NSCA Certification Handbook

About this Handbook
This handbook was developed to provide certification candidates and certificants with the information needed to earn and maintain certification through the NSCA. Certification candidates and certificants are expected to become familiar with and abide by the certification policies and requirements as set forth in this handbook. The procedures and instructions in this handbook are primarily intended for English-speaking certification candidates and certificants. Non-English speaking certification candidates and certificants outside of the U.S. should review the information in the International Candidates section.
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INTRODUCTION

About the Association

The National Strength and Conditioning Association (NSCA) was founded in 1978 as the National Strength Coaches Association by a group of strength coaches who shared a desire to network, collaborate, and unify the profession. In 1979, NSCA was incorporated as a nonprofit 501(c)(3) charitable and educational organization. NSCA established the CSCS Agency in 1985, later known as NSCA Certification Commission, to develop and administer a certification program for strength and conditioning professionals. In 2008, NSCA Certification Commission responsibilities were integrated into NSCA under the direction of the Certification Committee. Today, NSCA has a membership of approximately 28,000 exercise professionals and approximately 40,000 individuals actively certified through one of four certification programs.

NSCA is widely regarded as the worldwide authority on strength and conditioning. NSCA’s mission is to support and disseminate research-based knowledge and its practical application to improve athletic performance and fitness. NSCA publishes two of the world’s premier journals in strength and conditioning: Strength and Conditioning Journal (SCJ), Journal of Strength and Conditioning Research (JSCR). These and other NSCA publications link what is being learned in the sport science research laboratories to what is being taught by fitness professionals, thereby bridging the gap between theory and practice.

Certifications Offered

• **Certified Strength and Conditioning Specialist® (CSCS®).** The CSCS program was created in 1985 to recognize individuals who possess the knowledge and skills to design and implement safe and effective strength and conditioning programs for athletes in a team setting. Certified Strength and Conditioning Specialists (CSCSs) are professionals who apply scientific knowledge to train athletes for the primary goal of improving athletic performance. They conduct sport-specific testing sessions, design and implement safe and effective strength training and conditioning programs and provide guidance regarding nutrition and injury prevention. Recognizing that their area of expertise is separate and distinct, CSCSs consult with and refer athletes to other professionals when appropriate.

• **NSCA-Certified Personal Trainer® (NSCA-CPT®).** As the fitness industry continued to grow, NSCA saw a need for a prestigious and credible personal training certification, and established the NSCA-CPT® program in 1993. NSCA-Certified Personal Trainers (NSCA-CPTs) are health/fitness professionals who, using an individualized approach, assess, motivate, educate and train clients regarding their health and fitness needs. Certified personal trainers design safe and effective exercise programs, provide the guidance to help clients achieve their personal health/fitness goals and respond appropriately in emergency situations. Recognizing their own area of expertise, personal trainers refer clients to other healthcare professionals when appropriate.

• **Certified Special Population Specialist® (CSPS®).** The CSPS program was created in 2012. Certified Special Population Specialists (CSPSs) are fitness professionals who, using an individualized approach, assess, motivate, educate, and train special population clients of all ages regarding their health and fitness needs, preventively, and in collaboration with healthcare professionals. Special populations include those with chronic and temporary health conditions. CSPSs design safe and effective exercise programs, provide the guidance to help clients achieve their personal health/fitness goals, and recognize and respond to emergency situations. Recognizing their own areas of expertise, CSPSs receive referrals from and refer clients to other healthcare providers as appropriate.

• **Tactical Strength and Conditioning Facilitator® (TSAC-F®).** Tactical Strength and Conditioning Facilitators (TSAC-Fs) apply scientific knowledge to physically train military, fire and rescue, law enforcement, protective services, and other emergency personnel to improve performance, promote wellness, and decrease injury risk. They conduct needs analyses and physical testing sessions, design and implement safe and effective strength training and conditioning programs, and provide general information regarding nutrition. Recognizing their area of expertise is separate and distinct, TSAC-Fs consult with and refer those they train to other professionals when appropriate.

Accreditation of NSCA Certifications

NSCA strongly believes in adhering to industry best practices and established accreditation standards in the administration of its certification programs. Both the CSCS and NSCA-CPT certification programs have earned accreditation by the National
Commission for Certifying Agencies (NCCA). CSCS earned NCCA accreditation in 1993, and was the first nationally accredited strength training and conditioning certification program. In 1996, the NSCA-CPT became the first certified personal trainer program accredited by NCCA. Through the accreditation process, NSCA has demonstrated that the CSCS and NSCA-CPT programs meet or exceed NCCA Standards. NSCA is currently in the process of earning NCCA accreditation for the newly created CSPS and TSAC-F programs. For more information about NCCA accreditation please visit: www.credentialingexcellence.org/NCCA.
15 non-scored multiple-choice questions pertaining to program design, exercise techniques, testing and evaluation and organization/administration. There are 30-40 video and/or image items that assess competencies in exercise techniques, functional anatomy, and testing procedures. The full DCO is presented in Appendix H.

<table>
<thead>
<tr>
<th>Section and Domain</th>
<th>Percent of Exam Section</th>
<th>Number of Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exercise Technique</td>
<td>35%</td>
<td>38</td>
</tr>
<tr>
<td>Program Design</td>
<td>35%</td>
<td>39</td>
</tr>
<tr>
<td>Organization and Administration</td>
<td>12%</td>
<td>13</td>
</tr>
<tr>
<td>Testing and Evaluation</td>
<td>18%</td>
<td>20</td>
</tr>
<tr>
<td>Non-scored Questions</td>
<td>-</td>
<td>15</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
<td><strong>125</strong></td>
</tr>
<tr>
<td><strong>Length of Exam Section</strong></td>
<td></td>
<td><strong>2.5 hours</strong></td>
</tr>
</tbody>
</table>

NSCA-CPT
NSCA-CPT is a 3-hour examination that consists of 140 scored and 15 non-scored multiple-choice items. There are 25-35 video and/or image items that assess competencies in exercise techniques, functional anatomy, and testing procedures. The four (4) domains are as follows:

1. Client Consultation/Fitness Assessment Section
2. Program Planning Section
3. Exercise Techniques Section
4. Safety/Emergency Issues Section

The full DCO is presented in Appendix I.

<table>
<thead>
<tr>
<th>Domain</th>
<th>Percent of Exam Section</th>
<th>Number of Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Client Consultation/Assessment</td>
<td>25%</td>
<td>35</td>
</tr>
<tr>
<td>Program Planning</td>
<td>31%</td>
<td>43</td>
</tr>
<tr>
<td>Techniques of Exercise</td>
<td>31%</td>
<td>43</td>
</tr>
<tr>
<td>Safety, Emergency Procedures and Legal Issues</td>
<td>13%</td>
<td>19</td>
</tr>
<tr>
<td>Non-Scored Questions</td>
<td>-</td>
<td>15</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
<td><strong>155</strong></td>
</tr>
<tr>
<td><strong>Length of Exam</strong></td>
<td></td>
<td><strong>3 hours</strong></td>
</tr>
</tbody>
</table>

CSPS
CSPS is 2.5-hour examination consists of 100 scored and 10 non-scored multiple-choice items allocated across four (4) domains:

1. Basic Pathophysiology and Science of Health Status, Condition, Disorder, or Disease
2. Client Consultation
3. Program Planning
4. Safety, Emergency Procedures and Legal Issues

The full DCO is presented in Appendix J.

<table>
<thead>
<tr>
<th>Domain</th>
<th>Percent of Exam Section</th>
<th>Number of Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic Pathophysiology and Science of Health Status, Condition, Disorder, or Disease</td>
<td>40%</td>
<td>40</td>
</tr>
<tr>
<td>Client Consultation</td>
<td>19%</td>
<td>19</td>
</tr>
<tr>
<td>Program Planning</td>
<td>31%</td>
<td>31</td>
</tr>
<tr>
<td>Safety, Emergency Procedures and Legal Issues</td>
<td>10%</td>
<td>10</td>
</tr>
<tr>
<td>Non-Scored Questions</td>
<td>-</td>
<td>10</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
<td><strong>110</strong></td>
</tr>
<tr>
<td><strong>Length of Exam</strong></td>
<td></td>
<td><strong>2.5 hours</strong></td>
</tr>
</tbody>
</table>

TSAC-F
TSAC-F is a 3-hour examination that consists of 130 scored and 20 non-scored multiple-choice items allocated across five (5) domains:

1. Exercise Sciences
2. Nutrition
3. Exercise Technique
4. Program Design
5. Organization, Administration, Testing, Evaluation

The full DCO is presented in Appendix K.
<table>
<thead>
<tr>
<th>Domain</th>
<th>Percent of Exam</th>
<th>Number of Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exercise Sciences</td>
<td>20%</td>
<td>26</td>
</tr>
<tr>
<td>Nutrition</td>
<td>10%</td>
<td>13</td>
</tr>
<tr>
<td>Exercise Technique</td>
<td>20%</td>
<td>26</td>
</tr>
<tr>
<td>Program Design</td>
<td>35%</td>
<td>46</td>
</tr>
<tr>
<td>Organization, Administration, Testing, Evaluation</td>
<td>15%</td>
<td>19</td>
</tr>
<tr>
<td>Non-scored Questions</td>
<td>-</td>
<td>20</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
<td><strong>150</strong></td>
</tr>
<tr>
<td><strong>Length of Exam</strong></td>
<td></td>
<td><strong>3 hours</strong></td>
</tr>
</tbody>
</table>
Exam Preparation

NSCA offers several optional resources to help candidates prepare. These resources can be combined into a preparation plan that is tailored to the specific needs of a candidate based on their academic background and practical experience. For specific details regarding the following preparation resources, including pricing and availability, please visit NSCA.com.

- **Exam Prep Live Clinics** – NSCA Live clinics are taught by qualified and experienced professionals and are provided at various locations throughout the year. They range from 1.5 to 3 days in length and include an emphasis on exercise science, hands-on practical knowledge, or both, depending on the clinic.

- **ERP School Programs** – The Education Recognition Program (ERP) identifies college and university degree granting programs that meet NSCA standards for strength and conditioning professionals and personal trainers. ERP schools assist prospective students by aligning course content with material covered in NSCA certification exams.

- **Mentorships** – NSCA created the Mentor Board as a platform to connect the next generation of coaches and trainers with experienced NSCA members. The Mentor Board provides a unique opportunity to engage with and learn from the best.

- **Books** – Textbooks or materials with collections of important articles are available to provide a foundational academic resource to students and candidates preparing on their own.

- **Content Description Booklets** – Provide expanded topic questions and examples beyond the content description provided in the Certification Handbook.

- **Practice Questions** – Practice questions help candidates become familiar with the type, scope, and difficulty of the questions that appear on NSCA certification exams.

### Example Preparation Plan Options

<table>
<thead>
<tr>
<th>Option A</th>
<th>Option B</th>
<th>Option C</th>
<th>Option D</th>
<th>Option E</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓ Exam Prep Live Clinic</td>
<td>✓ Mentorship</td>
<td>✓ Individual Study</td>
<td>✓ Individual Study</td>
<td>✓ ERP School Degree Program</td>
</tr>
<tr>
<td>✓ Practice Questions</td>
<td>✓ Exam Prep Live Clinic</td>
<td>✓ Exam Prep Live Clinic</td>
<td>✓ Mentorship</td>
<td>✓ Exam Prep Live Clinic</td>
</tr>
<tr>
<td>✓ Practice Questions</td>
<td>✓ Practice Questions</td>
<td>✓ Practice Questions</td>
<td>✓ Exam Prep Live Clinic</td>
<td>✓ Practice Questions</td>
</tr>
</tbody>
</table>

### Plans Recommended by Background

<table>
<thead>
<tr>
<th>Exercise Science Related Degree*</th>
<th>Internship or Practical Experience</th>
<th>Recommended Preparation Plan</th>
<th>Approximate Length of Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>Yes</td>
<td>A</td>
<td>2 to 6 weeks</td>
</tr>
<tr>
<td>Yes</td>
<td>No</td>
<td>A or B</td>
<td>3 to 6 months</td>
</tr>
<tr>
<td>No</td>
<td>Yes</td>
<td>C or D</td>
<td>4 to 6 months</td>
</tr>
<tr>
<td>No</td>
<td>No</td>
<td>D or E</td>
<td>&gt; 6 months**</td>
</tr>
</tbody>
</table>

*Certain NSCA certifications require a college degree.

**Length of degree programs vary.
CERTIFICATION ELIGIBILITY
CERTIFICATION ELIGIBILITY
To qualify for an NSCA certification, candidates must meet all of the eligibility requirements for the certification program. NSCA’s four certification programs have different eligibility requirements. Additionally, all candidates and certificants must abide by the NSCA Code of Ethics for Certified Individuals (Appendix F).

Eligibility Requirements

CSCS
1. Bachelor’s degree or higher granted by an accredited institution, or terminal degree in Physical Therapy or Chiropractic Medicine
2. CPR/AED certification
3. Passing score on the CSCS Scientific Foundations Exam
4. Passing score on the CSCS Practical/Applied Exam

NSCA-CPT
1. At least 18 years old
2. High school diploma (or equivalent)
3. CPR/AED certification
4. Passing score on the NSCA-CPT Exam

CSPS
1. Current NSCA certification (e.g., NSCA-CPT, CSCS, etc.) or NCCA-accredited personal trainer certification
   OR
2. Bachelor’s degree or higher granted by an accredited institution in Exercise Science (or a related field, e.g. physical therapy, chiropractic medicine)
   OR
3. Current license as a physical therapist, physical therapist assistant, athletic trainer, or registered dietician
   AND
4. CPR/AED certification
5. Practical experience coaching/training individuals from special populations (250 hours)
6. Passing score on the CSPS Exam

TSAC-F
1. At least 18 years of age
2. High school diploma, or equivalent
3. CPR/AED certification
4. Passing score on the TSAC-F Exam

Candidates must meet the age requirement, if applicable, prior to registering for a certification exam. Other requirements must be met within one year of receiving a passing exam score. For example, CSCS and CSPS candidates who have senior standing may sit for the exams.

Acceptable Accreditation of Colleges and Universities
Only degrees granted by accredited colleges and universities can be used to satisfy the degree requirements for the CSCS and CSPS programs. NSCA recognizes the following accrediting institutions for U.S. colleges and universities: Middle State Association, New England Association, North Central Association, Northwest Commission on Colleges and Universities, Southern Association, and Western Association. Colleges and universities outside the U.S. must be recognized by the Ministry of Education of the country in which the institution is located.

Exercise Science-Related Fields
NSCA recognizes the following fields of study as relating to exercise science for the purpose of fulfilling the degree requirement for CSPS: Athletic Training, Biology, Biomechanics, Chiropractic, Community Health, Exercise Physiology, Exercise Science, Health Science, Human Movement Science, Kinesiology, Medicine (e.g., MD, DO), Nursing, Nutrition, Physical Education, Physical Therapy, and Sport Science.

Acceptable CPR/AED Certifications
CPR/AED certification ensures that professionals are able to recognize and respond to cardiopulmonary emergencies in adults, including in the application of CPR and the use of Automated External Defibrillators (AEDs). Acceptable CPR/AED certifications must include a hands-on skills performance assessment.

Discipline Policy and Certification Appeals
The NSCA Certification Program Disciplinary Policy and Procedures (Appendix G) were established as a means to enforce the Code of Ethics (Appendix F), thereby protecting the public and integrity of NSCA certification programs.
Consistent with the obligation of candidates and certificants in regards to Principle 13 of the Code of Ethics, the Disciplinary Policy and Procedures provide a formal process for submitting complaints of unethical behavior to NSCA for consideration and investigation.

Any action taken by the NSCA Certification Committee affecting the status of a certified individual may be appealed. Appeals must be in writing and received within 90 days after receipt of such notice.
EXAM REGISTRATION PROCESS
EXAM REGISTRATION PROCESS
Exam registration is a simple four-step process: (1) review the exam descriptions and eligibility requirements; (2) select a certification of best fit; (3) register online; and (4) submit eligibility verification documents. The exam registration process is not considered complete until all steps are met.

Completing the Registration Form
Candidates are encouraged to apply online for NSCA certification exams at www.nsca.com. A paper application is available for individuals without Internet access, but must be requested in writing. Candidates will receive a confirmation email which will include their assigned customer ID number. Candidates are notified by email once their registration forms have been processed, typically within two (2) business days.

1. Navigate to www.nsca.com
2. Log in using your NSCA username and password, or create a new account
3. Click on “Certification” on the top navigation bar
4. Click on the “Register” link underneath the desired certification
5. Verify profile information (name must match the primary and secondary forms of ID)
6. Follow on-screen prompts
7. Select “exam type”
8. Affirm eligibility requirements
9. Request special accommodations (if applicable)
10. Affirm reading/understanding the Administrative Policies
11. Download the Certification Handbook
12. Proceed to checkout
13. Submit eligibility verification documentation to NSCA (see Eligibility Documentation)

Affirmation
NSCA exam candidates are required to complete and submit an affirmation on the registration form. Affirmations include, but are not limited to, the following:

- Submitted registration information found to be false will result in a revoked certification
- NSCA exam items, certification names, acronyms, and logos are protected under U.S. copyright law
- Those who copy and/or distribute proprietary NSCA information will forfeit their registration fees and have their certification(s) revoked
- Certificants must comply with recertification policies to retain a certification(s)
- Certificants read and understand the Certification Policies contained in this Handbook

The complete Affirmation can be found in Appendix E.

Special Accommodations
NSCA complies with the Americans with Disabilities Act. To ensure equal opportunities for all qualified candidates, NSCA will make reasonable testing accommodations when appropriate. Candidates with a documented disability that significantly impairs his or her ability to arrive at, read, or otherwise complete an NSCA certification exam, may request special accommodations. Requests for special accommodations must be made at the time of registration. Candidates must submit required supporting documentation using the Special Accommodations Form available in Appendix B.

NOTE: Candidates with approved testing accommodations must call Pearson VUE at (800) 466-0450 to schedule an exam appointment. Candidates who schedule appointments through any other means (e.g. online, via a different number) will not have their accommodations available at the appointment.

Eligibility Documentation
Candidates have one (1) year to submit documentation demonstrating completion of all eligibility criteria. Exam results become invalid if acceptable eligibility documentation is not received within one (1) year of exam date.

It is recommended that all mailed documentation be sent in a form that is traceable (e.g., certified USPS, UPS, FedEx). Candidates should retain the tracking information...
in case a proof of mailing or receipt is needed. Any and all documentation sent to NSCA will not be returned.

NSCA Certification
1885 Bob Johnson Drive
Colorado Springs, CO 80906
USA

Academic Transcripts (CSCS and CSPS only)

CSCS
Candidates must submit an original, official transcript from their college/university when taking the CSCS exam for the first time. Official transcripts are required to be sent directly from the registrar’s office. Transcripts must confirm that the degree was conferred. Transcripts must be in an envelope with the registrar’s stamp placed across the envelope flap. Transcripts will not be returned. If candidates mail the transcript, the registrar’s seal must remain intact. NSCA accepts official electronic transcripts (e-transcripts) that are transferred using a secure document transfer program (e.g., escrip-safe, eDocs). The documents should be sent to exams@nsca.com.

Transcripts with the following are not acceptable:
- Student copy marked “student copy,” “issued to student,” or other similar language
- Photocopy
- Letter of degree status/verification
- Fax of the transcript

CSPS
Candidates must submit original documentation showing attainment of an appropriate personal trainer certification, academic degree, or professional license when taking the CSPS exam for the first time. Official academic transcripts are required to be sent directly from the registrar’s office. Transcripts must confirm that the degree was conferred. Transcripts must be in an envelope with the registrar’s stamp placed across the envelope flap. Documentation will not be returned. If candidates mail the transcript, the registrar’s seal must remain intact. NSCA accepts official electronic transcripts (e-transcripts) that are transferred using a secure document transfer program (e.g., escrip-safe, eDocs). The documents should be sent to exams@nsca.com. Candidates may provide certification and licensure documentation directly to NSCA.

CPR/AED Certifications
Scanned, photocopied, and fax copies of the CPR/AED certifications are acceptable. Front and back copies of the document are required.

Mail: NSCA Certification
1885 Bob Johnson Drive
Colorado Springs, CO 80906
USA
Email: exams@nsca.com
Fax: 719-632-6367

Practical Experience (CSPS only)
A Practical Experience Form must be completed and submitted as part of the CSPS application process. The form can be found in Appendix C. Practical Experience Forms are subject to a random audit within one (1) year of registration.

Exam Fees

<table>
<thead>
<tr>
<th>Credential</th>
<th>Attempt</th>
<th>NSCA Student and Professional Members</th>
<th>Non-Members</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSCS</td>
<td>Initial or Retake (Both Exams)</td>
<td>$340</td>
<td>$475</td>
</tr>
<tr>
<td></td>
<td>Retake One Exam</td>
<td>$250</td>
<td>$385</td>
</tr>
<tr>
<td>NSCA-CPT</td>
<td>Initial or Retake</td>
<td>$300</td>
<td>$435</td>
</tr>
<tr>
<td>CSPS</td>
<td>Initial or Retake</td>
<td>$340</td>
<td>$475</td>
</tr>
<tr>
<td>TSAC-F</td>
<td>Initial or Retake</td>
<td>$300</td>
<td>$435</td>
</tr>
</tbody>
</table>
Scheduling an Appointment
Exams are administered on computers year-round at Pearson VUE test centers worldwide. Candidates schedule exam appointments directly with Pearson VUE by visiting www.pearsonvue.com/nsca. After successfully registering with NSCA, candidates will receive an email from Pearson VUE within 48 hours. This confirmation notice will contain scheduling instructions.

The following scheduling methods are available:

1. Online: Online registration scheduling at www.pearsonvue.com/nsca.

OR

2. Telephone: Customer service representatives may be reached toll-free at (800) 505-7641 Monday through Friday 7:00 am to 7:00 pm Central Time.

Test Center Locations
Exams are administered on computers at hundreds of locations worldwide. Please note that certain test centers, such as those located on military bases, may not be accessible to the general public. Candidates can view exam appointment availability at www.pearsonvue.com/nsca.

Exam Authorization Period
Candidates have 120 days from the registration date to sit for their exam. Candidates who are unable to take the exam within the 120-day period must withdraw or extend their registration to avoid forfeiting their registration fees.

Candidate and Certificant Contact Information
Name
Candidates must contact NSCA if they have a name change. NSCA may request supporting documentation such as court documents or a marriage certificate. Remember that the name you used to register for an exam must match the name on the valid ID presented at the test center.

Contact Information and Communications
Candidates and certificants are required to keep their contact information (e.g., email address, phone number, primary address) up-to-date with NSCA. This is necessary to ensure that official communications and documents (e.g., certificates, score reports) will be received. Candidates and certificants are encouraged to update necessary information on NSCA.com, but may also contact the NSCA by phone or in writing to request updates to their contact information. Furthermore, candidates and certificants agree that as a condition of certification with NSCA, they allow NSCA to send them communications, including emails, with important information regarding their certification status (e.g., recertification notices, policy updates). This consent to receive communications does not extend to promotional or other emails to which candidates and certificants may opt in or out.

Registration Withdrawal and Refunds
Registered candidates who have not yet tested and do not have a scheduled exam appointment, may withdraw their registration by contacting NSCA toll free at 800-815-6826, internationally at +1-719-632-6722, at least three (3) business days prior to the end of their exam authorization period (120 days). Candidates who successfully withdraw their registration will be provided a 50% refund of their registration fees. No other refunds of registration fees will be granted to candidates.

Cancelling and Rescheduling Exam Appointments
Candidates can cancel and/or reschedule exam appointments within their 120-day authorization period at no charge. However, appointments must be cancelled or rescheduled at least one (1) business day (24 hours) prior to the appointment. Candidates may request an extension of their exam authorization for an additional 120 days. The extension must be requested within the original 120-day authorization period. The extension fee is $100 and is not refundable.

Late Arrival and No-Show
Late Arrival
Candidates who arrive more than 15 minutes after their scheduled appointment time will only be allowed to test at the discretion of the testing center, based on available capacity and other relevant factors. If the test center is unable to accommodate a late-arriving candidate, the candidate will be unable to take the test that day and will be recorded as a “no-show” for their appointment.

No-Shows
Candidates who do not arrive on time to take the exam, and who do not cancel or withdraw their registration, will forfeit the registration fee. Should they wish to take the exam at a later date, they would need to register and pay the registration fee again.
Inclement Weather, Power Failure, or Emergency

In the event of inclement weather or a local or national emergency, candidates should contact Pearson VUE at (800) 505-7641 or go to www.pearsonvue.com to determine if their appointment will be affected. If the test center is closed and appointments are canceled, candidates should wait two (2) business days before calling to reschedule their appointment.

If the test center is open and a candidate is unable to arrive on time for an exam appointment due to inclement weather or an emergency, the candidate must contact NSCA within one (1) business day (24 hrs) to avoid being recorded as a no-show. Candidates may be asked to provide documentation to show that their failure to arrive on time was due to a bona fide emergency.
EXAM DAY
On the day of the exam appointment, candidates are encouraged to arrive at least 15 minutes prior to their appointment. Please review the test center location information in the appointment confirmation email sent by Pearson VUE. Check-in procedures include verifying candidate ID, signature, biometric data, and abiding with the Candidate Rules Agreement (see appendix D).

Candidate ID Requirements
Candidates are required to present one form of original, valid ID that includes his/her name, photograph, and signature; photocopies and/or expired identification are not acceptable. The first and last name used to register must match exactly the first and last name on the ID that is presented on test day. All IDs required must be issued by the country in which the candidate is testing. If candidates do not have the qualifying ID issued from the country they are testing, a passport from a candidate’s country of citizenship is required. Candidates who do not present acceptable ID will receive a no-show result and will forfeit their registration fees.

Examples of acceptable forms of identification are as follows:

• Government issued driver’s license
• State/country identification card
• Passport
• Military identification card
• Alien registration card (e.g., green card, permanent visa)

Security
Test centers utilize security measures, such as video and audio recording, to ensure that all candidates are provided the same opportunity to demonstrate their abilities. All exam questions are the copyrighted property of NSCA. It is forbidden under federal copyright law to copy, reproduce, record, distribute, or display these exam questions by any means, in whole, or in part. Doing so may subject you to severe civil and criminal penalties. Candidates are required to accept a Non-Disclosure Agreement (NDA) before the exam will begin. Candidates who refuse the NDA will not be allowed to test.

Personal Belongings
Personal belongings are not allowed in the testing room, except for the few exceptions noted below. Backpacks, purses, cell phones, recording devices, books, calculators, papers, test materials, documents or memoranda, dictionaries, etc. must be stored in a secure area at the testing center. Pearson VUE and NSCA are not responsible for items left in the testing area.

Items Not Permitted
The following items are NOT allowed in the testing room.

• Electronic devices including
  • Cell phones
  • PDAs
  • Personal calculators
  • Translators
  • Any other electronic devices
• Outerwear (e.g., coats or jackets)
• Hats, barrettes, and clips larger than ¼ inch or hairbands wider than ½ inch
• Wallets, watches or jewelry wider than ¼ inch
• Backpacks, briefcases, purses or other bags
• Notes, books or translating devices
• Pens or pencils
• Food or drinks
• Water bottles, inhalers, eye drops or lip balm
• Weapons of any kind

Permitted Items
Religious apparel is allowed in the testing room.

The following items do not require pre-approval to be allowed in the testing room. They will be allowed in the testing room after visual inspection by the Testing Center staff. Visual inspection will be done by examining the item without directly touching it or the candidate and without asking the candidate to remove the item. The presence of any other items in the testing room, including medical equipment not listed below, must be requested and approved through the accommodations process.
Comfort Aids That Must be Provided by Testing Center:
• Earplugs
• Noise cancelling headphones
• Tissues/Kleenex

Permitted Medicine and Medical Devices:
• Bandages
• Braces including neck, back, wrist, leg or ankle braces
• Casts including slings for broken/sprained arms and other injury-related items that cannot be removed
• Cough drops (must be unwrapped and not in a bottle/container)
• Eye drops
• Eye patches
• Eyeglasses (without case)
• Handheld (non-electronic) magnifying glass (without case)
• Hearing aids/Cochlear implant
• Inhaler
• Medical alert bracelet
• Medical device attached to a person’s body including, but not limited to, insulin pumps/remotes, TENS unit, spinal cord stimulator
• EpiPen
• Medical/surgical face masks
• Oxygen tanks
• Pillows/cushions
• Pills such as Tylenol or aspirin (must be unwrapped and not in a bottle/container)

Candidates may bring pills that are still in the packaging if the packaging states they MUST remain in the packaging, such as nitroglycerin pills that cannot be exposed to air. Packaging must be properly inspected.

Permitted Mobility Devices:
• Canes
• Crutches
• Motorized scooters/chairs
• Walkers
• Wheelchairs

Exam Supplies
Candidates are not allowed to supply their own writing implements, notepads, or paper. Candidates will be provided with an erasable note board and marker to use as scratch paper. The note board and marker must be returned to the test center staff at the end of the exam.

Questions and Comments About Exam Content
Questions concerning exam content may not be asked during the exam. Candidates may provide written comments for any exam item during the exam using the Comment function in the exam delivery software. NSCA reviews all candidate comments as part of ongoing quality assurance procedures.

Breaks
Candidates may take an unscheduled break whenever they wish, however the exam timer will continue to run. The only scheduled break is between sections of the CSCS exam; a 15-minutes break that does not use exam time.

• Candidates are prohibited from accessing cellular phones, exam notes, and study guides during a scheduled or unscheduled break unless an exam sponsor specifically permits.
• During scheduled breaks, candidates may access personal belongings.
• During unscheduled breaks, candidates may access personal belongings only if necessary. For example, if a candidate needs to take medication or eat food at a specific time.
• Additional time for breaks is not provided unless as an approved special accommodation.

Leaving the Exam Early
Candidates must request the test center supervisor’s permission to leave the exam.
Exam Misconduct
Individuals who engage in misconduct at the test center may be dismissed from the exam, prevented from taking or continuing with the exam, and/or may have their scores invalidated. Upon arrival at the test center, candidates will be required to read and affirm that they will abide by the Candidate Rules Agreement (Appendix D). These rules are in addition to NSCA’s Code of Ethics and other affirmations made by candidates as part of the registration process.

Exam Results
Exam results are valid for one (1) calendar year following completion of the exam. Score reports are available immediately following the exam and can later be downloaded from within a candidate’s pearsonvue.com account.

Exam Scoring
The performance standard (passing score) and exam scores are reported as scaled scores. Performance standards for all NSCA certification exams are represented as scaled scores of 70. Scaled scores allow for comparability across different exam forms, which may vary slightly in difficulty. Therefore, a scaled score of 75 obtained in 2013 is equivalent to a scaled score of 75 obtained in 2015, even though the exam forms of those years contained different items. Statistical equating methods are used to ensure the consistent application of the standard to different exam forms. Raw (unscaled) domain scores are provided to candidates on score reports to provide information about strengths and weaknesses. It is not possible for a candidate to relate raw scores directly to his or her scaled score.

Exam Pass Rates
Between July 2012 and June 2013, 3,589 candidates in the U.S. sat for both the Scientific Foundations section and Practical/Applied sections of the CSCS exam. Of those candidates, 69% passed the Scientific Foundations section, 70% passed the Practical/Applied section, and 61% passed both sections. During this same period, 1,529 candidates sat for the NSCA-CPT exam. Of those candidates, 67% passed. Passing rates for exams administered outside the U.S. are similar. Passing rates for the CSPS and TSAC-F exams are 76% and 100%, respectively.

Confidentiality of Results
Information about candidates and their exam results are considered confidential. Candidates may download official score reports from within their pearsonvue.com account or by contacting NSCA. Individual’s exam results are not discussed over the phone or shared without written permission from the individual. Research and reports conducted on aggregate exam results do not contain identifiable candidate and may be publicized by NSCA.

Cancelled Scores
NSCA is committed to upholding the integrity of NSCA certification programs in a manner that is fair to candidates. When instances of equipment malfunction, candidate misconduct, or test administrator error are suspected and may impact the validity of exam score, NSCA reserves the right to withhold, investigate, and/or cancel examination scores/results as appropriate.

Interpreting Score Reports
Candidates who do not pass the exam are encouraged to review their score reports and determine which domain(s) need additional improvement.

Conferral of Certification
Candidates who pass the exam and have fulfilled all other certification requirements within one (1) year of passing the exam will be granted certification and receive a printed certificate and wallet card in the mail within 15 business days.

Retake Policy
There are no limits to the number of times a candidate may attempt an exam. Candidates must wait 90 days to retake an exam. Applications may be submitted at any time. Candidates do not need to resubmit eligibility requirements unless the CPR/AED requirement has lapsed.
RECERTIFICATION

In order to remain certified, NSCA requires that each Certified Strength and Conditioning Specialist (CSCS), Certified Special Population Specialist (CSPS), NSCA-Certified Personal Trainer (NSCA-CPT), and Tactical Strength and Conditioning Facilitator (TSAC-F) maintain current CPR certification and complete Continuing Education Units (CEUs) every three years. A two to three year certification period is common practice among certification organizations in the fitness industry. A three-year recertification period was chosen for NSCA certifications programs to ensure that certificants keep their knowledge of industry trends, technology, and laws/regulations up-to-date. The recertification deadline for the 2015-2017 Reporting Period deadline is December 31, 2017 for all certified individuals.

There are two options for becoming recertified:

1. Retake and pass the appropriate certification exam
2. Complete and report a specified number of continuing education units (CEUs)

CEU Program Overview

The purpose of continuing education is to require that certified individuals stay abreast of evolving knowledge and skills in the profession, and to promote the ongoing competency of those certified. Because scientific knowledge, training techniques, and equipment are continuously evolving in strength and conditioning, periodic reporting of continuing education is needed to ensure that certified individuals are continually competent. In general, CEUs are based on the number of contact hours (or actual clock hours) undertaken to complete an activity or event. For example:

- 1 contact hour equals 0.1 CEU
- 10 contact hours equals 1.0 CEU

Not all CEU activities are based on actual clock hours. There are exceptions, such as college or university courses, where 1 semester credit hour equals 0.5 CEU and 1 quarter credit hour equals 0.3 CEU. For example:

- 3 unit, semester-long Exercise Physiology course equals 1.5 CEUs
- 4 unit, quarter-long Functional Anatomy course equals 1.2 CEUs

Educational activity completed prior a conferred certification cannot be applied for CEUs. CEUs must be completed between the date of conferred and end of recertification cycle. Refer to the table below to determine the number of CEUs and related fees required.

<table>
<thead>
<tr>
<th>Original Certification Date (Shown on Certificate)</th>
<th>CEUs Required</th>
<th>Fee for Each Credential Held</th>
<th>Fee for Each Credential Held</th>
<th>Category A Maximum</th>
<th>Category B Maximum</th>
<th>Category C Maximum</th>
<th>Category D Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before 2015*‡</td>
<td>6.0</td>
<td>$50</td>
<td>$75</td>
<td>5.5</td>
<td>4.0</td>
<td>5.5</td>
<td>3.5</td>
</tr>
<tr>
<td>During 2015**</td>
<td>4.0</td>
<td>$40</td>
<td>$65</td>
<td>3.5</td>
<td>2.5</td>
<td>3.5</td>
<td>1.5</td>
</tr>
<tr>
<td>During 2016**</td>
<td>2.0</td>
<td>$30</td>
<td>$55</td>
<td>1.5</td>
<td>1.0</td>
<td>1.5</td>
<td>1.0</td>
</tr>
<tr>
<td>January 1, 2017 to June 30, 2017*</td>
<td>1.0</td>
<td>$20</td>
<td>$45</td>
<td>1.0</td>
<td>1.0</td>
<td>1.0</td>
<td>1.0</td>
</tr>
<tr>
<td>July 1, 2017 to December 31, 2017</td>
<td>0</td>
<td>$0</td>
<td>$0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

* You must obtain CEUs from at least two categories.
‡ All CEUs must be earned after January 1, 2015, even if certification was earned prior to this date.
* All CEUs must be earned after the date of certification.
What if I Hold Multiple Certifications?
If you hold multiple credentials, the same policies and procedures apply. You do not, however, need to submit 6.0 CEUs separately for each certification. For example, if you became CSCS and NSCA-CPT certified before January 1, 2015, you are only required to submit a total of 6.0 CEUs for the 2015-2017 reporting period. A more complex scenario exists if you became CSCS and NSCA-CPT certified at different times during the 2015-2017 reporting period. Special attention must be paid to the dates on your certificates to assure that the required CEUs are completed after those dates. Certificants are encouraged to contact NSCA if there is confusion regarding recertification requirements.

CEU Reporting
The online CEU reporting process is a convenient way to review, record, and edit CEU activities. To access the online CEU reporting page, visit www.nsca.com. Online reporting allows certified individuals to:

• View certification summaries
• CEUs required
• Category maximums
• Certification number
• Certification expiration date
• Track accumulated CEUs
• Record and edit CEUs
• Submit the recertification fees

A paper application is available for individuals without Internet access, but must be requested in writing.

Acceptable Content
Only continuing education content that directly relates to the scope of practice and detailed content outline (DCO) of an NSCA certification exam will be accepted. The following are only examples of acceptable and unacceptable content. Certificants with questions regarding the acceptability of a particular activity’s content should contact the NSCA prior to engaging in the activity.

Examples of Acceptable Content
• Anatomy/Physiology
• Nutrition

• Biomechanics
• Fitness Management
  • Current Industry Trends
  • Business Development
  • Fitness-specific marketing
  • Accounting/Finance
  • Staff development/leadership/teamwork
• Training Techniques
• Sport Psychology

Examples of Unacceptable Content
• Surgery
• Diagnosing
• Radiology/Imaging
• General Business/Statistics
• Group Fitness/Holistic Activities
• Unrelated Allied Health Topics (e.g., hypnosis, acupuncture)

CEU Category Descriptions
Category A
Attendance at clinics, conferences, seminars, workshops, symposia, and live webinars

Category B
Committee work; Strength and Conditioning Journal and webinar quizzes; Presentations; Publications

Category C
First Aid/AED certification or recertification; Post-certification college course work; Approved internships

Category D
Associate publication quizzes (e.g. NSCA Coach, Personal Training Quarterly, TSAC Report); Home study; Personal development; Earning an NSCA certification not currently held; Earning NCCA-accredited certifications
Automatically Recorded CEUs
The NSCA office automatically records many of the CEUs that qualify toward Recertified with Distinction requirements. This includes CEUs earned by:

- Attending or presenting at NSCA events
- Authoring articles for NSCA publications
- Participating on NSCA committees

CEU Documentation
It is the responsibility of each certified individual to maintain a record of all documentation for completed activities; see the table on the next page for documentation requirements. Documentation does not need to be submitted to NSCA unless requested.
<table>
<thead>
<tr>
<th>Category</th>
<th>Sub-Category</th>
<th>Activity</th>
<th>Number of CEUs Awarded</th>
<th>Required Documentation*</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Attendance</td>
<td>Attending strength and conditioning and/or personal training clinics, conferences, seminars, workshops, symposia, etc.</td>
<td>0.1 CEU per hour of attendance (Ex: 8 hour clinic x 0.1 CEU = 0.8 CEU) A maximum of 2.0 CEUs allowed for any one event</td>
<td>Photocopy of attendance certificate or letter verifying participation and number of hours for non-NSCA events</td>
</tr>
<tr>
<td>B</td>
<td>Committee Work</td>
<td>Serving as an NSCA Committee Member</td>
<td>0.5 CEU per year of committee involvement</td>
<td>Documentation for NSCA's sponsored activities not required</td>
</tr>
<tr>
<td>B</td>
<td>NSCA Quizzes</td>
<td>Passing NSCA Strength and Conditioning Journal Quizzes</td>
<td>0.2 CEU for each quiz that is submitted and passed</td>
<td>Documentation for NSCA's sponsored activities not required</td>
</tr>
<tr>
<td>B</td>
<td>Presentations</td>
<td>Serving as speaker or panelist at clinics, conferences, etc.</td>
<td>1.0 CEU per hour of presentation A maximum of 2.0 CEUs allowed for each presentation</td>
<td>Photocopy of brochure/flyer showing participation or letter of verification from event host</td>
</tr>
<tr>
<td>B</td>
<td>Publications</td>
<td>Authoring/co-authoring articles</td>
<td>1.5 CEUs for NSCA publications 1.0 CEU for peer-reviewed journals 0.5 CEU for all others</td>
<td>Photocopy of periodical cover and first page of article</td>
</tr>
<tr>
<td>B</td>
<td>Publications</td>
<td>Authoring/co-authoring abstracts</td>
<td>1.0 CEU per published abstract</td>
<td>Photocopy of periodical and abstract</td>
</tr>
<tr>
<td>B</td>
<td>Publications</td>
<td>Authoring/co-authoring chapters in books</td>
<td>1.5 CEUs per published chapter</td>
<td>Photocopy of book cover and table of contents</td>
</tr>
<tr>
<td>B</td>
<td>Publications</td>
<td>Authoring/co-authoring books</td>
<td>3.0 CEUs per published book</td>
<td>Photocopy of book cover and table of contents</td>
</tr>
<tr>
<td>C</td>
<td>First Aid/AED</td>
<td>Becoming certified or recertified in First Aid or AED</td>
<td>0.5 CEU awarded at time of certification/recertification for each</td>
<td>Photocopy of certification card(s)</td>
</tr>
<tr>
<td>C</td>
<td>College Course Work</td>
<td>Passing post-certification college course work</td>
<td>0.3 CEU per quarter hour 0.5 CEU per semester hour A maximum of 2.0 CEUs per course</td>
<td>Photocopy of grade report or transcript</td>
</tr>
<tr>
<td>C</td>
<td>Approved Internships</td>
<td>Completion of a non-academic-credit-granting internship of at least 150 hours</td>
<td>2.0 CEUs per internship</td>
<td>Photocopy of verification of internship completion</td>
</tr>
<tr>
<td>D</td>
<td>Associate Publication Quizzes</td>
<td>Passing NSCA Coach, Personal Training Quarterly, or TSAC Report Quizzes</td>
<td>0.1 CEU for each quiz that is submitted and passed</td>
<td>Documentation for NSCA's sponsored activities not required</td>
</tr>
<tr>
<td>D</td>
<td>Pre-Approved Home Study</td>
<td>Successfully completing an approved home study course</td>
<td>CEUs awarded for preapproved courses only; refer to course listings at <a href="http://www.nsca.com">www.nsca.com</a> for number of CEUs awarded</td>
<td>Photocopy of verification of course completion from preapproved provider</td>
</tr>
<tr>
<td>D</td>
<td>Personal Development</td>
<td>Other educational activities not covered by other categories, e.g., watching NSCA videos, reading articles on NSCA.com, etc.</td>
<td>0.5 CEU per year</td>
<td>Statement of nature of activities completed</td>
</tr>
<tr>
<td>D</td>
<td>Exam for NSCA Certification Not Currently Held</td>
<td>Earning the certification for a NSCA credential not currently held</td>
<td>3.0 CEUs</td>
<td>Documentation for NSCA's sponsored activities not required</td>
</tr>
<tr>
<td>D</td>
<td>NCCA-accredited Fitness, Sport or Exercise Nutrition Certifications</td>
<td>Earning fitness, sport or exercise nutrition certifications from other NCCA-accredited organizations</td>
<td>1.0 CEU</td>
<td>Photocopy of score report</td>
</tr>
</tbody>
</table>

*Documentation should be submitted in the following situations only:
  * If you are selected for the random audit, which will take place in February 2017
  * If you are appealing the revocation of your certification

CEUs for this activity qualify for Recertified with Distinction and will be automatically recorded.

Only CEUs earned directly through the NSCA qualify for Recertified with Distinction. CEUs for qualifying activities will be automatically recorded.

CEUs for this activity may be applied toward standard recertification only. They do not qualify for Recertification with Distinction.
Random Audit
NSCA will conduct a random audit of all certified individuals submitting their CEU Reporting Form and recertification fee. Those individuals selected for the audit will be required to submit their CEU documentation to NSCA.

Those chosen randomly for the audit will be notified by mail no later than February following the reporting deadline. Once contacted, certified individuals have 45 days to submit the documentation that supports the information on the previously submitted CEU Reporting Form. If supporting documentation is not provided, or does not substantiate the activities listed on the CEU Reporting Form, the conditions for recertification will have not been met and those individuals will not be recertified.

Failure to Report/Appeals
Once certified, each certified individual continues to be certified as long as he/she fulfills the minimum CEU requirements and pays the recertification fee. The NSCA Certification Committee will be notified of the names of those failing to meet all CEU requirements so that the appropriate action may be taken. Those who fail to meet the CEU requirements will be sent a Notice of Certification Revocation. Those wishing to appeal the revocation can do so by submitting an appeal in writing, including all relevant supporting education documentation, to the Certification Committee Chair.

Reinstatement
Individuals with expired certifications may petition NSCA for reinstatement of their certifications at any time. Reinstatement will be granted upon fulfillment of the following conditions.

- Presentation of documentation that all required CEUs were earned since the last successful recertification and earned in accordance with the requirements of the recertification policy in effect at that time.

- Payment of reinstatement and all related recertification fees of previous recertification period(s).

If reinstatement is granted, certificants will maintain their initial certification date. Certificants who are denied reinstatement may appeal to the Certification Committee. The Certification Committee will review appeals at the Committee’s next scheduled meeting and render a final decision.

The fee for reinstatement is $200 plus previously unpaid recertification fees. Please contact NSCA if you are unsure if you qualify for reinstatement and/or to receive the appropriate form to complete.

Recertifying with Distinction
Certificants who complete more than the required number of CEUs in a recertification period may be eligible to earn the added distinction of the “*D” (referred to as “star-D”). To qualify for recertification with distinction, certificants must earn a total of 10 CEUs from NSCA-sponsored activities in a recertification period. Holders of multiple NSCA certification must earn additional CEUs in order for the “*D” to count toward all certifications held (12 CEU for two certifications, 14 CEUs for three or more). The “*D” must be displayed following the appropriate NSCA certification credential(s), separated by a comma, with no space in between, example: “CSCS,*D”.
INTERNATIONAL CANDIDATES
INTERNATIONAL CANDIDATES
NSCA offers the CSCS and NSCA-CPT certifications in multiple languages internationally through partnerships with NSCA Affiliates in Japan, Italy, Spain, Korea, and China. International partners are responsible for the registration process within their country. NSCA currently administers non-English certification exams only in paper and pencil format. Certification exams administered are presented in both the native language and English.

International candidates should review the information available on the website of the NSCA Affiliate in their country to learn more about the registration process and availability of certification exams. NSCA links to the websites of its international partners can be accessed at http://www.nsca.com/about-us/international/. NSCA cannot guarantee international candidates the same level of accessibility to certification exams and other NSCA products and services (e.g., continuing education) as U.S. candidates.
Appendix A: Certification Checklist

• Meet the eligibility requirements.
• Read the Certification Handbook.
• Obtain the appropriate preparation materials.
• Prepare for the exam.
• Register for the exam online.
  • You will receive an email confirmation that you are authorized to take the exam and scheduling instructions.
  • Schedule your exam appointment with Pearson VUE.
  • Once registered, you have 120 days to schedule and complete the exam.
• Submit required documentation.
  • A photocopy (front/back) of your CPR/AED certification.
  • Official transcript and other documentation depending on eligibility requirements.
• Take the exam (passing is a scaled score of 70 for each exam).
  • You will receive your exam results immediately following the exam.
  • Passing candidates are not certified until all eligibility requirements are completed within the allotted time frame.
• Maintain your certification by keeping your knowledge and skills up-to-date with continuing education.
  • Be sure to recertify at the end of each three-year recertification period.
Appendix B: Special Accommodations Request Form

Request for Special Testing Accommodations
NSCA complies with the Americans with Disabilities Act. To ensure equal opportunities for all qualified candidates, NSCA will make reasonable testing accommodations when appropriate. Candidates with a documented disability that significantly impairs his or her ability to arrive at, read, or otherwise complete an NSCA certification exam, may request special accommodations. Requests for special accommodations must be made at the time of registration. Candidates must submit this completed form by mail:

NSCA
Attn: Certification
1885 Bob Johnson Drive
Colorado Springs, CO 80906

NOTE: Candidates with approved testing accommodations must call Pearson VUE at (800) 466-0450 to schedule an exam appointment. Candidates who schedule appointments through any other means (e.g. online, via a different number) will not have their accommodations available at the appointment.

Certification Candidate Information
Candidate’s Name (First Middle Initial Last):
NSCA Customer ID:
Home Address:
City: ____________ ST: _______ ZIP: ____________
Telephone Number: __________________________
Email Address: _______________________________

Qualified Professional Providing Diagnosis
Professional’s Name (First Middle Initial Last):
Business Address:
City: ____________ ST: _______ ZIP: ____________
Telephone Number: __________________________
Email Address: _______________________________
Professional Title (e.g., Medical Doctor, Licensed Psychologist): ________________________________
License Number, and State Issuing License: ___________________________________________________

Description of Disability
Disability Related to the Accommodation Request: ____________________________________________
Date of Most Recent Professional Diagnosis: _________________________________________________
Description of Disability’s impact on Candidate’s ability to take an NSCA certification exam:
**Requested Accommodation(s)**
Please indicate all accommodations that you are requesting.

- [ ] 1.5 x Exam Time
- [ ] 2.0 x Exam Time
- [ ] Separate Room
- [ ] Reader
- [ ] Recorder
- [ ] Enlarged Font
- [ ] Other (please describe): ___________________________________________________________

**Signature of Qualified Professional**
By signing below, I verify that the information provided on this form is complete and accurate to the best of my knowledge.

Signature of Qualified Professional: ______________________________________________________

Date: _______________________________

**Signature of Candidate**
By signing below, I verify that the information provided on this form is complete and accurate to the best of my knowledge. I authorize the release and disclosure of diagnostic information by healthcare providers, or other professionals having such information, for the purpose of allowing NSCA to make a determination regarding my request for a special testing accommodation. I understand that NSCA will employ reasonable methods to help ensure that the information provided to NSCA regarding my disability and request for accommodation is treated as confidential.

Signature of Candidate: _______________________________

Date: _______________________________
Appendix C: Practical Experience Form

The NSCA Certification Committee requires a minimum of 250 related, practical experience hours. Related hours must be consistent with the described CSPS Scope of Practice. It is strongly recommended that candidates gain experience in each of the content domains.

Complete the form below as accurately as possible. The form should be used to describe your principle or supporting role in managing clients with unique needs. Experience hours must relate to the following: (1) educate a client on the basic pathophysiology and science of health status, condition, disorder, or disease; or, (2) perform health appraisals, fitness evaluations, SMART goal development, program design, motivational/coaching techniques, and client outcome monitoring. It is appropriate for candidates to include parallel hours for clients with comorbidities. For example, experience may count in three domains if a candidate works with a client who is obese, has Type 2 diabetes and osteoarthritis of the knee. Recorded hours are subject to a random audit, and references may be contacted for validation purposes; if self-employed, indicate as such.

Submit multiple copies as necessary.

Facility Name, address, and phone number:

Supervisor Name/Title:

Type of Practice Setting:

Position Title:

Related Experience:

Total Hours of Experience: _______________________________

I affirm that the information provided above is accurate to the best of my knowledge. I also understand that recorded hours are subject to a random audit, and references may be contacted for validation purposes.

_________________________________________  _______________________________
Signature                                      Date

www.nsca.com  February 2015
Appendix D: Candidate Rules Agreement

Please review the following exam rules agreement. Contact the TA if you have any questions. The term TA will be used in this document to mean Test Administrator, Invigilator and Proctor.

1. **No** personal items, including but not limited to, mobile phones, hand-held computers/personal digital assistants (PDAs) or other electronic devices, pagers, watches, wallets, purses, firearms or other weapons, hats (and other non-religious head coverings), bags, coats, books, and/or notes, pens or pencils are allowed in the testing room. You must store all personal items in a secure area as indicated by the TA or return them to your vehicle. All electronic devices must be turned off before storing them in a locker. You will be asked to empty your pockets and ensure nothing is in them. The test center is not responsible for lost, stolen or misplaced personal items. **Studying IS NOT allowed in the test center. Visitors, children, spouses, family or friends ARE NOT allowed in the test center.**

2. Before you enter the testing room, the TA may collect your palm vein image digitally for the purposes of identity verification and to protect the security and integrity of the test. You understand that if there are discrepancies during this verification process you may be prohibited from entering the testing room, you may not be allowed to reschedule your testing appointment and you may forfeit your test application fee. Upon entering and being seated in the testing room, the TA will provide you with materials to make notes or calculations and any other items specified by the exam sponsor. **You may not remove these items from the testing room or write on your note board until your exam has been started.** If you need new or additional materials during the exam, you should raise your hand. You must return all materials to the TA immediately following the exam.

3. The TA will log you into your assigned workstation. You will verify that you are taking the intended exam. You will remain in your assigned seat until escorted out of the testing room by a TA.

4. Once you have entered the testing room, you may not communicate with other candidates. Any disruptive, threatening or fraudulent behavior may be grounds for termination of the exam.

5. You understand that eating, drinking or chewing gum, smoking and/or making noise that creates a disturbance for other candidates is prohibited during the exam.

6. To ensure a high level of security throughout the testing experience, you will be monitored at all times. Both audio and video may be recorded.

7. Break policies are established by the exam sponsor. Some exams may include **scheduled breaks,** and instructions will appear on the computer screen at the appropriate time; whether or not the exam time stops depends on the exam sponsor’s policy. If you take an **unscheduled break** at any other time, the exam time will **not** stop. The TA will set your workstation to the break mode, and you will take your ID with you when you leave the room. The TA will check your ID before escorting you back to your seat and will then resume your exam.

8. While you are taking a **scheduled break,** you are permitted to access personal items that you stored during the exam. While you are taking an **unscheduled break,** you are NOT permitted to access personal items other than medication required at a specific time unless you receive prior permission. Unless specifically permitted by the exam sponsor, you **MUST receive permission from the TA PRIOR to accessing personal items that have been stored,** including but not limited to: mobile phones, exam notes and study guides.

9. You must leave the testing room for all breaks. **During unscheduled breaks, please verify with the TA whether your exam sponsor permits you to leave the building.**

10. You will need to show identification and/or have your palm vein pattern captured when leaving and re-entering the testing room. The TA will escort you to your assigned workstation and continue the exam when you return.

11. If you experience any problems or distractions or if you have other questions or concerns, you must raise your hand and the TA will assist you. The TA cannot answer questions related to exam content. If you have concerns about a test question or image, make a note of the item (question) number, if available, in order for the item to be reviewed.

12. You understand that a Non-Disclosure Agreement or other security statement may be presented to you before
the exam and if so, you must agree to its terms and conditions within the specified time limit, if applicable, in order to take the exam or you will not be permitted to proceed with the examination and may forfeit your exam fees. If you select “DECLINE,” your exam will end.

13. After you finish the exam, you may be asked to complete an optional, onscreen evaluation.

14. After you finish the exam you will raise your hand and the TA will come to your workstation and ensure that your exam has ended properly. The exam sponsor may display a score on the computer screen after the exam or may provide a printed score report or a confirmation notice that you completed the exam. If printed information is provided, you will receive any printed information only after presenting your ID and returning all materials supplied before the exam to the TA. You will not leave these items at your testing workstation.

15. You may not remove copies of exam questions and answers from the testing center, and may not share or discuss the questions or answers seen in your exam with anyone. If you do not follow the above rules, tamper with the computer or if you are suspected of cheating, appropriate action will be taken. This may include invalidation of your exam results.

16. Your privacy—Your exam results will be encrypted and transmitted to Pearson VUE and the exam sponsor. The test center does not retain any information other than when and where your exam was taken. The Pearson VUE Privacy Policy Statement provides additional information regarding this which you can obtain by visiting the Pearson VUE website (www.pearsonvue.com) or by contacting the Reservation Call Center.

Candidate Statement: By providing a digital signature, I give Pearson VUE my explicit consent to retain and transmit my personal data and test responses to Pearson VUE and to the exam sponsor (either of which may be outside of the country in which I am testing). I understand the information provided above and agree to follow those Rules in addition to any other program rules I may have agreed to during registration for this test. If I do not follow the Rules, or I am suspected of cheating or tampering with the computer, this will be reported to Pearson VUE and the exam sponsor, my exam may be invalidated, and the sponsor may take other action such as decertifying me, and I will not be refunded my exam fee.
Appendix E: Registration Affirmation

By submitting this NSCA exam registration, I accept the conditions set forth by NSCA Certification concerning the administration, reporting of examination scores and the certification and recertification processes and policies. I attest that the information contained in this registration is true, complete and correct to the best of my knowledge and is made in good faith. I understand that if any information is later determined to be false, the NSCA Certification Committee reserves the right to revoke the certification that has been granted on the basis thereof. I also understand that any irregularity including, but not limited to, copying answers; permitting another person to copy answers; falsifying information required for admission to the examination; impersonating another exam candidate; falsifying education or credentials; or providing and/or receiving unauthorized advice about exam content before, during or following the examination in connection with any NSCA Certification examination could result in immediate revocation of my certification. I further understand that the examination questions, certification names/acronyms and logos are protected under U.S. copyright law and, as such, willful infringement of the copyright is a federal crime. I recognize that any unauthorized possession of, use or distribution of or the act of providing access to NSCA Certification examination questions, certificates, NSCA Certification logos, abbreviations relating thereto and any other NSCA Certification documents and materials may result in immediate revocation of my certification. I also recognize and acknowledge that I will abide by the recertification requirements established in order to remain certified.

☐ I have read and understand the Affirmation.

Certification policies, procedures, and requirements are listed in the NSCA Certification Handbook (Handbook), including but not limited to the Code of Ethics, certification eligibility, registration, exam authorization period, refunds, retakes, scheduling and rescheduling of appointments, test center rules, and recertification. The NSCA Certification Committee reviews these on a regular basis and updates are made when appropriate. The most current version of the Handbook is available for download from NSCA.com.

☐ I have downloaded, read, understand, and agree to abide by the certification policies, procedures, and requirements included in the Handbook. I also agree to abide by any and all future changes to certification policies, procedures, and requirements as made by the NSCA Certification Committee and published in the most current Handbook.
Appendix F: Code of Ethics for Candidates and Certified Individuals

Prepared: June 1992


The NSCA is dedicated to maintaining high standards for its certified individuals (“certificants”). The NSCA is committed to certifying individuals who demonstrate the knowledge and skills necessary to design and implement safe and effective strength training and conditioning and personal training practices. The NSCA also believes that continuing education encourages individuals to stay abreast of evolving knowledge and skills and, in doing so, promotes their ongoing competency. This philosophy implies that the responsibility of its certified individuals is not limited to the well-being of the athletes and/or clients, but also to society in general and the reputation of others in their field; with the overall goal being an improvement of health and well-being for all.

This Code of Ethics for Candidates and Certified Individuals (the “Code of Ethics”) was established so that candidates for NSCA certifications and certificants are aware of the standards of ethical behavior that must be followed in the practice of their profession. This Code of Ethics presents fundamental standards of behavior that all candidates and certified individuals must strive to achieve. It serves to increase ethical sensitivity and judgment, strengthen support for moral courage, and sharpen a sense of identity as an integral part of the NSCA’s Certification Program and its continued success.

By applying for certification, a candidate acknowledges and agrees that they are subject to the Code of Ethics, that they have not violated any of the ethical principles contained in the Code of Ethics, and that they are subject to discipline under the provisions of the NSCA Certification Program Disciplinary Policy and Procedures (the “Disciplinary Policies and Procedures”).

Candidates and certificants shall abide by this Code of Ethics and, in the practice of their profession duties, shall observe the following minimum ethical principles:

1. Respect the rights, welfare and dignity of all individuals

2. Strive to provide competent, fair, and equal treatment to all individuals and not discriminate against anyone

3. Provide and maintain a safe and effective training environment

4. Comply with all applicable laws including, but not limited to, business, employment, and copyright laws

5. Accept responsibility for the use of sound judgment when working with their clientele

6. Respect the confidentiality of their clientele and preserve the confidentiality of personal and privileged information of athlete and client, while remaining accountable

7. Not release any information to a third party not involved with the athlete’s or client’s care without a written release unless required by law

8. Not misrepresent, either directly or indirectly, their skills, training, professional credentials, identity, or services

9. Only provide services that they are qualified to provide through education or experience, and which are allowed by practice acts and other pertinent regulations

10. Refer their clientele to more qualified fitness, medical or health professionals when appropriate

11. Remain current on practical and theoretical foundations through continuing education activities

12. Avoid engaging in any behavior or form of conduct that would constitute a conflict of interest or actions that adversely reflect on the profession or the NSCA and the NSCA Certifications

13. Strive to safeguard the well-being of athletes and/or clients of certified individuals, and the public, by reporting violations of this Code of Ethics

In addition, candidates and certificants shall not:

a. Obtain or attempt to obtain certification by fraud, deception, or artifice.

b. Knowingly assisting another person or other persons in obtaining or attempting to obtain certification, by fraud, deception, or artifice.
c. Engage in any:

a. Illegal use of a certification certificate or falsification of credentials, or any other NSCA documents.

b. Unauthorized use of any NSCA trademarks or designations (e.g., “CSCS”, “NSCA-Certified Personal Trainer”, “*D,” etc.)

c. Unauthorized possession and/or distribution of any official NSCA certification examination materials to include copying and/or reproduction of any part, question, or problem of any certification examination.\(^1\)

To provide for enforcement of this Code of Ethics and to protect athletes and clients of certified individuals, as well as the public, from those who attempt to misrepresent, misuse, or abuse their qualifications as credentialed practitioners or their credential, the NSCA has established the Disciplinary Policy and Procedures under the jurisdiction of the NSCA Certification Committee. The Disciplinary Policy and Procedures, which may be amended from time to time, is incorporated into this Code of Ethics by this reference.\(^2\)

\(^1\) No part of any copyrighted document may be reproduced or transmitted in any form or by any means electronic or mechanical, including photocopying or recording, or by any information retrieval system, without written permission from the NSCA.

\(^2\) This Code of Ethics and the Disciplinary Policy and Procedures apply to all candidates and certificants of NSCA Certification Programs, whether or not such individuals are members of the NSCA. The NSCA has a Code of Ethics of general application for its members. As to the relationship between the NSCA Code of Ethics and this Code of Ethics for Candidates and Certified Individuals, matters pertaining to the conduct of a candidate or certified individual that are within the scope of this Code of Ethics will be administered under this Code of Ethics and the related Disciplinary Policy and Procedures, rather than the NSCA Code of Ethics.
Appendix G: Discipline Policy

Certification Program Disciplinary Policy and Procedures
Prepared: June 1992
Updated: June 1998, January 2000, October 2008, April 2013, and April 2015

To ensure the integrity of the credentials awarded through NSCA Certification Programs, the NSCA has adopted a Code of Ethics for Candidates and Certified Individuals (the “Code of Ethics”). To provide for enforcement of the Code of Ethics and to protect the public from those who attempt to misrepresent their qualifications as credentialed practitioners, the NSCA established this Disciplinary Policy and Procedures for its Certification Programs. The Disciplinary Policy and Procedures is administered by the NSCA Certification Committee (the “Certification Committee”).

The Certification Committee has been charged with investigating incidents and imposing discipline where candidates or credentialed practitioners have violated the Code of Ethics or engaged in other unacceptable practice related behaviors.

Violation of any provision of the Code of Ethics or engaging in other unacceptable practice-related behaviors is grounds for disciplinary actions under this Policy.

The disciplinary process outlined in this Disciplinary Policy and Procedures is designed to give the Charged Party with a fair opportunity to respond to the allegation and/or explain the situation before any action is taken by the Certification Committee. In each instance that comes to the NSCA’s attention, the following steps are taken to conduct the investigation as expeditiously as reasonably possible and to resolve the Complaint:

1. Investigation Notice: The Executive Director responds to an initial Complaint received by providing a written notice by certified mail to the Charged Party of the Complaint and the allegations contained in the Complaint. The Charged Party is given an opportunity to respond in writing to clarify the matter or provide other pertinent information within thirty (30) days of the date the written notice was received by the Charged Party.
2. Decision as to Further Action: Based on the Charged Party's response to the Executive Director's inquiry about the Complaint, the Certification Committee meets to determine whether or not the Complaint appears to have merit and whether or not it falls within the scope of the Certification Committee's responsibilities. The Certification Committee then determines if a hearing, in which the Charged Party and others, including the Complainant, may present testimony and written evidence, will be conducted. If the decision is that the Complaint does not have merit or does not fall within the scope of the Certification Committee's jurisdiction, the Complaint is dismissed and the Charged Party and the Complainant are notified in writing by the Executive Director that no action will be taken by the NSCA. In the event the Charged Party does not respond, the Certification Committee may determine what action it believes is appropriate to take, including imposition of any discipline that it believes is appropriate based on all information available to the Certification Committee.

3. Hearing Notice/Information Gathering: If it is determined that the Complaint appears to have merit and is within the jurisdiction of the Certification Committee, the Charged Party is notified by certified mail that a formal hearing will be conducted at the next Certification Committee meeting; provided that such hearing shall not take place sooner than thirty (30) days after the Charged Party has received such written notice. The specific violation alleged to have been committed is identified and the Charged Party is given thirty (30) days from receipt of such written notice in which to provide a written, signed response to the Certification Committee regarding the Complaint. At the same time, the NSCA may contact the Complainant and other individuals about the matter and gather other information that may help the Certification Committee decide if a violation has occurred. The Charged Party has the right to review all information so gathered, as well as to be personally present and/or represented by legal counsel at the hearing. The Charged Party may waive the conduct of the hearing, in which case the Certification Committee is authorized to consider all information submitted to it in connection with the investigation and information gathering process described above, including in the Complaint and the response of the Charged Party, and to render a decision based on consideration of all such information.

4. Hearing: The hearing will be conducted in an informal manner, following procedures that afford a fair and reasonable basis for the parties to be heard, for information to be submitted for consideration, and for challenges of information that has been submitted and cross-examination of testimony given. All of the information gathered during the investigation, all information provided by the Charged Party, and all information submitted at the hearing, whether testimony or written information, is reviewed by the Certification Committee. Any testimony from the Charged Party, the Complainant, or other witnesses, is taken during the hearing and a transcribed record of the proceedings is made. The hearing may be conducted in person or by conference call or other electronic communications means by which all persons participating can hear one another and testimony and information can be shared in a fair and reasonable manner. The Certification Committee will adopt and utilize hearing procedures to accomplish the hearing.

5. Case Decision: Based on the record of the hearing, including all testimony given and all information submitted, the Certification Committee determines whether or not the Charged Party has violated the Code of Ethics or other applicable NSCA policies and, if so, what disciplinary action the NSCA will take. Written notice of the Certification Committee's decision is provided to the Charged Party and the Complainant by certified mail.

6. Appeal: Upon receipt of the notice of the Certification Committee's decision, the Charged Party has thirty (30) days to file a written appeal of the decision to the NSCA. When an appeal is made, the NSCA Board of Directors reviews the record of the case and determines whether to affirm or modify the Certification Committee's decision.

Possible Disciplinary Actions
The Certification Committee considers each alleged violation of the Code of Ethics (or other unacceptable practice-related behavior) as individual cases and makes decisions regarding appropriate punishment to fit the circumstances. In doing this, the Certification Committee has a range of possible disciplinary measures from which to choose:

1. Admonishment: A written reprimand by the Chair of the Certification Committee to be placed in an individual's certification record for a minimum of two years.

2. Formal censure: An official resolution recorded in the minutes of a meeting of the Certification Committee.
Committee expressing the Certification Committee’s official displeasure with an individual’s conduct and/or responsiveness to the NSCA.

3. Denial of certification eligibility for certification examinations for a specified period of time: Depending upon the seriousness of the offense and the individual’s responsiveness to the NSCA’s concerns, the Certification Committee may remove a person’s eligibility for certification for a definite length of time, or for an indefinite period. To be reinstated, the individual must petition the Certification Committee for reconsideration of the matter and explain why such reconsideration should be made.

4. Suspension or revocation of certification for a definite or indefinite period of time: For certified practitioners who violate the Code of Ethics, the Certification Committee may suspend or revoke the practitioner’s active certification and require the individual to formally petition for reinstatement.

5. Mandatory re-examination or training to document continued competence. Failure to complete training or pass the examination could lead to suspension of certification for a definite or indefinite period of time.

6. Disqualification from recertifying for a definite or indefinite period of time.

Additionally, when the NSCA is advised of serious practice related offenses with respect to which there has been punishment imposed by a court or regulatory agency, the NSCA maintains records of legal information received and referred inquiries in response to legitimate requests for information about the practitioner’s ability to function on the job. This is done during the length of a court imposed punishment or regulatory agency-imposed punishment.

Publication of Disciplinary Action
The NSCA reserves the right to publish the disciplinary action in the *NSCA Bulletin* and/or *Strength and Conditioning Journal*.

Trademarks and Service Marks
The Certification Committee has the responsibility to oversee the appropriate use of NSCA’s certification trademarks and service marks and act to protect against infringement by unauthorized parties. Only those who are authorized by NSCA (e.g., certificants in good standing) have the right to use NSCA certification trademarks and service marks. As a result of disciplinary action as allowed in this Policy, certificants may be restricted from using NSCA certification trademarks and service marks.
## Appendix H: CSCS Detailed Content Outlines and Sample Questions

### CSCS’ EXAMINATION

**Detailed Content Outline**

**SCIENTIFIC FOUNDATIONS**

<table>
<thead>
<tr>
<th>Cognitive Level</th>
<th>Total Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recall</td>
<td>Application</td>
</tr>
<tr>
<td>20</td>
<td>33</td>
</tr>
</tbody>
</table>

### 1. EXERCISE SCIENCES

A. **Apply Knowledge of Muscle Anatomy and Physiology**
   1. Muscle anatomy (e.g., muscle group names, specific muscle names, muscle fiber/cell structure)
   2. Muscular dynamics involved during movement patterns (e.g., sliding filament theory, type of muscle action)

B. **Apply Knowledge of Neuromuscular Anatomy and Physiology**
   1. Neuromuscular anatomy (e.g., motor unit, Type I and II fibers, muscle spindle, Golgi tendon organ)
   2. Neuromuscular responses to exercise (e.g., motor unit recruitment patterns, nerve conduction, summation)

C. **Apply Knowledge of Basic Principles of Biomechanics Regarding Exercise Selection, Execution, and Sport Performance**
   1. Kinematic principles of movement (e.g., anatomical planes of movement, joint angles, velocity)
   2. Kinetic laws and principles of movement (e.g., momentum, torque, power, work, force, center of gravity, impulse, center of pressure, force-velocity curve, force-time curve, isometric/isotonic/isokinetic, lever systems)
   3. Role of muscles in movement (e.g., agonist, antagonist, synergist, neutralizer, stabilizer)

D. **Apply Knowledge of Bone and Connective Tissue (tendons and ligaments) Anatomy and Physiology**
   1. Bone and connective tissue anatomy
   2. Bone and connective tissue responses to exercise and training

E. **Apply Knowledge of Bioenergetics and Metabolism**
   1. Characteristics of the energy systems
   2. Effects of manipulating training variables (e.g., mode, intensity, duration, volume and work:rest ratio) to target specific energy systems

F. **Apply Knowledge of Neuroendocrine Physiology**
   1. Functions of hormones (e.g., testosterone, growth hormone)
   2. Neuroendocrine responses to exercise and training

G. **Apply Knowledge of Cardiopulmonary Anatomy and Physiology**
   1. Cardiopulmonary anatomy (e.g., structure of the heart, vascular system, lungs)
   2. Cardiopulmonary responses to exercise and training

H. **Apply Knowledge of Physiological Adaptations to Exercise and Training**
   1. Adaptations to metabolic conditioning
   2. Causes, signs, symptoms and effects of overtraining and detraining

I. **Apply Knowledge of the Anatomical, Physiological and Biomechanical Differences of Athletes (e.g., age, sex, training status, specific sport or activity)**

J. **Apply Knowledge of Psychological Techniques Used to Enhance Training and Performance**
### SCIENTIFIC FOUNDATIONS

<table>
<thead>
<tr>
<th>Cognitive Level</th>
<th>Application</th>
<th>Total Items</th>
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</thead>
<tbody>
<tr>
<td>Recall</td>
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<td>70</td>
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<tr>
<td>Analysis</td>
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<td>11</td>
</tr>
<tr>
<td><strong>Total Items</strong></td>
<td><strong>26</strong></td>
<td><strong>80</strong></td>
</tr>
</tbody>
</table>

#### 1. Motivational techniques (e.g., imagery techniques, reinforcement strategies)
#### 2. Methods that enhance motor learning and skill acquisition (e.g., instruction, feedback, whole versus part practice)
#### 3. Attentional control and decision-making (e.g., focus, arousal management)
#### 4. Confidence and positive self-talk

### 2. NUTRITION

<table>
<thead>
<tr>
<th>A. Apply Basic Knowledge of Nutritional Factors Affecting Health and Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Health-related and performance-related application of nutrition concepts (e.g., food groups, food exchanges, “MyPlate”, glycemic index)</td>
</tr>
<tr>
<td>2. Nutritional needs of various athletes for carbohydrates, protein, fat, vitamins, and minerals</td>
</tr>
<tr>
<td>3. Health risk factors associated with dietary choices (e.g., a high intake of cholesterol, triglycerides, and/or saturated fat, low intake of calcium and iron)</td>
</tr>
<tr>
<td>4. Effects of hydration status and electrolyte balance/imbalance on health and performance</td>
</tr>
<tr>
<td>5. Caloric vs. nutrient dense foods</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>B. Apply Basic Strategies for Manipulating Food Choices and Training Methods to Maximize Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Training/nutritional programs that produce specific changes in body composition (e.g., fat loss or lean body mass increase)</td>
</tr>
<tr>
<td>2. Composition and timing of nutrient and fluid intake before, during, and after an exercise session or a sport event</td>
</tr>
<tr>
<td>3. Nutritional factors that affect muscular endurance, hypertrophy, strength, and aerobic endurance</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>C. Recognize Signs, Symptoms, and Behaviors Associated with Eating Disorders and Altered Eating Habits</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Signs and symptoms associated with disordered eating (e.g., body dysmorphia), bulimia, and anorexia</td>
</tr>
<tr>
<td>2. Body composition changes and performance variations associated with eating disorders or disordered eating</td>
</tr>
<tr>
<td>3. Referral to a qualified healthcare professional</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>D. Apply Basic Knowledge of the Effects, Risks, and Alternatives of Common Performance-Enhancing Substances and Methods</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Ergogenic aids and dietary supplements (e.g., creatine, carbohydrate loading, anabolic steroids, blood doping) abiding by relevant governing bodies</td>
</tr>
<tr>
<td>2. Signs and symptoms of ergogenic aid abuse</td>
</tr>
</tbody>
</table>

**Totals for SCIENTIFIC FOUNDATIONS section:**

<table>
<thead>
<tr>
<th>Recall</th>
<th>Application</th>
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</tr>
</tbody>
</table>
CSCS® EXAMINATION
Detailed Content Outline

**PRACTICAL / APPLIED**

<table>
<thead>
<tr>
<th>1. EXERCISE TECHNIQUE</th>
<th>Cognitive Level</th>
<th>Total Items</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Recall</td>
<td>Application</td>
</tr>
</tbody>
</table>

A. Teach and Evaluate Resistance Training Exercise Technique

1. Free weight training equipment:
   a. preparatory body and limb position (e.g., grip, stance, alignment)
   b. execution of technique (e.g., body and limb positions, movement mechanics, breathing, focus, arousal)
   c. correction of improper technique

2. Resistance machines (e.g., pulley, cam, hydraulic, friction, air, tubing)
   a. preparatory body and limb position (e.g., grip, stance, alignment)
   b. execution of technique (e.g., body and limb positions, movement mechanics, breathing, focus, arousal)
   c. correction of improper technique

3. Alternative modes (e.g., core, stability, balance, calisthenic, body weight only)
   a. preparatory body and limb position (e.g., grip, stance, alignment)
   b. execution of technique (e.g., body and limb positions, movement mechanics, breathing, focus, arousal)
   c. correction of improper technique

4. Non-traditional implements (e.g., logs, tire-flipping, heavy ropes, kettle bells, heavy medicine balls)
   a. preparatory body and limb position (e.g., grip, stance, alignment)
   b. execution of technique (e.g., body and limb positions, movement mechanics, breathing, focus, arousal)
   c. correction of improper technique

B. Teach and Evaluate Plyometric Exercise Technique

1. preparatory body and limb position (e.g., stance, posture, alignment)
2. execution of technique (e.g., body and limb positions, movement mechanics, breathing, focus, arousal)
3. correction of improper technique

C. Teach and Evaluate Speed/Sprint Technique (e.g., resisted and assisted sprinting, speed-strength):

1. preparatory body and limb position (e.g., stance, posture, alignment)
2. execution of technique (e.g., body and limb positions, movement mechanics, breathing, focus, arousal)
3. correction of improper technique

D. Teach and Evaluate Agility Technique (e.g., forward, backward and lateral movements; turn, transition, acceleration, and deceleration maneuvers)

1. preparatory body and limb position (e.g., stance, posture, alignment)
2. execution of technique (e.g., body and limb positions, movement mechanics, breathing, focus, arousal)
3. correction of improper technique

E. Teach and Evaluate Metabolic Conditioning/Energy Systems Development
## Detailed Content Outline

### PRACTICAL / APPLIED

<table>
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<tr>
<th>Cognitive Level</th>
<th>Recall</th>
<th>Application</th>
<th>Analysis</th>
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<tr>
<td>1. Cardiovascular equipment (e.g., treadmill, bicycle, rowing machine, stair stepper, elliptical trainer)</td>
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</tr>
<tr>
<td>a. machine programming and setup</td>
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</tr>
<tr>
<td>b. preparatory body and limb position (e.g., stance, posture, alignment)</td>
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<tr>
<td>c. execution of technique (e.g., body and limb positions, movement mechanics, breathing, focus, arousal)</td>
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<td></td>
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</tr>
<tr>
<td>d. correction of improper technique</td>
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<tr>
<td>2. General body-only activities (e.g., walking, jogging, running, swimming)</td>
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<tr>
<td>a. execution of technique (e.g., body and limb positions, movement mechanics, breathing, focus, arousal)</td>
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<tr>
<td>b. correction of improper technique</td>
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<tr>
<td>3. Anaerobic conditioning activities (e.g., conditioning drills, heavy rope training, intermittent training)</td>
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<tr>
<td>a. execution of technique (e.g., body and limb positions, movement mechanics, breathing, focus, arousal)</td>
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<tr>
<td>b. correction of improper technique</td>
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<tr>
<td>F. Teach and Evaluate Flexibility Exercise Technique:</td>
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<tr>
<td>1. Static stretching exercises</td>
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<tr>
<td>a. preparatory body and limb position (e.g., stance, posture, alignment)</td>
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<tr>
<td>b. execution of technique (e.g., body and limb positions, movement mechanics, breathing, focus, arousal)</td>
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<tr>
<td>c. correction of improper technique</td>
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<tr>
<td>2. Proprioceptive neuromuscular facilitation (PNF) stretching exercises</td>
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<tr>
<td>a. preparatory body and limb position (e.g., stance, posture, alignment)</td>
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<tr>
<td>b. body mechanics to perform PNF stretching on an athlete</td>
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<tr>
<td>c. execution of technique (e.g., body and limb positions, movement mechanics, breathing, focus, arousal)</td>
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<tr>
<td>d. correction of improper technique</td>
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<tr>
<td>3. Dynamic stretching exercises</td>
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<tr>
<td>a. preparatory body and limb position (e.g., stance, posture, alignment)</td>
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<tr>
<td>b. execution of technique (e.g., body and limb positions, movement mechanics, breathing, focus, arousal)</td>
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<tr>
<td>c. correction of improper technique</td>
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<tr>
<td>G. Teach Spotting Procedures and Techniques</td>
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</tr>
<tr>
<td>1. Number of spotters needed for a given situation or exercise</td>
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<tr>
<td>2. Spotter location (i.e., the physical placement of the spotter or spotters in relation to the lifter)</td>
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<tr>
<td>3. Body and limb placement required when spotting the lifter (i.e., once in the correct position)</td>
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</tbody>
</table>

2. **PROGRAM DESIGN**

Based upon an athlete’s health status, training age, capabilities, and training goals, design training programs that maximize performance and minimize injury potential by...

- Incorporating Various Training Methods and Modes
## PRACTICAL / APPLIED

<table>
<thead>
<tr>
<th>Detailed Content Outline</th>
<th>Cognitive Level</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>B. Selecting Exercises</strong></td>
<td></td>
</tr>
<tr>
<td>1. Exercises specific to movement patterns of a particular sport (e.g., an exercise and</td>
<td></td>
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<tr>
<td>its application and effectiveness for a sport, an exercise and movements involved in a</td>
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<tr>
<td>sport, an exercise and muscles used in sport)</td>
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<tr>
<td>2. Exercises (e.g., power, core, assistance, structural) based upon the type or number of</td>
<td></td>
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<tr>
<td>the involved muscle group or groups (e.g., what exercise trains certain muscle(s); how to</td>
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<tr>
<td>change an exercise to change the involved muscles)</td>
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<tr>
<td>3. Exercises based upon the type of kinetic chain movement (e.g., open or closed)</td>
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<tr>
<td>4. Exercises to minimize injury potential (e.g., hamstring versus quadriceps, upper body</td>
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<tr>
<td>versus lower body)</td>
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<tr>
<td>5. Exercises to promote recovery</td>
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<tr>
<td><strong>C. Applying the Principles of Exercise Order</strong></td>
<td></td>
</tr>
<tr>
<td>1. Order of exercises based on the training goal</td>
<td></td>
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<tr>
<td>2. Variations in exercise orders (e.g., large to small muscle groups, alternating push</td>
<td></td>
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<tr>
<td>with pull, alternating upper body exercises with lower body exercises)</td>
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<tr>
<td>3. Variations in exercise modes (e.g., explosive training, strength training, warmup/</td>
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<tr>
<td>workout/cooldown, energy system training prioritization)</td>
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<tr>
<td>**D. Determining and Assigning Exercise Intensities (e.g., load, resistance, heart rate)</td>
<td></td>
</tr>
<tr>
<td>1. Methods for assigning an exercise load (e.g., a percent of the 1RM or the athlete's</td>
<td></td>
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<tr>
<td>body weight, RM loads, RPE or exercise heart rate (e.g., a percent of maximum heart rate</td>
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<tr>
<td>or functional capacity, the Karvonen method)</td>
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<tr>
<td>2. Load or exercise heart rate based on the training goal (e.g., muscular endurance,</td>
<td></td>
</tr>
<tr>
<td>hypertrophy, strength, power, aerobic endurance)</td>
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</tr>
<tr>
<td><strong>E. Determining and Assigning Training Volumes (defined as sets x reps)</strong></td>
<td></td>
</tr>
<tr>
<td>1. Outcomes associated with the manipulation of training volume</td>
<td></td>
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<tr>
<td>2. Volume based on the training goal (e.g., muscular endurance, hypertrophy, strength,</td>
<td></td>
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<tr>
<td>power, aerobic endurance)</td>
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<tr>
<td><strong>F. Determining and Assigning Work/Rest Periods, Recovery and Unloading, and Training</strong></td>
<td></td>
</tr>
<tr>
<td>1. Work/rest periods and recovery (e.g., muscular endurance, hypertrophy, strength,</td>
<td></td>
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<tr>
<td>power, metabolic conditioning)</td>
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<tr>
<td>2. Training frequency (e.g., muscular endurance, hypertrophy, strength, power,</td>
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<tr>
<td>metabolic conditioning, recovery)</td>
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<tr>
<td>**G. Determining and Assigning Exercise Progression (e.g., mode, intensity, duration,</td>
<td></td>
</tr>
<tr>
<td>frequency)**</td>
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</tr>
<tr>
<td><strong>H. Applying the Principles of Periodization</strong></td>
<td></td>
</tr>
<tr>
<td>1. Periodization (e.g., the periods/phases/cycles, the types of training programs</td>
<td></td>
</tr>
<tr>
<td>associated with the phases/periods/cycles)</td>
<td></td>
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<tr>
<td>2. Training variations based on a sport season (i.e., a certain training period, phase,</td>
<td></td>
</tr>
<tr>
<td>or cycle for a specific sport season)</td>
<td></td>
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<tr>
<td>3. A periodized program specific to the athlete's demands of a sport, position, and</td>
<td></td>
</tr>
<tr>
<td>training level</td>
<td></td>
</tr>
<tr>
<td><strong>I. Designing Programs for an Injured Athlete During the Reconditioning Period</strong> (e.g.,</td>
<td></td>
</tr>
<tr>
<td>assigning exercises for a given injury or condition in collaboration with sport medicine</td>
<td></td>
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<tr>
<td>professionals)</td>
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</tr>
</tbody>
</table>
3. ORGANIZATION AND ADMINISTRATION

A. Determine the Design, Layout, and Organization of the Strength and Conditioning Facility (e.g., flooring, ceiling height, mirror placement, ventilation, lighting, characteristics of the equipment) Based on Athletic Needs and Industry Standards

B. Determine the Primary Duties and Responsibilities of the Members of the Strength and Conditioning Staff

C. Determine the Policies and Procedures Associated with the Operation of the Strength and Conditioning Facility (e.g., facility/equipment cleaning and maintenance, rules, scheduling, emergency procedures)

D. Create a Safe Training Environment Within the Strength and Conditioning Facility:
   1. Identify common litigation issues and ways to reduce or minimize the risk of liability within the facility
   2. Recognize symptoms relating to overuse, overtraining and temperature-induced illness
   3. Recognize when to refer an athlete to and/or seek input from allied health professionals (e.g., athletic trainer, physical therapist, physician, registered dietitian, sport psychologist)

4. TESTING AND EVALUATION

A. Select and Administer Tests to Maximize Test Reliability and Validity
   1. Tests based upon the unique aspects of a sport, sport position and training status
   2. Test administration procedures that use equipment, personnel, and time efficiently

B. Administer Testing Protocols and Procedures to Ensure Reliable Data Collection
   1. Testing equipment and its proper use
   2. Testing procedures (e.g., warm-up, how to test, proper rest between trials)
   3. Testing to assess physical characteristics (e.g., body weight, girth, body fat, height) and evaluate performance (e.g., muscular strength, power, anaerobic capacity, muscular endurance, aerobic endurance, agility, speed, flexibility)

C. Evaluate and Interpret Test Results
   1. Validity of test results
   2. Typical vs. atypical test results based on a sport or sport position
   3. Design or modification of the training program based on test results (i.e., determine which outcome of training needs to be improved in a future program)

Totals for PRACTICAL/APPLIED section:

<table>
<thead>
<tr>
<th>Total Items</th>
<th>Recall</th>
<th>Application</th>
<th>Analysis</th>
<th>Totals</th>
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<tr>
<td>21</td>
<td>54</td>
<td>35</td>
<td>110</td>
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</tbody>
</table>
CSCS Sample Questions

1. Which of the following shoulder movements and planes of motion are associated with the upward movement phase of the side lateral shoulder raise exercise?
   A. flexion/transverse
   B. abduction/sagittal
   C. abduction/frontal

2. An untrained college-aged athlete begins a resistance training program. After training for three weeks, her strength increases dramatically. Which of the following is the most influential factor responsible for this improvement?
   A. decreased cross-sectional area of Type I fibers
   B. increased number of muscle fibers
   C. improved neuromuscular efficiency

3. What is the MINIMUM amount of carbohydrates that a 132-lb (60-kg) competitive Olympic triathlete should consume on a daily basis?
   A. 120 g
   B. 480 g
   C. 960 g

4. When running, which of the following contributes the MOST to minimizing the braking effect of a heel foot strike?
   A. eccentric hip flexion
   B. concentric hip extension
   C. eccentric knee extension

5. Which of the following components of mechanical load is the LEAST important for stimulating new bone formation?
   A. rest period
   B. magnitude
   C. rate of loading

Answers: (1) C (2) C (3) B (4) B (5) A
Appendix I: NSCA-CPT Detailed Content Outline and Sample Questions

<table>
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<tr>
<td>Analysis</td>
<td>7</td>
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</table>

## 1. CLIENT CONSULTATION & ASSESSMENT

### A. Initial Interview
1. Determine compatibility between a client and a personal trainer
2. Administer a client-personal trainer and/or a client-personal trainer-fitness facility agreement
3. Administer an informed consent and liability waiver form
4. Administer an assessment inventory on attitude and readiness

### B. Medical History and Health Appraisal
1. Administer a detailed medical history/health appraisal form and a lifestyle questionnaire (including exercise and injury history)
2. Obtain a medical release from the client’s primary physician, if necessary
3. Interpret medical history/health appraisal form and lifestyle questionnaire
4. Refer a client to and/or seek input from an appropriate healthcare professional
5. Maintain a network of allied healthcare professionals

### C. Fitness Evaluation
1. Conduct fitness evaluation including:
   a. vital signs (heart rate, blood pressure)
   b. height
   c. weight
   d. body composition
   e. girth measurements
   f. muscular strength
   g. muscular endurance
   h. speed/agility/power
   i. cardiovascular endurance
   j. flexibility
   k. postural alignment/muscle balance
2. Conduct movement assessments
3. Interpret the results of a health/fitness evaluation
4. Refer a client to and/or seek input from an appropriate healthcare professional

### D. Basic Nutrition Review
1. Identify the personal trainer’s scope of practice regarding nutritional recommendations
2. Conduct a review of a client’s dietary habits (e.g., recall, history, or food records)
3. Communicate basic information from peer-reviewed resources regarding nutrition, supplements, nutrient timing, and daily caloric needs
4. Recognize the signs and symptoms of an eating disorder
5. Refer client to and/or seek input from an appropriate healthcare professional
### 2. PROGRAM PLANNING

<table>
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<td>17</td>
<td>13</td>
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</tbody>
</table>

#### A. Goal Setting
1. Establish needs and goals by discussing the results of a fitness evaluation with a client
2. Establish needs and goals by discussing the results of dietary habit log with a client
3. Establish needs and goals by discussing health-related lifestyle habits (e.g., smoking, alcohol use) with a client
4. Determine the motivational/coaching techniques (e.g., reward system, reinforcement strategies, mental imagery techniques, visualization) that will be effective for a client

#### B. Program Design
1. Select the exercise modality or type
2. Select the warm-up/cool down exercises
3. Determine the order of exercises or exercise components
4. Determine the exercise intensity or workload
5. Determine exercise duration
6. Determine exercise frequency
7. Determine the rate of exercise progression

#### C. Training Adaptations
1. Describe exercise-induced changes to body structures
   a. muscles
   b. tendons, ligaments, and connective tissue
   c. bone and cartilage
   d. adipose tissue (fat stores)
2. Describe exercise-induced changes to body systems
   a. neuromuscular
   b. cardiorespiratory
   c. metabolic
   d. endocrine
   e. psychological

#### D. Special Populations
1. Determine the capacities and limitations of a client with a specialized need or condition
   a. age-specific conditions (e.g., older adults, prepubescents, adolescents)
   b. female-specific conditions (e.g., prenatal, postpartum, postmenopausal)
   c. individuals with psychological disorders/conditions (e.g., depression, eating disorders)
   d. individuals with orthopedic disorders/conditions (e.g., arthritis, osteoporosis/osteopenia, amputations, musculoskeletal trauma, rhabdomyolysis)
   e. individuals with cardiovascular disorders/conditions (e.g., hypertension, hyperlipidemia, post-cardiac rehabilitation, peripheral vascular disease, stroke)
   f. individuals with metabolic disorders/conditions (e.g., overweight, obese, diabetes, metabolic syndrome)
   g. individuals with respiratory disorders/conditions (e.g., asthma, chronic obstructive pulmonary disease)
### NSCA-CPT® EXAMINATION
#### Detailed Content Outline

<table>
<thead>
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<td>Application</td>
<td>42</td>
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<tr>
<td>Analysis</td>
<td>140</td>
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</table>

**h.** individuals with neurological disorders (e.g., epilepsy, multiple sclerosis, cerebral palsy, spinal cord injuries, paralysis, Parkinson’s disease, Down’s syndrome, traumatic brain injury)

**i.** individuals training for a certain sport/competition (e.g., athletes)

**j.** Individuals with fibromyalgia

**k.** Individuals with cancer

2. Modify the exercise program to coincide with the limitations and capacities of a client with a specialized need or condition

3. Refer a client to and/or seek input from an appropriate healthcare professional

### 3. TECHNIQUES OF EXERCISE

Evaluate exercise technique (including body position, speed/control of movement, movement/range of motion, progression, cueing, muscular involvement, breathing, spotting/safety guidelines, and functional movement*)

| A. | Machine Resistance Exercises (e.g., plate-loaded, selectorized, hydraulic, air, friction, tubing) |
| B. | Free Weight Exercises (e.g., barbells, dumbbells) |
| C. | Flexibility Exercises (e.g., static, ballistic, dynamic, PNF, active isolated stretching) |
| D. | Calisthenic and Body Weight Exercises (e.g., yoga, pull-up, pushup, torso exercises) |
| E. | Sport-specific/Performance-related Activities (e.g., plyometrics, sprinting, agility drills, reaction) |
| F. | Cardiovascular Machines (e.g., treadmill, stationary bike, rowing machine, stair-stepper, elliptical trainer) |
| G. | Non-machine Cardiovascular Activities (e.g., running, walking, swimming, aerobic dancing) |
| H. | Alternative Training Activities (e.g., tire-flipping, weighted carries, sandbags, ropes, chains, stability balls, kettleballs, medicine balls, resistance bands, balance) |

### 4. SAFETY, EMERGENCY PROCEDURES and LEGAL ISSUES

<table>
<thead>
<tr>
<th>A. Safety Procedures</th>
<th>11</th>
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<tbody>
<tr>
<td>1. Maintain exercise equipment</td>
<td></td>
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<tr>
<td>2. Establish an exercise environment consistent with industry standards</td>
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<tr>
<td>3. Respond to symptoms of overtraining, overuse injuries, and temperature-induced illness</td>
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<thead>
<tr>
<th>B. Emergency Response</th>
<th>1</th>
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<tbody>
<tr>
<td>1. Perform basic first aid consistent with industry standards</td>
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<tr>
<td>2. Perform CPR and use an Automated External Defibrillator (AED) consistent with industry standards</td>
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<tr>
<td>3. Implement a plan to respond to an emergency in an exercise facility (e.g., fire, tornado, medical situation)</td>
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<thead>
<tr>
<th>C. Professional, Legal and Ethical Responsibility</th>
<th>19</th>
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</thead>
<tbody>
<tr>
<td>1. Recognize litigation issues and circumstances</td>
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<tr>
<td>2. Maintain a professional client-personal trainer relationship</td>
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<td>3. Maintain client-personal trainer confidentiality</td>
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<td>4. Ensure documentation is maintained related to professional, legal, and ethical responsibilities (e.g., incident reporting, PAR-Q, HIPAA, compliance, facility maintenance requirements)</td>
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</table>

| Totals | 40 | 58 | 42 | 140 |
NSCA-CPT Sample Questions

1. Which of the following describes when the personal trainer should administer a medical history questionnaire to a client?
   
   A. before the fitness evaluation
   B. immediately after the first exercise session
   C. during the physician's medical examination

2. A moderate intensity (8-12RM loads) resistance training program involving one minute rest periods between sets and exercises is designed PRIMARILY to improve a client’s
   
   A. strength
   B. hypertrophy
   C. power

3. A personal trainer offers free sessions to clients who achieve their goals within a predetermined amount of time. Which of the following describes this motivational technique?
   
   A. intrinsic motivation
   B. achievement motivation
   C. positive reinforcement

4. What is the day’s caloric intake of a client who consumed 100 g of protein, 450 g of carbohydrates, and 40 g of fat in one day?
   
   A. 5310 kcals
   B. 4180 kcals
   C. 2560 kcals

5. A client’s 10RM in the bench press exercise is 150 lb (68 kg). Which of the following is this client’s estimated 1RM?
   
   A. 170 lb (77 kg)
   B. 200 lb (91 kg)
   C. 230 lb (105 kg)

Answers: (1) A (2) B (3) C (4) C (5) B
### 1. BASIC PATHOPHYSIOLOGY AND SCIENCE OF HEALTH STATUS or CONDITION, DISORDER, or DISEASE

<table>
<thead>
<tr>
<th>Cognitive Level</th>
<th>Recall</th>
<th>Application</th>
<th>Analysis</th>
<th>Total # of Questions</th>
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<tr>
<td></td>
<td>8</td>
<td>22</td>
<td>10</td>
<td>40</td>
</tr>
</tbody>
</table>

**A. Cardiovascular: Individuals with...**
1. Myocardial infarction
2. Angina
3. Hypertension
4. Peripheral vascular disease (e.g., deep vein thrombosis, peripheral artery disease)
5. Congestive heart failure
6. Valvular disorders
7. Revascularizations
8. Conduction defects or disorders (e.g., atrial fibrillation, pacemakers)

**B. Pulmonary: Individuals with...**
1. Chronic obstructive pulmonary disease (COPD) (e.g., emphysema, chronic bronchitis)
2. Chronic restrictive pulmonary disease (CRPD) (e.g., fibrosis, sarcoidosis)
3. Asthma
4. Pulmonary hypertension

**C. Metabolic**
1. Individuals with diabetes mellitus (Type 1 and 2)
2. Individuals who are overfat
3. Individuals with pre-diabetes
4. Individuals who have metabolic syndrome
5. Individuals with thyroid disorders (hypo/hyperthyroidism)
6. Individuals with end stage renal disease

**D. Immunological and Hematological: Individuals with**
1. AIDS/HIV
2. Chronic fatigue syndrome
3. Fibromyalgia
4. Anemia
5. Auto-immune disorders (e.g., lupus, rheumatoid arthritis)
6. Bleeding/clotting disorders

**E. Musculoskeletal/Orthopedic: Individuals with**
1. Osteoporosis and other low BMD conditions
2. Limb amputations
3. Osteoarthritis
4. Lower back conditions
5. Chronic musculoskeletal conditions (e.g., OA, osteoporosis, low back pain)
6. Frailty
### CSPS® EXAMINATION

#### Detailed Content Outline

(2012 version, based on 100 items) A shaded box denotes the examination will NOT contain items for the given task at the cognitive level indicated in the respective column (recall, application, or analysis).

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<tr>
<th>Cognitive Level</th>
<th>Recall</th>
<th>Application</th>
<th>Analysis</th>
<th>Total # of Questions</th>
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<tbody>
<tr>
<td>7. Joint disorders (e.g., muscle, labrum, ligament, cartilage, tendons)</td>
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<tr>
<td>8. Joint replacements (e.g., shoulder, knee, hip)</td>
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<tr>
<td>9. Sarcopenia</td>
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<tr>
<td>10. Posture conditions</td>
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<tr>
<td>11. Cystic fibrosis</td>
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<tr>
<td>F. Neuromuscular: Individuals with:</td>
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<tr>
<td>1. Stroke or brain injury</td>
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<tr>
<td>2. Spinal cord disabilities</td>
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<tr>
<td>3. Multiple sclerosis</td>
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<td>4. Cerebral palsy</td>
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<td>5. Down’s syndrome</td>
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<td>6. Parkinson’s disease</td>
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<tr>
<td>7. Epilepsy</td>
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<tr>
<td>8. Balance conditions</td>
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<tr>
<td>9. Muscular dystrophy</td>
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<tr>
<td>G. Post Rehabilitation: Individuals with:</td>
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<tr>
<td>1. Musculoskeletal disorders/conditions</td>
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<tr>
<td>2. Cardiopulmonary disorders/conditions</td>
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<tr>
<td>3. Neuromuscular disorders/conditions</td>
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<tr>
<td>H. Individuals with Cancer</td>
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<tr>
<td>I. Female Specific Conditions</td>
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<tr>
<td>1. Pregnant and postpartum</td>
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<td>2. Female athlete triad</td>
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<tr>
<td>3. Menopausal/post-menopausal</td>
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<td>J. Individuals with Behavioral/Psychological Disorders</td>
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<tr>
<td>1. Disordered eating patterns</td>
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<tr>
<td>2. Body image</td>
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<tr>
<td>3. Depression</td>
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<td>4. Chemical dependency</td>
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<tr>
<td>K. Older Adults</td>
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<tr>
<td>L. Children and Adolescents</td>
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### 2. CLIENT CONSULTATION

<table>
<thead>
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<th>Cognitive Level</th>
<th>Recall</th>
<th>Application</th>
<th>Analysis</th>
<th>Total # of Questions</th>
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</thead>
<tbody>
<tr>
<td>A. Determine the Fitness Professional’s Role in the Wellness Continuum</td>
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<tr>
<td>1. Align goals of the medical professional, client, and fitness professional</td>
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<tr>
<td>2. Maintain lines of communication with the primary healthcare provider</td>
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<tr>
<td>3. Optimize communication between the fitness professional and medical professionals</td>
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<td>4. Verify physician’s clearance to exercise</td>
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<tr>
<td>B. Perform Health Appraisal</td>
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<tr>
<td>1. Understand basic medical terminology</td>
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### CSPS® EXAMINATION

**Detailed Content Outline**

(2012 version, based on 100 items) A shaded box denotes the examination will NOT contain items for the given task at the cognitive level indicated in the respective column (recall, application, or analysis).

<table>
<thead>
<tr>
<th>Cognitive Level</th>
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<tr>
<td>Recall</td>
<td>Application</td>
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<tr>
<td>2.</td>
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<td>3. Administer life-style questionnaire</td>
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<td>4. Interpret “levels of pain” or prognosis (severity of condition; e.g., kurtzke expanded disability status scale)</td>
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<td>5. Interpret medical documentation</td>
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<td>6. Document subjective client feedback and observations relevant to medical condition</td>
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<td>7. Contact medical professionals for needed information or clarification on medical history, restrictions, etc.</td>
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<td>8. Identify signs and symptoms that indicate an individual should be referred for medical care</td>
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<td>9. Understand the roles of health professionals that prescribe exercise (e.g., physicians, physical therapists, occupational therapists, athletic trainers)</td>
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<tr>
<td>10. Perform nutritional review</td>
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</tbody>
</table>

**C. Fitness Evaluation**

1. Conduct fitness evaluation
   a. vital signs (e.g., heart rate, blood pressure)
   b. height and weight
   c. body composition (e.g., “Bod Pod” and DXA reports)
   d. girth measurements
   e. muscular strength and endurance
   f. speed/agility/power
   g. cardiovascular endurance (e.g., submaximal VO2 max test on treadmill and bike)
   h. flexibility
   i. lipid profile
   j. lung function
   k. postural assessment
   l. balance
   m. functional assessment
   n. evaluations specific for individuals with limited ability (e.g., 6-min walk, modified sit-and-reach from a chair, 8 lb. curl test, chair stands)

2. Prioritize need for clients with multiple diseases
3. Adjust fitness evaluation based on medical conditions and restrictions
4. Determine testing measures for the client
5. Document client progression with objective and subjective criteria

### 3. PROGRAM PLANNING

<table>
<thead>
<tr>
<th>A. Develop SMART Goals</th>
<th>Recall</th>
<th>Application</th>
<th>Analysis</th>
<th>Total # of Questions</th>
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<th>Application</th>
<th>Analysis</th>
<th>Total # of Questions</th>
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</thead>
</table>

#### B. Program Design

1. Develop individual training programs that are adapted to specific health condition *(types, duration, frequency, intensity, progression, rest)*
2. Develop group training programs that are adapted to specific health condition *(types, duration, frequency, intensity, progression, rest)*
3. Identify exercises indicated and contraindicated for client’s condition
4. Identify environmental risks *(e.g., MS and heat tolerance)*
5. Evaluate communicable disease risk *(client to fitness professional OR fitness professional to client)*
6. Modify the warm-up and cool-down program to coincide with the limitations and capacities of a client
7. Modify the exercise program to coincide with the limitations and capacities of a client
8. Instruct a client on therapeutic exercise technique and equipment *(including body position, speed/control of movement, movement/range of motion, breathing, and spotting/safety guidelines)*
   a. aquatic
   b. range of motion
   c. exercise with accessory equipment *(e.g., chairs, walker/cane, gait belt)*
   d. balance/perturbation training
   e. partner-assisted *(support person and conduction exercises beyond the medical fitness center/facility, or how they can help during the process of exercise)*
   f. home programs
9. Understand exercise-induced changes to body systems
   a. neuromuscular system
   b. cardiorespiratory system
   c. musculoskeletal system
   d. endocrine
   e. psychological

#### C. Apply Motivational/Coaching Techniques

1. Motivational interviewing
2. Stages of change
3. Transtheoretical model
4. Behavioral economics
5. Planned behavior theory
6. Cognitive theory
7. Relapse prevention
8. Positive psychology
9. Solution-focused coaching

#### D. Monitor Client Outcomes

#### E. Recognize Need for Referral to Healthcare Professional
### CSPS® EXAMINATION

#### Detailed Content Outline

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<tbody>
<tr>
<td>Recall</td>
<td>Application</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>4. SAFETY, EMERGENCY PROCEDURES, AND LEGAL ISSUES</th>
<th>4</th>
<th>6</th>
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<th>10</th>
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<tbody>
<tr>
<td>A. Comply with Scope of Practice Requirements</td>
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<tr>
<td>B. Practice Safety Procedures</td>
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<tr>
<td>C. Follow Emergency Procedures</td>
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<tr>
<td>D. Recognize Professional, Legal, and Ethical Responsibilities</td>
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<td>E. Comply with HIPAA regulations</td>
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**TOTAL ITEMS**  
21 59 20 100
**CSPS Sample Questions**

1. The initial strength training program for a client with Stage I hypertension should include which of the following variables?

<table>
<thead>
<tr>
<th>Reps</th>
<th>% 1RM</th>
<th>Rest Periods</th>
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<tbody>
<tr>
<td>A.</td>
<td>10</td>
<td>70</td>
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<tr>
<td>B.</td>
<td>15</td>
<td>60</td>
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<tr>
<td>C.</td>
<td>20</td>
<td>50</td>
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</table>

2. Which of the following exercises are CONTRAINDICATED for a client who suffers from spondylolysis?

   - A. lying trunk extension
   - B. lat pulldown
   - C. abdominal curls

3. A 25-year-old male client visits his physician because he wants to begin an exercise program. Results of a maximal graded exercise test indicate he has episodes of supraventricular tachycardia at a heart rate of 160 bpm. The physician clears him for exercise. Based on this information, which of the following should the fitness professional do?

   - A. Perform a cardiorespiratory evaluation up to 85% of the age-predicted HRmax.
   - B. Recommend a heart-healthy diet and begin a low intensity exercise program.
   - C. Conduct a fitness examination using 150 bpm as the maximum heart rate.

4. A client has been medically diagnosed as having tendonitis of the supraspinatus. Which of the following exercises is CONTRAINDICATED?

   - A. supine triceps extension
   - B. dumbbell pullover
   - C. seated row

**SCENARIO**

A new 45-year-old female client is a business owner and has three small children. Her medical history reveals the following:

- Height: 5 ft 5 in. (165 cm)
- Weight: 220 lb (100 kg)
- TC: 290 mg/dL
- Triglycerides: 214 mg/dL
- ECG: Normal
- Blood pressure: 115/100 mm Hg
- Resting heart rate: 68 bpm
- Maximum heart rate: 179 bpm
- Additional history: Congenital heart murmur
- Gained 80 lb (36.3 kg) within the last 2 years
- Family history: Mother had a malignant breast tumor removed
- Aunt died of breast cancer at age 41
- No family history of coronary artery disease
Her primary goals are to “get healthy” and “increase stamina” to keep up with her children. The client states that she feels very flexible in her low back and legs. Her ankles sometimes swell. She owns a treadmill and enjoys walking.

END OF SCENARIO

5. Which of the following is this client’s major coronary risk factor?

A. known heart murmur

B. diastolic blood pressure of more than 90 mm Hg

C. ankle edema

Answers: (1) C (2) A (3) C (4) B (5) B
Appendix K: TSAC-F Detailed Content Outline and Sample Questions

<table>
<thead>
<tr>
<th>Exercise Sciences</th>
<th>Cognitive Level</th>
<th>Total # of Questions</th>
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<tbody>
<tr>
<td>1. EXERCISE SCIENCES</td>
<td>Recall</td>
<td>Application</td>
</tr>
<tr>
<td>A. Apply General Concepts of Anatomy and Physiology</td>
<td>9</td>
<td>15</td>
</tr>
<tr>
<td>1. Muscle anatomy (e.g., muscle group names, specific muscle names)</td>
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<tr>
<td>2. Muscular dynamics involved during movement patterns (e.g., types of muscle action)</td>
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<tr>
<td>3. Bone and connective tissue anatomy</td>
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<tr>
<td>4. Bone and connective tissue responses to exercise</td>
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<tr>
<td>5. Cardiopulmonary anatomy (e.g., heart and vascular structure, lungs and respiratory system structure)</td>
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<tr>
<td>6. Cardiopulmonary responses to exercise</td>
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<tr>
<td>B. Apply Basic Concepts of Neuromuscular Anatomy and Physiology</td>
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<tr>
<td>1. Neuromuscular anatomy (e.g., motor unit, Type I and II fibers, muscle spindles, Golgi tendon organs)</td>
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<tr>
<td>2. Neuromuscular responses to exercise (e.g., chronic neuromuscular adaptations, motor unit recruitment patterns, nerve conduction, summation)</td>
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<tr>
<td>C. Apply the Basic Principles of Biomechanics Regarding Exercise Selection, Execution, and Operation/Mission Performance</td>
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<tr>
<td>1. Kinetic laws and principles of movement (e.g., lever systems, momentum, work, isometric/isotonic/isokinetic)</td>
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<tr>
<td>2. Kinematic laws and principles of movement (e.g., velocity, anatomical planes of movement, joint angles)</td>
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<td>3. Various types of muscle action (isometric, concentric, and eccentric) and the force-velocity and torque-velocity relationships</td>
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<td>4. Role of muscles in movement (e.g., agonist, antagonist, synergist, stabilizer)</td>
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<tr>
<td>D. Describe Bioenergetics and Metabolism (e.g., names and characteristics of energy systems, effects of manipulating training variables)</td>
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<tr>
<td>E. Describe Physiological Adaptations to Exercise Designed to Improve...</td>
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<tr>
<td>1. Aerobic endurance</td>
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<td>2. Muscular endurance</td>
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<td>3. Strength</td>
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<td>4. Speed</td>
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<td>5. Power</td>
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<tr>
<td>F. Explain Detraining and Retraining</td>
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<tr>
<td>1. The usual time course of detraining and retraining</td>
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<tr>
<td>2. Minimum training requirements to maintain training adaptations</td>
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<tr>
<td>G. Explain the Expected Anatomical, Physiological, and Biomechanical Differences of Tactical Athletes (e.g., age, gender, training status, position responsibilities, specific operation/mission or activity)</td>
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<tr>
<td>H. Correlate Phases of Rehab (e.g., protection, controlled motion, return to function) with Tissue Healing Phases (e.g., inflammation, repair, remodel)</td>
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</table>
### 1. Identify Environmental Concerns (e.g., heat, cold, altitude, smoke, uneven terrain) for Tactical Athletes

1. Physiological response to exercise in adverse conditions
2. Environmental illnesses (e.g., heat stroke, hypothermia) and their predisposing factors
3. Effects on physical performance and work capacity
4. Process and time course of acclimatization/adjustment
5. Recommended limitations to physical exercise in adverse conditions
6. Impact of body composition on tolerance
7. Apparel for exercise
8. Manipulation of training programs when training in adverse conditions

### 2. NUTRITION

#### A. Explain Nutritional Factors Affecting Health and Performance

1. Health-related and performance-related application of food (e.g., food groups, food exchanges, ChooseMyPlate.gov, nutrient density, glycemic load)
2. Basic nutritional needs of individuals and the unique nutritional needs of conventional military and special operations and emergency personnel (e.g., proteins, carbohydrates, vitamins, minerals)
3. Caloric expenditure during various forms of exercise
4. Coronary artery disease risk factors associated with dietary choices and obesity (e.g., cholesterol, triglycerides, saturated fat)
5. Effects of fluid and electrolyte balance/imbalance on health and performance

#### B. Explain Nutritional Strategies for Optimizing Body Composition and Maximizing Physical Performance and Recovery

1. Nutritional strategies for fat loss and gain and lean body mass increase
2. Timing and composition of nutrient and fluid intake before, during, and after an exercise session or operation/mission
3. Nutritional factors that affect muscular endurance, hypertrophy, strength, and aerobic endurance
4. Nutrition requirements during deployment and shift work
   a. effects of prolonged periods operating on a caloric deficit (deployment or prolonged emergency response)
   b. nutritional strategies for coping with unpredictability of access to food and water

#### C. Describe Signs, Symptoms, Behaviors, and Performance Variations Associated with Obesity, and Altered Eating Habits and Disorders

#### D. Explain the Effects, Risks, and Alternative of Common Performance-Enhancing Substances, Supplements, and their Methods of Use (e.g., creatine, protein, anabolic steroids, blood doping, caffeine, supplemental oxygen)

1. Effects of ergogenic aids on performance
2. Side effects of ergogenic aids
3. Signs and symptoms of ergogenic aid abuse

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<thead>
<tr>
<th>Cognitive Level</th>
<th>Recall</th>
<th>Application</th>
<th>Analysis</th>
<th>Total # of Questions</th>
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<tbody>
<tr>
<td></td>
<td>9</td>
<td>4</td>
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### TSAC-F EXAMINATION
**Detailed Content Outline**
130 Items

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<tr>
<th>Cognitive Level</th>
<th>Total # of Questions</th>
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<tbody>
<tr>
<td>Recall</td>
<td>Application</td>
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<tr>
<td>3. EXERCISE TECHNIQUE Teach safe and effective techniques including preparatory body and limb position (stance, posture, alignment), execution of technique (body and limb positions, movement mechanics, breathing), correction of improper exercise technique, and spotting for...</td>
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- **A.** Warming Up Prior to Endurance Exercise, Resistance Training, Plyometric Exercise, and Speed Work
- **B.** Resistance Training Exercise Technique
  1. Free weight training equipment
  2. Resistance machines
- **C.** Alternative Modes (e.g., proximal stability, stability balance, calisthenics under load, bodyweight-only, functional), Alternative Implements (e.g., truck tires, sledge hammers, heavy ropes, logs, suspension straps, sand bags), and Alternative Environments (e.g., off-camber, uneven terrain) for Physical Training
- **D.** Plyometric Exercise Technique Including Recommendation of Type, Frequency, and Volume of Exercise Based on Training Status and Goals
- **E.** Speed/Sprint Technique (e.g., resisted and assisted sprinting, speed-strength) Both With and Without Operational Equipment (e.g., firefighting equipment, protective vests, weapons, rucksack) Including Training Needs of Specific Conventional Military and Special Operations and Emergency Personnel
- **F.** General Agility Technique (e.g., forward, backward, lateral, turn, transition, change of direction) Including Training Needs of Specific Conventional Military and Special Operations and Emergency Personnel
- **G.** Aerobic Endurance Exercise Technique
  1. Cardiovascular equipment including machine programming and set-up
  2. Functional endurance activities
- **H.** Flexibility Exercise Technique
  1. Static stretching exercises
  2. Proprioceptive neuromuscular facilitation (PNF) stretching exercises
  3. Dynamic and ballistic stretching exercises
  4. Myofascial release (e.g., foam rolling)

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### PROGRAM DESIGN

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- **A.** Based on a Tactical Athlete's Health Status, Strength and Conditioning Level, Work Demands, and Individual Training Goals, Design Training Programs that Maximize Performance, Reduce Injury Risk, and Increase Long-Term Wellness by Selecting Exercises Based on Muscle Groups, Movement Pattern, and Job Specificity...
  1. Targeting specific energy systems by manipulating training variables (e.g., mode, intensity, duration, volume, work:rest ratio)
  2. Incorporating various training methods and modes (e.g., resistance, plyometric, speed/sprint, agility, aerobic, flexibility, anaerobic threshold)
  3. Utilizing the concept of specificity
  4. Maximizing muscle balance
5. Applying the principles of exercise order
   a. selection of the order of exercises based on the training goal (e.g., muscular endurance, hypertrophy, strength, power, aerobic endurance)
   b. application of various exercise orders (e.g., large to small muscle groups, alternating push with pull, warm-up/workout/cool-down)

6. Determining and assigning appropriate exercise intensities
   a. based on exercise or predicted heart rate
   b. based on training goal

7. Determining and assigning appropriate training volumes
   a. identification of outcomes associated with the manipulation of training volume
   b. determination of volume based on the training goal

8. Determining and assigning appropriate work periods/duration, rest periods, and training frequencies
   a. determination of duration, intensity, and work/rest patterns based on micro-, meso-, and macrocycles and training goals
   b. identification of a training load based on work schedule and optimization of recovery

9. Determining and assigning appropriate exercise progression
   a. determination of exercise mode, intensity, duration, and frequency progression to avoid stagnation and overtraining (on or off-shift)
   b. determination of an exercise progression based on the training goal

10. Applying the principles of periodization
    a. selection of training variations based on operation/mission/season
    b. design of a periodized training program specific to the demands of a operation/mission or occupation
    c. design of a periodized training program specific to an operator’s training level
    d. selection of linear (traditional) and non-linear periodization (non-traditional, concurrent training), and Block training

11. Implementation of flexibility training
    a. proper timing during a training session
    b. selection of type

B. Design Training Programs for an Injured Tactical Athlete to Maintain Training Status During the Rehabilitation and Reconditioning Period (e.g., assign safe and appropriate exercises for a given injury or condition under the direction of an athletic trainer, physical therapist, physician)

1. Identification of training objectives for each phase of rehabilitation (e.g., protection, controlled motion, return to function)
2. Modification of exercises to allow injured tactical athlete to continue training as appropriate (e.g., unilateral lifts)
3. Monitoring progress of injured tactical athletes through functional assessment
### C. Population Specific Considerations (E.G., firefighters, first responders, law enforcement, SWAT)

1. Describe Effects of Body Composition on Occupation-Related Tasks
2. Identify Methods by Which Force Output of Muscle Can Be Increased for Occupation-Related Specific Tasks
3. Describe Impacts of Equipment Load on Biomechanical Demands and Movement Patterns, and the Development of Functional Training Choices
4. Identify Anaerobic Training Methods Specific to Occupation-Specific Tasks
5. Identify Aerobic Training Methods Specific to Occupation-Specific Tasks
6. Describe Effects of Environmental Concerns on Physical Work Capacity
7. Recognize Common Injury Prevalence and Risk Factors Across Different Disciplines (e.g., wildland, police) and Sub-Disciplines (e.g., engine crews, trunk crews, hotspot crews, SWAT)
8. Explain Responses of Bone, Muscle, and Connective Tissue to Occupation-Related Job Tasks Under Load
9. Explain Acute Responses and Chronic Adaptations of the Endocrine and Cardiovascular Systems to Occupation-Related Job Tasks in High Stress Situations
10. Recognize the Causes, Signs, Symptoms, and Effects of Overtraining Caused by Occupation-Related Work Environments
11. Describe Advantages and Disadvantages of Performing Physical Training While On- and Off-Duty
12. Describe Common Chronic Injuries/Diseases
13. Select Wellness Strategies to Decrease Risk of Heart Disease Considering Nutritional Intake, Physical Activity, Stress Reduction, Smoking Cessation, Sleep Deprivation, etc.
   - a. identify critical job tasks
   - b. discuss physiological, movement, and injury analyses as they apply to each critical task
   - c. design a periodized program based on the job task analysis
15. Design Physical Training Programs to Optimize Load Carriage
   - a. improvement of short duration, high intensity load bearing
   - b. improvement of long duration, low intensity load bearing
   - c. improvement of mission-related heavy lifting
   - d. improvement of mission-related submaximal lifting and carrying
5. ORGANIZATION, ADMINISTRATION, TESTING, EVALUATION

<table>
<thead>
<tr>
<th>Item</th>
<th>Cognitive Level</th>
<th>Total # of Questions</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Recall</td>
<td>Application</td>
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<tr>
<td>5.</td>
<td>8</td>
<td>9</td>
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</table>

A. Organization and Administration
   1. Design, Layout, and Organization of the Training Facility
      a. identify specific space and equipment needs of the population(s) (e.g., conventional military, special operations, emergency personnel) that will use the facility
      b. apply strategies to arrange and space the equipment within/without the facility
   2. Policies and Procedures of the Training Facility
      a. identify the primary duties and responsibilities of the various personnel of the training facility
      b. establish rules for using the facility
   3. Safe Training Environment
      a. establish pre-participation screening requirements for the target population
      b. establish checklists and schedules for equipment maintenance and cleaning
      c. identify common litigation issues and methods for reducing and/or minimizing the risk of liability within the facility
      d. obtain insurance coverage
      e. establish procedures to respond to emergencies in the training environment
      f. recognize symptoms related to overuse and acute training injuries, and overtraining
      g. recognize when to refer a tactical athlete to another professional (e.g., athletic trainer, physical therapist, physician, registered dietitian)
      h. establish procedures for recording the type, severity, and mechanism of injuries that occur during physical training
      i. modify the facility or program to enhance training safety
   4. Establish Policies with the Department or Agency Supervisors Regarding the Type of Data Generated from the Program and the Frequency with which It Is Collected (e.g., improvements in physical fitness, participation rates)
   5. Create a Training Log
   6. Describe the Dynamics/Logistical Considerations of Training Large Groups (e.g., limited equipment, on “heavy days”, circuit training, inexperienced tactical athletes)

B. Testing and Evaluation
   1. Test Administration
      a. describe tests used by tactical organizations (e.g., Army Combat Readiness Test)
      b. select tests based upon the unique aspects of the tactical athlete’s work demands and training status
### 1. Test Administration

- c. develop alternative tests for injured/restricted individuals
- d. organize testing procedures to efficiently use equipment, personnel, and time
- e. establish a plan for testing frequency integrated within the overall periodized program
- f. explain testing equipment and procedures to tactical athletes
- g. administer testing protocols and procedures to ensure reliable data collection

### 2. Evaluation of Results

- a. discuss criteria for rating test performance
- b. use test results to design or modify training programs
- c. coach a tactical athlete who is not performing to departmental physical performance standards
- d. use psychological and motivational techniques to enhance training and performance
- e. discuss pass/fail rates

<table>
<thead>
<tr>
<th>Cognitive Level</th>
<th>Total # of Questions</th>
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<tbody>
<tr>
<td>Recall</td>
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<td>Analysis</td>
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<td>Totals</td>
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**TSAC-F Sample Questions**

1. Compared to a standard pull-up, the concentric force generated by the latissimus dorsi muscle during a kipping pull-up is
   A. higher
   B. lower
   C. equal

2. Which of the following pairs of exercises will BEST help a firefighter develop the type of strength needed when walking downhill while carrying heavy pack loads?
   A. half-squats, slow lunges
   B. power cleans, depth jumps
   C. deadlift, bench press

3. Which of the following will improve bone density the MOST?
   A. bicycle
   B. treadmill
   C. elliptical

4. Which of the following actions can lead to hyponatremia during exercise in the heat?
   A. drinking too much water
   B. drinking too little water
   C. consuming salt tablets

5. Which of the following activities would benefit the most from erythropoietin (EPO) use?
   A. 200-m sprint
   B. 15 box jumps
   C. 15-mile bike ride

**Answers:** (1) B (2) A (3) B (4) A (5) C
ABOUT THE EXAMS

The methods used to develop NSCA certification exams adhere to the procedures recommended in the Standards for Educational and Psychological Tests (APA, NCME, AERA; 2014) and other relevant industry standards, including the Principles for the Validation and Use of Personnel Selection Procedures (SIOP, 2003) and Standards for the Accreditation of Certification Programs (NCCA, 2007). NSCA certification exams measure a candidate’s knowledge, skills, and abilities (KSAs) compared to a standard—a predetermined level of competence—established by industry experts. Identifying the appropriate KSAs, writing exam items, and establishing the standard are all critical parts of the exam development process that ensure valid decisions can be made based on exam results.

Job Analysis

NSCA performs a job analysis approximately every five (5) years for each certification program to identify the critical KSAs needed to perform a job safely and effectively. The process is guided by a Job Analysis Advisory Committee (JAAC), composed of industry experts. The JAAC develops KSA surveys that are sent to a large, representative sample of certificants. The survey data is then analyzed and presented to the JAAC, who uses the data to guide the creation of a detailed content outline (DCO) for the certification exam.

Item Writing

NSCA certification exams are developed by industry experts serving on Exam Development Committees (EDCs). EDC members are selected based on their expertise as it relates to the DCOs, and are trained in item writing and reviewing by experts in testing and measurement. Before an item can be used on an exam, it is subjected to EDC review and is pre-tested. Pre-testing allows test developers to gather statistical information about new items for evaluation purposes without affecting candidate scores. Pre-test items are unscored items that appear on exam forms interspersed among scored items. Statistical information gathered from pre-test items is analyzed to determine if the items function properly and are ready for use as scored items.

Standard Setting

NSCA certification exams are designed to differentiate between candidates who meet a standard of competence and candidates who do not. The standard for an exam (also called the cut-score or passing score) is determined by the EDC through the use of a modified Angoff methodology. This accepted method requires EDC members to evaluate individual exam items and estimate the proportion of minimally competent candidates expected to answer correctly. These estimates are statistically analyzed for consistency and then aggregated to arrive at the standard.

Exam Content Outlines

Each certification exam has a detailed content outline (DCO) that organizes KSAs into major domains and subcategories. Below are summaries of the exam content outlines. The full DCOs are presented in Appendices H through K. Some tasks in a fitness profession simply involve recalling facts or applying specific information, whereas other tasks require a complete evaluation of a situation. Thus, NSCA exams contain items of varying levels of complexity.

CSCS

The CSCS Exam consists of two exams (sections):

1. Scientific Foundations
2. Practical/Applied

The first exam contains 80 scored and 15 non-scored multiple-choice items allocated across two (2) domains, and the second exam contains 110 scored and 15 non-scored multiple-choice items allocated across four (4) domains.

Scientific Foundations

The Scientific Foundations exam, which is 1.5 hours in length, consists of 80 scored multiple-choice questions and 15 non-scored multiple-choice questions designed to assess a candidate’s knowledge in the areas of exercise sciences (59 scored questions on anatomy, exercise physiology, biomechanics, etc.) and nutrition (21 scored questions). The full DCO is presented in Appendix H.

<table>
<thead>
<tr>
<th>Domain</th>
<th>Percent of Exam Section</th>
<th>Number of Questions</th>
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<tbody>
<tr>
<td>Exercise Science</td>
<td>74%</td>
<td>59</td>
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<td>Nutrition</td>
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<td>21</td>
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<tr>
<td>Non-scored Questions</td>
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<td>15</td>
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<tr>
<td><strong>Total</strong></td>
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Length of Exam Section: 1.5 hours

Practical/Applied

The Practical/Applied exam, which is 2.5 hours in length, consists of 110 scored multiple-choice questions and