

CURRICULUM GUIDELINES

A: Division: **HEALTH SCIENCES**

Date: **May 23, 2002**

B: Department/ **DISPENSING OPTICIAN**
Program Area: **PROGRAM**

New Course

Revision

X

If Revision, Section(s) Revised: **N, Q**

Date Last Revised:

January 8, 2001

C: DOPT 510

D: CONTACT LENS CLINICAL DISPENSING II

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 direct supervision of an Optician / Contact Lens Fitter, or Optometrist, or Ophthalmologist and program instructor.

G: Allocation of Contact Hours to Types of Instruction/Learning Settings

Primary Methods of Instructional Delivery and/or Learning Settings:

Clinical

Number of Contact Hours: (per semester for each descriptor)

Clinical Experience: 120

Number of Weeks per Semester: **15**

H: Course Prerequisites:

DOPT 400 AND DOPT 410 AND DOPT 412

I. Course Corequisites:

DOPT 500, DOPT 512

J. Course for which this Course is a Prerequisite:

DOPT 610

K. Maximum Class Size:

14

L: PLEASE INDICATE:

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Non-Credit

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College Credit Non-Transfer

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College Credit Transfer:

Requested

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Granted

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SEE BC TRANSFER GUIDE FOR TRANSFER DETAILS (www.bccat.bc.ca)

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	Dioptric Conversion Chart	Radiuscope
Snellen Chart	Acuity Trial Lens Set	

3. Prefit Evaluation / Hard and Gas Permeable Contact Lenses3.1 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 Lenses4.1 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

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.

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|----|---------------------------------|-----|
| 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

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