

**THE AMERICAN ACADEMY OF OPTOMETRY
SECTION ON CORNEA, CONTACT LENSES AND REFRACTIVE TECHNOLOGIES
CLINICAL REFRACTIVE TECHNOLOGIES DIPLOMATE CANDIDATE'S GUIDE**

Revised: April 2011

Becoming A Diplomate

This guide contains the requirements and the procedures for becoming a Clinical Refractive Technologies Diplomate in the Section on Cornea, Contact Lenses and Refractive Technologies of the American Academy of Optometry.

Please note that this guide supersedes all previous information and instructions.

Optometrists have been involved in all facets of the various procedures designed to alter refractive error since their inception. In recognition of this, the Refractive Technologies (RT) Diplomate award has been established by the Section on Cornea, Contact Lenses and Refractive Technologies. A Fellow in good standing of the American Academy of Optometry may become a Refractive Technologies Diplomate of the Section on Cornea, Contact Lenses and Refractive Technologies when he or she has demonstrated a thorough and appropriate level of knowledge of the cornea and in the refractive technologies area of expertise. As the contact lens wearing patient is frequently encountered prior to refractive surgery, and as contact lenses are a common form of treatment for post-surgical complications, a sound knowledge of the field of contact lenses is also expected. Completion of the requirements outlined in this guide will allow the candidate to demonstrate a broad base of knowledge in all phases in this field, including theoretical, technical, and clinical areas. Please frequently refer to the Web Site for the updates to the process for successful completion of your diplomacy.

Candidates Welcome

The Section on Cornea and Contact Lenses and Refractive Technologies welcomes you as an applicant. We believe that the process is not only a rewarding one but that it will also be a significant learning experience. Not only will you benefit from the added knowledge, but you will be rewarded with the satisfaction of being recognized as an expert in this field. You will also meet colleagues who share mutual interest and concern from all of parts of the world to whom you may refer patients and discuss both clinical and research topics with confidence. Once your candidacy has been completed, we hope that you will remain interested and curious about the corneal refractive procedures field, and that you will become involved as a leader in that field, with activities that might include lecturing, writing, and teaching within the Section and within the Academy as a whole so that more of our colleagues may become informed on this topic.

Requirements for Clinical Applicants

- I. Case Report requirements and Writing Guide
- II. Orientation Meeting
- III. Scheduling Examinations
- IV. Cornea and Anterior Segment Examination
- V. Refractive Technologies Applications Examination
- VI. Practical Examination
- VII. Oral Examination
- VIII. Repeating Examinations
- IX. Interviews
- X. Application period
- XI. Final Advice

To apply as a Diplomate candidate, you must:

1. Be a Fellow in good standing of the American Academy of Optometry.
2. Submit an application form (see attachment) indicating your desire to become a Diplomate of the Section. The application should be returned prior to June 15th of the year in which any part of the requirements will be undertaken with an application fee of \$100 (made payable to the AMERICAN ACADEMY OF OPTOMETRY) and a head and shoulders photograph of yourself to:

Diplomate Award Program
Section on Cornea, Contact Lenses and Refractive Technologies
American Academy of Optometry
6110 Executive Blvd., Suite 506
Rockville MD 20852 USA

REQUIREMENTS FOR DIPLOMATE IN REFRACTIVE TECHNOLOGIES OF THE SECTION ON CORNEA, CONTACT LENSES AND REFRACTIVE TECHNOLOGIES

I. Case Reports

This part of the process involves the submission and acceptance of ten (10) written case reports. The subject of these reports should be from the specific designated areas outlined below. All patients reported on should have been followed at least six months post-operatively, if a refractive procedure was applied. The case reports are the most arduous and time consuming part of the Diplomate process and are the only parts of the examination that are not conducted at the annual Academy meetings.

A. General Information

1. The purpose of the case reports requirement is not only to demonstrate your knowledge and expertise in various areas of cornea and refractive technologies but also to demonstrate your skill in communicating that knowledge. This requirement serves to inform the Diplomate Award Committee about your mode of cornea and refractive technologies care and serves as a basis for the oral examination. The topics covered in the case reports will not be the sole topics for examination throughout the Diplomate process. Diplomate candidates will be expected to demonstrate a high level of knowledge across all topics in the field.

2. Please submit your first case report to the Case Reports Chair as soon as confirmation of your application is received from the Diplomate Award Chair. **DO NOT SEND ALL 10 CASE REPORTS IN AT ONCE.** Once the Case Reports Chair returns your first report to you, you can begin work on the rest of the case reports. If it is returned for revision, the comments and critique from the referees often save considerable time and effort in revision. **All reports must be submitted to the Case Reports Chair 10 weeks prior to the start of the Annual Meeting,** in order to be considered for that year's Annual Meeting. (Early submission is strongly encouraged to allow adequate time for revision. Revisions are frequently necessary and must then be regraded. **Allow for, at minimum, four weeks for each grading cycle.**)

B. Current Case Report Topic Choices

Select 10 cases from the following list of acceptable options. Note that case number 1 is mandatory. Cases should include a variety of treatments and a minimum of 4 different procedures. Cases may include but not be limited to LASIK, PRK, PTK, LASEK, CRT, RK, AK, ICRS, CK, LTK.

If you have a report that you wish to submit that does not fit any of the specified categories, please submit an outline of the case with an explanation to the Case Reports Chair before proceeding with its full submission. This will perhaps save you some work if the Chair does not approve the submission of the case.

1. Mandatory requirement. A typical myopic LASIK laser vision correction case. Every candidate should submit this type of case. Included in it should be a complete description of your initial evaluation, your thought process, actions, and recommendations from start to finish in a typical laser vision correction case. Include all relevant findings, citing how these findings guided you toward your final recommendation of whether to have the eye(s) treated, which surgeon and which laser you recommended, and why. Also include any special concerns or considerations that you had before, during, or after the process. The follow-up process should likewise be presented. Be certain to select a case to demonstrate knowledge at a Diplomate level.
2. A contact lens related resolution of a refractive technologies case (for example, post-RK). Be certain that your case selection demonstrates knowledge in both laser vision correction and contact lens fitting post-operatively. Contact lens follow-up must be at least 6 months post-fit.
3. A case in which you prescribed Corneal Refractive Therapy (CRT) contact lenses. This case could be of a patient who was prescribed CRT as the primary procedure to correct refractive error or a case where CRT was prescribed to problem-solve another refractive technologies procedure.

4. A hyperopic refractive vision correction case. Be sure to include a discussion of the considerations in patient selection that are different in the hyperopic patient (as opposed to the myopic patient).
5. A case that demonstrates a difference in results due to the use of different brands or types of laser, or different types of laser technique. This case should demonstrate to the reviewer that you are very knowledgeable in the technological aspects of laser vision correction and the reasons that you might choose one form of technology over another.
6. A refractive vision correction case of significant (>3.00 D) refractive astigmatism. Include your rationale for selection of a particular instrument, surgeon, and technique, including the pre-op and post-op clinical data.
7. A case of Photorefractive Keratectomy (PRK). Include your decision-making process in recommending PRK versus another refractive procedure.
8. A case in which monovision refractive vision correction was performed on a presbyopic patient. The reason(s) for selection of monovision need to be included.
9. A laser vision case in which there were problems with the flap post-operatively. Include a description of your post-operative evaluation of flap efficacy.
10. A case in which the patient was myopic prior to refractive vision correction and over-correction resulted in hyperopia or under-correction resulted in undesired myopia. Include re-treatment and other management options.
11. A case in which drug therapy or other medical treatment was necessary to resolve post-treatment complications (for example, infection or inflammation)
12. A case in which a patient was recommended for a refractive procedure, which, in retrospect, perhaps should not have undergone the procedure.
13. A case of a patient with dry eyes (or ocular allergies) pre-operatively for whom a form of refractive procedure was recommended. Include your clinical rationale and clinical evaluation technique and suggested treatment rationale for dry eyes (or ocular allergies).
14. A case in which refractive vision correction could not be recommended due to pre-operative clinical findings (thin cornea, flat cornea, corneal irregularity, etc.) for whom another form of refractive alteration procedure was or was not recommended.
15. A refractive surgery patient with systemic disease that might have affected the outcome. Include in this case report a discussion of why (or why not) this patient was selected for treatment, what type of treatment was recommended, etc. Also, include your rationale for either including or ruling out patients with different types of systemic disease that may or may not affect the outcome of a refractive procedure.

16. A case where a patient came to see you seeking correction of an unsuccessful or problematic refractive procedure, include all pre-op and post-op data and your rationale for choosing the treatment or clinical approach used in this case.
17. A case of Phototherapeutic Keratectomy (PTK). Include in the discussion the reasons for selection for this form of therapy.
18. A case of conductive keratoplasty (CK). Discuss the strategy in deciding on this type of treatment versus another refractive procedure.
19. A case in which INTACS was utilized, describing the usage of this technology, its clinical applicability, and the testing and thought process used in choosing this modality
20. A case in which a clear lens extraction was performed. Include in the discussion the reasons for the selection of this form of therapy and which intraocular lens was implanted and why that lens was chosen.
21. A case in which a phakic intraocular lens implantation was performed. Include a discussion of the rationale for this type of treatment as opposed to a corneal-based surgical procedure.
22. An analysis of clinical outcomes—present a summary analysis of 30 or more cases where data are available before and after treatment that demonstrates an ability to analyze clinical care protocols and their impact on patient outcomes.

If you have a question about the appropriateness of a case, please contact the Case Reports Chair for an opinion.

C. Substitution of Published Articles/ Papers

Candidates may substitute peer-reviewed manuscripts or textbook chapters where they are a principal author in place of a written case report. These substitutions must be relevant to refractive technologies and a justification for each substitution demonstrating the relevance of the submitted material should be provided by the candidate at the time of submission. A maximum of five substitutions is allowed. The Case Reports Chair and referees will decide whether or not a published article/paper is acceptable and meets the substitution requirements.

Consideration will be given to applicants who no longer see patients nor have files that might satisfy this specific case report requirement. Since this is a relatively new field, there should be very few situations in which this consideration will be allowed. In these cases, in lieu of writing a case report, a topic will be assigned relating to that particular requirement. It is realized that there are candidates who may be currently in administrative roles in laser vision correction clinics, etc., who may fit this description.

D. Updating Requirements

As one would expect in a field that is as dynamic as Refractive Technologies, there will be, from time to time, changes made to the specific case report requirements. Candidates will be required to satisfy the new requirements if they have not previously done so. An exception will be made if the committee is aware that you are currently working on a case report to satisfy that particular requirement and are preparing that report for submission. It is understood, for instance, that the technology in both diagnostic and treatment instrumentation within the laser vision correction field has changed dramatically in the recent past. Thus, it is expected that case reports that encompass those changes in technology would be included in the cases that the candidate submits. However, if a case is submitted that utilizes technology that may be outdated at this time, but was current and adequate at the time that the patient was seen, consideration for that will be made when submitting case reports.

E. Case Report Format

1. The only allowable method of submission is by e-mail.
2. Case reports should be submitted double-spaced using Microsoft Word or Word Perfect, with pages numbered. Use of line numbering is encouraged to make it easier for referees to identify specific items for review or comment. Graphic images should be attached as jpeg files or embedding in the case report document. Use image compression or reduce the size and/or resolution of images submitted as possible before embedding in your document. Contact the case reports chair if you are unfamiliar with file compression techniques. **Total file size should not exceed 2MB.**
3. Your name and address should appear in the body of the submission email only, but NOT on the case reports. The cover page of the case report should include the Candidate ID number that you will be assigned upon starting the Diplomate process. You should also clearly identify the case report requirement you are intending to fulfill on the cover page (e.g., Requirement 7, a case of Photorefractive Keratectomy - PRK). The Case Reports Chair will assign each report a coded number and will forward the reports to two referees who are Diplomates in the Section. This requirement will insure that the referees do not know the author of the report they are grading, and will guard against any individual bias. Avoid references to institutions that may identify you personally.
4. Write in a clear, concise manner. PLEASE PROOFREAD YOUR REPORTS CAREFULLY. Approach your case reports as if you were preparing them to be submitted for publication in a scholarly journal.

F. Case report specifics (A SAMPLE CASE IS POSTED ONLINE)

1. Do not assume that the readers know what you are thinking. You must explain everything in detail, especially with regard to preoperative evaluation, treatment and postoperative care. You are demonstrating your skill and expertise. Reports that solve problems and encounter difficult situations are generally more acceptable than mundane reports where everything is perfect.
2. Record data in a manner that is easily understood by everyone. It is acceptable to record findings as "within normal limits" (WNL), if those findings have no bearing on the case being described. Readers from a different background than yours may not understand your refractive technology "shorthand" or conventions. Do not include extraneous information.
3. Case reports, which typically are 20 to 25 pages in length, must contain the following information:

I. Abstract

Include a structured abstract of 150 words or less with the following headings: Purpose, Case Report, and Discussion.

II. Text

A. Introduction

Describe the purpose of the case report, the clinical problem illustrated in the report, and any major findings that will constitute the focus of the report. The Introduction should highlight the unique elements of this individual case in the context of the more general clinical entity that is represented by the findings presented in the following sections. Limit references to only the most relevant publications.

B. Case Report

The Case Report section should consist of the specific findings detailed below, the date and time of these clinical observations, as well as any supplementary material relevant to the diagnosis, and management of the patient. The following subheadings might be used in the Case Report section as applicable, or the Candidate may elect to provide similar information in a prose format: The text should be written in complete sentences rather than brief statements as would be found in the patient's chart or clinical encounter form. The only exception is when listing routine clinical findings, they may be summarized as in the example below:

DATE OF VISIT:

Entrance visual acuity (spectacles): OD:
OS:

Manifest subjective refraction: OD:
OS:

Keratometry: OD:
OS:

Slit lamp biomicroscopy:

Lids/Lashes: clear OU

Cornea: clear OU

Tears: clear OU

Upper and lower tarsal plates (palpebral conjunctiva): clear OU

Bulbar conjunctiva: clear OU

Iris: flat OU

Lens: clear OU

Anterior chamber: deep (grade IV angle) and free of visible aqueous cells or flare OU

a. Patient information: must be HIPAA compliant. All identifying names and birthdates must be deleted from text and concealed on any included graphics such as corneal topographies. Patient age, gender, occupation and hobbies should be reported without violating HIPAA regulations. Dates of all visits must be included.

b. Setting: Such as clinical practice, referral center, multi-center, institutional or other practice environment.

c. Intervention: State the intervention or procedures(s) performed including (one or both eyes), basis for patient selection (i.e. inclusion/exclusion criteria). If the candidate is reporting a case series, provide the number patients presented and make a clear distinction between the number of patient and the number of eyes.

d. Clinical Findings: Describe clinical findings or patient outcomes and measurements in an objective sequential manner with a minimum of discussion. If the candidate uses any tables or figures, they should be cited and presented in the same sequential numeric order.

e. Data Reported: Candidates are encouraged to include the following information for any case report. Note that not all of this information will be relevant in every case, or is this list intended to be a complete list of all necessary findings. The candidate should present what is necessary to demonstrate their clinical skills and standards of care. Be sure to include patient preoperative evaluations, post operative patient management, and instrumentation, Pharmacological management is valuable in addition to any significant ocular and physiological aspects of the case. Use generic nonproprietary pharmaceutical nomenclature and complete dosing information and patient instructions. If candidates have a question regarding inclusion of specific data, for the sake of completeness, include it.

1. Patient information: initials, age, gender, occupation, hobbies (as they relate to visual demands or needs), particularly as this information might relate to the discussion of the individual case.
2. Dates of all clinical observations must be included.
3. History: a complete general history, family history, a list of diseases for which the patient may be treated, and a list of medications being taken.
4. Visual and ocular history must be reported, particularly if they relate to changes that may be relevant to the refractive procedure being discussed.
5. Discuss any ocular injuries, anatomical abnormalities or surgeries that have been experienced in the past.
6. Describe the patient's daily visual requirements and the reasons that they may be seeking a surgical refractive procedure.
7. Report contact lens wearing history in detail.
8. Patient symptoms need to be properly investigated and described.
9. Diagnostic testing, including the following areas:
 - A detailed report of biomicroscopic observations.
 - External examination, including lid position and adnexa.
 - Pupil size and pupillary reactions.
 - Internal ocular findings, including ophthalmoscopic (direct and indirect), and slit lamp evaluation of the fundus.
 - Keratometry, topography, wavefront analysis, corneal thickness.
 - Refractive findings, including the relationship to contact lens wearing.
 - Report any and all serial post-contact lens refractive findings.
 - Visual acuities, distance and near, aided and unaided.
 - Binocular function, in cases where it is relevant to the case presentation.
 - Intraocular pressure.
 - Corneal diameter, if it is a significant factor, such as in LASIK.
 - Summarization of the data, including impressions, diagnosis, and recommended treatment with the clinical rationale for the treatment recommended.

10. Treatment options:

- Discussion of treatment options for this patient, including any presentation or discussion of the risks and benefits of each option with the patient.
- Description of the final course of treatment for this patient and justification for it.
- Inclusion of any and all correspondence, technical data, calculations, photographs, technical data printouts, etc. related to the case with all patient identifiers removed.

11. Follow-up visits:

- History and symptoms, dates (including length of time since procedure).
- Visual and refractive results
- Biomicroscopic evaluation.
- Special testing performed.
- Discussion with the patient and advice for the patient.
- Impressions
- Treatment

f. Patient Outcomes: Provide sufficient detail to enable others to understand the preoperative condition of the patient, the details of the intervention received, the results of that intervention, and the basis for any clinical decisions that were made that influenced the reported findings. Describe the final clinical result and disposition of the patient, providing the length of postoperative care, basis for referral, or reason for discharging the patient.

If the candidate is reporting clinical outcomes from a substantial case series (>10 eyes), the guidelines published by Waring¹ are preferred, but not required.

C. Discussion

Elucidate (but do not reiterate) the clinical findings, identify any significant limitations or qualifications of the reported findings, discuss the reported findings in the context of other reports especially those that may be contradictory. Excessive generalization and undue speculation should be avoided. Give equal emphasis to positive and negative aspects with respect to the management of this case, state any additional care or clinical intervention that might be recommended. Conclude with the broader clinical implications illustrated by the case report.

D. References

Candidates are encouraged to cite references (i.e. peer reviewed publications) as a basis for their clinical decisions and to contrast their findings with previously reported findings to demonstrate their depth of scholarship and critical thinking. The references should be listed numerically as an attachment to each case report, and should be formatted according to the style guidelines exemplified below .

References should be numbered consecutively in the text and in the reference list. In the text, reference numbers are entered as superscripts. Candidates are advised to use automated reference numbering software (eg Medline, EndNote or Reference Manager) since they may facilitate accurate citations and consistent formatting. PubMed offers a useful reference checker.

Any cited references should have been read in their entirety by the Candidate. Discussion and interpretation of referenced citations is appropriate subject matter for the oral examinations.

¹ 1. Waring GO, 3rd. Standard graphs for reporting refractive surgery. J Refract Surg 2000;16:459-66.

References to journal articles should include:

- 1) The author or authors (for more than three authors, list the first three followed by "et al.")
- 2) Title
- 3) Journal name
- 4) Year of publication
- 5) Volume number
- 6) Page numbers.

References to books should include:

- 1) The author or authors
- 2) Chapter title (if any)
- 3) Editor or editors (if any)
- 4) Book title
- 5) Edition (other than the first)
- 6) City of publication
- 7) Publisher
- 8) Copyright year
- 9) Pages of the chapter or section cited

Examples:

Journal article:

Thibos LN, Hong X. Clinical applications of the Shack-Hartmann aberrometer. *Optom Vis Sci* 1999;76:817-25.

Bullimore MA, Olson MD, Maloney RK. Visual performance after photorefractive keratectomy with a 6-mm ablation zone. *Am J Ophthalmol* 1999;128:1-7.

Book Chapter:

Twa M, Moreira S. Astigmatism and Toric Contact Lenses. In: Mannis MJ, Zadnik K, Cora-Ghanem C, Kara-Jose N, ed. *Contact Lenses in Ophthalmic Practice*. New York: Springer-Verlag, 2003: 109-124.

Unpublished data:

Unpublished data includes studies in preparation or submitted for publication, scientific posters, and unpublished abstracts that reviewers cannot retrieve in an electronic literature search should be included parenthetically in the text.

Example: "... As described by Jones et al. (Jones RA, ASCRS, 1997)".

The Candidate should be prepared to provide abstracts or copies of such for reviewers if requested.

Internet references:

References to material that is available via the internet are appropriate, provided the material is of peer-reviewed caliber. The online reference should be listed with URL address and date the information was last accessed. Since Internet articles may not be available at the time of review the Candidate is advised to make a printed copy of the material they are referencing so that they will be able to provide it for reviewers if requested.

Example: Bullimore MA, Dobos MJ. Repeatability and Validity of Refractive Error Using the Bausch and Lomb Zywave [ARVO Abstract]. www.arvo.org, 2003 Abstract nr 4081, Accessed December 24, 2004

E. Tables

Information in the tables should not entirely duplicate the text. Instead, the candidate should highlight the most important trends and significant findings.

Tables should be numbered consecutively in order of citation in the text. Each table should have a brief title so that the reader can understand what is being displayed in the table without reference to the text. Tables may also be embedded in the text or each table may be submitted on separate page at the end of the text following the References and Figure legends page if any are included.

Tables should be created in a Word, WordPerfect or another word processing document using the table tools. Each table should be double-spaced.

F. Figures and Figure Legends

Figures may be embedded in word processing documents or may be attached as separate pages to the end of the case report. For embedded figures, figure legends should be included together at the bottom of the figure. For figures attached to the end of case reports, please include a separate figure legend page following any tables. Each legend should be numbered consecutively in the text, have a brief title, and contain a complete description of each figure. Ideally, the legend should contain enough information so that the figure can be understood independently of the text.

Example: Figure 1. Stromal Melting after LASIK. (Top left) The patient's cornea is shown postoperatively with severe inflammation and stromal thinning adjacent to the visual axis.

G. Case Reports Submission Progress

*** CASE REPORT PROGRESS IS REQUIRED BEFORE PROCEEDING TO THE OTHER EXAMINATION PARTS.**

You must have, at minimum, one case report (not a substituted published paper) accepted before you will be allowed to attempt the Cornea and Anterior Segment, Refractive Technologies Applications, or Practical Examinations. The initial case report must be submitted at least 10 weeks prior to the Annual Meeting in the year in which you would prefer to take any or all of the required examinations. However, keep in mind that revisions are frequently necessary and each grading cycle may take up to four weeks. Therefore, if you wish to have the case report passed before the Annual Meeting, the case report should be submitted as early as possible to allow time for revisions.

H. Case Report Checklist

Below is a checklist of items required before submission. Please be sure that you have thoroughly read the instructions for preparation and submission of your case report before submitting it. Materials should be provided in the following order.

- ___ Cover e-mail indicating the case report category (see above)
- ___ E-mail submission of the case report, double-spaced and formatted according to the instructions
- ___ Title page (Title, Candidate's name, academic degree or degrees, and affiliation, complete address, phone number, fax number, and e-mail address of the Candidate) * note that this information should not appear in any other place on the case report.
- ___ Abstract (limit: 150 words)
- ___ Text
- ___ References
- ___ Figure Legends
- ___ Tables
- ___ Figures

I. Appeals Process

The section does its best to have expert reviews and hopes that candidates recognize that many good case reports may be rejected or require substantial revision. Candidates should view each case report as an individual learning opportunity. Reviewers are encouraged to provide Candidates with constructive criticism that is meant to aid in the Candidates' professional growth. If you feel your experience (i.e. case report reviews) do not facilitate this objective and deserve another evaluation, you may address this issue with the Section Chair at any time.

REVISIONS: If a case report is sent back for revision, please attach a cover letter stating how and where in the case report the concerns by the reviewers have been addressed. It is also helpful to return your revision to the case report chair with highlighted print (for example italics) where changes to the original submission have been made or by using track changes options in your word processing program.

J. Additional Case Reports Advice

1. As has been mentioned earlier in this outline, it is not proper to assume that the reader knows what you are thinking. It is also not understood that you have done a test if it is not reported. Remember that you are demonstrating your skill and expertise. You must explain everything in detail, particularly your rationale for any clinical decisions. Reports that solve problems and deal with difficult clinical situations are generally more highly regarded and acceptable than reports where all the clinical findings are perfect.

2. Report data in a manner that may be easily understood by the reviewer. It is acceptable to record findings as within normal limits (WNL) but only in situations where those findings have no bearing on the case being discussed. For instance, if the candidate is describing the appearance of the cornea post-operatively, WNL is simply not sufficient. Realize that, in some instances, a reviewer may be from a different part of the country or different part of the world from you and may not understand abbreviations or shorthand. The candidate will have to review each case to be sure that all information is completely reported, without the inclusion of extraneous information.
3. The six month follow-up requirements for validity of a case report will be waived in cases where the applicant's patient care setting is such that it is not the customary patient care protocol. However, note that:
 - a. The applicant must obtain all pre-op and post data that can be retrieved and include it in the case report, as one visit case reports will generally be an unacceptable format.
 - b. The Case Reports Chair must review and accept the case report format and subject matter that may qualify the case report as acceptable despite being outside of the usual and customary one year pre-op and post-op rule.

K. Current Traditional Cornea and Contact Lens Diplomates Who Choose to Complete the Refractive Technologies Requirements.

We encourage current Traditional Cornea and Contact Lens Diplomates to also become Refractive Technologies Diplomates. The requirements will be somewhat modified. The previously stated 10 case report requirement as stated in this guide are required. In addition, candidates must pass the Refractive Technologies Application Examination and Oral examination.

II. Orientation Meeting

All prospective and active candidates should attend the Orientation Meeting, which is scheduled for first morning of the annual meeting at either 6:30 or 7:00 AM, prior to the Lectures & Workshops. Please confirm the date, time and place of this meeting with the Diplomate Award Chair prior to making your firm hotel and airline reservations. At the meeting, members of the Diplomate Award Committee will help further acquaint you with the goals of the Section and with the requirements and procedures for achieving diplomacy. It is important that the Diplomate Award Chair knows your hotel location so he/she can contact you during the Annual Meeting. Meeting time and location will also be noted on the meeting "green sheet".

III. Scheduling Examinations

IF YOU ARE TAKING AN EXAMINATION FOR THE FIRST TIME OR ARE REPEATING PARTS OF THE EXAM, YOU SHOULD NOTIFY THE DIPLOMATE AWARD CHAIR OF YOUR INTENT PRIOR TO THE ANNUAL MEETING AND SCHEDULE YOURSELF ACCORDINGLY.

You may sit for all parts of the examination sequence in one year or may elect to do any part or parts of the examination you wish, as long as the above requirements are met.

IV. The Cornea and Anterior Segment Examination

The Cornea and Anterior Segment examination is designed to evaluate your knowledge of the Cornea and Anterior Segment. The examination will cover anatomy, physiology, pathology, pathophysiology, identification and differential diagnosis of conditions of the adnexa, anterior segment and cornea. Most particularly, questions will be focused on both normal and atypical responses of these tissues to contact lens wear and/or surgical procedures. Questions will attempt to remain germane to clinical practice. Treatment options for these conditions will also be covered. The examination format may contain various media, with fill in the blank and multiple choice questions at the discretion of the author; but some calculations may be required. **The Cornea and Anterior Segment examination will be given the second day of the Academy's annual meeting.** It is typically conducted at the meeting headquarters hotel, the exact location will be announced at the Orientation Meeting and distributed to all eligible candidates prior to the annual meeting. **Two hours are allotted for this examination.**

The following is a guide to studying for the Cornea and Anterior Segment examination. This is not meant to exclusively identify all of those topics that might be covered on the various examinations included in the Diplomate process.

1. Knowledge of basic cornea and anterior segment anatomy and physiology.
2. Ability to identify and differentiate pathologies related to contact lens wear and/or abuse or as induced by other ocular/systemic diseases.
3. The influence of contact lenses and refractive surgery on the metabolism, transparency and integrity of the cornea and conjunctiva.
4. Identify certain conditions as being contraindications for contact lens wear or refractive surgery.
5. Biomicroscopy techniques used in clinical practice.
6. Pharmacology related to diagnosis and treatment of cornea and anterior segment disease, as well as potential complications of contact lens and refractive Technologies applications.
7. Understanding of topographical analysis of the cornea as it relates to refractive surgery.
8. Dystrophies and degenerations of the adnexa, cornea and anterior segment.

V. The Refractive Technologies Application Examination

The Refractive Technologies Application Examination is intended to primarily test and evaluate your knowledge and skill in the application of refractive surgical technologies in a clinical setting. Knowledge of contact lens technologies will be expected as a secondary topic. Questions will attempt to remain germane to clinical practice. The examination may contain various media, with fill in the blank and multiple choice questions at the discretion of the author; some calculations may be required. **The Refractive Technologies Application examination will be given the second day of the annual meeting.** It is typically conducted at the meeting headquarters hotel, the exact location will be announced at the Orientation Meeting and distributed to all eligible candidates prior to the meeting. **Two hours are allotted for this examination.**

The following is a guide to studying for the Refractive Technologies Application Examination:

1. Basic understanding of laser technology.
2. The development of the laser as it is related to refractive correction.
3. The various forms of surgical technologies and procedures that are utilized in the field.
4. All updates and technical progress within the field.
5. Familiarity with the literature as it related to risks, benefits, and outcomes of various refractive procedures.
6. Patient selection criteria for various refractive procedures.
7. Common post-procedure complications seen, and appropriate management of them.
8. Clinical diagnosis and treatment of post-procedure complications.
9. Recognition of appropriate post-procedure contact lens applications.
10. Corneal factors that can preclude refractive procedures, or add potential risks.
11. Pharmacology of medications utilized both pre-procedure and post-procedure.
12. Understanding of all of the principles and technologies involved in corneal measuring instruments (topography, wavefront, pachymetry etc.).
13. Understanding impact of contact lens wear on the evaluation of the refractive surgical patient
14. Understanding intraocular lens optics.
15. Understanding of contact lens design and indications, including but not limited to soft lenses, rigid lenses and advanced design lenses

VI. The Practical Examination

The Practical Examination is designed to evaluate the knowledge of the candidate in a clinical setting. Patients will be presented at various stations with proctors grading the responses of each candidate as they pass through that station. Candidates are expected to evaluate and describe the presentation and status of the patient examined and will be questioned relative to these observations. The practical will cover both pre-operative evaluation of the potential refractive surgical patient as well as identification and management of post-op complications as well as biomicroscopic evaluation of patients, including those with anterior segment disease and interpretation of corneal topography. In general, the Practical Examination is given on Thursday of the Academy Meeting. It is typically conducted at a clinical site somewhere in the geographic area of the hotel at which the meeting is being held.

The exact location and information about transportation to and from the site will be provided at the orientation meeting. Lunch will be provided. One must allow at least 4 – 5 hours for this examination, as some travel time must be included.

VII. THE ORAL EXAMINATION

After successful completion of your case reports and all other tests, you will be eligible to sit for the oral examination. This oral examination allows you to demonstrate your knowledge in all of the areas covered by your case reports, the Cornea and Anterior Segment examination and the Refractive Technologies Application examination. The oral exam is not intended to be a strict defense of your case reports. Rather, it will be your opportunity to prove that you have an above average understanding and knowledge base in all aspects of the field of cornea and contact lenses that would make another Diplomate comfortable sending you one of his or her patients for continued care. It is usually administered by three current Diplomates and will last approximately two hours. Typically, there will be a past Section Chair, an educator, and a clinician on the examining committee. The oral examination will be scheduled before noon on the day of the Section Diplomate reception in the meeting's headquarters hotel.

VIII. Repeating Examinations

Failure of any one part of the examination necessitates a repetition of that entire part of the examination at a subsequent meeting of the Academy. Those parts of the examination completed successfully need not be repeated unless your application period has expired. If any portion of the Cornea and Anterior Segment, Refractive Technologies Application and/or practical examinations are not successfully completed, you must make additional progress on any outstanding case reports before you will be allowed to retake the remaining examination sections the following year. Such progress is defined as having one additional case report accepted prior to the Annual Meeting.

IX. Interview

All candidates active in the examination process will have an interview scheduled during the Annual Meeting. You should contact the Diplomate Award Chair in the Section on Cornea, Contact Lens and Refractive Technologies suite at the Annual Meeting Headquarters Hotel to schedule this interview. Few candidates complete all phases of the examination in one year. Upon completion of the requirements, you will be nominated for the Diplomate in the Section on Cornea, Contact Lenses and Refractive Technologies, which is granted by the Board of Directors of the American Academy of Optometry. When you complete your requirements, it is requested that you attend the Section on Cornea, Contact Lenses and Refractive Technologies Reception for new Diplomates and the Academy's Annual Banquet, where you will be introduced as a new Diplomate.

X. Application Period

All requirements must be completed within a five-year period from the date of acceptance of the application. Failure to satisfy the requirements during that period will necessitate a re-submission of your application including a non-refundable fee and may require retaking all parts of the examination. Candidates are encouraged to take any and all parts of the examination as soon as possible, in order to advance toward diplomacy.

XI. Final Advice

Everyone involved in the Diplomate process of the American Academy of Optometry has previously completed the process themselves. It is a rewarding professional goal that sets you apart from your colleagues. It is a designation that is held in high esteem within our profession. It is not intended to be simple or easy, but is intended to test a candidate's knowledge.

Every Diplomate in any of the Academy's Sections will tell you that it was a great learning experience for him or her. It makes you review your clinical techniques, solidifies your thinking in many clinical areas, and forces the candidate to review the textbook and technical information that is the foundation of the clinical work that we do every day. We wish you good luck in the process and are here to help and guide any candidate who wishes to move forward in the process. In addition to the official representative (Section Chair, Case Reports Chair, referees, exam proctors, etc.) any Section Diplomate would be more than happy to offer you their time to assist you in the process. Please do not hesitate to use that resource at any time throughout the process.

American Academy of Optometry
Section on Cornea, Contact Lenses and Refractive Technologies

Select Track: **Clinical Contact Lens** **Clinical Refractive Technologies**
 Research* (Cornea, Contact Lens, or Refractive Technologies)

**For research candidates, please confirm that you meet the Qualifications in the Candidate Guide before applying.*

Candidate's Name: _____

Date of Application: _____

Date Designated as Academy Fellow: _____/_____/_____

Are you currently a Diplomate in the Cornea, Contact Lens and Refractive Technologies Section of the Academy? Y / N

Office Address: _____

Phone: _____ Fax: _____

E-Mail: _____

Home Address: _____

Please send mail to: Office / Home

Do you personally know two current diplomates who could serve as mentors? (Please list their names).

1. _____

2. _____

If not, would you like the section to assign someone? Yes / No

Please Attach:

1. Curriculum Vitae to include: professional education, professional experience (clinical and teaching), professional affiliations, presentations, publications, honors and awards, community service, professional service.
2. A check for \$100.00 made out to the American Academy of Optometry
3. Current head and shoulders photograph of yourself

You will be contacted by the Diplomate Awards Chair after your application is processed. Thank you for applying to the Section.