VISION CARE TECHNOLOGY (OPH)

Division: Nursing and Health Sciences Division

OPH 123 Ophthalmic Laboratory I (4 Credits)
This course teaches the use of basic lens measuring devices and gauges, LEAP system of blocking, and use of automatic and hand edging machinery. Standard frame alignment will be presented using zyl frames. Students will learn skills needed to fabricate a pair of eyeglasses including use of lensometers and vertometers and laying out single vision lenses in preparation for edging and final insertion into zyl and metal frames.

OPH 124 Ophthalmic Laboratory II (4 Credits)
Laboratory "finishing" procedures will be practiced; neutralizing, duplication, layout, edging, beveling, single vision and bifocal lenses, and insertion of lenses into plastic and combination frames. Students will also learn lens drilling and mounting in rimless and semi-rimless mountings, the use of both hand and automatic equipment related to the finishing operation, the identification of spectacle frames and patterns, and the use of the lens-hardening oven. Repair of frames and temples and the interpretation of shop-orders will be included.
Pre-requisites: OPH 123 with a minimum grade of C and OPH 126 with a minimum grade of C

OPH 126 Ophthalmic Materials I (3 Credits)
This course provides an introduction to the field of ophthalmic optics. The roles of the Ophthalmic Laboratory Technician, Ophthalmic Dispenser, Optometrist, and Ophthalmologist will be explained. The course continues with the history of lenses, basic optical terminology, lens characteristics, the metric system, and the refraction of light. Instructions will also include calculation of lens curvature, lens power, and prism. The gross anatomy of the eye will be introduced, as well as the use of optical charts and graphs.

OPH 127 Ophthalmic Materials II (3 Credits)
This course is a continuation of Ophthalmic Materials I. it includes calculations and formulae to compute marked and true power, lens thickness, and the relation of center to edge thickness. Performance of higher power lens and the importance of lens position will be considered, as well as the function of bifocals and multifocal lenses along with the proper management of their related optical effects. Lectures will include optical standards, tolerance, and an introduction to absorptive lenses with their applications.
Pre-requisites: OPH 126 with a minimum grade of C and OPH 123 with a minimum grade of C

OPH 201 Ophthalmic Dispensing I (5 Credits)
An examination of professional ethics, practices and responsibilities will be followed by an evaluation of absorptive lenses and optical coatings. The calculation and elimination of vertical imbalance, by various methods, is thoroughly presented. Lecture and laboratory sessions include techniques in ocular and facial measurements for single vision, multifocal and lenses to correct Aphakia. Included are proper techniques in adjusting plastic frames and the neutralizing and analysis of completed spectacles. Practical problems are offered with the goal being development of the skills necessary at the dispensing table.
Pre-requisites: OPH 124 with a minimum grade of C and OPH 127 with a minimum grade of C

OPH 202 Ophthalmic Dispensing II (5 Credits)
The psychology of dispensing will be stressed along with the procedures for proper management of the Presbyopic and low-vision patient. The interpretation of complex prescriptions, i.e., the effect of changing lens position, crossing cylinders, and the design of Iseikonic lenses, is covered. Instruction includes the fitting of progressive lenses, eyeglasses for occupational and vocational use, and the considerations of style and fashion. Lecture and practical sessions include techniques in adjusting metal and rimless frames, analyzing and neutralizing unknown spectacles, frame repairs, and classroom participation in simulated case histories.
Pre-requisites: OPH 201 with a minimum grade of C and OPH 203 with a minimum grade of C

OPH 203 Contact Lenses I (3 Credits)
This course provides an introduction to contact lenses. Topics include: The history of contact lenses, lens materials, the anatomy and physiology of the cornea, corneal topography and its relation to lens design. Instruction will include use of the Keratometer and Slit Lamp as well as the procedures required in the design and inspection of hard contact lenses.
Pre-requisites: OPH 124 with a minimum grade of C and OPH 127 with a minimum grade of C

OPH 204 Contact Lenses II (3 Credits)
Fitting requisites, lens-cornea relationships, and the fitting of soft contact lenses are presented. Emphasis on lens parameters, residual astigmatism and recognition of patient symptoms is fully presented. Included are extended wear, scleral, cosmetic, and therapeutic lens fitting methods and a full understanding of the signs, symptoms and management of the Keratometer patient. Instruction continues in the use of the Keratometer and Slit Lamp with the basic fitting philosophy of rigid and gas permeable contact lens fitting. Refraction techniques are described and demonstrated.
Pre-requisites: OPH 201 with a minimum grade of C and OPH 203 with a minimum grade of C

OPH 210 Principles of Refraction I (3 Credits)
This course is designed to develop the student's knowledge of clinical refraction. Topics will include: etiology, types, symptoms, testing and treatment of refractive anomalies of the eye, accommodation, presbyopia, versions, vengeances, anisometropia and aniseikonia, asthenopia, patient history, procedures involved in preliminary testing, objective and subjective refraction, basic techniques in retinoscope.

OPH 273 Supervised Clin Instruction (3 Credits)
This course provides the student with co-op experience in two areas. Of this experience, 20% will be received in the College's ophthalmic dispensary and the remaining portion will be received at a retail optical dispensary chosen from the department's approved site list. The entire hands-on experience is performed under the supervision of a licensed optician.
Pre-requisites: OPH 124 with a minimum grade of C and OPH 127 with a minimum grade of C