



American Academy of Cosmetic Dentistry® ACCREDITATION IN COSMETIC DENTISTRY

The Testing Protocol for Laboratory Technicians

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Welcome - Introduction

What is American Academy of Cosmetic Dentistry Accreditation?

In 1984 the American Academy of Cosmetic Dentistry (AACD) was formed by a group of forward-thinking individuals, dedicated to continuing education in the rapidly evolving field of cosmetic dentistry. Within a short period of time, the AACD developed a credentialing process for cosmetic dentistry designated "Accreditation."

As techniques and materials have improved, the Accreditation examination has continued to set a standard for excellence in cosmetic dentistry. Accreditation represents the acknowledgment of a dentist's or laboratory technician's excellence in cosmetic dentistry. The American Board of Cosmetic Dentistry® (ABCD) administers Accreditation and the examination process.

Purpose

Accreditation serves to set standards for excellence in cosmetic dentistry. Achieving Accredited status from the AACD requires dedication to continuing education, careful adherence to the protocols and a resolve to produce exceptional dentistry.

Benefits

The Accreditation program of the Academy benefits you and your patients. The process encourages further education, interaction with like-minded colleagues and opportunity for professional growth. Prospective patients who call or interface with the Academy on the website are informed that Accredited Members have passed a rigorous examination that demonstrates enhanced skill in cosmetic dentistry. Accredited laboratory technicians are in greater demand for their services and are able to meet dentists who share the same philosophy and goals. You will become a better dentist or laboratory technician and patients will benefit from the higher quality of service and treatment that you will be able to provide.

How to Become Accredited/The Examination Process

Accreditation is a three-part process, consisting of a written examination, clinical case submissions for examination and an oral examination. Each part must be completed in sequence. The laboratory technician has flexibility to proceed at a pace that works best for himself/herself as long as the process is completed by the fifth annual scientific session following passing the written examination.

Written Examination

The Accreditation Written Examination tests the laboratory technician's foundational knowledge in cosmetic dentistry. Laboratory technicians who are knowledgeable in all phases of cosmetic dentistry are expected to pass the examination. Failure to pass the written examination indicates that a laboratory technician would likely benefit from further education in cosmetic dentistry prior to attempting the submission of clinical cases. The written examination is administered at the annual scientific session and at additional dates as directed by the ABCD. The annual scientific session is held in the spring at different locations, and is publicized well in advance of the date.

Eligibility for the Written Examination

To be eligible to take the written examination at the next annual scientific session, the following requirements must be met:

- Application completed and fee paid for the written examination

Application and Fees

Applications for the written examination are made through the AACD Executive Office. An application will be mailed upon request, or is available on the AACD website at *www.aacd.com*. A non-refundable written examination fee of \$400 member / \$600 non-member (USD) must accompany the application. If you elect to take the written examination at a testing center during the allotted time frame, the non-refundable application fee is \$600 (USD). In addition, testing center fees will be applied.

Postponement

If the written examination is postponed **in writing**, an administrative fee of \$125 (USD) will be required to reschedule. Failure to appear for a scheduled written examination will result in forfeiture of the entire fee.

Content

Foundational knowledge in cosmetic dentistry includes all disciplines of dentistry with an emphasis on those subjects with a special relevance to aesthetics. Subjects may include, but are not limited to:

- Smile design
- Adhesion
- Materials
- Occlusion
- Porcelain/resin restorations
- Posterior aesthetic restorations
- Bridges and pontics
- Implants
- Color/shade
- Whitening
- Periodontics
- Orthodontics
- Laboratory communication
- Photography

Some questions will be included that are based on scenarios of clinical cases concerned with cosmetic dentistry.

Type of Examination/Grading

The written examination is a multiple-choice examination. Each question is referenced to a textbook or referred source to ensure its validity. A reference library and sample written examination are available on the AACD website at *www.aacd.com*.

In order to have credibility with the dental community, all steps are followed to ensure that the written examination complies with the established rules of testing. A representative of a testing agency is present when the written examination is compiled. The educational testing and measurement consultant is also responsible for grading the written examination and presents the results to the ABCD. For more information contact the AACD Credentialing Department at 800.543-9220.

Sample Examination

Some questions will be taken from the written examination each year and will be released in the form of sample examinations. The sample examinations may be purchased on the AACD website at *www.aacd.com*.

Time Limit

There is a five year time limit to complete the entire Accreditation process. The clinical case portion of the Accreditation process must be completed by the expiration of the candidate's written examination. The oral examination must be successfully completed by the oral examination session immediately following the expiration of the candidate's written examination. In order to be fair to all individuals pursuing Accreditation in the AACD, the ABCD has established policy that no waivers or time extensions will be granted within the Accreditation process.

Clinical Case Submissions/Examination

The Accreditation Clinical Case Examinations are the core of the Accreditation examination process. Clinical case submissions allow the laboratory technician to demonstrate diagnostic skills and clinical excellence. Three specific types of cosmetic dental treatments have been chosen to cover a variety of techniques.

Prerequisites for Submission of Clinical Cases

To submit clinical cases, the following requirements must be met:

- Laboratory technician must have passed the written examination
- Laboratory technician must have attended two workshops: the Accreditation Workshop and the Criteria Workshop. These workshops are offered at the annual scientific session, online and at additional dates as directed by the ABCD. Verification of attendance must be on record with the AACD Credentialing Department.
- Attended at least half of the annual scientific sessions since passing the written examination.
- For individuals passing the written exam at a testing center, you can submit cases as long as you attended the annual scientific session the calendar year you pass the testing center written exam. In addition, workshop requirements must be fulfilled as noted above. Meeting attendance requirements will be monitored for all members in the process from the time they pass the written.
- Submission form completed and fee paid for each clinical case submitted.
- Any outstanding "ethical issues" with the AACD must be resolved prior to clinical case submission.

The Three Required Case Types

Three case types must be successfully completed. These cases will allow the laboratory technician to demonstrate excellence in a range of disciplines that cover important aspects of cosmetic dentistry. All three cases will be submitted as "Technique" cases.

I. Six or more indirect restorations, treating upper incisors and canines

II. One or two indirect restorations (treating upper incisors*; adjacent teeth must have no indirect restorations) *Edentulous space and or implant does not qualify as treating upper incisors.

III. Tooth replacement (options: bridge or implant)

A. Bridge: at least one pontic must be replacing an upper incisor and/or canine

B. Implant: must involve placement of an implant root form into an upper anterior edentulous space. The edentulous space is defined as being devoid of any root structure. (Pre-op x-rays and photographic views must show edentulous space or

failing tooth *prior* to implant placement.) Replacement of a crown on an existing implant or the use of Pink Porcelain/Composite is not acceptable for this case type.

All cases will be submitted as "Technique" cases (bench photography) along with all the 12 before and 12 after shots described in the *Photographic Documentation and Evaluation in Cosmetic Dentistry – A Guide to Accreditation Photography*.

NOTE: ALL required teeth treated must be upper anterior teeth and permanent.

When additional teeth are treated they are judged using the same criteria as the required teeth. Only one case type per patient may be used.

Submission Procedure

A total of three clinical case submissions must be examined and passed to complete the second part of the Accreditation process. From one to three clinical cases may be submitted at a time by mail, however, only one of each case type may be submitted at a time for examination.

Clinical case submissions must be completed and received **on or prior to** the deadline date and must include all of the required materials for the case to be examined at the next available examination session.

Be sure to follow the protocol exactly. Check and double check that you have included all the required materials. All materials submitted become property of the AACD.

1. Clinical Case Submission Form

The laboratory technician will complete the online clinical case submission form after passing the written examination and all other prerequisites have been completed.

2. Fee

The non-refundable submission fee is \$250 member / \$350 non-member (USD) per clinical case submitted.

3. AACD Photographic Release Form

The current form is to be submitted with each clinical case and signed by the dentist, lab technician and patient. The form grants permission to the AACD for use of the images submitted for Accreditation. Cases suitable for submission for Accreditation must be submitted without restrictions or limitations placed on the AACD photographic release form. The photo release form is available online within the Accreditation area under "Additional Forms and Resources" located on the left-hand side.

4. Photographic Documentation

The *Photographic Documentation and Evaluation in Cosmetic Dentistry - A Guide to Accreditation Photography* represents and illustrates the specific photographic documentation required for the clinical case submission portion of the AACD Accreditation Examination.

The AACD will not define specific equipment requirements, however, the AACD has outlined criteria to produce quality images. The protocol and equipment recommendations are expected to evolve with advances in technology.

Image Criteria

Digital image quality is contingent upon six distinct factors related to the image itself. Proper set up and use of your camera and adjunctive photographic equipment maximizes results.

- **Correct color**
- **Correct exposure**
- **Depth of field**
- **Good tonal range**
- **Image sharpness**
- **All images need to be captured in landscape orientation**

Capture Equipment Criteria

Professional grade digital cameras are recommended

An example of a professional grade camera would be a Single Lens Reflex Digital Camera with a macro lens capable of manual focus and selectable magnification ratio with a lens mounted flash. The digital camera should be capable of capturing at least five megapixels and be able to capture images as RAW files.

Many consumer grade digital cameras capture images that are visibly degraded due to small capture chips and internal firmware. They may also lack the ability to control exposure and depth of field during macro image capture.

Camera Set Up (Variables are set in the camera menus)

1. **Set internal clock to correct time**
2. **Capture images as RAW files (Required)**
Different camera manufactures use different names for this type of file.
3. **Select Lens Magnification Ratio** as shown in the *AACD Photographic Documentation and Evaluation in Cosmetic Dentistry - A Guide to Accreditation Photography*. Make any necessary magnification conversions to produce an image magnification comparable to the images illustrated in the photography guide. Typically a conversion is necessary between the ratios dictated for a film camera to produce the same result with a digital camera. Once the ratio has been determined, that ratio or magnification should be consistently maintained throughout the before and after photographic series. The lens magnification conversion that is needed for most digital SLR cameras is 1.5 (Cameras with sensor size of 14 mm x 9.3 mm).
 1. Magnification of (1.5) x (the setting on the lens barrel)
 2. 1:2 views set the lens on a digital camera to 1:3
 3. 1:1 views set the lens on a digital camera to 1:1.5
4. **Maximize depth of field using high f-stops (minimized aperture)**

Managing Images on a Computer

1. **Set internal clock to correct time**
2. **Transfer the RAW camera image files** from the camera directly to your computer hard drive.
3. **Create a compressed JPEG image file by copying the RAW image file**

Choose a software tool to make compressed JPEG files of all the RAW files. Either use software from the camera manufacturer or an after-market software tool of your own choice. (i.e. PhotoShop, ThumbsPlus, acdsee)

- A. Open the RAW image with the software. Go to: *file> save as> JPEG compressed> Quality> Maximum* (100%, best quality, Minimum Compression). Image quality must be more than adequate to judge the dentistry; free of saliva and debris, properly exposed, framed and focused. (See the *Photographic Documentation and Evaluation in Cosmetic Dentistry -A Guide to Accreditation Photography* for additional recommendations.)
- B. Some cameras have settings that create both a RAW and a high-quality JPEG at the same time. Make sure the camera is set to the highest JPEG setting when using this feature.

NOTE: Scanned images will not be accepted for submission

(Instructions are a guide and not intended as a substitute for continuing education in digital photography and use of computer hardware and software.)

Image Editing

No global, focal, fixed point or spot editing is allowed

Global, focal, fixed point or spot editing is strictly prohibited and considered fraudulent. This means even innocent changes such as cleaning up dust spots, cropping, rotating, resizing or eliminating red eye is not allowed.

Case Submission

Laboratory technicians pursuing Accreditation may submit all clinical cases online through the credentialing module. The module is located in your MyAACD account, under AACD Credentialing on the lower right-hand side. All materials become property of the AACD.

Passed Cases

In preparation for oral examinations, an external flash drive loaded with your passed RAW images must be submitted. The external drive must be loaded with preoperative folders for each case type, and postoperative folders for each case type. The folders must also contain required radiographic documentation and any required technique slides. All required Accreditation images must be loaded onto this flash drive.

Please review both pre-op and post-op images to ensure all views are correct. Incomplete submissions will not be examined.

Accreditation Examination

Examiners will examine cases with appropriate media for image viewing and evaluating.

5. Additional Photographic Documentation for all Cases

Additional documentation is required to demonstrate the technique that was utilized to complete all cases. The following RAW images must be included with the submission of all cases. These steps are to be documented in the written report.

These photos are to be taken at 1:2 magnification or digital equivalent.

1. Frontal view of prep model in occlusion with opposing model
2. Occlusal view of prep model
3. Frontal view of lab manipulated tissue site for Case Type III only

4. Frontal view of bridge framework or coping design before application of veneering material. If no framework is present, provide a frontal view, after the effects bake
5. Frontal view of completed build-up before firing or processing
6. Frontal view of contoured bisque bake (including tissue adaptation on Case Type III)
7. Frontal view of finished case on model

6. Verification of Authenticity for Each Case

AACD upholds the highest standards of ethical behavior applicable to the profession of cosmetic dentistry and expects its members to do the same. Violation of these ethical standards in the Accreditation process is a matter that is taken seriously by the AACD and can result in permanent disqualification from the Accreditation process.

As technology continually evolves, increasing opportunities exist for fraud. Although the AACD knows that few would resort to such unethical behavior, the AACD is committed to ensuring the integrity of the Accreditation process through proactive measures to verify supporting documentation for clinical case submissions. Such measures are designed to maintain the integrity of the credential without imposing an undue hardship on laboratory technicians.

Examiners are trained in specialized software tools to detect manipulation of the digital image in violation of this protocol including spot editing. Any alteration of images, falsification of information or attempt to mislead the examiners is grounds for immediate termination of the Accreditation process and permanent disqualification from obtaining Accreditation in the future.

7. Radiographic Documentation

Post-op periapical radiographs are required for all cases. An implant must also include a pre-op radiograph prior to implant placement. Radiographs must be of diagnostic quality. Up to six radiographs can be submitted to show all required treated teeth. Additional treated teeth do not require radiographic documentation. In the event that the radiographic images submitted by the dentist or laboratory technician suggest that there has been manipulation or editing of the image in violation of this protocol, it is grounds for immediate termination of the Accreditation process and permanent disqualification from obtaining Accreditation in the future. When submitting multiple radiographic images, please be sure to separate them.

Radiographs may be in one of these formats:

1. Photo image file (JPEG) of x-ray
2. Scanned x-ray image file (JPEG)

8. Written Report

The written report is to be submitted as outlined in the credentialing module. Reports are expected to be well organized, original, accurate and complete. Include the following information in the written report:

Description of preparation design

Copy of lab prescription including shade diagram

Description of framework or porcelain coping (when applicable)

Description of application and layering of porcelain including: opaques, tints, modifiers to final build-up

Description of handling of bisque stage to ready for glaze

Description of glaze handling to completion

Under no circumstances should names, acknowledgements (including partnering dentist, ceramist or specialists that may have been involved in the case) or any type of personal information be included in the written report.

We strongly recommend that you start by creating an electronic version of your report and then transfer the information to its respective areas of the online report. You will be expected to be knowledgeable of the information within your written report during your oral examination, so saving and storing a copy of the submitted written report with your own documentation (i.e. a Word document) is highly encouraged.

Grading/Examination

Each case is examined anonymously by a panel of five examiners. A majority of “pass” votes are required to pass a case. The laboratory technician may resubmit clinical cases until all three have received a passing score. When all three clinical cases have received a passing score, the laboratory technician is eligible to continue to phase three, the oral examination.

Poorly produced or incomplete written reports and/or poor photographic or radiographic documentation could result in failure. Each case will be examined based on the Accreditation examination criteria. *Contemporary Concepts in Smile Design - A Guide to Accreditation Criteria* uses examples of previously presented cases to further clarify and identify criteria points being evaluated.

Resubmission Information

A member in the process that does not successfully complete the Accreditation process in their allotted five-year time frame may be eligible for a one time roll-forward of successfully passed clinical case(s) to a new five-year time period. The requirements for eligibility are as follows:

- The written examination must be taken no later the next annual scientific session following term expiration to initiate a new five year time frame
- The case being submitted for roll-forward has not been rolled forward in the past
- The candidate feels that he or she can comfortably and thoroughly explain and defend treatment decisions at the oral examination
- A roll-forward form is completed and submitted to the credentialing department for each passed case being requested
- A fee of \$250 member / \$350 non-member will be required with each case roll-forward and submitted with the required form.

NOTE: All materials submitted become property of the AACD.

Oral Examination

Purpose

The purpose of the Accreditation Oral Examination is two-fold. The first purpose is to provide the laboratory technician an opportunity to verify and authenticate passed casework. The laboratory technician may be asked questions about case selection, diagnosis and treatment planning, or materials and techniques on any of their passed clinical case submissions. **The laboratory technician’s knowledge should clearly demonstrate a familiarity and understanding of these cases.** Additional questions

may be asked that cover related topics considered relevant by the examiners.

The second purpose of the oral examination is to provide the laboratory technician with an opportunity to demonstrate their treatment planning abilities. The laboratory technician will be presented with information regarding a pre-selected case. Adequate time will be allowed for the laboratory technician to formulate a treatment plan, which will then be shared and discussed.

Eligibility for Appearance at the Oral Examination

To take the oral examination at the next given date, the following requirements must be met:

- The laboratory technician must have passed all three required clinical cases
- Attended at least half of the annual scientific sessions, starting with the session that the laboratory technician took and passed the written examination
- Application completed and fee paid for the oral examination, which must accompany the submission of your external flash drive that contains all cases properly loaded with the original RAW images. The external drive must be loaded with preoperative folders for each case type, and postoperative folders for each case type. The folders must also contain required radiographic documentation and any required technique slides. The application and oral examination flash drive must be mailed to the AACD Executive Office, prior to scheduling an appearance for this exam.

Application and Fees

The application for the oral examination will be sent to the lab technician once the three clinical cases have been passed. The application, fee, and external flash drive loaded with the original, passed RAW images for each of the three case types must be received at the AACD Executive Office prior to scheduling. The fee is \$500 member / \$725 non-member (USD) and is non-refundable.

Postponement

The laboratory technician may defer appearance for the oral examination as long as all three phases of the Accreditation process are completed within the time limit. If the oral examination is postponed **in writing** at least two months in advance an administrative fee of \$125 (USD) must be paid to reschedule. If the oral examination is postponed with less than two months' notice, the original application fee will be forfeited.

Guidelines for Appearance at the Oral Examination

Dress professionally and be on time. You should be completely familiar with the three cases. Laboratory technicians will be required to bring one written report from each case passed.

For Any Cases That Were Not Originally Submitted Online

For all cases that were submitted and passed prior to the credentialing module - You will be responsible for loading all materials into the credentialing module by the date specified by the AACD Credentialing Department. This will be in preparation for your oral examination.

Grading: Pass/Fail

Pass

With the successful completion of the oral examination, a laboratory technician becomes an **Accredited Member** in the AACD.

Fail

A laboratory technician may retake the oral examination one time immediately following the expiration of their five-year time period and must successfully pass the next time the oral examination is administered. A second failure at the oral examination terminates the Accreditation process. Submission of a new written examination application is required to begin the Accreditation process again.

Accreditation Award Ceremony

With the successful completion of the oral examination, a laboratory technician becomes an Accredited Member in the AACD. The recognition ceremony and presentation of the award will be held at the next annual scientific session.

Maintaining Accredited Member or Accredited Fellow Member Status

The Accreditation process has become recognized as the gold standard in cosmetic dentistry. It represents an intensely calibrated measurement of those specific clinicians and laboratory technicians that have applied themselves to a vigorous level of examination and evaluation of their skills and knowledge relative to cosmetic dentistry by a jury of their peers. The credential is the accomplishment of a single provider and is not necessarily a reflection of the practice or laboratory within which the provider performs. The acknowledgement of this credential is beyond reproach and identifies those leaders in the field of cosmetic dentistry.

Although the tribute to these talents and accomplishments are achieved at a single point in time, this proficiency requires continual dedication to education, advances in cosmetic dentistry and excellence in current patient care. Because of these ongoing requisites, there are requirements in maintaining **Active Status** for the protection of the credential. The purpose of these maintenance requirements is to assure the esteem and integrity of the credential to the profession and the public at large.

To maintain **Active Status** as Accredited or Accredited Fellow, Accredited Members and Accredited Fellow Members must to the satisfaction of the American Board of Cosmetic Dentistry (ABCD):

1. Maintain active and continuous membership in the AACD.
2. Maintain active and continuous hands-on patient **clinical practice. These activities and procedures may include the management of diagnosis and treatment planning, mentoring or even over the shoulder care, but must include hands-on patient care in the role of delivering intraoral treatment as the clinician or technician fabricating restorations within the past six months with routine frequency to the satisfaction of the ABCD.

** Clinical practice for our purposes is defined as actual handling of the patients' dental needs through preparation, impressions and delivering of restorations, etc. It is not considered clinical practice if no direct patient care is being performed. It is not considered clinical practice if one is only reading x-rays, working up patient treatment plans, presenting treatment plans, and consulting or advising for patient care.

3. Uphold the integrity of the credential to a recognized level of ethics.
 - <http://www.aacd.com/index.php?module=cms&page=1102>
4. Satisfy one of the following requirements once every three years:
 - Attend the Annual AACD Scientific Session
 - Serve as an editor, editorial reviewer of contributing editor in a recognized aesthetic dental publication
 - Author a published article in a recognized aesthetic dental publication
 - Participate as a coordinator or lecturer in an aesthetic dentistry continuum
 - Attend the Criteria Workshop or lecture portion of the Advanced Accreditation Workshop (registration required)
 - Serve as a board or committee member in the AACD
 - Examiners only - Attend Examiner Calibration

Forms for verification on requirements are available at the AACD Executive Office. Submission of these forms is the responsibility of each individual who is Accredited. Five percent will be randomly reviewed and proof of verification will be required.