RARITAN VALLEY COMMUNITY COLLEGE
ACADEMIC COURSE OUTLINE

OPTH 200 CONTACT LENSES I

I. Basic Course Information

A. Course Number and Title: OPTH 200 CONTACT LENSES I

B. Modified Course

C. Date of Proposal: Semester: Fall Year: 2025

D. Effective Term: Fall 2026

E. Sponsoring Department: Health Science Education

F. Semester Credit Hours: 3

G. Weekly Contact Hours: 3 Lecture: 3

Lab: 0

Out of class student hours per week: 6

H. ☒ Prerequisite (s): minimum grade of C or higher in OPTH 100 Ophthalmic Materials I Lecture and OPTH 101 Ophthalmic Materials II Lecture, and OPTH-121Anatomy & Physiology of the Eye

☐ Corequisite (s): None

I. Additional Fees: No

II. Catalog Description

Prerequisites: minimum grade of C or higher in OPTH 100 Ophthalmic Materials I Lecture and OPTH 101 Ophthalmic Materials II Lecture, and OPTH 121 Anatomy & Physiology of the Eye

Includes a historical review as well as theory; design and optical principles of contact lenses; indications and contraindications for contact lens wear; patient evaluation; discussion of lens types and availability; fundamental techniques and fitting procedures including the biomicroscope and keratometer; evaluation of fit and patient education on care, cleaning, insertion and removal of contact lenses. Minimum grade C required.

III. Statement of Course Need:

A. This is a required course for the Ophthalmic Science-AAS degree, and Ophthalmic Science (Opticianry) Certificate- Apprenticeship Option.
B. This course is not designed for transfer.

IV. Place of Course in College Curriculum

A. Free Elective
B. This is a required course for the Ophthalmic Science-AAS degree, and Ophthalmic Science (Opticianry) Certificate-Apprenticeship Option.

V. Outline of Course Content

A. Historical review, anterior segment anatomy and physiology, bulbar and palpebral conjunctiva, corneal metabolism, structures, characteristics, parameters and transparency. Tear film, lid movements, Shirmer's tests, B.U.T., optical and refractive conditions of the eye.

B. Indications and contraindications for contact lens wear, prefit evaluation, keratoconus, corneal scars and irregularities, prosthetics, aphakia, micropthalmos, diabetes, hyperthyroidism, chronic sinusitis, herpes simplex, skin conditions and allergic reactions, rheumatoid arthritis, keratoconjunctivitis sicca, atopic eczema, corneal edema and ulcers, environmental contraindications.

C. Patient interview and evaluation, age, gender, occupational conditions, pharmaceuticals, personal habits and hygiene, interpretation and classification of prescription, with and against the rule astigmatism, residual astigmatism, neutralizing astigmatism, oblique astigmatism, keratometry reading.

D. Contact lens design and function, optical zone, intermediate zone, central posterior curve, bevel, flange, myodisc, bifocal and lenticular. HEMA advantages and disadvantages. Biomicroscopy, sclerotic scatter, direct illumination, specular relfection, indirect illumination, retro illumination, diffuse illumination and conical sections.

E. Soft fitting procedure, refractive elements, determining prescription, vertex calculations, keratometry and A.N.S.I. standards. Insertion, removal, care and cleaning of soft lenses. Follow up care: biomicroscope reexamination, flourescein staining, symptomology vs. cause, diagnostic procedure, solutions to difficult fitting problems.

F. Rigid lens design, "K" or on "K", lacrimal lens, steep lens, flat lens, tight lens syndrome, loose lens, lens lag, spectacle blur, contact lens blank, semi-finished and finished blanks. Fenestration, truncation, hyperflange, myoflange, back toric, front toric and bitoric designs. Lens inspection: power, diameter, thickness, base curve, quality of ski and edge.

Instrumentation: vertometer, diameter gauge, thickness gauge, radiuscope, measuring magnifier and contact –a –scope.

G. Rigid fitting procedures, refractive elements, determining Rx, vertex calculations, keratometry and A.N.S.I. standards, lens modification: changing intermediate and peripheral curves, thinning and reshaping edges and vertex power changes. Insertion, removal, care and cleaning of rigid lenses.

VI. A. Course Learning Outcomes

At the completion of the course the student will be able to:

1. Explain the significant contributions of opticians in the principles of fitting contact lenses (GE-7).
2. Describe the anatomy and physiology of the ocular anterior segment, tear film, and palpebrae.
3. Describe the optical concepts and fitting techniques of contact lenses and apply that knowledge to patient indications and contraindications.
4. Explain the various types of contact lenses, their function and application, cleaning and care of contact lenses, aseptic techniques in their usage and to be able to properly educate the patient on these matters.
5. Explain the function and procedural usage of the biomicroscope and keratometer.
6. Explain the fitting procedure of soft contact lenses according to the text.
7. Explain the fitting procedure of rigid contact lenses, including allowances for K discrepancies.
8. Describe the proper procedure for determining the fit evaluation of any category of contact lenses.
9. Demonstrate the proper techniques and instrumentation necessary to verify the accuracy of a finished contact lens of any category.
10. Be prepared for the contact lens portion of the New Jersey State Board of Ophthalmic Dispensers Examination or a similar examination such as the NCLE.

B. Assessment Instruments

1. Written examinations
2. Essay quiz
3. Discussion forum
4. Reflection (discussion)

VII. Grade Determinants

1. Written examinations

2. Essay quiz
3. Discussion forum
4. Reflection (discussion)

Given the goals and outcomes described above, LIST the primary formats, modes, and methods for teaching and learning that may be used in the course:

A. Written examinations
B. Essay quiz
C. Discussion forum
D. Reflection (discussion)

VIII. Texts and Materials

A. Donshik, P. (Ed.) (2017). Contact Lens manual: A comprehensive study and reference guide. CLSA:VA.
B. Course handouts (available via Canvas)
C. Power point presentations.

(Please Note: The course outline is intended only as a guide to course content and resources. Do not purchase textbooks based on this outline. The RVCC Bookstore is the sole resource for the most up-to-date information about textbooks.)

IX. Resources

A. Computer
B. Canvas course
C. RVCC library
D. Contact lens instrumentation

X. Check One: ☐Honors Course ☒ N/A