

BROWARD COLLEGE COURSE OUTLINE

LAST REVIEW: 2009-2010

NEXT REVIEW: 2014-2015

STATUS: A

COURSE TITLE: OPHTHALMIC DISPENSING

COMMON COURSE NUMBER: OPT 1450

CREDIT HOURS: 2

CONTACT HOUR BREAKDOWN

CLOCK HOURS:

Lecture: 32

Lab:

Clinic:

Other:

PREREQUISITE(S): OPT 1150, OPT 1150L, OPT 2090, OPT 2879

COREQUISITE(S):

PRE or COREQUISITE(S): OPT 1450L, OPT 2500, OPT 2500L, OPT 2800L

COURSE DESCRIPTION

This course reviews the theory and terminology of ophthalmic dispensing. Emphasis will be placed on new technology in ophthalmic frame materials; multifocal lenses including progressive power and occupational bifocals; and high index lenses. The process of analyzing the patient's prescription and identifying the patient's specific visual needs for the proper frame and lens selection is highlighted.

UNIT TITLES

- 1 ANATOMY AND PHYSIOLOGY OF THE VISUAL SYSTEM (REVIEW)
- 2 FACIAL ANATOMY AND COSMETICS
- 3 FRAME SELECTION
- 4 SPECIAL PURPOSE FRAMES
- 5 ORDERING AND VERIFICATION
- 6 LENS INSERTION
- 7 ALIGNMENT OF THE FRAME
- 8 ADJUSTING THE FRAME
- 9 FRAME REPAIRS

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Unit 1: ANATOMY AND PHYSIOLOGY OF THE VISUAL SYSTEM (REVIEW)

General Outcome:

1.0 The student will review gross anatomical structures and general physiology of the visual system.

Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the student shall be able to:

- 1.1 List the major systems of the body and describe their function.
- 1.2 Describe the structures of the eye.
- 1.3 List the bones of the orbit and skull.
- 1.4 Discuss the photochemistry of vision.
- 1.5 Describe the function of the visual pathway.
- 1.6 List the extra-ocular muscles and describe their function.
- 1.7 Describe four (4) refractive errors and how they are corrected.

Unit 2 FACIAL ANATOMY AND COSMETICS

General Outcome:

2.0 The student will discuss how facial anatomy can be enhanced by the proper use of cosmetics in frame selection.

Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the student shall be able to:

- 2.1 Describe the seven (7) basic facial shapes.
- 2.2 Discuss how frame cosmetics will affect facial cosmetics.
- 2.3 List five (5) basic skin tones and how face color will enhance facial cosmetics.

Unit 3 FRAME SELECTION

General Outcome:

3.0 The student will be able to determine how a frame can be used to enhance facial features and limitation on frame design due to optical considerations

Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the student shall be able to:

- 3.1 Discuss lens accessories.
- 3.2 Determine the effect that bridge design will have on the appearance of the nose.

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Unit 3 FRAME SELECTION continued

- 3.3 Compare and contrast frame style and construction when fitting the high minus or high plus lens wearer.
- 3.4 Determine the optical effects of various frame shapes.
- 3.5 Determine the change in effective power of a lens when the frame fit is changed.
- 3.6 Differentiate between the different angles of the nose pads and how they affect frame fit.

Unit 4 SPECIAL PURPOSE FRAMES

General Outcome:

4.0 The student will be able to identify and compare frames used for special prescriptions and occupations.

Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the student shall be able to:

- 4.1 List five (5) types of specialty frames.
- 4.2 Identify frames used for aphakic prescriptions.
- 4.3 Describe frames used for progressive myopia.
- 4.4 Discuss occupational safety frame requirements according to ANSI Z-87 standards.
- 4.5 Describe sports frames.
- 4.6 Compare and contrast several types of glazed and un-glazed sport frames.

Unit 5 ORDERING AND VERIFICATION

General Outcome:

5.0 The student shall: gain a working knowledge of how to order and verify lenses and frames.

Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the student shall be able to:

- 5.1 Identify important information on a lens order form.
- 5.2 Describe frame markings in relation to ordering.
- 5.3 Describe the use of a lensometer in the verification process.
- 5.4 Discuss how to determine the quality of lens surfaces and lens media.
- 5.5 Discuss the procedures used to verify frame orders.

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Unit 6 LENS INSERTION

General Outcome:

6.0 The student shall: gain a working knowledge of the procedure for insertion and mounting of spectacle lenses in an ophthalmic frame.

Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the student shall be able to:

- 6.1 Discuss the proper method for heating a zyl frame.
- 6.2 Compare and contrast several methods of lens insertion into a zyl frame.
- 6.3 List the factors to check after inserting a lens into a zyl frame.
- 6.4 Describe how to check bifocal segments.
- 6.5 Compare and contrast several methods of lens insertion into a nylon frame.
- 6.6 Compare and contrast several methods of lens insertion into a optyl frame.
- 6.7 Compare and contrast several methods of lens insertion into a wire frame.
- 6.8 Describe the methods of insertion of a lens into a semi-rimless frame.
- 6.9 Describe the methods of mounting a lens into a rimless frame.

Unit 7 ALIGNMENT OF THE FRAME

General Outcome:

7.0 The student shall: gain a working knowledge of the procedure used in “truing” or placing the frame in a standard alignment.

Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the student shall be able to:

- 7.1 Discuss “truing” or standard alignment.
- 7.2 Discuss the points in heating a frame.
- 7.3 Describe the process of aligning the bridge of a plastic frame.
- 7.4 Differentiate between horizontal alignment and a rotated lens in a plastic frame.
- 7.5 Discuss the “four-point” touch on a plastic frame.
- 7.6 Describe the procedure for alignment of the temples in a plastic frame.
- 7.7 List temple spread problems for a plastic and their solutions.
- 7.8 Discuss temple-fold angle of a plastic frame.
- 7.9 Describe the process of aligning the bridge of a metal frame.
- 7.10 Differentiate between horizontal alignment and a rotated lens in a metal frame.
- 7.11 Discuss the “four-point” touch on a metal frame.
- 7.12 Describe the procedure for alignment of the temples in a metal frame.
- 7.13 List temple spread problems for a metal and their solutions.
- 7.14 Discuss temple-fold angle of a metal frame.

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Unit 8 ADJUSTING THE FRAME

General Outcome:

8.0 The student shall: gain a working knowledge of the procedure used in adjusting the frame to custom fit a patient's face.

Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the student shall be able to:

- 8.1 Compare and contrast alternative methods of changing the pantoscopic tilt on various frames.
- 8.2 Discuss the procedure to adjust nose pads .
- 8.3 List the different nose pad angles and how they affect fit.
- 8.4 List the causes of a lens being out of alignment and the solutions.
- 8.5 Discuss the most common causes of a patient's complaint in frame fitting.
- 8.6 Describe the fitting triangle.
- 8.7 List the methods used in correcting the fit of a bridge.
- 8.8 Determine how to move a frame horizontally.
- 8.9 Describe proper temple fit.
- 8.10 List the steps in proper frame fitting.

Unit 9 FRAME REPAIRS

General Outcome:

9.0 The student shall: gain a working knowledge of the procedure and methods used in making minor frame repairs.

Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the student shall be able to:

- 9.1 Describe the proper methods for repairing hinges.
- 9.2 List methods for tightening.
- 9.3 List methods for repairing broken plastic frames.
- 9.4 Discuss wire brace bridge repairs.
- 9.5 Describe how to fix loose fitting lenses.
- 9.6 Describe the proper ways to clean frames.
- 9.7 Discuss frame soldering.