

# **OPTICIANRY**

Program Guide and Student Handbook



Reynolds Community College School of Health Professions

Associate in Applied Science Degree &

**Opticians Apprentice Career Studies Certificate** 



#### WELCOME TO REYNOLDS COMMUNITY COLLEGE

Welcome and thank you for your interest in the Opticianry Program at Reynolds Community College. We hope you will find the following information beneficial. This packet contains information about the field of Opticianry, Virginia Opticians' Board licensing requirements and specific information concerning the two programs we offer. The first part of this packet is a guide to familiarize yourself with the Opticianry programs and the steps for acceptance. The second part of the packet is the Opticianry program's student handbook and outlines the policies specific to our program.

General information about Reynolds Community College, financial aid and college admissions can be found at the college website <a href="www.reynolds.edu">www.reynolds.edu</a>

The Opticianry program has the following course offerings available:

- Lecture courses may be on campus during the day with a 2 day a week schedule, hybrid with a
  one day a week campus meeting and/or on the internet with virtual classes once a week. These
  courses are offered in both the associate degree program and the opticians apprentice career
  studies certificate program.
- Clinical courses are offered on campus during the day or evening with a 1 or 2 day a week schedule and/or distance clinical courses that are completed at an assigned clinical site in your area or at your current place of employment when applicable.

The faculty wishes you much success in your academic pursuit of an associate degree or career studies certificate in Opticianry. If you need assistance of any kind, do not hesitate to contact the program director. Directions to our campus may be found on the college website.

Program Head and Faculty Advisor Leah Exline Lexline@reynolds.edu

Office: Downtown Campus 549 Phone: 804-523-5415

USPS Mailing Address: PO Box 85622 Richmond, VA. 23285 Program Physical Address: 700 East Jackson Street Room 512 Richmond, VA 23219

## Table of Contents

|   | <u>Page</u> |
|---|-------------|
| OVERVIEW OF THE OPHTHALMIC PROFESSIONS                          | 4           |
| Program Description   | 4           |
| Program Mission, Goals Objectives                               | 5           |
| AAS Degree Requirements   | 5           |
| Licensure in Virginia   | 6           |
| EXAM AND EMPLOYMENT STATISTICS                                  | 6           |
| SNAH PROGRAM CLINICAL COURSE OFFERINGS                          | 6           |
| SNAH PROGRAM CLINICAL COURSE OFFERINGS                          | 6           |
| STEPS TO FOLLOW FOR ACCEPTANCE INTO THE Opticianry AAS Degree   | 7           |
| AAS Curriculum  | 8           |
| Grade Requirements  | 9           |
| STEPS TO FOLLOW FOR ACCEPTANCE INTO THE Optician Apprentice CSC | 9           |
| Opticians Apprentice CSC Curriculum                             | 9           |
| ADA Compliance and Student Accommodations                       | 10          |
| Counseling Policy and Student Support Services                  | 10          |
| College and Opticianry Policies                                 | 11          |
| Instructional Delivery methods                                  | 12          |
| Clinical Responsibilities                                       | 12          |
| Financial obligations   | 13          |
| Equipment and Tool Requirements for Lab and Clinical            | 13          |
| Homework Policies   | 15          |
| Attendance Policies   | 15          |
| Safety Procedures   | 15          |
| Infectious disease Policy                                       | 16          |
| Emergency Preparedness  | 16          |
| Graduation Information  | 17          |
| College Graduation Requirements                                 | 17          |
| Virginia State Licensure Information                            | 17          |
| OPTICIANRY ORGANIZATION & BOARD CONTACT INFORMATION             | 18          |
| College grievance Policy  | 18          |
| Student learning outcomes                                       | 18          |
| Opticianry Course descriptions                                  | 20          |
| Opticianry Distance learning Course Guidelines                  | 24          |
| Testing Instructions for opticianry Courses                     | 24          |
| REYNOLDS LEARNING RESOURCE CENTER HOLDINGS                      | 26          |

#### **OVERVIEW OF THE OPHTHALMIC PROFESSIONS**

**OPTICIAN** – an eye care professional who has the responsibility for the dispensing of eyewear, including spectacles, contact lenses, low-vision aids, and accessories. The optician may fabricate, verify, and fit eyeglasses, contact lenses and other optical devices upon the written prescription of a medical doctor or doctor of optometry. Once presented with this prescription, an optician is responsible for analyzing and interpreting the prescription to determine the best products to match the patient's lifestyle and visual demands. State licensure is required in Virginia to become an Optician.

**OPTOMETRIST** - Doctors of Optometry (O.D.) are the independent primary health care professionals for the eye. Optometrists examine, diagnose, treat, and manage diseases, injuries, and disorders of the visual system, the eye, and associated structures as well as identify related systemic conditions affecting the eye.

**OPHTHALMOLOGIST** –Doctors of Medicine (M.D.) a medical or osteopathic doctor who specializes in eye and vision care. Ophthalmologists are specially trained to provide the full spectrum of eye care, from prescribing glasses and contact lenses to complex and delicate eye surgery. A board certified ophthalmologist has passed a rigorous two-part examination given by the American Board of Ophthalmology designed to assess his/her knowledge, experience and skills.

**OPTOMETRIC PERSONNEL**- The optometric assistant or technician is a person trained to assist an Optometrist. Their duties may include, but not limited to: office skills, patient data collection & entry, help in various pre-testing, instruction of contact lens care, and adjustment of eyeglasses.

**OPHTHALMIC PERSONNEL**- An ophthalmic assistant or technician is a member of the eye care team who performs tasks that may include, but not limited to: refraction, contact lens fitting, pre-test, pre-screening, medical history, and office management for the Ophthalmologist.

#### PROGRAM DESCRIPTION

The college is accredited by the Southern Association of Colleges and Schools Commission on Colleges. The program is nationally accredited by the Commission on Opticianry Accreditation and a member of the National Federation of Opticianry Schools. The Opticianry program is designed to prepare individuals in the art and science of all phases of the making, fitting and dispensing of eyewear and contact lenses.

Commission on Opticianry Accreditation PO Box 592 Canton, NY 13617 Phone: (703) 468-0566

The courses give a basis for many different employment opportunities in the optical field, but are primarily designed to provide the education needed to have a successful career as an **OPTICIAN**. Graduation from the program may lead to one of the following occupational goals: optician, private practitioner, ophthalmic dispenser, optical laboratory manager, contact lens technician, branch

manager, optical laboratory technician, ophthalmic sales representative, ophthalmic research technician, instructor in ophthalmic dispensing.

Completion of the Opticianry degree program results in the conferring of the Associate in Applied Science Degree in Opticianry and prepares the student for the licensing examinations required in Virginia and most other licensed states. Completion of the Opticians Apprentice Certificate satisfies the related instruction component of the Virginia State Apprenticeship program and is not a stand-alone certificate for employment or licensure.

#### PROGRAM MISSION STATEMENT

To provide quality education in the profession of Opticianry resulting in an Associate in Applied Science Degree and to prepare graduates for employment meeting the needs of the workforce. As an equal opportunity institution, Reynolds welcomes all and encourages its students to seek excellence in their studies.

#### PROGRAM GOALS

- 1. To add qualified professionals who can interpret prescriptions, fabricate eyewear, dispense spectacles and contact lenses, communicate effectively, utilize sales techniques, and are self-competent to serve the visual needs of the public.
- 2. To prepare graduates for successful employment in the optical field.
- 3. To prepare Opticianry students for successful completion of national certification and/or state licensing exams.
- 4. To maintain qualified faculty that meet and/or exceed the standards set forth by the Commission on Opticianry Accreditation and provide professional development opportunities.
- 5. To maintain program accreditation.
- 6. To eliminate hazardous waste and to reduce non-hazardous waste to the minimum levels economically and technically practical, and to be in full compliance with all federal and state environmental regulations.

#### **PROGRAM OBJECTIVES**

- 1. Graduates will be able to demonstrate theoretical and technical optical knowledge at a level of a licensed optician in the state of Virginia and other states requiring accreditation with similar requirements.
- 2. Graduates will be able to demonstrate clinical optical skills at a level of a licensed optician in the state of Virginia and other states requiring accreditation with similar requirements. .
- 3. Graduates will be able to demonstrate clinical competency in basic contact lens fitting.
- 4. Graduates will be able to demonstrate entry level business skills within the Opticianry profession.

#### AAS PROGRAM REQUIREMENTS

To earn the A.A.S. Degree in Opticianry, a total of 67 credit hours must be successfully completed. The Opticianry program is a designed to be a five semester, two year, full-time program. The required courses are a mixture of humanities, social sciences, science, business, and Opticianry courses designed to prepare the

student for a career in the eye care industry. The optical courses are sequential, therefore, the student cannot continue into a higher course without successfully completing the prerequisite course(s).

#### LICENSURE IN THE STATE OF VIRIGINIA

According to the DPOR Virginia Board of Hearing Aid Specialists and Opticians Rules and Regulations:

Part 1 Entry 18 VAC 100-20-10 section 5.

An applicant has to complete one of the following education requirements to sit for the opticianry state board-licensing exam:

1. An approved two-year course in a school of opticianry, including the study of topics essential to qualify for practicing as an optician (the AAS degree program);

)R

 A two-year on the job apprenticeship with a minimum of one school year of related instruction (the Optician Apprentice CSC program) while registered in the apprenticeship program in accordance with the standards established by the VA State Department of Labor and Industry Division of Apprenticeship Training.

Virginia Board for Hearing Aid Specialists and Opticians, Richmond VA 804-367-8569

Department of Professional and Occupational Regulation <a href="http://www.dpor.virginia.gov/">http://www.dpor.virginia.gov/</a>

#### **EXAM AND EMPLOYMENT STATISTICS**

The program has a strong track record of enabling students to successfully pass their state boards and gain employment in the optical industry. Exam rates are based on a graduate's ability to pass on the  $1^{st}$  attempt.

|                  | 2016 | 2017 | 2018 | 2019 | 2020 | 2021   |
|------------------|------|------|------|------|------|--------|
|                  |      |      |      |      |      | *as of |
|                  |      |      |      |      |      | 8/2021 |
| ABO exam         | 100% | 100% | 100% | 100% | 100% | 100%   |
| NCLE exam        | 100% | 100% | 100% | 100% | 100% | 100%   |
| State Board exam | 92%  | 94%  | 100% | 100% | 100% | 100%   |
| Employment       | 100% | 100% | 100% | 100% | 93%  | 100%   |
|                  |      |      |      |      |      |        |

#### SNAH PROGRAM CLINICAL COURSE OFFERINGS

The college offers this program in affiliation with the healthcare agencies and practitioners in the community. The college relies on its community affiliates to provide clinical education opportunities for its students and expert clinical preceptors for many courses. The often rapid changes in healthcare law, standards of practice, technology, and content of credentialing

examinations increasingly necessitates sudden changes in the program's course content, policies, procedures and course scheduling. As a result the college cannot guarantee every student continuous and uninterrupted clinical and course instruction as outlined in the printed catalog curriculum for this program. Circumstances beyond the control of the college may necessitate the postponement of course offerings or changes in the sequencing and/or location of scheduled courses or clinical assignments. Additionally the college may have to change the instructor for courses after instruction has started.

#### STEPS TO FOLLOW FOR ACCEPTANCE INTO THE AAS DEGREE PROGRAM

- **1.** Complete the Reynolds Community College online application form. (There is no fee for applying) The "Apply NOW" link is on our website: <a href="https://www.reynolds.edu">www.reynolds.edu</a>
- **2. Send all transcripts** from high school and any prior colleges attended to Reynolds Registrar's office. They must be official copies. Electronic submissions are best whenever available. Allow 10-14 days for delivery and review of hard copy submissions.
- **3. Apply for any Financial Aid (if needed).** You can apply for Aid on the college website also. Aid applications usually take at least 2 months to process. It is **very important** to get it done immediately if you are dependent upon the results for enrollment. Only one application is needed to apply for aid for both the fall and spring semesters but a separate application is required if you want to get aid in the summer semester.
  - **IF Applicable:** Students whose primary language is not English must either complete the college's English language proficiency testing or submit required documentation for a waiver of these tests prior to registration. Non-native speakers may be restricted to English as a Second Language (ESL) classes, and will be expected to complete these before progressing to Math and English Placement tests and most other classes. For additional information, please schedule an appointment with an ESL Advisor in Building B, Room 364, Parham Road campus by calling 804.523-5020.
- **4.** Have an interview with the Program head/Faculty Advisor. Interviews can be arranged by contacting Ms. Exline directly via email or phone.

Once all 4 of these items have been completed, the applicant's folder is coded complete and acceptance is granted (space permitting).

New class cohorts for the degree typically start in the Fall semester, however if enrollment is strong enough, we may offer a Spring accelerated semester start with our online courses for students with prior experience.

#### **AAS DEGREE OPTICIANRY CURRICULUM** Course Course Course LEC. LAB. CRS. Prefix Number Title HRS. HRS. **CRE Fall Term** OPT 150 Optical Laboratory Theory I 3 0 3 OPT 152 Optical Laboratory Clinical I 0 6 3 OPT 121\* Optical Theory I 3 0 3 Orientation to Health Sciences 1 SDV 101 0 1 MTH 111\* **Basic Technical Mathematics** 3 0 3 10 6 13 Total **Spring Term** OPT 151 Optical Laboratory Theory II 3 0 3 OPT 153 Optical Laboratory Clinical II 0 6 3 3 OPT 122 Optical Theory II 0 3 3 ITE 115\* Intro to Computer Applications & Concepts 0 3 Anatomy, Physiology, and Pathology of the Eye OPT 105 3 0 <u>3</u> 12 6 15 **Summer Term** 160 OPT Optical Dispensing Theory I 3 0 3 OPT 165 Optical Dispensing Clinical I 0 4 2 3 3 OPT 273 Contact Lens Theory I 0 College Composition I <u>3</u> 3 ENG 111 0 9 **Total** 4 11 **Fall Term** Personal Wellness Elective 0-2 0-1 1 OPT 260 Optical Dispensing Theory II 3 0 3 OPT 271 Optical Dispensing Clinical II 0 12 3 Contact Lens Theory II OPT 274 3 0 3 **ENG** 112 College Composition II 3 0 3 Total 9-10 12-14 13 **Spring Term** 0 OPT 154 **Optical Business Management** 3 3 OPT 280 0 6 3 Contact Lens Clinical OPT **Optical Dispensing Clinical III** 0 12 3 272 **Humanities Elective** 3 0 3 Social Science Elective <u>3</u> <u>3</u> 0 Total 18 15

Total Minimum Credits for AAS Degree in Opticianry

Students who receive a final grade lower than "C or 71" in any of the Opticianry courses must obtain permission from the program director to continue the major in Opticianry.

67

<sup>\*</sup>Math 111 is a co-requisite for OPT 121; there is a test out option for ITE 115

#### **GRADE REQUIREMENTS**

The following standards will be used in the Opticianry Program:

100 - 91 = A 90 - 81 = B 80 - 71 = C 70 - 61 = D<sup>1</sup> Below 61 = F<sup>1</sup>

#### STEPS TO FOLLOW FOR ACCEPTANCE INTO THE APPRENTICE CSC PROGRAM

- \*\*Before you can begin, you must be registered with the DOLI Apprenticeship office.
- **1.** Complete the Reynolds Community College online application form. (There is no fee for applying) The "Apply NOW" link is on our website: <a href="www.reynolds.edu">www.reynolds.edu</a>
- 2. Send transcripts from high school and any prior colleges attended to Reynolds Registrar's office.
- **3. Apply for any Financial Aid (if needed).** You can apply for Aid on the college website also. Aid applications usually take at least 2 months to process. It is **very important** to get it done immediately if you are dependent upon the results for enrollment.
- **4.** Have an interview with the Program Head/Faculty Advisor. Interviews can be arranged by contacting Ms. Exline directly via email or phone.

# OPTICIAN APPRENTICE CAREER STUDIES CERTIFICATE CURRICULUM

**Occupational Objectives:** Students who successfully complete this career studies certificate program and complete the 4000 hours of on-the-job training, as a registered apprentice will be eligible to sit for the licensure examination to become a licensed optician in the State of Virginia. Individuals seeking apprenticeship must register independently with the Department of Labor as apprentice opticians. The college does not do this on your behalf.

To seek further details, contact the Virginia Department of Labor Apprentice Training on 804 -371-3104 ext 127.

**Program Notes:** In addition to the general college curricular admission requirements, an interview with the Opticianry program head is required before beginning the curriculum. Students must be registered as an Apprentice Optician with the Virginia Department of Labor. This career studies certificate program may be completed in one, two or three years. The student can set the pace. All courses from the career studies certificate are transferable into the degree program.

<sup>&</sup>lt;sup>1</sup> A D or F in any opticianry courses requires the course to be repeated.

# OPTICIAN APPRENTICE CAREER STUDIES CERTIFICATE CURRICULUM

| Course<br>Prefix | Course<br>Number | Course Title                         | LEC.<br>HRS. | LAB.<br>HRS. | CRS.<br>CRE. |
|------------------|------------------|--------------------------------------|--------------|--------------|--------------|
| Fall Seme        | ester_           |                                      |              |              |              |
| OPT              | 121              | Optical Theory I                     | 3            | 0            | 3            |
| OPT              | 150              | Optical Laboratory Theory I          | 3            | 0            | 3            |
| Spring Se        | mester           |                                      |              |              |              |
| OPT              | 122              | Optical Theory II                    | 3            | 0            | 3            |
| OPT              | 151              | Optical Laboratory Theory II         | 3            | 0            | 3            |
| Summer :         | <u>Semester</u>  |                                      |              |              |              |
| OPT              | 160              | Optical Dispensing Theory I          | 3            | 0            | 3            |
| OPT              | 165              | Optical Dispensing Clinical I        | 0            | 4            | 2            |
| May be to        | aken any se      | <u>mester</u>                        |              |              |              |
| OPT              | 105              | Anatomy, Physiology, and Path of Eye | 3            | 0            | 3            |
|                  |                  |                                      |              |              |              |
| Total            |                  |                                      | 18           | 4            | 20           |

<sup>\*\*</sup>Please Note: Reynolds has no control over the required hours of on the job training. Your on the job training can, however, be used for credit by able for OPT 165.

#### ADA COMPLIANCE AND STUDENT ACCOMMODATIONS

The Office of Student Accommodations assists students with documented disabilities gain access to College programs, services, and activities our goal is to identify needs and implement services in accordance with the guidelines established by the Vocational Rehabilitation Act of 1973 and The Americans with Disabilities Act of 1990. Students who wish to request accommodations should contact the Office of Student Accommodations [OSA] on the Downtown or Parham Road Campus to schedule an appointment. Service for the Western Campus is coordinated through the Parham Road Office. Please visit <a href="http://www.reynolds.edu/studentaffairs/accom.htm">http://www.reynolds.edu/studentaffairs/accom.htm</a> or call (804)523-5289 for more information or to seek assistance.

#### **COUNSELING POLICY AND STUDENT SUPPORT SERVICES**

The Opticianry Program uses the counseling policy as stated in the current college catalog <a href="https://www.reynolds.edu/">https://www.reynolds.edu/</a> onlinecatalog/current/catalog.pdf . Students experiencing non-academic difficulties should contact the Office of Student Affairs at (804) 523-5025. Staff can help students connect with appropriate community resources. Reynolds does not provide personal or mental health

counseling; however they know that students' educational and career goals are important and offers programs that can help students address any hurdles that can occur along their journey. Reynolds uses a system called "Single Stop" that connects students with a variety of free and comprehensive social services and community resources so they can stay focused on their academic goals. These resources and support include:

- Benefits Screening Learn whether you qualify for federal and state benefits, such as food and nutrition programs (SNAP, WIC), health insurance (Medicaid), cash, utilities, and more. You can also get assistance in applying for these benefits.
- Tax Preparation Get help maximizing your tax credits and refund while filing your taxes for free.
- Health Care Enrollment Explore health care insurance options and receive help with enrolling or renewing your coverage.
- Financial Education Achieve your financial goals with guidance in budgeting and debt management.
- Community Resource Referrals Get connected to community resources and agencies who can help you with your barriers or challenges. Areas include healthcare, food access, utility assistance, and more.

Click here for more information on Single Stop: <a href="https://www.reynolds.edu/student\_services/student-supports/default.aspx">https://www.reynolds.edu/student\_services/student\_supports/default.aspx</a>

#### **COLLEGE AND OPTICIANRY POLICIES**

This Opticianry Student Handbook along with the Reynolds College Catalog and the Reynolds Student Handbook will provide you with valuable information concerning academic procedures, guidelines, and requirements of a Reynolds Community College student.

Every student can access a copy of the catalog and these two handbooks digitally via the college website. The student is expected to be familiar with the contents of each book and to consult with these publications when questions arise.

Current College catalog:

https://www.reynolds.edu/onlinecatalog/current/catalog.pdf

Current Reynolds Student Handbook:

https://issuu.com/reynoldscommunitycollege/docs/studenthandbook\_2020\_digital\_v5?fr=sMmViZDQ3 OTA5NA

To be a successful optician, one must not only be able to fit and adjust eyeglasses, contact lenses, and low vision aids but also communicate effectively with the public, doctors, management, wholesalers, and other businesses. You must also be prepared for marketing, salesmanship and management. The varied courses in the degree curriculum address these needs and provide a foundation for success in all of these areas.

The program director is also assigned as your faculty advisor to guide you, but **the ultimate responsibility for registering for the proper courses is** *yours***.** Your advisor will provide you with a program plan to follow. This plan is to be used as a check sheet to ensure that you have met all the program course requirements.

We hope that your college experience will be pleasant as well as beneficial. The faculty wishes you much success in your academic pursuit of an associate degree or apprentice certificate in Opticianry. If you need assistance of any kind, do not hesitate to ask one of the Opticianry faculty members.

#### **INSTRUCTIONAL DELIVERY METHODS**

The Opticianry program presents lessons within courses using print based materials, computer assisted lectures, guest lectures, conventional lecture, internet, video and audio. Students are assigned activities which will require the student to read textbooks, read trade journals, locate, read and download internet materials. Students will be required to provide written and oral answers to assignments and inclass activities. Some of these activities may be individual or group participation projects.

#### **CLINICAL RESPONSIBILITIES**

During their second year, fourth and fifth semester, on campus students will fit actual patients with eyewear in the REYNOLDS Eyeglass Clinic. During the fifth semester only, the students will also fit actual patients in the REYNOLDS Contact Lens Clinic. Distance education students will be required to have an approved clinical site and preceptor to perform these courses. The clinical courses provide excellent learning experiences and are a required part of the program. In addition to campus based experiences, during the Dispensing Clinical II & III courses, off campus clinical rotations may take place. During this time the student may be responsible for working 6-9 hours a week at an outside clinical site that is assigned by the instructor. Students must take this into consideration and prepare for any schedule conflicts in advance.

The REYNOLDS Eyeglass and Contact Lens clinics are conducted and operated in the same manner that an independent provider would function. Each student is expected to dress and act in a professional manner. Both clinics are non-profit organizations and services are available to staff, faculty and students of the College. Clinic rules and regulations will be given to each student and discussed in detail the first clinical class meeting.

The Eyeglass Clinic will be open for regular hours that will be posted every fall and spring semesters. The Contact Lens Clinic will be open only during the spring semester. The Eyeglass and Contact Lens clinics are located on the 5<sup>th</sup> floor of the Downtown Campus.

All measurements, fittings and adjustments of eyewear and contact lenses must be checked by the instructor or supervising optician. It is illegal to dispense prescription eyewear or contact lenses in the Commonwealth of Virginia without a license. It is illegal to fit contact lenses in the Commonwealth of Virginia without being contact lens endorsed.

**Financial Requirements for on-campus dispensing and contact lens clinics:** In addition to the regular college tuition and fees, the Opticianry program requires:

| Current eye examination (must be done before taking OPT 280)  | \$35-85                |
|---|------------------------|
| Personal pair of safety glasses & ear protection (Non-Rx safety eyewear is made available for on-campus labs) | \$15-50                |
| White laboratory coat (based on clinical setting requirement)   | \$20-45                |
| Student Name badge  | \$8-10                 |
| Headset with microphone (for all distance & online course sections)   | \$25-75                |
| Mailing costs (for distance clinical courses only)  | \$ varies by location* |
| Testing center fees (for distance clinical courses only)  | \$ varies by location* |

Note: The above costs are approximate, clinical site dependent, and subject to change.

#### **EQUIPMENT AND TOOLS REQUIRED FOR LAB AND CLINICAL COURSES**

Students enrolled in campus based clinical sections will have access to all program resources, including the required items listed below. Student who choose to enroll in distance clinical courses and use an approved clinical site off campus must have access to the following environments for each course:

OPT 152 & OPT 153 – A finishing laboratory which includes the following equipment at minimum:

- Lens edger
- Hand Stone / Hand Edger
- Groover
- Polisher
- Tinting Unit
- Manual Lensometer
- Frame Warmer

OPT 165, 271 & 272 – An optical dispensary which includes the following equipment at minimum:

- Dispensing tables
- Frame & Lens displays
- Pupilometer

<sup>\*</sup>Distance learning students are required to take proctored exams and complete projects to be sent back to the college throughout the curriculum. Each student must have an approved proctor and, if there is a fee, the student is required to pay for the services they decide to use.

- Spectacle ordering system
- Frame Warmer
- Lensometer

OPT 280 – A contact lens examination area which includes the following equipment at minimum:

- Slit Lamp
- Keratometer
- Trail lens set or Phoropter
- Visual Acuity tests
- Soft and GP Trial Contact lenses
- Radiuscope

All students need to have access to the following additional tools in order to successfully complete their clinical competencies. If a clinical site does not have an item that you will need for class, it is the student's responsibility to obtain it. Students may purchase any items through any given supplier; however, Reynolds Opticianry program has a discount program for students through OptiSource that offers up to 40% off most items you may need. When beginning at a clinical site – please check to ensure you have what you may need with your preceptor or instructor. If you are missing any required items, you may order them through OptiSource or see if there is another optical location that may be willing to allow you to borrow what you need. However, many students like to take advantage of the student discount and purchase a tool kit for themselves and that they can use throughout their career.

| <b>Tool or Instrument Description</b> | OPT Course it will be required in |  |  |
|---------------------------------------|-----------------------------------|--|--|
| Lens Clock & Thickness Caliner        | 152 152 271 272                   |  |  |

| Lens Clock & Thickness Caliper     | 152,153,271,272         |
|------------------------------------|-------------------------|
| Narrow Double Nylon Plier          | 152, 153, 165, 271, 272 |
| Wide jaw Angling Plier             | 152, 153, 165, 271, 272 |
| Nylon Gripping Plier               | 152, 153, 165, 271, 272 |
| Flat Chain Nose Plier              | 152, 153, 165, 271, 272 |
| Round Metal/Flat Nylon Plier       | 152, 153, 165, 271, 272 |
| Cutting Plier                      | 152, 153, 165, 271, 272 |
| Lens Sizing Plier                  | 152, 153                |
| Nose Pad Adjusting Plier           | 152, 153, 165, 271, 272 |
| Lens Axis Aligning Plier           | 152, 153, 165, 271, 272 |
| Compression Sleeve Assembly Plier  | 153,271, 272            |
| Flat and Philips head Screwdrivers | 152, 153, 165, 271, 272 |
| PD Ruler                           | 152, 153, 165, 271, 272 |
| Circumference Gauge                | 153, 165                |
| Lens marking Pens for AR coatings  | 152, 153, 165, 271, 272 |
| Compression Sleeve trimming Pliers | 153, 271, 272           |
| Eyewire Shaping Plier              | 152, 153                |
| Rx Aligner                         | 153, 165, 271, 272      |
| PAL Fitting Tool                   | 165, 271, 272           |
|                                    | •                       |

#### **HOMEWORK POLICY**

A college education is gained from a combination of attending lectures and/or labs, completing formal assignments, and doing additional homework outside of scheduled class times. Amounts of assigned homework will vary depending on the instructor and the course content. Although there is no official required work schedule for homework, a good rule-of-thumb is to plan for two-three hours of homework for every one hour of class time. When an instructor does not give assignments to fill this time during a given week, you are expected to do work independently to review the content and prepare for the next class or assignment.

To help you be successful, Reynolds offers a number of support services. We have an excellent library, academic support center and multiple stations to access the internet. You are encouraged to take advantage of the services that are available at the college.

Unless otherwise stated in the course syllabus, the Opticianry department late assignment policy is as follows:

Homework assigned in any Opticianry classes should be turned in by the given due dates. Ten points will be deducted from the total score for that assignment for each day it is late up to 30 points. After 3 days, the assignment will not be accepted and a grade of zero will be given for that assignment. No more than 3 assignments may be submitted late in a given class.

#### ATTENDANCE POLICY

Class attendance is considered essential to academic success in this program. Since there are constant learning opportunities between faculty and students, between students and other students, and between students and patients in the clinics. It is expected that you will attend each meeting of each course in which you are enrolled. It is understood that sometimes situations occur that are unavoidable and may cause you to miss class. Personal or family problems, automobile breakdowns, and illnesses happen to the best of us - students and faculty alike.

When you miss a class, you are responsible for learning the material that was covered before attending the next class or lab. It is recommended to create a network with your fellow classmates in case you miss a class. Contacting the instructor via email is an option, however, if they are unable to reply before the next class meeting it is still your responsibility to find out what material you missed.

In the event that a quiz or test is missed, it is up to the instructor whether a make-up will be administered. Individual course policies for making up for assignments, papers, quizzes, or tests that are missed will be explained by each instructor the first time each class meets. The policy will also be included in the course syllabus or outline given to each student at the first class meeting.

#### **SAFETY PROCEDURES**

The laboratory instructor will review the specific rules that are applicable to the laboratory. In general, students are allowed to operate machinery, use equipment or tools when they have been instructed in the proper use of that equipment. Students are not allowed to use equipment, machinery or tools

unless they have received operation and safety instruction for the equipment. No equipment, machinery or tools will be used without an instructor in the laboratory.

There are strict rules enforced for the safety of students and faculty in the laboratory and clinics. The optical dispensary and contact lens areas contain equipment and materials which could be harmful and cause serious injury to an individual if not handled properly. It is the responsibility of each and every student to be aware of the dangers in the area and act in a safe and appropriate manner.

Safety Data Sheets (SDS) are available in each lab for required chemicals or products encountered. It will be necessary to acquaint yourself with these data sheets. Students are required to wear safety eyewear while operating specified equipment and ear plugs as needed.

In all classes, labs, and clinics, students should inform the instructor of any accidents, no matter how minor they may seem at the time. Campus police should be notified immediately of any accident.

#### **INFECTIOUS DISEASE POLICY**

As a student performing in the clinical/practicum facilities, you must understand that you may be exposed to environmental hazards and infectious diseases including, but not limited to tuberculosis, hepatitis B and HIV (AIDS). All faculty and students are expected to follow posted hand hygiene procedures during clinical procedures, proper disinfection and/or disposal methods of products, and local public health mandates, such as the use of personal protective equipment, as published by the Department of Health. Faculty will provide necessary information related to blood borne pathogens to students in the clinical courses and ensure students are familiar with protocols to protect themselves and others during clinical activities. Reynolds Community College recommends that all students entering programs in the School of Health Professions obtain the Hepatitis B vaccine prior to entering the clinical experience portion of the program.

#### **EMERGENCY PREPARDNESS STATMENT**

In the event if a college-wide emergency, course requirements, classes, deadlines, and grading schemes are subject to changes that may include alternative delivery methods, alternative methods of interaction with the instructor, class materials, and/or classmates, a revised attendance policy, and a revised semester calendar and/or grading scheme.

In the case of a college-wide emergency, please refer to the following about changes in this course:

- Canvas Course webpage: www.myreynolds.edu
- Instructor's email from Syllabus or Canvas

For more general information about the emergency situation, please refer to:

- College website: <u>www.reynolds.edu</u>
- College Telephone number: (804) 371-3000
- To register for emergency text messaging, email, or voice mail go to <a href="https://alert.reynolds.edu/index.php?CCheck=1">https://alert.reynolds.edu/index.php?CCheck=1</a>

#### **GRADUATION INFORMATION**

#### **Instructions:**

- Determine a plan for completion of your curriculum and have it approved by the Program head.
   As you complete a semester, check off the courses you have completed on the program plan provided by the program director.
- 2. If sending transcripts from other colleges, do that as soon as possible. Transcripts can take 3-4 weeks to be processed. You can check to see if they have been entered by checking your unofficial transcript in the Student Information System. If you should have courses transferring and they do not appear in SIS contact the records office at 804-523-5029.
- 3. In the 1<sup>ST</sup> week of the semester before you wish to graduate, print your unofficial transcript from the student information system. Bring it and your curriculum plan to the program director for final review and approval to ensure you have properly prepared to complete all your requirements.

#### **COLLEGE GRADUATION REQUIREMENTS**

#### The student must:

- 1. Complete the total credit hours required in the respective program in which they are candidates for the degree or certificate.
- 2. Apply for graduation in the Student Information System by the published deadlines.
- 3. Satisfactorily fulfill all obligations, financial and otherwise, to the College.
- 4. Achieve a minimum cumulative GPA of 2.00.

#### VIRGINIA STATE LICENSING INFORMATION

If you wish to graduate and take your state board exam on time it is vital that you make sure you are aware of the application deadlines! It is the student's responsibility to make sure they submit their applications on time. The program head will try to inform students of upcoming dates but it is not his/her responsibility to do so.

**VA State Board Exam** applications & deadline dates can be received from:

Board for Hearing Aid Specialists and Opticians
Department of Professional and Occupational Regulation
9960 Mayland Drive, Suite 400
Richmond, VA 23233
804-367-8509
http://www.dpor.virginia.gov/Boards/HAS-Opticians/

The VA state Contact Lens Endorsement is a separate application that you will need to request.

In the 1<sup>st</sup> week of your last semester, make sure you find out the dates that your application(s) for the state boards are due.

#### **OPTICIANRY ORGANIZATION & BOARD CONTACT INFORMATION**

Commission on Opticianry Accreditation PO Box 952
Canton, NY 13617
703-468-0566
http://coaccreditation.com/

National Federation of Opticianry Schools 236 East Main Street #183 Sevierville, TN 37862 <u>information @nfos.org</u> http://www.nfos.org/

Board for Hearing Aid Specialists and Opticians
Department of Professional and Occupational Regulation
9960 Mayland Drive, Suite 400
Richmond, VA 23233
804-367-8509
http://www.dpor.virginia.gov/Boards/HAS-Opticians/

#### **COLLEGE GRIEVANCE POLICY**

Reynolds Community College is dedicated to an affirmative action policy that provides that all matters relating to present and prospective students will be handled fairly and equally without regard to race, color, sex, age, political affiliation, religion, disability, national origin, or other non-merit factors. Students may file academic or non-academic grievances within the policy. The grievance policy can be found in its entirety in the college student handbook.

#### STUDENT LEARNING OUTCOMES

The learning outcomes for a graduate of the Opticianry Degree Program should include but are not limited to the following:

- 1. Define the scope of practice of opticians, optometrists, ophthalmologists and other eyecare professionals.
- 2. Explain the history of lenses, eyeglasses and Opticianry.
- 3. Describe how lens materials are manufactured.
- 4. Explain the theories of light and the electromagnetic spectrum.
- 5. Analyze the ophthalmic prescription.
- 6. Explain the application and use of the lens cross and flat transposition.
- 7. Describe the refractive errors and their correction.
- 8. Explain the process of measuring visual acuity.
- 9. Identify the use and parts of the lensometer.
- 10. Determine the power of the cylinder away from the axis.

- 11. Explain prism and how it affects the patient.
- 12. Explain Snell's Law and the index of refraction.
- 13. Explain and demonstrate the steps of the ophthalmic finishing process.
- 14. Explain and demonstrate the uses of the lensometer.
- 15. Explain basic record keeping procedures.
- 16. Identify frame adjustment tools.
- 17. Describe techniques of hardening glass lenses, and policies of FDA and ANSI regarding testing of impact resistance.
- 18. Explain proper laboratory and workshop safety procedures.
- 19. Explain proper handling and techniques for proper environmental handling of optical substances and waste products.
- 20. Describe the specialized application of aphakic lenses.
- 21. Define and explain presbyopia and the different lens forms used for correction.
- 22. Demonstrate skills in prescription interpretation and analysis.
- 23. Apply ANSI standards to ophthalmic eyewear.
- 24. Describe the procedures used in surfacing lenses.
- 25. Explain the applications of specialty lenses.
- 26. Demonstrate an understanding of lifestyle dispensing.
- 27. Demonstrate clinical dispensing skills.
- 28. Understand clinical management skills.
- 29. Explain effective communication skills both verbal and written within the optical industry.
- 30. Understand basic optical management procedures.
- 31. Describe the use of absorptive lenses.
- 32. Understand proper base curve selection.
- 33. Calculate lens edge and center thickness.
- 34. Define and describe the parts, styles and materials of current spectacle frames.
- 35. Explain the boxing and datum systems of measuring frames and how to interpret frame markings.
- 36. Execute accurate monocular and binocular interpupillary measurements.
- 37. Describe the six major types of lens aberrations and how they affect vision.
- 38. Analyze the special needs of the high myope and high hyperope to include lenses and frames and etc.
- 39. Explain properties of visible and invisible light.
- 40. Calculate and correct vertical prism at the reading level.
- 41. Explain and demonstrate basic bench alignment.
- 42. Describe and demonstrate basic frame adjustments.
- 43. Demonstrate how to take accurate bifocal, trifocal and progressive height measurements.
- 44. Demonstrate the skills of ordering and processing prescription eyewear.
- 45. Understand ethical professional conduct for opticians.
- 46. Understand the lens coating processes.
- 47. Understand the use of current technology at work in the ophthalmic field.
- 48. Understand the need for basic equipment maintenance and repair.
- 49. Demonstrate frame repairs.
- 50. Demonstrate a basic understanding of the history and development of contact lenses.
- 51. Describe the nomenclature of contact lenses.
- 52. Understand the theory behind the corneal/lens relationship.

- 53. Understand the physiological parameters for fitting contact lenses.
- 54. Demonstrate proper insertion and removal of contact lenses.
- 55. Understand basic contact lens fitting problems and their solutions.
- 56. Operate the instruments necessary for contact lens verification and fitting.
- 57. Demonstrate the proper care and handling of contact lenses
- 58. Explain how to modify and rigid contact lenses.
- 59. Understand the human optical system and ocular anatomy
- 60. Demonstrate product knowledge and understanding of the diverse uses of optical products.
- 61. Demonstrate basic knowledge and understanding of refractometry

#### **OPTICIANRY COURSE DESCRIPTIONS**

#### **OPT 121 Optical Theory I (3 credits)**

Introduces theory and application of ophthalmic lenses. Presents history, basic manufacturing and quality standards of ophthalmic lenses, propagation of light, refraction and dioptric measurements, true power, surface power, nominal lens formula. Explains lens makers' equation, boxing system, spherical lens design, fundamental aspects of cylindrical lenses, sphero-cylinder lens design, and flat and toric transposition. Lecture 3 hours per week.

#### **OPT 122 Optical Theory II (3 credits)**

Explores the development of multifocal lenses, application of multifocal lenses, survey of current ophthalmic lens, the properties of spherocylinder lenses, and an in-depth analysis of the optics of ophthalmic prisms. Prerequisite: OPT 121. Lecture 3 hours per week

#### **OPT 150 Optical Laboratory Theory I (3 credits)**

Introduces the student to the terminology, instruments, lens, frames, and materials used in the surfacing and finishing of optical prescription eyewear. Presents personal and environmental safety issues. Corequisite: OPT 152. Lecture 3 hours per week.

#### **OPT 151 Optical Laboratory Theory (3 credits)**

Covers making eyeglasses with advanced prescriptions and frames. Includes verification and neutralization techniques for single vision lens and bifocals, frame repair, accomplishing prescribed prism by decentration, verification and neutralization, semi-rimless glasses, and multifocal glasses. Prerequisites: OPT 150 and OPT 152 or equivalent. Corequisite: OPT 153. Lecture 3 hours per week.

#### **OPT 152 Optical Laboratory Clinical I (3 credits)**

Provides the clinical component of Optical Laboratory Theory I. Provides students the opportunity to learn clinical skills in fundamental optical laboratory tasks at the entry level under the direction and supervision of a preceptor. Emphasizes accuracy and attaining skills that meet acceptable professional standards. Corequisite: OPT 150. Laboratory 6 hours per week.

#### **OPT 153 Optical Laboratory Clinical II (3 credits)**

Provides the clinical component of Optical Laboratory Theory II. Presents students with an opportunity to learn clinical skills for optical laboratory tasks at the advanced level under the direction and supervision of a preceptor. Emphasizes accuracy and the attainment of skills that meet acceptable

professional standards. Prerequisites: OPT 150 and OPT 152 or equivalent. Corequisite: OPT 151. Laboratory 6 hours per week.

#### **OPT 154 Optical Business Management (3 credits)**

Covers basic management and leadership skills necessary for a successful eye care office. Teaches the analysis, creative thinking, judgment, planning strategy, and implementation skills necessary for today's optical business challenges. Lecture 3 hours per week. (*Online Course*)

#### **OPT 160 Optical Dispensing Theory I (3 credits)**

Introduces the student to the skills necessary for becoming a dispensing optician. Includes the history of the profession, patient/client measurements, frame and lens materials, frame and lens selection, prescription analysis, and adjustment techniques. Prerequisite: OPT 121 or equivalent. Corequisite: OPT 165. Lecture 3 hours per week.

#### **OPT 165 Optical Dispensing Clinical I (2 credits)**

Provides the student with an opportunity to develop the skills necessary for becoming a dispensing optician. Covers patient/client measurements, frame and lens materials, frame and lens selection, prescription analysis, and adjustment techniques. Serves as the clinical component of Optical Dispensing Theory I. Prerequisite: OPT 121 or equivalent. Co-requisite: OPT 160. Laboratory 4 hours per week.

#### **OPT 260 Optical Dispensing Theory II (3 credits)**

Focuses on the development and refinement of the skills necessary for students to become a licensed dispensing optician, including patient/client measurements, frame and lens materials, frame and lens selection, prescription analysis, and adjustment techniques. Prerequisites: OPT 160 and OPT 165 or equivalent. Co-requisite: OPT 271. Lecture 3 hours per week.

#### **OPT 271 Optical Dispensing Clinical II (3 credits)**

Focuses on the development and refinement of the skills necessary for students to become a licensed dispensing optician, including patient/client measurements, frame and lens materials, frame and lens selection, prescription analysis, and adjustment techniques. Serves as the clinical component of Optical Dispensing Theory II. Prerequisites: OPT 160 and OPT 165 or equivalent. Co-requisite: OPT 260. Laboratory 12 hours per week.

#### **OPT 272 Optical Dispensing Clinical III (3 credits)**

Focuses on the development and refinement of the skills necessary for students to become a licensed dispensing optician, including patient/client measurements, frame and lens materials, frame and lens selection, prescription analysis, and adjustment techniques. Prerequisites: OPT 260 and OPT 271 or equivalent. Laboratory 12 hours per week.

#### **OPT 273 Contact Lens Theory I (3 credits)**

Introduces basic concepts and techniques of contact lens fitting, contact lens design, contact lens materials, and contact lens nomenclature. Covers contact lens insertion and removal techniques, and basic slit lamp and keratometry skills. Prerequisites: OPT 105 or equivalent. Lecture 3 hours per week.

#### **OPT 274 Contact Lens Theory II (3 credits)**

Explores soft spherical and gas permeable contact lens fitting philosophies, tolerances, and designs. Develops the student's patient evaluation skills, patient training skills, and skills for evaluating the fit and verification of contact lenses. Prerequisite: OPT 273 or equivalent. Lecture 3 hours per week.

#### **OPT 280 Contact Lens Clinical (3 credits)**

Promotes the development of clinical skills in fundamental contact lens tasks at the entry level under the direction and supervision of a preceptor. Emphasizes professional standards. Prerequisite: OPT 274 or equivalent. Laboratory 6 hours per week.

#### OPT 105 Anatomy, Physiology, and Pathology of the Eye (3 credits)

This course will include fundamentals of various body systems and principles of human physiology, methods of drug delivery including the advantages and disadvantages of drops, ointments, sustained release systems, systemic use of medications, basic characteristics of common external and internal diseases of the eye, and ocular emergencies. Lecture 3 hours per week. (*Online Course*)

# **Reynolds Opticianry Distance Learning Course Guidelines**



#### Lecture courses:

- A minimum of 1 mandatory virtual meeting will be held every 1 to 2 weeks (preferably there
  will be a meeting every week). Faculty will wait a maximum of 15 minutes for students to sign
  in, otherwise the meeting will be cancelled.
- Assignments will be graded and returned to the student within 5 business days of the posted submission due date.
- Unless there are mitigating circumstances, changes made to the class schedule will be announced at least 1 week in advance.
- All student questions pertaining to the course or assignments should be sent to the faculty
  through the Class Discussion forum on the course canvas page. Students should only email
  instructors if the subject is a private matter. Texting an instructor is prohibited.
- Faculty will reply to student discussion inquiries and emails within a 48 hour period.
- Virtual meetings are mandatory for an attendance grade unless otherwise stated in the course syllabus. Attendance policies for each course will be covered by the instructor during the orientation or first meeting.
- Students are responsible for coordinating proctored exam sites at approved sites per college
  policy.

#### Clinical Courses:

- Faculty will assess all major competencies in person or by live video streaming.
- Instructors will communicate with the clinical site preceptors a minimum of 3 times during the semester, more often as needed to provide assistance and feedback.
- Students must submit a copy of their photo ID for any video submission assignment to be accepted.
- **Weekly clinical discussion postings** will be submitted on Canvas and the instructor will provide feedback to student postings regularly.
- **Weekly reports** are required to be scanned, faxed to the instructor or uploaded on the course canvas page and must be signed by the preceptor.
- Students living within a 3 hour radius of the college must come to campus for major assessments. Students who are outside the 3 hour radius will have assessments proctored by the faculty member via live video streaming (Skype, Zoom, Google plus, etc..) and must have the ability to connect to the internet reliably while at their clinical site.
- OPT 152, 153 will have a proctored mid-semester project and a practical final exam.
- OPT 165 will have proctored midterm and final practical exams.
- OPT 271 and 272 will have proctored final practical exams.
- OPT 280 will have a proctored final practical exam and may require a minimum of 2 live video stream submissions of specific competencies.

Any questions regarding these policies may be directed to the program director, Leah Exline.



### **Testing Instructions For Opticianry Courses**

Please read over these procedures very carefully and contact your faculty if you have any questions.

All written tests/exams are held online through Canvas. All students are expected to adhere to the Academic Honesty policy. This means that the use of textbooks, notes, or help from another person is not permitted unless specific instructions have been given by the faculty of the course. Any student found to be guilty of academic dishonesty will receive a zero on the assignment and will be reported to the Office of Student Affairs.

#### **Procedures for Written Final Exams**

- The Final Exam must be taken using an approved proctoring modality during the time set forth by the faculty and posted on the course page.
- It is the student's responsibility to provide the faculty with their proctor information and submit the "Proctor Request Form" as necessary by the specified deadlines.
- Failure to meet any required deadlines may result in an inability to take the final exam and the student will be given a zero for the exam.
- > Students taking multiple classes must provide Proctor Information for each class regardless if it is the same faculty. This information must include: the testing site name and location, proctor name, phone number, and email address.
- Only students taking the exam at a NON-Reynolds testing site must complete and send the a Proctor Request Form as indicated.
- > Students taking the exam at a **Reynolds testing center** must use the "testing ticket" given by the faculty and posted on the course page.
- It is the student's responsibility to make arrangements well in advance and be familiar with the policies and hours of operation for the testing site location they choose.
- The exam will be conducted online (therefore your site needs to have internet access) and is password protected. A password will be provided upon proof of identity when you arrive at the testing location.
- ➤ ONLY In the event Canvas is down due to server issues or other technical issues at a proctoring site a hard copy of the exam will be provided for you to complete.

#### **Procedures for Practical Exams**

- > OPT 152, 153, 165, 271, 272 and 280 require the completion of a practical exam.
- Students who reside within a 3 hour radius of Richmond, Virginia will be <u>required</u> to travel to campus for major assessments and/or examinations.

- Students outside a 3 hour radius of the college must make arrangements with the faculty to schedule a live video streaming session and the faculty member will proctor the exam.
- Proctors for dispensing, contact lens and laboratory clinical sites cannot be the student's preceptor for the class or any individual who works directly with the student on a daily basis (ie: store manager, fellow employee, etc).
- For distance proctoring the practical exam pack will be mailed directly to the preceptor or a third party at least 2 weeks prior to the scheduled exam date. The exam pack must remain unopened until the time of the exam and the faculty instructs the student to open it.
- NOTE: the exam pack must be received back at the college by the posted deadline. This means it must be mailed/shipped with significant prior notice to arrive on time. Please be mindful of any holidays or weekends in which mailing/shipments are not received.

#### **Policy Regarding College Emergencies**

Students shall be expected to take course-related tests at their regularly scheduled times and in the format and manner specified by the faculty. No exceptions shall be made without college approved accommodations and the permission of the faculty member for that course. If the student fails to appear for a test, it shall be the student's responsibility to contact the faculty member and make arrangements for a make-up test, at the discretion of the faculty member. In the event the college closes due to inclement weather or other college emergency, make-up tests will be extended by the number of days the college is closed.

#### REYNOLDS LEARNING RESOURCE CENTER

In line with the mission to provide an environment where students and faculty can meet their learning and teaching needs, Reynolds Library provides students and faculty access to adequate learning and information resources and services to support the associate degree, certificate, and career studies certificate programs that the college offers.

Students attending classes at any location or via distance education have full access to all library materials. The libraries on the Downtown and Parham Road Campuses are open Monday through Saturday for 58 hours per week during each semester. The Goochland Campus library is open Monday through Friday for 42 hours per week. For library hours, check <a href="https://reynoldslibraries.org/hours/">https://reynoldslibraries.org/hours/</a>. This allows users access to circulation, reference, periodicals, videos, and computers resources on-site.

In addition, users can search the collection through the online library catalog or access millions of articles, ebooks or videos through over 150 online databases. Just recently, the library acquired over 150 ebooks specifically covering ophthalmology topics. This is especially useful for students enrolled in distance education classes, giving them access to the same materials as students who are on campus. The complete list of electronic databases currently available to students and faculty can be found from library's web page at <a href="https://libguides.reynolds.edu/az.php">https://libguides.reynolds.edu/az.php</a>.

In addition, the Reynolds library is a member of the <u>Virtual Library of Virginia (VIVA)</u> consortium, composed of the libraries of the 39 state-supported colleges and universities within Virginia and 32 private institutions that have been permitted to join the consortium. VIVA's mission is to provide, in an equitable, cooperative, and cost-effective manner, enhanced access to library and information resources for the Commonwealth of Virginia's academic libraries. Through VIVA, colleges can improve faculty and staff productivity, enhance learning, avoid duplications of collections, and better utilize technology. Through enhanced support of interlibrary loan services, improved sharing of Virginia's exceptional print and microfilm collections is achieved. Shared access to online library resources improves coordinated collection development.

The Virginia Community College System (VCCS) also utilizes group purchasing power to contract for several databases and services. Each year, Reynolds Library, along with the other 22 colleges in the VCCS, pays an apportioned amount based on each college's enrollment toward the group purchase of VCCS databases.

All VIVA, VCCS and Reynolds Library Databases are remotely accessible to all faculty members and currently enrolled students who have Internet access from home computers or from local school or public libraries as described in <u>Resources for Online Learning Page</u>.

Reynolds Library has also participated in VIVA's <u>Cooperative Borrowing Program</u> which allows current Reynolds students, faculty, and staff to borrow library materials directly from <u>participating academic libraries</u> such as the University of Virginia, University of Richmond, Virginia Commonwealth University, etc.

Through interlibrary loan agreements, students and faculty also have access to the physical materials from other libraries in the country. An <u>online interlibrary loan request form</u> makes such opportunities easily accessible to all students and faculty.

A summary of the <u>library's circulation policies</u>, including a description of the interlibrary loan agreements and procedures, can be found on the library's web site.

The library staff maintains a collection of print and online library resources that meet the teaching and learning needs of the college's students and faculty and that support the range of academic programs offered by the college. The staff continually reviews its collections and connections to online resources. Program heads and individual teaching faculty are encouraged to recommend new library resources and an <u>online form for recommending the purchase of new resources</u> is available on the library's web site.

#### **REYNOLDS LEARNING RESOURCE CENTER HOLDINGS**

| Title   | Author                        | Permanent Call Number |
|---|-------------------------------|-----------------------|
| Physiology of the eye.  | Davson, Hugh, 1909-           | QP475 .D3 1972        |
| Visual optics /   | Emsley, H. H.                 | QP475 .E52 1952       |
| The eye.  |                               | QP475 .E92            |
| Anatomy of the eye and orbit : the clinical essentials /  | Freddo, Thomas F., author.    | QP475 .F74 2018       |
| Vision: a computational investigation into the human representation and processing of visual information /                            | Marr, David, 1945-1980.       | QP475 .M27 1982       |
| Ocular anatomy and physiology /   | Lens, Al.                     | QP475 .028 2008       |
| Physiological optics  |                               | QP475 .P53            |
| Foundations of vision /   | Wandell, Brian A.             | QP475 .W32 1995       |
| Focus on vision /   | Weale, R. A.                  | QP475 .W34 1982       |
| Vision: how it works and what can go wrong /  | Dowling, John E.              | QP475.5 .D69 2016     |
| The miracle of vision /   | Freese, Arthur S.             | QP475.5 .F7           |
| A natural history of seeing: the art and science of vision  | Ings, Simon.                  | QP475.5 .154 2008     |
| Physiology of the eye : an introduction to the vegetative functions /   | Fatt, Irving.                 | QP476 .F37            |
| The retina : an approachable part of the brain /  | Dowling, John E.              | QP479 .D65 2012       |
| The theory of binocular vision /  | Hering, Ewald, 1834-<br>1918. | QP487 .H413 1977      |
| Vision and acquisition: fundamentals of human visual performance, environmental influences, and applications in instrumental optics / | Overington, lan.              | QP491 .093 1976       |

| System of ophthalmology.  | Duke-Elder, Stewart, Sir,<br>1898-1978. | RE46 .D82           |
|---|---|---------------------|
| Medical sciences for the ophthalmic assistant /   | Nemeth, Sheila Coyne.                   | RE46 .N4 1991       |
| Ophthalmology, principles and concepts /  | Newell, Frank W.                        | RE46 .N57 1992      |
| Ocular periphery and disorders /  |   | RE46 .O38 2011      |
| Ophthalmic technology: a guide for the eye care assistant /                             |   | RE46 .O62 1987      |
| Vaughan & Asbury's general ophthalmology /  | Riordan-Eva, Paul.                      | RE46 .V4 2004       |
| Clinical light damage to the eye /  |   | RE48 .C56 1987      |
| Emergencies in eyecare /  | Hargis-Greenshields,<br>Leslie.         | RE48 .H34 1999      |
| Computer eye-stress : how to avoid it, how to alleviate it /                            | Hutchinson, R. Anthony.                 | RE48 .H87 1985      |
| Optical radiation and visual health /   |   | RE48 .067 1986      |
| Manual of eye emergencies : diagnosis and treatment                                     | Webb, Lennox A.                         | RE48 .W43 2004      |
| Rosenbloom & Morgan's vision and aging /  |   | RE48.2.A5 R67 2007  |
| Vision and aging : general and clinical perspectives /                                  |   | RE48.2.A5 V57 1986  |
| The Eye in childhood /  |   | RE48.2.C5 E93 1983  |
| Pediatric optometry /   | Harvey, William.                        | RE48.2.C5 H37 2004  |
| Assessing children's vision : a handbook /  | Leat, Susan J.                          | RE48.2.C5 L413 1999 |
| Eye care for infants and young children /   | Moore, Bruce D.                         | RE48.2.C5 M66 1997  |
| Optometric management of learning-related vision problems /                             |   | RE48.2.C5 S34 2006  |
| Practical pediatric ophthalmology /   | Taylor, David, 1942-                    | RE48.2.C5 T39 1997  |
| The Massachusetts Eye and Ear Infirmary illustrated manual of ophthalmology /           | Kaiser, Peter K., author.               | RE48.9 .F75 2014    |
| Manual of ocular diagnosis and therapy /  |   | RE48.9 .M36 2008    |
| Ophthalmic diseases and therapeutics /  | Norton, A. B. 1856-1919.                | RE48.9 .N676 2010   |
| The Wills eye manual: office and emergency room diagnosis and treatment of eye disease. |   | RE48.9 .W54 1994    |
| The Wills eye manual: office and emergency room diagnosis and treatment of eye disease  |   | RE48.9 .W54 2017    |
| Healthy vision: prevent and reverse eye disease through better nutrition /              | Adams, Neal.                            | RE51 .A33 2014      |
| The eye book : a complete guide to eye disorders and health /                           | Cassel, Gary H., 1953-                  | RE51 .C34 1998      |
| Living with vision problems: the sourcebook for blindness and vision impairment /       |   | RE51 .L585 2002     |
| Complete guide to eyecare, eyeglasses & contact lenses /                                | Zinn, Walter J.                         | RE51 .Z56 1996      |
| Ophthalmology made ridiculously simple /  | Goldberg, Stephen.                      | RE56 .G56 1993      |

| Adler's physiology of the eye : clinical application /                                     | Adler, Francis Heed,<br>1895- | RE67 .A32 1992     |
|--|-------------------------------|--------------------|
| Color atlas of anterior segment eye diseases /   | Abrahamson, Ira A., 1924      | RE71 .A25 1974     |
| Basic procedures /   | DuBois, Lindy, 1948-          | RE72.5 .D83 1998   |
| Clinical skills for the ophthalmic examination : basic procedures /                        | DuBois, Lindy, 1948-          | RE72.5 .D83 2006   |
| Certified ophthalmic assistant exam review manual /  | Ledford, Janice K.            | RE72.5 .L427 2012  |
| The ophthalmic assistant : a text for allied and associated ophthalmic personnel /         |                               | RE72.5 .S84 2013   |
| Ophthalmic assistant : a text for allied and associated ophthalmic personnel /             |                               | RE72.5 .S84 2018   |
| Instrumentation for eyecare paraprofessionals  | Herrin, Michelle Pett.        | RE73 .H45 1999     |
| Laboratory and radiologic tests for primary eye care /                                     | Burden, Gail.                 | RE75 .B87 1997     |
| Clinical procedures for ocular examination /   |                               | RE75 .C474 2004    |
| Clinical diagnosis in ophthalmology /  | Kanski, Jack J.               | RE75 .K35 2006     |
| Biomicroscopy for contact lens practice : clinical procedures /                            | Goldberg, Joe B.              | RE79.B5 G6 1984    |
| Visual fields /  | Henson, David B.              | RE79.P4 H45 1993   |
| Overcoming complications of LASIK and other eye surgeries /                                | Shalaby, Ismail A., 1956-     | RE85 .S53 2010     |
| Ophthalmic nursing /   | Shaw, Mary E.                 | RE88 .S76 2010     |
| The low vision handbook for eyecare professionals /  | Brown, Barbara, 1956-         | RE91 .B75 2007     |
| Low vision : principles and practice /   | Dickinson, Christine.         | RE91 .D48 1998     |
| Management of low vision /   | Fonda, Gerald.                | RE91 .F597         |
| The art and practice of low vision /   | Freeman, Paul B.              | RE91 .F67 1991     |
| Amblyopia: basic and clinical aspects /  | Ciuffreda, Ken J., 1947       | RE92 .C58 1991     |
| Reversing dry eye syndrome: practical ways to improve your comfort, vision, and appearance | Maskin, Steven L.             | RE216.D78 M37 2007 |
| The dry eye : a practical approach /   | Patel, Sudi.                  | RE216.D78 P37 2003 |
| Anterior eye disease and therapeutics A-Z /  | Bruce, Adrian S.              | RE334 .B7 2003     |
| Ocular surface disease : cornea, conjunctiva and tear film /                               |                               | RE334 .O283 2013   |
| Beyond glasses! : the consumer's guide to laser vision correction /                        | Armstrong, Franette.          | RE336 .A76 1998    |
| Refractive surgery /   | Azar, Dimitri T.              | RE336 .A93 2007    |
| Diagnosis, contact lens prescribing, and care of the keratoconus patient /                 | Zadnik, Karla.                | RE339 .Z33 1999    |
| Cataract and glaucoma for eyecare paraprofessionals  | Duvall, Brian, 1968-          | RE451 .D88 1999    |
| Retina, vitreous, and choroid : clinical procedures /                                      | Johnston, Robert L.,<br>1963- | RE551 .J64 1995    |
|  |                               |                    |

| Duratical atlantational disease and the survey           |                           | DEEE4 D72 4000     |
|--|---------------------------|--------------------|
| Practical atlas of retinal disease and therapy /         |                           | RE551 .P73 1998    |
| The retina and its disorders /                           | 1                         | RE551 .R434 2011   |
| Retinal imaging /  |                           | RE551 .R486 2006   |
| What you must know about age-related                     | Anshel, Jeffrey, author.  | RE661.D3 A57 2018  |
| macular degeneration : how you can prevent,              |                           |                    |
| stop, or reverse AMD /                                   |                           |                    |
| Macular degeneration : the latest scientific             | D'Amato, Robert.          | RE661.D3 D36 2000  |
| discoveries and treatments for preserving                |                           |                    |
| your sight /   |                           |                    |
| Macular degeneration : a complete guide for              | Samuel, Michael A.,       | RE661.D3 S26 2008  |
| patients and their families /                            | 1956-                     |                    |
| Macular degeneration: living positively with vision loss | Wason, Betty, 1912-       | RE661.D3 W37 1998  |
| Diabetes and primary eye care /                          | Ariffin, A.               | RE661.D5 A7 1992   |
| Binocular vision /                                       | Evans, Bruce J. W.        | RE735 .E93 2005    |
| The pediatric glaucomas /                                | Mandal, Anil K.           | RE871 .M25 2006    |
| Glaucoma /   |                           | RE871 .R48 2019    |
| Glaucoma : a patient's guide to the disease /            | Trope, Graham E.          | RE871 .T76 1997    |
| Toxicology of the eye : effects on the eyes and          | Grant, W. Morton 1915-    | RE901.T67 G73 1986 |
| visual system from chemicals, drugs, metals              | (Walter Morton),          |                    |
| and minerals, plants, toxins and venoms; also,           | ,,,                       |                    |
| systemic side effects from eye medications /             |                           |                    |
| The island of the colorblind and Cycad Island /          | Sacks, Oliver W.          | RE921 .S23 1997    |
| Borish's clinical refraction /                           | Benjamin, Will J., 1955   | RE925 .B64 2006    |
| Ocular accommodation, convergence, and                   | Goss, David A., 1948-     | RE925 .G67 1995    |
| fixation disparity: a manual of clinical analysis        |                           |                    |
| Last minute optics : a concise review of optics,         | Hunter, David G., 1957-   | RE925 .H76 1996    |
| refraction, and contact lenses /                         |                           |                    |
| Optics, retinoscopy, and refractometry /                 | Lens, Al.                 | RE925 .L46 2006    |
| Clinical refraction and visual science /                 | Levene, John R.           | RE925 .L47         |
| Clinical pearls in refractive care /                     | Werner, D. Leonard.       | RE925 .W47 2002    |
| Clinical visual optics /                                 | Bennett, Arthur G.        | RE927 .B46 1989    |
| Presbyopia research : from molecular biology             | International Symposium   | RE938.5 .I57 1989  |
| to visual adaptation                                     | on Presbyopia. 1989 :     |                    |
| Presbyopia: recent research and reviews from             |                           | RE938.5 .P74 1987  |
| the third international symposium /                      |                           |                    |
| Dictionary of optometry /                                | Millodot, Michel.         | RE939.7 .M54 1990  |
| Dictionary of optometry and vision science /             | Millodot, Michel, author. | RE939.7 .M54 2018  |
| Ophthalmic prescription work.                            | Bennett, Arthur G.        | RE951 .B4          |
| Practical aspects of ophthalmic optics /                 | Dowaliby, Margaret.       | RE951 .D68 1988    |
| Ophthalmic dispensing : the present-day                  | Drew, Ralph.              | RE951 .D73 1990    |
| realities /  |                           |                    |
| Clinical optics /  | Fannin, Troy E.           | RE951 .F36 1987    |
| Primary care optometry : anomalies of                    | Grosvenor, Theodore P.    | RE951 .G76 1996    |
| refraction and binocular vision /                        |                           |                    |

| Onhthalmic longer & dispensing /               | Ialia M (Mahammad)       | DE0E1 12E 2002       |
|--|--------------------------|----------------------|
| Ophthalmic lenses & dispensing /               | Jalie, M. (Mohammed)     | RE951 .J35 2003      |
| The principles and practice of optical         | Sasieni, Lewis Sidney,   | RE951 .S2            |
| dispensing and fittin g.                       | 1903-                    |                      |
| Spectacles for aphakia /                       | Benton, Curtis D., 1921- | RE952 .B45           |
| Dispensing pediatric eyeware /                 | Schramm, Katheryn D.     | RE952.5.C45 S37 2000 |
| Clinical procedures in primary eye care /      |                          | RE952.9 .C56 2014    |
| The optician training manual : simple steps to | McCleary, Davis S.       | RE952.9 .M363 2009   |
| becoming a great optician /                    |                          |                      |
| The optician training manual: simple steps to  | McCleary, David S.       | RE952.9 .M363 2018   |
| becoming a great optician /                    |                          |                      |
| Opticianry, ocularistry and ophthalmic         |                          | RE952.9 .065 1990    |
| technology /                                   |                          |                      |
| Optical training: skills and procedures /      | Wooton, Davey M.         | RE952.9 .W66 2003    |
| A dispensing optician manual : an introduction | Zelada, A. J.            | RE952.9 .Z45 1987    |
| to vision care for the new ophthalmic          |                          |                      |
| technician /                                   |                          |                      |
| OAT Prep Plus 2019-2020 /                      |                          | RE953 .028 2018      |
| Law and ethics for the eye care professional / | Pierscionek, Barbara K.  | RE959 .P52 2008      |
| Management for the eyecare practitioner /      | Bennett, Irving.         | RE959.3 .B45 1993    |
| Management for opticians /                     |                          | RE959.3 .M36 1999    |
| Complete optometric assistant /                | Morgan, Sarah.           | RE959.5 .M67 2008    |
| The principles of ophthalmic lenses /          | Jalie, M. (Mohammed)     | RE961 .J3 1977       |
| Opticianry : the practice and the art /        | Borover, Bill, 1939-     | RE962 .B67           |
| Essentials of ophthalmic lens finishing /      | Brooks, Clifford W.      | RE962 .B74 2012      |
| Essentials for ophthalmic lens work /          | Brooks, Clifford W.      | RE962 .B76 1983      |
| Understanding lens surfacing /                 | Brooks, Clifford W.      | RE976 .B78 1991      |
| Envision yourself : an independent study guide |                          | RE976 .E95 1994      |
| to successful eyewear dispensing & marketing   |                          |                      |
| Spectacle lenses : theory and practice /       | Fowler, Colin.           | RE976 .F69 2001      |
| CLAO guide to spectacles and dispensing: a     | Stein, Harold A. 1929-   | RE976 .S74 1999      |
| primer for ophthalmologists /                  | (Harold Aaron),          |                      |
| Eyeglassery /                                  | Weber, Jack (Jack M.)    | RE976 .W42 1996      |
| Contact lenses /                               | Phillips, Anthony J.     | RE977 .C6 2019       |
| Rigid gas-permeable contact lenses /           |                          | RE977 .R5 1986       |
| Close contacts: the joys and tears of contact  | Archer, Caroline.        | RE977.C6 A7 1991     |
| lenses - a user's guide /                      |                          |                      |
| Clinical manual of contact lenses /            |                          | RE977.C6 C525 2009   |
| Clinical manual of contact lenses /            |                          | RE977.C6 C525 2014   |
| Contact lenses for pre and post-surgery /      |                          | RE977.C6 C5557 1997  |
| Contact lenses : fundamentals and clinical use |                          | RE977.C6 C5558 1997  |
| Contact lens problem solving /                 |                          | RE977.C6 C55584 1995 |
| Advanced contact lens manual : a               |                          | RE977.C6 C559 1998   |
| comprehensive study and reference guide.       |                          |                      |
| Contact lens practice /                        |                          | RE977.C6 C575 2018   |
| Contact lenses /                               | Daniels, Ken.            | RE977.C6 D36 1999    |

| Contact lens optics and lens design /                                    | Douthwaite, W. A.         | RE977.C6 D68 1995  |
|--|---------------------------|--------------------|
| Contact lens complications /   | Efron, Nathan.            | RE977.C6 E34 2004  |
| The contact lens manual : a practical guide to fitting /                 | Gasson, Andrew.           | RE977.C6 G38 2003  |
| Contact lenses : treatment options for ocular disease /                  | Harris, Michael G., 1942- | RE977.C6 H289 1996 |
| Contemporary contact lens practice /                                     | Hartstein, Jack, 1924-    | RE977.C6 H294 1991 |
| Contact lens perspectives /  | Hill, Richard M., 1934-   | RE977.C6 H535 1988 |
| Common contact lens complications : their recognition and management /   | Jones, Lyndon W.          | RE977.C6 J62 2000  |
| Contact lenses in ophthalmic practice /                                  |                           | RE977.C6 M254 2004 |
| Manual of contact lens prescribing and fitting with CD-ROM /             |                           | RE977.C6 M257 2006 |
| Manual of gas permeable contact lenses /                                 |                           | RE977.C6 M36 2004  |
| Specialty contact lenses : a fitter's guide /                            | Schwartz, Carol A.        | RE977.C6 S38 1996  |
| Fitting guide for rigid and soft contact lenses : a practical approach / | Stein, Harold A. 1929-    | RE977.C6 S73 1990  |
| Fitting guide for rigid and soft contact lenses : a practical approach / |                           | RE977.C6 S73 2002  |
| Test review II for contact lens technicians /                            |                           | RE977.C6 T44 2001  |
| Test review for contact lens technicians /                               |                           | RE977.C6 T77 2001  |
| Orthokeratology handbook /   | Winkler, Todd D.          | RE977.C6 W556 1995 |
| System for ophthalmic dispensing /                                       | Brooks, Clifford W.       | RE979 .B76 1996    |
| System for ophthalmic dispensing /                                       | Brooks, Clifford W.       | RE979 .B76 2007    |
| Spectacle frames and their dispensing /                                  | Obstfeld, Henri.          | RE979 .O36 1997    |
| 101 dispensing tips and procedures /                                     | Weber, Jack M.            | RE979 .W3 1995     |
| Ocular pharmacology /  | Havener, Will H. 1924-    | RE994 .H35 1983    |

### <u>DVD</u>

| Title   | Location Name    | Permanent Call Number |
|---|------------------|-----------------------|
| Complications during cataract surgery : anesthesia,         | Media Collection | RE451 .C737 2012      |
| positive pressure, zonular damage, IOL problems, and more / |                  |                       |
| Diagnostic imaging of retinal disease /                     | Media Collection | RE551 .D53 2012       |
| Elementary optics & the lensometer v.1                      | Media Collection | RE979 .B31 1985       |
| Fundamentals of ophthalmic medical assisting                | Media Collection | RE72.5 .F86 2009      |
| Glaucoma filtering surgery and drainage devices /           | Media Collection | RE871 .G55 2010       |
| Hope & cope living with macular degeneration /              | Media Collection | RE661.D3 H67 2005     |
| How to test for colorblindness /                            | Media Collection | RE921 .H69 2003       |
| Job orders: right measurements the first time v. 3          | Media Collection | RE979 .B33 1985       |
| Retinoscopy and subjective refraction                       | Media Collection | RE928 .R48 2007       |
| The Fitting triangle & frame adjustments v. 4               | Media Collection | RE979 .B34 1985       |
| Visual acuity.  | Media Collection | RE75 .V834 1995       |