

Course Description

OPT1331 | Clinical Data Collection 2 | 2.00 credits

Techniques necessary in a clinical environment for the collection of subjective and objective patient diagnostic information including visual field plotting, tonometry, lensometry, keratometry, and sphugmomanometry.

Prerequisites: OPT1330, OPT1331L

Course Competencies:

Competency 1: The student will explain the techniques of how to measure a blood pressure reading and analyze the systolic and diastolic pressure by:

1. Identifying the instrument and its parts
2. Defining the Korotkoff sounds, systolic pressure, and diastolic pressure
3. Explaining the readings

Competency 2: The student will state the procedures, techniques, and methods used to measure an interpupillary distance for far and nearby by:

1. Defining what a Pupillary Distance is and its purpose
2. Describing and identifying the various instruments used to measure a pupillary distance: millimeter ruler and pupilometer
3. Explaining how to measure and record a distance and near Pupillary Distance

Competency 3: The student will identify and explain the techniques used in determining existing basic visual skills relating to accommodation, convergence, ocular motility, and binocularity by:

1. Describing the ocular muscles, fixation, alignment of the eyes, accommodation, and convergence
2. Describing dominance, near point of convergence, saccades, pursuit rotations, cover tests, and pupillary distance tests

Competency 4: The student will describe and identify the corneal measurement instruments, describe the purposes of corneal curvature measurements and instrument parts and their functions and skillful collection of data by:

1. Describing the keratometer and identifying its parts
2. Explaining the purpose of a keratometer

Competency 5: The student will learn the various types of glaucoma, signs and symptoms, methods of glaucoma diagnosis, treatment, and the instrumentation used to identify glaucoma by:

1. Understanding the basic anatomy of the eye
2. Differentiating among the different types of glaucoma, diagnosis, treatment plans, and prognosis
3. Explaining application and indentation tonometry and describing the various instruments
4. Explaining the parts of the non-contact tonometer and its operational procedures and measurements

Competency 6: The student will learn the principles of regular visual field testing, terminology, various defects and causes, and classifications of visual field defects by:

1. Defining the standard visual field blind spot and scotomas
2. Differentiating among the four visual field defect types (contraction, sector, quadrant, and hemianopsia)
3. Explaining the importance of stimuli while doing a v.f. (test object size, color, intensity, brightness, illumination, patient cooperation, speed of target, various defects, movement, contrast, time of exposure, and RX)
4. Explaining and define the retina-stimulated areas (central, pericentral, paracentral, cecal, blind spot, and peripheral)

5. Defining a scotoma and describing how the depth and steepness is found
6. Defining a depression
7. Defining a confrontation field and its purpose (screening test)

Competency 7: The student will learn the principles and be able to describe the purpose and various types and procedures of photo documentation by:

1. Explaining the definition of photo documentation
2. Describing the instrumentation and the procedure

Competency 8: The student will learn to explain and describe the purpose and parts of the lens meter by:

1. Explaining how "Diopter" relates to the lensometer
2. Explaining the differences between (-) lenses, (+) lenses, and spherocylindrical lenses
3. Defining the following terms: lensometer, diopter, concave lenses, convex lenses, cylindrical lenses, sphere cylindrical lenses, prism lenses, and add power
4. Explaining the purpose of the lensometer by being able to understand the difference between neutralization and verification
5. Identifying and describing the instrument

Competency 9: The student will learn to explain and identify a biomicroscope by:

1. Explaining and describe the different parts of the instrument
2. Explaining the purpose of each part
3. Explaining and differentiate among the types of illumination
4. Recognizing the different beams of light given off by the biomicroscope

Learning Outcomes:

- Communicate effectively using listening, speaking, reading, and writing skills