



EFFECTIVE: SEPTEMBER 2004 CURRICULUM GUIDELINES

A. Division: **HEALTH SCIENCES** Effective Date: **May 23, 2002**

B. Department / **DISPENSING OPTICIAN** Revision ☒ New Course ☐
 Program Area: **PROGRAM**

If Revision, Section(s) **N, Q**
 Revised:
 Date of Previous Revision: **January 8, 2001**
 Date of Current Revision: **May 23, 2002**

C: **DOPT 2510** D: **CONTACT LENS CLINICAL DISPENSING 11** E: **3**

| Subject & Course No. | Descriptive Title | Semester Credits |
|---|---|------------------|
| F: Calendar Description: This course provides learning opportunities in the contact lens program at an advanced level. Students will apply knowledge and skills from related contact lens theory and laboratory courses to the contact lens dispensary. Students will continue their clinical practice in the Douglas College Vision Centre. They will complete their contact lens dispensing skills under the direct supervision of an Optician/ Contact Lens fitter, or Optometrist, or Ophthalmologist and program instructor. | | |
| G: Allocation of Contact Hours to Type of Instruction / Learning Settings Primary Methods of Instructional Delivery and/or Learning Settings: Clinical Number of Contact Hours: (per week / semester for each descriptor) Clinical Experience 120 Number of Weeks per Semester: 15 | H: Course Prerequisites: DOPT 2400 AND DOPT 2410 AND DOPT 2412 | |
| | I: Course Corequisites: DOPT 2500, DOPT 2512 | |
| | J: Course for which this Course is a Prerequisite DOPT 2610 | |
| | K: Maximum Class Size: 14 | |
| L: PLEASE INDICATE: <div style="display: flex; align-items: center;"> <input type="checkbox"/> Non-Credit <input checked="" type="checkbox"/> College Credit Non-Transfer <input type="checkbox"/> College Credit Transfer: </div> <p>SEE BC TRANSFER GUIDE FOR TRANSFER DETAILS (www.bccat.bc.ca)</p> | | |

M: Course Objectives / Learning Outcomes

Upon successful completion, the student will be able to:

1. Obtain a general history from the patient through discussion to determine visual, physiological, pathological problems, and activity needs of the patient.
2. Review and compare past and current ocular status and assess suitability for lens wear, and determine what diagnostic activities must be conducted to complete evaluation.
3. Use instrumentation and other provisional methods to determine appropriate hard and gas permeable contact lens types and designs.
4. Interpret patient refractive error and keratometry readings by analyzing a written prescription and accumulated information to meet patient's needs.
5. Discuss hard and gas permeable contact lens options with the patient as related to the ocular status and prescription.
6. Apply knowledge of hard and gas permeable lens materials, characteristics, and physiology to maintain ocular integrity and visual requirement of the patient.
7. Conduct a diagnostic evaluation by inserting a trial lens and evaluating objective findings to determine appropriate design and fitting relationship.
8. Determine aggregate lens parameters from the diagnostic fitting and patient subjective responses and order contact lenses by specific lens parameters to achieve optimal fit and visual acuity.
9. Educate the patient by providing verbal and written instructions and hands-on practice of hard and gas permeable lens insertion / removal procedures.
10. Educate the patient by providing verbal and written instructions and hands-on practice of hard and gas permeable lens care and hygiene.
11. Determine the patient's subjective responses to contact lens wear by follow-up examination to evaluate appropriateness of lens comfort, material and solution compatibility and visual acuity.
12. Evaluate contact lens fit by observation using instrumentation, diagnostic tools, and empirical methods and determine objective findings.
13. Make necessary modifications of lens parameters, lens materials and / or lens solutions to improve fitting characteristics, ocular health, patient compliance, and visual acuity.
14. Verify visual acuity by over-refraction using instrumentation, diagnostic tools, and mathematical calculation.
15. Reinforce to the patient the necessity of follow-up examination for compliance, evaluation, contact lens care, hygiene and handling protocols.

N: Course Content:**1. Introduction**

- Clinical Objectives
- Clinical and personal hygiene

2. Instrumentation

| | | |
|-------------------------|--------------------------|----------------|
| Slit Lamp Biomicroscope | Keratometry | Lensometer |
| Profile Analyzer | Hand Loop | Diameter Gauge |
| Vertex Conversion Chart | Dioptic Conversion Chart | Radiuscope |
| Snellen Chart | Acuity Trial Lens Set | |

3. Prefit Evaluation / Hard and Gas Permeable Contact Lenses**3.1 Advanced Ocular Anatomy and Physiology**

| | | |
|------------------|-------------|------------------|
| Cornea Structure | Conjunctiva | Lid Structure |
| Tear Film | Lashes | Crystalline Lens |
| Iris | Pupil | Sclera |

3.2 Advanced Ocular Pathology

| | | |
|---------------------|---------------------|-----------------|
| Conjunctivitis | GPC | Blepharitis |
| Exophthalmos | Keratoconus | Keratitis sicca |
| Neovascularization | Pterygium | Pinguecula |
| Aniridia | Corneal Edema | Corneal Ulcers |
| Bullous Keratopathy | Corneal Dystrophies | |

3.3 Abnormalities Affecting Hard and Gas Permeable Lens Wear

| | | |
|-------------------|------------------|-----------|
| Alcohol | Drugs | Diabetes |
| Arthritis | Herpes | Thyroid |
| Ocular Medication | Systemic Disease | Allergies |

3.4 Lifestyle Considerations for Hard and Gas Permeable Lens Wear

| | | |
|-----------|------------------|---------|
| Athletics | Work Environment | Climate |
| Cosmetic | Social | Age |

3.5 Interpreting Refractive Errors for Hard and Gas Permeable Lenses

| | | |
|-------------|--------------|---------------|
| Myopia | Hyperopia | Presbyopia |
| Aphakia | Amblyopia | Strabismus |
| Astigmatism | Aniseikonia | Exotropia |
| Esotropia | Pseudophakia | Anisometropia |

3.6 Advanced Corneal Defects / Deformities / Injuries

| | | |
|---------------|-------------|--------------------|
| Keratoplasty | Albinism | Nystagmus |
| Coloboma | Retinopathy | Radial Keratometry |
| Laser Surgery | | |

4. Determine Lens Type / Lens Design / Hard and Gas Permeable Lenses**4.1 Hard and Gas Permeable Lens Configuration and Design**

| | | |
|----------------------|------------------------|-----------------|
| Aspheric | Front Toric | Back Toric |
| Bi-Toric | Prism Ballast | Keratoconus |
| Presbyopic Design | Aphakic Design | Cosmetic Design |
| Lenticular Myoflange | Lenticular Hyperflange | |

4.2 Determination of Hard and Gas Permeable Lens Parameters

| | | |
|------------------------|----------------------------|-------------|
| Base Curve | Diameter | Edge Design |
| Thickness | Vertex Power | |
| Apical Posterior Curve | Posterior Peripheral Curve | |

4.3 Chemical Properties / Relation to Pre-Fit Evaluation

| | | |
|----------------------|------------------|------------|
| Oxygen Permeability | Transmissibility | Durability |
| Thermal Conductivity | Surface Wetting | Stability |

- 4.4 Lens Material Characteristics / Relation to Pre-Fit Evaluation
 Prescription Limitation Design Limitations
 Specific Gravity Colour Tinting
 Manufacturing Limitation
5. **Solution Compatibility / Hard and Gas Permeable Lens Materials**
 5.1 Chemical Disinfection Systems
 5.2 Ultrasonic Disinfection Systems
 5.3 Surfactant Cleaners
 5.4 Enzyme Cleaners
 5.5 Rewetting Agents
6. **Fitting Procedure / Hard and Gas Permeable Lenses**
 6.1 Procedure for Specific Lens Types
 Daily Wear Extended Wear
 Therapeutic Investigational
 6.2 Procedure for Specific Patient Application
 Myopia Hyperopia Astigmatism
 Presbyopia Aphakia Esotropia
 Exotropia Therapeutic Pediatric
7. **Patient Instruction / Delivery Procedure**
 7.1 Patient Instruction / Verbal and Written
 - Patient hygiene
 - Insertion and removal techniques
 - Alternate insertion and removal techniques
 - Emergency responses to patient insertion and removal techniques
 7.2 Patient Post Insertion / Removal Procedure
 - Movement / Centration / Stability
 - Burning / Itching / Stinging
 - Presence of a foreign body
 - Visual acuity
 7.3 Hygiene for Hard and Gas Permeable Lens Care
 - Chemical Disinfection Systems
 - Ultrasonic Disinfection Systems
 - Surfactant Cleaners
 - Enzyme Cleaners
 - Rewetting Agents
 7.4 Lens Sensitivities / Contamination
 - Chemical contamination
 - By-Product contamination
 - Airborne contaminations
 - Allergy reactions
 - Systemic reaction
 - Medication reaction

8. Patient Follow-up Care / Evaluation**8.1 Instrumentation Diagnosis**

- a) *Keratometry*
 - Post Lens fitting observation
 - Objective diagnosis
 - Corneal compatibility
- b) *Slit Lamp Biomicroscope*
 - Ocular anatomy
 - Ocular physiology
 - Lens fitting evaluation
 - Corneal compatibility
 - Objective diagnosis
 - Fluorescein pattern evaluation
- c) *Phoropter / Trial Lens Set*
 - Visual acuity verification

8.2 Aspects of Evaluation / Corrective Measures

| | | |
|-----------------------|--------------------------|--------------|
| Movement | Centration | Stability |
| Steep Lens | Flat Lens | Damaged Lens |
| Corneal Molding | Corneal Edema | Infection |
| Neovascularization | Corneal Staining | Foreign Body |
| Conjunctival Staining | Allergic Ocular Response | |
| | Systemic Ocular Response | |

8.3 Follow-up Protocols / Hard and Gas Permeable Lens Types

| | | |
|------------|---------------|-------------|
| Aspheric | Front Toric | Back Toric |
| Bi-Toric | Prism Ballast | Keratoconus |
| Presbyopic | Aphakic | Cosmetic |

8.4 Follow-up Protocols / Solution Compatibility

- Allergic ocular response
- Systemic ocular response
- Daily wear materials
- Extended wear materials
- Therapeutic / Pediatric materials

8.5 Follow-up Protocols / Specific Patient Types

- Routine
- Apprehensive
- Psychologically unstable
- Post Surgical

O: Methods of Instruction

1. Lecture
2. Clinical exercises in the dispensary
3. Independent study of procedures
4. Completion of Independent evaluation
5. Completion of Assignment

P: Textbooks and Materials to be Purchased by Students

Mandell, **Contact Lens Practice**, (Latest Edition) Charles C. Thomas Publishing

Stein-Slatt-Stein, **Fitting Guide for Rigid and Soft Contact Lenses**, (Latest Edition) C.V. Mosby Co.

Q: Means of Assessment

Means of Assessment

Evaluation of the course will be based on the course objectives in accordance with Douglas College policies. Evaluation methods will include written, oral and practical examination.

| | | |
|----|---------------------------------|-----|
| 1. | Completion of clinical fittings | 30% |
| 2. | Midterm Exam | 30% |
| 3. | Final Exam | 30% |
| 4. | Completion of Proficiency test | 10% |

R: Prior Learning Assessment and Recognition: specify whether course is open for PLAR

Yes

Course Designer(s)

Education Council / Curriculum Committee Representative

Dean / Director

Registrar