OPH 262
CONTACT LENSES II

COURSE DESCRIPTION:

Prerequisites: OPH 261
Corequisites: OPH 215 and OPH 243

This course continues the study of contact lens fitting. Emphasis is on soft contact lens advanced fitting design and techniques. Upon completion, students should be able to demonstrate the competence required for the National Contact Lens Examination and the NC State Board of Opticians Examination. Course Hours Per Week: Class, 3. Lab, 3. Semester Hours Credit, 4.

COURSE OBJECTIVES:

Upon completion of the course, the student will be able to:

a. Evaluate, fit and dispense contact lenses
b. Interpret soft contact lens prescriptions
c. Record patient history
d. Use fitting instruments associated with soft contact lenses
e. Select lens materials/brands/products
f. Fit soft contact lenses
g. Instruct patient in soft lens care
h. Describe the principles behind extended-wear lenses
i. Assess patients as candidates for each type of contact lens
j. Select most appropriate lens brand and type
k. Fit extended-wear lenses
l. Fit multifocal contact lenses
m. Fit aphakic and minus lenticular contact lenses
n. Instruct contact lens patients in wearing schedules and lens care procedures
o. Discuss keratotomy
p. Discuss keratoconus problems and bandage contact lenses
q. Conform to federal and state regulations regarding contact lenses
r. Troubleshoot
s. Apply the rules and regulations for contact lenses as stated by FDA and ANSI
t. Use FDA guidelines to assess the safety of prolonged lens wear

OUTLINE OF INSTRUCTION:

I. Soft contact lens computations
   A. Dioptic power computations
   B. Spherical equivalents
   C. Lens curve computations
   D. Nominal power formula

II. Soft contact lens materials
   A. HEMA materials
   B. Gas-permeable materials
   C. Extended-wear contact lens materials

III. Soft contact lens manufacturing
   A. Major manufacturing companies
   B. Manufacturing processes
      1.) Lathe-cut lenses
      2.) Spin-cast lenses
      3.) Molded lenses

IV. Evaluating patients as candidates for soft contact lenses
   A. Patient selection
      1.) Motivation
      2.) Physical requirements
   B. Prescription limitations
   C. Good candidates
   D. Poor candidates

V. Interpreting soft contact lens prescriptions
   A. Ophthalmic abbreviations
   B. Prescription formats
      1.) Spherical prescriptions
      2.) Cylindrical prescriptions
      3.) Prismatic prescriptions
      4.) Multifocal prescriptions
   C. Astigmatism
      1.) With-the-rule
      2.) Against-the-rule
      3.) Oblique

VI. Brands of rigid and soft contact lenses
   A. Major trade names
   B. Advantages
   C. Disadvantages

VII. Inspecting soft contact lenses
   A. Visual inspection
   B. Shadow-graph
   C. Vertometer

VIII. Fitting soft contact lenses
   A. Patient chart
   B. Anterior parameters
   C. Fitting guides
   D. Vertex power recomputations

IX. Determining the initial lens
   A. Case history
   B. K readings

C. Ocular dimensions
D. Prescription interpretation
E. Indicators of well-fitting lenses
F. Indicators of poor fitting lenses

X. Evaluating the initial lens
A. Visual acuity
B. Corneal changes
C. Injection
D. Diseases and infections
E. Instruments
F. Diagnostic tests
G. Patient reaction

XI. Inserting and removing soft contact lenses
A. Elements of good hygiene
B. Instruction tips
C. Alternate methods

XII. Instructing the patient in soft lens care
A. Hygiene
B. Cleaning instructions
C. Storage instructions
D. Disinfection instructions

XIII. Selecting rigid and soft contact lens products
A. Basic chemistry
B. Products for cleaning
C. Products for storage
D. Products for wearing comfort

XIV. Soft contact lens sterilization
A. Chemical disinfection
B. Heat disinfection
C. H_2O_2 disinfection

XV. Arranging follow-ups and referrals
A. Signs and symptoms
B. Diagnostic tests
C. Referring to the prescriber

XVI. Completing paperwork
A. Ordering of contact lenses
B. Patient's chart
C. Fees
D. Insurance
E. Checking and credit transactions

XVII. Silicon materials
- A. Elastomers
- B. Rigid lenses
- C. Patient selection
  - 1.) Evaluating patients
  - 2.) Types and brands of lenses available

XVIII. Fitting multifocal contact lenses
- A. Candidates for multifocal contact lenses
- B. Types of multifocal contact lenses
  - 1.) Advantages
  - 2.) Disadvantages
- C. Evaluative testing
- D. Monocular suppression

XIX. Fitting aphakic contact lenses
- A. Candidates for aphakic contact lenses
- B. Types of aphakic contact lenses
  - 1.) Advantages
  - 2.) Disadvantages
- C. Hyperflange contact lenses
- D. Evaluative testing

XX. Fitting minus lenticular contact lenses
- A. Candidates for minus lenticular contact lenses
- B. Types of minus lenticular contact lenses
  - 1.) Conventional carrier designs
  - 2.) Myoflange contact lenses
  - 3.) Advantages
  - 4.) Disadvantages
- C. Evaluative testing

XXI. Fitting extended-wear lenses
- A. Candidates for extended-wear lenses
- B. Available extended-wear contact lenses
  - 1.) Advantages
  - 2.) Disadvantages
- C. Evaluative testing
- D. Patient instruction

XXII. Fitting keratoconus contact lenses
- A. Candidates for keratoconus contact lenses
- B. Instrumentation for keratoconus contact lens fitting
  - 1.) Corneascope
  - 2.) Placidodisk
  - 3.) Kepatometer
  - 4.) Topogometer
- C. Types of keratoconus contact lenses
  - 1.) Soper lenses
  - 2.) Piggy-back lenses
  - 3.) Advantages

4.) Disadvantages
D. Radical surgery (keratotomy)
E. Evaluative testing

XXIII. Applications of contact lenses to treat ocular diseases and infections under medical supervision
A. Recognizing common diseases and infections
B. Referring the consumer to prescriber

XXIV. Bandage contact lenses
A. Types of bandage lenses
B. Purpose of bandage lenses
C. Advantages of bandage lenses
D. Disadvantages of bandage lenses

XXV. Contact lens regulations
A. State
B. Federal
C. Record keeping to comply with law

XXVI. Contact lens troubleshooting
A. Signs and symptoms of good fits
B. Signs and symptoms of poor fits

REQUIRED TEXTBOOK AND MATERIALS:

CLSA – Advanced Contact Lens Manual Volume II

SUGGESTED REFERENCES:

CLSA - Contact Lens Fitting Procedures

Hales. Contact Lenses - A clinical Approach to Fitting.

Lowther. Contact Lenses: Procedures and Techniques.

STATEMENT FOR STUDENTS WITH DISABILITIES:

Students who require academic accommodations due to any physical, psychological, or learning disability are encouraged to request assistance from a disability services counselor within the first two weeks of class. Likewise, students who potentially require emergency medical attention due to any chronic health condition are encouraged to disclose this information to a disability services counselor within the first two weeks of class. Counselors can be contacted by calling 919-536-7207, ext. 1413 or by visiting the Student Development Office in the Phail Wynn Jr. Student Services Center, room 1209.