

CERTIFIED DENTAL TECHNICIAN

EXAMINATION HANDBOOK AND APPLICATION

NBC
National Board for Certification in
Dental Laboratory Technology

Dear Certified Dental Technician Candidate:

Thank you for your interest in pursuing the CDT designation. You are to be congratulated for your commitment to attain the highest standards of professional excellence within the dental technology community.

You should know that this distinctive certification, when it is obtained, places you among the elite group of dental technology professionals who hold this designation. We, at the NBC Headquarters in Tallahassee, Florida, will be with you throughout the process, providing guidance, information, study material and advice, which will help you along the path to becoming a CDT.

This handbook contains the information you need in order to become a Certified Dental Technician. For more information about the NBC, visit our website at www.nbccert.org. The examination applications, order forms, and the examination schedules are also available on the website.

Once again, you have made an excellent choice in pursuing the CDT designation and we will be there to provide support for you along the way.

If you have any questions, please contact the NBC at certification@nbccert.org or call (800) 684-5310.

NBC
National Board for Certification in
Dental Laboratory Technology

325 John Knox Road, #L103, Tallahassee, FL 32303
(800) 684-5310 Toll Free • (850) 205-5626
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This publication is intended solely for use by candidates interested in seeking certification with the National Board for Certification in Dental Laboratory Technology. NBC reserves the right to amend the information contained in this handbook. For the most up-to-date information concerning the examinations, please contact NBC.

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Certified Dental Technician Examination Handbook and Application

NBC MISSION

The National Board for Certification in Dental Laboratory Technology provides professional certification to both dental technicians and dental laboratories.

NBC VISION

NBC is dedicated to administering and promoting globally recognized certification programs to assess the knowledge and skills of dental technicians and to review facility and staff training criteria for dental laboratories.

STATEMENT OF NONDISCRIMINATION

The Certified Dental Technician program is offered to all candidates that meet eligibility requirements regardless of age, race, religion, gender, national origin, marital status or disability.

AMERICANS WITH DISABILITIES ACT FOR EXAMINATION CANDIDATES

No individual with a disability will be deprived of the opportunity to take the NBC examinations solely by the reason of that disability. The NBC complies with the Americans with Disabilities Act and will provide reasonable accommodations for candidates with disabilities. An application requesting special accommodations and arrangements at regularly scheduled examinations must be submitted at least thirty (30) days prior to the examination, in writing, to the NBC. The request must include verification of the disability and the specific type of assistance needed. Please contact the NBC for an application form, if needed.

Please read all sections of this handbook. Information can also be found on the NBC website at www.nbccert.org. You can contact the NBC Headquarters at certification@nbccert.org or (800) 684-5310.

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Certified Dental Technician Examination Handbook and Applications

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How to Become a Certified Dental Technician

WHAT IS CERTIFICATION?

Certification is the professional standard in dental laboratory technology. It is the means for the dental profession, the dental laboratory industry and all others with an interest to identify dental technicians and dental laboratories that have demonstrated their technical qualifications and their commitment to maintaining high standards in dental laboratory technology.

The Certified Dental Technician (CDT) Program is a national program. Since certification is voluntary, it represents not only compliance with documented standards, but also a special personal commitment to quality and professionalism. Each CDT has met industry standards of required knowledge and applied skills through the successful completion of examinations and compliance with continuing technical and regulatory education requirements.

The CDT is recognized and endorsed by the National Association of Dental Laboratories (NADL), the American Dental Association (ADA) and the American College of Prosthodontists (ACP). It also receives outstanding support and participation from U.S. military services. The CDT program adheres to national certification program standards.

For those engaged in the practice of dental laboratory technology, certification offers:

- An incentive to achieve proficiency;
- Criteria for maintaining continuing education;
- Improved career opportunities;
- Peer recognition; and
- Enhanced professional visibility.

For the dentist-client, certification offers:

- Reinforced credibility through the use of credentialed support services;
- A means to encourage proficiency and advancement; and
- An enhanced source of specialized expertise.

Finally, for the dental patient, certification could establish:

- An enhanced perception of the value of dental services; and
- A positive perception of (and respect for) the career of dental laboratory technology.

WHAT ARE THE SKILL STANDARDS?

The goal of the CDT examination is to measure competence or the mastery of a predetermined body of knowledge and the skills deemed to represent the successful, professional-level practice of dental laboratory technology. To become a CDT, a technician must demonstrate their knowledge and applied skills, from start to finish in their chosen specialty, in the manufacturing procedures common in contemporary practice. There are seven (7) specialties currently recognized by the NBC: Ceramics, Complete Dentures, Crown & Bridge, Digital Workflow, Implants, Orthodontics and Partial Dentures.

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How to Become a Certified Dental Technician, continued.

THE EXAMINATIONS

The examinations given by the NBC are the result of years of continuing development. Questions on the tests originate with technicians in the field. Special task forces (comprised of technicians, laboratory owners, educators and dentists) have been appointed by the NBC to conduct regular reviews, revisions and updates of the examinations. All examination content is also subject to ongoing statistical analysis based on actual usage of examination questions as well as peer review to ensure relevance to current practices in dental laboratory technology.

The following examinations must be passed successfully to become a Certified Dental Technician (CDT):

- The Written Comprehensive examination (or the Written Recognized Graduate examination, if eligible);
- The Written Specialty examination; and
- The Practical examination (in the same specialty area as the Written Specialty examination — Ceramics, Complete Dentures, Crown & Bridge, Digital Workflow, Implants, Orthodontics and Partial Dentures.)

Candidates may sit for the examinations in any order but all three (3) examinations must be passed within four (4) years of the date that the first examination was passed.

ANNUAL RENEWAL

In order to retain certification, CDTs are required to apply annually to the NBC for renewal. To qualify for renewal, the CDT must attest that he or she has complied with the laws governing the practice of dental technology and dentistry in the applicable state, must submit proof of specific continuing education and must pay the renewal fee.

The current continuing education requirements are subject to change and are available by contacting the NBC Headquarters. Various types of continuing education are required and may include training on regulatory standards, infection control, scientific and/or technical topics and general professional development topics. Some of the ways the continuing education requirement may be met are through attendance at approved clinics, reading of accepted technical publications, completion of college level credit courses, or the development of original technical clinics or papers.

Renewals are based on an annual renewal cycle. All new CDTs will be notified to which renewal cycle they have been assigned upon certification. An invoice is sent out to every CDT seventy-five (75) days prior to their certification renewal date.

Overview of History, Regulation & Organization in Dental Laboratory Technology

EARLY HISTORY

Dental disease has been treated since the first prehistoric toothache. Primitive history recorded incantations, chemical and vegetable plasters, and various rinses to treat oral pain. Substitutes for natural teeth were made very early from the bones and teeth of animals and later from other materials such as mother-of-pearl, ivory and jeweler's enamel baked on carved bone or metal tooth plates.

Until the mid-eighteenth century, medical doctors concerned themselves little with the mouth. Dental ailments were treated largely by laymen. Only a very small amount of medical literature dealt with dental treatment until 1728, when a Frenchman, Pierre Fauchard, published the first major text dealing with dentistry: *Le Chirurgien Dentiste*. By incorporating into a single book everything known about the science and art of dentistry, Fauchard established a scientific basis for a new medical specialty and earned the title "The Father of Modern Dentistry."



Set of dentures made for George Washington by John Greenwood, 1798. Courtesy of the Dr. Samuel D. Harris National Museum of Dentistry.

Dentistry was brought to colonial America around 1766; George Washington was among the most famous of early dental patients for whom prosthetic teeth were made. The various forms of dental treatments, techniques and materials used for the replacement of missing teeth soon started to evolve and expand.

FIRST COMMERCIAL DENTAL LABORATORY

As the art and science of dentistry continued to develop, certain dentists developed special processes and skills in fabricating prosthetic devices. Since these processes and skills were in demand by other dentists, the practice of sending out laboratory work to those possessing the processes began.

One doctor particularly noted for his prosthetic skills was Dr. W. H. Stowe who practiced in Boston. Dr. Stowe eventually found that he had little time for his own dental practice after accepting laboratory work from all the dentists who sought his services. In 1883, he began to separate his dental practice from his laboratory services, accepting laboratory work only from a limited number of dentists. However, the laboratory service was so successful that it suggested to him the potential for a dental laboratory serving the profession at large.

In 1887, Dr. Stowe opened a dental laboratory in Boston. He was later joined by his cousin, Frank F. Eddy. The laboratory, later to be known as Stowe and Eddy, is generally acknowledged to be the first commercial dental laboratory in America separate from a private dental practice.

The establishment of commercial dental laboratories led quickly to the training of apprentices. As these apprentices gained skills, they opened their own laboratories and the growth of the

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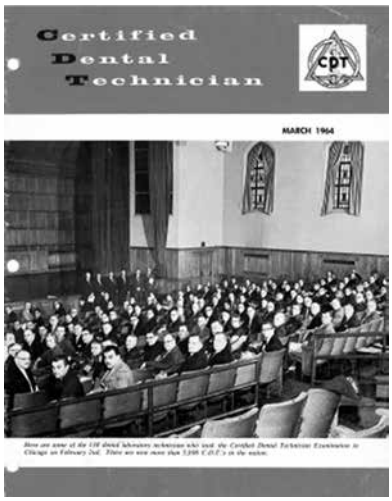
commercial dental laboratory industry began. As more and more laboratories came under the management of dental technicians, a decreasing number of dentists went into the business. By 1910, it is likely that dental technicians managed the majority of commercial dental laboratories.

The work and innovations of dental technicians became a significant influence in the development of new prosthetic techniques and materials.

NATIONAL ORGANIZATION

As the dental laboratory craft and industry grew, it was natural that organizations should be formed. In 1950, there were two national organizations representing the dental laboratory industry, but no single unified organization. A group of dental laboratory owners from throughout the country met in Chicago that year, and agreed to form a national, federated association, similar in organization to the American Dental Association, with state-level association components.

This meeting marked the beginning of the National Association of Dental Laboratories (NADL), which today represents more than 1,000 commercial laboratories nationwide. The stated mission of NADL is, "NADL aggressively advances the dental laboratory technology industry and its members through advocacy, education, standards and services." NADL's vision statement is, "NADL is the dental laboratory industry's respected authority, delivering the highest standards to ensure our members are viewed as valued professionals on the dental health team."



CDT Magazine from March 1964 with photo of examination candidates.

BEGINNING OF CERTIFICATION

The early activities of NADL were concentrated in the areas of recognition and education. In 1954, the NADL Education Committee began the development of a certification program which would set skill standards for the individual dental technician. The following year, the NADL Executive Council elected seven persons to the newly formed National Board for Certification in Dental Laboratory Technology, which adopted policies and approved examinations for the certification program. The first Certified Dental Technician examinations were given in October of 1958, and the first CDT designations were awarded in March of 1959.

Visit www.nbccert.org/about-national-board-certification/certification-standards.cfm to learn more on the certification program standards.

GOVERNMENT REGULATIONS

The authority of state governments to regulate the health professions is well established. Every state in the nation has exercised its authority over dental health services by enacting a Dental Practice Act, which establishes the basic relation between the dentist and the dental technician or commercial dental laboratory. In general, these acts state that the fabrication and repair of dental prosthetic appliances are included in the definition of the practice of dentistry and that no

unlicensed person may engage in any phase of such fabrication or repair unless it is at the direction of a licensed dentist. The required "direction" normally means the written dental prescription or work authorization of the dentist. The nature and format of the prescription is spelled out in varying degrees of detail by the different state Dental Practice Acts.

All state dental practice laws specify the functions which the dentist may perform, and the conditions under which he or she may perform them. Any unlicensed person found to perform these functions directly for the public is engaged in the illegal practice of dentistry.

During the past few decades, additional regulation has been imposed on dental laboratories in the form of occupational health and safety laws. These laws deal with the requirement for employers to provide safe and healthy workplaces for their employees, and they are promulgated and administered by both federal and state agencies, including the Occupational Safety and Health Administration (OSHA).

While there are approximately a dozen states having more specific regulatory legislation governing the operation of a commercial dental laboratory, there has long been a segment of the laboratory industry desiring the enactment of registration or licensing laws. This is a state-level issue and the decision to seek or oppose such legislation must remain in the hands of the respective states.

The National Board for Certification in Dental Laboratory Technology cannot participate in the influencing of legislation. However, it does encourage the protection of public health and welfare by maintaining the nationally recognized certification standards which form a solid foundation for either statutory or voluntary regulation of dental technology.

Through public advocacy and outreach, NADL works with the state dental associations and state health officials to enact legislation to require:

- Certification and continuing education for dental technicians who manufacture restorations;
- Registration of all dental laboratories with the state board of dentistry or other appropriate state agencies;
- Mandatory disclosure of all patient contact materials in a restoration, as well as the point of origin (country and laboratory) where the restoration was manufactured; and
- Required documentation of these items in patient dental records.

Dental laboratory owners and managers must also be aware of applicable state and local laws (zoning, taxation, etc.) which apply to all businesses.

RELATED ORGANIZATIONS AND INSTITUTIONS

The Foundation for Dental Laboratory Technology (Foundation) is a non-profit 501(c)(3) organization that was incorporated in December 2008 with the help of its sister organizations, NADL and NBC. The purpose of the Foundation is to advance the profession of dental laboratory technology by developing educational curriculum and programs that will be relevant and accessible to dental technicians and other members of the dental team.

The Foundation has a number of resources beneficial to the entire dental laboratory technology profession, including:

- The ongoing grant and scholarship program (www.dentallabfoundation.org/scholarshipsgrants), providing financial support to interested candidates for advanced education and to various qualifying organizations.
- The NADL Learner Community (https://nadl.learnercommunity.com/) whereby the Foundation hosts 80+ on-demand courses free of charge.

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Overview of History, Regulation & Organization in Dental Laboratory Technology, continued.

- The NBC Approved CE Provider Directory Search (www.dentallabfoundation.org/cesearch) for interested candidates to have easy access to 1,500+ continuing education opportunities.

The Foundation's ability to offer programs to support education and workforce training are based solely on contributions from individuals and companies. For more information on the Foundation, please visit www.dentallabfoundation.org.

In addition to those obligations which are set by law, there are also groups and institutions which are concerned with the maintenance of proper ethical and technical relationships between the dentist and the dental technician. These include dental schools, schools of dental technology, dental societies and dental laboratory associations.

The role of the dental school goes beyond imparting scientific information and skill to the dental student; it extends to giving students an understanding of the many intangible factors that contribute to the making of a professional person. Included in these factors are the fundamentals of ethics, which govern the graduate's conduct in practice and the relationship that must be maintained with auxiliary personnel and commercial dental laboratories.

Dental technology schools have similar responsibilities in the educating and training of dental technicians. The Commission on Dental Accreditation (CODA) issues accreditation. The dental laboratory industry is represented in the accreditation process by having a representative on the Commission, membership on its Dental Technology Education Committee, and numerous consultants who take part in the onsite inspections required for program accreditation.

The roles of the American Dental Association and the National Association of Dental Laboratories and their affiliated state-level associations include the establishment and maintenance of professional ethics and standards of conduct for their members. They are also active in promoting programs of continuing education for their members. Further, these organizations are primary sources of legislative initiatives regarding the laws governing the practice of dentistry and dental technology.

OTHER STANDARDS

As with most professions and industries, there are both technicians and dental laboratory owners/managers who desire to achieve and be recognized for their advanced levels of professionalism.

CERTIFIED DENTAL LABORATORY

For the laboratory owner/manager, the NBC administers the Certified Dental Laboratory (CDL) program. The CDL program was created to promote and maintain a recognition that will assist dental laboratories in their continuing efforts to improve the quality and efficiency of the dental team's service to the public. This is accomplished by:

- Promoting a means for identifying dental laboratories which meet specific standards established for the certification program; and
- Encouraging dental laboratories to improve the quality and efficiency of their services and facilities.

To learn more about the CDL program, please visit http://nbccert.org/certificants/certified-dental-laboratory/cdl-application.cfm. For more information about any of the programs offered by the NBC, please contact the NBC Headquarters or refer to the NBC website at www.nbccert.org.

Examination Application Process

ELIGIBILITY FOR CDT CERTIFICATION EXAMINATIONS

All technicians applying for the CDT examinations must:

1. Have a working knowledge of the English language.
2. Be a high school graduate (or the documented equivalent).
3. Be of satisfactory ethical and legal standing as defined by the NBC's disciplinary standards.
4. Meet the technical prerequisites required for testing.

For technicians who ***are not*** current participants in the NBC's Recognized Graduate (RG) program, the technical prerequisites for testing may be met by documenting at least five (5) years of training and/or experience in dental laboratory technology. Time spent in on-the-job training (including formal apprenticeships and training courses) or studying in a dental technology education program may be counted towards this requirement.

- An exception is made for graduates of a two-year, CODA accredited dental technology education program. These candidates may apply for the CDT examinations after completion of two (2) years of practical experience in addition to (and not concurrent with) their course of study.

NBC has an additional pathway to becoming a CDT, whereby documented continuing education (CE) can substitute for education and/or experience. For a detailed breakdown, please visit the Career Path to Becoming a CDT document at www.nbccert.org/become-a-cdt or the CE Addendum on page 41.

For technicians who ***are*** current Recognized Graduates and have taken and passed their RG examination within the last four (4) years, the technical prerequisites for testing may be met in one of the following ways:

1. Recognized Graduates from two-year CODA accredited programs may sit for the CDT examinations without having to obtain additional education or on-the-job-experience, or
2. Recognized Graduates from non-CODA-accredited programs may sit for the CDT examinations after obtaining at least three (3) years of on-the-job experience.

An RG may keep his or her designation indefinitely, pending that they maintain the renewal requirements. However, the RG examination will only substitute for the Written CDT Comprehensive examination for a four (4) year period. After four years, the RG must complete all three examinations to earn certification.

To see the list of dental technology education programs currently approved by the Commission on Dental Accreditation, please visit their website at www.ada.org/en/coda.

APPLICATION PROCESS AND FEES

Eligibility to take the CDT examinations will be determined by the NBC upon receipt of a completed application and payment of the examination fees.

The fee for all three (3) required examinations is broken down as follows:

Written Comprehensive examination: $295
Written Specialty examination: $295
Practical examination: $685

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Examination Application Process, continued.

If any of the examinations are not passed on the first attempt, a new application and fee must be submitted before the candidate can retake the examination(s) in question.

Candidates who require their Practical Examination materials to be shipped outside of the United States must provide the shipping label(s) and corresponding tracking number(s) to NBC.

WRITTEN EXAMINATION REGISTRATION

In order to offer a greater number of testing locations and more flexible scheduling, NBC administers the CDT and RG written examinations utilizing computer-based testing with remote proctoring. The examinations are delivered through the computer-based testing platform, FastTest, and are remotely proctored by the third-party proctoring service, MonitorEDU. You will need the following to take the written examinations online:

1. Private workspace (a busy location, such as a library or café, will not suffice)
2. Desktop computer or laptop computer with built-in or external webcam, speakers, and microphone (tablets not supported)
3. Cellular smart phone that meets the requirements for MonitorEDU as outlined in the link below:
   - MonitorEDU requirements: www.nbccert.org?5q4nb2
4. Internet connection with at least 2 Mbps download and 2 Mbps upload speeds. Both the computer and cell phone will need to be connected to the Internet.
   - Candidates that do not know their Internet speed can run a speed test on their laptop and cell phone at their examination location prior to the examination at www.speedtest.net.
5. Power cords for desktop computer or laptop computer and cellular smart phone
6. Something to prop your cellular smart phone on (tripod, phone stand, household item, etc.)
7. Photographic identification (Driver's License or Passport)
8. A printed copy of your NBC candidate letter

You will be required to provide a view of the testing area and will be given specific instructions by the remote proctor regarding examination guidelines during the testing process. Cheating or suspected cheating of any sort, including any talking, giving or receiving any help, utilizing any outside materials (translation and/or dental dictionaries, reference materials, scrap paper, etc.), and copying or retaining any examination questions will result in the proctor immediately stopping your examination. Failure to follow these instructions will result in your grade being held and your examination fee being forfeited.

Once a candidate has been approved for online testing through NBC, they will receive a confirmation email with detailed instructions regarding accessing their examination. This email will be sent a few days prior to the start of the candidate's desired testing window.

Candidates must complete their examination within thirty (30) days once they have been approved by NBC to test. Should a candidate not complete their examination, they will forfeit all fees paid to NBC and must re-apply to complete the examination.

Because all communication for testing is electronic, candidates must maintain a valid email address at all times. Please ensure you have whitelisted the following domains: executiveoffice.org and fasttestweb.com. A Gmail email address is preferred, but not required.

PRACTICAL EXAMINATION REGISTRATION

REMOTE TESTING USING A THIRD PARTY PROCTOR

In order to offer a greater number of testing locations and more flexible scheduling, NBC launched a new pathway for the Practical examinations, whereby the Practical examinations can be taken remotely at a dental laboratory of the candidate's choice under the supervision of the third party proctoring service, MonitorEDU. Candidates will need the following to utilize the remote testing option for the Practical examination:

1. Private workbench where the candidate can perform the majority of work without interference.
2. Desktop computer or laptop with built-in or external webcam, speakers, and microphone (tablets not supported).
   - Laptop operating system of Windows 7 and higher or Mac OS 9 and higher. Most Linux are also supported.
   - Web browser must be recent version of Google Chrome (50+). Software is not supported on other internet browsers. Most recent version of Google Chrome can be downloaded at https://www.google.com/chrome/.
3. Cellular smart phone with camera with Android 4.1 or higher or iOS 8.0 or higher operating system.
4. Internet connection with at least 2 Mbps download and 2 Mbps upload speeds. Both the computer and cell phone will need to be connected to the Internet.
   - Candidates that do not know their Internet speed can run a speed test on their laptop and cell phone at their examination location prior to the examination at www.speedtest.net.
5. Power cords for desktop computer or laptop computer and cellular smart phone.
6. Something to prop your cellular smart phone on (tripod, phone stand, household item, etc.)

Additional rules will be provided to the candidate by NBC and by the examination Proctor.

Because all communication for testing is electronic, candidates must maintain a valid email address at all times. Please ensure you have whitelisted the following domain: executiveoffice.org.

Important Note: Candidates utilizing the Remote Practical Testing (RPT) option must include any articulator that was used to complete their work in the package back to NBC in order to appropriately have their work evaluated.

GROUP TESTING AT A PRE-SCHEDULED VOLUNTEER HOST SITE

For group testing Practical examinations at a pre-scheduled volunteer host site, examination dates are tentative until thirty (30) days prior to the examination. Please call the NBC to check on the expected status of examinations prior to making travel arrangements. The NBC reserves the right to cancel the examinations if there are not enough candidates registered. If this occurs, candidates are notified and rescheduled for the examination site listed as their second choice.

The examination dates are confirmed thirty (30) days prior to the examination date, after the registration deadline. Confirmation letters are mailed approximately four (4) weeks prior to the examination with molds, instructions, directions and examination site contact information.

If an examination is taking place on a military base, NBC will contact candidates in order to obtain the following information to ensure pre-approved base access: last name, first name, and middle initial (as shown on driver's license/ID card); date of birth; address; driver's license number;

Examination Application Process, continued.

driver's license state of issue; driver's license expiration date; and vehicle information – make, model, and license plate number. This information must be received at least 30 days prior to the examination date.

If you are not a U.S. citizen, you will also be required to provide the following information: place of birth; citizenship; passport number; company; and duty title. This information must be received at least 60 days prior to the examination date. If this information is not provided within the necessary time frame, NBC cannot guarantee base access and the candidate will be responsible for any reschedule fees.

EXAMINATION CANCELLATION/ RESCHEDULING POLICY

All candidates who have registered with the National Board for Certification in Dental Laboratory Technology (NBC) to take the CDT examinations are expected to attend their examinations as scheduled. In the unlikely event that a scheduling conflict or emergency situation arises, the NBC adheres to the following rescheduling and cancellation policies:

WRITTEN EXAMINATIONS

Candidates may reschedule their computer-based testing (CBT) examination to a different testing window than originally outlined within their application at no charge by notifying the NBC in writing prior to the published application deadline. Initial fees paid must be used within one year; otherwise, the candidate will forfeit all fees paid to NBC and must re-apply to complete the examination.

Candidates that fail to notify the NBC in writing prior to the published application deadline must get special permission from the NBC to reschedule to a different testing window. If allowed to do so, candidates will be charged a $75 administrative fee for each written examination, which must be paid prior to the candidate being rescheduled.

Once a candidate begins their session, should the candidate be unable to complete their examination due to being disconnected from the actual examination, by fault of FastTest, the third-party proctor, or NBC, the candidate will be able to reschedule at no charge. If a candidate is unable to complete their examination due being disconnected from the actual examination by fault of their own or a technical issue (i.e. loss of internet connection, or power on electronic device, etc.), the candidate must pay a fee of $50 before being allowed to reschedule.

Once a candidate begins their session, should the candidate's cellular device get disconnected from the third-party proctor for any reason for longer than 10 minutes, the examination will be terminated by the third-party proctor and results will be deemed invalid by NBC. Should this situation occur, candidates will need to contact NBC to reschedule to a different testing window and will be charged a $50 administrative fee. If for any reason the third-party proctor fails to terminate the examination and/or the candidate submits their examination under these circumstances, the examination results will be deemed invalid by NBC until further review by NBC's psychometrician and the NBC Board of Trustees.

If a candidate does not complete their written examination during their testing window, they will forfeit all payment, and may be rescheduled for another examination upon re-payment. No refund will be given.

PRACTICAL EXAMINATIONS

Candidates may reschedule practical examinations by notifying the NBC in writing prior to the published application deadline.

Candidates that fail to notify the NBC in writing prior to the published application deadline must get special permission from the NBC to reschedule to a different testing window and if allowed to do so, candidates will be charged a $225 administrative fee, which must be paid prior to the candidate being rescheduled.

Rescheduled examinations must occur within one year of the originally scheduled examination; otherwise candidates forfeit all related examination fees.

If a scheduled candidate does not show for the practical examination via group testing at a pre-scheduled volunteer host site, or does not complete their practical examination via remote testing using a third party proctor during their testing window, they will forfeit all payment, which includes application and examination fees, and may be rescheduled for another examination upon re-payment. No refund will be given.

EMERGENCY SITUATIONS

The NBC recognizes that there are sometimes unavoidable emergency situations which may interfere with a candidate's ability to attend a scheduled examination. In emergency situations you should notify the NBC in writing as outlined above including supporting documentation if available (hospital receipt, military orders, police report, etc.). Acceptable reasons for failing to appear for an examination include but are not limited to death or serious illness, accident, jury duty or military deployment.

If approved for an emergency situation, candidates are given a maximum period of one year within which to pass the examination and retain credit for the testing fee previously paid; and that if such deadline is not met, fees will be forfeited and new application and payment will be required before testing can be approved.

About the CDT Examinations

TYPES OF EXAMINATIONS

The goal of the CDT examinations is to measure competence or the mastery of a predetermined body of knowledge and the skills deemed to represent the successful, professional-level practice of dental laboratory technology. To become a CDT, a technician must demonstrate their knowledge and applied skills, from start to finish in their chosen specialty, in the manufacturing procedures common in contemporary practice.

Each of the CDT examinations must be passed successfully within a four (4) year period to become a CDT. The candidate must test in the same specialty area for both the Written Specialty examination and the Practical examination. The examinations may be taken in any order that the candidate desires.

THE WRITTEN COMPREHENSIVE EXAMINATION

Current Recognized Graduates that have taken and passed the RG examination within the last four (4) years may waive the Comprehensive examination requirement, but all other technicians must pass the Comprehensive examination before being recognized as a CDT. The Comprehensive examination is the measure for basic knowledge in history, ethics and the various specialties.

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About the CDT Examinations, continued.

The Comprehensive examination is a written multiple-choice test. There are 160 questions on the examination, covering basic dental laboratory knowledge: oral anatomy, tooth morphology, materials science, health & safety, fundamental theory and terminology across the specialties tested by the NBC (Ceramics, Complete Dentures, Crown & Bridge, Digital Workflow, Implants, Orthodontics and Partial Dentures). Each test item will consist of a question and four (4) possible answers, or an incomplete statement and four (4) possible ways to complete the statement. Of the four possible responses, the candidate must select the best answer.

As part of NBC's ongoing efforts to ensure that the questions included in its written examinations are contributing to the reliability of the examinations, NBC includes an additional ten field test questions embedded on each examination form. These ten questions are not graded, but instead are used to gather statistical data to allow NBC to determine if the field test questions may be used on future examinations. Using field test questions is a common practice in the certification and licensure testing industry.

Candidates have up to two and three-quarter (2 3/4) hours to complete the examination; they may use as much or as little of this time as they require.

Please note there will not be any breaks allowed during the examination, so it is recommended to use the restroom prior to starting the examination.

THE WRITTEN SPECIALTY EXAMINATION

The Written Specialty examination is a requirement for all CDT candidates. This examination tests a candidates' knowledge in his or her chosen specialty area.

The Written Specialty examination consists of eighty (80) multiple-choice questions. Each test item will consist of a question and four (4) possible answers, or an incomplete statement and four (4) possible ways to complete the statement. Of the four possible responses, the candidate must select the best answer.

As part of NBC's ongoing efforts to ensure that the questions included in its written examinations are contributing to the reliability of the examinations, NBC includes an additional ten field test questions embedded on each examination form. These ten questions are not graded, but instead are used to gather statistical data to allow NBC to determine if the field test questions may be used on future examinations. Using field test questions is a common practice in the certification and licensure testing industry.

Candidates have up to one and one-half (1 1/2) hours to complete the examination; they may use as much or as little of this time as they require.

Please note there will not be any breaks allowed during the examination, so it is recommended to use the restroom prior to starting the examination.

THE PRACTICAL EXAMINATION

The Practical examination is a requirement for all CDT candidates. This examination is a hands-on examination that requires candidates to demonstrate their competence over a range of procedures normally associated with their respective specialties. The Practical examination consists of preliminary procedures that must be performed in each candidates' own laboratory prior to the examination, plus specific steps which must be completed on the day of the examination.

REMOTE TESTING USING A THIRD PARTY PROCTOR

Practical examinations through the remote testing option will be offered in testing windows six times a year: January, March, May, July, September, and November. These windows will run from the first day of the month through the last day of the month. Application deadlines are the 20th of the month prior to the candidate's desired testing window.

NBC has a rental program for articulators for candidates' use. NBC will charge a $100.00 non-refundable rental fee for the articulator(s) and up to four mounting plates (if needed). Articulator(s) provided will either be fully adjustable or fixed guide depending on the candidate's chosen specialty. Candidates will be required to ship the articulator(s) back with their examination work. If the NBC articulator(s) is not returned by the candidate, the candidate will not receive their grades. Please note that NBC has a limited number of articulators available for rent, so their use cannot be guaranteed. Candidates will need to select the rental option on their application and articulators will be rented on a first-come, first serve basis. If an articulator is not available in the candidate's desired testing window, they will be notified and be offered the option of using their own articulator or changing to a different testing window.

Candidates must complete their Practical examination within 30 days once approved by NBC to test. Candidates can take their Practical examination on any day during their testing window as permitted by the laboratory; however, candidates must start their examination between 8:00 am - 7:00 pm EST. Once the application deadline of the candidate's desired testing window has passed, the NBC Headquarters will provide candidates with detailed instructions and molds from which the candidates must work via UPS. Depending on the candidate's location, it will take two to five business days to receive these materials. All candidates should receive their NBC materials prior to the first day of their approved testing window. Candidates will receive an email from NBC when materials have shipped.

Candidates are required to arrange for the use of any equipment that will be needed in order to complete the Practical examination. Candidates may bring, borrow and/or ship any such equipment and must work with the host representative. Think everything through in advance, and make sure to arrange any equipment needs, including on-site soldering capabilities, available air hand piece connections or borrowing equipment (like porcelain ovens).

It is recommended that candidates arrange all equipment at least one week prior to the anticipated examination date for permission to borrow any needed items. Do not expect the host representative to have items available upon arrival if prior arrangements have not been made. NBC and examination hosts cannot guarantee the availability or functionality of borrowed equipment or materials, although every effort will be made to assist candidates.

On the day of the examination, candidates must bring all preliminary work with them; verify their identity (Candidate Admittance Card and Photographic Identification); and set up their materials and equipment. The remote proctor will provide the candidate with instructions for the examination prior to starting. Candidates should be certain that they understand all instructions before proceeding with their examination. In addition to the general instructions, the proctor will also provide instructions related to the candidate's specialty as well as specific security instructions to be completed by the candidate during the examination.

Candidates have exactly five and one-quarter hours (5 1⁄4) to complete the examination. They may use as much or as little of this time as they require. Examination tasks may be completed in any order the candidate prefers, but it is important to remember that time management is crucial. The examination must be completed in one single sitting, at one physical location, and candidates must be on camera for the entire duration of the examination.

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About the CDT Examinations, continued.

NBC is not liable for any of the candidate's examination materials (examination work and/or articulators) being damaged or lost by the shipping carrier. This includes candidate materials being shipped back to NBC headquarters for grading with the prepaid UPS label provided, and the return of the candidate's materials after grading, should candidates choose to have their materials returned. If candidates want their materials returned to them, they are required to provide a return label and are responsible for obtaining insurance through the shipping carrier of their choice, if desired.

Important Note: Candidates utilizing the Remote Practical Testing (RPT) option must include any articulator that was used to complete their work in the package back to NBC in order to appropriately have their work evaluated.

Candidates are responsible for returning NBC materials in good condition to NBC upon completion of the NBC Practical Examination. If a candidate fails to complete the NBC Practical Examination, they are still responsible for returning the materials in good condition to NBC within seven business days. Damaged or unreturned molds will result in a fee of $150.00 and their Practical Examination grade will be withheld until either undamaged molds are returned or the $150.00 fee has been paid.

As part of the Practical examination application process for the remote testing option using a third party proctor, it is required that all candidates read the frequently asked questions at www.nbccert.org?qfc218.

GROUP TESTING AT A PRE-SCHEDULED VOLUNTEER HOST SITE

Approximately four (4) weeks prior to the examination date, the NBC Headquarters provides candidates with detailed instructions, molds from which the candidates must work and a Candidate Identification Number. At the same time, candidates also receive contact information for the host facility so that they may contact the host about any specific needs they may have, including site soldering capabilities, available air hand piece connections or borrowing equipment (like porcelain ovens). Whenever possible candidates should bring their own equipment and supplies to the examination site (including porcelain furnaces and pumps, if needed). If this is impossible, candidates must contact the host facility for permission to borrow the items needed. Neither the NBC nor the examination host site can guarantee borrowed equipment or materials. Every effort will be made to assist candidates, but there is no guarantee that the equipment will function correctly (or as candidates are accustomed to) nor that time-critical equipment will be available only to a specific candidate.

On the day of the examination, candidates should arrive at about 7:00 am for an examination that begins at 7:45 am. Candidates must bring all preliminary work with them; verify their identity; locate the work station that displays their Candidate Identification Number; and set up their materials and equipment. The NBC Lead Examiner will give candidates specific information and instructions that must be followed. These instructions will be simple, but are extremely important. Candidates should be certain that they understand all instructions before proceeding with their examination.

Candidates have exactly five and one-quarter hours (5 1/4) to complete the examination. They may use as much or as little of this time as they require. During this period, the NBC Examiners will carry out specified security measures, monitor candidate work, and begin the evaluation of the work done in the preliminary portion of the examination.

After 5 ¼ hours all candidates will be excused so that the NBC Examiners may perform their evaluations. This process may take several hours depending on the number of candidates and other factors, but typically ends by 7:00 p.m., at which time candidates will be asked to claim their

materials and equipment and depart the facility. It is strongly suggested that candidates who must make flight arrangements plan to depart well after 7:00 pm on examination day, or the morning after the examination.

Candidates are responsible for returning NBC materials in good condition to NBC upon completion of the NBC Practical Examination. If a candidate fails to complete the NBC Practical Examination, they are still responsible for returning the materials in good condition to NBC within seven business days. Damaged or unreturned molds will result in a fee of $150.00 and their Practical Examination grade will be withheld until either undamaged molds are returned or the $150.00 fee has been paid.

EXAMINATION REFERENCES

The NBC examinations were developed on the basis of practice in the field and are not based on a specific textbook or course of study. Therefore, many sources of information are appropriate for study and review. The references listed in this publication must not be regarded as the only useful publications. They should be considered only as representative sources of the types of information covered by the examination.

There are several useful study materials available for purchase through the NADL's online store at www.nadl.org. The study materials that can be found there include, but are not limited to, Visual Reference Guides (one per each specialty), an Examination Preparation Guide, and the U.S. Air Force Manuals (which includes Dental Laboratory Technology, Basic Sciences, Removable Prosthodontics, and Orthodontics (2005), Air Force Pamphlet 47-103, Volume One and Dental Laboratory Technology, Fixed and Special Prosthodontics (2005), Air Force Pamphlet 47-103, Volume Two).

The following references are in addition to those listed above. Most of these references can easily be purchased through Quintessence Publishing.

GENERAL REFERENCES

Hohmann, Arnold and Hielscher, Werner
Principles of Design and Fabrication in Prosthodontics
Chicago, Quintessence Publishing, 2016

Mosby's Dental Dictionary 3rd edition
St. Louis, Mosby Publishing, 2014

Nelson, DDS, MS, Stanley
Wheeler's Dental Anatomy, Physiology & Occlusion, 9th edition
St. Louis, Saunders Publishing, 2009

O'Brien, William
Dental Materials and their Selection, 4th edition
Chicago, Quintessence Publishing, 2009

United States Air Force Manuals 47-103
Volume One Basic Sciences, Removable Prosthodontics, and Orthodontics (2005), Volume Two Fixed and Special Prosthodontics (2005)

CERAMICS AND CROWN & BRIDGE

Chu, Stephen J.; Devigus, Alessandro; Paravina, Rade; and Mieleszko, Adam
Fundamentals of Color: Shade Matching and Communication in Esthetic Dentistry, 2nd edition
Chicago, Quintessence Publishing, 2011

Hämmerle, Christoph; Sailer, Irena; Thoma, Andrea; Hälg, Gianni; Suter, Ana; and Ramel, Christian
Dental Ceramics: Essential Aspects for Clinical Practice
Chicago, Quintessence Publishing, 2008

Kelly, J. Robert
Ceramics in Dentistry: Principles and Practice
Chicago, Quintessence Publishing, 2016

Naylor, W. Patrick
Intro to Metal-Ceramic Technology 2nd edition
Chicago, Quintessence Publishing, 2009

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About the CDT Examinations, continued.

COMPLETE DENTURES

MacEntee, Michael
The Complete Denture: A Clinical Pathway 2nd edition
Chicago, Quintessence Publishing, 1999

DIGITAL WORKFLOW

Due to the large amount of references for Digital Workflow, references are listed online at www.nbccert.org?w68d5h.

PARTIAL DENTURES

Carr, Alan
McCracken's Removable Partial Prosthodontics 13th edition
St. Louis, Mosby Publishing, 2015

ORTHODONTICS

McNamara Jr., Dr. James A.
Orthodontics and Dentofacial Orthopedics
Needham, MA Needham Press, 2001

Willison, CDT, Brian D. and Warunek, DDS, MS, Stephen P.
Practical Guide to Orthodontic Appliances
Tonawanda, NY, Great Lakes Orthodontics

IMPLANTS

Babbush, DDS, MScD, Charles A.; Hahn, DDS, Jack A.; Krauser, DMD, Jack T.; and Rosenlicht, DMD, Joel L.
Dental Implants: The Art and Science, 2nd Edition
Maryland Heights, MO, Saunders, 2011

Misch, DDS, MDS, Carl E.
Contemporary Implant Dentistry, 3rd edition
St. Louis, MO, Mosby, Inc., 2008

Misch, DDS, MDS, Carl E.
Dental Implant Prosthetics, 2nd edition
St. Louis, MO, Mosby, Inc., 2014

Shafie, Dr. Hamid
Clinical and Laboratory Manual of Implant Overdentures
St. Louis, MO, Blackwell Publishing Company, 2007

White, Graham E.
Osseointegrated Dental Technology
Quintessence Publishing, 1993

EXAMINATION PREPARATION & SAMPLE QUESTIONS

Preparation for all of the examinations leading to certification begins at the technician's first introduction to the dental laboratory. Ideally, it is a process of training, education, experience and continuing education. In publishing this manual, the NBC is not attempting to teach the competencies measured by its examinations, but rather to give technicians an understanding of examination content, structure and procedures so that they may approach the CDT examinations with the confidence that comes from knowing what to expect.

It is to each candidate's advantage to plan, study and practice for their examinations. Candidates are required to complete all parts of their examinations without assistance. Examination Proctors and NBC Examiners may not define terms or answer questions relating to examination content.

The Comprehensive examination is designed to measure the equivalent of a formal education in dental technology. Technicians who have on-the-job training or have learned their skills in other settings may find it useful to review certain parts of various publications to broaden and/or reinforce their understanding of dental technology. Technicians who have experience in narrowly defined specialty areas should use the preparation for this examination as an opportunity to broaden their theoretical knowledge to include fundamental concepts throughout the range of specialties offered in dental laboratories.

For the Comprehensive examination and the Written Specialty exams, candidates will be instructed to read the question carefully and select the best answer from the given answer choices.

Practical examination candidates should bring their preliminary work and should be prepared to complete all other portions of their examination on the day of their examination. The Practical examinations are designed to enable candidates to display their abilities by performing representative procedures that are normally associated with practice in their respective specialties. Day-to-day, hands-on experience is the primary preparation for this portion of the examination. In addition, candidates may be able to improve their comfort and performance levels by studying, planning and practicing the required steps prior to the examination date. To help reduce the stresses on examination day, candidates should ensure their readiness by bringing or arranging for their equipment and materials and by having a plan. It may also help candidates to realize that time management is important.

THE NBC EXAMINERS

The NBC Practical exams are evaluated by three (3) NBC Examiners. The NBC Examiners are selected by the NBC on the basis of their technical qualifications and backgrounds; their education, training, geographical location and employment represent a diversity of perspectives. They are specially trained and monitored by the NBC to achieve fair and uniform grading standards throughout the country. They score using strict objectivity and are instructed to make assessments on the basis of general acceptability rather than compliance with their personal preferences and standards. All NBC Examiners are volunteers and they are not paid for their services to the CDT program.

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About the CDT Examinations, continued.

THE GRADING SYSTEM

Grading is not a comparative process. All grades are based on a standard that the NBC believes to represent basic competence in dental technology and in each of the specialties represented.

Written examination passing scores are based upon the number of questions answered correctly – scores are not rounded or averaged. Minimum passing scores are subject to change by the NBC. All candidates will receive a copy of the current minimum passing scores with their examination confirmation letter prior to the examination.

For Practical exams, three (3) NBC Examiners will independently evaluate the work of each candidate. Examiners will use their professional judgment when grading examinations and may deduct points for any aspect of the examination which has been specified for grading when they find it to be aesthetically, anatomically or functionally incorrect. Grade sheets completed by the NBC Examiners are returned to the NBC Headquarters for compilation and determination of all candidates' grades. Because the scores assigned from each of the NBC Examiners are determined individually and because they are compiled for the determination of the final grades, no single NBC Examiner can determine the final grade for any candidate. No examination scores are available at the examination site.

With the instructions and the materials mailed to Practical examination candidates before the examination date or examination window, there is a list of the items to be graded. In determining final grades, each item is weighted according to what the NBC considers to be its criticality to the success of the completed appliance or restoration. Candidates will see their score for each item when they receive their grades. Further, each examination is divided into "subtests" representing the different types of skills that are being tested. Each candidate must achieve a passing grade in each of these "subtest" areas during the same examination administration to pass the Practical examination. Examination work from any section of the examination is not to be reused from previous examinations. NBC has the right to mark candidate work during grading to indicate the work has already been examined by NBC to ensure it is not reused.

NOTIFICATION OF GRADES

For the Written examinations, candidates will be mailed their grades within four (4) weeks after the examination. For the Practical examinations, candidates will be mailed their grades within six (6) weeks after the examination. By default, examination results are reported directly to each candidate by mail using the address provided on the application. Candidates can choose to receive their grades electronically by selecting this option on the application. If this option is selected, grades will only be emailed to the email address provided on the application. Examination results are otherwise held confidential. It is important that all candidates maintain a current mailing address and email address with NBC Headquarters. Candidates who have taken and passed all three examinations can expect to receive their new CDT welcome packet within six (6) weeks.

FAILING GRADES

A candidate who is unsuccessful in any of the CDT examinations must repeat that entire examination. Credit for passing the Comprehensive examination, the Written Specialty examination or the Practical examination may be retained for up to four (4) years. From the date of passing the first examination, the candidate has four (4) years to successfully pass the other required exams. Candidates may repeat examinations one or more times as needed.

If a candidate wishes to retake a written examination, they must wait at least 30 days before re-applying to take the written examination.

Examination Content & Tasks

WRITTEN EXAMINATIONS

The content on the Written Examinations is derived from the current NBC Job Task Outlines, which are listed below and can be found on the NBC website under Certification Program Standards at www.nbccert.org/about-national-board-certification/certification-standards.cfm.

The Comprehensive examination is a written multiple-choice test. There are 160 questions on the examination, covering basic dental laboratory knowledge: oral anatomy, tooth morphology, materials science, health & safety, fundamental theory and terminology across the specialties tested by the NBC (Ceramics, Complete Dentures, Crown & Bridge, Digital Workflow, Implants, Orthodontics and Partial Dentures).

The Written Specialty examination consists of eighty (80) multiple-choice questions.

GENERAL

A. Dental Laboratory Industry Regulations and Scope of Practice

(8 - 10% of general knowledge examination questions on the Comprehensive examination are from this domain)

1. Understanding Good Manufacturing Practices (GMPs)
2. Practice under Federal guidelines, OSHA, HIPAA, (e.g., labeling and disclosure)
3. Interpret prescription and assess case viability
4. Practice within the scope of state dental practice act

B. Anatomy

(17 - 19% of general knowledge examination questions on the Comprehensive examination are from this domain)

1. Identify occlusal requirements (e.g. bilateral posterior contacts, guidance, lingualized, anterior guidance)
2. Differentiate types of occlusion (canine guidance, group function, malocclusion)
3. Identify tooth morphology
4. Identify growth and development of dentition
5. Identify basic anatomic landmarks (e.g. soft tissue and hard tissue)
6. Identify muscles of mastication and facial expression
7. Identify facial and cranial skeletal anatomy
8. Identify tooth coding systems (e.g. Universal, International, and Palmer)

C. Terminology and Principles

(6 - 8% of general knowledge examination questions on the Comprehensive examination are from this domain)

1. Define dental terms using appropriate terminology
2. Identify function and types of dental devices (e.g., appliances, prostheses, restorations)
3. Weights and measure

D. Articulation

(6 - 8% of of general knowledge examination questions on the Comprehensive examination are from this domain)

1. Identify uses, types and components of articulators (e.g. non-, semi-, fully-adjustable)
2. Identify mounting procedures (e.g. face bows, etc.)
3. Identify bite registrations and/or jaw relation records

continued...

Examination Content & Tasks, continued.

E. Identify the types, processes, physical properties and handling characteristics of dental lab materials (e.g. Traditional or Digital)

(34 - 36% of general knowledge examination questions on the Comprehensive examination are from this domain)

1. Gypsum products
2. Waxes
3. Metals and alloys
4. Plastics, resins and composites
5. Separating materials
6. Fluxes and antifluxes
7. Alcohols (e.g., denatured and isopropyl)
8. Acids and neutralizers
9. Wetting agents
10. Wax Solvents
11. Abrasives and polishing agents
12. Laboratory gases
13. Investments (e.g. casting, pressing, soldering, refractory)
14. Impression materials
15. Ceramics (e.g., core and layering materials)
16. Cements

F. Impressions and Models (e.g., Traditional or Digital)

(10 - 12% of general knowledge examination questions on the Comprehensive examination are from this domain)

1. Evaluate and validate scans and impressions
2. Understand model fabrication
3. Recognize contraindications for impression techniques and materials
4. Identify techniques for handling types of impressions
5. Identify custom tray parameters

G. Safe Working Practices

(12 - 14% of general knowledge examination questions on the Comprehensive examination are from this domain)

1. Identify equipment maintenance and safety requirements and PPE (verification and validation)
2. Perform infection control procedures
3. Use and maintenance of Safety Data Sheet (SDS)
4. Identify hazardous waste disposal requirements (EPA)
5. Identification, handling and storage of hazardous materials (OSHA, Pictogram labeling)
6. Identify emergency preparedness (e.g., eye wash, fire blanket, first aid, fire extinguishers, exit plan)

CERAMICS

(16-18% of specialty specific examination questions on the Comprehensive examination are from this domain)

A. Perform Preliminary & Diagnostic Work Up

(9 - 11% of Ceramics examination questions are from this domain)

1. Manufacture diagnostic cast from preliminary impression or digital file for case design
2. Evaluate case for various types of restorations
3. Recognize contraindications for materials/case design
4. Perform diagnostic wax up (e.g., traditional, digital)

B. Manufacture Master Cast (Traditional or Digital)

(9 - 11% of Ceramics examination questions are from this domain)

1. Manufacture the master cast
2. Identify and evaluate preparation designs
3. Prepare the dies
4. Articulate casts

C. Manufacture Substructure for Ceramics

(18 - 20% of Ceramics examination questions are from this domain)

1. Design substructure for ceramics (e.g., traditional, digital)
2. Identify various manufacturing methods (e.g., traditional, digital)
3. Select compatible materials for manufacturing methods
4. Identify techniques for manufacturing methods
5. Evaluate restoration/substructure
6. Identify techniques for welding, pre and post ceramic

D. Ceramic Application & Contouring

(36 - 38% of Ceramics examination questions are from this domain)

1. Select ceramic materials according to prescription
2. Prepare surface for ceramic application
3. Apply opaque/liner
4. Layer ceramic material (e.g., traditional, digital)
5. Contour tooth morphology
6. Verify occlusion, contacts and excursions
7. Evaluate shade and characterization
8. Stain and glaze techniques
9. Finish and polish techniques
10. Evaluate the restoration for final acceptance

E. Selection and Application of Materials and Equipment for Ceramics

(21 - 23% of Ceramics examination questions are from this domain)

1. Identify properties and application of materials
2. Identify properties and applications of abrasives and polishing agents
3. Identify the use of instruments and equipment
4. Identify use of acids
5. Identify components of CAD/CAM systems
6. Identify properties and application of investment materials
7. Identify properties and application of ceramic materials
8. Identify application of sealers, die hardeners, spacers, and separating mediums

COMPLETE DENTURES

(16-18% of specialty specific examination questions on the Comprehensive examination are from this domain)

A. Create Master Casts from Stock and/or Custom Tray Impressions

(15 - 17% of Complete Dentures examination questions are from this domain)

1. Recognize contraindications for materials/case design
2. Construct master cast
3. Identify anatomical landmarks
4. Identify the requirements for a posterior palatal seal

B. Design and Manufacture Record Base Plate & Occlusal Rim

(5 - 7% of Complete Dentures examination questions are from this domain)

1. Identify the requirements for the manufacture of the base plate
2. Identify the requirements for the manufacture of the occlusal rim

C. Select and Arrange Artificial Teeth

(16 - 18% of Complete Dentures examination questions are from this domain)

1. Index and articulate casts
2. Select anterior and posterior denture teeth
3. Set-up anterior and posterior denture teeth
4. Create anatomical wax contours of the denture base

D. Process the Denture

(14 - 16% of Complete Dentures examination questions are from this domain)

1. Denture investment techniques
2. Mold preparation techniques
3. Processing techniques

E. Finish & Polish Complete Denture

(15 - 17% of Complete Dentures examination questions are from this domain)

1. Divest the denture
2. Remount the denture
3. Equilibrate
4. Construct a remount cast and index
5. Finish the denture
6. Polish the denture

F. Procedures for Repairs and Alterations for Complete Dentures

(13 - 15% of Complete Dentures examination questions are from this domain)

1. Rebase denture
2. Reline denture
3. Repair denture
4. Duplicate denture

continued...

Examination Content & Tasks, continued.

5. Manufacture immediate denture

G. Selection and Application of Materials and Equipment for Removable Prosthetics

(14 - 16% of Complete Dentures examination questions are from this domain)

1. Understand properties and application of flexible materials
2. Understand properties and application of waxes
3. Understand properties and application of resins
4. Understand safety protocols for the use and storage of hazardous materials
5. Identify the use of instruments and equipment (e.g., traditional, digital)

CROWN AND BRIDGE

(16-18% of specialty specific examination questions on the Comprehensive examination are from this domain)

A. Perform Preliminary & Diagnostic Work Up

(9 - 11% of Crown & Bridge examination questions are from this domain)

1. Manufacture diagnostic cast from preliminary impression or digital file for case design
2. Evaluate case for various types of restorations
3. Recognize contraindications for materials/case design
4. Perform diagnostic wax up (e.g., traditional, digital)

B. Manufacture Master Cast (Traditional or Digital)

(10 - 12% of Crown & Bridge examination questions are from this domain)

1. Manufacture the master cast
2. Identify and evaluate preparation designs
3. Prepare the dies
4. Articulate casts

C. Design and Manufacture Patterns (Traditional or Digital)

(17 - 19% of Crown & Bridge examination questions are from this domain)

1. Determine method for creating pattern
2. Identify design parameters for fixed restorations
3. Manufacture pattern for full contour restoration
4. Manufacture pattern for post & core
5. Manufacture pattern for substructures
6. Manufacture pattern for bridges
7. Manufacture pattern for inlays/onlay

D. Manufacture Restoration (Traditional or Digital)

(11 - 13% of Crown & Bridge examination questions are from this domain)

1. Sprue and invest pattern
2. Burnout invested mold
3. Cast/Press/Divest the restoration
4. Mill the restoration
5. Print the restoration

E. Finish and Polish the Restoration

(24 - 26% of Crown & Bridge examination questions are from this domain)

1. Inspect the restoration for defects
2. Remove the sprues
3. Seat restoration to die(s)
4. Finish the restoration
5. Refine contacts, occlusion and excursions
6. Prepare surface for porcelain
7. Polish the restoration
8. Evaluate the restoration for final acceptance
9. Apply soldering/welding techniques

F. Selection and Application of Materials and Equipment for Crown & Bridge

(21 - 23% of Crown & Bridge examination questions are from this domain)

1. Identify properties and application of pattern materials
2. Identify properties and applications of abrasives and polishing agents
3. Identify properties and application of acids
4. Identify properties and application of laboratory gases
5. Identify properties and application of restorative materials
6. Identify properties and application of CAD/CAM systems

7. Identify properties and application of refractory and investment materials
8. Identify properties and application of sealers, die hardeners, spacers, and separating mediums
9. Identify properties and application of instruments and equipment

ORTHODONTICS

(16-18% of specialty specific examination questions on the Comprehensive examination are from this domain)

A. Growth and Development

(11 - 13% of Orthodontics examination questions are from this domain)

1. Identify deciduous and permanent dentition
2. Identify the order of tooth eruption
3. Identify classes of occlusion (class I,II and III
4. Identify the types of malocclusion
5. Identify the types of tooth movement

B. Orthodontic Treatment & Appliances

(16 - 18% of Orthodontics examination questions are from this domain)

1. Differentiate between dental and skeletal treatments
2. Categorize types of appliances (passive, active, functional)
3. Recognize contraindications for materials/case design
4. Recommend orthodontic appliance design
5. Reset teeth in the cast for proper alignment
6. Identify therapy appliances and related federal regulatory requirements (e.g., orthodontic, splints, guards, deprogrammers, sleep apnea)
7. Identify and manufacture study casts

C. Wire Components and Auxiliaries

(21 - 23% of Orthodontics examination questions are from this domain)

1. Identify principles of bending wire
2. Identify and manufacture types of clasps
3. Identify functions and uses of clasps
4. Identify and manufacture springs
5. Identify and place screws
6. Identify and use coil spring (open & closed)
7. Identify and manufacture labial bows
8. Identify and use components (bands, crowns, etc.)
9. Embed components in acrylics
10. Understand application of wire bending tools

D. Acrylics, Composites, Plastics

(14 - 16% of Orthodontics examination questions are from this domain)

1. Utilize vacuum/pressure formed materials
2. Apply acrylic using the sprinkle technique
3. Apply acrylic using the dough pack technique (cold cured)
4. Identify and utilize light cured materials
5. Identify and utilize heat cured materials
6. Finish and polish appliances
7. Perform acrylic repair

E. Soldering and Welding

(14 - 16% of Orthodontics examination questions are from this domain)

1. Identify components of the soldering process (e.g., flux, solder, anti-flux)
2. Solder an appliance
3. Weld an appliance
4. Finishing and polishing of weld/solder work
5. Perform metal repair

F. Selection and Application of Materials and Equipment for Orthodontics

(16 - 18% of Orthodontics examination questions are from this domain)

1. Identify and utilize finishing instruments and equipment
2. Identify and utilize vacuum/pressure forming equipment
3. Identify properties and application of gypsum products
4. Understand application of separating mediums
5. Identify properties and application of waxes

continued...

Examination Content & Tasks, continued.

6. Understand applications of abrasives and polishing agents
7. Understand safety protocol for use and storage of hazardous materials
8. Identify the use of instruments and equipment unique to Orthodontics

PARTIAL DENTURES

(16-18% of specialty specific examination questions on the Comprehensive examination are from this domain)

A. Create Master Casts from Stock and/or Custom Tray Impressions

(6 - 8% of Partial Dentures examination questions are from this domain)

1. Construct master casts
2. Identify anatomical landmarks
3. Index casts
4. Articulate casts

B. Survey, Design and Preparation for Framework (Traditional or Digital)

(25 - 27% of Partial Dentures examination questions are from this domain)

1. Recognize contraindications for materials/case design
2. Identify major connectors (types and functions)
3. Identify minor connectors (types and functions)
4. Identify direct retainers (types and functions)
5. Identify indirect retainers
6. Determine location of rests
7. Determine types denture base retention
8. Identify types of attachments
9. Identify stress relievers and application
10. Identify techniques of surveying
11. Understand clasp selection
12. Understand application of blockout and relief
13. Perform bead line applications
14. Perform relief for acrylic retention
15. Understand classification of partially edentulous arches

C. Manufacture Refractory Cast

(3 - 5% of Partial Dentures examination questions are from this domain)

1. Duplicate master cast
2. Transfer design

D. Manufacture Partial Dentures Frameworks

(10 - 12% of Partial Dentures examination questions are from this domain)

1. Understand application of patterns (e.g., traditional, digital)
2. Understand requirements for spruing (e.g., traditional, digital)
3. Invest the pattern
4. Eliminate the pattern
5. Identify casting techniques
6. Divest casting
7. Finish and polish framework

E. Select and Arrange Artificial Teeth and Process

(9 - 11% of Partial Dentures examination questions are from this domain)

1. Select appropriate teeth
2. Set-up and arrange appropriate teeth
3. Create anatomical wax contours of the denture base
4. Identify processing equipment, materials & techniques
5. Deflask RPD

F. Finish and Polish Partial Denture Base

(9 - 11% of Partial Dentures examination questions are from this domain)

1. Identify equipment and materials
2. Identify the techniques and procedures
3. Divest the partial denture
4. Identify and correct processing errors
5. Finish the partial denture
6. Polish the partial denture

G. Procedures for Repairs and Alterations for Partial Dentures

(11 - 13% of Partial Dentures examination questions are from this domain)

1. Identify techniques for soldering
2. Identify techniques for welding
3. Finish and polish after alterations
4. Perform repairs and additions

5. Understand process for altered (split) cast technique
6. Reline a partial denture
7. Rebase a partial denture
8. Understand process for immediate partial denture

H. Selection and Application of Materials and Equipment

(18 - 20% of Partial Dentures examination questions are from this domain)

1. Identify properties and application of gypsum products
2. Identify properties and application of refractory and investment materials
3. Identify application of separating mediums
4. Identify properties and application of waxes
5. Identify properties and application of resins
6. Identify properties and application of alloys
7. Understand application of abrasives and polishing agents
8. Understand application of solder and flux materials
9. Understand safety protocol for the use and storage of hazardous materials
10. Understand application of flexible RPD materials
11. Understand application of CAD/CAM processes
12. Identify use of instruments and equipment (e.g., traditional, digital)

IMPLANTS

(16-18% of specialty specific examination questions on the Comprehensive examination are from this domain)

A. Perform Preliminary and Diagnostic Work Up

(20 - 22% of Implants examination questions are from this domain)

1. Differentiate between implant technologies
2. Categorize and identify case design options
3. Understand osseointegration and biocompatibility
4. Understand correlation between bone density and load bearing capability
5. Understand occlusal considerations for fixed or hybrid restorative options
6. Understand occlusal considerations for removable restorative options
7. Recognize contraindications for materials/case design
8. Plan and construct case diagnostics
9. Recommend final case design
10. Manufacture guide stent (radiographic/surgical)

B. Manufacture the Master Cast

(10 - 12% of Implants examination questions are from this domain)

1. Identify custom tray options and assess impression for acceptance
2. Identify, select, and assemble implant parts
3. Manufacture soft-tissue cast
4. Articulate casts
5. Design and construct verification jig

C. Manufacture Removable Prosthesis

(8 - 10% of Implants examination questions are from this domain)

1. Construct baseplate and occlusal rim
2. Identify and understand implant attachments
3. Manufacture implant retained denture

D. Manufacture Bar/Substructure

(15 - 17% of Implants examination questions are from this domain)

1. Identify and understand implant retained options
2. Identify and understand implant bar attachments
3. Identify and understand load bearing parameters
4. Identify and understand angle correction at fixture levels
5. Design and manufacture bar/substructure (e.g., traditional, digital)
6. Verify and fit bar/substructure
7. Correct discrepancies (e.g., weld, solder, remake)

continued...

Examination Content & Tasks, continued.

E. Manufacture Screw-Retained Fixed or Removable (Hybrid) Restoration

(16 - 18% of Implants examination questions are from this domain)

1. Identify and select components
2. Understand path of insertion and emergence profile
3. Design restoration (e.g., traditional, digital)
4. Manufacture restoration (e.g., traditional, digital)

F. Manufacture Abutment and Cement-Retained Restoration

(14 - 16% of Implants examination questions are from this domain)

1. Identify and select components
2. Understand path of insertion and emergence profile
3. Design restoration (e.g., traditional, digital)
4. Manufacture restoration (e.g., traditional, digital)

G. Selection and Application of Materials and Equipment

(9 - 11% of Implants examination questions are from this domain)

1. Select and operate manufacturing equipment
2. Identify the use of instruments
3. Understand federal regulatory requirements governing implant abutment design and manufacturing
4. Identify components of CAD/CAM systems

DIGITAL WORKFLOW

A. Data Aquisition
(21- 25% of written exam questions are from this domain)

1. Retrieve IO scans
2. Interpret prescriptions
3. Plan cases (e.g., dental, restorative, treatment)
4. Create digital workorders (e.g., all indications)
5. Scan physical impression and/or final models (e.g., bite registration, max/min, scan bodies, tissue)
6. Import intra-oral scans into CAD software (e.g., .stl files)
7. Perform scan quality checks
8. Clean up excess data from scans
9. Import/Export CAD files (e.g., outsource workflow)

B. Design Indications
(30- 34% of written exam questions are from this domain)

1. Model/Scan orientation
2. Establish a design protocol
3. Select materials
4. Navigate tooth and material libraries
5. Design models (e.g., milling, printing)
6. Design cosmetic smile
7. Design crowns and bridges
8. Design custom trays
9. Design complete dentures
10. Design RPDs
11. Design splints (e.g., night guards)
12. Design orthodontic appliances
13. Design surgical guides
14. Design implant abutments
15. Design all on X

C. Fabricating Restorations
(22 - 26% of written exam questions are from this domain)

1. Outsource design to appropriate manufacturers
2. Use CAM software to nest CAD restorations in mills
3. Use CAM software to nest CAD restorations in 3D printers
4. Perform CAM quality checks (e.g., milling strategy, print simulation)
5. Troubleshoot errors/problems (e.g., CAM error messaging during design or nesting)
6. Operate 3D printers (e.g., load/unload, calibrate/test)
7. Operate mills (e.g., load/unload, calibrate/test)
8. Post-process printed parts (e.g., final curing of printed material)
9. Post-process milled parts (e.g., blowing off dust, sintering, sprue removal)

10. Perform restoration quality checks (e.g., shade margins)

D. Maintaining Digital Equipment
(20 - 24% of written exam questions are from this domain)
1. Maintain PC (e.g., memory, graphics card, server archival)
2. Maintain software licenses (e.g., adding new software, renewing licenses)
3. Maintain regulatory standards (e.g., 510K, HIPAA, OSHA)
4. Perform electronic updates (e.g., software system)
5. Maintain CAD/CAM material files (e.g., DMEs, file library)
6. Maintain scanners (e.g., calibration, dust/debris removal)
7. Maintain mills (e.g., calibration, cleaning, tool changing)
8. Maintain 3D printers (e.g., calibration, cleaning, and changing trays)
9. Maintain sintering trays and furnaces (e.g., purging, clean/repair, replace heating elements)

PRACTICAL EXAMINATION

The Practical examination is a hands-on examination that requires a candidate to demonstrate their competence over a range of procedures normally associated with their chosen specialty. The Practical examination consists of preliminary procedures that must be performed in the candidate's own laboratory prior to examination date or window, plus specific steps which must be completed on the day of the examination.

The following breakdown gives a general outline of the Practical Examinations, including the preliminary work and onsite work.

CERAMICS

In the preliminary part of this test, candidates must fabricate models and individual removable dies according to the written instructions. Candidates must fabricate a single-unit and a three-unit substructure using the material of their choice. Substructures may be fabricated using traditional or digital methods and should be finished as specified in the written instructions.

At the test site, candidates are instructed to complete:
- a pattern for a veneer.
- a crown with porcelain butt margin.
- a three unit posterior bridge.

In the Ceramics test, candidates' grades are reported in in three parts: (1) the preliminary work; (2) the veneer and the crown; and (3) the three unit bridge.

COMPLETE DENTURES

In advance of the examination day, candidates must pour and mount casts on semi-adjustable articulators according to NBC instructions. They must then setup and process a complete set of maxillary and mandibular dentures. At the test site, they will:
- Make and finish a maxillary custom tray;
- Arrange 1 x 28 anatomical teeth in full balance, using the previously mounted casts;
- Wax and Contour the 1 x 28 setup;
- Make two denture repairs (one tooth replacement and one fracture repair);
- Make a maxillary stabilized baseplate and wax an occlusal rim on it.

continued...

Examination Content & Tasks, continued.

Candidates' grades are grouped into three sub-tests. One sub-test consists of the grades on the setup accomplished at the test site; another covers all of the preliminary procedures; and the third includes all other procedures on the examination.

CROWN & BRIDGE

In the preliminary part of this test, candidates must fabricate casts and individual removable dies and mount their casts on semi-adjustable articulators according to the written instructions. Candidates must fabricate a full contour three-unit metal bridge, which may be fabricated using traditional or digital methods, leaving it unfinished as specified in the written instructions.

At the test site, candidates will:

- wax a substructure.
- wax a full contour three-unit bridge.
- finish and polish the 3-unit bridge.

In the Crown & Bridge test, candidates' grades are reported in three parts: (1) the preliminary assignments; (2) the waxing assignments; and (3) the metal work.

DIGITAL WORKFLOW

In the preliminary portion of this test, candidates will be provided with two physical impressions and one digital impression and must fabricate models and individual removable dies in accordance with the written instructions. Candidates must fabricate two full contour zirconia crowns as specified in the written instructions.

At the test site, candidates will:

- import digital scans and scan models into CAD software
- design and fabricate a diagnostic bridge
- design and fabricate a full contour bridge with cutback
- design and fabricate two full contour crowns and a model from the provided file

Candidates can use the CAD software and milling and printing equipment of their choice to fabricate their restorations as long as they can meet the outlined grading criteria.

In the Digital Workflow test, candidates' grades are reported in four parts: (1) the preliminary assignments; (2) the diagnostic bridge; and (3) the full contour bridge with facial cutback; and (4) the single unit crowns and and model.

IMPLANTS

In the preliminary part of this test, candidates must pour casts, with appropriate soft tissue material, for both fixed and removable tasks according to the written instructions.

They will be required to construct a custom abutment which may be fabricated using traditional or digital methods. Candidates are also required to construct a baseplate over attachments and a verification jig to fit a multi-implant situation according to the written instructions.

At the test site, candidates are instructed to complete:

- a full contour wax up over a custom abutment.
- a matrix and a full contour wax up for a screw retained bridge.

- a stable wrap-around bar substructure to fit the provided stent.
- a 1 x 14 set up and wax up over attachments.

In the Implant test, candidates' grades are reported in three parts: (1) the preliminary assignments; (2) the screw retained and cement retained assignments; and (3) the bar design and the 1x14 set up and wax up assignments.

ORTHODONTICS

Prior to the examination, candidates in the Orthodontics specialty need only prepare their casts using the NBC test molds. All other assignments, the fabrication of three appliances, are done at the test site:

- One Hawley-type appliance
- One removable modified mandibular unilateral sagittal appliance
- One fixed mandibular lingual arch.

In the Orthodontics test, candidates' grades are reported in four parts: Each appliance represents one sub-test score.

PARTIAL DENTURES

The preliminary portion of the Partial Dentures examination requires candidates to pour several sets of casts, survey and design maxillary and mandibular frameworks, make refractory casts and make one chrome partial framework casting, unfinished. At the test site, candidates are instructed to:

- Survey and design, according to given specifications, one maxillary and one mandibular framework and prepare the casts for duplication;
- Weld or solder a wrought wire clasp to a framework that is brought to the test;
- Make wax patterns on two refractory casts fabricated in the preliminary portion of the examination;
- Finish and polish the casting that is brought to the test site.

In the Partial Dentures test, candidates' grades consist of four parts: (1) the preliminary work; (2) design; (3) waxing; and (4) metal work.

Materials and specific instructions for the examination will be mailed to candidates approximately four (4) weeks before the examination date. The candidate instruction booklet should be read by each candidate immediately upon receipt. All of the instructions should be followed carefully and completely.

The Practical examination candidate instruction booklet for each specialty is made up of four (4) parts:

1. A list of materials to bring to the examination site.
2. Instructions for pouring casts and other procedures which must be done in advance of the examination date.
3. A complete list of the procedures you will be asked to perform at the examination.
4. The standards that will be applied in evaluating the examination and the specific items that will be graded.

The NBC uses both the U.S. Postal Service and parcel delivery services. This makes it imperative that all candidates maintain a correct, current street address and mailing address on file with the NBC Headquarters. If a candidate relocates and fails to notify the NBC on a timely basis, resulting delays and/or the cost of new examination materials will be the candidate's responsibility.

Written Examination Appeal Policy & Procedures

PROCEDURAL APPEAL:

If during a written examination, you believe and can provide valid evidence that any circumstance, event, or procedure during the test had an adverse effect on your ability to successfully complete the written examination, or that you experienced unfair treatment, please let the Proctor know immediately ***before*** the end of the examination. The Proctor will log your initial comments and return them to NBC headquarters. A written complaint ***must*** be created during the test. Any comments regarding circumstances, events, or procedures that are not logged during the test may not be considered for appeal.

You must also notify NBC headquarters in ***writing*** of your request for a procedural appeal *within 48 hours (or two business days) after the test date*. Your written request for appeal should include a detailed description of the circumstance, event, or procedure that affected your performance on the examination.

The complaint and supporting information shall be reviewed to determine if unsatisfactory examination conditions did exist. Upon determination that a candidate did not have a "fair" opportunity to take the written examination under acceptable conditions, a solution will be developed with the candidate based on the particular situation. If it is determined that the conditions were acceptable, the candidate has the option to appeal to the Board of Trustees. Notice of the final decision for procedural appeals shall be provided in writing to the appellant within 3-4 weeks of submission. In the event that additional time is needed, the appellant will be notified in writing.

GRADE APPEAL:

Candidates who take the written examination receive a written report of the points awarded to each content area. If a candidate feels there has been an error in reporting the reading of the answer sheets, the candidate should submit a written request for a score review to verify accuracy in the calculation. If accurate, grades will not be altered.

You must notify NBC headquarters in writing of your request for a grade review *within two weeks after the receipt of examination results*. Notice of the final decision for grade appeals shall be provided in writing to the appellant within 2-3 weeks of submission.

QUESTION COMMENTS:

For all CDT written examinations, a candidate is allowed to make comments pertaining to the examination items. Candidate comments must be logged during the examination using the instructions provided by the Proctor.

Comments will only be accepted if completed during the examination. All comments are reviewed by subject matter experts, designated by the appropriate examination committee, throughout the year. While responses to comments are not provided back to the candidate, the comments will be used to help ensure the maintenance of the examinations.

All appeals are dealt with in a constructive, impartial, and timely manner. Submission, investigation and decision on appeals shall not result in any discriminatory actions against the appellant.

Please submit appeals to:
NBC Examination Appeals
325 John Knox Rd., Ste# L-103, Tallahassee, FL 32303
Fax: (850) 222-0053 Email: nbcexamappeals@nbccert.org

Updated May 2018

Practical Examination Appeal Policy & Procedures

PROCEDURAL APPEAL:

If during a practical examination, you believe and can provide valid evidence that any circumstance, event, or procedure (i.e. equipment failure) at the test site had an adverse effect on your ability to successfully complete the practical examination, or that you experienced unfair treatment or grading (group testing), please let the Lead Examiner or Remote Proctor know immediately ***before*** you leave the test site. The Lead Examiner or Remote Proctor will log your initial comments and return them to NBC headquarters. If you are uncomfortable speaking with the Lead Examiner or Remote Proctor, you should note your comments on your exit form. Either way, if you are aware of the circumstance, event, or procedure at the test site, a written complaint ***must*** be created at the test site. Any comments regarding known circumstances, events, or procedures at the test site that are not logged at the test site will not be considered for appeal.

You must also notify NBC headquarters in ***writing*** of your request for a procedural appeal *within two weeks of the test date*. Your written request for appeal should include a detailed description of the circumstance, event, or procedure that affected your performance on the examination.

If in the event a circumstance, event, or procedure does not become apparent until after the practical examination results are received rather than at the test site, NBC reserves the right to evaluate each situation on a case by case basis to determine whether or not the appeal will be considered.

The complaint and supporting information shall be reviewed to determine if unsatisfactory examination conditions did exist. Upon determination that a candidate did not have a "fair" opportunity to take the practical examination under acceptable conditions, a solution will be developed with the candidate based on the particular situation. If it is determined that the conditions were acceptable, the candidate has the option to appeal to the Board of Trustees. Notice of the final decision for procedural appeals shall be provided in writing to the appellant within 3-4 weeks of submission. In the event that additional time is needed, the appellant will be notified in writing.

GRADE APPEAL:

Candidates who take the practical examination receive a detailed written report of the percentage grades assigned to each evaluated aspect of their test materials. If a candidate feels there has been an error in reporting the percentage grade for one or more specific line items in the report, the candidate should submit a written request for a score review to verify accuracy in the calculation and reporting of the specific line item(s). If accurate, grades will not be altered but the candidate may appeal for a retake.

Consideration of grade appeals will NOT include requests for additional points, exceptions or revisions to the standards, or re-submission or re-evaluation of examination assignments that have been removed from the security of the test site.

You must notify NBC headquarters in writing of your request for a grade review *within two weeks after the receipt of examination results*. Notice of the final decision for grade appeals shall be provided in writing to the appellant within 2-3 weeks of submission.

All appeals are dealt with in a constructive, impartial, and timely manner. Submission, investigation and decision on appeals shall not result in any discriminatory actions against the appellant.

Please submit appeals to:
NBC Examination Appeals
325 John Knox Rd., Ste# L-103, Tallahassee, FL 32303
Fax: (850) 222-0053 Email: nbcexamappeals@nbccert.org

Updated April 2022

Certified Dental Technician Examinations Application

This application should be used for candidates applying to take all CDT examinations. This includes the Comprehensive examination, the Written Specialty examination and the Practical examination.

ELIGIBILITY FOR CDT CERTIFICATION EXAMINATIONS

All technicians applying for the CDT examinations must:

1. Have a working knowledge of the English language.
2. Be a high school graduate (or the documented equivalent).
3. Be of satisfactory ethical and legal standing as defined by the NBC's disciplinary standards.
4. Meet the technical prerequisites required for testing.

For technicians who ***are not*** current participants in the NBC's Recognized Graduate (RG) program, the technical prerequisites for testing may be met by documenting at least five (5) years of training and/or experience in dental technology. Time spent in on-the-job training (including formal apprenticeships and training courses) or studying in a dental technology education program may be counted towards this requirement.

- An exception is made for graduates of a two-year, CODA accredited dental technology education program. These candidates may apply for the CDT examinations after completion of two (2) years of practical experience in addition to (and not concurrent with) their course of study.

NBC has an additional pathway to becoming a CDT, whereby documented continuing education (CE) can substitute for education and/or experience. For a detailed breakdown, please visit the Career Path to Becoming a CDT document at www.nbccert.org/become-a-cdt or the CE Addendum on page 41.

For technicians who ***are*** current Recognized Graduates and have taken and passed their RG examination within the last four (4) years, the technical prerequisites for testing may be met in one of the following ways:

1. Recognized Graduates from two-year CODA accredited programs may sit for the CDT examinations without having to obtain additional education or on-the-job-experience, or
2. Recognized Graduates from non-CODA-accredited programs may sit for the CDT examinations after obtaining at least three (3) years of on-the-job experience.

An RG may keep their designation indefinitely, pending that they maintain the renewal requirements. However, the RG examination will only substitute for the Written CDT Comprehensive examination for a four (4) year period. After four years, the RG must complete all three examinations to earn certification.

APPLICATION INSTRUCTIONS

1. Type or print all answers clearly in ink.
2. Use extra sheets of paper if more space is needed for requested information.
3. Be honest, accurate and thorough in completing all sections of this application. The National Board for Certification in Dental Laboratory Technology (NBC) reserves the right to reject any application if the NBC has evidence that the applicant has made a false or misleading statement in the application or any supporting documents.
4. Payment is due with this application. The check or money order, payable to the National Board for Certification, must be in the amount of the application and examination fee for this candidate only. The NBC also accepts Visa, MasterCard and American Express.
5. The NBC Headquarters should receive all applications by the published deadline. Any late applications must be accompanied by the late fee and are subject to NBC approval. Applications are accepted in the order in which they are received, up to the capacity of each examination site.
6. Practical examinations via the group testing at a pre-scheduled volunteer host site are tentative until thirty (30) days prior to the examination. Please call the NBC to check on the expected status of exams prior to making travel arrangements. The NBC reserves the right to cancel the examinations if there are not enough candidates registered.
7. Once an examination has been confirmed, candidates are required to attend their selected examination date or examination window. Failure to do so may result in the forfeiture of all examination fees. Please read the CDT Examination Handbook for additional details about rescheduling and cancellations.

All CDT candidates should thoroughly read the CDT Examination Handbook for further details and information regarding certification and procedures.

Revised 01012027

Application for Certified Dental Technician
All CDT Examinations

For Office Use Only:	Date _____
Candidate# _____	Site# _____
Approved _____	Exam _____

I. APPLICANT INFORMATION

☐ Dr. ☐ Mr. ☐ Mrs. ☐ Ms. ☐ Miss ☐ Other _____

Name _____
(First) (Middle Initial) (Last)

(as shown on government issued ID)

Street Address _____

_____

City _____ State _____ Zip _____

Home or Cell Phone _____ Work Phone _____

Date of Birth _____ Email* _____

**Required*

Do you wish to receive your grades electronically? ☐ Yes ☐ No

(if yes, please note grades will only be released to the email address provided above on this application)

II. WRITTEN EXAMINATION SELECTION

(if you are not taking a Written examination, skip this section)

☐ Written Comprehensive Examination

- ☐ January Testing Window (Dec. 20th deadline)
- ☐ February Testing Window (Jan. 20th deadline)
- ☐ March Testing Window (Feb. 20th deadline)
- ☐ April Testing Window (March 20th deadline
- ☐ May Testing Window (April 20th deadline)
- ☐ June Testing Window (May 20th deadline)
- ☐ July Testing Window (June 20th deadline)
- ☐ August Testing Window (July 20th deadline)
- ☐ September Testing Window (Aug. 20th deadline)
- ☐ October Testing Window (Sept. 20th deadline)
- ☐ November Testing Window (Oct. 20th deadline)
- ☐ December Testing Window (Nov. 20th deadline)

continued...

All Certified Dental Technician Examinations Application, continued.

☐ Written Specialty Examination (choose a specialty below)

☐ Ceramics ☐ Complete Dentures ☐ Crown & Bridge ☐ Digital Workflow
☐ Implants ☐ Orthodontics ☐ Partial Dentures

☐ January Testing Window (Dec. 20th deadline)
☐ February Testing Window (Jan. 20th deadline)
☐ March Testing Window (Feb. 20th deadline)
☐ April Testing Window (March 20th deadline
☐ May Testing Window (April 20th deadline)
☐ June Testing Window (May 20th deadline)
☐ July Testing Window (June 20th deadline)
☐ August Testing Window (July 20th deadline)
☐ September Testing Window (Aug. 20th deadline)
☐ October Testing Window (Sept. 20th deadline)
☐ November Testing Window (Oct. 20th deadline)
☐ December Testing Window (Nov. 20th deadline)

Candidates must complete their examination within 30 days once they have been approved by NBC to test. Testing windows run from the first day of each month through the last day of each month. Registration deadlines are the 20th of the month prior to your desired testing window.

Applications may not be accepted after the deadline specified for an examination without NBC approval and a late fee of $25 per written examination.

III. PRACTICAL EXAMINATION SELECTION

(if you are not taking the Practical Examination, skip this section)

1. Please check the box next to the Practical examination specialty in which you will be testing.

☐ Ceramics ☐ Complete Dentures ☐ Crown & Bridge
☐ Digital Workflow ☐ Implants
☐ Orthodontics ☐ Partial Dentures

1a. If you are taking Digital Workflow, please complete the below information:

Design Software You Plan on Using: _____

Mill You Plan on Using: _____

Printer You Plan on Using: _____

2. Please select the method in which you plan to take your Practical examination.

☐ Remote Testing Using a Third Party Proctor ☐ Group Testing at a Pre-Scheduled Volunteer Host Site

2a. If you selected the remote testing using a third party proctor option, please:

1. Select your desired testing window:

☐ January Testing Window (Dec. 20th deadline)
☐ March Testing Window (Feb. 20th deadline)
☐ May Testing Window (April 20th deadline)
☐ July Testing Window (June 20th deadline)
☐ September Testing Window (Aug. 20th deadline)
☐ November Testing Window (Oct. 20th deadline)

2. Select one of the following options below:

☐ I will be providing my own articulator.
☐ I will be borrowing an articulator from NBC.

Note: NBC will charge a $100.00 non-refundable rental fee for the articulator(s) and up to four mounting plates (if needed).

3. Select whether or not you want your completed work returned to you after grading: ☐ Yes ☐ No

If yes, please include your return label from NBC to your desired address upon submission of this application.

4. Initial that you have read the frequently asked questions:

☐ I hereby verify that I have read the frequently asked questions at www.nbccert.org?qfc218 for the Practical examination remote testing option using a third party proctor. *Initial:*_____

2b. If you selected the group testing at a pre-scheduled volunteer host site option, please enter your preferred examination location/date (refer to www.nbccert.org for examination schedule).

City _____ Date _____

Examination applications are processed in the order in which they are received. If the examination location of your choice is full, the NBC will notify you and ask that you make another selection. Applications may not be accepted after the deadline specified for an examination without NBC approval and a late fee of $50. Check with the NBC prior to making your travel arrangements in case there is a cancellation.

IV. LANGUAGE REQUIREMENT

Do you read, speak and write the English language? ☐ Yes ☐ No

V. LEGAL REQUIREMENT

Have you been convicted of illegal practice of dentistry? ☐ Yes ☐ No

VI. FORMAL EDUCATION

1. Did you graduate from high school or the equivalent (such as earning a GED)? ☐ Yes ☐ No

2. List post-secondary studies and degree(s) earned, if any:

Name of Institution	Courses or Major	Degree Earned	Year of Graduation

VII. CONTINUING EDUCATION

Candidates that are interested in certification that do not have the required five (5) years' of experience and/or education, have the option to submit continuing education to substitute for experience.

1. Do you have the required five (5) years' of experience and/or education? ☐ Yes ☐ No
   (if yes, proceed to section VIII; if no, answer the question below)
2. Enclosed you will find the following completed documents:
   - ☐ Continuing Education Log (required – see Pg. 41)
   - ☐ Mentorship Attestation Signatures (if claiming mentorship – see Pg. 42)

continued...

All Certified Dental Technician Examinations Application, continued.

VIII. APPLICANT'S CURRENT EMPLOYMENT

1. Present Employer_____

2. Position Title:_____

☐ Owner ☐ Laboratory Manager ☐ Department Manager ☐ Technician

☐ Other_____

3. Business Address_____

_____

City _____ State _____ Zip _____

4. Date of Employment _____ ☐ Full-time ☐ Part-time (hrs. per week____)

5. Name and title of present supervisor _____

6. Brief description of the work you do _____

_____

_____

7. Are you responsible for supervising the performance of other technicians or production personnel on a daily basis? ☐ Yes ☐ No

7. Are you regularly or occasionally responsible for the instruction or training of other technicians?
☐ Yes ☐ No

IX. APPLICANT'S PREVIOUS EMPLOYMENT

The NBC requires that CDT applicants have at least five years of education and/or employment in dental technology, unless the applicant is a Recognized Graduate (see Eligibility for CDT Certification Examinations). You must supply such information as the NBC might need to verify compliance with this requirement — including the complete mailing addresses and names of employers and supervisors. This requirement is interpreted to mean five (5) years of full-time employment (at least 35 hours per week) and additional credit is not awarded for formal education concurrent with employment claimed towards this requirement.

1. Most Recent Employer _____

Business Address_____

_____

City _____ State _____ Zip _____

Telephone:_____

a. Dates employed:

from (month and year) _____ until (month and year) _____

☐ Full-time ☐ Part-time (hrs. per week____)

b. Job title and brief description of duties performed _____

_____

_____

_____

c. Name of Supervisor_____

2. Employment prior to position listed above _____

Business Address _____

_____

City _____ State _____ Zip _____

Telephone: _____

a. Dates employed:

from (month and year) _____ until (month and year) _____

☐ Full-time ☐ Part-time (hrs. per week____)

b. Job title and brief description of duties performed _____

_____

_____

c. Name of Supervisor _____

Please use additional pages if needed to report at least five years of dental technology training, education and experience.

X. APPLICANT'S AFFIDAVIT

I have read and understand the CDT examination handbook and application. I agree to submit to testing for certification according to the requirements and procedures specified by the NBC.

I agree to indemnify and hold harmless the NBC, its Trustees, officers, employees and agents, and the institution where the CDT examination is administered from any and all liability for injury or damages suffered by me, or which I might cause to others, during the course of taking my examination.

I agree to abide by the laws and regulations which govern the practice of dentistry and the practice of providing dental laboratory technology services, restorations and services to the dental profession.

I affirm that all statements made by me in this application are true and correct to the best of my knowledge. I understand that any misrepresentation of facts made in this application for testing or in future applications to the NBC for certification testing or renewal, or in my personal claim to certification (use of the CDT designation and logo), may be found cause for suspension or denial of certification or eligibility for certification testing.

I understand that NBC operates its examinations with specific procedures that ensure the integrity of the examination process. I understand that if I fail to follow NBC's policies and procedures that my examination results will not be valid and I would be required to retest at my own expense.

Any application submitted hereafter will be considered an addendum to this application.

I understand that for the NBC Practical Examination, NBC will ship me materials for the examination. I understand that it is my responsibility as the candidate to return these materials in good condition to NBC upon the completion of the NBC Practical Examination. I understand that if I fail to complete the NBC Practical Examination, I am still responsible for returning these materials in good condition to NBC within seven business days. I understand that damaged or unreturned molds will result in a fee of $150.00 and my examination grade will be withheld until either undamaged molds are returned or the $150.00 fee has been paid.

I hereby verify that I have ____ years of education and/or employment in dental laboratory technology.

Applicant's Signature _____ Date _____

continued...

XI. PAYMENT

☐ **Written Comprehensive Examination — $295**

☐ **Written Specialty Examination — $295**

☐ **Practical Examination Remote Testing — $685**

☐ **Articulator Rental — $100**

☐ **Practical Examination Group Testing — $685** **Total $_____**

Any applications submitted after the published deadline must be accompanied by a late fee of $100 ($25 per written examination and $50 for the Practical examination) and are subject to NBC approval.

Candidates who require their Practical Examination materials to be shipped outside of the United States must provide the shipping label(s) and corresponding tracking number(s) to NBC.

☐ Enclosed is Check #_____ in the amount of $_____ payable to the NBC.

☐ Please charge my credit card ☐ VISA ☐ MC ☐ AMEX Amount $_____

Credit Card #_____ Exp._____ CCV Code* _____

* Credit Card Verification (CCV Code): This is the 3-digit number that appears on the reverse side of your credit card. For American Express cards only, this is the 4-digit number on the front of your card.

Cardholder Name_____ Signature _____

Billing Address _____

Phone_____

The fees published in this application are subject to change. For more information about testing & other programs please visit our website at www.nbccert.org.

If you have not signed your application or enclosed the required fees, your application will not be processed.

Please send completed application and fee to:
NBC
325 John Knox Road, #L103
Tallahassee, FL 32303
(850) 222-0053 Fax

Continuing Education Addendum

(VII. CONTINUING EDUCATION CONTINUED)

Candidates that are interested in certification that do not have the required five (5) years' of experience and/or education, will have the option to submit continuing education to substitute for experience. 75 hours of continuing education will substitute for one year of experience.

1) To sit for an examination a candidate must have:

- At least four years of experience and 75 hours of CE
- At least three years of experience and 150 hours of CE
- At least two years of experience and 225 hours of CE

2) Continuing Education Breakdown - This continuing education log must be included with the examination application to document continuing education in lieu of experience. Candidates will be required to report the titles, dates, locations, and speakers of their continuing education courses, and total the full amount for the application to be accepted. Additionally, candidates will be asked to link their areas of study back to the NBC Job Task Outlines. A sample row has been completed as an example.

IMPORTANT NOTES:

- The continuing education hours can be a combination of different types of training, including, but not limited to, live conferences, workshops, seminars, or other in-person meetings, online training, webinars, in-lab training programs, mentorship, or self-study.
- A maximum of 1/3 of all hours can be claimed as self-study (this amounts to 25 hours for each 75 hours reported).
- A maximum of 1/3 of all hours can be claimed through a mentorship program (this amounts to 25 hours for each 75 hours reported). Mentorship is only permitted if managed by a certified individual; CDT, DMD, DDS, etc.
- A minimum of 1/3 of all hours must be approved by one of the following: NBC, ADA-CERP, or AGD (this amounts to 25 hours for each 75 hours reported). The NBC Director of Certification may use discretion on allowing other continuing education credits approved by alternative organizations.

Please use the continuing education log example to assist in filling out the CE log on the next page. For additional documentation of CE, please make as many copies of the page as needed.

Continuing Education Addendum, continued.

NBC CONTINUING EDUCATION LOG

*Type	Title	Date	Location	**Speaker/ Mentor	Approved By	***Job Task Outline	# Hours
☑ CE ☐ Self-Study ☐ Mentorship	FDA, Implants/ Abutments and Audits	9/25/15	Destin, FL	Bennett Napier, CAE	☑ NBC ☐ ADA-CERP ☐ AGD ☐ Not Approved	Implants - G3	1
☐ CE ☐ Self-Study ☐ Mentorship					☐ NBC ☐ ADA-CERP ☐ AGD ☐ Not Approved		
☐ CE ☐ Self-Study ☐ Mentorship					☐ NBC ☐ ADA-CERP ☐ AGD ☐ Not Approved		
☐ CE ☐ Self-Study ☐ Mentorship					☐ NBC ☐ ADA-CERP ☐ AGD ☐ Not Approved		
☐ CE ☐ Self-Study ☐ Mentorship					☐ NBC ☐ ADA-CERP ☐ AGD ☐ Not Approved		
☐ CE ☐ Self-Study ☐ Mentorship					☐ NBC ☐ ADA-CERP ☐ AGD ☐ Not Approved		
☐ CE ☐ Self-Study ☐ Mentorship					☐ NBC ☐ ADA-CERP ☐ AGD ☐ Not Approved		
☐ CE ☐ Self-Study ☐ Mentorship					☐ NBC ☐ ADA-CERP ☐ AGD ☐ Not Approved		
☐ CE ☐ Self-Study ☐ Mentorship					☐ NBC ☐ ADA-CERP ☐ AGD ☐ Not Approved		
☐ CE ☐ Self-Study ☐ Mentorship					☐ NBC ☐ ADA-CERP ☐ AGD ☐ Not Approved		

Total CE:	
Total Self Study:	
Total Mentorship:	
Subtotal:	

*CE includes live conferences, workshops, seminars, or other in-person meetings, online training, webinars, in-lab training programs, etc.

**If claiming mentorship, please fill out the mentorship attesting signatures on the following page.

***To link your area of study back to the NBC Job Task Outlines, please visit pages 21-29 in the CDT Handbook or www.nbccert.org/about-national-board-certification/certification-standards.cfm.

You may request an electronic copy of the CE log by emailing certification@nbccert.org.

MENTORSHIP ATTESTING SIGNATURES

(Only complete this affidavit if you are claiming mentorship on your CE log)

As a CDT applicant claiming continuing education through mentorship, you must obtain an attesting signature(s) from your mentor(s).

To the attesting persons:

Your signature below testifies that the mentorship claimed by the applicant in the Continuing Education Log is true and correct to the best of your knowledge. Mentorship is only permitted if managed by a certified individual; CDT, DMD, DDS, etc. Your signature below also testifies that as the applicant's claimed mentor, you meet the designation requirements.

Signature _____

Name _____
(please print)
Credential: ☐ CDT ☐ DMD ☐ DDS ☐ Other: _____

Date _____

Mailing address _____

_____

Telephone _____

Fax _____

Email _____

Signature _____

Name _____
(please print)
Credential: ☐ CDT ☐ DMD ☐ DDS ☐ Other: _____

Date _____

Mailing address _____

_____

Telephone _____

Fax _____

Email _____

NOTES

CHECKLIST

HAVE YOU:

- ❑ read this handbook in its ENTIRETY?
- ❑ COMPLETELY filled out the application(s)?
- ❑ SIGNED the application affidavit?
- ❑ enclosed the appropriate FEE(S)?
- ❑ kept a COPY of the entire application for your records?

WE RECOMMEND THAT YOU KEEP THIS CANDIDATE HANDBOOK FOR REFERENCE THROUGHOUT THE ENTIRE APPLICATION AND EXAMINATION PROCESS.

This handbook contains information about how to become nationally certified in dental laboratory technology. To avoid problems in processing your application, it is important that you follow the guidelines outlined in this handbook and that you comply with the required deadlines. If you have questions about the policies, procedures or processing of your certification after reading this handbook, please go to our website at www.nbccert.org, or email us at certification@nbccert.org. Additional copies of this handbook may be obtained by emailing certification@nbccert.org, by calling (800) 684-5310 or by sending a written request to the NBC at the address below.

NBC
National Board for Certification in
Dental Laboratory Technology

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