Douglas College

EFFECTIVE: SEPTEMBER 2009
CURRICULUM GUIDELINES

A.	Division:	**EDUCATION**	Effective Date:	**SEPTEMBER 2009**	
B.	Department / Program Area:	**HEALTH SCIENCES/ DISPENSING OPTICIAN**	Revision	**X**	New Course
			If Revision, Section(s) Revised:	**C, D, F, G, I, J, M, N, O**	
			Date of Previous Revision:	**JANUARY 2008**	
			Date of Current Revision:	**JUNE 2009**	

C:	**D:**	**E:**
DOPT 2113	**LABORATORY IN CONTACT LENSES AND OPTICAL TECHNOLOGIES I**	**4**
Subject & Course No.	Descriptive Title	Semester Credits

F: Calendar Description:

This course provides students the laboratory skills for quality control of contact lens materials, solutions, and their ocular applications. The ability to calibrate, maintain and implement the usage of the equipment and tools associated within the contact lens dispensary. There is a new focus on the new technologies related to automated refractive error determination. The student will review past, current, and new equipment used during the course of a routine sight testing component of an eye exam. It provides the student with the skills to assimilate information collected on contact lens materials, solutions, and techniques for ocular application and refractive error correction. A one-week on-campus (laboratory and clinical) instruction component will take place near the end of the semester to complete the course.

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

Primary Methods of Instructional Delivery and/or Learning Settings:

Lecture / Distance / Laboratory

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

Lecture / Distance / Laboratory **120 hrs.**

Number of Weeks per Semester:

15

H: Course Prerequisites:

DOPT 1310 or Meeting Second Year Direct Entrance Requirements

I: Course Corequisites:

DOPT 2111

J: Course for which this Course is a Prerequisite:

DOPT 2213

K: Maximum Class Size:

25

L: PLEASE INDICATE:

- [ ] Non-Credit
- [X] College Credit Non-Transfer
- [ ] College Credit Transfer:

SEE BC TRANSFER GUIDE FOR TRANSFER DETAILS (www.bctransferguide.ca)

M: Course Objectives / Learning Outcomes:

Upon successful completion, the student will be able to:

1. Demonstrate competency with the use of instruments for contact lens fitting, lens analysis, and refractive error
2. Collect, record, and interpret data and patient health information through during a routine contact lens fitting and refractive error determination
3. Gain knowledge of contact lens materials by manufacturer, label name, material compound names, water content, power range and recommended patient fitting procedure and wearing schedule
4. Recall knowledge of contact lens cold disinfection systems, lens storage solutions, surfactant cleaning solutions, enzyme cleaners, rewetting agents, and medically prescribed pharmaceutical agents
5. Describe the physical cleaning and disinfection of contact lenses
6. Recall knowledge of contact lens solutions by manufacturer, brand name, chemical ingredients, and recommended usage.
7. Describe the steps in the refraction process and use the equipment necessary to produce the patient's refractive error assessment.
8. Recall knowledge of the automated refractive error assessment within the context of the overall eye exam.
9. Apply knowledge of tonometry to collect and record intraocular pressure.
10. Describe concepts of boutique eyeglass and contact lens dispensing
11. Describe limitations and contraindications to the automated refractive error assessment according to the Professional Standards of Practice

N: Course Content:

1. **Introduction**
   - **a.** Laboratory objectives
   - **b.** Orientation to laboratory instruments and equipment
   - **c.** Laboratory hygiene
   - **d.** Equipment sterilization

2. **Traditional and Computerized Diagnostic Technologies**

Slit Lamp Biomicroscope	Keratometry	Lensometer
Profile Analyzer	Hand Loop	Diameter Gauge
Vertex Conversion Chart	Dioptric Conversion Chart	
Snellen Chart	Acuity Trial Lens Set	
Phoroptor	Auotmated Corneal Topography	
Autorefractor	Tonometry	

3. **Lens Types, Material Characteristics, Fitting, and Relationship to Ocular Health**
   - **a.** Material compounds
   - **b.** Material configurations and design
   - **c.** Lens parameter determination
   - **d.** Chemical properties of contact lenses
   - **e.** Manufacturer's material limitations

Course Content Continued

4. **Contact Lens Solution Properties, Chemical Compounds, Procedures, and Relationship to Ocular Health**
   - **a.** Chemical Disinfection Systems
   - **b.** Hydrogen Peroxide Disinfection
   - **c.** Surfactant Cleaners
   - **d.** Enzyme Cleaners
   - **e.** Rewetting Agents
   - **f.** Medically Prescribed Ocular Pharmaceutical Agents

5. **Automated Sight Testing**
   - **a.** The Process of Refraction
   - **b.** Equipment and function
   - **c.** Ophthalmoscopy
   - **d.** Retinoscopy
   - **e.** Subjective and Objective Refraction
   - **f.** Autorefraction
   - **g.** Tonometry
   - **h.** Corneal Topographer
   - **i.** Professional Standards of Practice

6. **Professional Relationship with the Patient**
   - **a.** Communication and patient interaction
   - **b.** New Fit Routine
   - **c.** Follow-up Routine

O: Methods of Instruction:

1. Lectures
2. Independent study of courseware
3. Independent completion of online self-assessment quizzes
4. Completion of field assignments
5. Participation in online Discussion Forums

P: Textbooks and Materials to be Purchased by Students:

A list of required and optional textbooks and materials is provided for students at the beginning of each semester.

Q: Means of Assessment:

The course evaluation is consistent with Douglas College evaluation policy. An evaluation schedule is presented at the beginning of the course.

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

Yes.

Course Designer(s)

Education Council / Curriculum Committee Representative

Dean / Director: Dr. Mike Tarko

Acting Registrar: Brenda Walton

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