



**Southwestern Indian Polytechnic Institute**  
A National Indian Community College and Land Grant Institution

## **VISION CARE TECHNOLOGY PROGRAMS**

The Vision Care Technology Programs are designed to educate students in the vision care field as dispensers/opticians/vision care technicians or assistants. Students receive theoretical and laboratory experiences in optics, enabling them to explore practical and laboratory experiences in the vision care profession. Students may pursue an Associate in Applied Science (A.A.S.) degree in Vision Care Technology or a Certificate of Completion in Optical Laboratory Technology.

At the present time, there are shortages of qualified dispensers/opticians/vision care technicians or assistants. Vision Care is a growing health care field, providing excellent career opportunities and upward mobility. Employment opportunities are available in retail stores, wholesale laboratories, eyecare clinics, optometrists and ophthalmologists' offices, and Indian Health Service medical centers. Many dispensers/opticians/vision care technicians or assistants, after several years of experience, choose to become self-employed.

### **Professional Accreditation**

SIPI's Vision Care Technology program is accredited by the Commission on Opticianry Accreditation (COA) (<http://www.coaccreditation.com>) The COA exists to assess and verify educational quality in optical programs.

#### **The mission of the Commission on Opticianry Accreditation:**

The Commission on Opticianry Accreditation (COA) is committed to an accreditation process that is a fair, thorough assessment of educational quality. The goal of COA as an accrediting agency is to assist the opticianry programs in producing well-trained, competent graduates to provide quality professional services to the public.

#### **Why attend or become an accredited Opticianry program?**

Twenty-one states require licensure for Opticians. Of those states, nineteen accept graduates of a COA accredited program in lieu of the apprenticeship portion of the process of preparing for licensure, and one requires graduation from a COA accredited school as a condition to be licensed. Graduation from an accredited Opticianry program gives the individual a nationally recognized credential.

Many scholarships, federal funding, student loans, and fellowships are only available to students who are attending accredited programs.

The Vision Care Technology Program's curriculum is designed to follow the established guidelines of the COA.

The COA develops the educational standards by which programs are evaluated based on skills and knowledge necessary for opticianry, conducts program evaluation, and publishes a list of accredited programs that meet the national accreditation standards.

Accreditation means that the program being offered by a school has voluntarily undergone a comprehensive study, which has demonstrated that the school has set appropriate educational objectives for students. The accreditation identifies that the school does in fact perform the functions that it claims; and that the school furnishes materials and services that enable students to meet those stated objectives.

### **Career Description**

Dispensers/Opticians/Vision Care Technicians or Assistants must accurately translate a doctor's written prescription into eyeglasses or contact lenses that can be worn comfortably and satisfy the optical physiological, cosmetic, and lifestyle needs of the patient/consumer.

Vision Care is a very rewarding profession. Dispensers/Opticians/Vision Care Technicians or Assistants assist the public by providing optical devices to correct visual perception, reading disorders, poor eye coordination, and poor visual acuity, which can affect an individual's quality of life. Vision is extremely important in education, work, and play because more than 80 percent of learning is visual studies have shown that good vision improves the production and morale of workers and that athletic performances is enhanced when vision problems are corrected. Vision care personnel are vital to industry, public health, recreation, highway safety, education, and the community.

### **Training Facilities**

The program has three hands-on training areas within its facilities:

- A retail optical dispensing store/clinic
- A lens fabricating laboratory
- A visual screening/contact lab area

The program's **combined equipment inventory** includes current standard equipment as well as state of art lens fabrication equipment. This includes the latest in computer technology optical software programs and computerized equipment.

The **retail-dispensing store** provides optical services for the college campus community. Students perform dispensing skills and procedures through related course curriculum and internship training.

The **visual screening testing area** provides visual acuity screening testing for the college campus community. Testing includes distant and near acuity checks for referrals to visual practitioners.

The **contact lens lab** portion is use to educate students in contact lens fitting, measurements, verification, lens insertion and removal and other related task in contact lens fitting.

## **Mission Statement**

The Vision Care Program will provide training and education to students to enable them to compete and qualify for employment in the Ophthalmic/Opticianry/Optical/ Vision Care field; and to produce well-trained, competent professionals to provide professional services to the public.

## **Goals**

The primary goal of the Vision Care Programs is to educate all individuals for technical competencies and capabilities to enable them to compete and qualify for employment in the optical and ophthalmic industry.

The program also strives to eliminate hazardous waste and to reduce non-hazardous waste to minimum levels where economically and technically practical, and to be in full compliance with all federal and state environmental regulations.

## **Program Objectives**

1. Maintain accreditation with Commission on Opticianry Accreditation.
2. Maintain a resourceful Advisory Committee.
3. Maintain professional affiliation with optical associations or organizations.
4. Provide course curriculum that is conducive to the optical industry.
5. Provide facilities and equipment, which emphasize variety and quality.
6. Empower each student with ability to analyze and use basic optical principles, concepts, formulae and laws of physics as applied to the optical industry.
7. Empower each student with ability to use their knowledge of the human seeing system, optical theories and mathematics to interpret prescriptions written by doctors and to determine the frame and lens combinations that would be beneficial to the consumer.
8. Empower each student the ability to perform and use optical instruments, equipment, material, procedures and techniques at optical industry standards.
9. Empower each with the ability to establish good working relationships with doctors, managers, supervisors and other opticians and to employ the concept of team effort and goal setting/accomplishment.
10. Empower each student with the ability to use communication skills, both oral and written, which include interpreting, recording, instructing, designing, verifying and transmitting facts or ideas and the ability to recognize and analyze consumer/client needs and wants.
11. Empower each student with the ability to project self-confidence and attitudes necessary for success in the optical industry.
12. Empower each student with the knowledge of laboratory safety procedures and environmental requirements.

## **ASSOCIATE OF APPLIED SCIENCE DEGREE IN VISION CARE TECHNOLOGY**

The Vision Care program educates students to become dispensers/opticians/vision care technicians or assistants. A dispensers/opticians/vision care technicians or assistants accurately interprets and evaluates the consumer's prescription for the fitting of eyeglasses and contact lenses. This involves selecting the correct ophthalmic lenses, frames and lens enhancements to fit each individual needs and wants. Students will learn a variety of dispensing skills including product knowledge, fashion, optical eyewear fabrication, salesmanship, customer relations and retail optical management. Retail optical stores usually employs dispensers in shopping malls or retail outlets. Dispensers/Opticians/Vision Care Technicians or Assistants generally work independently with consumers.

Students enrolled at the college may pursue an Associate of Applied Science Degree if ACT Compass test scores meet the college's entry-level requirements and the student is a high school or GED graduate. The curriculum is fully accredited by COA and is consistent with nationally recognized opticianry curriculum. The degree program provides the student optician with skills and knowledge to be employed in any of the primary occupations in opticianry. Students learn dispensing principles and applications, laboratory surfacing and finishing operations and concepts, contact lens principles and procedures, low vision aids concepts and devices, ophthalmic instruments and equipment use, and professional and management skills.

The degree program is a two-year curriculum (five –trimesters), which includes general education courses in behavior sciences, communications, humanities, mathematics, and science. The degree program, in addition to providing for transferability to advanced study, also provides an excellent foundation for students desiring to become optical managers or entrepreneurs.

### **The Vision Care Technology AAS Degree Program Goal Statements**

The Vision Care Technology program will train individuals for technical competencies and skills I which will enable them to compete and qualify for employment in the vision care field; become certified by the American Board of Opticianry (ABO) and the National Contact Lens Examiner (NCLE); and become state license where applicable and required.

The program also strives to eliminate hazardous waste and to reduce non-hazardous waste to minimum levels where economically and technically practical, and to be in full compliance will all federal and state environmental regulations.

### **The Vision Care Technology Outcome Objectives:**

- Be able to use the knowledge of the human visual system, theory of refraction, optical theories and mathematics to interpret prescriptions written by licensed practitioners to determine the frame and lens combinations that would be beneficial to the consumer.
- Be able to demonstrate the ability to use optical instruments, equipment, materials, procedures and techniques to industry standards in the practice of proper lens selection

and design, insertion, removal, and care of contact lenses while adhering to OSHA and environmental regulations.

- Be able to establish and maintain good working relationships with doctors, managers, supervisors, and other opticians and to employ a good record keeping system for office supply control, business finance and operating expenses, and inventory needs.
- Be able to demonstrate ability to use communications skills, both oral and written, which include interpreting, recording, instructing, designing, verifying, and transmitting facts or concepts and the ability to recognize and analyze consumer needs and wants.

### **Vision Care Technology Exit Competencies**

- Use effective oral and written communication
- Perform basic algebra, trigonometry, and geometry
- Identify the human eye structure, function, and pathology
- Determine facial and eye measurements
- Neutralize/verify eyewear/vision aids prescriptions
- Assess vocational and avocational needs of the patient/customer
- Assist in selection of proper frames and lenses
- Price and collect fees for vision aids and services
- Prepare ophthalmic laboratory job orders
- Deliver prescription eyewear/vision aids and instruct patient/customer/client in use and care
- Maintain customer records
- Provide follow-up service, including eyewear/vision aids, repair, lens and frame replacement
- Respond to inquires and concerns
- Apply rules and regulations for safe work practices
- Demonstrate proficiency in the operation and function of equipment
- Utilize and maintain equipment
- Demonstrate proficiency in finishing techniques
- Demonstrate proficiency in surfacing techniques
- Describe visual assessment
- Maintain records related to inventory and equipment
- Demonstrate principles of adaptation, dispensing, and fitting of contact lenses
- Identify concepts/procedures associated with dispensing artificial eyes and low vision aids
- Discuss prescription eyewear/vision aids and other patient/customer/client related information (verbal and written) with the prescriber
- Demonstrate knowledge of national certifications
- Apply ophthalmic lens enhancements

**Academic requirements for the  
ASSOCIATE APPLIED SCIENCE IN VISION CARE TECHNOLOGY  
CIP 51.1801**

<b>First Trimester</b>	<b>Credit Hours</b>
COSC 107 Computer Literacy.....	3
ENGL 101 Composition.....	3
HLTH 164 First Aid & Safety.....	2
OPTI 101 Introduction To Optics W/Lab.....	5
OPTI 112 Opticianry Environmental & Safety Issues.....	2
<b>Total First Trimester Credits</b>	<b>15</b>
<b>Second Trimester</b>	
MATH 120 Intermediate Algebra.....	3
OPTI 105A Ophthalmic Finishing & Surfacing 1 W/Lab.....	5
OPTI 110A Ophthalmic Dispensing I W/Lab.....	4
OPTI 115 Ophthalmic Sales.....	2
<b>Total Second Trimester Credits</b>	<b>14</b>
<b>Third Trimester</b>	
ENGL 119 Technical Communications.....	3
OPTI 205A Ophthalmic Finishing & SurfacingII W/Lab.....	5
OPTI 215 Anatomy & Physiology of the Eye.....	3
PHYS 102 Introductory to Physics.....	3
<b>Total Third Trimester</b>	<b>14</b>
<b>Fourth Trimester</b>	
OPTI 220A Ophthalmic Dispensing II w/Lab.....	4
OPTI 225 Management for Opticians.....	3
OPTI 235 Contact Lenses W/Lab.....	4
XXXX xxx Social or Behavioral Elective.....	3
<b>Total Fourth Trimester Credits</b>	<b>14</b>
<b>Fifth Trimester</b>	
BADM 130 Principles of Management or	
BADM 242 Principles of Marketing.....	3
XXX xxx Humanities Elective.....	3
OPTI 236 Introduction to Refraction W/Lab.....	4
OPTI 245 Ophthalmic Dispensing Internship.....	3
<b>Total Fifth Trimester Credits</b>	<b>13</b>
<b>Total credit hours required</b>	<b>70</b>

## **CERTIFICATION OF COMPLETION IN OPTICAL LABORATORY TECHNOLOGY**

The Certificate in Optical Laboratory Technology is a course of study over three trimesters designed to train students to work in lab areas of optical establishments as technicians fabricating eyewear to ophthalmic lens prescriptions.

The Optical Laboratory Technology Program is designed to train students to work in lab areas as technicians fabricating eyewear to ophthalmic lens prescriptions. Students learn how to layout, generate and polish optical lenses to prescription specifications. Students will also learn how to edge and mount lenses into various types of frames and to apply various lens enhancements such as lens tints or coatings. The lab technician student is required to take all advanced level courses in lens fabrication. Lab technicians are generally employed by wholesale facilities. The technician generally works independently as a member of a technical team.

Some technicians are employed by contact lens manufacturing plants as contact lens lathe operators. Lathe operators use jeweler's lathes to cut the inside or outside curvature in the contact lens blanks. Skills learned within the program qualify graduates for entry-level employment.

### **The Optical Laboratory Technology Program Goal Statements**

The Optical Laboratory Technology program will educate students in technical competencies and skills to enable them to compete and qualify for employment as optical laboratory technicians; gain skills and confidence in use of optical instruments, machinery, material, procedures and techniques to optical industry standards.

The program also strives to eliminate hazardous waste and to reduce non-hazardous waste to minimum levels where economically and technically practical, and to be in full compliance with all federal and state environmental regulations.

### **The Optical Laboratory Technology outcome objectives:**

- Be able to layout, generate and polish optical lenses to prescription specifications
- Be able to verify, spot, layout, edge, and mount lenses into various types of frames and to apply various tints and coatings
- Be able to maintain and repair various optical instruments and equipment; plan and establish a routine maintenance schedule.
- Be able to establish and maintain production schedules, inventory control, quality control, compliance with OSHA and environmental regulations and relationships with eyecare professionals relating to laboratory management.

### **Optical Laboratory Technology Exit Competencies**

- Use effective oral and written communication
- Maintain patient/customer records
- Perform basic mathematical and algebraic operations

- Prepare ophthalmic laboratory job orders
- Assess vocational and avocational needs of the patient/customer
- Select proper frames and lenses for job orders
- Utilize and maintain equipment
- Respond to dispenser's complaints
- Apply rules and regulations for safe work practices
- Demonstrate proficiency in the operation and function of equipment
- Assist in the business related area of ophthalmic laboratory technology, including record maintenance, frame and lens inventory, supply, equipment maintenance, and third party forms
- Neutralize eyewear/Ophthalmic devices prescriptions
- Perform final inspection and verification
- Surface, grind, and polish lenses
- Fabricate eyewear
- Tint and coat lenses
- Perform minor frame repair
- Perform impact resistance treatment and testing
- Discuss prescription eyewear/Ophthalmic devices and other patient/customer related information (verbal and written) with the prescriber.
- Have basic computer skills

**Requirements for the  
CERTIFICATE OF COMPLETION IN OPTICAL LABORATORY TECHNOLOGY  
CIP: 51.1802**

<b>First Trimester</b>	<b>Credit Hours</b>
COSC 107 Computer Literacy.....	3
OPTI 101 Introduction To Optics W/Lab.....	5
OPTI 112 Opticianry Environmental & Safety Issues.....	2
<b>Total First Trimester Credits</b>	<b>12</b>
<b>Second Trimester</b>	
ENGL 100 Writing Standard English.....	5
HLTH 164 First Aid and Safety.....	2
OPTI 105 Ophthalmic Finishing & Surfacing I W/Lab.....	5
<b>Total Second Trimester Credits</b>	<b>12</b>
<b>Third Trimester</b>	
MATH 100 Introductory to Algebra.....	5
OPTI 205 Ophthalmic Finishing & Surfacing II W/Lab .....	5
OPTI 225 Management for Opticians.....	3
<b>Total Third Trimester</b>	<b>13</b>
 <b>Total credit hours required</b>	 <b>35</b>

## **Program Course Descriptions**

### **OPTI 101 Introduction To Optics W/Lab (5)**

Prerequisite: Acceptance into the Program. This lecture and laboratory course introduces the student to human eye anatomy, optical terms, optical concepts and related math, instruments, equipment, lens and frame materials/types used in the surfacing and finishing of ophthalmic prescription eyewear. This course establishes the foundation for all other advanced ophthalmic courses.

### **OPTI 105A Ophthalmic Finishing & Surfacing I W/Lab (5)**

Prerequisite: OPTI 101 Introduction to Optics. This course will introduced the student to terms, instruments, lens and frame materials to be used in the surfacing and finishing of ophthalmic prescription eyewear. This lecture and laboratory course provides students with the basics of lens grinding and finishing of single vision lenses and how to use fabricating equipment safely.

### **OPTI 110A Ophthalmic Dispensing I W/Lab (4)**

Prerequisite: OPTI 101 Introduction to Optics. This course introduces historical and modern dispensing practices and the laws governing opticianry. Topics include basic eyeglass choices, dispensing, measurements, adjustments, and record keeping.

### **OPTI 112 Opticianry Environmental & Safety Issues (2)**

Prerequisite: Acceptance into the Program. The origin and purpose of the Occupational Safety Health Act (OSHA) will be presented along with its coverage and standards. The focus is on the OSHA Hazard Communication Standard developed to address the education and training requirements outlined in the Standard. The specifics of managing an optical/ophthalmic laboratory in terms of personal safety and environmental management will be covered. The development of OSHA compliance will be detailed.

### **OPTI 115 Ophthalmic Sales (2)**

Prerequisite: OPTI 101 Introduction to Optics. This course is designed to assist the student to function as a professional salesperson. It is a structured, programmed approach to providing effective customer service. Students will perform sales demonstrations utilizing various dispensing scenarios.

### **OPTI 205A Ophthalmic Finishing & Surfacing II W/Lab (5)**

Prerequisite: OPTI 105 Ophthalmic Finishing & Surfacing I W/Lab. This course is a continuation of Ophthalmic Surfacing and Finishing I with the primary focus on fabricating prescriptions using various multifocals, lens treatments and enhancements, frame and lens designs, production, quality control and other related advanced techniques.

### **OPTI 215 Anatomy & Physiology of the Eye (3)**

Prerequisite: OPTI 105 Ophthalmic Finishing & Surfacing I W/Lab. This course gives the student an insight into the anatomical structure of the eye and its adnexa and the function of its parts as they relate to vision and the fitting of contact lenses. Common pathologies and ocular pharmacology are presented.

**OPTI 220A Ophthalmic Dispensing II W/Lab (4)**

Prerequisite: OPTI 110 Ophthalmic Dispensing I W/Lab. This course presents ophthalmic instruments and devices; analysis of absorptive lenses; computing and compensation of vertical imbalance; discussion of ethics and legal issues; record keeping and communication.

**OPTI 225 Management for Opticians (3)**

Prerequisite: OPTI 101 Introduction to Optics for degree students and OPTI 110 Ophthalmic Dispensing I W/Lab for certificate students. This basic optical management course presenting basic management and leadership skills necessary for a successful eyecare office. The course will teach analysis, creative thinking, and judgement, planning strategy and implementation skills necessary for today's optical business challenges.

**OPTI 235 Contact Lenses W/Lab (4)**

Prerequisite: OPTI 215 Anatomy & Physiology of the Eye. This lecture and laboratory course begins with a historical review of contact lenses. It progresses into the theory; design and optical principles of contact lenses; indications and contra-indications for contact lens wear; patient evaluation; lens types and availability; fundamental techniques and fitting procedures including the use the biomicroscope, keratometer, rigid contact lens modifiers, and radiuscope; ANSI standards; patient education on care, cleaning, insertion and removal of lenses.

**OPTI 236 Introduction to Refraction W/Lab (4)**

Prerequisite: OPTI 235 Contact Lenses W/Lab. This course focuses on the refractive status of the human eye; anatomy and physiology and the visual system; binocular vision; the ophthalmic prescription; instrumentation and equipment used in clinical refraction; and basic pre-testing procedures.

**OPTI 245 Ophthalmic Dispensing Internship (3)**

Prerequisite: OPTI 220 Ophthalmic Dispensing II W/Lab. This internship course covers routine procedures used in a retail-dispensing store, which provides the student with direct hands-on experience in the dispensing clinic. Under supervision, students will coordinate all activities and functions required to dispense and fabricate optical eyewear.