**ESSEX COUNTY COLLEGE**

**Nursing and Allied Health Division**

**OPH 204 *–* Contact Lens II**

**Course Outline**

**Course Number & Name:**  OPH 204 Contact Lens II

**Credit Hours:**  3.0 **Contact Hours:**  3.0 **Lecture:** 3.0 **Lab:**  N/A **Other:**  N/A

**Prerequisites**: Grade of “C” or better in OPH 203 or placement

**Co-requisites:** OPH 201 and OPH 202 **Concurrent Courses:** None

**Course Outline Revision Date:** Fall 2010

**Course Description:** 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.

**Course Goals:** Upon successful completion of this course, students should be able to do the following:

1. thoroughly explain the anatomy, physiology and topography of the eye as related to the wearing of contact lenses;
2. name the different types of lens materials, differentiate between lens designs and interpret the parameters affecting the availability of contact lenses;
3. accurately use the instrumentation for measuring the eye and contact lenses;
4. discuss and interpret the conditions for fitting soft lenses and extended-wear lenses and the handling of a Keratoconus condition; and

5. calculate contact lens’ powers, compensating for the change in vertex distance and fittings that are either flatter or steeper than the “K” reading.

**Measurable Course Performance Objectives (MPOs)**: Upon successful completion of this course, students should specifically be able to do the following:

1. Thoroughly explain the anatomy, physiology and topography of the eye as related to the wearing of contact lenses:

1.1 *identify and describe corneal anomalies as they relate to wearing contact lens;*

1.2 *identify and describe cellular respiration as it relates to and explain how oxygen is absorbed during contact lens us;*

1.3 *recognize and discuss corneal topography and its implications toward proper fitting and contact lens material choice*

**Measurable Course Performance Objectives (MPOs)** (continued):

2. Name the different types of lens materials, differentiate between lens designs and interpret the parameters affecting the availability of contact lenses:

2.1 *recognize and describe the differences in a variety of lens*;

2.2 *list different lens polymers, water content, thickness and lens availability*;

2.3 *determine the different type of lenses used for Aphakic correction*;

2.4 *manage the presbyopic patient*; and

2.5 *demonstrate proper techniques for insertion and removal of lenses*

3. Accurately use the instrumentation for measuring the eye and contact lenses:

3.1 *identify and describe the parts of the keratometer;*

3.2 *calibrate the keratometer;* and

3.3 *identify and describe the parts of the slit lamp and use the slit lamp*

4. Discuss and interpret the conditions for fitting soft lenses and extended-wear lenses and the handling of a Keratoconus condition:

4.1 *define* *and use terminology of tight or loose and steep or flat fitting lenses*;

4.2 *recognize a Rigid Gas Permeable (RGP) lens and describe the type of patient this lens would be appropriate for*;

4.3 *demonstrate the proper fitting procedure for soft contact lenses*;

4.4 *evaluate trial lens fitting results and finalize a lens order*;

4.5 *demonstrate the fitting of extended-wear lenses with emphasis on current FDA-approved lenses;*

4.6 *define and differentiate between extended wear, flexible wear and disposable lenses*; and

4.7 *demonstrate insertion and removal techniques for soft lenses*

5. Calculate contact lens’ powers, compensating for the change in vertex distance and fittings that are either flatter or steeper than the Keratometer (“K”) reading:

5.1 *calculate the spherical contact lens power to correct the Ametropia*;

5.2 *calculate the base curve of a lens*;

5.3 *solve problems that demonstrate how parameters may be varied to control lens fit*; and

5.4 *explain the concept behind the mathematical formula used to estimate residual astigmatism*

**Methods of Instruction**: Instruction will consist of lectures and demonstrations.

**Outcomes Assessment:**  Test and exam questions are blueprinted to course objectives. Data is collected and analyzed to determine the level of student performance on these assessment instruments in regards to meeting course objectives. The results of this data analysis are used to guide necessary pedagogical and/or curricular revisions.

**Course Requirements:** All students are required to:

1. Maintain regular attendance.
2. Complete assigned homework on time.
3. Take part in class discussions.
4. Take all tests and exams given.

**Methods of Evaluation:** Final course grades will be computed as follows:

**% of**

**Grading Components final course grade**

* 3 or more Written Tests (dates specified by the instructor) 75%

Tests will show evidence of the extent to which students meet course objectives, including but not limited to identifying and applying concepts, analyzing and solving problems, and stating appropriate conclusions using correct terminology.

* **1 Written Final Exam** **25%**

The same objectives apply as with tests, but it is anticipated that students will provide increased evidence of synthesizing a combination of concepts.

Note: Students must obtain an overall average of at least 70% to pass the course.

**Academic Integrity:** Dishonesty disrupts the search for truth that is inherent in the learning process and so devalues the purpose and the mission of the College.  Academic dishonesty includes, but is not limited to, the following:

* plagiarism – the failure to acknowledge another writer’s words or ideas or to give proper credit to sources of information; could result in a
* cheating – knowingly obtaining or giving unauthorized information on any test/exam or any other academic assignment;
* interference – any interruption of the academic process that prevents others from the proper engagement in learning or teaching; and
* fraud – any act or instance of willful deceit or trickery.

Violations of academic integrity will be dealt with by imposing appropriate sanctions.  Sanctions for acts of academic dishonesty could include the resubmission of an assignment, failure of the test/exam, failure in the course, probation, suspension from the College, and even expulsion from the College.

**Student Code of Conduct:** All students are expected to conduct themselves as responsible and considerate adults who respect the rights of others. Disruptive behavior will not be tolerated. All students are also expected to attend and be on time all class meetings. No cell phones or similar electronic devices are permitted in class. Please refer to the Essex County College student handbook, *Lifeline*, for more specific information about the College’s Code of Conduct and attendance requirements.

**Course Content Outline:** based on the text **Contact Lenses: Procedures and Techniques**, 2nd edition, by Lowther & Snyder; published by Butterworth – Heinemann; ISBN-13#: 9780409950120

**Week Class Topics/Reading Assignments**

1 Review and video viewing: Basics of Contact Lenses

2 Spherical RGP fitting methods

3 Fluoroscein pattern evaluation

4 Review

**Test #1**

5 Toric RGPs and astigmatism

6 RGP modification

7 Spherical hydrogels

8 Review

**Test #2**

9 Toric hydrogels/presbyopic fitting

10 Lens care systems

11 Follow-up care/patient education

12 Contact lens complications

13 Review

**Test #3**

14 Review for the Final Exam

15 **Final Exam**