promote programs, services and facilities.**
V.D.1.a	Knowledge of lead generation techniques.
V.D.1.b	Knowledge of the four Ps of marketing: product, price, placement, and promotion.
V.D.1.c	Knowledge of public relations, community awareness, and sponsorship and their relationship to branding initiatives.
V.D.1.d	Knowledge of advertising techniques.
V.D.1.e	Knowledge of target market (internal) assessment techniques.
V.D.1.f	Knowledge of target market (external) assessment techniques.
V.D.2.a	Skill in applying marketing techniques that promote client retention.
V.D.2.b	Skill in applying marketing techniques that attract new clients.

V.D.2.c	Skill in designing and writing promotional materials
V.D.2.d	Skill in collaborating with community and governmental agencies and organizations.
V.D.2.e	Skill in providing customer service.
	Domain V: Management **E. Use effective communication techniques to develop professional relationships with other allied health professionals (e.g., nutritionists, physical therapists, physicians, nurses).**
V.E.1.a	Knowledge of communication styles and techniques.
V.E.1.b	Knowledge of networking techniques.
V.E.2.a	Skill in planning meetings.