

OPT-1520: OPTICAL DISPENSING II

Cuyahoga Community College

Viewing: OPT-1520 : Optical Dispensing II

Board of Trustees:

May 2024

Academic Term:

Fall 2024

Subject Code

OPT - Optical Technology

Course Number:

1520

Title:

Optical Dispensing II

Catalog Description:

Beginning principles of design, fitting, verification and dispensing of spectacles.

Credit Hour(s):

3

Lecture Hour(s):

2

Lab Hour(s):

3

Other Hour(s):

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Requisites

Prerequisite and Corequisite

OPT-1510 Optical Dispensing I.

Outcomes

Course Outcome(s):

Utilize prescription analysis, fitting theory, geometric optics and the use of ophthalmic equipment to design accurate spectacles.

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.

Information Literacy: Acquire, evaluate, and use information from credible sources in order to meet information needs for a specific research purpose.

Objective(s):

1. Use ophthalmic equipment to determine an ophthalmic prescription.
2. Discuss HIPAA as it pertains to the design and delivery of spectacles
3. Apply geometric optics, federal regulations, and proper use of ophthalmic equipment to determine the accuracy of spectacles.
4. Analyze ophthalmic prescriptions in order to design single vision or multifocal spectacles.
5. Assess the vocational and avocational needs of the patient.
6. Determine all physiognomic measurements.
7. Prepare ophthalmic laboratory work orders.
8. Adjust ophthalmic frames to fit the patient comfortably.
9. Verify the accuracy of spectacles fabricated in an ophthalmic laboratory.
10. Discuss absorptive lenses.

Course Outcome(s):

Utilize effective communication skills with patients and eyecare professionals.

Essential Learning Outcome Mapping:

Information Literacy: Acquire, evaluate, and use information from credible sources in order to meet information needs for a specific research purpose.

Objective(s):

1. Assess the vocational and avocational needs of the patient.
 2. Prepare ophthalmic laboratory work orders.
 3. Adjust ophthalmic frames to fit the patient comfortably.
 4. Discuss absorptive lenses.
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Course Outcome(s):

Work within the standards that govern opticianry.

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. Discuss HIPAA as it pertains to the design and delivery of spectacles.
 2. Determine all physiognomic measurements.
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Course Outcome(s):

Perform work tasks in accordance with industry expectations for ophthalmic professionals.

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.

Information Literacy: Acquire, evaluate, and use information from credible sources in order to meet information needs for a specific research purpose.

Objective(s):

1. Discuss HIPAA as it pertains to the design and delivery of spectacles.
 2. Analyze ophthalmic prescriptions in order to design single vision or multifocal spectacles.
 3. Determine all physiognomic measurements.
 4. Prepare ophthalmic laboratory work orders.
 5. Adjust ophthalmic frames to fit the patient comfortably.
 6. Verify the accuracy of spectacles fabricated in an ophthalmic laboratory.
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Course Outcome(s):

Recognize valid professional sources.

Essential Learning Outcome Mapping:

Information Literacy: Acquire, evaluate, and use information from credible sources in order to meet information needs for a specific research purpose.

Objective(s):

1. Discuss how perspective and bias impact the credibility of an information source.
 2. Identify popular, professional, and academic sources within opticianry
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Methods of Evaluation:

1. Quizzes
2. Exams

3. Class Participation
4. Research log
5. Task analysis and evaluation of manipulative skills

Course Content Outline:

1. Interpersonal relationships
 - a. First visit
 - b. Rx selection and interpretation
 - c. Frame selection and style
 - d. Exit interview
 - e. Phone etiquette
2. Stock knowledge
 - a. Frames in stock
 - b. Ophthalmic lenses
 - c. Tints
 - d. Special orders
3. Ophthalmic lens characteristics
 - a. Index of refraction
 - b. Specific gravity
 - c. Dispersion
4. Lens options
 - a. Anti-reflective lenses
 - b. Tinted lenses
 - c. Photochromic lens technology
 - d. Polarized lenses
5. Low vision aids
6. Interpupillary (P.D.) measurements
 - a. P.D. ruler
 - b. Corneal reflection pupillometer
 - c. Digital measurement systems
 - d. Measuring P.D. for distance vision
 - e. Measuring P.D. for intermediate vision
 - f. Measuring P.D. for near vision
7. Editing the prescription form
 - a. Rx
 - b. P. D.
 - c. Frame
 - d. Color of frame
 - e. Lens color and style
 - f. Glass or plastic
8. Designing quality eyewear
 - a. Prescription analysis
 - b. Identification of patient needs
 - c. Frame-prescription matching
 - d. Patient communication in the eyewear design process
 - e. Communicating with the patient while troubleshooting eyewear
9. Adjusting and dispensing glasses
 - a. Four-point touch test
 - b. Temple bends
 - c. Bridge bends
 - d. Pantoscope tilt
 - e. Retrosopic tilt

10. Laws, Regulations, and Standards
 - a. American National Standards Institute (A.N.S.I.) standards
 - i. Z80.1-2020
 - ii. Z87.1-2020
 - b. Health Insurance Portability and Accountability Act of 1996 (HIPAA)
 - c. Ohio Administrative Code 4725

Resources

American National Standards Institute 2015. (2020) *Standards*, The Institute.

Bhootra, A. K. (2018) *Optician's guide A manual for opticians*, Jaypee Brothers Medical Publishers.

Brooks, C.W. *System for ophthalmic dispensing*. 4th ed. Elsevier, 2023.

McCleary, D. *The optician training manual*. Santa Rosa Publishing, 2009.

National Academy of Opticianry. *Ophthalmic dispensing review book*. 2019.

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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