

OPT-2550: ADVANCED OPTICAL DISPENSING LAB

Cuyahoga Community College

Viewing: OPT-2550 : Advanced Optical Dispensing Lab

Board of Trustees:

January 2023

Academic Term:

Fall 2023

Subject Code

OPT - Optical Technology

Course Number:

2550

Title:

Advanced Optical Dispensing Lab

Catalog Description:

Development of advanced dispensing techniques including troubleshooting, advanced lens design, advanced fitting theory and repair techniques.

Credit Hour(s):

1

Lecture Hour(s):

0

Lab Hour(s):

3

Requisites

Prerequisite and Corequisite

OPT-1520 Optical Dispensing II.

Outcomes

Course Outcome(s):

Utilize advanced prescription analysis, fitting theory, geometric optics and the use of ophthalmic equipment to design specialized eyewear.

Objective(s):

- a. Analyze ophthalmic prescriptions in order to design any eyewear, including single vision, multifocal and specialized eyewear.
- b. Assess the vocational and avocational needs of the patient.
- c. Determine all physiognomic measurements, including those needed for specialized eyewear.

Course Outcome(s):

Communicate professionally with patients and ophthalmic professionals.

Objective(s):

- a. Assess the vocational and avocational needs of the patient.
 - b. Adjust ophthalmic frames to fit the patient comfortably.
 - c. Address patient concerns about visual acuity.
 - d. Address patient concerns about the comfort of their eyewear.
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Course Outcome(s):

Use ophthalmic equipment to verify the accuracy of eyewear, address patient concerns and make modification to eyewear.

Objective(s):

- a. Determine all physiognomic measurements, including those needed for specialized eyewear.
- b. Adjust ophthalmic frames to fit the patient comfortably.
- c. Address patient concerns about visual acuity.
- d. Address patient concerns about the comfort of their eyewear.

Course Outcome(s):

Conduct self in a professional manner at all times.

Objective(s):

- a. Analyze ophthalmic prescriptions in order to design any eyewear, including single vision, multifocal and specialized eyewear.
- b. Address patient concerns about visual acuity.
- c. Address patient concerns about the comfort of their eyewear.

Course Outcome(s):

Dispense eyewear to patients.

Objective(s):

- a. Assess the vocational and avocational needs of any patient.
- b. Determine all physiognomic measurements using computerized technology.
- c. Prepare ophthalmic laboratory work orders both manually and electronically.
- d. Evaluate ophthalmic frame adjustments and make appropriate correction if necessary.
- e. Apply American National Standards Institute Z80.1-2010 standards to determine the accuracy of spectacles.
- f. Discuss absorptive lenses.
- g. Apply HIPAA regulations as they pertain to the design and delivery of eyewear.
- h. Use ophthalmic equipment to determine an ophthalmic prescription.
 - i. Analyze any ophthalmic prescription in order to design single vision or multifocal eyewear.

Methods of Evaluation:

- a. Practical skills assessment
- b. Patient assessment
- c. Written report

Course Content Outline:

- a. Advanced prescription analysis
 - i. Figuring intermediate power
 - ii. Figuring near power
 - iii. Determining whether slab-off is needed
- b. Advanced spectacle design
 - i. Designing eyewear with prescribed prism
 - ii. Designing eyewear for use at intermediate distance
 - iii. Designing eyewear for use at near distance
 - iv. Designing eyewear that includes bicentric grind
 - v. Designing spectacles for occupational use
 - vi. Advanced multifocal design
- c. Addressing spectacle problems
 - i. Addressing major reference point placement
 - ii. Addressing seg height placement
 - iii. Addressing frame alignment
 - iv. Addressing vertex distance

- v. Addressing face form
- vi. Addressing visual acuity problems
- d. Advanced spectacle fitting
 - i. Adjusting multifocal eyewear
 - ii. Adjusting spectacles with occupational lenses
- e. Professional Communications
 - i. Communicating concerns with other ophthalmic professionals
 - ii. Hearing and addressing patient concerns
 - iii. Giving and receiving constructive feedback
- f. Advanced use of ophthalmic equipment

Resources

Brooks, Clifford W. and Irvin Borish. *System for Ophthalmic Dispensing*. 3rd. Butterworth-Heinemann, 2006.

National Academy of Opticianry. (2019) *Ophthalmic Dispensing Review Book*, Landover, MD: National Academy of Opticianry.

Resources Other

- a. [20/20 Magazine](https://www.2020mag.com). <https://www.2020mag.com> Jobson Medical Information, LLC. 2019.
- b. [Contact Lens Spectrum](https://www.clspectrum.com/). <https://www.clspectrum.com/> Pentavision, Inc. 2019
- c. [Eyecare Business](https://www.eyecarebusiness.com/). <https://www.eyecarebusiness.com/> Pentavision, Inc. 2019.
- d. [Invision Magazine](https://invisionmag.com/). <https://invisionmag.com/> Invision Mag. 2019.
- e. [Khan Academy](https://www.khanacademy.org/). <https://www.khanacademy.org/> 2019.
- f. <https://opticianworks.com/>
- g. [Quantum Optical](http://www.quantumoptical.com/). <http://www.quantumoptical.com/> 2022.
- h. [Review of Optometry](https://www.reviewofoptometry.com/). <https://www.reviewofoptometry.com/> Jobson Medical, Inc. 2022.
- i. <https://timroot.com/videos/>
- j. Essilor. *Corrective Lenses*. <https://www.essilor.com/en/the-group/activities-and-distribution/corrective-lenses/>

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