

# OPT-1510: OPTICAL DISPENSING I

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## Cuyahoga Community College

**Viewing: OPT-1510 : Optical Dispensing I**

**Board of Trustees:**

May 2024

**Academic Term:**

Fall 2024

**Subject Code**

OPT - Optical Technology

**Course Number:**

1510

**Title:**

Optical Dispensing I

**Catalog Description:**

Introduction, history, and development of modern opticianry, spectacles, and fitting procedures. Principles of interpersonal relationships. Instruction in basic frame types and parts.

**Credit Hour(s):**

3

**Lecture Hour(s):**

2

**Lab Hour(s):**

3

**Other Hour(s):**

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## Requisites

**Prerequisite and Corequisite**

Departmental approval: admission to Optical Technology program.

## Outcomes

**Course Outcome(s):**

Utilize prescription analysis, fitting theory, and the use of ophthalmic equipment to design accurate, single-vision eyewear.

**Essential Learning Outcome Mapping:**

Critical/Creative Thinking: Analyze, evaluate, and synthesize information in order to consider problems/ideas and transform them in innovative or imaginative ways.

**Objective(s):**

1. Identify all parts of an ophthalmic frame.
2. Apply geometric optics and proper use of ophthalmic equipment to determine accuracy of single vision eye wear.
3. Analyze ophthalmic prescriptions in order to design single vision eye wear.
4. Communicate with patients in order to design single vision eye wear.
5. Demonstrate the ability to properly align ophthalmic frames.
6. Describe the process of verifying the accuracy of spectacles fabricated by an ophthalmic laboratory.
7. Determine physiognomic measurements in the horizontal plane.
8. Discuss how ophthalmic frames pertain to the design and fitting of eye wear.

**Course Outcome(s):**

Communicate with various stakeholders throughout the process of fitting and dispensing eyewear.

**Objective(s):**

1. Describe professional communication for a diverse population that is sensitive to race, culture, and age.
  2. Perform effective and professional communication with the patient and eyecare professionals.
  3. Communicate with patients in order to design single-vision eyewear.
  4. Prepare ophthalmic laboratory single-vision work orders.
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**Course Outcome(s):**

Work within the federal standards that govern the dispensing of spectacles.

**Objective(s):**

1. Prepare ophthalmic laboratory single vision work orders.
  2. Describe the process of verifying the accuracy of spectacles fabricated by an ophthalmic laboratory.
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**Methods of Evaluation:**

1. Quizzes
2. Exams
3. Class Participation
4. Task analysis and evaluation of manipulative skills

**Course Content Outline:**

1. Ophthalmic Prescription
  - a. Sphere
  - b. Cylinder
  - c. Axis
  - d. Prism
  - e. Add
2. Prescription Analysis
  - a. Transposition
  - b. Determine near power
  - c. Determine intermediate power
3. Ophthalmic Frames
  - a. Parts
  - b. Markings
  - c. Materials
4. Frame Alignment
  - a. Standard alignment
  - b. Patient alignment
5. Design Theory
  - a. Determine patient needs
  - b. Appropriate frame selection
  - c. Physiognomic measurements
  - d. Frame selection
  - e. Frame adjustment
  - f. Lens selection
6. Verification of Eyewear
  - a. Use of lensometer in verification
  - b. Determine fabricated horizontal distance
  - c. ANSI standards (Z80.1-2010 and Z87.2)
  - d. FDA regulations
7. Communication in the eyecare setting

- a. Communication process
  - i. Interprofessional
  - ii. Intrapersonal
- b. Verbal communication in nursing and health professions
  - i. Establishing professional rapport with the patient
  - ii. Communicating techniques for diverse populations
- c. Written communication in nursing and health professions
  - i. Medical records
  - ii. Ordering eyewear
  - iii. Patient privacy
- d. Communicating with patients when troubleshooting eyewear

## Resources

American National Standards Institute. (2020) *Standards (Z80 and Z87)*, New York: The Institute.

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Brooks, C. W. (2023) *System for ophthalmic dispensing*, Elsevier.

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National Academy of Opticianry. (2019) *Ophthalmic dispensing review book*, National Academy of Opticianry.

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McCleary, David S. (2018) *The optician training manual: Simple steps to becoming a great optician*, Santa Rosa Publishing.

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## Resources Other

1. 20/20 <https://www.2020mag.com/>
2. American Optometric Association. <https://www.aoa.org/patients-and-public/caring-for-your-vision/contact-lenses?sso=y> (<https://www.aoa.org/patients-and-public/caring-for-your-vision/contact-lenses/?sso=y>)
3. Centers for Disease Control and Prevention. "Healthy Contact Lens Wear and Care." <https://www.cdc.gov/contactlenses/index.html> (<https://www.cdc.gov/contactlenses/>)
4. Eyecare Business <https://www.eyecarebusiness.com/>
5. Invision <https://invisionmag.com/>
6. Khan Academy. <https://www.khanacademy.org/>
7. Ophthobook <https://timroot.com/ophthobook/>
8. OptiBoard Forums. <http://www.optiboard.com/forums/>
9. Quantum Optical. <http://www.quantumoptical.com/> (<https://www.2020mag.com/>)
10. Review of Optometry. <https://www.reviewofoptometry.com/>
11. Vision Professionals Board <https://vision.ohio.gov/vision-professionals/optician/3-optician> (<https://vision.ohio.gov/vision-professionals/optician/3-optician/>)

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