

# OPT-2650: LICENSE REVIEW SPECTACLE

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## Cuyahoga Community College

**Viewing: OPT-2650 : License Review Spectacle**

**Board of Trustees:**

January 2022

**Academic Term:**

Fall 2022

**Subject Code**

OPT - Optical Technology

**Course Number:**

2650

**Title:**

License Review Spectacle

**Catalog Description:**

Focus on key optical concepts as they relate to spectacles with in-depth look at the domains assessed on the National Opticianry Competency Examination administered by the American Board of Opticianry.

**Credit Hour(s):**

1

**Lecture Hour(s):**

1

## Requisites

**Prerequisite and Corequisite**

Departmental approval.

## Outcomes

**Course Outcome(s):**

Design, fit and dispense spectacles, adhering to federal, state, and local guidelines.

**Objective(s):**

1. Describe the characteristics of dispensing and fitting of various frame styles.
2. Identify ophthalmic equipment and identify how each piece is used.
3. Describe the process of lens neutralization.
4. Validate that spectacle lenses are fabricated as prescribed by the refractionist within acceptable standards set forth by the American National Standards Institute (ANSI).

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**Course Outcome(s):**

Determine how ocular anatomy impacts spectacle design.

**Objective(s):**

1. Describe the structure and function of the eye.
2. Identify basic ocular pathology.
3. Interpret ophthalmic prescriptions.

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**Course Outcome(s):**

Consider and apply all aspects of spectacle design.

**Objective(s):**

1. Interpret and analyze an ophthalmic prescription.
  2. Perform advanced optical formulae calculations.
  3. Describe the characteristics of dispensing and fitting of various frame styles.
  4. Apply the laws and regulations that govern opticianry.
  5. Predict how inherent lens characteristics effect lens thickness and weight.
  6. Discuss how lens design impacts the geometric optics of a spectacle lens.
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**Course Outcome(s):**

Describe the maintenance and use of ophthalmic equipment.

**Objective(s):**

1. Describe the characteristics of dispensing and fitting of various frame styles.
  2. Identify ophthalmic equipment and identify how each piece is used.
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**Course Outcome(s):**

Apply the laws and regulations that govern opticianry.

**Objective(s):**

1. Describe the characteristics of dispensing and fitting of various frame styles.
  2. Apply the laws and regulations that govern opticianry.
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**Methods of Evaluation:**

1. Weekly tests or quizzes
2. Final exam

**Course Content Outline:**

1. Ophthalmic Optics
  - a. Terminology
  - b. Prescriptions
  - c. Lens characteristics
  - d. Lens powers and formulas
  - e. Lens types
  - f. Lens materials
  - g. Base curve
  - h. Prism
  - i. Prismatic effect
2. Ocular Anatomy, Physiology and Pathology
  - a. Structure and function of the eye
  - b. Refractive errors
    - i. Myopia
    - ii. Hyperopia
    - iii. Astigmatism
  - c. Ocular conditions
    - i. Presbyopia
    - ii. Glaucoma
    - iii. Macular degeneration
3. Ophthalmic Products
  - a. Frames
  - b. Lenses
  - c. Applying product knowledge
  - d. Recognizing specific product applicability with regard to the needs and wants of the patient
  - e. Verifying frame and lens parameters and other physical characteristics
4. Instrumentation

- a. Use of lens power measuring devices
  - i. Determine lens power from lens curves
  - ii. Neutralize lenses
  - iii. Validate that the lens is fabricated as prescribed by the refractionist.
- b. Select ophthalmic tools, instruments and equipment
- c. Use and maintain ophthalmic tools, instruments and equipment
- 5. Dispensing procedures
  - a. Visual needs for lifestyle and occupational activities
  - b. Fitting, adjusting, measuring and verification
  - c. Patient interaction
- 6. Regulatory
  - a. Administrative
  - b. Standards
  - c. Legal

## Resources

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

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Cassin, Barbara. *Dictionary of Eye Terminology*. 6th edition. Gainesville, FL: Triad Publishing Company, 2011.

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National Academy of Opticianry. *Ophthalmic Dispensing Review Book*. Landover, MD: National Academy of Opticianry, 2014.

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NOCE Exam Secrets Test Prep Team. *National Opticianry Competency Exam Secrets Study Guide: NOCE Test Review for the National Opticianry Competency Exam*. Beaumont, TX: Mometrix Media LLC, 2013.

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Stein, Harold. *The Ophthalmic Assistant: A Text for Allied and Associated Ophthalmic Personnel*. 10th edition. Atlanta, GA: Elsevier, 2017.

## Resources Other

1. 20/20 Magazine. <https://www.2020mag.com> Jobson Medical Information, LLC. 2019
2. Contact Lens Spectrum. <https://www.clspectrum.com/> Pentavision, Inc. 2019.
3. Eyecare Business. <https://www.eyecarebusiness.com/> Pentavision, Inc. 2019.
4. Ivision Magazine. <https://invisionmag.com/> Ivision Mag. 2019.
5. Khan Academy. <https://www.khanacademy.org/> 2019.
6. OptiBoard Forums. <http://www.optiboard.com/forums/> 2019.
7. <https://opticianworks.com/>
8. Opt Magazine. <http://www.optmagazine.com/> 2019.
9. Quantum Optical. <http://www.quantumoptical.com/> 2019.
10. Review of Optometry. <https://www.reviewofoptometry.com/> Jobson Medical, Inc. 2019.
11. <https://timroot.com/videos/>
12. <https://www.visioncareproducts.com/>

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