



**EFFECTIVE: SEPTEMBER 2002**

**CURRICULUM GUIDELINES**

**A:** Division: **HEALTH SCIENCES** Date: **May 23, 2002**  
**B:** Department/ **DISPENSING OPTICIAN** New Course  Revision   
 Program Area: **PROGRAM**  
 If Revision, Section(s) Revised: **M, N, P, Q**  
 Date Last Revised: **March 1, 1995**

**C: DOPT 112 D: DISPENSING OPTICIAN LAB SKILLS I E: 5**  
 Subject & Course No. Descriptive Title Semester Credits

**F:** Calendar Description:  
 This course provides students the laboratory skills for quality control of lenses, the ability to layout and prepare lenses for edging; edge and hand edge lenses, treat glass lenses for safety. The ability to calibrate and maintain the equipment and tools associated with the edging and finishing laboratory. It provides the student with skills to insert lenses into various frame materials, and mount lenses on to various frame designs.

<p><b>G:</b> Allocation of Contact Hours to Types of Instruction/Learning Settings</p> <p>Primary Methods of Instructional Delivery and/or Learning Settings:</p> <p><b>Laboratory</b></p> <p>Number of Contact Hours: (per semester for each descriptor)</p> <p><b>Laboratory: 150 hrs.</b></p> <p>Number of Weeks per Semester: <b>15</b></p>	<p><b>H:</b> Course Prerequisites:</p> <p><b>NIL</b></p>
	<p><b>I.</b> Course Corequisites:</p> <p><b>DOPT 100</b></p>
	<p><b>J.</b> Course for which this Course is a Prerequisite:</p> <p><b>DOPT 200 + DOPT 210 + DOPT 212</b></p>
	<p><b>K.</b> Maximum Class Size:</p> <p><b>14</b></p>

**L:** PLEASE INDICATE:

Non-Credit  
 College Credit Non-Transfer  
 College Credit Transfer: Requested  Granted

SEE BC TRANSFER GUIDE FOR TRANSFER DETAILS ([www.bccat.bc.ca](http://www.bccat.bc.ca))

**M:** Course Objectives/Learning Outcomes

Upon successful completion, the student will be able to:

- spot check lenses for surface quality
- verify the power of a single vision lens with the lensometer
- mark the optical centre and major reference point of a single vision lens
- calculate horizontal and vertical lens centration
- calculate lens blank size requirements
- perform the function of lens pattern calculation and formation
- perform the process of lens edging
- perform modifications of lens shapes by hand edging
- edge polish lenses
- perform lens insertion and mounting with various frame designs and materials
- calibrate the following instruments
  - Lensometer                      Edger                      Lens Protractor
- perform lubrication and maintenance on the following equipment
  - Lens Blocker                      Edger                      Hand Stone
  - Lensometer                      Pattern Maker
- perform chemical and thermal lens hardening.
- define ophthalmic terms pertaining to frame materials, designs, fitting and adjustments
- perform frame fitting and adjustments

**N:** Course Content

**1. Introduction**

- course content and requirements
- orientation of the equipment and tools
- an overview of the edging process
- introduction to industry standard charts
- safety procedures in the laboratory

**2. Spotting of Lenses**

- checking for optimal surface quality
- use of the lensometer
- power verification of single vision lenses
- optical centre versus major reference point
- single vision lenses with prism

**3. Frames**

- frame parts, types & materials
- frame measurements & markings
- frame selection
- frame alignment & adjustment
- frame repairs
- specialized frames
- lens insertion
- frame maintenance & cleaning

**4. Centration of Single Vision Lenses**

- the mechanics of lens centration
- horizontal and vertical centration
- the boxing system
- calculating lens blank sizes
- industry standards formulas

**5. Blocking of Lenses**

- the lens protractor
- marking a single vision lens
- double checking lens blank size
- pupil distances and accuracy
- blocking systems and their relationship to lens materials
- deblocking lenses

N: Course Content cont'd

- 6. Lens Shape Formation**
  - pattern measurements and terminology
  - mounting and datum lines
  - pattern formation
  
- 7. Edging**
  - the edging process
  - deviations from edger settings
  - lens chucking
  - bevel selection
  - variations in lens materials
  
- 8. Hand Edging**
  - purpose of hand edging
  - developing the correct technique
  - correctional modifications
  - changing shapes
  - edge polishing
  - lens cleaning solutions
  
- 9. Lens Insertion and Mounting**
  - frame materials
  - mounting design variations
  - hand tooling
  - heating and cooling
  - drilling and notching
  - grooving and nylon mounts
  - lens alignment
  - frame alignment
  - securing screws and pins
  - final verification
  
- 10. Chemical and Thermal Hardening**
  - glass lens material
  - lens preparation
  - lens weight and hardening times
  - cooling process
  - verification with polariscope
  
- 11. Calibration and Maintenance**
  - maintenance schedules
  - calibration of lensometer
  - centration devices
  - calibration of edgers
  - edger lubrication and coolant system
  - dressing and truing of diamond wheels
  - recycling of glass and plastic waste materials

<b>O:</b>	<p>Methods of Instruction</p> <ol style="list-style-type: none"> <li>1. Laboratory Lectures</li> <li>2. Application / Calculation exercises in Laboratory</li> <li>3. Independent Study of Courseware</li> <li>4. Completion of Proficiency tests</li> <li>5. Completion of Laboratory Assignments</li> </ol>															
<b>P:</b>	<p>Textbooks and Materials to be Purchased by Students</p> <p style="padding-left: 40px;">Brooks - <b><u>Essentials for Ophthalmic Lens Work</u></b>. (Latest Edition) New York. Fairchild</p> <p style="padding-left: 40px;">Brooks - <b><u>System for Ophthalmic Dispensing</u></b>. (Latest Edition) Woburn. MA</p>															
<b>Q:</b>	<p>Means of Assessment</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 5%;">1.</td> <td style="width: 85%;">Completion of Proficiency tests</td> <td style="width: 10%; text-align: right;">20%</td> </tr> <tr> <td>2.</td> <td>Completion of Laboratory Assignments</td> <td style="text-align: right;">20%</td> </tr> <tr> <td>3.</td> <td>Midterm Exam</td> <td style="text-align: right;">20%</td> </tr> <tr> <td>4.</td> <td>Practical midterm</td> <td style="text-align: right;">20%</td> </tr> <tr> <td>5.</td> <td>Final Exam</td> <td style="text-align: right;">20%</td> </tr> </table> <p>Midterm and Final examinations will be written and practical.</p>	1.	Completion of Proficiency tests	20%	2.	Completion of Laboratory Assignments	20%	3.	Midterm Exam	20%	4.	Practical midterm	20%	5.	Final Exam	20%
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<b>R:</b>	<p>Prior Learning Assessment and Recognition: specify whether course is open for PLAR</p> <p>Yes</p>															

Course Designer(s)

Education Council/Curriculum Committee Representative

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Dean/Director

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Registrar