



THE INTERNATIONAL SOCIETY  
FOR CLINICAL DENSITOMETRY

# **Certified Bone Densitometry Technologist CBDT™**

**Candidate Handbook and Application**

## **Examination Session Dates:**

September 1 - 25, 2010

## ***Applications Accepted:***

May 10, 2010 to July 30, 2010

***Computer-based exam at Prometric Sites located throughout the US***



**Certified Bone Densitometry Technologist Certification Program  
*US/Canada Candidates Only***

The Certified Bone Densitometry Technologist  
credentialing program is governed by the ISCD Certification Council

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***Certification Council Mission***

The ISCD Certification Council serves to establish skeletal health assessment skills in bone densitometry by promoting best practice standards, competent evaluation, and continued professional development in bone densitometry. The certification process recognizes attainment of the highest standard of achievement and professional excellence in the field of bone densitometry for clinicians and technologists.

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**Nondiscrimination Policy**

ISCD does not discriminate among applicants on the basis of age, gender, race, religion, national origin, disability, sexual orientation or marital status. The CBDT™ examination will be offered to candidates in environments that meet the standards established by the American Disability Act (ADA).

The **International Society for Clinical Densitometry (ISCD)** is a multidisciplinary, nonprofit organization that provides a central resource for a number of scientific disciplines with an interest in the assessment of skeletal health. The Society was founded in June 1993 as the result of a meeting of a group who recognized the need to bring disciplines together for this single purpose. The Society was the first of its kind worldwide.

Membership in ISCD has grown steadily since the organization's inception and now stands at over 5,000 doctors, technologists, and other allied health providers in over 60 countries and regions. The Society currently has 60% of its members as physicians and 40% as densitometry technologists in more than 30 disciplines. Disciplines represented include: nephrologists, endocrinologists, radiologists, rheumatologists, gynecologists, densitometry technologists, and nurses -- *therefore, the Society reflects an optimal approach to the care and diagnosis of patients with metabolic bone disease across a broad span.*

To further enhance the care and diagnosis of metabolic bone disease, the Society has formed a Certification Council to develop and administer a certification program.

### **1. The CBDT™ Credential**

Certified Bone Densitometry Technologist (CBDT™) is a professional certification in the field of bone densitometry for technologists who perform central bone densitometry scans. The CBDT™ credential signifies that an individual has passed an examination that has been designed to meet the stringent certification industry standards and best practices in the United States. CBDT™ has been developed in response to state regulatory agencies and third party payors requiring certification programs to be accredited before they will accept them as meeting their requirements. Application is being made for accreditation of this program.

Successful candidates can use the designation CBDT™ after their names. They may also use the following statement on a separate line on business cards and stationary:

#### **Certified Bone Densitometry Technologist.**

Volunteer content experts from ISCD worked for two years to develop the CBDT™ credential. The foundation of the examination is the Position/Job Analysis survey that identified the areas of knowledge and application of knowledge required by individuals in the field of bone densitometry. An outline of the content areas covered on the examination is in Section 4 of this Handbook.

Participation in the certification program is voluntary and open to anyone meeting the eligibility requirements in the US and Canada. Membership in the International Society for Clinical Densitometry is not required. The ISCD Technologist Bone Densitometry Course is not a requirement to take the certification examination.

Members of the Certification Council and its subcommittees provide oversight to the development and administration of the CBDT™ examination and the CBDT™ recertification program. More detailed information on the ISCD is available on the ISCD Web site at [www.ISCD.org](http://www.ISCD.org).

#### **1.1 Eligibility Criteria**

- Technologists:** healthcare professionals who perform bone densitometry scans.

**Requirements to apply for the CBDT™ Examination**

**A. If you "are" a CDT® or ARRT (BD) in good standing\***

1. Take the CBDT™ exam when first offered and transfer to the CBDT™ certification. The only way to receive the CBDT™ is to successfully pass the CBDT™ examination OR
2. Recertify any time the exam is offered (full fee) and transfer to the CBDT™ certification

**CDT:**

*\*The CDT® credential is awarded by the International Society for Clinical Densitometry (ISCD) and is earned by passing the ISCD CDT® Examination. In order to be considered in "good standing" the technologist must maintain their certification through the ISCD by providing documentation of the completion of the required continuing education credits.*

**ARRT(BD):**

*A person is certified by American Registry of Radiologic Technologists (ARRT) after meeting educational preparation standards, complying with ethics standards, and passing a certification exam. Only technologists who are currently registered — have renewed within the past year — may designate themselves as ARRT Registered Technologists and use the initials "R.T." after their names*

**(BD):**

*BD is a post-primary certification in Bone Densitometry. Candidates for post-primary certification must be registered by ARRT in the appropriate supporting discipline to be eligible.*

**B. If you "are not" CDT® or ARRT (BD) certified**

1. Required Experience
  - a. Document a minimum of six months experience in bone densitometry scans AND
  - b. Have performed at least 100 central DXA patient scans at two skeletal sites (hip, spine or forearm) – attestation and manufacturer equipment name required
2. Required Education
  - a. Degree in other Allied Health Fields (RN, NMT, MT, etc.) OR
  - b. Document a minimum of 12 hours of CME Category 1 or Category A CE credits in bone densitometry, osteoporosis or metabolic bone disease

**1.2 Eligibility Appeal**

Candidates who believe that they have met the eligibility requirements as stated in this handbook may appeal decisions of ineligibility. However, the eligibility requirements themselves may not be appealed. Appeals letters requesting reconsideration of applications must indicate the specific findings of ineligibility being contested and provide evidence of meeting those findings. Letters must be received by ISCD with 30 days of notification of ineligibility.

**Refer to the Frequently Asked Questions on the ISCD Web site for answers to additional questions regarding the CBDT™ exam and eligibility.**

**2. Examination Application Process**

**2.1 Deadlines**

Application Deadline: **July 30, 2010**

Application must be submitted and all fees paid by the deadline to be eligible for the exam. Incomplete applications will be returned unprocessed. The examination fee must accompany the CBDT™ application.

- ❑ CBDT™ Examination: The CBDT™ examination is computer-based and offered at Prometric sites located throughout the US and Canada.
- ❑ The test window is **September 1-25, 2010**. Upon notification of acceptance, the candidate will schedule the exam with Prometric, the test vendor. Information on the scheduling of the exam will be included with the candidate's Authorization to Test letter (ATT). For more information on Prometric go to their Web site: [www.prometric.com](http://www.prometric.com)

## **2.2 Examination Fees**

CBDT™ examination fees

ISCD Members	\$275.00
ISCD Non-members	\$375.00

### **The fee includes:**

- Registration for the CBDT™ examination
- Workbook Self-Study Guide downloadable from the ISCD Web site

### **The fee does NOT include:**

- Exam References as identified in Section 4.1 of the CBDT Handbook.

*The examination fee must accompany the CBDT™ application.*

## **3. Examination Application Procedure**

- All communication with applicants will be handled via e-mail only.
- Applications must be typed or clearly hand-printed.
- An acknowledgement of receipt of the candidate's application will be provided via e-mail within 10 business days of receipt of the Application in the ISCD office.
- The application must be complete with registration fee and signatures on the Application Statement and Confidentiality Statement. *Incomplete applications will be returned unprocessed.*
- Once the candidate's application has been reviewed and accepted, candidates will be sent an Authorization to Test letter (ATT) no later than two weeks before the test window. A password and ID needed to access the Self-Study Guide together with instructions on how to schedule an exam location and date with Prometric will be included with the ATT.
- Once the candidate has completed the on-line registration process with Prometric, an electronic confirmation will be sent to the candidate containing the candidate's name, identification number, address of the test center, the date of the test, and name of the test. If the candidate is registering by the 800 number, the candidate must give the Prometric operator his or hers email address to receive an electronic confirmation. If a candidate loses the confirmation or has not received a confirmation two weeks before the test date, he or she should contact ISCD at 860.259.1000.
- **Applications accepted by mail only.**
  - Certification Administrator
  - ISCD
  - 306 Industrial Park Rd, Suite 208
  - Middletown, CT 06457

### **3.1 Examination Schedule**

Candidates must report to the test center no later than 15 minutes before the scheduled time of the exam. Seating of candidates, distribution of test materials, and testing instructions will begin at the scheduled time of exam. The total testing time is three and one half hours, including additional time for instructions and wrap-up. You can expect to leave the test center at approximately three and one half hours after the start of the exam. *There are no scheduled breaks.*

### **3.2 Required Identification**

One form of photo ID (such as a valid driver's license, passport or other government issued photo ID) with candidate's name as printed on the confirmation ticket must also be presented. **The name on the photo ID must match the name on the confirmation ticket.**

Candidates without a confirmation ticket, photo ID, or who arrive after the proctor has started pretest instructions will NOT be permitted to enter the test center, and their examination fees will be forfeited.

### **3.3 Testing Center Rules**

The following are the rules enforced at all test administrations:

- All candidates must have proper photo ID to be admitted to the exam.
- Candidates are admitted only to their assigned test center.
- Candidates arriving less than 15 minutes prior to the exam will not be admitted.
- No guests are permitted in the examination rooms.
- No reference material, books, papers, or personal items (purses, briefcases, coats, etc.) are allowed in the examination room.
- No electronic devices are permitted in the assessment site, including telephones, signaling devices such as pagers and alarms, personal digital assistants (PDAs) and other hand-held computers.
- No weapons or instruments that may reasonably be used as weapons may be brought into the examination room.
- No test materials, documents, or memoranda of any sort are to be taken from the examination room.
- Candidates may not communicate with other candidates during the examination. Proctors or field evaluators are authorized to maintain secure and proper test administration procedures, including relocation of candidates.
- No questions concerning the content of the examination may be asked during the testing period.
- Candidates will be provided with a survey at the end of the exam to comment on any question he or she believes is misleading or deficient in accuracy or content or comments on the exam administration.
- Candidates will be provided with erasable note board (supplied by testing company) to use during the examination. The note board must be returned to the supervisor at the completion of testing, or the candidate will not receive a score report.
- Food and beverages are not permitted in the assessment center. Tobacco products and gum may not be used during the examinations.
- Breaks are not scheduled during the exam. Candidates are permitted breaks on an individual basis, but no additional time is given to candidates who take breaks. Candidates who must leave the testing room must receive permission from the examiner and may be escorted while outside the testing room.
- Candidates will not be allowed to talk during rest room trips. Those who do will be denied re-admittance to the testing room, forfeit all fees and will not have their exam scored.

### **3.4 Emergencies**

Every attempt will be made to administer all examinations as scheduled. However, should any problems occur, due to the testing vendor, the exam will be rescheduled at no cost to the candidate.

### **3.5 No Show, Late Arrival, Inclement Weather, Rescheduling and Cancellation**

Candidates who have scheduled with Prometric and are unable to sit at the assigned time for the examination must notify Prometric (the testing vendor) in advance of the scheduled examination date. The candidate must make and confirm all changes through Prometric personnel first and then contact the ISCD Office. Information on this is stated in the Authorization to Test Letter.

- If advance notice is received 48 hours prior to scheduled test, the candidate may have the registration moved to another scheduled exam administration for a fee of \$25 plus the difference in any exam increase **OR** cancel the examination with a refund of the registration fee minus a \$75 administrative fee.
- If notice is not received 48 hours prior to the scheduled exam, the registration will **NOT** be moved to another scheduled exam nor is the application fee refunded.
- If the exam has NOT been scheduled with Prometric and the candidate wishes to move to another scheduled exam window, written notice must be sent to **ISCD** seven (7) days before the opening date that the candidate had applied for and pay an administration fee of \$25 plus the difference in any exam increase.
- If the exam has NOT been scheduled with Prometric and a written notice requesting a transfer to another scheduled exam window or cancellation of the exam was not received by the ISCD seven (7) days before the opening date of the candidate's scheduled exam session, no refund will be provided.
- If the exam has NOT been scheduled with Prometric and the candidate wishes to withdraw from the taking the exam, a written notice must be received by ISCD at least seven (7) days before the opening scheduled window that the candidate applied for. The candidate will receive a refund of the registration fee minus a \$25 administration fee.
- Candidates will not be permitted to take the exam if they present themselves less than fifteen (15) minutes after the scheduled start time for taking the exam and are refused admittance to the exam.
- If the exam is unable to be administered or if any candidate is unable to arrive at a designated exam site because of inclement weather, terrorist acts, a natural disaster, or other unforeseen emergencies beyond control of the candidate, as determined by the ISCD Certification Committee, the candidate may receive an extended testing window (to be determined on an individual basis) and will be allowed to reschedule the examination without being charged a re-examination fee. Candidates will be responsible for their own associated expenses for future testing.

#### 4. The CBDT™ Examination Structure

ISCD offers the CBDT™ certification examination for bone densitometry technologists who perform central bone densitometry scans.

The Body of Knowledge Study identified five major topic areas:

- I Basic Concepts
- II Technology and Equipment
- III Radiation Safety
- IV Total Scan Process
- V Role of the Technologist

A detailed content outline serves as the basis for the development of the examination and its test specifications. Content expert volunteers in the field of bone densitometry develop the questions on the examination. The CBDT™ Test Committee reviews and finalizes all questions for the examination. Each stage of the CBDT™ examination is an intensive peer review

process. The exam questions are mapped to the core references listed below. A Study Guide with sample exam questions is available to certificants once they have registered. See Section 4.2 for further information. References may be ordered through the ISCD Bone Yard at [www.iscd.org](http://www.iscd.org) or [amazon.com](http://amazon.com). Candidates should allow four weeks to receive references ordered.

#### **4.1 References**

##### **Core References\***

1) Bonnick, S and Lewis, L., *Bone Densitometry for Technologists*: Second Edition, Humana Press, 2006. ISBN: 1-58829-670-9 EISN: 1-59259-992-3.

2) ISCD Technologist Course Syllabus and Associated Reading Materials: Version 7.3 International Society for Clinical Densitometry, 2007 or later versions

3) 2007 Official Positions of the International Society for Clinical Densitometry; International Society for Clinical Densitometry, 2008.

##### **Supplemental References for additional background in specific topic areas\*\***

1) Favus, M., Editor, *Primer on the Metabolic Bone Diseases and Disorders of Mineral Metabolism*. Sixth Edition. American Society for Bone and Mineral Research, 2006. Searchable online at <http://www.ibmronline.org/loi/prim>

2) Blake, G., Fogelman, Ignac. 2007. Role of Dual Energy X-ray Absorptiometry in the Diagnosis and Treatment of Osteoporosis. *Journal of Clinical Densitometry* 10(1) 102-110.

3) *Journal of Clinical Densitometry*, New York, Publisher Elsevier ISSN: 1094-6950 <http://www.iscd.org/Visitors/publications/journal.cfm>

\*Exam questions are written from all these references based on the content outline (see 4.3 below)

\*\*Supplemental references are for background and additional information.

#### **4.2 Workbook - Self-Study Guide**

The *CBDT Workbook Self-Study Guide: 2008* is available online at [www.ISCD.org](http://www.ISCD.org) to each candidate after his or her application is accepted. The password and ID needed to access this guide will be given to the candidate in his/her acceptance letter. It contains a diagnostic test, key terms, study tips and how to prepare for multiple-choice examinations. A brief sample test is also included with the Workbook. The Workbook is *not* one of the suggested core references.

#### **4.3 CBDT Content Outline**

The Exam will cover the following topics:

**I. Basic Concepts**

**A. Key Terms**

1. Osteoporosis
2. Osteopenia/low bone mass
3. T-scores
4. Z-scores
5. Primary
  - (a) Type 1
  - (b) Type 2
6. Secondary Osteoporosis
7. Bone Mineral Content (BMC)
8. Bone Mineral Density (BMD)
9. Least Significant Change (LSC)

**B. Bone Science**

1. Anatomy and Physiology
2. Functions of Bone
3. Bone Types
4. Remodeling/Resorption
5. Bone Health
6. Risk Factors
  - (a) age
  - (b) gender
  - (c) ethnicity
  - (d) disease
  - (e) medications
  - (f) lifestyle
7. Patterns of Bone Loss and Gain

**C. Osteoporosis**

1. Causes
2. Risk Factors
3. Incidence and Prevalence
4. Treatments
  - (a) diet/ supplements
  - (b) medication
  - (c) exercise
  - (d) psychosocial support
5. Health Impact
  - (a) economic
  - (b) morbidity
  - (c) related diseases
6. Indications for Ordering DXA

**D. BMD Testing Methods**

1. DXA
  - (a) advantages
  - (b) disadvantages

- (c) key systems
- 2. QCT
  - (a) advantages
  - (b) disadvantages
  - (c) key systems
- 3. QUS
  - (a) advantages
  - (b) disadvantages
  - (c) key systems

## **II. Technology and Equipment**

### **A. X-Ray Science**

### **B. Measurement Types**

- 1. Types of Devices
  - (a) DXA
  - (b) QCT/pQCT
  - (c) QUS
- 2. Types of Scanners
  - (a) pencil beam
  - (b) fan beam
  - (c) single energy
  - (d) dual energy

### **C. DXA**

- 1. Factors
  - (a) time
  - (b) MA
  - (c) KVP
- 2. Absorptiometry
- 3. Calibration
- 4. Quality Assurance (QA)
- 5. Quality Control (QC)
- 6. Accuracy
- 7. Precision
- 8. Troubleshooting

### **D. Computer System Management**

- 1. Computer Basics
- 2. Electronic Medical Records
- 3. HIPAA
- 4. Maintenance and Upgrades
- 5. Manufacturer Support
- 6. Troubleshooting

### **E. Machine Care and Maintenance**

- 1. Quality Assurance (QA)
- 2. Quality Control (QC)

**III. Radiation Safety**

**A. ALARA**

**B. Biological Effects in Radiation Safety**

1. Short Term and Long Term
2. DXA
3. Radiosensitive Tissue/Organs
4. Somatic and Genetic
5. Units of Measurement
  - (a) dosage types
  - (b) dosage equivalents

**C. Basic Methods of Protection and Radiation Safety**

1. Who to Protect?
  - (a) patient
  - (b) technologist
  - (c) public
  - (d) family
2. Protection Methods
  - (a) shielding
  - (b) time
  - (c) distance
  - (d) pregnancy

**IV. Total Scan Process**

**A. Patient Biographical Data**

**B. Scan Mode**

1. Speed
2. Length

**C. Patient Preparation**

1. Artifacts
2. X-ray Contrast
3. Pregnancy
4. Problems

**D. Skeletal Selection Scan Sites**

1. Prosthesis and Hardware
  - (a) hips
  - (b) scoliosis
  - (c) osteoarthritis
  - (d) spinal instrumentation
3. Wrist Fractures

**E. Scans**

1. Positioning/alignment
  - (a) spine
  - (b) hip
  - (c) forearm
  - (d) VFA
  - (e) total body
2. Serial Scanning,
  - (a) spine
  - (b) hip
  - (c) forearm
  - (d) VFA
  - (e) total body
3. Landmarks
  - (a) spine
  - (b) hip
  - (c) forearm
  - (d) VFA
  - (e) total body

**F. Scan Review, Interpretation and Validation**

1. Databases
  - (a) Nhanes
2. WHO

**G. Types of Analysis**

1. Manufacturer's Specifics
2. Baseline and Serial
3. Errors and Automatic Adjustments
4. Specific Sites
  - (a) ROI
  - (b) label bones/sites
  - (d) evaluate false BMD elevation

**V. Role of the Technologist**

**A. How to Establish Protocols**

1. Policies
  - (a) data management
  - (b) archiving
  - (c) Quality Assurance (QA)
  - (d) Quality Control (QC)
  - (e) machine maintenance
2. Procedures – Scan Choice
3. Ethics, Confidentiality and Professionalism
4. Scan Review

**B. Patient Communication**

1. Questionnaire
2. History
3. Current Status
4. Patient Safety

**C. Patient Education**

1. Bone Health
  - (a) nutrition
  - (b) exercise
  - (c) Stadiometer
  - (d) patient safety  
(falls, pregnancy, ALARA)
2. Bone Loss
  - (a) nutrition
  - (b) exercise
  - (c) Stadiometer
  - (d) patient safety  
(falls, pregnancy, ALARA)
3. Treatment
  - (a) nutrition
  - (b) exercise
  - (c) Stadiometer
  - (d) patient safety  
(falls, pregnancy, ALARA)

**D. Basic Reports and Analysis**

1. Coding
2. Billing
3. BMMA – Bone Mass Measurement Act

ISCD: CBDT Content Outline (2006)  
CBDT Job Analysis Study  
July 2006

**4.4 CBDT™ Examination Specifications**

The CBDT™ examination has a total of 125 multiple choice questions, 25 of these questions will be case-based multiple choice questions. Candidates will have **three** hours to complete the examination with 15 minutes of instruction and 15 minutes of wrap-up after the exam making the total test period three and one-half hours.

**Number of Questions by Content Area and Percentage of Exam**

<b>Content Outline</b>	<b>Total</b>	<b>%</b>
I. Basic Concepts	21	17%
II. Technology and Equipment	19	15%
III. Radiation Safety	13	10%
IV. Total Scan Process	51	41%
V. Role of the Technologist	21	17%
<b>Total</b>	<b>125</b>	<b>100%</b>

- Each correctly answered question is one point.
- Points are not deducted for incorrect answers.
- Answer all questions, even if you are not sure of the answer.
- All questions on the examination are based on the Certified Bone Densitometry Technologist (CBDT™) Content Outline and documented to a text included in the CBDT™ Body of Knowledge.
- CEs are not awarded for taking the CBDT™ exam.

**5. Examination Results**

**5.1 Examination Scores**

Candidates will be notified in writing with a pass/fail score within four to six weeks following the close of the examination window. No results will be provided by telephone, fax or email. Scores are released ONLY to the individual candidate.

**Passing Score**

***How is the cut-score (the passing score) determined for a test?***

The passing grade, or cut point, is established through a cut-score study. For this process, a panel of experts in clinical densitometry is convened. Through consensus, the panel determines a set of characteristics that they expect of a minimally qualified candidate in relation to the content outline. The subject-matter experts use it as a guide to help them rate each question in reference to the proportion of borderline candidates that will get the answer right.

The results of this cut-score study are then presented to the Certification Test Committee. Along with the written expectation of performance that the panel developed, the summary of the judges' combined estimate of the difficulty of the exam is presented as the recommended cut point for the exam. Once that cut-score point is established by committee approval, it becomes the minimum score necessary to earn certification.

Scores for the examination are reported as scaled scores. Scaled scores are more meaningful than raw scores (percentage correct or number correct) because they reflect the difficulty of a particular test compared to other forms of the same test and represent the same level of test performance regardless of what exam form was administered. The CBDT total scores are reported on a scale that ranges from 150 – 400. A total scaled score of 300 is necessary to pass the examination. Examination results are reported as pass/fail.

For individuals that fail the exam, a report is sent that provides diagnosis information to help identify your strengths and weaknesses in each of the content areas covered by the CBDT examination. The diagnostic level definitions are:

- Proficient – The score you obtained is at or above the acceptable level; you have demonstrated an acceptable understanding of the content. A review of this area may be helpful to you prior to re-taking the exam.
- Marginal – The score you obtained is marginally unacceptable. Your understanding of this content does not appear to be strong. Additional study is suggested.
- Deficient – The score you obtained is below an acceptable level. Substantial study of this content area is recommended prior to re-taking the exam.

## **5.2 Questions About the Examination**

Candidates have two options to raise questions about the examination:

- Each candidate will receive a survey at the end of the exam at which time the candidate may express comments and concerns about the examination.
- Candidates may also forward their comments in writing to ISCD within 10 business days of the examination.

All questions about the examination are reviewed by Technologist Certification Committee prior to test results being published. You will not receive an individual response from the committee following their review.

## **5.3 Cancelled Scores**

ISCD is concerned with only reporting valid scores. On rare occasions, circumstances may invalidate test scores. ISCD retains the right to cancel or withhold any exam scores. Invalid scores fall into two categories:

- a. Doubts may be raised by the examination administrator or another candidate of suspected misconduct or cheating by a candidate. A candidate is expected to cooperate with any investigation to determine if the score is invalid.
- b. In rare instances, there may be a problem with the examination materials or the test site; such situations will be investigated. Exam will not be invalid in these instances.

In addition, ISCD may cancel or invalidate any candidate's score if, upon investigation, violation of the testing and/or candidate validation policies is established.

## **5.4 Reexamination**

Anyone who does not pass the examination may retake the exam the next time it is offered at the full fee. A candidate may sit for the exam up to three times. Thereafter, if they are still unsuccessful in passing the exam, the candidate must show documentation of an additional 12 hours of CME Category 1 or Category A CE Credits.

## **5.5 Appeals**

Appeals of examination scores must follow the following procedure:

- All appeals must be filed with ISCD within 15 business days of receipt of the score report. The Appeals Reporting Form is located on the ISCD Web site at: <http://iscd.org/Visitors/pdfs/Cert-Appeals-Form.pdf>
- A letter (not e-mail) must be forwarded to ISCD stating the concern and reason for the appeal to: ISCD Certification Committee, 306 Industrial Park Rd, Suite 208, Middletown, CT, 06457 Attention: Appeals Committee.
- The CBDT™ Appeals Committee will review the letter. A response from the Appeals Committee will be forwarded within 15 business days of receipt of the appeal letter. The response will detail the reasons the request has been approved or not approved.

**6. Recertification Guidelines**

Certificants must participate in ongoing professional development to maintain their CBDT™. Upon earning the CBDT™ credential, certification remains valid for the following three complete calendar years (one recertification cycle).

**6.1 General Guidelines**

- Certificants will recertify every three years on December 31 with 24 continuing education credits ; the first recertification cycle will start January 1 of the year immediately following successfully passing the CBDT™ examination. Example – Certified September 2009, certification cycle 1/1/2010 – 12/31/2012
- Credits will be earned and recorded as CME Category 1 Credits or Category A CE Credits.
- Credits must be earned throughout the three-year recertification cycle.
- Credits may not be carried over from one recertification cycle to another.
- Continuing education credits must be earned from bone densitometry, osteoporosis or metabolic bone disease related conferences, seminars or workshops and come from more than one source or activity.
- Continuing education credits are defined in Activity Matrix below.

**CBDT™ Recertification Categories**

- It is the responsibility of each certificant to maintain records documenting Contact Hour activity. 24 Contact Hours are required **every three years**.

<b>Category</b>	<b>Activity – continuing educational credits may include any of the following</b>	<b>Contact Hours</b>
1.	<b>Conference, Seminar, Workshop</b> Each 50 – 60 minute session including questions and answers	1
2.	<b>Continuing Education (CE’s)</b> 1.0 CE awarded by program sponsor,	1
3.	<b>Continuing Education Units (CEU’s)</b> 0.1 CEU awarded by program sponsor	1
4.	<b>Academic Courses:</b> 1 semester hour credit	5
5.	<b>Academic Courses:</b> 1 quarter hour credit	3
6.	<b>Master’s Thesis or PhD Dissertation</b> on a topic related to skeletal health from an accredited institution.	10
7.	<b>Presentations and Publications – a maximum of 10 contact hours may be earned in this category with the exception of published books</b>  * Presentations: each hour – a presentation may not be submitted more than once, includes preparation time  * Publications: minimum of three page article accepted for publication in a peer-reviewed journal, includes preparation time  *Book published on a topic related to skeletal health	2  2  15
8	<b>General professional development - a maximum of 3 hours may be earned in this category.</b>  • examples include CPR training, First Aid, etc.	3

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**6.2 CE Record Retention**

- Documentation for all activities submitted for Contact Hour credit must be retained by the certificant for a period of three years following submission.
- ISCD reserves the right to audit a certificant's records; any Contact Hours that cannot be documented during the audit process may be disqualified.
- During any three-year recertification cycle, it is the responsibility of a certificant to maintain a current address and contact information with the ISCD office. Changes to a certificant's professional information will be updated regularly in the ISCD Certification Registry on the ISCD site.

**6.3 Recertification Application Fees**

- Fees are due at the completion of the certificant's three-year recertification cycle.
- Fees must accompany the CBDT™ Recertification Summary Form.

Fees:       \$125.00 for ISCD members  
              \$ 225.00 for non-members

- Detailed Recertification Guidelines and an Application for Recertification are available on the ISCD Web site, [www.ISCD.org](http://www.ISCD.org).

**6.4 CBDT™ Registry**

A current listing of all certificants will be maintained in the Certification Registry on the ISCD Web site.

**7.0 Certificant Record Retention**

**7.1** Candidate and Certificant information is confidential and will not be released or given to any one other than to legally-required agencies. The Exam Security Policy provides information on confidentiality.

The ISCD maintains all applications, test results and other pertinent information for the certification program. The application, exam format, results and any other pertinent information are considered confidential and privileged information and will not be revealed to anyone without the applicant's written permission unless required by law.

**7.2** ISCD certification staff and its testing agency are the only individuals allowed access to the certification files. ISCD certification staff will only verify that an individual is certified and will not reveal whether an individual has even applied for the exam. No personal information about the applicant or certificant will be revealed unless written permission has been obtained from the certificant or applicant.

8. CBDT™ Application



**CBDT™ Examination – Application  
Sponsored by ISCD**

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**Important Information**

- All communication with applicants will be handled via e-mail only.
- Applications must be typed or clearly hand-printed.
- The name and address on your application MUST match your ID.
- An acknowledgement of receipt of the candidate's application will be provided via e-mail within 10 business days of receipt of the Application in the ISCD office.
- The application MUST be complete with registration fee and signatures on the Application Statement, Confidentiality Statement and Code of Ethics (pages 21-24).
- **Incomplete applications will be returned unprocessed.**
- Once the candidate's application has been reviewed and accepted, candidates will be sent an Authorization to Test letter (ATT) no later than two weeks before the test window. A password and ID needed to access the Self-Study Guide together with instructions on how to schedule an exam location and date with Prometric will be included with the ATT.
- Once the candidate has completed the registration process with Prometric, an electronic confirmation ticket will be sent to the candidate containing the candidate name, identification number, the address of the test center, the date of the test, and the name of the test. If a candidate loses the confirmation ticket or has not received a confirmation ticket two weeks before the test date, he or she should contact ISCD at 860.259.1000.
- **Applications are accepted by mail only.**

Forward the application and registration fee to:  
Certification Administrator  
ISCD  
306 Industrial Park Rd, Suite 208  
Middletown, CT 06457

**Section 1. Candidate Information**

Name: \_\_\_\_\_  
(Must be the same as it appears on your Drivers License or ID)

Home Address (Do not use a PO Box): \_\_\_\_\_

City: \_\_\_\_\_ State/Province: \_\_\_\_\_ Zip/Postal Code \_\_\_\_\_

Phone: \_\_\_\_\_ Fax: \_\_\_\_\_ E-mail: \_\_\_\_\_

Organization: \_\_\_\_\_

Job Title: \_\_\_\_\_

**Special ADA (Americans with Disability ACBDT) Accommodations Request**

If you have special testing requirements, please attach a sheet to your application outlining your request and stating the reasons for your request.

- Candidates will be sent Notice of Approval from ISCD included with their Authorization to Test (ATT) confirmation.

- Candidates must call the special conditions coordinator at the Prometric Candidate Services Contact Center (CSCC) at the toll-free number **(800) 967-1139** to schedule an appointment.

**Section 2. Education**

If you **ARE** currently a CDT or ARRT(**BD**) "Bone Densitometry" in good standing

*(include copy of certificate):*

Certification Start Date	Expiration Date	ISCD CDT or ARRT(BD)	ARRT #

*If you ARE currently a CDT or ARRT [(BD) Bone Densitometry in good standing, you do NOT complete the following information. Skip to page 22 Section 4 and complete the application. (See explanation of CDT and ARRT in Section 1.1 of Handbook).*

If you are **NOT** a CDT or ARRT(BD) [Bone Densitometry Certified] but **HOLD** a degree in other Allied Health field (RN, MN, MT, RT etc.):

Graduation Date	Degree/Certification	College, University, Organization Sponsor	Facility Location

If you are **NOT** a CDT or ARRT[(BD)[Bone Densitometry Certified] and **DO NOT** hold another Allied Health degree:

- Document a minimum of 12 hours of CME category 1- accredited course study or 12 Category A, CE credits in bone densitometry, osteoporosis, metabolic bone disease, within the past 12 months
- One contact hour equals 50-60 minutes
- **Documentation** (i.e. CE certificate, proof of attendance, etc.) **is required for each entry.**

Date	Number of Hours	Topic	Sponsor

**CBDT™ Candidate Handbook 2010**

**Section 3. Bone Densitometry Experience to meet Eligibility Requirement**

*You MUST complete if you are NOT Bone Densitometry Certified:*

Year Month/Year	Name of Organization	Title/Job/Position

**ATTESTATION**

**Technologists:** *Your supervisor must complete the following:*

I attest that the afore-named applicant has a minimum of six months experience in bone densitometry scans and has performed at least 100 central DXA patient scans at two skeletal sites (hip, spine or forearm)

\_\_\_\_\_  
Supervisor Signature:

\_\_\_\_\_  
Supervisor Title:

Name of Manufacturer Equipment

▪ **Exam Dates and location:**

**Examination Session Dates: September 1-25, 2010**  
**Computer-based test at Prometric Sites located throughout the US**  
<http://www.prometric.com>

**Section 4. Fees**

<b>CBDT™ Examination Fee (U.S. Dollars)</b>			
• ISCD Member	<b>\$275</b>	ISCD Non-member	<b>\$375</b>

Please charge: \$\_\_\_\_\_ To my:  MasterCard  Visa  American Express

Card Number \_\_\_\_\_ Expiration Date \_\_\_\_\_

Name as it appears on card \_\_\_\_\_

Billing Address: \_\_\_\_\_

Signature \_\_\_\_\_

**Or Make Check Payable to: ISCD (US Dollars)** Check No. \_\_\_\_\_ Amount \$ \_\_\_\_\_

**Section 5. Candidate Application Statement**

All candidates must sign the Candidate Application Statement and agree to all policies, procedures, and terms and conditions of certification in order to be eligible for the CBDT™ credential. The statement follows.

I hereby apply for certification as a Certified Bone Densitometry Technologist. I understand that my certification depends on my ability to meet all requirements and qualifications. I certify that the information contained in this application is true, complete, and correct to the best of my knowledge and is made in good faith. I further understand that if any information is later determined to be false, ISCD reserves the right to revoke any certification that has been granted on the basis thereof.

I hereby release, discharge, and exonerate ISCD, its directors, officers, members, examiners, representatives, and agents, from any actions, suits, obligations, damages, claims or demands arising out of, or in connection with, any aspect of the application process including results or any other decision that may result in a decision to not issue me a certificate.

*I attest that I have reviewed and understand this CBDT Handbook.*

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

All candidates that pass CBDT examination will be listed in the Certification Registration on the ISCD Web site. If you DO NOT wish to be listed, you must check this box.

**I do NOT wish to be listed on the ISCD Certification Registry.**

**Section 6. Candidate Confidentiality Agreement**

*All candidates must sign the Candidate Confidentiality Agreement. The agreement follows:*

You understand, acknowledge and agree:

- 1 That the questions and answers of the exam are the exclusive and confidential property of ISCD and are protected by ISCD intellectual property rights;
- 2 That you may not disclose the exam questions or answers or discuss any of the content of the exam materials with any person, without prior written approval of ISCD;
- 3 Not to remove from the examination room any exam materials of any kind provided to you or any other material related to the exam, including any notes or calculations;
- 4 Not to copy or attempt to make copies (written, photocopied, or otherwise) of any exam material, any exam questions or answers;
- 5 Not to sell, license, distribute, give away, or obtain from any other source other than ISCD the exam materials, questions or answers.
- 6 You agree that your obligations under this Agreement shall continue in effect after the examination and, if applicable, after termination of your certification, regardless of the reason or reasons for termination, and whether such termination is voluntary or involuntary.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**Section 7. Ethics**

The CBDT™ certification promotes high standards of patient care that includes enforcing high standards of ethics among Certified Technologists and among candidates for certification. All candidates must comply with the Code of Ethics located at the end of this application. The Rules are intended to promote the protection, safety, and welfare of patients. Certified Technologists and candidates engaging in any of the conduct or activities noted in the Code of Ethics, or who permit the occurrence of such conduct or activities, have violated the Code of Ethics and are subject to sanctions. By signing this application you have accepted the Code of Ethics and are bound by these codes.

Please refer to the ISCD Web site for the full Enforceable Rules of Ethics

[http://www.iscd.org/Visitors/pdfs/Enforceable\\_Rules\\_Ethics.pdf](http://www.iscd.org/Visitors/pdfs/Enforceable_Rules_Ethics.pdf) and the Certification Ethics Committee for the procedures [http://www.iscd.org/Visitors/pdfs/Certification\\_Ethics\\_Committee.pdf](http://www.iscd.org/Visitors/pdfs/Certification_Ethics_Committee.pdf)

Section 8.1 Code of Ethics



# Technologist Code of Ethics

## Preamble

The practice of densitometry is a recognized allied health profession. The CBDT™ certificant assumes specific responsibilities to the physician or other licensed healthcare prescriber, the patient, the public, associates and to the profession itself. These responsibilities must be discharged with honor and integrity to assure the maintenance of public confidence in the profession.

The Technologist Code of Ethics of the International Society for Clinical Densitometry (ISCD) shall apply to persons holding the CBDT™ certification from ISCD. The Code of Ethics is intended to be consistent with the ISCD Certification Mission Statement and to promote the goals of ISCD Certification Mission Statement.

## Technologist Code of Ethics

As a densitometry technologist, credentialed by the International Society for Clinical Densitometry, I hereby acknowledge, accept and profess to abide by the following code of conduct and ethics:

- I will conduct myself in a professional manner, respond to patient needs, and support colleagues and associates in providing quality patient care.
- I will deliver patient care and service without reservation on the basis of gender, race, creed, religion or socio-economic status.
- I will perform my duties and services in accordance with the accepted standards of practice for bone densitometry.
- I will not engage in or be a party to unethical or unlawful acts that negatively affect the community, my professional reputation, or the field of densitometry.
- I will not share, disseminate, or otherwise distribute confidential or proprietary information pertaining to the ISCD certification process.
- I will respect confidences entrusted in the course of professional practice, respect the patient's right to privacy, and reveal confidential information only as required by law or to protect the welfare of the individual or the community.
- I will not use my certification or objects associated with my certification (such as certificates or logos) to represent any individual or entity other than myself as being certified by ISCD.
- I will do nothing to undermine or detract from this credential. I accept that any activity on my part that will cause harm to the credential serves as a breach and a failure on my part to uphold this code of ethics. Moreover, I accept that such action for which I might be responsible could result in the revocation of my credential.
- As long as my credential is in an active status, I shall endeavor to improve my knowledge and skills by participating in continuing education and professional activities.
- I commit that my professional goal is to submit to the highest standards of professional care in densitometry.

Signed \_\_\_\_\_

Date \_\_\_\_\_

## How did you learn about the certification?

- ISCD Forum or Web site
- ISCD Educational program
- Flyer
- Personal Contact
- Other: \_\_\_\_\_

## 9. Re-examination Application



# CBDT™ Re-examination – Application

This application may **ONLY** be used if you are applying for reexamination because you **did NOT pass** the CBDT examination and you are applying to sit for the exam *within one year from the failed exam date*.

An acknowledgement of receipt of the candidate's re-application will be provided via e-mail within 10 business days of receipt of this Application in the ISCD office.

***Incomplete Applications will be RETURNED Unprocessed.***

Forward the application and registration fee to:

**MAIL: Certification Administrator, ISCD, 306 Industrial Park Rd, Suite 208, Middletown, CT 06457**

### Candidate Information

Name: \_\_\_\_\_  
**(Must be the same as it appears on your Drivers License or ID)**

Home Address (Do not use a PO Box): \_\_\_\_\_  
\_\_\_\_\_

City: \_\_\_\_\_ State/Province: \_\_\_\_\_ Zip/Postal Code \_\_\_\_\_

Phone: \_\_\_\_\_ Fax: \_\_\_\_\_ E-mail: \_\_\_\_\_  
(All correspondence sent via e-mail)

Organization: \_\_\_\_\_

Job Title: \_\_\_\_\_

Date of "Original" Examination \_\_\_\_\_

### **Special ADA (Americans with Disability ACBDT) Accommodations Request**

If you have special testing requirements, please attach a sheet to your application outlining your request and stating the reasons for your request.

- Candidates will be sent Notice of Approval from ISCD included with their Authorization to Test (ATT) confirmation.
- Candidates must call the special conditions coordinator at the Prometric Candidate Services Contact Center (CSCC) at the toll-free number **(800) 967-1139** to schedule an appointment.

**I acknowledge that I have reviewed the examination process as outlined in the CBDT Handbook**

**CBDT™ Candidate Handbook 2010**

**Exam window - Check one**

(If you do not make a selection, you will automatically be registered for the next available exam window)

**September 2010**

**December 2010**

**FEE:   CBDT™ Examination Fee (U.S. Dollars)**

ISCD Member           **\$275**

ISCD Non-member      **\$375**

**PAYMENT:**

Make **Check** Payable to: **ISCD (US Dollars)** Check No. \_\_\_\_\_ Amount \$ \_\_\_\_\_

*Or*

Please charge: \$ \_\_\_\_\_ my:  MasterCard    Visa    American Express

Name as it appears on card \_\_\_\_\_

Billing Address: \_\_\_\_\_

Signature \_\_\_\_\_

Card Number: \_\_\_\_\_ Expiration Date: \_\_\_\_\_ CVV: \_\_\_\_\_