Douglas College

CURRICULUM GUIDELINES

A: Division: **HEALTH SCIENCES**

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

Date: **January 8, 2001**

New Course [ ] Revision [X]

If Revision, Section(s) Revised: **E, F, G, M, N**

Date Last Revised: **March 1, 1995**

C:	D:	E:
DOPT 100	**DISPENSING OPTICIAN THEORY**	**7**
Subject & Course No.	Descriptive Title	Semester Credits

F: Calendar Description:

This course provides the introductory theory related to eyeglass dispensing. The following content areas are presented: basic mathematical calculations used in practice, optics, anatomy and physiology and conditions of the eye, instruments and tools used in practice, frames, lenses and analysis and interpretation of prescriptions, surgical alternatives, professional standards of practice.

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

Primary Methods of Instructional Delivery and/or Learning Settings:
Lecture and Student Directed Learning

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

Lecture	**90 hrs.**
Student Directed Learning	**90 hrs.**

Number of Weeks per Semester: **15**

H: Course Prerequisites:
NIL

I. Course Corequisites:
DOPT 112

J. Course for which this Course is a Prerequisite:
DOPT 200 + DOPT 210 + DOPT 212

K. Maximum Class Size:
35

L: PLEASE INDICATE:

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

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. - Calculate basic mathematical formulas relating to the theory of Optics.

2. -Define medical and ophthalmic terms pertaining to the anatomy and physiology of the eye.

3.
- 3.1 -Define scientific and ophthalmic terms pertaining to optics.
- 3.2 -Calculate the angle of deviation of a prism, the power of a prism, lens surface curvature and focal power.
- 3.3 -Apply information pertaining to vergencies.

4.
- 4.1 -Define scientific and ophthalmic terms pertaining to lenses.
- 4.2 -Apply knowledge of lens materials, tinting and coatings, and safety aspects of lenses.
- 4.3 -Transpose prescriptions
- 4.4 -Determine unknown values with power crosses.
- 4.5 -Determine optimum lens blank size.
- 4.6 -Define ophthalmic terms pertaining to analysis and interpretation of prescriptions.
- 4.7 -Calculate lens thickness, prismatic effects and vertical imbalance.
- 4.8 -Retain a knowledge of acceptable and unacceptable lens standards of the ophthalmic dispensing industry.

5.
- 5.1 -List and define the function of various ophthalmic instruments used in the scope of practice of opticians.
- 5.2 - Perform the functions of these instruments:-

Lensometer	pupillometer	optic ruler
penlight	distometer	vertex gauge
lens clock	calipers	conversion calculator
polariscope	clavulus	frame heater
screwdrivers	optic pliers	ultrasonic cleaner
drills	thread taps	files

6.
- 6.1 -Define Ophthalmic terminology pertaining to surgical alternatives.
- 6.2 -Be able to give clear descriptions of Surgical Alternatives

7.
- 7.1 Become familiar with the Standards of Practice of Dispensing Opticians (Eyeglasses) from the College of Opticians of B.C. pertaining to tools required, optical tolerances and professional conduct.

N: Course Content

1. **Introduction**
   - -course content and requirements
   - -sign pledge to code of ethics and practice standards
   - -orientation to College of Opticians Regulations
   - -Responsibilities to the consumer of Vision Health Care providers
   - -review of pre-required optical facility tour

2. **Anatomy & Physiology 1**
   - -terminology
   - -structure of the eye
   - -physiology of the eye
   - -conditions of the eye
   - -pathologies & abnormalities
   - -refractive errors
   - -strabismus

3. **Applied Math 1 & Math Review**
   - -order of arithmetic operations
   - -how to round off numbers
   - -metric conversions
   - -scientific notation
   - -right angle triangles
   - -how to solve equations
   - -how to isolate variables in an equation
   - -trigonometric functions
   - -vector analysis

4. **Physical Optics 1**
   - -theory of light
   - -prisms: -power of prisms
     - -deviations of light by calculation
   - -Snell's Law
   - -surface curvature
   - -focal power & calculation
   - -vergencies: -convergent rays of light
     - - divergent rays of light

5. **Surgical Alternatives**

   Medical and ophthalmic terms pertaining to surgical alternatives to spectacle and/or content lens wear, including the following:
   - -refractive keratoplasty
   - -keratomileusis
   - -keratophakia
   - -epikeratoprosthesis
   - -radial keratotomy
   - -Photo refractive Keratectomy (PRK)
   - -intraocular lens implants

N: Course Content cont'd

6. **Standards of Practice**
   -client management
   -records management
   -supervision and responsibility
   -professional ethics
   -equipment for dispensing eyeglasses
   -tolerance for dispensing eyeglasses

O: Methods of Instruction

1. Lecture
2. Application / Calculation exercises in classroom
3. Independent study of courseware
4. Independent completion of post tests
5. Completion of field assignments

P: Textbooks and Materials to be Purchased by Students

Brooks - Boris, **System for Ophthalmic Dispensing**, (Latest edition) New York, Fairchild

Cassin - Soloman, **Dictionary of Eye Terminology**, (Latest Edition) Florida, Triad Co.

Dowalaby, **Practical Aspects of Ophthalmic Optics**, (Latest Edition)New York,Fairchild

Brooks, **Essentials for Ophthalmic Lens Work**, (Latest Edition) New York, Fairchild

Douglas College Courseware

Q: Means of Assessment

Evaluations of the course will be based on the course objectives in accordance with Douglas College policies. Evaluation methods will include written tests and assignments.

1. Completion of post tests	20%
2. Midterm exams (X 2)	40%
3. Final exam	30%
4. Completion of field assignments	10%

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

No

Course Designer(s)

Education Council/Curriculum Committee Representative

Dean/Director

Registrar