

# NCCPT Certification Programs Candidate Handbook

Certified Personal Trainer (CPT) Certified Group Exercise Instructor (CGxI) Certified Indoor Cycling Instructor (CICI) Certified Yoga Instructor (CYI) Certified Strength Training Specialist (CSTS)

The NCCPT Certification Programs are accredited by the National Commission for Certifying Agencies (NCCA)

ACCREDITED CERTIFICATION PROGRAM

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# 1. General Information

# Purpose of this Handbook

The purpose of the NCCPT Certification Program Handbook is to provide information on the NCCPT certification processes: eligibility requirements, application procedures, exam development and administration, and recertification/certification maintenance. The information, procedures, fees, etc., detailed in this publication may be amended, revised, or otherwise altered at any time without advance notice from NCCPT. The provision of this Handbook does not confer any rights upon an NCCPT candidate or certificant.

The NCCPT certification programs covered under this handbook are as follows:

Ce	rtification	Designation
•	Certified Personal Trainer	СРТ
٠	Certified Group Exercise Instructor	CGxI
٠	Certified Indoor Cycling Instructor	CICI
٠	Certified Yoga Instructor	CYI
٠	Certified Strength Training Specialist	t CSTS

All correspondence and requests for information concerning the administration of the NCCPT Certification programs should be directed to:

National Council for Certified Personal Trainers (NCCPT) 11201 N. Tatum Blvd., Suite #300 PMB 28058 Phoenix, AZ 85028-6039 Phone: 1 (877) 355-1640 Email: support@nccpt.com Website: www.nccpt.com

# Purpose of the NCCPT Certification Programs

The National Council for Certified Personal Trainers (NCCPT) was founded in 1995. The NCCPT Certification Board was established in 2009. During this time, the NCCPT certifications were first developed to recognize those individuals who are able to demonstrate competent knowledge and skills needed to perform as trainers in the fitness industry. The NCCPT certification programs, which are accredited by the National Commission of Certifying agencies (NCCA) serve as key indicators to fitness employers and other potential fitness clients that the trainer has proficiency to provide competent training in fitness. Individuals who earn the NCCPT credential have demonstrated knowledge of the professional domains that encompass the tasks and knowledge required of a personal trainer in the fitness profession. By meeting the eligibility criteria and successfully completing an NCCPT certification exam, certificants are able to display their aptitude as professionals in fitness training. Since 2005, the NCCPT certification program has certified over 8,000 individuals in the Personal Training industry.

#### Scope of the NCCPT Certification Programs

The NCCPT certification programs assess the knowledge, skills, and abilities required for entry level fitness trainers in the following areas of practice: *Personal Training (CPT), Group Exercise Instruction (CGxI), Yoga Instruction (CYI), Indoor Cycling Instruction (CICI), and Strength Training Instruction (CSTS).* Likely candidates to sit for these certifications would be individuals versed in training within the fitness industry, both domestically and internationally. They may likely also be individuals involved in conducting health and fitness assessments, testing procedures, consultation on wellness and public health issues.

# NCCPT Authority and Governance

The National Council for Certified Personal Trainers (NCCPT) is a subsidiary/affiliate entity of the International Sports Sciences Association (ISSA). The NCCPT functions autonomously from the ISSA with regard to the establishment and refinement of all essential decisions governing the NCCPT certification programs. This includes but is not limited to, certification eligibility requirements, recertification requirements, disciplinary determinations, examination development, examination administration, examination scoring, and selection of subject matter experts. The NCCPT Certification Board (CB) has final decision-making authority over the complete examination development cycle, which includes practice analysis (i.e., job analysis or role delineation), exam content outline, item writing, item review, development of exam forms, standard setting (i.e., cut score study), exam administration, exam scoring, candidate score reporting, and data analysis and exam technical reports. The NCCPT shall function autonomously with respect to its credentialing criteria, policies and procedures, administration, time, place, and frequency of its meetings, election of officers and members, and all other lawful activities.

The NCCPT has no role in the development of exam review materials, educational resources or conducting educational programs that may be used by candidates pursuing successful completion of the certification program.

# **NCCPT** Mission

The mission of the National Council for Certified Personal Trainers Certification Board ("NCCPT CB") is to determine entry-level competence of the fitness training professional who will provide safe and effective programs to the public.

The NCCPT believes that the health and fitness of our society can be significantly improved by the

success of certified personal professionals. Efforts to stem the tide of poor health and physical decline are multiplied exponentially as certified professionals disseminate NCCPT principles and methods to their clients, peers and associates. The mission of the NCCPT is to inspire certified personal trainers to positively impact the quality of life of each individual with whom they come in contact.

NCCPT is unconditionally committed to providing quality certification and recertification programs for competent practice in the heath, sports and fitness specialties, advancing the fitness industry as a whole, and developing greater access to career opportunities for those who share our vision of creating a stronger, healthier world.

# NCCPT Non-Discrimination Policy

In accordance with federal and state laws, NCCPT and its testing partner Prometric, do not discriminate among individuals based on color, race, religion, sexual orientation, gender, national origin, gender identity, age, genetic information, disability, veteran status, or any other protected characteristic.

In accordance with federal and state laws, NCCPT adheres to principles of fairness and due process and endorses the principles of equal opportunity. In administering the certification programs, NCCPT does not discriminate or deny opportunity to anyone on the basis of race, color, creed, age, gender, national origin, religion, disability, marital status, parental status, ancestry, sexual orientation, military discharge status, source of income, or any other status protected by applicable law. All certification candidates and certificants will be judged solely on the published eligibility and/or re-certification requirements determined by the Certification Board.

# Statement of Confidentiality

NCCPT is committed to protecting confidential or proprietary information related to applicants and certificants as well as having the same commitment regarding exam development, maintenance, and administrative processes. NCCPT will not disclose any confidential applicant/certificant information outside the course of its business unless authorized in writing by the individual or as required by law.

NCCPT certification candidate or certificant information including their demographics, exam registration and testing information is confidential, with the exception of whether he or she has a current/active certification, i.e., "certification status". Written authorization by the candidate or certificant is needed to release his or her information (excluding certification status).

#### NCCPT Impartiality Statement/Conflict of Interest

NCCPT's management and its employees, volunteers and contractors understand the importance of impartiality and the consideration of any potential conflicts of interest in carrying out its certification activities. NCCPT shall manage conflicts of interest and ensure the objectivity of its activities related to certification. NCCPT shall act impartially in relation to its applicants, candidates and certificants.

Certification of individuals is based on objective evidence obtained by NCCPT through a fair, valid and reliable exam development process which is not influenced by other interests or parties. NCCPT is committed to identifying and assessing risks in all related certification activities which may result in a conflict or pose a threat to impartiality.

# 2. Application Process

# **Eligibility Requirements**

To be eligible to sit for an NCCPT certification exam, candidates must be at least 18 years of age. Additionally, they must have a current and valid CPR/AED certification.

These NCCPT eligibility requirements relate specifically to NCCPT's certification programs and are separate from any requirements set forth by state law, regulation or rule, or by any government oversight body. The laws pertaining to fitness training may vary from state to state. Candidates are responsible for understanding and knowing the requirements if there are any that may apply which govern the practice of their profession in their ability to meet regulatory requirements set forth by any state or government agency.

# Verification of Eligibility

Verification of eligibility will be completed by the test administrator at the testing center or remotely should the exam be administered through Prometric's remote proctor process. The test administrator/proctor will then verify the current status of the certificant's CPR/AED certification.

# Enrollment Period

NCCPT-CPT Candidates have up to 12 months to sit for their exams from the date of purchase. This period can be extended for an additional six (6) months at no charge. If needed, a candidate can pay an additional <u>fee</u> to extend exam eligibility for six (6) more months. After two (2) years, a candidate must re-purchase the exam voucher. If the candidate is unsuccessful in the attempt to pass the exam, retakes are available for an additional <u>fee</u>.

NCCPT-CSTS, NCCPT-CYI, NCCPT-CGxI and NCCPT-CICI Candidates should plan to complete these exams by May 31, 2024. Extension timelines listed above may not extend past May 31, 2024.

# **Special Accommodations**

NCCPT complies with the Americans with Disabilities Act of 1990 (ADA) and other applicable laws and regulations. Upon request, the NCCPT shall make reasonable accommodations to assist a candidate with disabilities. Special accommodations can be provided for an individual with documented disabilities by completing the NCCPT Request for Special Accommodations form (Appendix 1). A current (within six (6) months of the application) letter from a healthcare specialist knowledgeable of the candidate's disability stating the specific disability and his or her specific prescription for accommodations must accompany the completed application and letter of request form. Requests for accommodations must minimally include:

- Documentation of the disability
- Accommodations requested for the examination
- Descriptions of past accommodations provided for in other educational or testing situations
- A current letter from a physician or other appropriate diagnostic health care specialist confirming the diagnosis of the disability and a prescription for specific accommodations

Accommodations are provided to a qualified candidate with disabilities to the extent that such accommodations do not fundamentally alter the examination or cause an undue burden on the NCCPT Certification Program or the partner-testing agent.

A "qualified individual with a disability," is one who has a disability and satisfies the requisite skill, experience, education and other requirements of the service, program or activity of which he or she is being measured; and with or without accommodations, can perform the essential functions of the service, program, or activity. An essential function is one that the individual is required to perform, and removing that function would fundamentally change the service, program, or activity. A person must be a "qualified individual with a disability" to be protected under the ADA

Examples of requests for special testing accommodations that may be granted include modification of seating, time extensions, larger print screens, or other physical arrangements in the testing facility, providing for the examination to be taken in an accessible location for reasonable accommodations. All ADA accommodations available at the brick and mortar test sites are also available to candidates who choose to test remotely with the exception of those accommodations having to do with allowing for an aide to be physically present.

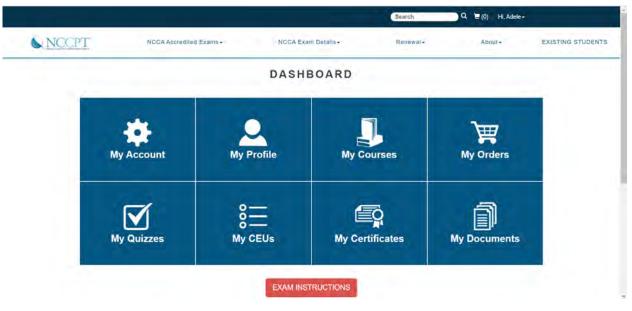
As NCCPT exams are written in the English language, they will not be translated into foreign languages and interpreters are not permitted to translate the examination. English as a second language is NOT considered a disability requiring special testing accommodations.

#### **Exam Registration**

Upon receipt of payment, the following outlines the process candidates are required to follow when registering to sit for an NCCA accredited NCCPT exam:

#### NCCA Exam Request Process

To submit an exam request, candidates need to set up an NCCPT account, login and click on the box labeled "Exam Instructions" located in the Dashboard.



Next, the screen below will load containing information regarding the testing process as well the option for the Candidate to select their desired exam.

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Upon completion of reviewing Prometric Testing Request – Step 1, click on the "Continue" button, and the final page will load requiring the candidate to fill out all fields of the form. At the bottom of the page, candidates will finalize their request submission by selecting on the clickable box at the bottom of the page.

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# After Submitting This Form:

The NCCPT will validate the candidate's testing request and on approval will send instructions for choosing the date and time to schedule the exam through Prometric Testing Centers. Candidates should allow 72 hours for the NCCPT to validate requests.

# If Approved:

Upon approval, candidates will receive an email with the subject line *"Important, (insert first name) your exam request has been approved."* The email will contain the candidate's eligibility code as well as instructions and links to proceed to Prometric's website. There is a proctor fee payable to Prometric due at the time of scheduling the exam appointment. Please visit <u>http://NCCPT.com/fees</u> for a list of all current exam fees.

# If Denied:

Upon denial of an exam request, candidates will receive an email with the subject line *"Important, (insert first name) your exam request has been denied."* Those candidates denied exam requests can contact NCCPT at 877-355-1640 should they have questions or concerns.

# **Prometric Cancellation/Reschedule Policy:**

Candidates may cancel their exam appointment 30 days or more in advance and receive a full refund from Prometric. Candidates who cancel 5-29 days prior to their scheduled test date will be subject to a cancellation fee. Fees are collected by Prometric from the candidate. Please visit <a href="http://NCCPT.com/fees">http://NCCPT.com/fees</a> for a list of all current exam fees.

Candidates who fail to cancel their exam 5 days prior to their scheduled test date, do not show up for their scheduled appointment or present themselves more than 30 minutes after their scheduled test appointment will not be allowed to sit for their exam and will not be granted a refund.

#### Passing the Exam:

Upon successful completion of the exam, candidates will have a certification generated in the My Certificates section of the Dashboard of the candidate's NCCPT account. Certifications will be valid two (2) years from the date of passing the exam.

# Failing the Exam:

If a candidate does not receive a passing score, an exam retake will need to be purchased before a candidate can reattempt the exam. Details regarding the NCCPT certification retake policy can be found in this Candidate Handbook. Please visit <u>http://NCCPT.com/fees</u> for a list of all current exam fees.

# 3. Exam Fee Information

Pricing information for the stand-alone purchase of the NCCPT Certification programs is located on the NCCPT.com website at: <u>http://nccpt.com/fees</u>.

# 4. Exam Preparation

There are numerous ways candidates can help prepare themselves for the NCCPT certification exams.

*Exam Content Outline:* Candidates anticipating sitting for an NCCPT exam should have a good understanding of the concepts within the domains, tasks and knowledges as presented in the Content Outline. The Content Outline is based on the results of the Job Practice Analysis (JTA) which defines practice in the fitness training profession. Only those concepts covered in the Content Outline will be reflected on the exam.

*Bibliography and References:* The NCCPT provides a bibliography and listing of references, many of which were used as references for the exam items on the test. Please see "Bibliography and References" in Appendix 3 in this Handbook.

*Training Courses, Exam Preparation Materials*: There are numerous educational exam study packages available to candidates through NCCPT's partnership with ISSA and through other media available in the market. It should be noted that the NCCPT Certification Board does not endorse, participate in nor support any exam study packages as a means of passing the exam. Study materials or participation in exam study packages is not required in order to sit for an NCCPT exam nor do they guarantee a passing score on the exam.

# 5. Exam Administration

The NCCPT certification exams are administered in a computer-based testing (CBT) format. Each exam contains 140 multiple-choice items. Of the 140 items, 125 of them are "scored" (meaning they count as part of the candidate's score) and 15 of them are "pre-test" items (meaning they do not count on the exam as part of the candidates score). "Pre-test" items are interspersed throughout the exam. Candidates have 2 hours to complete their exam.

# 6. Modes of Exam Delivery

Candidates have two options regarding NCCPT certification examination modes of delivery. They can be delivered through Prometric, NCCPT's testing vendor at any of their proctored testing sites or through remote delivery. Registered candidates can schedule their in-person or remote proctored test administration through <u>www.Prometric.com/NCCPT</u>. Additional information regarding remote proctoring can be found at the following Prometric site: <u>https://www.prometric.com/ProProctor</u>.

# Test Center Exam Delivery

On the day of the exam, candidates must check in at the testing center using two forms of documentation: a government issued photo ID with signature and a valid CPR certificate or card. The first and last name on the IDs must match exactly the first and last name under which the candidate registered for their exam appointment as it appears in the candidate's NCCPT (or ISSA) account. Some candidates may register without a middle name on their account, yet it is on their ID. Only the first and last name have to match one form of primary identification with a photo and signature.

The exam administrator or proctor is the NCCPT Certification Board's designated agent for maintaining a secure and valid exam administration. Prometric, the current exam administrator requires that all proctors complete live proctor training in accordance with its Proctor Handbook. Any security violations or issues will be promptly reported by Prometric to the Certification Staff

who may oversee any needed investigation and corrective action. Any individual found by the Certification Staff or Prometric to have engaged in conduct which compromises or attempts to compromise the integrity of the exam process will be subject to disciplinary action as sanctioned by the NCCPT Certification Board. The exams are administered according to a strict protocol to ensure its security and to protect the rights of each candidate to be able to experience a standardized testing administration. The candidate must abide by all rules and regulations, set forth in this Policies and Procedures Manual.

#### Candidate Check-in

During the registration procedures at the testing center, a candidate is required to produce a valid, non-expired government issued photo identification with signature and a valid CPT certificate/card. For those exams proctored at facilities outside of the US (as well as remotely) an ID is acceptable as long as it is government issued but does not necessarily need to be a foreign-issued passport for those individuals. Acceptable identification includes the following:

- U.S. driver's license with photograph
- State ID card with photograph
- U.S. passport
- U.S. military ID card with photograph
- Permanent resident card with photograph
- Native American tribal ID card with photograph
- Foreign government issued passport with photograph
- Canadian provincial driver's license with photograph
- Indian and Northern Affairs Canada card with photograph (INAC)
- Transportation worker ID with photography (TWIC)

A candidate is required to present his or her registration confirmation on the day of his or her scheduled appointment. This confirmation is provided to the candidate by NCCPT's testing vendor, Prometric, upon approval of his or her application and at the time the candidate is ready to schedule his or her exam.

No books, papers, texts, references, etc., are allowed into the exam center room. Scratch paper and a pencil are provided for use during the exam and will be collected by the proctor at the end of the exam. Candidates are allowed to bring a simple basic calculator with no smart phone or internet capabilities into the testing center room.

A candidate is encouraged to bring only his or her ID, CPR certificate/card, keys, a simple calculator as described above, and their registration confirmation which is needed in order to sit for an NCCA accredited NCCPT exam. Other personal belongings (purses, cell phones, etc.,) will be stored in a secure location, and may not be accessed by the candidate during administration of the exam. Prometric testing centers are not responsible for lost or stolen items. Except in cases where there is an approved medical/physical need, food is not allowed in any of the testing centers. While beverages are usually prohibited, some sites may allow a candidate to bring in bottled water (after being inspected). A candidate with a specific medical condition (e.g., hypoglycemia, pregnancy, diabetes) requiring the consumption of water or food during the exam period must meet the special accommodations criteria as indicated in the Special Accommodations section of this Handbook.

Visitors are not permitted in the exam room.

The timing of the NCCPT certification exams does not account for any scheduled breaks. A candidate may leave the exam room only with expressed permission from the exam administrator. A candidate must sign out and sign in from the room and must surrender all exam materials should he or she exit. Exit from the exam room is permitted for restroom and drinking fountain visits only. Excessive restroom breaks or suspicious behavior prior to, during, or after a break might lead an exam administrator to think cheating is in progress. A candidate may not access cell phones, nor may he or she leave the building during breaks.

Note that the exam administration time is not paused should the candidate decide to take an unscheduled break. The exam time will continue to run down.

A candidate is expected to follow all instructions provided by the exam administrator or that which is displayed in the computer-testing software. A candidate may ask questions regarding the exam procedure prior to beginning the exam.

The computer-delivered exam includes a tutorial program designed to give the candidate confidence in the use of the software, as well as familiarity with the system prior to beginning the exam. The tutorial questions are for demonstration purposes only, and do not impact exam scores. Candidates are encouraged to take the time to complete the optional tutorial that explains the features of the computerized testing system. On average, a candidate spends 1-4 minutes to go through the tutorial.

The candidate will see their name and the name of the exam which are displayed in the center of the screen. Once the examination is launched, the navigation grid is displayed in the bottom left corner of the screen. The sections and item numbers are also displayed going down the left-hand side of the screen - indicating which had been answered, skipped, or flagged. In addition, a digital countdown timer is displayed at the top center of the screen.

#### **Cheating and Inappropriate Behavior**

At no time during the exam may a candidate give or receive help to or from another or communicate with another in any way. The exam administrator has the authority to remove a candidate suspected of cheating or other inappropriate behavior from the exam room, at which time scores are canceled, and disciplinary action may be pending.

Inappropriate behavior includes:

- Creating a disturbance
- Aiding or asking for aid from another candidate
- Any attempt to remove copy, buy, sell, or reproduce exam materials
- Unauthorized possession of exam materials
- Impersonation of another candidate
- Use of contraband materials or equipment in the exam site
- Any falsification or misrepresentation of information provided during the application process.

The NCCPT Certification Board shall maintain strict policies to safeguard the security of the exam administration. Any individual who removes, or attempts to remove, exam materials from the testing site, including memorizing exam questions, is subject to prosecution in addition to sanctions by the NCCPT. Sanctions may include removal of certification and restrictions on future access to the certification exam.

# Exam Delivery through Remote Proctoring

In addition to offering administration of NCCPT exams at Prometric testing centers, remote proctoring has been added as a test delivery option for candidates. Prometric's remote proctoring test delivery agent, ProProctor, enables test takers to take any NCCPT NCCA accredited examination outside of a fixed test center environment. The testing locations can be anywhere that meet the system requirements, including internet connectivity, and environmental requirements for a secure test event. Typical test locations for candidates are their place of residence or an office setting location. A detailed diagnosis and review of the test location is made during in the check in process. Candidates are required to visually show their location and surroundings for proctor confirmation. Without confirmation, an exam administration cannot take place.

In order for candidates to be able to choose this remote delivery option, they must have access to their own personal computer equipment and internet connectivity while being able to meet the necessary system requirements to enable a successful event. Prometric and ProProctor have designed a simple and intuitive process to help ensure test takers have all of the necessary information to make an informed decision and clearly determine if their environment meets our specifications.

To help ensure that security and integrity in this process, ProProctor uses two agents that help in the administration of remote exams: A *Readiness Agent* performs an authentication of the test taker and live video and audio scan of the remote testing room and desk area ensuring compliance with security requirements. In addition, a *Security Agent* provides an additional layer of protection and integrity to the exams and assists in assuring secure delivery of the exam.

#### **Remote Proctoring Candidate Environmental and System Requirements**

#### Environmental Requirements

Candidates scheduled to have their exams administered remotely must meet the following Environmental Requirements:

- Testing location must be indoors (walled), well lit, free from background noise and disruptions.
- No third party may be present in the room or enter the room for the duration of the exam. If this occurs, the candidate's exam will be terminated and/or results invalidated.
- The candidate's workstation and surrounding area are allowed 2 blank pieces of paper, a #2 pencil and a calculator with no web-based capabilities. No content that could potentially provide an unfair advantage during the exam, including that posted on walls or within the candidate's immediate area, should be present during the exam session.
- Two tissues are permitted at the workstation but must be inspected by the Proctor prior to start of exam.

#### System Requirements

Candidates that have scheduled to have their exams administered remotely need to make sure their hardware and software meet the following system requirements:

- Secure and strong internet connection with an upload/download speed of .5-1mbps each
- Working desktop or laptop computer
- No tablets, surface/2-in-1 computers, virtual machines or additional monitors
- Functioning web-camera with a resolution of 640 x 480 pixels: External for desktops, Internal for laptops
- Windows Operating System of Windows 7 or higher | MAC OS 10.13 or higher
- Linux products are not supported
- Functioning microphone and speakers or headset
- Screen resolution of 1024 x 768
- Latest version of Google Chrome installed

#### Candidate Check-in

On the day of the examination, candidates should make sure they allow at least 15 minutes to prepare for their testing environment. After running a System Readiness Check, candidates can go to <a href="https://rpcandidate.prometric.com/">https://rpcandidate.prometric.com/</a> to launch their exam. Once launched, candidates are required to enter their appointment confirmation number and the first four (4) letters of their last

name/surname (Example: John Summers would enter in "Summ"). Prometric's *Readiness Agent* will walk candidates through the Candidate Check-In Process.

Candidates sitting for an exam remotely are required to present their registration confirmation to ProProctor's *Readiness Agent* on the day of their scheduled appointment. This confirmation is provided to the candidate by Prometric, upon approval of his or her application and at the time the candidate is ready to schedule his or her exam.

In addition, candidates sitting for an NCCPT exam remotely are required to produce a valid, nonexpired government issued photo identification with signature and a valid CPT certificate/card to the *Readiness Agent*. For those exams proctored at remote locations outside of the US, an ID is acceptable as long as it is government issued but does not necessarily need to be a foreign-issued passport for those individuals. Acceptable identification includes the following:

- U.S. driver's license with photograph
- State ID card with photograph
- U.S. passport
- U.S. military ID card with photograph
- Permanent resident card with photograph
- Native American tribal ID card with photograph
- Foreign government issued passport with photograph
- Canadian provincial driver's license with photograph
- Indian and Northern Affairs Canada card with photograph (INAC)
- Transportation worker ID with photography (TWIC)

Candidates will be required to show their workstation and surrounding area.

The candidate's *Readiness Agent* will conduct a Candidate Person Check prior to starting the exam. Candidates will be required to raise their pants legs above their ankles, empty and turn all pockets inside-out and raise shirt sleeves above wrists prior to every entry into the online test. If the candidate wears eye-glasses they will be required to remove them for visual inspection to ensure they don't contain a recording device.

Large jewelry items must be removed prior to and throughout the duration of the exam. If the candidate has long hair that covers his/her ears, he/she will be asked to pull their hair back to ensure nothing is attached to their ears that could provide an unfair advantage (such as a Bluetooth earpiece).

The remote proctored exam includes a tutorial program designed to give the candidate confidence in the use of the software, as well as familiarity with the system prior to beginning the exam. The tutorial questions are for demonstration purposes only, and do not impact exam scores. Candidates are encouraged to take the time to complete the optional tutorial that explains the features of the computerized testing system. On average, a candidate spends 1-4 minutes to go through the tutorial.

During the testing administration, there are no scheduled breaks and candidates are prohibited from leaving the camera view while the exam is in progress unless otherwise specified by the NCCPT. Should a candidate require a bathroom break during the administration, he/she will be subject to the same scrutiny required in the previously mentioned Candidate Person Check before being able to resume his/her exam. The exam time clock will not stop for unscheduled breaks.

#### **Cheating and Inappropriate Behavior**

At no time during the exam may a candidate give or receive help to or from another or communicate with another in any way. The exam administrator has the authority to remove a candidate suspected of cheating or other inappropriate behavior from the exam room, at which time scores are canceled, and disciplinary action may be pending.

Inappropriate behavior includes:

- Creating a disturbance/diversion
- Receiving aid from someone in the room or some sort of reference during the test administration.
- Any attempt to remove copy, buy, sell, or reproduce exam materials
- Unauthorized possession of exam materials
- Impersonation of another candidate
- Any falsification or misrepresentation of information provided during the application process.

The NCCPT Certification Board shall maintain strict policies to safeguard the security of the exam administration. Any individual who cheats or is responsible for inappropriate behavior, is subject to prosecution in addition to sanctions by the NCCPT. Sanctions may include removal of certification and restrictions on future access to the certification exam.

For further information on Exam Delivery through Remote Proctoring, please visit Prometric's/ProProctor's site at: <u>https://www.prometric.com/ProProctor</u>.

# 7. Certification Exam Retakes

Those candidates who fail their NCCPT Certification exam are provided with information which allows them to focus on those content areas which may require additional attention. The information shows performance in each of the examination content areas. It is intended to be used

as a resource for preparation should the candidate wish to re-sit for the exam again in the future. It should be noted that these qualitative indicators provided to failed candidates may result in less stability in the numerical results. Thus, candidates are advised to review all content areas prior to retaking the exam, including areas in which performance was good.

In the event a candidate fails their exam, they are allowed two (2) additional attempts and may schedule a re-test. There are waiting periods for re-testing. They are as follows:

- After 1st attempt: 14 day wait period
- After 2nd attempt: 90 day wait period
- After 3rd attempt (and ongoing): 12-month wait period (Each 12-month-period begins on the first exam date).

ATTENTION: A re-take fee is required in order to re-take the exam. Please contact us at 877-355-1640 and we will be happy to assist you regarding your retake. Please visit <u>http://NCCPT.com/fees</u> for a list of all current exam fees.

NCCPT Certification candidates have a 12-month testing window to initially sit for the exam or reattempt the exam should they fail. This 12-month testing window starts from the date of purchase. Candidates failing and wishing to retake the exam must do so in within this initial 12-month testing window, adhering to the time schedule above. In the event the candidate fails the exam and the waiting period to retest extends beyond the initial 12-month testing window, candidates may request an additional 6-month extension for free. If after 18 months, more time is required, a 6-month extension can be purchased for a fee. After two (2) years, a candidate must re-purchase the exam voucher. For each retake attempt, candidates must reregister, meet all the eligibility criteria, and pay the full examination fee. Please visit <a href="http://NCCPT.com/fees">http://NCCPT.com/fees</a> for a list of all current exam fees.

NCCPT-CSTS, NCCPT-CYI, NCCPT-CGxI and NCCPT-CICI Candidates should plan to complete these exams by May 31, 2024. Extension timelines listed above may not extend past May 31, 2024.

# 8. Use of Credential

The use of the NCCPT certification trademark is in accordance with the Certification Board's Policies and Procedures and cannot be used in a misleading or fraudulent manner. The Certification Board shall take all appropriate steps including legal or other action, such as suspension or revocation of the certification, in order to protect its rights regarding the use of the trademark.

Only those individuals obtaining a certification through NCCPT by successfully passing the examination may use the NCCPT's certification trademark in a manner consistent with the scope for which the certification was granted.

After meeting all eligibility requirements and passing the examination, individuals may use their NCCPT certification credential in all correspondence and professional relations. The credential is typically used after certificants' names following any academic degrees and licensure designations.

#### Examples

Terminal Degree Only: Joe Trainer, PhD

Terminal Degree Plus License: Joe Trainer, PhD, ATC

Terminal Degree Plus License Plus Certification: Joe Trainer, PhD, ATC, NCCPT-CPT

The certification mark(s) may be used as long as the certificant's certification remains valid and the certificant remains in good standing. The certification mark and logo are the property of NCCPT. Permission to use the certification mark or logo is granted to credentialed persons at the discretion of the Certification Board, for permissible uses only.

Any misuse of credentials will be investigated. The NCCPT Certification Board has the right to suspend or revoke NCCPT certification credentials. The NCCPT Certification Board reserves the right to report any violations to third parties which may include but are not limited to a certificant's school or employer, any licensing body, or law enforcement.

# 9. Certification Appeals and Exam Challenges

# Appeals Definition

The NCCPT Certification Board defines a certification appeal as a formal request for reconsideration of the following:

- Exam eligibility
- Exam performance
- Recertification (certification maintenance)

# Exam Eligibility Appeal

An NCCPT certification candidate may request an appeal to contest his or her eligibility to sit for the exam. The Certification Board reserves the right to deny any applicant request that does not meet the eligibility criteria. An appeal of an NCCPT certification application may be denied for any of the following reasons:

- **Requirements Not Satisfied** A declined candidate, because of not satisfying the eligibility requirements to sit for an NCCPT certification exam, may reapply once all requirements have been satisfied.
- **Pending Legal/Regulatory Issues** A declined application as the result of a pending legal issue would be brought before the NCCPT Certification Appeals Committee and possibly the Ethics Committee. The candidate would need to provide proof of resolution and resubmit a new application.
- Decision of the NCCPT Ethics Committee –A candidate, whose application has been reviewed by the Ethics Committee and declined, will not be permitted to appeal the decision of the Ethics Committee and would therefore remain ineligible to sit for the exam.

The NCCPT Appeals Committee reviews certification application appeals. The NCCPT Certification Staff shall notify the candidate of the committee's decision in written form. Appeals are filed by submitting the "NCCPT Exception Request/Appeal Form" found in Appendix 4 of this Candidate Handbook. It is the responsibility of the candidate to submit the Form and supporting documentation within thirty (30) days to the NCCPT Certification Staff. Once the Form has been received, the candidate/certificant can expect a written response in approximately thirty to forty-five (30 to 45) days. An appeal decision by the NCCPT Certification Appeals Committee is final and not subject to further appellate review.

# Exam Performance Appeal

An NCCPT certification candidate may request an appeal of his or her final exam score. The requests must be received in writing on the NCCPT Exception Request/Appeal Form within thirty (30) days of the exam date (Please see Appendix 4 in this Candidate Handbook). Decisions are communicated in writing only. All decisions are final.

An NCCPT certification candidate may request a hand-scoring of his or her exam by submitting a written request. NCCPT has the right to assess a fee for any rescoring requests. Scoring requests must be received within thirty (30) days of the exam administration date. All rescoring determinations are final.

# **Recertification Appeal**

The Certification Board reserves the right to deny or remove a credential based on the holder's inability to maintain his or her credential for reasons other than disciplinary action (expired credential, inappropriate continuing education materials submitted, non-payment of renewal fees, etc.) It is the responsibility of the candidate to submit the NCCPT Exception Request/Appeal Form (Appendix 4) and supporting documentation in the event the candidate does not meet the eligibility requirements for re-certification. Once this Form has been received by the Certification Staff, the certificant can expect a written response in approximately thirty to forty-five (30-45) days.

Re-certification appeals are reviewed by the NCCPT Certification Appeals Committee. The Committee notifies candidates of their decision in written form. An appeal can be filed by submitting the NCCPT Exception Request/Appeal Form (Appendix 4). An appeal decision by the NCCPT Certification Appeals Committee is final and not subject to further appellate review.

# 9. Certification Professional Misconduct, Code of Content

#### **Professional Misconduct and Complaints**

NCCPT defines professional misconduct as a violation or alleged violation of the rules or boundaries set forth by the NCCPT's Professional Code of Conduct that may involve an NCCPT candidate or credentialed individual.

All other inquiries, questions, and concerns regarding the NCCPT credentials or its respective certification examination are not considered appeals but are instead regarded as customer service complaints and are managed accordingly through the Certification Department.

# Professional Misconduct Procedures

Allegations of professional misconduct should be submitted to the NCCPT Certification Success Manager at support@nccpt.com. Allegations are not anonymous and are only accepted in writing. Anyone may submit an allegation when a violation may have occurred. Upon receipt of the allegation, the Certification Liaison will confirm or deny the validity of the complaint. If confirmed, he/she will send copies of the complaint to the NCCPT Ethics Committee. This committee serves as a peer review group to investigate professional misconduct allegations. Allegations are reviewed as received and within 10 business days. Upon receipt, the Certification Liaison will inform the accused in writing that they are under investigation. In this communication, respondents will be encouraged to reply with their position on the allegation.

The NCCPT Ethics Committee will investigate valid complaints in ways that may include interviews, document reviews, and written statement requests. All requests for information on the alleged complaint must be received within 10 business days of initial request. The Committee will proceed forward on making a decision from information available after the 10-day request.

# Professional Misconduct Sanctions

Should the committee determine a violation has occurred, the following sanctions are possible outcomes.

- Written warnings describing the violation and corrective recommendations.
- Suspension of NCCPT certification status for a definite or indefinite period of time.
- Permanent or restricted denial of a candidate's future eligibility to sit for and obtain an NCCPT credential.
- Permanent or restricted disqualification from certification or recertification with the NCCPT.
- Permanent or restricted revocation of the NCCPT certification credential.
- Removal from a position in which a person might serve within the NCCPT governance or administrative structures (Board Member, Committee Member, SME, Staff, etc.)

In addition to the abovementioned sanctions, the NCCPT maintains the right to impose fines, and other conditions appropriate for the violations.

# Code of Conduct

NCCPT and its designated Certified Personal Trainers are committed to best industry standards and a professional code of conduct to safeguard clients and the profession's reputability. The following serves as the NCCPT Professional Code of Conduct and as guidelines all NCCPT certification candidates and certificants must follow. This code is not an exhaustive list nor does it address every situation:

- 1. Demonstrate respect, dignity, welfare, and objectivity with all clients. This includes nondiscrimination, fairness, and privacy.
- 2. Comply with all applicable laws, policies, and regulations in the personal training scope of practice. This includes local, state, and federal laws as well as NCCPT policies and procedures.
- 3. Maintain a professional relationship with clients, similar to any other qualified professional, by documenting training sessions, evaluations, fitness programs, and any supplemental fitness and nutrition recommendations.
- 4. Respect the client-trainer relationship as professional and advisory.
- 5. Not knowingly endanger clients or put them at risk. This includes striving to maintain the well- being of all clients.
- 6. Refer clients to more qualified fitness, medical, health, or nutrition professionals when appropriate or outside of the personal trainer scope of practice. This includes never providing a diagnosis or medication recommendations.
- 7. Continuously work toward clients' ultimate goals. This includes not placing financial gain above the welfare of potential, existing, or past clients.
- 8. Strive to remain current with industry knowledge and practice through continuing education.
- 9. Not misrepresent qualifications, skills, or services.
- 10. Not falsify records or attempt to obtain certification by fraud. This includes assisting others in the like.
- 11. Not distribute NCCPT confidential certification exam materials.
- 12. Not condone nor engage in unethical behavior.

# 10. Test Development

# Job Task Analysis

Based on the frequency of anticipated changes in the industry, a Job Task Analysis (JTA) will be conducted at least every five (5) years for each of the NCCPT NCCA-accredited certification programs. A JTA may be conducted earlier if there are significant changes to the profession that would necessitate an update. The JTA process will be facilitated by a qualified psychometrician, coordinated through the NCCPT staff, and will include content-related input by qualified Subject Matter Experts (SMEs) who have been selected to serve on the panel.

The purpose of the Job Task Analysis is to identify the performance domains and associated tasks, knowledge, and/or skills necessary to practice in the profession. It is the basis for validating what is tested on the exam. The NCCPT Certification Board will review the final selection of SMEs who are identified to serve on the JTA Expert Panel. This ensures the SMEs are qualified, autonomy remains in the selection process, and no undue influence exists regarding

the selection process or the applicants recommended. The Certification Board is also responsible for reviewing and approving the results of the JTA which determines the Exam Content Outline.

# Content Outline/Exam Blueprint

The Exam Content Outline/Exam Blueprint is the primary outcome anticipated from the JTA. It provides key information that defines current practices in the profession. The Content Outline details the content of the proposed exam specifications, including the relative emphasis to be placed upon each content area and the total test length. The final exam content outline is generated and made available to the public based on the Certification Board's approval of the Job Task Analysis. NCCPT certification candidates are encouraged to be familiar with the domains, tasks and knowledges within the Content Outline of the exam they will be sitting for. Appendix 2 lists the Content Outlines for all NCCPT Certification Exams

# **Exam Specifications**

Each of the NCCPT certification exams consist of one-hundred and forty (140) four-option multiple choice items. One-hundred and twenty-five (125) of those items are "scored" (graded, and count toward the candidate's score), and fifteen (15) are considered "pretest" (appear on the exam but do not count as part of the candidate's score). The pretest items are inserted into the exam randomly. The statistical data gathered from the pretest items help determine their psychometric integrity and whether they can be reliably used as scored items on a future exam form. Candidates have two (2) hours to complete each exam form.

Complete specifications for all NCCPT, NCCA-accredited certification examinations can be found in Appendix 2 titled, "NCCPT Exam Content Outlines". Each examination form will be built based on the content specifications resulting from the most recent Job Task Analysis conducted for each program.

# Item Development

NCCPT conducts Item Writing/Review Workshops in which Subject Matter Experts (SMEs) in each NCCPT exam discipline are trained to write and review exam items to replenish the exam item banks (where questions are stored for use within the exam forms).

NCCPT recruits SMEs to participate in the item development process. These individuals are required to be experienced practitioners who hold the credential of the program for which they are writing/reviewing items. They come from diverse geographical areas, practice environments, and experience levels and must adhere to NCCPT's SME qualifications.

### Scoring

The passing score for each NCCPT certification exam is primarily determined using a criterion referenced methodology called the modified Anghoff method. During a modified Anghoff study, subject matter experts are presented with each item on the exam form and asked whether they believe the Minimally Qualified Candidate (defined in previous studies) would likely answer the item correctly or incorrectly. Also, taken into account when determining the passing score is the review of preliminary data that had been collected on items on the test forms prior to conducting the Cut Score Study (Preliminary Item Analysis) The review of how these items performed in the Preliminary Item Analysis along with the results of the modified Anghoff study provides a range of recommended passing scores. Then, using a standard error of measurement, the passing score with the most consistent data is chosen.

The NCCPT uses a Scaled Score in determining whether candidates pass or fail an exam. A scaled score is a representation of the total number of correct questions a candidate has answered (raw score) that has been converted onto a consistent and standardized scale.

A Scaled Score helps ensure that the same passing standard is consistently reported regardless of which examination form candidates might take. Scaled scores are reported instead of raw scores to provide a direct comparison of performance across examination forms and administrations. This process ensures that the passing standard communicated to candidates remains the same for all test forms within an exam.

# 11. Recertification

In order to maintain their certifications, NCCPT certificants are required to renew their certifications every two (2) years. The following information is also available in the NCCPT Recertification Manual on NCCPT's website at: <u>https://www.nccpt.com/data/pdf/NCCPT\_Recertification\_Packet.pdf</u>.

# Purpose of Recertification

The purpose of the NCCPT Recertification Program is to ensure that NCCPT certification credential holders are able to maintain their credentials and continued commitment to the profession through life-long continuing education. The NCCA Commission (NCCPT's third party certification accreditation agency) defines recertification as "Requirements and procedures established as part of a certification program that a certificant must meet to maintain competence and renew his or her certification." The NCCPT Recertification Program adheres to this definition by requiring certificants participating in the program to demonstrate that their skills and knowledges remain current in order to assure that they are able to continue to practice successfully within their profession. It is required that all NCCPT certification credential holders participate in the recertification program in order to maintain an active certification. NCCPT certification credential holders are required to keep their

certification current by completing various NCCPT Certification Board-approved continuing education activities.

# NCCPT's Definition of Continued Competence

NCCPT understands the importance of practitioners remaining competent in the field of personal training throughout their careers. It ensures that clients being trained are receiving the most up-to-date training modalities and are able to obtain the most effective results. The NCCA commission defines continuing competence as "Demonstrating specified levels of knowledge, skills, or ability not only at the time of initial certification but throughout an individual's professional career." The NCCPT Recertification requirements adhere to this definition by requiring an NCCPT certification credential holder to participate in continuing education activities related to the profession in order to maintain his or her status in good standing. Continued competence is documented through participation in the NCCPT Recertification Program.

# **Recertification Requirements**

NCCPT certification credentials are valid for two (2) years from the date of successful completion of the examination. It is important that credential holders renew their credentials prior to their expiration.

To maintain active certification status in good standing through recertification, credential holders must:

- Abide by the NCCPT Professional Code of Conduct and re-attest to this Code on an annual basis.
- Earn NCCPT-approved CEUs and submit documentation providing proof of credit being awarded.
- Pay the current recertification fees upon completion of CEUs and submission of the "NCCPT Certification Renewal Form" which can be found in **Appendix 5.**

Any applicant who does not meet the recertification requirements will be notified within thirty (30) days of receipt of their application that his or her recertification has been denied. The reason(s) for the denial shall be indicated in the notification.

NCCPT Certification credential holders must renew their certification every two years in order to maintain their credential and remain in good standing. To renew your certification you must send in a copy of the certification or certificate that is about to expire along with proof in writing of completion of the required amount of Continuing Education Units (CEUs) specific to the related subject matter of the credential you are renewing. CPR is required to renew your certification and counts as 0.1 CEU.

#### NCCPT certifications CEU renewal requirements:

Certification/Certificate	Renewal CEU Requirements *
Personal Trainer	2.0
Indoor Cycling Instructor	2.0
Strength Training Specialist	2.0
Yoga Instructor – Vinyasa Flow	2.0
Group Exercise Instructor	2.0

\* Certificants who hold more than one NCCPT Certification can apply the same CEUs to more than one certification for renewal, provided that the subject matter is appropriate for continuing education for the NCCPT Certifications which the CEUs are applied.

### **Recertification Fees**

Completed applications for renewal should be submitted prior to the expiration of the credential. An administrative fee is charged for recertification and should be included with the application. Should a credential expire prior to submission for renewal, certificants are allowed a 30-day grace period to complete and submit proof that they have completed NCCPT's renewal process. An additional late fee will be applied to any recertification application postmarked less than 30 days after the date the credential expires. With this fee, certificants will be allowed an additional 30 days from the date of their expired certification to submit CEUs. Please keep in mind a certificant's CEUs must have been completed within the period of time the credential had been active. Please note that being late up to 30 days does not extend a certificant's next recertification expiration date. Once the 30-day period has passed, credentials are considered expired. In order to be reinstated or become certified again, individuals will have to purchase and successfully sit for the exam again. Please visit http://NCCPT.com/fees for a list of all current exam fees, including fees for certificants holding multiple NCCPT credentials.

# NCCPT Continuing Education Reporting Forms

#### **NCCPT Certification Renewal Form**

NCCPT, through its partnership with ISSA offers numerous opportunities for certificant holders to meet CEU requirements for recertification (credential-related continuing education courses, workshops, events, etc.). CEU information in this regard can be recorded by completing and submitting the "NCCPT Certification Renewal Form" (Appendix 5) which is located on NCCPT's website at: https://www.nccpt.com/data/pdf/NCCPT CEU Renewal Form.pdf.

#### **Petition Application for NCCPT CEUs**

Additional CEU opportunities outside those available through NCCPT or ISSA (credentialrelated continuing education courses, workshops, events, etc.) can be reviewed and approved by completing a petition process form, "Continuing Education Petition Application for NCCPT" form (Appendix 6) that is available to NCCPT credential holders on NCCPT's website at: https://www.nccpt.com/data/pdf/NCCPT\_Petition.pdf. A non-refundable administrative fee is required for each course/event petitioned. Please visit http://NCCPT.com/fees for a list of all current fees.

#### **Change of Address**

Changes in mailing address must be provided to NCCPT. *Failure to keep the mailing address current can result in lost mail, lost information and/or lost business.* You may keep your information current by logging onto (www.nccpt.com) and updating your member page or contacting support@nccpt.com.

# **Continuing Education Submission Guidelines**

#### **Continuing Education Unit ("CEU") Requirements**

Check for the required amount of CEU's required for each particular Certification program

- CEUs are based on contact hours
- Contact hours are defined as the number of clock hours spent in direct participation in a structured educational format
- One (1) contact hour is equal to one-tenth (0.1) CEU.

College or university coursework will be granted 0.2 CEUs for each quarter credit hour or 0.3 CEUs per semester credit hour. (A quarter course worth 5 credits = 1.0 CEUs, and a semester course worth 3 credits = 0.9 CEUs)

#### **Documenting Continuing Education Information**

It is the sole responsibility of the NCCPT credential holder to document continuing education activities.

#### **Reporting Continuing Education Information**

The completed continuing education reporting form must be submitted to NCCPT. Applications for re-certification will only be accepted within 1 year prior to credential expiration.

#### How to List and Report CEUs

• Information should be recorded directly on the NCCPT Continuing Education Reporting Form/Renewal Form and/or the Continuing Education Petition Application for NCCPT

form. It is recommended that information be recorded on an ongoing basis (i.e. as soon as an activity is successfully completed).

- Proof of appropriate documentation as noted in the Continuing Education Reporting Form must be completed and submitted.
- In providing the date of an activity; the month, day and year must be included. CEUs will be awarded only for activities that are completed within the relevant re-certification period.
- CEUs in excess of the amount required for the continuing education reporting period cannot be carried over for credit in subsequent reporting periods.
- A photocopy of the front and back of the card(s) verifying current emergency cardiac care (CPR) certification must be included with the Continuing Education Reporting Form.
- The Continuing Education Reporting Form must be signed to be recognized as valid.

#### Accepted subject matter for continuing education

The following subject matter is accepted for NCCPT certification continuing education unit (CEU) credit: Exercise physiology, exercise science, nutrition, flexibility, special populations, anatomy, functional anatomy, exercise application, biomechanics, program design, program implementation, disease prevention, injury prevention, health assessment, , safety procedures, emergency procedures, injury prevention, sports psychology, dance, first aid and CPR. Any continuing education must pertain to the subject matter of the certification or certificate program.

# **CEU Category Requirements**

#### Maximum Number of CEUs per Category

Total	Category A	Category B	Category C	Category D
Required	Maximum	Maximum	Maximum	Maximum
2.0 CEUs	2.0	1.0	2.0	0.1

#### **CATEGORY A – NCCPT-APPROVED PROVIDED OFFERINGS**

- 1. Activities in this category are available through NCCPT-approved providers (ISSA, the general market, etc.) and include the following:
  - Workshops
  - Conferences
  - Symposiums
  - Home-Study Courses
  - Other NCCPT approved educational courses

- 2. NCCPT and/or the individual approved provider will determine the number of CEUs awarded for activities in this category. These activities must be specifically applicable to the certification or certificate you are renewing.
- **3.** All conferences, workshops and symposiums must be intended for an audience of health and fitness professionals.

#### CATEGORY B – INDUSTRY CONTRIBUTIONS

- 1. Speaking engagements can be counted only once per topic.
- 2. Articles written for NCCPT must adhere to NCCPT Writing Guidelines. \*
- 3. Case studies written for NCCPT must adhere to NCCPT Case Study Guidelines.
- **4.** All conferences, workshops, symposiums must be intended for an audience of health and fitness professionals.
- 5. A maximum of 1.0 CEUs can be obtained in Category B.
- 6. Activities in this category defined by NCCPT as follows:

Possible Activities	Number of CEUs	Required Documentation
Speaker at conference,	0.1 CEU per	Letter of Acknowledgement
lecture or workshop	contact hour	
Panelist at conference,	0.1 CEU per	Letter of Acknowledgement
lecture or workshop	contact hour	
Primary author in a peer	0.5 CEU	Copy of Article Writer
reviewed publication <sup>1</sup>		Guidelines
Primary author in a non-peer	0.2 CEU	Copy of Article Writer
reviewed publication <sup>1</sup>		Guidelines
Primary author in a NCCPT	0.2 CEU	Letter of Acknowledgement
publication		
Primary author in a NCCPT	0.5 CEUs (8-wk)	Letter of Acknowledgement
case study	0.8 CEUs (12-wk)	
Primary author in a textbook	0.5 CEUs	Copy of cover, table of
		contents, 500 word summary
		or contribution to industry

<sup>1</sup> A peer reviewed publication is one that been reviewed by an editor and one or more specialists, prior to its publication

\* The NCCPT does not claim ownership nor endorse any of the materials provided to the NCCPT to post, upload, input or submit to any of the websites associated with the NCCPT. However, by posting, uploading, inputting, providing or submitting your articles,

comments, blogs, wiki's or submission, you are granting NCCPT and its affiliated companies and licensees permission to use **your** Submission in connection with the operation of their Internet businesses including, without limitation, the rights to copy, distribute, transmit, publicly display, publicly perform, reproduce, edit, translate and reformat your Submission, and to publish your name in connection with your submission.

No compensation will be paid with respect to the use of your submission, as provided herein. The NCCPT is under no obligation to post or use any Submission you may provide and may remove any submission at any time at NCCPT's sole discretion.

By posting, uploading, inputting, providing or submitting your submission, you warrant and represent that you own or otherwise control all of the rights to your submission as described in this section including, without limitation, all the rights necessary for you to provide, post, upload, input or submit the submissions.

#### CATEGORY C – POST-CERTIFICATION COLLEGIATE COURSEWORK

- 1. CEUs are awarded for successful completion of college or university courses if the content relates to the health and fitness fields. Courses must be specifically applicable to the certification you are renewing.
- 2 In order for a course to be eligible, it must be assigned credit hours and be listed on the official university transcript.
- 3 Such coursework in a related field of study will be granted 0.2 CEUs for each quarter credit hour or 0.3 CEUs for semester credit hour (a quarter course worth 5 credits = 1.0 CEUs and a semester course worth 3 credits = .9 CEUs)
- 4 A maximum of 2.0 CEUs can be obtained in Category C.

Possible Activities	Number of CEUs	<b>Required Documentation</b>
College/official university	0.2 CEUs for each quarter	Official university
course	credit hour or 0.3 CEUs for semester credit hour	transcript

- 5 Acceptable courses include those specifically included in the following degree programs: Athletic Training, Biomechanics, Community Health, Health Sciences, Health Care Management, Emergency Medical Technician, Ergonomics, Exercise Physiology, Exercise Science, Health Science, Human Movement Science, Kinesiology, Massage Therapy, Nursing, Nutrition, Physical Education, Physical Therapy, Dance and Sport Science.
- **6** General education requirements are only accepted with relevance to the health and fitness industry (e.g. Biomechanics, Business Administration, Communications, Exercise Physiology, Human Anatomy and Human Physiology).
- 7. In order for Massage Therapy courses to be acceptable, they must be part of an ACCET accredited program in good standing.
- 8 Practicum courses, internship experiences and laboratory format courses are subject to approval as acceptable CEU credit.

**9.** Weight training and/or conditioning course may be acceptable for CEU credit.

#### **CATEGORY D – EMERGENCY CARDIAC CARE (CPR) CERTIFICATION (REQUIRED)**

- 1. CEU credits earned in this category are REQUIRED.
- 2. Providers in this category are those that adhere to the standards of either:
  - a) The American Heart Association; or
  - b) The American Red Cross.
- **3.** EMT (Emergency Medical Technician) certification can be used in this category.
- 4. Only 0.1 CEU can be obtained in Category D.
- 5. Some examples of where a CPR might be acquired are:
  - a) Fire Departments: Many Fire Departments in many states conduct classes.
  - b) Police Departments and Independent Contractors: Approved through Red Cross and AHA.
  - c) Red Cross and AHA locations

Possible Activities	Number of CEUs	Required Documentation
Courses providing required certifications	0.1 CEU	Front & back copies of current certification
EMT course and certification	0.1 CEU	Front & back copies of current certification

# **Contact Hours Definitions**

**CEUs** are based upon contact hours. Contact hours are defined as the number of clock hours spent in direct participation in a structured educational format. One (1) contract hour is equal to one (0.1) Continuing Education Unit.

Re-cert Fee	Total	Category A	Category B	Category C	Category D
	Required	Maximum	Maximum	Maximum	Maximum
\$75	2.0 CEUs	2.0	1.0	2.0	0.1

Category	Descriptions	Number of CEUs	Required Documentation
A	Workshops	As awarded by NCCPT	Certificate of Attendance
A	Conferences	As awarded by NCCPT	Certificate of Attendance
A	Symposiums	As awarded by NCCPT	Certificate of Attendance
A	Home Study Course	As awarded by NCCPT	Certificate of Attendance

А	NCCPT Credential	As awarded by	Certificate of
	Courses	NCCPT	Attendance
А	Other Approved	As awarded by	Certificate of
	Certifications	NCCPT	Attendance
В	Speaker at conference,	0.1 CEU per	Letter of
	lecture or workshop	contact hour	Acknowledgement
В	Panelist at conference,	0.1 CEU per	Letter of
	lecture or workshop	contact hour	Acknowledgement
В	Primary author in a peer	0.5 CEU	Copy of Article; Writer
	reviewed publication <sup>1</sup>		Guidelines
В	Primary author in a non-	0.2 CEU	Copy of Article; Writer
	peer reviewed		Guidelines
	publication <sup>1</sup>		
В	Primary author in a	0.2 CEU	Letter of
	NCCPT publication		Acknowledgement
В	Primary author in a	0.5 CEUs (8-wk)	Letter of
	NCCPT case study	0.8 CEUs (12-wk)	Acknowledgement
В	Primary author in a	0.5 CEUs	Copy of cover, table of
	textbook		contents, summary of
			contribution to
			industry
С	College/official university	0.1 CEU per official	Official university
	course	credit hour	transcript

D	Courses providing required certifications	0.1 CEU	Front & back copies of current certification
D	EMT course and certification	0.1 CEU	Front & back copies of current certification

# **Recertification Audit Procedure**

The NCCPT will conduct random audits of credential holders for CEU records or may do so upon a challenge. During the audit, the credential holder will be requested to provide evidence of CEU compliance that may include records, certificates or other evidence that substantiates CEU completion. Approximately 10% of all NCCPT credential holders can expect an audit of their CEU records.

### **Recertification Appeals**

#### **Recertification Appeals (Other than Disciplinary or Ethical)**

The Certification Board reserves the right to deny or remove a credential based on the holder's inability to maintain his or her credential for reasons other than disciplinary action (expired credential, inappropriate continuing education materials submitted, non-payment of renewal fees, etc.) It is the responsibility of the candidate to submit the NCCPT Exception Request/Appeal Form and supporting documentation in the event the candidate does not meet the eligibility requirements for re-certification. Once this Form has been received by the Certification Staff, the certificant can expect a written response in approximately thirty to forty-five (30-45) days.

A Recertification appeal is reviewed by the NCCPT Certification Appeals Committee. The Committee notifies the candidate of their decision in written form. An appeal can be filed by submitting the NCCPT Exception Request/Appeal Form. An appeal decision by the NCCPT Certification Appeals Committee is final and not subject to further appellate review.

Reinstatement of certification may be granted to an individual whose credential has been revoked for non-renewal. Reinstatement provides a previously designated NCCPT credential holder the opportunity to regain the credential provided all maintenance of certification and/or recertification requirements have been met. An individual whose credential has been revoked for non-renewal is required to pay an additional fee in order to be reinstated.

The NCCPT Certification Staff reviews a candidate application submitted to determine if the applicant is eligible to sit for the NCCPT certification. NCCPT Certification Staff will review all applications for completeness and payment of fees.

When an NCCPT credential is either withdrawn or revoked, either for non-payment or at the request of the certificant, there is no reinstatement allowed once the cancelation has been processed.

#### **Disciplinary or Ethics Violations/Appeals**

Adherence to NCCPT Code of Conduct

When renewing an NCCPT credential, certificants agree to adhere to the NCCPT Code of Conduct. Certificants attest that any personal and/or confidential information given to NCCPT is true, complete and correct best to their knowledge. *If acknowledgement of any of this information is later determined to be false, NCCPT reserves the right to revoke any certification credential that has been granted by the NCCPT.* Certificants further acknowledge that NCCPT certification does not in any way guarantee a certain level of performance of skills and knowledges of practice in the profession. Certificants therefore agree to indemnify and hold harmless NCCPT, its officers, directors and staff from any claims due to negligent acts, omissions, or faulty advice that may be given to clients as a NCCPT certified professional. It is further recognized that NCCPT is not responsible for any actions or damages incurred or taken by any person arising out of work performance, intentions or actions as a NCCPT certified professional.

#### **NCCPT Code of Conduct**

NCCPT and its designated Certified Personal Trainers are committed to best industry standards and a professional code of conduct to safeguard clients and the profession's reputability.

#### **Reporting Ethical Violations or Professional Misconduct**

In order to ensure the validity and professional significance of NCCPT Certifications and processes, certified and/or non-certified individuals recognizing NCCPT Code of Conduct violations are asked to report concerns to the NCCPT Ethics Committee for review. By doing so, this will help to ensure the continuation of high standards related to professional fitness practice of NCCPT Certified Fitness Professionals and fair treatment of public members, employers and clientele. The identity of all parties involved, whether reporting ethical or professional misconduct, will remain private and undisclosed to any and all entities unless legal procedures require such disclosure. As part of this process, factual evidence must be collected and submitted to the NCCPT Ethics Committee and reviewed in order for any alleged disciplinary action to be recommended.

The purpose of the Code of Conduct is to ensure ethical and professional practice are conducted by setting forth fair and reasonable standards for NCCPT Certified Fitness Professionals and creating an avenue for enforcement of these expectations. All responses challenging Ethics Committee decisions regarding professional and ethical misconduct must be received by NCCPT in writing. In the event disciplinary action is taken by the Ethics Committee as a result of a Code of Conduct violation, the accused party or parties have 30 days to file an appeal to the NCCPT Certification Board for final consideration. The Certification Board will conduct a final review of the previously submitted evidence and recommendations of the Ethics Committee as well as of any new information about the case which may have become available after the Ethics Committee's initial review and make a decision regarding the final outcome. The Certification Board will notify the

defendant of its decision in writing. All decisions made by the Certification Board are considered final and cannot be appealed.

## Appendix 1: Special Accommodations Form



# NCCPT Request for Special Accommodations

In accordance with the Americans with Disabilities Act (ADA), special accommodations may be available for individuals with documented disabilities. The NCCPT will provide reasonable testing accommodations to candidates with a qualifying medical condition or documented disability that may impose on their ability to take an NCCA accredited NCCPT exam under standard testing circumstances. In order to be considered for special accommodations, the candidate will need to complete the NCCPT Request for Special Accommodations form. The submission of the request for special accommodations does not guarantee the approval of requested testing accommodations. All decisions are made on a case-by-case basis, consideration is based on information provided, and in accordance with the law.

Candidates should allow for a minimum of thirty (30) days for processing, while NCCPT makes every effort to process requests as quickly as possible. In order to expedite the process, candidates should include all the required documentation in their initial request.

The exam that candidates are requesting accommodations for must be purchased prior to requesting any accommodations.

Once a decision is made, candidates will be informed in writing regarding their request for special accommodations. NCCPT reserves the right to make final judgement decisions regarding testing accommodations, and candidates are still required to follow the same exam testing policies.

See next page for instructions.

### **Instructions for Documentation:**

Attach a letter from a health care professional or physician, qualified to diagnose the disability or medical condition, as to the need for an accommodation. If you are a postsecondary student or graduated in the last two (2) years, an Individual Education Plan (IEP) may be used in place of the letter.

The IEP or letter must include:

- a. Specific disability or diagnosis.
- b. Brief explanation of how the condition limits the candidate's ability to take an exam under standard conditions.
- c. If it is not a permanent disability, please indicate when it was first diagnosed, about how long you have had it, and under what circumstances the diagnosis was made.
- Specific accommodations required. Keep in mind, these accommodations should be adequate for the candidate to complete the exam without creating an unfair advantage.
   If more time is required, the letter or IEP must specify exactly how much more time is needed, and why that amount is needed.

Once you have completed the form, please submit it and all relative documentation in one (1) single submission by email to: <a href="mailto:support@nccpt.com">support@nccpt.com</a>. See next page for Submission form.

### **NCCPT Request for Special Accommodations Form**

(To be completed by the candidate)

Name:		_	Date:	
Current street address:				
City/State/Zip:		/	/	
Best contact phone number:		_		
Email:		_		
Description of disability:				
Accommodations requested:				
Accommodations granted in the past	t			
Organization Name:				
Date:	_Exam Name:			
Accommodation(s) Description:				

Under penalty of perjury, by signing below, I declare that all information provided in this request for accommodations and all supporting documentation I provided are true to the best of my knowledge. I also understand that if any information is found to be false, NCCPT will have the right to challenge the candidate's position on the requested accommodations. I hereby certify that I personally completed this form and may be asked by a representative from NCCPT to verify this information at any time. NCCPT reserves the right to make addition inquiries regarding my disability and previous accommodations before coming to a decision.

### (page 2, NCCPT Request for Special Accommodations Form)

If further information or clarification is found to be necessary, I understand and authorize NCCPT to communicate and request additional documentation from the professional who has diagnosed the disability, who provided the information related to my accommodation request, or any organization that has granted me accommodations in the past. I also authorize NCCPT to release this information if found necessary to a professional chosen by NCCPT for the purpose of conducting an independent evaluation of the requested accommodations. I acknowledge that these processes may require extra time for the accommodation to be granted beyond the standard 30 days.

Candidate's Signature

Date

Candidate's Printed Name

## Appendix 2 NCCPT Certification Exam Content Outlines

### NCCPT Certified Personal Trainer Detailed Content Outline Based on 2020 Job Analysis Study

	Examination
Domain/Task Statement	Weight (%)
I. Applied Science (Anatomy, Kinesiology, Physiology)	25%
A. Anatomy	I
1. Apply basic knowledge of the muscular system (e.g., fascia, tendons, muscles)	
2. Apply basic knowledge of the nervous system (e.g., CNS, PNS)	
3. Apply basic knowledge of the skeletal system (e.g., bones, ligaments)	
B. Functional Anatomy	
1. Identify primary mover vs. secondary mover (e.g., agonist, antagonist, synergist)	
2. Identify the muscle groups involved in exercises and relate the muscle groups wit	h specific
Exercises	
3. Identify anatomical locations (e.g., anterior, posterior, lateral)	
4. Identify common muscle-injury relationships	
5. Differentiate between types of joints	
6. Analyze how the muscular and skeletal systems work together to perform moven	nent
7. Evaluate the relationship between the joints and muscles during exercise	
8. Recognize the major kinetic chains (e.g., foot/ankle, knee, hip, shoulder, neck)	
C. Biomechanics (study of human motion)	
1. Identify planes of motion (e.g., frontal, sagittal, transverse)	
2. Identify joint motions and muscle actions (e.g., abduction, extension, flexion, con	icentric,
eccentric, isometric)	
3. Identify how mechanical principles apply to the human body (e.g., range of motion, angles,	
levers)	
D. Energy Systems	
1. Explain how the body uses fuel and creates energy (e.g., calorie intake/output, Ba	asal Metabolic
Rate [BMR] vs. Total Daily Energy Expenditure [TDEE])	
2. Identify the different energy systems of the body	
3. Explain the benefits of anerobic and aerobic training	
E. Physiology	
1. Identify the physiological changes or benefits that result from exercise	
2. Identify the physiological response when performing exercise (e.g., heart rate, block and the physiological response when performing exercise (e.g., heart rate, block and the physiological response when performing exercise (e.g., heart rate, block and the physiological response when performing exercise (e.g., heart rate, block and the physiological response when performing exercise (e.g., heart rate, block and the physiological response when performing exercise (e.g., heart rate, block and the physiological response when performing exercise (e.g., heart rate, block and the physiological response when performing exercise (e.g., heart rate, block and the physiological response when performing exercise (e.g., heart rate, block and the physiological response when performing exercise (e.g., heart rate, block and the physiological response when performing exercise (e.g., heart rate, block and the physiological response when performing exercise (e.g., heart rate, block and the physiological response when performing exercise (e.g., heart rate, block and the physiological response when performing exercise (e.g., heart rate, block and the physiological response when performing exercise (e.g., heart rate, block and the physiological response when performing exercise (e.g., heart rate, block and the physiological response when performing exercise (e.g., heart rate, block and the physiological response when performing exercise (e.g., heart rate, block and the physiological response when performing exercise (e.g., heart rate, block and the physiological response when performing exercise (e.g., heart rate, block and the physiological response when performing exercise (e.g., heart rate, block and the physiological response when performing exercise (e.g., heart rate, block and the physiological response when performing exercise (e.g., heart rate, block and the physiological response when performing exercise (e.g., heart rate, block and the physiological response when performing exercise (e.g., heart rate, block and the physi	ood pressure,
hormonal response)	
3. Understand the theory behind muscle movements (e.g., sliding filament theory, a	all-or-none
theory, size principle of motor unit recruitment)	
4. Differentiate between muscle fiber types and how they react to exercise	
II. Nutrition	10%

A. General Nutrition Information

	Examination
Domain/Task Statement	Weight (%)
1. Define basic nutritional and dietary guidelines	
2. Define the macro- and micro-nutrients and explain how they are used by the bod	ly
3. Define the difference between supplements and ergogenic aids (e.g., performance	ce-enhancing
drugs, controlled substances)	-
B. Client Dietary Habits	
1. Obtain an understanding of a client's dietary habits	
2. Assess shortcomings in a client's diet	
3. Assess caloric intake relative to client needs	
C. Nutritional Guidance	
1. Offer basic nutritional education and guidance	
2. Educate clients regarding food labels and portion size	
3. Educate clients regarding current diet trends (e.g., fasting, fad diets)	
4. Educate clients regarding supplements and ergogenic aids (e.g., performance-enl	nancing drugs,
controlled substances)	
III. Intake and Ongoing Evaluation	15%
A. Collect and review all necessary documentation (e.g., medical release, medical hi	story, liability
waiver)	
B. Conduct a basic fitness assessment (e.g., postural, performance, movement, stre	ngth,
cardiovascular, flexibility, body composition)	
C. Interpret results of all assessments in relation to client goals (e.g., comparison to	the general
population, initial assessment vs. ongoing assessments)	
IV. Program Design and Implementation	25%
A. Principles of Program Design	
1. Apply principles of specificity for clients to achieve goals (e.g., hypertrophy, cardi	ovascular
endurance, lean body mass changes)	
2. Evaluate and integrate applications of general adaptation syndrome	
3. Identify when to apply undulating vs. linear periodization	
B. Program Design Activities	
1. Design a balanced, functional program that includes the basic components of fitn	iess
2. Apply injury prevention protocols in program design (e.g., static and dynamic stre	etching, foam
rolling, warm-up and cool-down protocols)	
3. Apply differential variables or training techniques (e.g., intensity and volume, free	quency,
repetition range, sets, rest, time under tension, tempo)	
4. Apply findings of fitness assessment to program design (e.g., equipment selection	٦,
movement/exercise selection)	
C. Program Implementation	
1. Implement and adjust exercise program based on client's goals (e.g., training and	l check-in
schedules)	
2. Recommend training modifications for special populations (e.g., prenatal, youth,	arthritic,
hypertensive)	
3. Identify and develop specific techniques (e.g., regressions, progressions, modification of the second se	ations) to match
the ability level of the client	

	Examination
Domain/Task Statement	Weight (%)
4. Counsel the client regarding flexibility, range of motion practices (e.g., static and	dynamic
stretching, foam rolling)	
5. Evaluate the client's cardiovascular health in order to help reach client's goals	
V. Exercise Selection, Technique, and Training Instruction	15%
A. Correcting Technique	
1. Educate client regarding technique and form (e.g., coaching cues)	
<ol><li>Correct technique on kinetic chain checkpoints (e.g., correct posture, use verbal a cues)</li></ol>	and non-verbal
3. Correct muscular imbalance and incorrect posture and technique	
B. Monitor Client	
1. Evaluate client's progress using multiple measures (e.g., energy level, sleep quality	ty, changes in
appearance/measurements)	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
2. Apply coaching cues to evaluate client's technique and form (e.g., range of motio	n, intensity,
speed, symmetry)	
3. Inform client regarding recovery, rest, over-training, and when to stop exercising	
4. Monitor and modify intensity during cardiovascular activity based on the client's	physical
abilities	
VI. Professional Practice and Responsibility	10%
A. Scope of Practice	
1. Recognize professional duties and responsibilities as outlined by the sanctioning	organization
(e.g., punctuality, appearance, hygiene, safety, keeping current with practice)	
<ol><li>Recognize when to refer clients to others (e.g., outside resources, other colleague professionals)</li></ol>	es, medical
<ol> <li>Recognize current and evolving technology trends to train and communicate with on client's needs</li> </ol>	n client based
4. Motivate and educate clients to pursue and continue a healthy lifestyle	
B. Ethics	
1. Recognize ethical boundaries (e.g., sexual harassment, fraternization outside ses	sion hours)
2. Evaluate applications of codes of conduct (e.g., conflicts of interest, discussing se	nsitive subjects)
C. Legal	
1. Recognize liability and insurance policies/practices	
2. Ensure contract terms and cancellation policies are clear to the client	
D. Marketing and Selling	
1. Apply various means of market and communication with the intent to sell person	al training
services (e.g., text, emails, phone calls, friends and family referrals, websites, email	campaigns,
social media)	
2. Build and nurture relationships in order to retain clients	
E. Trainer and Client Safety	
1. Follow safety checklist; active, ongoing monitoring of client during session	
2. Proactively identify risk indicators (e.g., awareness of environment, trip hazards,	cleaning and
sanitization according to current public health recommendations)	
<ol><li>Apply proper procedure to document incident reports</li></ol>	

Domain/Task Statement	Examination Weight (%)
4. Apply emergency event protocols (e.g., know when to call 911, activate EMS)	
5. Locate and use emergency tools (e.g., first-aid kit, AED, fire extinguisher, emerge locations)	ency exit

### NCCPT Certified Indoor Cycling Instructor Detailed Content Outline Based on March 2018 Job Analysis Study

### CLASS PREPARATION - 11%

- Check the room.
- Operate the stereo and/or pa system.
- Prepare class format ahead of time.
- Modify class format based on the participants.
- Coordinate tempo or beats per minute for each segment of the class.
- Knowledge of how to use the bikes.
- Know the check-in system for students.
- Know the check-in system for teachers.
- Be early to help new students
- Check Temperature & air flow ventilation
- Towel & water bottle set up as the example
- Engage with students to set the atmosphere; introduction, positioning
- Encourage participants to listen to their body; recognize body issues

BIKE SET UP - 15%

- Be able to explain and teach foot placement on the pedals.
- Be able to explain and teach foot gear and cleat placement.
- Be able to explain hip/knee/ foot alignment.
- Be able to establish seat height and fore and aft position.
- Establish upper body position; handlebar placement, elbow placement, etc.
- Know how to use measuring tools/devices
- Seat distance forward and back that is appropriate for each person

### HEALTH ASSESSMENTS – 6%

- Elicit and interpret client goals.
- Administer and interpret cardiovascular assessments.
- Rona: checking students during class to adjust
- Understand heart rate; Vo2 max; wattage; some resistance not just momentum.

### CLASS INSTRUCTION - 15%

- Use the correct tempo or beats per minute (bpm) and cadence for each section of the class.
- Know how and when to cue participants in class.
- Identify endangerment sites/sites of caution.
- Use cycling terms in the class.

#### **RIDING TECHNIQUES – 15%**

- Understand and teach pedaling technique.
- Understand and teach proper cadences.
- Understand and teach proper hand positions.
- Understand and teach proper breathing techniques.
- Understand heart rate training.
- Understand wattage/ tension on the flywheel with relation to heart rate
- Riding and performing resistance exercise
- Identify contraindicated movements
- Positioning changes

### **EMERGENCY PROCEDURES – 6%**

- Administer and apply principles of emergency procedures.
- Know how to take steps to ensure injury prevention for your clients.
- Know how to implement and follow emergency procedures for the place of practice.
- Educate clients on ways to avoid re-injury.
- Identify Dehydration
- Hydration/ water break

### KINESIOLOGY – 8%

- Knowledge of gross muscular anatomy.
- Knowledge of gross skeletal anatomy.
- Explain anatomical terms to clients.
- Explain physiological concepts to clients.
- Seat height to pedal.
- Fore and aft position.
- Appropriate resistance.
- Body positioning.

### EXERCISE PHYSIOLOGY - 8%

- Use knowledge of the body's energy systems.
- Educate clients on basic muscles and their functions.
- Understand the physiological cardiovascular changes that may occur as a result of an indoor cycling program.
- Understand the physiological flexibility changes that may occur as a result of an indoor cycling program.
- Understand the physiological strength changes that may occur as a result of an indoor cycling program.

- Macronutrients (carbohydrates, proteins, fats, water).
- Micronutrients (vitamins, minerals).
- Interpret completed information on client intake forms.
- Basic knowledge of Ergogenic Aids and Supplements.
- Know how to read and interpret dietary labels.

### ETHICS/BUSINESS PRACTICES – 8%

- Maintain ethical, professional and lawful relationships with clients.
- Identify code of ethics violations.
- Report code of ethics violations.
- Operate within a legally defined scope of practice.
- Maintain client confidentiality.
- Use self-care and injury prevention practice.
- Conduct yourself in a professional manner
- Be proficient in verbal, audible and kinesthetic communication skills.
- Market and advertise your skills as an indoor cycling instructor.
- Ability to sell your services as an indoor cycling instructor.
- Good personal hygiene.

### NCCPT Certified Group Exercise Instructor Detailed Content Outline Based on March 2018 Job Analysis Study

### Class Preparation – 14%

- Check the room/ equipment/temperature/ventilation.
- Check floor for moisture/ other safety hazards.
- Operate the stereo and/or PA system/audio/video.
- Prepare class format ahead of time.
- Modify class format based on the participants progression/regression.
- Coordinate tempo or beats per minute for each segment of the class/exercise routine.
- Prepare play list ahead of time.
- Knowledge of how to use fitness equipment.
- Know the check-in system for participants.
- Know the check-in system for instructors.

### Health Assessments – 5%

- Elicit and interpret client goals.
- Assess fitness level of individuals in the class.
- Assess quality of movement.
- Inquire about health preconditions.
- Inquire about pre-existing injuries.

- Understand how to conduct a proper warm-up.
- Understand the difference between static and dynamic movement.
- Understand how to create a safe conditioning segment.
- Understand how to conduct a proper cool down.
- Understand training principles of the workout.
- Identify the type of the class. (I.e. strength based, kick boxing, step, dance etc).
- Identify goals (i.e. speed, agility, power, strength, stability, endurance).
- Acute variables (i.e. sets, reps intervals, rest periods, length of time) and how to modify exercises for higher or lower levels.
- How to progress/regress each exercise in the program.
- Length of class/class segment.
- Consider studio space and available equipment.
- Consider participant demographics.
- Music selection and appropriate volume.

#### Emergency Procedures – 7%

- Administer and apply principles of emergency procedures (CPR, AED, First Aid.)
- Administer and apply principles of environmental emergency procedures (fire, tornado, earthquakes, hurricanes etc.)
- Know how to take steps to ensure injury prevention for participants.
- Educate participants on ways to avoid injury and re-injury.
- Know the location of emergency equipment.
- Assess participants in class for potential emergencies in response to exercise

### Class Instruction – 19%

- Use the correct tempo or beats per minute (bpm) for each segment of the class.
- Ensure the music is appropriate for the type of class.
- Know how and when to cue participants in class.
- Know how to motivate participants.
- Ability to engage with participants to create connection.
- Know how to set up stations/equipment in the room.
- Know how to cue and correct proper technique.
- Know how to adjust to various exercise levels and suggest modifications
- Create a positive, fun atmosphere.
- Instructor introduction, welcome participants and explain class format.
- Acknowledge new participants.
- Explain the benefits of the class

Kinesiology – 10%

- Knowledge of gross muscular anatomy.
- Knowledge of gross skeletal anatomy.
- Explain anatomical terms to participants.
- Explain physiological concepts to participants.
- Use knowledge of joint structure and function.

- Understand basic biomechanics.
- Know planes of motion.
- Know the concepts of momentum.
- Explain proper alignment.

Exercise Physiology – 10%

- Have knowledge of the body's energy systems; aerobic, anaerobic.
- Educate clients on muscles and their functions.
- Understand the physiological changes that may occur as a result of a cardiovascular training program.
- Understand the physiological changes that may occur as a result of a resistance training program.
- Understand the physiological changes that may occur as a result of a flexibility training program.
- Understand recovery and appropriate rest periods.
- Understand the concept of EPOC (excess post oxygen consumption).
- Understand heart rate training and the metabolic effects of the different heart rate zones (HIIT, Tabata).
- Understand muscle contraction; concentric, eccentric and isometric.
- Understand muscle fiber type, slow and fast twitch.

Nutrition – 8%

- A general understanding of macronutrients (carbohydrates, proteins, fats, water).
- A general understanding of micronutrients (vitamins, minerals).
- Suggest healthy food options.
- Know how to read and interpret dietary labels.

Ethics/Business Practices – 8%

- Maintain ethical, professional and lawful relationships with participants.
- Identify and report code of ethics violations.
- Operate within a legally defined scope of practice (e.g. diagnosing medical conditions, nutritional advice, psychological counseling, etc.).
- Differentiate between various business entities (e.g., employee, independent contractor, partnership, corporation).
- Work within a legal business structure (e.g., license, permits, insurance).
- Use self-care and injury prevention practice.
- Conduct oneself in a professional manner.
- Practice good personal hygiene.
- Be proficient in verbal, audible and kinesthetic communication skills.
- Market and advertise your skills as a Group Exercise instructor.
- Maintain ethical and professional boundaries with place of employment (i.e. selling products or additional personal services).
- Maintain professional and personal boundaries with participants and co-workers.
- Demonstrate sensitivity to diverse populations (seniors and/or those with disabilities etc.).
- Work within company guidelines to promote internal or external events/classes.
- Adhere and work within the guidelines if teaching a brand's pre-choreographed formats or choreography (Zumba, Les Mills, Tribe, Stages, etc.).

### NCCPT Certified Strength Training Instructor Detailed Content Outline Based on March 2018 Job Analysis Study

Health Assessment - 14%

- Review client records before each session.
- Document findings from the session.
- Conduct Health Assessments prior to exercise participation.
- Administer and interpret a postural assessment.
- Assess efficiency of movement, posture and balance.
- Administer and interpret a range of motion assessment.
- Conduct Health Assessments to assess progress of an exercise program.
- Use concepts of muscle physiology to assess muscle health (e.g., short/tight/weak, long/inhibited/weak, weak, hypertonic, muscular imbalances... muscle uppercross).
- Elicit and interpret client goals.
- Prevent and recognize musculoskeletal injuries.
- Perform a post-program assessment.
- Elicit and interpret client goals.
- Administer and interpret strength assessments.
- Administer and apply principles of emergency actions/procedures. Particular health issue e.g. asthma what to do that is in scope of practice
- What to do when have health conditions? Sickle cell anemia; risk factors;
- Prevent and recognize musculoskeletal injuries.
- Perform a post-program assessment.

**Emergency Procedures - 9%** 

- Risk management plan staff must be aware and understand Agent of institution or Independent Contractor important to know liability.
- Emergency action plan incident report form; e.g. Fire
- Administer and apply principles of emergency procedures.
- Know how to implement and follow emergency procedures for the place of practice.
- Know how to take steps to ensure injury prevention for clients; moving balls, gym equipment, collars, dropping dumb bells, equipment safety features, aligning joint access machines, etc.).
- Educate clients on ways to avoid re-injury.
- Understand applications for hot or cold treatments, whirlpool.

Kinesiology - 10%

- Knowledge of gross muscular anatomy.
- Knowledge of gross skeletal anatomy.
- Explain basic anatomical terms to clients.
- Explain physiological concepts to clients.
- Apply knowledge of joint structure and function.
- Know basic anatomical terms and/or medical terminology.
- Identify anatomical landmarks, origin, insertion and action of the muscles.

- Understand basic anatomical position and human reference to movement.
- Know the planes of motion.
- Know the basics of biomechanics.
- Know the concepts of power.
- Know the difference between gross anatomy and functional anatomy.
- Know the difference between kinetics and kinematics.
- Know the difference between linear/translation motion, rectilinear and curvilinear motion.

### Exercise Physiology 10%

- Apply knowledge of the body's energy systems.
- Educate clients on muscles and their functions.
- Understand the structure of skeletal muscle.
- Understand muscle fiber type.
- Identify and understand the relationship between types of muscular contractions.
- Understand the physiological changes that may occur as a result of a cardiovascular training program.
- Understand the physiological changes that may occur as a result of a resistance training program.
- Understand the physiological changes that may occur as a result of a flexibility training program.
- Understand the physiological changes that may occur as a result of a strength training program.
- Understand neuromuscular adaptations to strength training.
- Understand how muscle soreness occurs and DOMS.
- Understand the definition and the different types of strength.
- Understand the cardiovascular system, VO2 max and heart rate.
- Understand concepts of aerobic and anaerobic training.
- Understand concepts of overreaching, overtraining and detraining.
- Understand the structure and functional unit of the nervous system.

### Nutrition – 9%

- Macronutrients (carbohydrates, proteins, fats, water).
- Micronutrients (vitamins, minerals,).
- Dietary analysis. Review Good nutrition habits Scope?
- Interpret completed information on client intake forms.
- Create meal plans. Scope? General Recommendations
- Ergogenic Aids and Supplements.
- Know how to read and interpret dietary labels.

### Exercise Application – 20%

- Principles of proper instructional techniques and cues (ex: visual, auditory and kinesthetic).
- Principles of biomechanical principles to body weight, free weight, sectorized machine exercises, etc.
- Consider the client's ergonomics and body mechanics.
- Understand the concept of lever systems.
- Demonstrate to client stretching and strengthening techniques.
- Understand the concepts of application of force on the body.
- Principles of proper flexibility training techniques (passive stretching, active stretching, dynamic stretching, etc.).

- Knowledge of the sport of weightlifting spotting and cueing (ex: visual, auditory and kinesthetic).
- Knowledge of strength equipment.
- Program Design 20%
- Incorporate the principles of effective program design.
- Incorporate the concept of periodization to design a fitness program.
- Appropriate and efficient program design for muscular endurance training.
- Appropriate and efficient program design for flexibility training.
- Appropriate and efficient program design for coordination and balance training.
- Appropriate and efficient program design for weight-loss or to reduce body fat.
- Appropriate and efficient program design for sports specific training.
- Appropriate and efficient program design for speed training.
- Appropriate and efficient program design for power training.
- Appropriate and efficient program design for hypertrophy (i.e. vanity).

Program Design 20%

- Incorporate the principles of effective program design.
- Incorporate the concept of periodization to design a fitness program.
- Know how to create an efficient program design for muscular endurance training.
- Know how to create an efficient program design for flexibility training.
- Know how to create an efficient program design for coordination and balance training.
- Know how to create an efficient program design for weight-loss or to reduce body fat.
- Know how to create an efficient program design for sports specific training.
- Know how to create an efficient program design for speedtraining.
- Know how to create an efficient program design for power training.
- Know how to create an efficient program design for hypertrophy (i.e. vanity)

Ethics/Business Practices - 8%

- Maintain ethical, professional and lawful relationships with clients.
- Identify code of ethics violations.
- Report code of ethics violations.
- Operate within a legally defined scope of practice.
- Maintain client confidentiality.
- Use self-care so trainer does not get injured i.e. how to spot, etc.
- Use self-care (example: trainer has flu & goes into work should wear mask)
- Injury prevention practice
- Establish and maintain client records
- Document each client visit.
- Keep complete and accurate training records.
- Securely store client records.
- Advise client of confidentiality policy, rights and expectations.
- Knowledge of when to use health history form.
- Differentiate between various business entities (e.g., employee, independent contractor, partnership, corporation).
- Work within a legal business structure (e.g., license, permits, insurance).
- Conduct yourself in a professional manner.

- Be proficient in verbal, audible and kinesthetic communication skills.
- Market and advertise your skills as a Strength Training instructor.
- Ability to sell your services as a Strength Training instructor.

### NCCPT Certified Yoga Instructor Detailed Content Outline Based on March 2018 Job Analysis Study

Class Preparation - 8%

- Check the room.
- Temperature (appropriate, comfortable, ventilation).
- Starting on time.
- Etiquette.
  - o Touching
  - o Approaching the student
- Operate the stereo and/or PA system.
- Music selection.
- Lighting.
- Mats.
  - Set up preferred configuration/orientation i.e. circles, rows, staggered dependent upon #of participants
  - Thickness, not slippery
  - o Extra if needed
- Prepare class format ahead of time/ vinyasa flow introduction
- Modify class format based on the participants.
- Know the check-in system for students.
- Know the check-in system for teachers.

Class Instruction - 28%

- Asana (poses).
- PRANYAMA/ (Breathing exercises).
- Sequencing and cueing.
- Alignment every pose should be deconstructed & reconstructed.
- Chakra (poses are to align chakras, and teacher have knowledge).
- Necessary modifications/contraindications.
- How to use Props.
- Proper attire.
- Benefits of various poses (i.e. hip; opening chakras).
- Know the proper Sanskrit names to the poses.
- Know the proper English names to the poses.
- Know the basic history of Yoga.
- Know the proper sequence of poses.
- Benefits of the poses.
- Know how to modify each pose to accommodate participants.

- Know how and when to cue participants in class.
- Know how and when to use tools and yoga equipment.
- Breathing.
- Hands on correction/assist.
- Yoga Demonstration techniques.

Emergency Procedures - 8%

- Risk management plan staff must be aware and understand How important to be aware of emergency procedures.
- Emergency action plan e.g. Fire
- Administer and apply principles of emergency procedures.
- Know how to implement and follow emergency procedures for the place of practice.
- Know how to take steps to ensure injury prevention for clients.
- Educate clients on ways to avoid re-injury.

### Kinesiology/Anatomy – 12%

- Knowledge of gross muscular anatomy.
- Knowledge of gross skeletal anatomy.
- Identify anatomical landmarks, origin, insertion and action of the muscles.
- Use knowledge of joint structure and function.
- Understand basic anatomical position and human reference to movement.
- Know the basics of biomechanics.
- Alignment Principles
- Knowledge of fascia (key to movement in yoga)
- Subtle body vs physical body movement of energy

Exercise Physiology - 8%

- Apply knowledge of the body's energy systems.
- Educate clients on muscles and their functions.
- Apply knowledge of breathing techniques and how to demonstrate and teach them
- Identify and understand the relationship between yoga and resistance.
- Identify and understand the relationship between yoga and flexibility.
- Understand what physiological changes that may occur as a result of a yoga program.
- Knowledge of Neurobiology (expanding field)
- Definition of terms; terminology

Ethics/business practices/Scope of Practice/Code of Conduct - 8%

- Maintain ethical, professional and lawful relationships with clients.
- Identify code of ethics violations.
- Report code of ethics violations.
- Operate within a legally defined scope of practice.
- Maintain client confidentiality.
- Use self-care and injury prevention practice.
- Conduct oneself in a professional manner.
- Be proficient in verbal, audible and kinesthetic communication skills.
- Market and advertise your skills as a yoga instructor.

• Ability to sell your services as a yoga instructor.

Yoga and the Mind/Body Connection 28%

- Theory & Practice
- Meditation
- Chakras awareness
- Teach Importance Drishti (where you place your eyes)
- Mind/body Balance
- Subtle body (blueprint for the physical body)
- Chakra system
- Breath
- Kosha
- Nadis

# Appendix 3: Bibliography References

### For the Certified Personal Trainer Credential (CPT)

- Aaberg, Everett. Strength Speed & Power. Marie Butler-Knight, 2002.
- ACE Personal Trainer Manual, 5th edition, 2014.
- American Red Cross Instructor's Handbook, St. Louis, Mo, Mosby-Year Book, Inc, 2009.
- Anderson, Niki, Davis, Shala E., Archer, Shirley. ACSM's Resources for the Personal Trainer. 2nd, Philadelphia, PA, Lippincott Williams & Wilkins, 2007.
- Anthony, CP, Thibodeau, GA. Textbook of Anatomy and Physiology. 11th, St. Louis, MO, CV Mosby, 1983.
- Balady, Gary J., Berra, Kathy A., Golding, Lawrence A. ACSM's Guidelines for Exercise Testing and Prescription. 6th, Philadelphia, PA, Lippincott Williams & Wilkins, 2000.
- Beavers, Kristen M., Leutholtz, Brian. Glycemic Load Food Guide Pyramid for Athletic Performance.Vol. 30, No. 3, Philadelphia, PA, Lippincott Williams & Wilkins, June, 2008.
- Beedle, Barry B., Leydig, Summer N., Carnucci, Jennifer M. No Difference in Pre and Postexercise Stretching on Flexibility. Vol. 21, No. 3, Philadelphia, PA, Lippincott Williams & Wilkins, August, 2007.
- Bompa, Tudor. Periodization: Theory and Methodology of Training. 4th, Champaign, IL, Human Kinetics, 1999.
- Brooks, GA, Fahey, TD. Exercise Physiology: Human Bioenergetics and It's Applications. NY, NY, John Wiley & Sons, 1986.
- Costill, DL. Adaptations of Skeletal Muscle following Strength Training. Journal of Applied Physiology, 1979.
- Feldenkrais, Moshe. The Master Moves. Capitola, Ca, Meta Publications, 1984.
- Fleck, S., Kramer, W. Designing Resistance Training Programs. Champaign, IL, Human Kinetics, 1997.
- Girard, Joe. How to Close Every Sale. NY, NY, Warner Books.
- Gitomer, Jeffry. The Sales Bible, Harper Collins, 2008.
- Gollnick, PD, Hermansen, L. Biomechanical Adaptations to Exercise, Anaerobic Metabolism in Exercise & Sports Sciences.
- Gray, Henry. Grays Anatomy. Philadelphia, PA, Running Press, 1974.
- Guyton, JG. Physiology of the Human Body. 5th, Baltimore, MD, Williams & Wilkins, 1976.
- Hamil, Joseph, Knutzen, Kathleen M. Biomechanical Basis of Human Movement. Media, PA, Williams & Wilkins, 1995.
- Hartmann, J., Tunnemann, H. Fitness and Strength Training for All Sports. Toronto, Canada, Sports Books Publisher, 1995.
- Howley, Edward T, Franks, B. Don. Health Fitness Instructor's Handbook. 3rd, Champaign, IL, Human Kinetics, 2007.
- Hunter, Gary R., Dudley, Gary A., Harris, Robert T. Essentials of Strength Training and Conditioning. NSCA, Champaign, IL, Human Kinetics, 1994.
- Kapit, Wynn, Elson, Lawrence M. The Anatomy Coloring Book. Benjamin-Cummings.
- Karrass, Dr. Chester L. Effective Negotiating. 1999.
- Kelly, Stephen B., Brown, Lee E., Coburn, Jared W. The Effect of Single Versus Multiple Sets on Strength. Vol. 21, No. 4, Philadelphia, PA. Lippincott Williams & Wilkins, November, 2007.
- Kendall, Florence P.; McCreary, Elizabeth K.; Provance, Patricia G. Muscle Testing and Function. 5th, Philadelphia, PA, Lippincott Williams & Wilkins, 2005.
- Kinakin, Ken. Optimal Muscle Training. Champaign, IL, Human Kinetics, 2004.
- Kirschmann, John D., Dunne, Lavon J. Nutrition Almanac. 2nd Edition.

- Lee, Diane. The Pelvic Girdle. 2nd, Leith Walk, Edinburgh, Harcourt Publishers Ltd, 2000.
- Levinson, Jay Conrad. Mastering Guerilla Marketing. NY, NY, Houghton Mifflin Company, 1999.
- Magruder, Jeff, Davis, Paul O. Fitness: The Complete Guide. ISSA. 2nd Edition, Santa Barbara, CA, International Sports Sciences Association, 1992.
- Mcardle, William, Katch, Frank I, Katch, Victor L. Essentials of Exercise Physiology. Philadelphia, PA Lea & Febinger, 1994.
- McGinnis, Peter M. Biomechanics of Sport and Exercise. 2nd, Champaign, IL, Human Kinetics, 2005.
- McMurray, WC. Essentials of Human Metabolism. 2nd Edition.
- NASM. Optimum Performance Training for the Health and Fitness Professional. 2nd, Calabasas, CA, National Academy of Sports Medicine, 2004.
- Netter, Frank H. Atlas of Human Anatomy. Summit, NJ, Ciba Pharmaceuticals Division, Ciba- Geigy Corporation, 1989.
- Norkin, Cynthia C., Levangie, Pamela K. Joint Structure and Function. 2nd, Philadelphia, PA, F.A. Davis, 1992.
- Petersen, Tammy J. Sr. Fit-The Personal Trainer's Resource for Senior Fitness. Tonganoxie, Kansas, American Academy of Health and Fitness, 2008.
- Pike, Ruth L., Myrtle L. Brown. Nutrition and Integrated Approach.
- Platero, John J. The Power of Personal Training. Ontario, CA, The National Council for Certified Personal Trainers, 2009.
- Poloquin, Charles. Modern Trends in Strength Training. Volume 1. Daytons Writers Group, 2001.
- Purvis, Tom. Focus Hands On Series. 1997.
- Reid, JG, Thomson, JM. Exercise Prescription for Fitness. Englewood Cliffs, NJ, Prentice-Hall, 1985.
- Rosenburg, Harold. The Doctor's Book of Vitamin Therapy.
- Sahrmann, Shirley A. Diagnosis and Treatment of Movement Impairment Syndromes. St. Louis, Mo, Mosby, Inc, 2002.
- Southmayd, M.D., William, Hoffman, Marshall. Sports Health, The Complete Book of Athletic Injuries. Agincourt, Ontario, Quick Fox, 1981.
- Telle, J. Beyond 2001: The Next Real Step: New Approaches to Scientific Training for the Advanced Body Builder. Denver, CO, Edict, 1994.
- Thomas, DE, Brotherhood, JR, Brand, JC. Carbohydrate feeding before exercise: effect of glycemicindex. International Journal of Sports Medicine. 1991 Apr;12(2):180-6.
- Upton, David E., Verity, Larry S., Williams, Karen M. Clinical Exercise Specialist Manual ACE's Source for Training Special Populations. San Diego, CA, American Council on Exercise, 2007.
- Weintraub, William. Tendon and Ligament Healing. Berkeley, CA, North Atlantic Books, 1999.

### Magazines/Websites

- American Fitness Magazine http://www.americanfitness.com/
- The American Journal of Sports Medicine http://ajs.sagepub.com/
- Biomechanics <u>http://www.biomech.com/</u>
- IDEA Source<u>http://www.ideasource.com/</u>
- Journal of the American Physical Therapy Association <u>http://www.ptjournal.org/</u>
- Personal Fitness Professional <u>http://www.fit-pro.com/ME2/Default.asp</u>
- Training and Conditioning <a href="http://www.training-conditioning.com/">http://www.training-conditioning.com/</a>

### For the Indoor Cycling Credential (CICI)

- Amundsen, L.R. (1990). Isometric muscle strength testing with fixed-load cells. In L.R. Amundsen (Ed.), *Muscle Strength Testing* (pp. 89-121). New York, NY: Churchill Livingstone.
- Bompa, T.O. (2010). *Power Training for Sport: Plyometrics for Maximum Power Development*. Oakville, Ontario, CANADA: Mosaic Press.
- Brown, L. E. & Ferrigno, V. A. (2005). *Training for Speed, Agility, and Quickness* (2<sup>nd</sup> Edition). Champaign, IL: Human Kinetics.
- Chu, D. A. (1996). *Explosive Power & Strength: Complex Training for Maximal Results*. Champaign, IL: Human Kinetics.
- Ertl, D. (2009). *101 Cycling Workouts: Improve Your Cycling Ability While Adding Variety to Your Training Program.* Garden City, NY: Morgan James Publishing.
- Fleck, S. J. (2002). Periodization of training. In *Strength Training for Sports* (pp.55-68). Oxford, England: Blackwell Science Ltd.
- Fleck, S.J. & Kraemer, W.J. (Eds.). (1987). *Designing Resistance Training Programs* (2<sup>nd</sup> Edition). Champaign, IL: Human Kinetics.
- Fleck, S.J. & Kraemer, W.J. (Eds.) (1996). *Periodization Breakthrough*. New York, NY: Advanced Research Press.
- Fleck, S.J. & Kraemer, W.J. (1997). *Designing Resistance Training Programs* (2<sup>nd</sup> Edition). Champaign, IL: Human Kinetics.
- Friel, J. (2009). *The Cyclist's Training Bible*. Boulder, CO: VeloPress.
- Gray, H. (1974). *Gray's Anatomy*. Philadelphia, PN: Running Press.
- Hartmann, J. (Ed.). (1989). *Strength, Speed, and Endurance for Athletes*. Toronto, Canada: SportBooks Publisher.
- Hobson, W. & Friel, D. (2005). *Workouts in a Binder for Indoor Cycling* (Spi Edition). Boulder, CO: VeloPress.
- Kiddle, R. (2015). *The Complete Guide to Studio Cycling* (1<sup>st</sup> Edition). Bloomsbury Sport.
- Kory. K. (1999). *Power Pacing for Indoor Cycling*. Champaing, IL: Human Kinetics.
- McArdle, W.D., Katch, F.I. & Katch, V.L. (2004). *Exercise Physiology* (9<sup>th</sup> Edition). Philadelphia, PN: Lippincott, Williams & Wilkins.
- McGinnis, P. M. (2005). *Biomechanics of Sport and Exercise* (2<sup>nd</sup> Edition). Champaign, IL: Human Kinetics.
- Michael, M. (2016). Bike Shorts: Your Complete Guide to Indoor Cycling. Independently published.
- Nacey, G. (2016). The Complete Guide to Power Training for Indoor Cycling: Training your cyclingpower indoors, to improve your riding outdoors (2<sup>nd</sup> Edition). Pittsburg, PA: Cycling Fusion.
- Netter, F. (1989). Atlas of Human Anatomy. Summit, NJ: Elsevier Health Sciences.
- Norkin, C.C. & Levangie, P.K. (1992). Joint Structure and Function (2<sup>nd</sup> Edition). Philadelphia, PN: F.A. Davis.
- Platero, John J. The Power of Personal Training. Ontario, CA, The National Council for Certified Personal Trainers,
  - 2009.
- Rowland, T.W. (1996). *Developmental Exercise Physiology* (3<sup>rd</sup> Edition). Champaign, IL: Human Kinetics.
- Seabourne, T. (2016). *Indoor Cycling Drills and Skills: For indoor cycling instructors and participants alike!* (Kindle Edition). Amazon Digital Services LLC.
- Scott, B. L. (2014). The Indoor Cycling Guide: How to improve your fitness and speed with turbotrainers and rollers (Iron Training Tips). Amazon Digital Services LLC.
- Shechtman, N. (2015). *Indoor Cycling Basics and Beyond Print CE Course* (3<sup>rd</sup> Edition). Champaign, IL: Human Kinetics.
- Viru, A. (1995). Adaptation in Sport Training (1<sup>st</sup> Edition). Boca Raton, FL: CRC Press.

- Yessis, M. (Ed.). (1992). *Kinesiology of Exercise*. Indianapolis, IN: Masters Press, Inc.
- Yessis, M. & Hatfield, F. C. (Eds.). (1986). *Plyometric Training: Achieving Power and Explosiveness in Sports*. Fitness Systems.
- Zatsiorsky, V. M. (Ed.). (1995). *Science and Practice of Strength Training*. Champaign, IL: Human Kinetics.

### For the Group Exercise Instructor Credential (CGxI)

- Armbruster, C. (2009). *Methods of Group Exercise* (2<sup>nd</sup> Edition). Champaign, IL: Human Kinetics.
- Baechle, T.R. & Groves, B.R. (1992). *Weight Training: Steps to Success.* Champaign, IL: LeisurePress.
- Bompa & Tudor (1999). *Periodization: Theory and Methodology of Training* (4<sup>th</sup> Edition). Champaign, IL: Human Kinetics.
- Brewer, C. (2008). *Strength and conditioning for sport: A practical guide for coaches*. Leeds, UK: National Coaching Foundation.
- Brooks, G.A. & Fahey, T.D. (1986). *Exercise Physiology: Human Bioenergetics and It's Application*. New York, NY: John Wiley & Sons.
- Brown, L.E. & Ferrigno, V.A. (2005). *Training for speed, agility, and quickness* (2<sup>nd</sup> Edition). Champaign, IL: Human Kinetics.
- Chu, D.A. (1992). *Jumping into Plyometrics*. Champaign, IL: Leisure Press.
- Contreras, B. (2013). *Bodyweight Strength Training Anatomy* (1<sup>st</sup> Edition). Champaign, IL: Human Kinetics.
- Dawes, J. (2017). *Complete Guide to TRX Suspension Training*. Champaign, IL: Human Kinetics.
- DeCurtins, J. (2015). *Ultimate Plank Fitness: For a Strong Core, Killer Abs- And a Killer Body* (1<sup>st</sup> Edition). Beverly, MA: Fair Winds Press.
- Feldenkrais, M. (1984). *The Master Moves*. Capitola, CA: Meta Publications.
- Fleck, S. & Kramer, W. (1997). *Designing Resistance Training Programs*. Champaign, IL: Human Kinetics.
- Girard, J. (1989). *How To Close Every Sale*. New York, NY: Warner Books.
- Gray, H. (1974). *Gray's Anatomy*. Philadelphia, PN: Running Press.
- Guyton, A.C. (1979). *Physiology of the Human Body* (5<sup>th</sup> Edition). Philadelphia, PN: W.B. Saunders Co Ltd.
- Hancox, J.E., Quested, E., Thøgersen-Ntoumani, C. & Ntoumanis, N. (2015). An intervention to train group exercise class instructors to adopt a motivationally adaptive communication style: a quasiexperimental study protocol. *Health Psychology and Behavioral Medicine* (pp. 190-203). Abingdon, UK: Taylor & Francis.
- Leung, K. & Chou, L. (2015). *Suspended Bodyweight Training: Workout Programs for Total-Body Fitness.* Berkeley, CA: Ulysses Press.
- Liebman, H. (2017). *1,500 Stretches: The Complete Guide to Flexibility and Movement*. New York, NY: Black Dog & Leventhal Publishers.
- McArdle, W.D., Katch, F.I. & Katch, V.L. (2004). *Exercise Physiology* (9<sup>th</sup> Edition). Philadelphia, PN: Lippincott Williams & Wilkins.
- McGinnis, P.M. (2005). Biomechanics of Sport and Exercise (2<sup>nd</sup> Edition). Champaign, IL: Human Kinetics.
- Muscle and Fitness (2001). 101 Strength Training Workouts & Strategies. Chicago, IL: Triumph Books.
- Netter, F. (1989). *Atlas of Human Anatomy*. Summit, NJ: Ciba Pharmaceuticals Division, Ciba- Geigy Corporation.
- Norkin, C.C. & Levangie, P.K. (1992). *Joint Structure and Function* (2<sup>nd</sup> Edition). Philadelphia, PN: F.A. Davis Company.

- Oliver, A. (2016). *The Trainer's Big Book of Bookcamps: Ready-Made Workouts for Your Bootcampor Group Fitness Classic* (1<sup>st</sup> Edition). CreateSpace Independent Publishing Platform.
- Pagano, J. (2013). *Strength Training Exercises for Women* (1<sup>st</sup> Edition). DK Publishing.
- Platero, John J. The Power of Personal Training. Ontario, CA, The National Council for Certified Personal Trainers, 2009
- Rey, N. (2013). *100 Non-Equipment Workouts Vol. 1: Fitness Routines You Can Do Anywhere, Any Time.* New Line Publishing.
- Rowland, T.W. (1996). Developmental Exercise Physiology. Champaign, IL: Human Kinetics.
- Stanhope, S.J. (1987). Interactions between the Anterior Abdominal Wall Musculature of Athletes. *Biomechanics in Sports III & IV.* Del Mar, CA: Eds J Terauds, L Holt, B Gowitzke Academic Publishers.
- Whitmarsh, C. (2006). 101 Ways to Work Out with Weights: Effective Exercises to Sculpt Your Body and Burn Fat. Beverly, MA: Fair Winds Press.

### For Certified Strength Training Specialist (CSTS)

- Aagaard, P., Simonsen, E. B., Andersen, J. L., Magnusson, P., Halkjaer-Kristensen, J., & Dyhre-Poulsen, P. (1997). Neural adaptation to strength training in man: spinal and supraspinal mechanisms. In J. Bangsbo, B. Saltin, H. Bonde, Y. Hellsten, B. Ibsen, M. Kjaer, & G. Sjogaard (Eds.), *Book of Abstracts I* (pp. 336-337). Copenhagen, Denmark: European College of Sport Science.
- Abernethy, P., & Wilson, G. (2000). Introduction to the assessment of strength and power. In C. J. Gore (Ed.), *Physiological tests for elite athletes* (pp. 147-154). Champaign, IL: Human Kinetics.
- Amundsen, L. R. (1990). Isometric muscle strength testing with fixed-load cells. In L. R. Amundsen (Ed.), *Muscle Strength Testing* (pp. 89-121). New York, NY: Churchill Livingstone.
- Amundsen, L. R. (1990). Measurement of skeletal muscle strength: an overview of instrumented and non-instrumented systems. In L. R. Amundsen (Ed.), *Muscle Strength Testing* (pp. 1-23). New York, NY: Churchill Livingstone.
- Ayalon, M., Ben-Sira, D., & Tirosh, O. (1998). The effect of training through a partial range of motion. In H. J. Riehle & M. M. Vieten (Eds.), *ISBS '98 XVI International Symposium on Biomechanics in Sports* (II ed., pp. 292-295). Konstanz, Germany: UVK - Universitatsverlag.
- Baechle, T. R., & Groves, B. R. (Eds.). (1992). *Weight training: Steps to success*. Champaign, IL: Leisure Press.
- Baechle, T. R., & Earle, R. W. (2012). *Weight training steps to success* (4th ed.). Champaign, IL: Human Kinetics.
- Baltzopoulos, V. (2002). Assessment of sport-specific dynamic strength using isokinetics. In K. E. Gianikellis, D. Schmidtbleicher, V. Baltzopoulos, & V. M. Zatsiorsky (Eds.), *ISBS 2002 Applied Proceedings -Strength Training* (pp. 23-32). C ceres, Spain: University of Extremadura, C ceres, Spain, International Society of Biomechanics in Sports.
- Baltzopoulos, V., & Kellis, E. (1998). Isokinetic strength during childhood and adolescence. In E. Van Praagh (Ed.), *Pediatric anaerobic performance* (pp. 225-240). Champaign, IL: Human Kinetics.
- Banister, E. W., Good, P., Holman, G., & Hamilton, C. L. (1986). Modeling the training response in athletes. In D. M. Landers (Ed.), *Sport and Elite Performers* (3 ed., pp. 7-23). Champaign, IL: Human Kinetics.
- Billeter, R., & Hoppeler, H. (1992). Muscular basis of strength. In P. V. Komi (Ed.), *Strength and power in sport* (pp. 39-63). Oxford, England: Blackwell Scientific Publications.
- Blimkie, C. J. R., & Bar-Or, O. (1996). Trainability of muscle strength, power and endurance during childhood. In O. Bar-Or (Ed.), *The child and adolescent athlete* (pp. 113-129). Oxford, England: Blackwell

Science, Ltd.

- Blimkie, C. J. R., & Sale, D. G. (1998). Strength development and trainability during childhood. In E. Van Praagh (Ed.), *Pediatric anaerobic performance* (pp. 193-224). Champaign, IL: Human Kinetics.
- Bohannon, R. W. (1990). Muscle strength testing with hand-held dynamometers. In L. R. Amundsen(Ed.), *Muscle Strength Testing* (pp. 69-88). New York, NY: Churchill Livingstone.
- Bompa, T. O. (Ed.) (1993). *Periodization of Strength*. Toronto, Ontario, Canada: Veritas Publishing.
- Bompa, T. O. (Ed.) (1994). *Power training for sport*. Oakville, Ontario, Canada: Mosaic Press.
- Bouchard, C., Taylor, A. W., Simoneau, J., & Dulac, S. (1991). Testing anaerobic power and capacity. In J. Duncan MacDougall, H. A. Wenger, & H. J. Green (Eds.), *Physiological testing of the high-performance athlete* (pp. 175-221). Champaign, IL: Human Kinetics.
- Bouza, D. C. (Ed.) (1989). *Strength the ultimate power system*. Metairie, LA: Strength FootwearInc.
- Brewer, C. (2008). *Strength and conditioning for sport: A practical guide for coaches*. Leeds , United Kingdom: National Coaching Foundation.
- Brown, M. S. (1990). Physical Readiness. In J. L. Gabriel (Ed.), U.S. Diving Safety Manual (pp. 69-76). Indianapolis, IN: U.S. Diving Publications.
- Brown, L. E., & Ferrigno, V. A. (2005). *Training for speed, agility, and quickness* (2nd ed.). Champaign, IL: Human Kinetics.
- Brunet, M. E., Cook, S. D., Omey, M. L., & Schultz, G. (Eds.). (1992). *Development or lower leg strength and flexibility with the strength shoe*. Washington, DC: American Academy of Orthopaedic Surgeons Scientific Program, Paper No. 349, Abstract, Washington, DC.
- Burke, R. E. (1986). The control of muscle force: Motor unit recruitment and firing patterns. In N. L. Jones, N. McCartney, & A. J. McComas (Eds.), *Human muscle power* (pp. 98-109). Champaign, IL: Human Kinetics.
- Burke, R. E., & Edgerton, V. R. (1975). Motor unit properties and selective involvement in movement. In
  J. H. Wilmore & J. F. Keogh (Eds.), *Exercise and Sport Science Reviews* (3 ed., pp. 31-81). London, England:
  Academic Press.
- Chance, B., Graham, T., Maris, J., & Leigh Jr., J. S. (1986). Resting (State 4) to active (State 3) transitions as observed by 31 PNMR in steady state skeletal muscle exercise in normal and peripheral vascular diseased humans. In N. L. Jones, N. McCartney, & A. J. McComas (Eds.), *Human muscle power* (pp. 239-252). Champaign, IL: Human Kinetics.
- Christie, B. (1987). Strength training. In S. H. Adams, M. J. Adrian, & M. Bayless (Eds.), *Catastrophic injuries in sports avoidance strategies* (pp. 25-34). Indianapolis, IN: Benchmark Press.
- Chu, D. A. (1992). *Jumping into plyometrics*. Champaign, IL: Leisure Press.
- Chu, D. A. (1996). *Explosive power & strength: Complex training for maximum results*. Champaign, IL: Human Kinetics.
- Counsilman, J. E., & Counsilman, B. E. (1994). *The New Science of Swimming*. Englewood Cliffs, NJ: Prentice Hall.
- Delitto, A. (1990). Trunk strength testing. In L. R. Amundsen (Ed.), *Muscle Strength Testing* (pp. 151-177). New York, NY: Churchill Livingstone.
- Delorme, T. L., & Watkins, A. L. (Eds.). (1951). *Progressive resistance exercise*. New York, NY: Appleton Century.
- Denoth, J. (1985). The dynamics of Hill's muscle model considerations and applications. In S. M. Perren & E. Schneider (Eds.), *Biomechanics: Current Interdisciplinary Research* (pp. 617-622). Dodrecht, Holland: Martins Mijhoff.
- DiPasqual, M. G. (Ed.) (1995). *Body building supplement review*. Oxnard, CA: Optimum Training Systems.
- Docherty, D. (1996). Field tests and test batteries. In D. Docherty (Ed.), *Measurement in Pediatric Exercise Science* (pp. 285-334). Champaign, IL: Human Kinetics.

- Drabik, J. (1996). *Children & Sports Training*. Island Pond, VT: Stadion Publishing Co.
- Dudley, G. A., & Harris, R. T. (1992). Use of electrical stimulation in strength and power training. In P. V. Komi (Ed.), *Strength and power in sport* (pp. 329-337). Oxford, England: Blackwell Scientific Publications.
- Duncan MacDougall, J. (1992). Hypertrophy or hyperplasia. In P. V. Komi (Ed.), *Strength and power in sport* (pp. 230-238). Oxford, England: Blackwell Scientific Publications.
- Edgerton, V. R., Roy, R. R., Gregor, R. J., & Rugg, S. (1986). Morphological basis of skeletal muscle power output. In N. L. Jones, N. McCartney, & A. J. McComas (Eds.), *Human muscle power* (pp. 43-64). Champaign, IL: Human Kinetics.
- Fahey, T., & Fritz, B. (Eds.). (1991). *Steroid alternative handbook*. San Jose, CA: Sport Science Publications.
- Faulkner, J. A., Claflin, D. R., & McCully, K. K. (1986). Power output of fast and slow fibers from human skeletal muscles. In N. L. Jones, N. McCartney, & A. J. McComas (Eds.), *Human muscle power* (pp. 81-94). Champaign, IL: Human Kinetics.
- Ferrigno, V. A., Brown, L. E., & Murray, D. (2005). Designing sport-specific training programs. In L. E. Brown & V. A. Ferrigno (Eds.), *Training for speed, agility, and quickness* (2nd ed., pp. 223-236). Champaign, IL: Human Kinetics.
- Flarity, J. R. (Ed.) (1999). *The effectiveness of the Strength Shoe in enhancing sport specific skills (Abstract)*. Strength Systems, Inc: <u>www.strength-systems.com/shoe/strshoes.html</u>.
- Fleck, S. J. (1992). Cardiovascular response to strength training. In P. V. Komi (Ed.), *Strength and power in sport* (pp. 305-315). Oxford, England: Blackwell Scientific Publications.
- Fleck, S. J. (2002). Periodization of training. In *Strength training for sport* (pp. 55-68). Oxford, England: Blackwell Science Ltd.
- Fleck, S. J., & Kraemer, W. J. (Eds.). (1987). *Designing resistance training programs*. Champaign, IL: Human Kinetics.
- Fleck, S. J., & Kraemer, W. J. (Eds.). (1996). *Periodization breakthrough*. New York, NY: Advanced Research Press.
- Forsberg, A., Tesch, P., & Karlsson, J. (1978). Effect of prolonged exercise on muscle strength performance. In E. Asmussen & K. Jorgensen (Eds.), *Biomechanics VI-A* (2A ed., pp. 62-67). Baltimore, MD: University Park Press.
- French, D. N., Jones, T., & Kraemer, W. J. (2014). Strength development in youths. In R. S. Lloyd & J. L. Oliver (Eds.), *Strength and Conditioning for Young Athletes* (pp. 66-79). London, UK: Routledge.
- Froberg, K., & Lammert, O. (1996). Development of muscle strength during childhood. In O. Bar-Or(Ed.), *The child and adolescent athlete* (pp. 25-41). Oxford, England: Blackwell Science, Ltd.
- Fry, A. C. (1998). The role of training intensity in resistance exercise overtraining and overreaching. In R.
   B. Kreider, A. C. Fry, & M. L. O'Toole (Eds.), *Overtraining in sport* (pp. 107-127). Champaign, IL: Human Kinetics.
- Fry, A. C., Haakkinen, K., & Kraemer, W. J. (2002). Special considerations instrength training. In W. J. Kraemer & K. Haakkinen (Eds.), *Strength Training for Sport* (pp. 135-162).
- Fry, A. C., Hakkinen, K., & Kraemer, W. J. (2002). Special considerations in strength training. In *Strength training for sport* (pp. 135-162). Oxford, England: Blackwell Science Ltd.
- Fry, A. C., & Newton, R. U. (2002). A brief history of strength training and basic principles and concepts. In *Strength training for sport* (pp. 1-19). Oxford, England: Blackwell Science Ltd.
- Gain, W., & Hartmann, J. (Eds.). (1990). *Strong together*. Toronto, Canada: Sport Books Publisher.
- Gambetta, V., & Odgers, S. (Eds.). (1991). *The complete guide to medicine ball training*. Sarasota, FL: Optimum Sports Training.
- Garhammer, J. (Ed.) (1987). *Strength training*. New York, NY: Winner's Circle Books.
- Garhammer, J., & Takano, B. (1992). Training for weightlifting. In P. V. Komi (Ed.), Strength and power in

sport (pp. 357-369). Oxford, England: Blackwell Scientific Publications.

- Gollhofer, A. (2000). Importance of proprioceptive activation on functional neuromuscular properties. In Y. Hong & D. P. Johns (Eds.), *Proceedings of XVIII International Symposium on Biomechanics in Sports* (I ed., pp. 119-125). Hong Kong, China: The Chinese University of Hong Kong, International Society for Biomechanics in Sports.
- Gollnick, P. D., & Bayly, W. M. (1986). Biochemical training adaptations and maximal power. In N. L. Jones, N. McCartney, & A. J. McComas (Eds.), *Human muscle power* (pp. 255-267). Champaign, IL: Human Kinetics.
- Goluch, A. (1981). Changes in the mechanical properties of muscles during training. In A. Morecki, K. Fidelus, K. Kedzior, & A. Wit (Eds.), *Biomechanics VII-B* (3-B ed., pp. 386-391). Baltimore, MD: University Park Press.
- Graham, J., & Ferrigno, V. A. (2005). Agility and balance training. In L. E. Brown & V. A. Ferrigno (Eds.), *Training for speed, agility, and quickness* (2nd ed., pp. 71-136). Champaign, IL: Human Kinetics.
- Green, H. J. (1986). Muscle power: Fiber type, recruitment, metabolism and fatigue. In N. L. Jones, N. McCartney, & A. J. McComas (Eds.), *Human muscle power* (pp. 65-79). Champaign, IL: Human Kinetics.
- Grimby, G. (1992). Clinical aspects of strength and power training. In P. V. Komi (Ed.), *Strength andpower in sport* (pp. 338-354). Oxford, England: Blackwell Scientific Publications.
- Grymkowski, P., Connors, E., Kimber, T., & Reynolds, B. (Eds.). (1984). *The Gold's Gymtraining encyclopedia*. Chicago, IL: Contemporary.
- Gustavsen, R., & Streeck, R. (Eds.). (1993). *Training therapy*. New York, NY: Thieme Medical Publishers.
- Hakkinen, K. (2002). Training-specific characteristics of neuromuscular performance. In *Strength training for sport* (pp. 20-36). Oxford, England: Blackwell Science Ltd.
- Harman, E. A. (1995). The measurement of human mechanical power. In P. J. Maud & C. Foster (Eds.), *Physiological assessment of human fitness* (pp. 87-113). Champaign, IL: Human Kinetics.
- Hartmann, J. (Ed.) (1990). *Strength speed and endurance for athletes*. Toronto, Canada: SportBooks Publisher.
- Hasegawa, H., Dziados, J., Newton, R. U., Fry, A. C., Kraemer, W. J., & Hakkinen, K. (2002). Periodized training programs for athletes. In *Strength training for sport* (pp. 69-134).Oxford, England: Blackwell Science Ltd.
- Hatfield, F. C. (Ed.) (1984). *Body building a scientific approach*. Chicago, IL: Contemporary.
- Hay, J. G. (1992). Mechanical basis of strength expression. In P. V. Komi (Ed.), *Strength and powerin sport* (pp. 197-207). Oxford, England: Blackwell Scientific Publications.
- Hay, J. G., Andrews, J. G., Vaughan, C. L., & Ueya, K. (1983). Load, speed and equipment effects in strength-training exercises. In H. Matsui & K. Kobayashi (Eds.), *Biomechanics VIII-B* (4B ed., pp. 939-950). Champaign, IL: Human Kinetics.
- House, S., & Johnston, S. (2014). *Training for the new alpinism*. Ventura, CA: Patagonia Books.
- Huijing, P. A. (1992). Elastic potential of muscle. In P. V. Komi (Ed.), *Strength and power in sport* (pp. 151-168). Oxford, England: Blackwell Scientific Publications.
- Huijing, P. A. (1992). Mechanical muscle models. In P. V. Komi (Ed.), *Strength and power in sport* (pp. 130-150). Oxford, England: Blackwell Scientific Publications.
- Hultman, E., & Sjoholm, H. (1986). Biochemical causes of fatigue. In N. L. Jones, N. McCartney, & A. J. McComas (Eds.), *Human muscle power* (pp. 215-238). Champaign, IL: Human Kinetics.
- Hutton, R. S. (1992). Neuromuscular basis of stretching exercises. In P. V. Komi (Ed.), *Strength andpower in sport* (pp. 29-38). Oxford, England: Blackwell Scientific Publications.
- Israel, S. (1992). Age-related changes in strength and special groups. In P. V. Komi (Ed.), *Strengthand power in sport* (pp. 319-328). Oxford, England: Blackwell Scientific Publications.
- Jakeman, P. M., Winter, E. M., & Doust, J. (Eds.). (1992). Sports physiology. London, England: The Sports

Council.

- Jereb, B., & Strojnik, V. (1998). Fatigue after Wingate tests of different duration. In H. J. Riehle & M. M. Vieten (Eds.), *ISBS '98 XVI International Symposium on Biomechanics in Sports* (II ed., pp. 31-33). Konstanz, Germany: UVK Universitatsverlag.
- Jones, B., & Klissouras, V. (1986). Genetic variation in the force-velocity relation of human muscle. InR.
   M. Malina & C. Bouchard (Eds.), Sport and human genetics (4 ed., pp. 155-163). Champaign, IL: Human Kinetics.
- Kibler, W. B., & Chandler, T. J. (1998). Musculoskeletal and orthopedic considerations. In R. B. Kreider, A. C. Fry, & M. L. O'Toole (Eds.), *Overtraining in sport* (pp. 169-190). Champaign, IL: Human Kinetics.
- Knuttgen, H. G., & Komi, P. V. (1992). Basic definitions for exercise. In P. V. Komi (Ed.), *Strength and power in sport* (pp. 3-6). Oxford, England: Blackwell Scientific Publications.
- Koch, F. (Ed.) (1994). Strength training for sports. Oxnard, CA: Applied Futuristics.
- Komi, P. (1987). Neuromuscular biomechanics: selective correlates between structure and function. In S. Maehlum, S. Nilsson, & P. Renstrom (Eds.), *An Update on Sports Medicine* (pp. 60-78). Oslo, Norway: Danish and Norwegian Sports Medicine Associations and the Swedish Society of Sports Medicine.
- Komi, P. V. (1984). Physiological and biomechanical correlates of muscle function: Effects of muscle structure and stretch-shortening cycle on force and speed. In R. L. Terjung (Ed.), *Exercise and Sport Sciences Reviews* (12 ed., pp. 81-122). Toronto, Canada: D.C. Heath.
- Komi, P. V. (1986). The stretch-shortening cycle and human power output. In N. L. Jones, N. McCartney, & A. J. McComas (Eds.), *Human muscle power* (pp. 27-39). Champaign, IL: Human Kinetics.
- Komi, P. V. (1987). Neuromuscular factors related to physical performance. In P. Marconnet, P. V. Komi, & B. Saltin (Eds.), *Medicine and Sport Science* (26 ed., pp. 48-66). Basel, Belgium: Karger.
- Komi, P. V. (1992). Stretch-shortening cycle. In P. V. Komi (Ed.), *Strength and power in sport* (pp. 169-179). Oxford, England: Blackwell Scientific Publications.
- Kraemer, W. J. (1992). Endocrine responses and adaptations ot strength training. In P. V. Komi(Ed.), *Strength and power in sport* (pp. 291-304). Oxford, England: Blackwell Scientific Publications.
- Kraemer, W. J. (1992). Hormonal mechanisms related to the expression of muscular strength and power. In P. V. Komi (Ed.), *Strength and power in sport* (pp. 64-76). Oxford, England: Blackwell Scientific Publications.
- Kraemer, W. J. (2002). Developing a strength training workout. In *Strength training for sport* (pp. 37-54). Oxford, England: Blackwell Science Ltd.
- Kraemer, W. J., & Dziados, J. (2002). Medical aspects and administrative concerns in strength training. In *Strength training for sport* (pp. 163-172). Oxford, England: Blackwell Science Ltd.
- Kraemer, W. J., & Fleck, S. J. (2005). *Strength Training for Young Athletes*. Champaign, IL: Human Kinetics.
- Kraemer, W. J., & Fry, A. C. (1995). Strength testing: development and evaluation of methodology. In P. J. Maud & C. Foster (Eds.), *Physiological assessment of human fitness* (pp. 115-138). Champaign, IL: Human Kinetics.
- Kraemer, W. J., & Nindl, B. C. (1998). Factors involved with overtraining for strength and power. In R. B. Kreider, A. C. Fry, & M. L. O'Toole (Eds.), *Overtraining in sport* (pp. 69-86). Champaign, IL: Human Kinetics.
- Kurz, T. (1994). *Stretching Scientifically a Guide to Flexibility Training*. Island Pond, VT: Stadion.
- Lentz, D., & Hardyk, A. (2005). Speed training. In L. E. Brown & V. A. Ferrigno (Eds.), *Training for speed, agility, and quickness* (2nd ed., pp. 17-70). Champaign, IL: Human Kinetics.
- Leynaert, P. T., & Komi, P. V. (1997). Neural adaptation to short term resistance training. In J.Bangsbo, B.

Saltin, H. Bonde, Y. Hellsten, B. Ibsen, M. Kjaer, & G. Sjogaard (Eds.), *Book of Abstracts I* (pp. 366-367). Copenhagen, Denmark: European College of Sport Science.

- Loberbauer, E., Zallinger, G., & Muller, E. (2003). Whole body vibration and training. In E. Muller, H. Schwameder, G. Zallinger, & V. Fastenbauer (Eds.), *8th Annual Congress European College of Sport Science* (pp. 218). Salzburg, Germany: Institute of Sport Science.
- Logan, P., Fornasiero, D., Abernethy, P., & Lynch, K. (2000). Protocols for the assessment of isoinertial strength. In C. J. Gore (Ed.), *Physiological tests for elite athletes* (pp. 200-221). Champaign, IL: Human Kinetics.
- Lortie, G., Simoneau, J.-A., Boulay, M. R., & Bouchard, C. (1986). Muscle fiber type composition and enzyme activities in brothers and monozygotic twins. In R. M. Malina & C. Bouchard (Eds.), *Sport and human genetics* (4 ed., pp. 147-154). Champaign, IL: Human Kinetics.
- Lynch, L. (1990). Manual muscle strength testing of the distal muscles. In L. R. Amundsen (Ed.), *Muscle Strength Testing* (pp. 25-67). New York, NY: Churchill Livingstone.
- MacDougall, J. D. (1986). Morphological changes in human skeletal muscle following strength training and immobilization. In N. L. Jones, N. McCartney, & A. J. McComas (Eds.), *Human muscle power* (pp. 269-288). Champaign, IL: Human Kinetics.
- Maeda, K., Murai, M., Takahashi, S., Yoshida, M., Sugawara, M., & Matsuda, Y. The torque curve characteristics of isokinetic knee extension in different knee angle position in ski jumpers the differences among ski jumpers, soccer players, and non-athletes. In E. Müller, R. Roithner, W. Niessen, C. Raschner, & H. Schwameder (Eds.), 2nd International Congress on Skiing and Science. St. Christoph a. Arlberg, Austria.
- Malina, R. M. (1986). Genetics of motor development and performance. In R. M. Malina & C. Bouchard (Eds.), *Sport and human genetics* (4 ed., pp. 23-58). Champaign, IL: Human Kinetics.
- Manual, I. (Ed.) (1988). Nicholas Manual Muscle Tester. Lafayette, IN: Lafayette Instrument.
- Mathiowetz, V. (1990). Grip and pinch strength measurements. In L. R. Amundsen (Ed.), *Muscle strength testing* (pp. 163-177). New York, NY: Churchill Livingstone.
- Matsudo, V. K. R. (1996). Prediction of future athletic excellence. In O. Bar-Or (Ed.), *The child and adolescent athlete* (pp. 92-109). Oxford, England: Blackwell Science, Ltd.
- Matveyev, L. (1977). *Fundamentals of sports training*. Moscow, USSR: Progress Publishers.
- McGuigan, M. R., & Cormack, S. J. (2011). Biochemical monitoring in strength and conditioning. In M. Cardinale, R. U. Newton, & K. Nosaka (Eds.), *Strength and Conditioning* (pp. 305-315). Oxford, UK: Wiley-Blackwell.
- McGuigan, M. R., Sheppard, J. M., Cormack, S. J., & Taylor, K.-L. (2013). Strength and power assessment protocols. In R. K. Tanner & C. J. Gore (Eds.), *Physiological Tests for Elite Athletes* (2nd ed., pp. 207-230). Champaign, IL: Human Kinetics.
- McKardle, W. D., Katch, F. I., & Katch, V. L. (2007). *Exercise Physiology: Energy, Nutrition and Human Performance* (6th ed.). Baltimore, MD: Lippincott, Williams, & Wilkins.
- McLaughlin, T. (1981). Strength/power training for U.S. divers. In D. Golden (Ed.), *The Proceedings of the 1981 Sports Science Seminar* (pp. 131-147). Indianapolis, IN: U.S. Diving.
- McLish, R. (Ed.) (1984). *Flex appeal*. New York, NY: Warner.
- Medlin-Silver, N., Lampard, P., & Lynsey Bunsell, T. (2017). Strength in numbers: An explorative study into the experiences of female strength and conditioning coaches in the UK. In A. N. Milner & J. Henry Braddock II (Eds.), *Women in Sports* (pp. 125-149). Santa Barbara, CA: Praeger.
- Medvedyev, A. S. (Ed.) (1986). *A system of multi-year training in weightlifting*. Moscow,U.S.S.R.: Fizkultura i Sport.
- Mellerowicz, H., & Hansen, G. (1971). Conditioning. In L. A. Larson (Ed.), The Encyclopedia of Sports

Sciences and Medicine (pp. 166-171). New York, NY: McMillan.

- Mero, A. (1998). Power and speed training during childhood. In E. Van Praagh (Ed.), *Pediatric anaerobic performance* (pp. 241-267). Champaign, IL: Human Kinetics.
- Micheli, L. J. (1990). Strength training. In J. A. Sullivan & W. A. Grana (Eds.), *The Pediatric Athlete* (pp. 17-20). Park Ridge, IL: American Academy of Orthopaedic Surgeons.
- Moritani, T. (1992). Time course of adaptations during strength and power training. In P. V. Komi(Ed.), *Strength and power in sport* (pp. 266-278). Oxford, England: Blackwell Scientific Publications.
- Mueller, K.-J., & Schmidtbleicher, D. (1987). Innervation pattern of isometric and concentric contractions of the human triceps brachii during elbow extension. In B. Jonsson (Ed.), *Biomechanics X-A* (pp. 479-483). Champaign, IL: Human Kinetics.
- Muller, E., Reithner, R., Niessen, W., Raschner, C., & Schwameder, H. (2000). 2nd international congress on skiing and science. In P. Spitzenpfeil, J. Schwarzer, F. Seifriz, & J. Mester (Eds.), *Vibration: interactions of strength and motor control in alpine skiing* (pp. 78-79). St. Christoph a Adberg: St. ChristophaAdberg.
- Newton, H. (2010). *Explosive Lifting for Sports*. Champaign, IL: Human Kinetics.
- Norgan, N. G. (1994). Anthropometry and physical performance. In S. J. Ulijaszek & C. G. N. Mascie-Taylor (Eds.), *Anthropometry: the individual and the population* (pp. 141-177). Cambridge, England: Cambridge University Press.
- Noth, J. (1992). Cortical and peripheral control. In P. V. Komi (Ed.), *Strength and power in sport* (pp. 9-20). Oxford, England: Blackwell Scientific Publications.
- Noth, J. (1992). Motor units. In P. V. Komi (Ed.), *Strength and power in sport* (pp. 21-28). Oxford, England: Blackwell Scientific Publications.
- O'Brien, R. (1993). Preliminary talent identification test development: Physical performance measures of Junior Olympic Divers. In R. Malina & J. L. Gabriel (Eds.), *U.S. Diving Sport Science Seminar 1993 Proceedings* (pp. 17-25). Indianapolis, IN: U.S. Diving Publications.
- Pampus, B., Lehnertz, K., & Martin, D. (1990). The effect of different load intensities on the development of maximal strength and strength endurance. In J. Jarver (Ed.), *A collection of European sports science translations Part II* (pp. 20-25). Kidman Park, Australia: South Australian Sports Institute.
- Patteson Lombardi, V. (1996). Resistance training. In D. J. Caine, C. G. Caine, & K. J. Lindner (Eds.), *Epidemiology of sports injuries* (pp. 312-336). Champaign, IL: Human Kinetics.
- Paul Edman, K. A. (1992). Contractile performance of skeletal muscle fibres. In P. V. Komi (Ed.), *Strength and power in sport* (pp. 96-114). Oxford, England: Blackwell Scientific Publications.
- Pearl, B. (Ed.) (1986). *Getting Stronger*. Bolinas, CA: Shelter Publications.
- Peronnet, F., & Ferguson, R. J. (1975). Interval training. In A. W. Taylor (Ed.), *The scientific aspects of sports training* (pp. 31-41). Springfield, IL: Charles C. Thomas.
- Perrine, J. J. (1986). The biophysics of maximal muscle power outputs: methods and problems of measurement. In N. L. Jones, N. McCartney, & A. J. McComas (Eds.), *Human muscle power* (pp. 15-25). Champaign, IL: Human Kinetics.
- Peterson Kendall, F., Kendall McCreary, E., Geise Provance, P., McIntyre Roberts, M., & Romani, W. A. (2005). *Muscles testing and function with posture and pain* (5th ed.). Baltimore, MD: LippincottWilliams & Wilkins.
- Platero, John J. The Power of Personal Training. Ontario, CA, The National Council for Certified Personal Trainers, 2009.
- Plisk, S. S. (2005). Athlete assessment. In L. E. Brown & V. A. Ferrigno (Eds.), *Training for speed, agility, and quickness* (2nd ed., pp. 7-16). Champaign, IL: Human Kinetics.
- Pollock, M. L., & Vincent, K. R. (1996). *Resistance training for health*. Indianapolis, IN: American College of Sports Medicine.

- Poussa, M. (2011). Back pain in children. In B. A. Akbarnia, M. Yazici, & G. H. Thompson (Eds.), *The Growing Spine* (pp. 97-105). Berling, Germany: Springer-Verlag.
- Rabita, G., & Delextrat, A. (2013). Stretching. In C. Hausswirth & I. Mujika (Eds.), *Recovery for Performance in Sport* (pp. 55-69). Champaign, IL: Human Kinetics.
- Reed, A. (1982). Field tests. In J. D. MacDougall, H. A. Wenger, & H. J. Green (Eds.), *Physiological testing of the elite athlete* (pp. 133-136). Ithaca, NY: Mouvement Publications.
- Refsnes, P. E. (1999). Testing and training for top Norwegian athletes. In E. Muller, G. Zallinger, & F. Ludescher (Eds.), *Science in elite sport* (pp. 97-114). London, UK: E &FN Spon.
- Reilly, T., & Bangsbo, J. (1998). Anaerobic and aerobic training. In B. Elliott (Ed.), *Training in sport* (pp. 351-409). New York, NY: John Wiley & Sons.
- Ringhofer, K. R., & Harding, M. E. (Eds.). (1996). *Coaches guide to drugs and sport*. Champaign, IL: Human Kinetics.
- Rowland, T. W. (1996). *Developmental exercise physiology*. Champaign, IL: Human Kinetics.
- Roy, R. R., & Reggie Edgerton, V. (1992). Skeletal muscle architecture and performance. In P. V. Komi (Ed.), *Strength and power in sport* (pp. 115-129). Oxford, England: Blackwell Scientific Publications.
- Sale, D. G. (1986). Neural adaptation in strength and power training. In N. L. Jones, N. McCartney, & A. J. McComas (Eds.), *Human Muscle Power* (pp. 289-308). Champaign, IL: Human Kinetics.
- Sale, D. G. (1991). Testing strength and power. In J. Duncan MacDougall, H. A. Wenger, & H. J. Green (Eds.), *Physiological testing of the high-performance athlete* (pp. 21-106). Champaign, IL: Human Kinetics.
- Sale, D. G. (1992). Neural adaptation to strength training. In P. V. Komi (Ed.), *Strength and Power inSport* (pp. 249-265). Oxford, England: Blackwell Scientific Publications.
- Sale, D. G., & Norman, R. W. (1982). Testing strength and power. In J. D. MacDougall, H. A. Wenger, & H. J. Green (Eds.), *Physiological testing of the elite athlete* (pp. 7-38). Ithaca, NY: Mouvement Publications.
- Sands, W. A., & McNeal, J. R. (2016). Flexibility developing effective movement. In I. Jeffreys & J. Moody (Eds.), *Strength and Conditioning for Sports Performance* (pp. 187-403). London, UK:Routledge.
- Sargeant, A. (1989). Short-term muscle power in children and adolescents. In O. Bar-Or (Ed.), Advances in *Pediatric Exercise Science* (3 ed., pp. 41-65). Champaign, IL: Human Kinetics.
- Schmidtbleicher, D. (1988). Muscular mechanics and neuromuscular control. In B. E. Ungerechts, K. Wilke, & K. Reischle (Eds.), *Swimming Science V* (pp. 131-148). Champaign, IL: Human Kinetics.
- Schmidtbleicher, D. (1992). Training for power events. In P. V. Komi (Ed.), *Strength and power in sport* (pp. 381-395). Oxford, England: Blackwell Scientific Publications.
- Schmidtbleicher, D. (2002). Neuromuscular aspects of strength and strength training with respect to stretch-shortening-cycle typed movements. In K. E. Gianikellis, D. Schmidtbleicher, V. Baltzopoulos, &V. M. Zatsiorsky (Eds.), *ISBS 2002 Applied Proceedings Strength Training* (pp. 13-21). C ceres, Spain: University of Extremadura, C ceres, Spain, International Society of Biomechanics in Sports.
- Schmidtbleicher, D., & Buehrle, M. (1987). Neuronal adaptation and increase of cross-sectional area studying different strength training methods. In B. Jonsson (Ed.), *Biomechanics X-B* (pp. 615-620). Champaign, IL: Human Kinetics.
- Schmolinsky, G. (1996). *Track and Field*. Toronto, Ontario, Canada: Sports Book Publisher.
- Scholten, P. J. M., Veldhuizen, A. G., & Grootenboer, H. J. (1985). Stability of the spine. In S. M. Perren& E. Schneider (Eds.), *Biomechanics: Current Interdisciplinary Research* (pp. 495-500). Dodrecht, Holland: Martins Mijhoff.
- Seidel, H., Beyer, H., Bluthner, R., Brauer, D., Hinz, B., Menzel, G., & Weissmuller, A. (1985). Electromyography in back research - assessment of static and dynamic conditions. In S. M. Perren & E. Schneider (Eds.), *Biomechanics: Current Interdisciplinary Research* (pp. 611-616). Dodrecht, Holland:

Martins Mijhoff.

- Sharkey, B. J. (1986). When should children begin competing? A physiological perspective. In M. R. Weiss & D. Gould (Eds.), *Sport for children and youths* (10 ed., pp. 51-54). Champaign, IL: HumanKinetics.
- Sheppard, J., & Young, W. (2011). Training agility and change-of-direction speed (CODS). In M. Cardinale, R. Newton, & K. Nosaka (Eds.), *Strength and Conditioning* (pp. 363-376). Hoboken, NJ: Wiley-Blackwell.
- Siff, M. C. (1998). *Facts and Fallacies of Fitness*. University of Witwatersrand, Johannesburg, South Africa: Mel Siff.
- Siff, M. C. (2000). *Supertraining*. Denver, CO: Supertraining Institute.
- Sjogaard, G. (1987). Muscle fatigue. In P. Marconnet & P. V. Komi (Eds.), *Muscle Function in Exerciseand Training* (pp. 98-109). Basel, Switzerland: Karger.
- Stannope, S. J. (1987). Interactions between the anterior abdominal wall musculature of athletes. In J. Terauds, B. A. Gowitzke, & L. E. Holt (Eds.), *Biomechanics of Sports III & IV* (pp. 410-419). Del Mar, CA: Academic Pub.
- Stone, M. H. (1992). Connective tissue and bone response to strength training. In P. V. Komi (Ed.), *Strength and power in sport* (pp. 279-290). Oxford, England: Blackwell Scientific Publications.
- Stone, M. H., & Fry, A. C. (1998). Increased training volume in strength/power athletes. In R. B. Kreider, A. C. Fry, & M. L. O'Toole (Eds.), *Overtraining in Sport* (pp. 87-105). Champaign, IL: Human Kinetics.
- Stone, M. H., Stone, M. E., & Sands, W. A. (2007). Monitoring resistance training. In *Principles and Practice of Resistance Training* (pp. 181-199). Champaign, IL: Human Kinetics.
- Stone, M. H., Stone, M. E., & Sands, W. A. (2007). *Principles and Practice of Resistance Training*. Champaign, IL: Human Kinetics.
- Stratton, G., & Oliver, J. L. (2014). The impact of growth and maturation on physical performance. In R. S. Lloyd & J. L. Oliver (Eds.), *Strength and Conditioning for Young Athletes* (pp. 3-18). London, United Kingdom: Routledge.
- Tanner, R. K., & Gore, C. J. (2013). *Physiological Tests for Elite Athletes* (R. K. Tanner & C. J. Gore Eds. 2nd ed.). Champaign, IL: Human Kinetics.
- Tesch, P. A. (1992). Short- and long-term histochemical and biochemical adaptations in muscle. In P. V. Komi (Ed.), *Strength and power in sport* (pp. 239-248). Oxford, England: Blackwell Scientific Publications.
- Tesch, P. A. (1992). Training for bodybuilding. In P. V. Komi (Ed.), *Strength and power in sport* (pp. 370-380). Oxford, England: Blackwell Scientific Publications.
- Tesch, P. A. (Ed.) (1993). *Muscle meets magnet*. Stockholm, Sweden: PA Tesch AB.
- Thorstensson, A., Oddsson, L., Andersson, E., & Arvidson, A. (1985). Balance in muscle strength between agonist and antagonist muscles of the trunk. In D. A. Winter, R. W. Norman, R. P. Wells, K. C. Hayes, & A. E. Patla (Eds.), *Biomechanics IX-B* (pp. 15-26). Champaign, IL: Human Kinetics.
- Tihanyi, J. (1990). Principles of individualized training methods based on muscle fibre structure and mechanical characteristics. In J. Jarver (Ed.), *A collection of European sports science translations Part II* (pp. 14-19). Kidman Park, Australia: South Australian Sports Institute.
- Tittel, K., & Wutscherk, H. (1992). Anthropometric factors. In P. V. Komi (Ed.), *Strength and powerin sport* (pp. 180-196). Oxford, England: Blackwell Scientific Publications.
- Tokmakidis, S. P., Toubekis, A. G., & Smilios, I. (2011). Active versus passive recovery: metabolic limitations and performance outcome. In M. A. Powell (Ed.), *Physical fitness: training, effects and maintaining* (pp. 1-44). New York, NY: Nova Science Publishers, Inc.
- Vaczi, M., Tihanyi, J., & Racz, L. (2003). Acute effects of whole body vibration on maximal isometric strength in elite weightliters. In E. Muller, H. Schwameder, G. Zallinger, & V. Fastenbauer (Eds.), 8th Annual Congress European College of Sport Science (pp. 301). Salzburg, Germany: Institute of Sport Science.

• Van Praagh, E. (1996). Testing anaerobic performance. In O. Bar-Or (Ed.), The child and adolescent

athlete (pp. 602-616). Oxford, England: Blackwell Science, Ltd.

- VandeBroek, G., Van Leemputte, M., Andries, R., & Willems, E. J. (1994). Mechanical muscle properties after two types of plyometric training. In A. Barabas & G. Fabian (Eds.), *Biomechanics in Sports XII* (pp. 98-101). Budapest, Hungary: Hungarian University of Physical Education.
- Verkhoshansky, Y., & Siff, M. (2009). *Supertraining*. Rome, Italy: Ultimate Athlete Concepts.
- Verkhoshansky, Y. V. (1977). *Fundamentals of special strength-training in sport*. Moscow, USSR: Fizkultura i Spovt.
- Verkhoshansky, Y. V. (1985). *Programming and organization of training*. Moscow, U.S.S.R.: Fizkultura i Spovt.
- Verkhoshansky, Y. V. (2006). *Special strength training: A practical manual for coaches*. Moscow, Russia: Ultimate Athlete Concepts.
- Viru, A. (1995). Adaptation in sports training. Boca Raton, FL: CRC Press.
- Vives, D., & Roberts, J. (2005). Quickness and reaction-time training. In L. E. Brown & V. A. Ferrigno (Eds.), *Training for speed, agility, and quickness* (2nd ed., pp. 137-236). Champaign, IL: Human Kinetics.
- Wachowski, E. (1981). Speed and useful power in strength exercises. In A. Morecki, K. Fidelus, K. Kedzior, & A. Wit (Eds.), *Biomechanics VII-B* (3-B ed., pp. 379-385). Baltimore, MD: University ParkPress.
- Wakeling, J. (2003). Tuning in to soft-tissue resonance. In E. Muller, H. Schwameder, G. Zallinger, &V. Fastenbauer (Eds.), 8th Annual Congress European College of Sport Science (pp. 216-217). Salzburg, Germany: Institute of Sport Science.
- Weltman, A. (1989). Weight training in prepubertal children: physiologic benefit and potentialdamage. In O. Bar-Or (Ed.), *Advances in pediatric sport sciences* (3 ed., pp. 101-129). Champaign, IL: Human Kinetics.
- Wielki, C., & Dangre, M. (1985). Analysis of jump during the spike of volleyball. In D. A. Winter, R. W. Norman, R. P. Wells, K. C. Hayes, & A. E. Patla (Eds.), *Biomechanics IX-B* (pp. 438-442). Champaign, IL: Human Kinetics.
- Wilk, K. (1990). Dynamic muscle strength testing. In L. R. Amundsen (Ed.), *Muscle Strength Testing* (pp. 123-150). New York, NY: Churchill Livingstone.
- Woolford, S. M., Polglaze, T., Rowsell, G., & Spencer, M. (2013). Field testing principles and protocols. In R. K. Tanner & C. J. Gore (Eds.), *Physiological Tests for Elite Athletes* (pp. 231-248). Champaign, IL: Human Kinetics.
- Wrigley, T., & Strauss, G. (2000). Strength assessment by isokinetic dynamometry. In C. J. Gore (Ed.), *Physiological tests for elite athletes* (pp. 155-199). Champaign, IL: Human Kinetics.
- Yessis, M. (Ed.) (1992). *Kinesiology of exercise*. Indianapolis, IN: Masters Press, Inc.
- Yessis, M., & Hatfield, F. C. (Eds.). (1986). *Plyometric training: Achieving power and explosiveness in sports*. Escondido, CA: Sports Training, Inc.
- Zatsiorsky, V. M. (Ed.) (1995). *Science and practice of strength training*. Champaign, IL: Human Kinetics.
- Zatsiorsky, V. M. (2002). Biomechanical aspects of strength and strength training: An overview. In K. E. Gianikellis, D. Schmidtbleicher, V. Baltzopoulos, & V. M. Zatsiorsky (Eds.), *ISBS 2002 Applied Proceedings Strength Training* (pp. 2-11). C ceres, Spain: University of Extremadura, C ceres, Spain, International Society of Biomechanics in Sports.
- Zheng, X.-Y., Wang, T., Li, S.-L., & Fu, S.-G. (2000). A measurement system of human-body constitution and strength exercise. In Y. Hong & D. P. Johns (Eds.), *Proceedings of XVIII International Symposium on Biomechanics in Sports* (II ed., pp. 713-716). Hong Kong, China: The Chinese University of Hong Kong, International Society in Sports.

### For the Certified Yoga Instructor Credential (CYI)

- Aldous, S. H. (2006). Anatomy and Asana: Preventing Yoga Injuries. Seattle, WA: Eastland Press.
- Bachman, N. (2005). *The Language of Yoga: The Complete A to Y Guide toAsana Names,Sanskrit Terms, and Chants*. Boulder, CO: Sounds True.
- Desikachar, T. K. (1995). *The Heart of Yoga: Developing a Personal Practice*. Rochester, VT:Inner Traditions International.
- Easwaran, E. (2007). The Bhagavad Gita (2nd ed.). Berkeley, CA: Nilgiri Press
- Farhi, D. (2006). *Teaching yoga: Exploring the teacher-student relationship*. Berkeley, CA: Rodmell.
- Feuerstein, G. (2008). *The yoga tradition: Its history, literature, philosophy, and practice*. Prescott, AZ: Hohm Press.
- Griffith, T.B., & Tice, P. (2003). *The Vedas*. San Diego, CA: The Book Tree.
- Iyengar, B. K. S. (1965). *Light on yoga: Yoga dipika*. London: Allen & Unwin.
- Iyengar, B. K., Evans, J. J., & Abrams, D. C. (2005). *Light on Life: The Yoga Journeyto Wholeness, Inner Peace, and Ultimate Freedom*. Emmaus, PA: Rodale.
- Iyengar, B. K. (2008). Yoga: The path to holistic health. London: Dorling Kindersley.
- Jordan, S. (2005). Yoga for Pregnancy: Safe and Gentle Stretches. New York: Griffin.
- Kaminoff, L. (2007). Yoga Anatomy. Champaign, Ill.: Human Kinetics.
- Kapit, W., & Elson, L. M. (2002). *The anatomy coloring book*. San Francisco: Addison Wesley.
- Lad, V. (2009). Ayurveda: The science of self healing. Twin Lakes, WI: Lotus Press.
- Lasater, J. (2015). *Living Your Yoga: Finding the Spiritual in Everyday Life*.Berkeley, CA: Rodmell Press.
- Long, R., & Macivor, C. (2006). Scientific Keys Volume I: The Key Muscles of Hatha Yoga.

Plattsburg

h, NY: Bandha Yoga.

- Long, R., & Macivor, C. (2006). *The Key Muscles of Yoga: Your Guide to Functional Anatomy in Yoga* (Vol. 1). Place of publication not identified: Bandha Yoga Publications.
- Long, R., & Macivor, C. (2008). The Key Poses of Yoga: Your Guide to Functional Anatomy in Yoga (Vol. 2). Plattsburgh, NY: Bandha Yoga.
- Prabhavananda, S., & Manchester, F. (2002). *The Upanishads: Breath of the Eternal*. New York,NY: Signet Classics.
- Prabhavananda, S., P., & Isherwood, C. (2007). *How to know God: The yoga aphorisms of Patanjali*. Hollywood, CA: Vedanta Press.
- Rama, S., Ballentine, R., & Ajaya, S. (2014). *Yoga and psychotherapy: The evolutionof Consciousness*. Honesdale, PA: Himalayan Institute Press.
- S., & Akers, B. D. (2002). The Hatha yoga Pradipika. Woodstock, NY: YogaVidya.com.
- Satchidananda, S. (1990). The Living Gita: The Complete Bhagavad Gita. New York: H. Holt.
- Satchidananda, S. (2012). *The Yoga Sutras of Patanjali*. Place of publication not identified: Integral Yoga Dist.
- Schiffmann, E. (1996). Yoga: The Spirit and Practice of Moving into Stillness (1st ed.). New York: Pocket.
- Stephens, M. (2010). *Teaching Yoga: Essential Foundations and Techniques*. Berkeley, CA: North Atlantic.
- Stephens, M. (2012). *Yoga Sequencing: Designing Transformative Yoga Classes*. Berkeley, CA:North Atlantic Books.
- Watts, A. (1989). The book: On the taboo against knowing who you are. New York: Vintage Books.

# Appendix 4: Exception Request/Appeals Form



NCCPT EXCEPTION REQUES (Please pri		(TO BE COMPLETED BY THE PERSON MAKING THE REQUEST)
Date:		
Your name:		
Current street address:		
City/State/Zip:		
Daytime phone:		
Email:		
Nature of Appeal (Circle one)	1. Exam Eligibility; 2. Exa	am Performance; 3. Recertification
Please describe your req	Details of the Reque uest in detail (attach add needed).	est/Appeal itional sheets of paper if more space is

I understand that this exception request/appeal form will be reviewed by the NCCPT Certification Appeals Committee and I will receive a letter from NCCPT informing me of the committee's decision. I also understand that NCCPT's policies regarding exception requests and appeal processes are provided in detail in the Candidate Handbook.

Signature of person making the request/appeal

Date

<u>Please attach any documentation supporting your request/appeal that you want the NCCPT Certification Appeals Committee to consider.</u>

Please email the completed form and any attached documentation to: support@nccpt.com

# Appendix 5: Certification Renewal Form



#### PLEASE PRINT OR TYPE

First Name		Last Name	
Phone		Email	
Address			
City	State		ZIP Code

### HOW TO SUBMIT YOUR RENEWAL APPLICATION

- Complete the Renewal Application below.
- Photocopy your CEU validation forms.
- Photocopy your current certificates for renewal.
- Photocopy your valid CPR/AED Certification cards (front and back). 0.1 CEUs will be awarded.
- Determine appropriate renewal fees.
- When you're ready, please contact (877) 355-1640 for forward instructions.
- Please allow 30 days to process your renewal.

Pro	gram (check all that apply)	Certificate #	Expiration Date
	Certified Personal Trainer		
	Certified Group Exercise Instructor		
	Certified Indoor Cycling Instructor		
	Certified Strength Training Specialist		
	Certified Yoga Instructor - Vinyasa Flow		

Continued on page 2...

	CEU Category A: NCCPT Approved Provider Offerings	
Date of Activity	Title of Course/Activity	# of CEUs
	CEU Category B: Industry Contributions (maximum of 1.0 CEUs)	
Date of Activity	Title of Course/Activity	# of CEUs
CEU Cate	egory C: Post-Certification Collegiate Coursework (maximum of 2.0 CEUs)	
Date of Activity	Title of Course/Activity	# of CEUs
	CEU Category D: Emergency Cardiac Care Certification (Mandatory)	•
Date of Activity	Title of Course/Activity	# of CEUs
	CPR	0.1

All renewal applications may take up to a 30-day processing time from the day they are received by the NCCPT. To ensure you are renewed by your expiration date, please plan ahead and submit your renewal at least 30 days before your expiration date. Failure to do so could result in your renewal not being available by your expiration date. Please call (877) 355-1640 to start your renewal and one of our Career Advisers will help you with the process.

Please submit renewals to support@nccpt.com with the subject line "Renewal". Renewal submissions are restricted to a file size of 10 megabyte. Emails over 10 megabytes will be rejected and your renewal will not be processed.

 TOTAL RENEWAL FEES	\$
#1 Certificate at \$75	\$
#2 or more Certificates at \$50 each	\$
Late Fee (if postmarked after your expiration date)	\$
Course Petition Fee based on # of petitions x \$10	\$
 Total Enclosed	\$
-	

**Payment:** Please pay online at www.nccpt.com/recertification. You may also pay by calling (877) 355-1640. Personal checks are not accepted. \* After approval, you may access your updated certificate in your member dashboard on the NCCPT website. Hard copies are available upon request (fees apply). Please allow 30 days for processing. Paperwork will not be returned. Do not send originals.

# Appendix 6: Continuing Education Petition Application for NCCPT

Name:	Phone:		
Mailing Address:			
City	State		Zip code
Email Address:			•
Course/ CEU Activity Title		Conference	
Date(s):			
Course/ CEU Provider			
Mailing Address:			
City	State		Zip code
Nebsite:	Email Address:		