

# School of Optometry

## Administration Indiana University

- MICHAEL A. McROBBIE, Ph.D., President of the University
- CHARLES R. BANTZ, Ph.D., Executive Vice President and Chancellor, Indiana University–Purdue University Indianapolis
- KAREN HANSON, Ph.D., Executive Vice President and Provost, Indiana University Bloomington
- JOHN S. APPEGATE, Ph.D., Vice President for Planning and Policy
- D. CRAIG BRATER, M.D., Vice President and Dean and Walter J. Daly Professor, School of Medicine
- J. TERRY CLAPACS, M.B.A., Vice President and Chief Administrative Officer
- DOROTHY J. FRAPWELL, J.D., Vice President and General Counsel
- G. FREDERICK GLASS, J.D., Vice President and Director of Intercollegiate Athletics
- EDWIN C. MARSHALL, O.D., Vice President for Diversity, Equity, and Multicultural Affairs
- PATRICK O'MEARA, Ph.D., Vice President for International Affairs
- ORA H. PESCOVITZ, M.D., Interim Vice President for Research Administration
- MICHAEL M. SAMPLE, B.A., Vice President for Public Affairs and Government Relations
- WILLIAM B. STEPHAN, J.D., Vice President for Engagement
- NEIL D. THEOBALD, Ph.D., Vice President and Chief Financial Officer
- BRADLEY C. WHEELER, Ph.D., Vice President for Information Technology
- MARYFRANCES McCOURT, M.B.A., Treasurer of the University
- NASSER H. PAYDAR, Ph.D., Chancellor of Indiana University East
- MICHAEL A. WARTELL, Ph.D., Chancellor of Indiana University–Purdue University Fort Wayne
- STUART GREEN, M.F.A., Interim Chancellor of Indiana University Kokomo
- BRUCE W. BERGLAND, Ph.D., Chancellor of Indiana University Northwest
- UNA MAE RECK, Ph.D., Chancellor of Indiana University South Bend
- SANDRA R. PATTERSON-RANDLES, Ph.D., Chancellor of Indiana University Southeast
- KENNETH R. R. GROS LOUIS, Ph.D., University Chancellor

## Bloomington Campus

- KAREN HANSON, Ph.D., Executive Vice President and Provost, Indiana University Bloomington
- THOMAS F. GIERYN, Ph.D., Vice Provost for Faculty and Academic Affairs

- EDUARDO L. RHODES, Ph.D., Vice Provost for Academic Support and Diversity and Associate Vice President for Academic Support and Diversity
- P. SARITA SONI, O.D., Vice Provost for Research
- SONYA STEPHENS, Ph.D., Vice Provost for Undergraduate Education
- ROGER J. THOMPSON, Ph.D., Vice Provost for Enrollment Services
- RICHARD N. McKAIG, Ed.D., Dean of Students and Vice President for Student Affairs, Bloomington

## Indianapolis Campus

- CHARLES R. BANTZ, Executive Vice President and Chancellor, Indiana University–Purdue University Indianapolis
- UDAY SUKHATME, Ph.D., Executive Vice Chancellor and Dean of the Faculties
- TRUDY W. BANTA, Ed.D., Senior Advisor to the Chancellor for Academic Planning and Evaluation
- DAWN RHODES, M.B.A., Vice Chancellor for Finance and Administration
- KODY VARAHRMYAN, Ph.D., Vice Chancellor for Research
- AMY C. WARNER, M.A., Vice Chancellor for External Affairs
- KAREN M. WHITNEY, Ph.D., Vice Chancellor for Student Life and Dean of Students
- KENNETH B. DURGANS, Ed.D., Assistant Chancellor for Diversity, Equity, and Inclusion

## School of Optometry

- JOSEPH A. BONANNO, O.D., Ph.D., Dean ([jbannano@indiana.edu](mailto:jbannano@indiana.edu))
- CLIFFORD W. BROOKS, O.D., Executive Associate Dean for Academic Affairs and Student Administration ([brooks@indiana.edu](mailto:brooks@indiana.edu))
- NEIL A. PENCE, O.D. Associate Dean, Clinical and Patient Care Services Indiana University School of Optometry [pence@indiana.edu](mailto:pence@indiana.edu)
- ANN E. ELSNER Ph.D., Associate Dean for Research [aeelsner@indiana.edu](mailto:aeelsner@indiana.edu)
- STEPHEN A. BURNS Ph.D., Associate Dean for Graduate Programs [staburns@indiana.edu](mailto:staburns@indiana.edu)
- CINDY S. VANCE, M.P.A., Director of Student Administration ([csvance@indiana.edu](mailto:csvance@indiana.edu))
- SANDRA PICKEL A. S. A.B.O.C., B.G.S., C.P.O.T., Director, Optician/Technician Program ([pickels@indiana.edu](mailto:pickels@indiana.edu))
- CINDY LEPORE, B.S., Director of Budgetary Planning and Administration ([lepore@indiana.edu](mailto:lepore@indiana.edu))
- TAMI TARPLAY, M.S. Director of Development [tatarple@indiana.edu](mailto:tatarple@indiana.edu)

## Overview

### Purposes

The following are major purposes of the optometry program:

- to qualify men and women for the practice of optometry
- to instill in the graduate a scientific and professional attitude

- to provide a background for the graduate's contribution to the civic and social welfare of the community
- to encourage and facilitate graduate and postgraduate study in optometry and vision science
- to encourage and facilitate research in the clinical aspects of optometry and in the fundamental sciences germane to optometry
- to contribute to the scientific and professional literature
- to train men and women as optometric technicians and/or opticians

### Geographical Distribution of Students

Students enrolled in the School of Optometry's optometry, vision science, and optician/technician programs represent approximately 30 states and several foreign countries.

### History

In 1951, the General Assembly of the State of Indiana established a program in optometry at Indiana University. The first year of preoptometry courses was offered beginning in the fall semester of 1951–52, the first professional courses were offered in 1953–54, and the first Master of Optometry (M.Opt.) degrees were awarded in 1956. In recognition of the vital role of vision research, the graduate degree programs in physiological optics were early priorities (M.S., 1953; Ph.D., 1955).

The program in optometry operated as a division of the university, with its degrees granted by the College of Arts and Sciences and the Graduate School, until the 1975–76 school year, at which time it became a degree-granting school of the university.

A continuous fund was created to support the establishment of the optometry program by adding a special fee to the annual license renewal fee of each practicing optometrist in Indiana. Additional funds and gifts, including a substantial collection of library books, were contributed through the auspices of the Indiana Optometric Association. As a permanent endowment program, the Optometry School Trust Fund was created as a division of the Indiana University Foundation for the general purpose of receiving and accepting gifts, bequests, pledges of money, etc., for the benefit of the optometric work to be carried on at Indiana University.

The building for the Division of Optometry and the Program in Physiological Optics was completed in 1967. This six-story, limestone-faced building is located on East Atwater Avenue and provides space for classrooms, a library, clinics, laboratories, offices, and supporting research and development activities. In addition to the main Atwater Eye Care Center (AECC), the school operates the Community Eye Care Center (CECC) on the west side of Bloomington. In 1992, the School of Optometry opened the Indianapolis Eye Care Center (IECC) in a newly constructed building at 501 Indiana Avenue in Indianapolis. Offering an expanded scope of patient care services, the IECC is located near the campus of Indiana University–Purdue University Indianapolis. In 2004 the School of Optometry, in conjunction with the IU School of Medicine, opened a clinic in Carmel, Indiana, called IU Eye. Fourth-year optometry students receive additional clinical training through external rotations at locations such as Veterans Administration facilities, Indian Health Service

clinics, military hospitals, referral centers, and the school's eye care center in Guanajuato, Mexico.

In 1971, in cooperation with the then-existing Division of General and Technical Studies of Indiana University, the School of Optometry established a two-year program for the preparation of optometric technicians. In 1980, the Indiana University School of Optometry established a two-year program for the training of opticians. In 1987, the School of Optometry combined the optician and technician programs into one.

In 1995, a portion of the clinic in the Optometry Building was dedicated as the Borish Center for Ophthalmic Research. The center's mission is to abet and develop clinical and applied research support and to facilitate investigations in visual disorders, ocular pathologies, and systemic diseases that affect the eye and its adnexa. The Borish Center provides an arena for the development of clinical researchers in vision and for the training of graduate students, residents, and fellows.

### Mission, Vision, and Goals

The **mission** of the School of Optometry is to protect, advance, and promote the vision, eye care, and health of people worldwide by preparing individuals for careers in optometry, the ophthalmic industry, and vision science, and by advancing knowledge through teaching, research, and service. This will be accomplished through the Doctor of Optometry, Optician/Technician, Residency, and Graduate Programs.

The **vision** of the School of Optometry is to be at the leading edge of vision care for the people of the world.

The **goals** of the School of Optometry focus on six areas:

- **Teaching.** To be recognized for excellence and leadership in teaching.
- **Patient care.** To supply students with sufficient numbers, diversity, and quality of patient experiences that will provide them with the clinical education to become efficient in performing patient care. At the same time, the goal is to provide timely, appropriate, and quality care to the patients.
- **Research.** To increase the research activity of our faculty and students, to improve the research profile of the faculty and school, and to be a recognized leader in vision science and vision health research.
- **Service.** To increase the service activity of our faculty, staff, and students; to be recognized nationally/internationally as a leader in service to the profession and vision science; and to have a level of service within the university and community to be recognized as outstanding citizens.
- **Facilities.** To have state-of-the-art physical facilities and equipment that create an integrative approach to education, research, training, and service delivery.
- **Finances.** To maintain funding that allows for sufficient faculty and staff, continued growth, up-to-date facilities, and the ability to take advantage of opportunities that arise.

## Membership & Accreditation

The School of Optometry is a member of the [Association of Schools and Colleges of Optometry](#) and is accredited by the [Accreditation Council on Optometric Education of the American Optometric Association](#), the official optometric agency recognized by the National Commission on Accrediting, and by the Association of Regulatory Boards of Optometry. Optometry students and graduates are eligible to take the annual examinations of the [National Board of Examiners in Optometry](#). Optician/Technician Program graduates are eligible to take the registry examination of the American Optometric Association and may become certified by the American Board of Opticianry.

## Degrees Offered

For more information, contact the Office of Student Administration, School of Optometry, Indiana University, 800 E. Atwater Avenue, Bloomington, IN 474053680; (812) 855-1917; e-mail [iubopt@indiana.edu](mailto:iubopt@indiana.edu).

### Bachelor's Degree Options for School of Optometry Students

#### Bachelor of Arts in the B.A./O.D. Program (B.A.) (College of Arts and Sciences)

A Bachelor of Arts degree is offered by the College of Arts and Sciences in conjunction with the School of Optometry. It requires fulfillment of the B.A. requirements of the College of Arts and Sciences. A student who is admitted to the School of Optometry after completing 90 credit hours in the College of Arts and Sciences may apply 32 credit hours of courses in optometry as electives toward the B.A. degree, which is received in the initial major. The student must satisfy the college's specified requirements, including a concentration in the department of the college.

#### Special Bachelor of Science in Biology for Three-Year Preoptometry Students (B.S.) (College of Arts and Sciences)

This program is designed for students admitted to the Indiana University School of Optometry after three years at Indiana University Bloomington. Students who have completed the fundamental skills and distribution requirements for the standard B.S. in Biology and at least 90 credit hours in courses offered by the College of Arts and Sciences may apply 8 credit hours of their first-year professional courses toward their major and 24 credit hours of their first-year professional courses as elective credit.

#### Bachelor of Science in Optometry (B.S.) (School of Optometry)

A Bachelor of Science degree is offered by the School of Optometry. It is available only to those students who have not completed a bachelor's degree before enrolling in the professional (O.D.) degree program. It requires satisfactory completion of all preoptometry courses and of the course work specified in the section of this bulletin titled "Bachelor of Science in Optometry Degree."

#### Doctor of Optometry (O.D.) (School of Optometry)

The Doctor of Optometry degree is offered by the School of Optometry. It requires fulfillment of a bachelor's degree (before or after enrollment), including all preoptometry requirements and satisfactory completion of the four-year professional curriculum. The specific requirements are described in the section of this bulletin entitled "Doctor of

Optometry Degree." Holders of this degree are eligible to apply for examinations for licensure by the Indiana Optometry Board or by corresponding agencies in other states.

#### Associate of Science in Optometric Technology/Opticianry (A.S.) (School of Optometry)

The School of Optometry offers a two-year Associate of Science degree in Optometric Technology/Opticianry. The Optician/Technician Program that leads to this degree is open to high school graduates as well as those with some college experience. Students completing the program will be qualified to work as optometric technicians and/or opticians, or may choose to pursue related careers as laboratory opticians, optical managers, contact lens technicians, or ophthalmic sales and service representatives.

#### Master of Science and Doctor of Philosophy (M.S., Ph.D.) (University Graduate School)

Offered by the University Graduate School in conjunction with the School of Optometry, the two degree programs in vision science are designed primarily for those who wish to devote themselves to teaching and research in the field of vision.

#### Combined Degree Programs

Indiana University's Vision Science Program has a proud tradition of training more than 50 doctoral graduates and nearly 100 master's graduates who have gone on to productive academic or clinical careers. Many have held prestigious leadership positions in academia and national and/or international research organizations. Because of the increasing cost of higher education, it has become difficult for optometry graduates to pursue M.S. or Ph.D. degrees after completing optometry training. The Indiana University School of Optometry has developed combined degree programs in conjunction with the University Graduate School to allow students to work toward an M.S. or Ph.D. simultaneously with the O.D. degree. The two combined degree programs are designed to attract students interested in careers devoted to the creation of new knowledge in clinical and/or academic optometry. A number of financial support mechanisms are available.

#### Application for Degrees

The School of Optometry awards A.S., B.S., and O.D. degrees in May, June, August, and December. Candidates for these degrees should submit degree applications to the Office of Student Administration of the School of Optometry at least two months in advance of anticipated graduation. Candidates for the M.S. and Ph.D. degrees should consult the University Graduate School Bulletin.

## Continuing Education

The School of Optometry offers continuing education to licensed optometrists several times each year. The offerings carry continuing education relicensure credit. The school has also developed courses accessible through the Internet to be taken for continuing education credit. Information on standard and online continuing education courses can be found at [www.opt.indiana.edu/ce/ce.html](http://www.opt.indiana.edu/ce/ce.html).

Inquiries should be addressed to: Chair, Continuing Education Committee, School of Optometry, Indiana University, 800 E. Atwater Avenue, Bloomington, IN 47405-3680; (812) 855-9292

## Contact Information

[School of Optometry](http://www.indiana.edu/~opt)

800 East Atwater Avenue

Bloomington, Indiana 47405-3680

(812) 855-4447

Fax: (812) 855-8664

[opt@indiana.edu](mailto:opt@indiana.edu)

## Professional Optometry Degree Program (OD)

### The Optometric Oath

With full deliberation I freely and solemnly pledge that:

- I will practice the art and science of optometry faithfully and conscientiously, and to the fullest scope of my competence.
- I will uphold and honorably promote by example and action the highest standards, ethics and ideals of my chosen profession and the honor of the degree, Doctor of Optometry, which has been granted me.
- I will provide professional care for those who seek my services, with concern, with compassion and with due regard for their human rights and dignity.
- I will place the treatment of those who seek my care above personal gain and strive to see that none shall lack for proper care.
- I will hold as privileged and inviolable all information entrusted to me in confidence by my patients.
- I will advise my patients fully and honestly of all which may serve to restore, maintain or enhance their vision and general health.
- I will strive continuously to broaden my knowledge and skills so that my patients may benefit from all new and efficacious means to enhance the care of human vision.
- I will share information cordially and unselfishly with my fellow optometrists and other professionals for the benefit of patients and the advancement of human knowledge and welfare.
- I will do my utmost to serve my community, my country and humankind as a citizen as well as an optometrist. I hereby commit myself to be steadfast in the performance of this my solemn oath and obligation.

— As adopted by the American Optometric Association and the Association of Schools and Colleges of Optometry

## Preoptometry Requirements

A total of 90 semester hours of college credit is required as a minimum for admission to the School of Optometry; however, a bachelor's degree is strongly recommended. Preoptometry requirements must be completed by the time the student enters the School of Optometry. Students who already have a bachelor's degree with a major in a science field are often fully prepared for admission to the School of Optometry. Those with degrees in nonscience fields may find additional course work required. **Students must take their preoptometry course work from an accredited institution. Grades lower than a C in any preoptometry requirement will not be accepted. Each course meets just one requirement. All preoptometry requirements**

**must have been completed within 10 years from the time when the student hopes to start the Doctor of Optometry program.**

**Students entering with a bachelor's degree must have completed the following courses:**

Subject Area	Min. sem. cr. hrs. req'd.	Comparable IU courses
Biology/Zoology		
• Introductory, with lab	4	L 112 and L 113
• Advanced (animal or developmental)	3	see recommended list below
• Microbiology, with lab	4	M 250 and M 255
Chemistry		
• Organic, 2 courses	4	C 341, C 342 and/or C 343
• Inorganic, with labs	8	C 117 and N 330 or C 118
Mathematics		
• Calculus	4	M 211 or M 119-120 or M 119 and X 201
Physics		
• General	8	P 201 and P 202
Statistical Techniques and/or Experimental Design	3	STAT S 300, PSY K 300 or K 310 SPEA K 300 or Econ E 370 or Math K310
Psychology, Introductory	3	P 101
Writing Skills - two courses; English Composition W131 or 132 and an additional course with a strong writing component	6	W 131 or 132 and the Intensive Writing Requirement

**Students entering the Indiana University School of Optometry without a bachelor's degree must have completed the following courses in addition to the above:**

Subject Area	Min. sem. cr. hrs. req'd.
Arts and Humanities	6
Foreign Language	6
Social and Historical Studies	6
Additional Credits	as needed
Total Credits	90

Of the 90 credit hours, at least 20 must be at the 300-400 level. A maximum of 60 semester hours may be taken at a junior college.

	Credit Hours Required	IU Courses
<b>Advanced Biology:</b>		
Vertebrate or Human Anatomy with lab	5	ANAT-A 215
Physiology with lab	5	PHSL-P 215
Biochemistry (300+ level if possible)	3	BIOL-M 350/CHEM-C 483
<b>Other Recommended Elective Courses:</b>		
Anatomy and Physiology of the Eye	3	OPT-V 201
Small Business Management	3	BUS-X 100
Explore Entrepreneurship	3	BUS-W 212
Medical Terminology	2	CLAS-C 209
Histology	4	ANAT-A 464
Ethics	3	PHIL-P 140
Independent Research	1-3	490 Series

None of the specified courses may be taken on a Pass/Fail basis. The credit hours required in the individual subjects are considered absolute minimums, which must be met or exceeded. If the credit hours in any subject total fewer than the minimum specified, the student should complete the next higher course in that subject. Quarter hours convert to semester hours by the following scale:

3 quarter hours = 2 semester hours  
 4 quarter hours = 3 semester hours  
 5 quarter hours = 3.33 semester hours  
 6 quarter hours = 4 semester hours

For further information, contact the Office of Student Administration, School of Optometry, Indiana University, 800 E. Atwater Avenue, Bloomington, IN 474053680; (812) 855-1917; e-mail [iubopt@indiana.edu](mailto:iubopt@indiana.edu).

## Admission

- Application for Admission
- The Admissions Timetable
- Early Admit Process
- Transfer Admission
- Functional Standards and Expectations
- Admission Test
- Deposit Policy

## Application for Admission

Qualified applicants are sought from all racial, ethnic, socioeconomic, and cultural groups in order to enhance the

diversity of the class. The ideal candidates for the Doctor of Optometry degree should have demonstrated high scholastic ability, leadership, and a record of community and volunteer service. Applicants are judged on scholastic ability (demonstrated by college grades, high school class rank, and admission and aptitude test scores). Written and oral communication skills are extremely important. The applicants' personal characteristics are evaluated through character references, interviews, amount and kind of extracurricular and leadership activities, work experience, and the narrative explaining why they chose optometry as a career.

An admission day visit is arranged for those applicants with the greatest potential for success in completing the program at the School of Optometry.

## The Admissions Timetable

The regular application period for students entering with or without a bachelor's degree begins on July 1 and ends on January 15th. Admission Day invitations begin in early October and continues through April. A rolling admissions process is used, and the selection process is usually completed by June. A new class begins each fall.

### Deposit Policy

Students admitted to the Doctor of Optometry program are required to pay an enrollment deposit of \$500. This fee is due as directed in admission letters before the start of the program. If the student enrolls in the IU School of Optometry, the deposit will be applied to the student's tuition. If the student does not enroll, the deposit is not refunded.

## Early Admit Process

Students are encouraged to complete a bachelor's degree prior to entering the School of Optometry. Some exceptional students, however, can enter the optometry program after three years of undergraduate work, which can decrease the total years of university study to seven. Early decision is also available for these students. These students should have a minimum GPA of 3.6.

Admission to the School of Optometry under this process (after three years of undergraduate work) is conditional upon the following:

- Maintaining a cumulative GPA of at least 3.6.
- Obtaining a minimum score of 320 on the Quantitative and Total Science sections of the Optometry Admission Test, with no section score below 300. Students should plan to take the OAT for the first time in the spring/summer of their second year of college. Students who do not achieve this level in the spring of their second year can take the test again.
- Completing all the prerequisite courses for admission to the School of Optometry as outlined in this bulletin. Students must complete all preoptometry prerequisites as outlined in this bulletin including completion of four GENERAL EDUCATION course: two courses (6 cr. hrs) that satisfy the Breadth of Inquiry for Arts & Humanities and two courses (6 cr hrs.) that satisfy the Breadth of Inquiry for Social & Historical Studies. A minimum of two courses of foreign language are required. This requirement for an IU Bachelor of Science in Optometry may be met by placement examination. Students who have completed two or

more years of a single foreign language in high school with an average grade of C or above are exempt from this requirement.

If a student who is conditionally admitted under an early admission plan for acceptance after three years of undergraduate study fails to meet the above conditions but meets the conditions for acceptance after four years, the student will be accepted after four years.

## Transfer Admission

The Indiana University School of Optometry admits students with advanced standing only when a vacancy exists and when the student would have met the Indiana University preoptometry requirements and standards for admission had he or she applied here originally. Students may lose credits in transferring, and for this reason, transfer is generally not recommended.

The student must have a minimum cumulative average of B in the optometry curriculum, be in good standing with his or her present institution, and have a compelling reason for wanting to transfer to Indiana University's School of Optometry. No deficiencies in the Indiana University preoptometry requirements may exist at the time of admission.

Candidates for transfer must submit a statement of good standing from the dean of the school from which they are transferring. A regular application for admission should be submitted along with the statement of good standing and other documents specific to the transfer request.

## Functional Standards and Expectations

The Indiana University School of Optometry expects that admitted students will be able to meet all of the functional standards for optometric education established by the Association of Schools and Colleges of Optometry. These standards require that students possess appropriate abilities in the following areas:

- **Observation Abilities:** The student must be able to acquire a defined level of knowledge as presented through lectures, laboratories, patient interaction, and self-study. Acquiring this body of information necessitates the functional use of visual, auditory, and somatic sensation enhanced by the use of other sensory modalities. Examples of these observational skills in which accurate information needs to be extracted in an efficient manner include:
  - Visual abilities (as they relate to such things as visual acuity, color vision, and binocularity)
  - Visualizing and reading information from papers, films, slides, video, and computer displays
  - Observing optical, anatomic, physiologic, and pharmacologic demonstrations and experiments
  - Discriminating microscopic images of tissue and microorganisms Observing a patient and noting nonverbal signs Discriminating numbers, images, and patterns associated with diagnostic tests and instruments
- Visualizing specific ocular tissues in order to discern three-dimensional relationships, depth and color changes
- **Auditory Abilities:** Understanding verbal presentations in lecture, laboratory, and patient settings Recognizing and interpreting various sounds associated with laboratory experiments as well as diagnostic and therapeutic procedures
- **Tactile Abilities:**
  - Palpating the eye and related areas to determine the integrity of the underlying structures
  - Palpating and feeling certain cardiovascular pulses
- **Communication Abilities:** Students must be able to communicate effectively, efficiently, and sensitively with patients and their families, peers, staff, clinic faculty, and other members of the health care team. The student must be able to demonstrate established communication skills using traditional and alternative means. Examples of required communications skills include:
  - Relating effectively and sensitively to patients, conveying compassion and empathy
  - Perceiving verbal and nonverbal communication such as sadness, worry, agitation, and lack of comprehension from patients
  - Eliciting information from patients and observing changes in mood and activity
  - Communicating quickly, effectively, and efficiently in oral and written English with patients and other members of the health care team
  - Reading and legibly recording observations, test results, and management plans accurately
  - Completing assignments, patient records, and correspondence accurately and in a timely manner
- **Sensory and Motor Coordination Abilities:** Students must possess the sensory and motor skills necessary to perform an eye examination, including emergency care. In general, this requires sufficient exteroception sense (touch, pain, temperature), proprioceptive sense (position, pressure, movement, stereognosis, and vibratory), and fine motor function (significant coordination and manual dexterity using arms, wrists, hands and fingers). Examples of skills required include:
  - Instillation of ocular pharmaceutical agents
  - Insertion, removal, and manipulation of contact lenses
  - Assessment of blood pressure and pulse
  - Removal of foreign objects from the cornea
  - Simultaneous manipulation of lenses, instruments, and therapeutic agents and devices
  - Reasonable facility of movement
- **Intellectual—Conceptual, Integrative, and Quantitative Abilities:** Problem-solving, a most critical skill, is essential for optometric students and must be performed quickly, especially in emergency situations. In order to be an effective problem-solver, the student must be able to accurately and efficiently use such abilities as measurement, calculation, and reasoning;

analysis; judgment; investigation; memory; numerical reasoning; and synthesis. Examples of these abilities include being able to:

- Determine appropriate questions to be asked and clinical tests to be performed
- Identify and analyze significant findings from history, examination, and other test data
- Demonstrate good judgment and provide a reasonable assessment, diagnosis, and management of patients
- Retain, recall, and obtain information in an efficient manner
- Identify and communicate the limits of one's knowledge and skill
- **Behavioral and Social Attributes:** The student must possess the necessary behavioral and social attributes for the study and practice of optometry. Examples of such attributes include:
  - Satisfactory emotional health required for full utilization of one's intellectual ability
  - High ethical standards and integrity
  - An empathy with patients and concern for their welfare
  - Commitment to the optometric profession and its standards
  - Effective interpersonal relationships with patients, peers, and instructors
  - Professional demeanor
  - Effective functioning under varying degrees of stress and workload
  - Adaptability to changing environments and uncertainties inherent in patient care
  - Positive acceptance of suggestions and constructive criticism

Candidates with questions or concerns about how their own conditions or disabilities might affect their ability to meet the functional standards are encouraged to meet with an optometry school counselor before to submitting an application.

Qualified applicants to the School of Optometry who have disabilities that might hinder them in achieving these standards can, if they are admitted, receive reasonable accommodation from the School of Optometry. This accommodation will be based on an evaluation of the disability conducted by Indiana University's Office of Disability Services for Students.

## Admissions Test

Each applicant is required to take the Optometry Admission Test (OAT), which is designed to measure general academic ability and scientific knowledge. The test is given at various testing centers across the United States. Information concerning the test is available online at the [website of the Association of Schools and Colleges of Optometry](#), or by contacting the Optometry Admission Testing Program at 211 E. Chicago Avenue, Sixth Floor, Chicago, IL 606112678; 1-800-232-2159.

**Note:** Applicants must take the OAT for the first time before the February of the year in which they wish to enter. Applicants must provide OAT scores by February 1.

All applicants whose native language is not English are required to establish English proficiency. The Test of English as a Foreign Language (TOEFL) is preferred. For information concerning the TOEFL, write to TOEFL Educational Testing Service, P.O. Box 6151, Princeton, NJ 08541, or visit the [TOEFL website](#).

## Degree Requirements

### Doctor of Optometry (O.D.) Degree

The courses required for this degree are listed in the section of this bulletin entitled "Optometry Curriculum." All of the courses except those identified as electives must be completed. A baccalaureate degree is required prior to receiving the O.D. degree. The curricular requirements for preoptometry are described in the section of this bulletin entitled "Preoptometry Requirements."

Students are responsible for understanding all requirements for graduation and for completing them by the time they expect to graduate.

### Optometry Curriculum

The curriculum includes instruction in all of the clinical and practical phases of optometry as well as in the theoretical and fundamental aspects of vision science. It requires four years of professional degree courses, including at least a three-week summer assignment before the third year.<sup>1</sup> The university schedules two regular academic semesters and two summer sessions. The regular fall semester includes 14 weeks and two days of instruction plus one week for final examinations; the spring semester includes 15 weeks of instruction plus one week for final examinations. Most optometry courses are scheduled for a full academic semester. Some, however, are scheduled for three, six, or eight weeks, and will be scheduled back-to-back with other courses that will be taken in the remaining weeks of the semester.

### First Year

#### First Semester

V 501	Integrative Optometry I	2.0 cr.
V 521	Geometric and Visual Optics I	4.0 cr.
V 540	Ocular Biology I	4.0 cr.
V 542	Systems Approach to Biomedical Sciences I	5.0 cr.
V 550	Clinical Sciences I	3.0 cr.
	Total	18.0 cr.

#### Second Semester

V 502	Integrative Optometry II	2.0 cr.
V 523	Geometric and Visual Optics II	4.0 cr.
V 543	Systems Approach to Biomedical Sciences II	4.5 cr.

V 551	Clinical Sciences II: 3.0 cr. Motility & Refraction	
V 552	Clinical Sciences II: 2.0 cr. Anterior Segment Exam. Techniques	
V 560	Vision Science I: 3.5 cr. Perception	
V 574	Intro to 2.0 cr Epistemology & Option Research	
V 889	Special Projects 1.0 cr	
	Total	22 cr.

### Second Year

#### First Semester

V 601	Integrative 2.0 cr. Optometry III	
V 631	Optics III: 4.0 cr. Ophthalmic and Advanced Clinical Optics	
V 642	General 4.0 cr. Pharmacology	
V 652	Clinical Sciences 3.0 cr. III: Accomodation and Binocular Vision	
V 653	Clinical Sciences 2.0 cr. III: Posterior Segment Examination Techniques	
V 665	Vision Science II: 2.5 cr. Ocular Motility	
	Total	17.5 cr.

#### Second Semester

V 632	Optics IV: Optics of 4.0 cr. Ophthalmic and Contact Lenses	
V 633	Contact Lenses 3.0 cr.	
V 644	Ocular Disease I 3.0 cr.	
V 646	Ocular 2.0 cr. Pharmacology	
V 654	Clinical Sciences IV 4.0 cr.	
V 666	Vision Science III: 4.0 cr. Binocular Vision	
	Total	20.0 cr.

#### Summer

V 680	Introduction to 2.5 cr. Clinic	
-------	-----------------------------------	--

### Third Year

#### First Semester

V 701	Grand Rounds I 0.5 cr.	
V 745	Ocular Disease II 3.0 cr.	
V 748	Physical 3.5 cr. Assessment and Medicine	
V 752	Advanced Contact 2.0 cr. Lens Topics I	
V 756	Clinical 1.0 cr. Assessment I	
V 781	Pediatric Optometry 3.0 cr.	
V 786	Optometry Clinic <sup>1</sup> , 3.0 cr. <sub>2</sub>	
V 787	Optometry Clinic <sup>1</sup> , <sub>2</sub> 3.0 cr.	
	Total	19.0 cr.

#### Second Semester

V 702	Grand Rounds II 0.5 cr.	
V 746	Ocular Disease III: 2.0 cr. Neuro-Optometry	
V 749	Ocular Disease IV: 3.0 cr. Applied Ocular Therapeutics	
V 751	Low Vision 3.0 cr. Rehabilitation	
V 757	Clinical 1.0 cr. Assessment II	
V 754	Optometric 2.0 cr. Profession (Public Health, Policy, Legal, History and Ethical Issues)	
V 758	Advanced Clinical 2.0 cr. Concepts in Binocular Vision and Pediatrics	
V 759	Business Aspects 2.0 cr. of Optometry	
V 788	Optometry Clinic 3.0 cr.	
V 789	Optometry Clinic 3.0 cr.	
	Total	21.5 cr.

### Fourth Year

V 885	Optometry Clinic 10.0 cr. (Bloomington)	
V 887	Extension Clinic 10.0 cr. (Indianapolis)	
V 888	External Clinic 10.0 cr. Fourth Clinical 10.0 cr. Assignment (V 885, V 887, Or V 888)	
	Total	40.0 cr.



<b>Overall Total</b>	<b>160.5 cr.</b>
----------------------	------------------

Note: Subject to change.

1. Elementary school vision-screening program assignments will be arranged.
2. Students in the final year of the program will spend 12 weeks at each of their four clinic assignments (V 885, V 887, V 888, and the Fourth Clinical Assignment). Three of these four assignments are at various external locations.

### **Bachelor of Science (B.S.) in Optometry Degree**

Students who enter the Doctor of Optometry (O.D.) program without an undergraduate degree will receive the B.S. in Optometry upon successful completion of the first two years of the four-year professional degree program. The following requirements, in addition to the preoptometry requirements and the courses in the first two years of the professional degree program, must be satisfied by the student seeking this degree:

- A minimum of 122 credit hours in courses that may be counted toward the B.A., B.S., or higher degree of one or more degree-granting divisions of the university.
- A minimum cumulative grade point average of 2.00.
- A minimum of 30 credit hours in courses at the 300 level or above.
- At least 30 credit hours of V-lettered courses, which are regularly offered by the School of Optometry and/or the Vision Science Graduate Program.
- A minimum of 60 credit hours at Indiana University, of which at least 26 credit hours, including not fewer than 10 credits in the V-lettered courses, must be completed in residence on the Bloomington campus.
- Courses taken on a Pass/Fail basis can be applied only as electives in meeting the degree requirements. The limit is a total of eight courses with two courses allowed per year.
- Not more than 60 credit hours earned in accredited junior colleges may be applied toward the degree.
- Not more than 10 credit hours earned through online study and/or special credit examination may be applied toward the degree, except by special permission of the dean.
- Work for a degree must be completed within six years from the time the student first registers in the university, except by special permission of the dean.

## **Academic Regulations**

### **Semester Load**

A student is not permitted to enroll in fewer than 12 credit hours during a fall or spring semester except with special permission from the dean.

### **Withdrawals from Courses**

Withdrawals during the first eight weeks of a semester, first four weeks of a half-semester course, or first two weeks of a summer session are automatically marked W (Withdrawn). Withdrawals that would reduce a student's enrollment below 12 credit hours ordinarily will not be authorized.

Petitions for withdrawal after the periods specified above will not be authorized by the dean except for urgent reasons related to extended illness or equivalent distress. The desire

to avoid a low grade is not an acceptable reason for withdrawal from a course.

If a student withdraws with the dean's consent, the grade in the course will be W if the student is passing at the time of withdrawal and F if the student is not passing. The grade will be recorded on the date of withdrawal. Failure to complete a course without authorized withdrawal will result in the grade F.

### **Addition of Courses**

No course may be added by students after the first two weeks of a semester or first week of a summer session or half semester unless the instructor of the course petitions that an exception be made and the request is approved by the dean.

### **Grades**

The quality of a student's work is indicated by the following grades and numerical values:

A+ (4.00), A (4.00), A- (3.70) High degree of academic performance  
 B+ (3.30), B (3.00), B- (2.70) Above-average achievement  
 C+ (2.30), C (2.00), C- (1.70) Average achievement Any grade lower than a C in any course in the professional (O.D.) curriculum must be repeated.  
 D+ (1.30), D (1.00), D- (0.70) Passing work but below desired standards

F—Failure in a course or failure to complete a course without an authorized withdrawal. When a failing grade is recorded in an optometry course, the instructor(s) may require specific remedial procedures to be taken by the student before readmission to the course. The FX option is not accepted by the School of Optometry. Retaking and passing a failed course will, therefore, not remove the original grade of F from the student's record.

W—Withdrawn. Given automatically when the student, with the approval of the academic advisor and the dean, officially withdraws during the first eight weeks of a semester, first four weeks of a half-semester course, or first two weeks of a summer session. After these deadlines, the grade W is given in the instance of an approved and properly executed withdrawal only if the student is passing at the time of withdrawal.

R—Deferred Grade. Given when the grade determination will be deferred until completion of two or more terms of study, as with research or thesis courses. Also given either at the end of the first term of a two-term course or midway through a single course that overlaps two terms, when the course has been identified as one for a deferred grade in the Schedule of Classes. At the end of the final term in the sequence, the entry or entries R will be replaced with standard letter grades. Instructors will designate the standard grades on the rosters for the final term or by means of a form for removal of deferred grades.

I—Incomplete. May be given only when the work of the course is substantially completed and when the student's work is of passing quality. When an Incomplete is assigned, a record will be maintained in the Office of Student Administration of the School of Optometry. The record will include a statement of the reason for recording the Incomplete and an adequate guide for its removal, with a suggested final grade in the event of the departure or extended absence of the instructor from the campus.

A student must complete work required to have the Incomplete removed within one calendar year from the date of its recording, although the dean may authorize adjustment of this period in exceptional circumstances. An Incomplete that still stands after one calendar year is replaced by a grade of F.

Once a student has graduated, nothing in these regulations will prohibit the Incomplete from remaining on the record.

A student repeating a course must register for the course a second time. If any course to be repeated is a prerequisite to another course, the other course may not be taken until the prerequisite course is satisfactorily repeated.

### **Clinic Grades**

Fourth-year rotation grades become official at the time of submission by the rotation preceptor. (Note: Grades for rotations ending mid-semester will be considered official prior to completion of the academic semester and online posting.) Academic standing will be assessed upon receipt of grades from the rotation preceptor at the completion of each fourth-year rotation.

If a student is unable to complete a clinic rotation due to academic performance and/or professional misconduct, a grade of F will be assigned.

### **Absences from Scheduled Classes**

Illness is usually the only acceptable excuse for absence from class. Other absences must be explained to the satisfaction of the instructor, who will decide whether omitted work may be made up. The names of students who are excessively absent are to be reported by their instructors to the dean.

### **Absences from Final Examinations**

A student who fails to attend the final examination of a course and who has a passing grade up to that time may be given a grade of Incomplete if the absence is explained to the instructor's satisfaction. A missed final examination for which there is no satisfactory excuse will be assigned a grade of F. When called upon, the Academic Review Committee of the School of Optometry will assist an instructor in weighing an excuse concerning absence from a final examination.

## **Academic Standing**

The intent of the School of Optometry is that professional students be able to graduate after four years of instruction. In some cases, six years can be considered. Although primary responsibility rests with the student, the school will work to help all students maintain good academic standing and will seek out and attempt to provide remedial help for students who are having academic difficulties.

### **Good Academic Standing**

The minimum standard for academic good standing is a semester and cumulative grade point average (GPA) of 2.30; that is, a C+ average, which is also the minimum standard for graduation from Indiana University and the School of Optometry.

### **Probation**

Academic probation results when any course grade is below a C, or if the semester or cumulative grade point average is below a 2.3. Continuation in the program requires approval by the Academic Review Committee.

### **Course Repeat**

A course grade of C- or below is considered to be unacceptable and the course must be repeated. If a student does receive an unacceptable grade requiring that the course be repeated the following year, the student must restart that semester the following year and repeat all courses for that semester in which a grade of C+ or below was received.

### **Academic Review**

Students on probation will be evaluated by the Academic Review Committee to determine whether they can continue in the program. In many cases, the Academic Review Committee will make recommendations about help and remedial work that will make it possible for the student to achieve better academic performance. In some cases probation could result in dismissal.

### **Clinical Competence**

At the end of the second year, students are required to pass a competency examination in preparation for the course V 680 Introduction to Clinic. A student who fails the competency examination must complete remediation and take the examination again. If the student fails any part of the competency twice, the student will not receive a passing grade for the course, will not be permitted to enter clinic and must repeat V564. A student who does not ultimately pass the competency exam will be ineligible to continue.

### **Remediation**

If a student receives a grade of less than a C in any third- or fourth-year clinic rotation, the student must enroll in and complete with a grade of C or better V 780 Clinical Skills Enhancement (third-year clinic remediation) or V 880 Clinical Skills Enhancement (fourth-year clinic remediation) prior to continuation of the third- or fourth-year clinic rotation.

A student who fails to complete V 780 or V 880 with a grade of C or better will be ineligible to continue.

If an intern is unable to continue with a clinical rotation for academic or clinical performance reasons, the grade of F will be assigned, and the intern will be ineligible to continue.

Policies and procedures are explained in detail in the most recent Indiana University School of Optometry Eye Care Centers Student Orientation Manual.

In addition to possible dismissal following Academic Review, dismissal can occur if:

- the student earns lower than a 1.00 GPA for any semester, regardless of cumulative GPA
- the student earns both lower than a 2.30 GPA in a semester and a recommendation by the Academic Review Committee
- the student has failed to complete V780 or V880 with a grade of C or higher
- the student has failed the clinical competency examination two times and recommendation by the Academic Review Committee.
- the student fails a clinical course after remediation; clinical courses are V 680, V 786, V 787, V 788, V 789, V 885, V 887, V 888
- the student has received a grade of F for a rotation during the fourth year

### Academic Misconduct

Academic integrity is fundamental to the intellectual life of the university and to the education of each student. The following acts of academic dishonesty are prohibited: cheating, fabrication, plagiarism, interference, and facilitating academic dishonesty. Proven academic misconduct is grounds for dismissal.

### Professional Misconduct

Maintaining standards of professional conduct is essential to the integrity of the profession. Professional misconduct is strictly prohibited. This includes dishonest conduct (including, but not limited to, false accusation of misconduct; forgery; alteration or misuse of any university document, record, or identification; and giving to a university official any information known to be false) and use or possession of alcoholic beverages or illegal drugs on university property or during a university activity.

In addition, fraud and patient endangerment and abandonment will be grounds for dismissal. Standards for patient care procedures and for professional behavior in a clinical setting are detailed in the most recent Indiana University School of Optometry Eye Care Centers Student Orientation Manual.

Additional rules and regulations of the university are available in the Code of Student Rights, Responsibilities, and Conduct published by Indiana University. It is each student's responsibility to be aware of these regulations. Violation of the Code of Student Rights, Responsibilities, and Conduct may result in dismissal.

### Academic Fairness Committee

The charge of the committee is to consider, arbitrate, and adjudicate grading disputes in cases of procedural errors and in cases where evaluation on nonacademic grounds is alleged.

The Academic Fairness Committee is composed of three students and three faculty members, chosen by the dean of the School of Optometry.

Issues dealing with substantive quality of the student's academic performance and involving intrinsic, professional, academic judgments by a faculty member lie outside the Committee's jurisdiction.

## Courses

**OPT-V 501 Integrated Optometry (2 cr.)** This course sequence is offered over four semesters. Overall goal is to provide an integrated perspective of optometry in the paradigm of problem-based learning (PBL). The problems will be clinical cases (four-six cases per semester) which relate to the contents of courses taught contemporaneously in optics, biomedical, and ocular biology modules. Students will meet in small groups to discuss the problems guided by a faculty facilitator.

**OPT-V 502 Integrated Optometry (2 cr.)** This course sequence is offered over four semesters. Overall goal is to provide an integrated perspective of optometry in the paradigm of problem-based learning (PBL). The problems will be clinical cases (four-six cases per semester) which relate to the contents of courses taught contemporaneously in optics, biomedical, and ocular biology modules. Students

will meet in small groups to discuss the problems guided by a faculty facilitator.

### OPT-V 521 Optics I: Geometric and Visual Optics (4 cr.)

P: Calculus, Physics P 202, and enrollment in the School of Optometry or permission of instructor. Fundamentals of geometric and physical optics. Optical analysis of myopia, hyperopia, and astigmatism. Components of the eyes and their optical properties. Clinical instrumentation for optical measurement and diagnosis of eyes.

### OPT-V 523 Optics II: Geometric and Visual Optics (4 cr.)

P: V 521 or permission of instructor. Continuation of application of the principles of geometrical and physical optics to the optical description and correction of the eye. Schematic optical models of the eye. Measurement of light. Higher-order aberrations and their impact on vision.

### OPT-V 540 Ocular Biology I (4 cr.)

Head and neck neuroanatomy related to the normal functioning of the eye and visual system. Detailed anatomy/histology and physiology of the eye and adnexa. Maintenance of optical transparency and intraocular pressure. Phototransduction, retinal physiology, and the basis for the electroretinogram and electro-oculogram.

### OPT-V 542 Systems Approach to Biomedical Sciences I (SABS-I) (4.5 cr.)

This is the first of a three-semester sequence which presents basic science information organized into specific organ systems. The first module will cover common processes: basic biochemistry, cell and molecular biology, fundamentals of physiology, pharmacology, immunology/infection, and oncology. Subsequent modules are organized to discuss the structure, function, pathology and therapy for each organ system. These modules include: cardiovascular/pulmonary, renal, gastrointestinal, reproductive, neuromuscular-skeletal, endocrine, hematopoietic.

### OPT-V 543 Systems Approach to Biomedical Sciences II (4 cr.)

P: V 542. Continuation of SABS-I.

### OPT-V 550 Clinical Sciences I (3 cr.)

Introduction to clinical history and interview techniques, health history content, and medical record documentation as applied to the optometric setting; optometric and medical terminology, interview techniques for special populations, legal aspects of medical records, differential diagnosis of visual symptoms, introduction to physical assessment, slit lamp biomicroscopy and ophthalmoscopy.

### OPT-V 551 Clinical Sciences I: Motility and Refraction (3 cr.)

P: V 550 Vision examination techniques and theory. Application of vision testing instrumentation with emphasis on preliminary test, motility and refractive tests. The study of the principles involved in the measurement, epidemiology, and treatment of ametropia, oculomotor imbalances, and associated conditions.

### OPT-V 552 Clinical Sciences II: Anterior Segment Examination Techniques (2 cr.)

P: V 550 Introduction to techniques used to examine and evaluate the health of the anterior segment of the eye, including use of the slit lamp biomicroscope, clinical measurement of intra-ocular pressure, foreign body evaluation and removal. Other techniques will be introduced as appropriate.

**OPT-V 560 Vision Science I (Perception) (3.5 cr.)** Provides an understanding of how visual performance is determined by the underlying biology of the eye and the brain. Topics include visual pathway, neuroanatomy and physiology, with special emphasis on the roles of receptive and nureal sampling.

**OPT-V 569 Selected Studies (elective, cr. arr. cr.)** Items of current scientific interest. Consideration given to students' special interests. May include writing of abstracts and reviews of current vision science literature. May be repeated for credit with permission of instructor.

**OPT-V 574 Introduction to Epidemiology & Optometric Research (2 cr.)** Introduction to epidemiology and biostatistics, principles of epidemiological inquiry and research design, and the application of statistical methods to clinical data.

**OPT-V 601 Integrated Optometry (2 cr.)** This course sequence is offered over four semesters. Overall goal is to provide an integrated perspective of optometry in the paradigm of problem-based learning (PBL). The problems will be clinical cases (four-six cases per semester) which relate to the contents of courses taught contemporaneously in optics, biomedical, and ocular biology modules. Students will meet in small groups to discuss the problems guided by a faculty facilitator.

**OPT-V 631 Optics III: Ophthalmic and Advanced Clinical Optics (4 cr.)** P: V 523 or permission of instructor. Design and application of ophthalmic spectacles and materials. Optics of low vision. Objective refraction, fundus imaging, optics of diseased eyes, wavefront-based treatments.

**OPT-V 632 Optics IV: Optics of Ophthalmic and Contact Lenses (4 cr.)** P: V 631 or permission of instructor. Continuation of design and application of ophthalmic spectacles and materials. Optics of contact lenses.

**OPT-V 633 Contact Lenses (3 cr.)** P: V 652. Theory and practice of contact lenses. General principles of lens materials, design, care; examination, selection, fitting; diagnosis and treatment of lens wear problems; introduction to specialty fitting. Practical laboratory on lens handling, modification, and fitting.

**OPT-V 642 General Pharmacology (4 cr.)** P: V 543. Basic principles of pharmacology. Mechanisms of action and side effects of: anti-inflammatory, automoic, cardiovascular, autocoid, respiratory, CNS, anti-diabetic, chemotherapeutic, immune system, and GI drugs.

**OPT-V 644 Ocular Disease (3 cr.)** P: V 543. A detailed description of the signs, symptoms, differential diagnosis, and management of ocular disease of the anterior segment.

**OPT-V 646 Ocular Pharmacology (3 cr.)** P: V 642. Medications used in treatment of ocular disease. Ocular effects of systemic medications.

**OPT-V 652 Clinical Sciences III: Accommodation and Binocular Vision (3 cr.)** P: V 551. Vision examination techniques and theory and application of vision testing instrumentation, with emphasis on accommodation and binocular vision; accommodation and vergence test findings as they relate to normal function, subjective symptoms, and

performance; theory and case analysis of no-strabismic binocular vision problems.

**OPT-V 653 Clinical Sciences III: Posterior Segment Examination Techniques (2 cr.)** P: V551, V552. Introduction to techniques used to examine and evaluate the health of the posterior segment of the eye, including direct ophthalmoscopy, monocular and binocular indirect ophthalmoscopy, fundus biomicroscopy, three mirror gonioscopy, and posterior pole imaging techniques. Other techniques will be introduced as appropriate.

**OPT-V 654 Clinical Sciences IV (4 cr.)** P: V 652. Advanced clinical analysis, procedures, and protocols for examinations of patients in the clinical setting, and comprehensive eye and vision examinations with scheduled patients; patient assessment and plan, patient communication; introduction to clinical ocular disease and protocols.

**OPT-V 665 Vision Science II: Ocular Motility (2.5 cr.)** Characteristics, control, and deficits of the five somatic eye-movement systems (convergence, saccadic version, pursuit version, fixation maintenance, vestibular reflex) and the autonomic systems subserving accommodation and pupillary diameter and reflexes.

**OPT-V 666 Vision Science III Binocular Vision (4 cr.)** P: V 560, V 652 & V 665. This course is intended to prepare the student to manage the common binocular vision anomalies encountered in primary care optometry. The course will examine the anatomical, physiological, psychophysical, and oculomotor characteristics of normal binocularity in humans. The course will then present diagnosis and management strategies for both non-strabismic and strabismic patients.

**OPT-V 680 Introduction to Clinic (2.5 cr.)** P: V 551, V 553, V 631, V 632, V 633, V 644, V 652, V 654, and a passing score on the Clinical Competency Examination in V 654. Introduction to clinical practice in visual analysis, optometric procedures, case conference; discussion and patient care for three 40-hour weeks during the summer, or the equivalent by arrangement.

**OPT-V 701 Grand Rounds I (0.5 cr.)** Presentation of cases.

**OPT-V 702 Grand Rounds II (0.5 cr.)** Presentation of cases.

**OPT-V 745 Ocular Disease II (3 cr.)** P: V 644. A detailed description of the signs, symptoms, differential diagnosis, and management of ocular disease of the posterior segment; neurological diseases affecting the eye; and application of ocular therapeutics.

**OPT-V 746 Ocular Disease III (Neuro-Optometry) (2 cr.)** P: V 745. A detailed discussion of the signs, symptoms, differential diagnosis, and management of neurological diseases affecting the eye.

**OPT-V 748 Principles and Methods of Physical Assessment and Medicine (3.5 cr.)** P: V 680. Physical examination with emphasis on HEENT and neurological screening, and their relationship to ocular health conditions and medical management; clinical chemistry and interpretation of clinical laboratory tests; criteria for referral to other providers, and emergency office procedures.

**OPT-V 749 Ocular Disease IV (Applied Ocular Therapeutics) (3 cr.)** P: V 745. The use, in clinical

optometric practice, of legend drugs, lasers, and other therapeutic devices in the treatment and management of ocular disease.

**OPT–V 751 Low Vision Rehabilitation (3 cr.)** P: V 652 and V 654. Special examination procedures and patient management techniques for the visually impaired. Evaluations and prescriptions of optical, nonoptical, and electronic devices. Overview of rehabilitative services.

**OPT–V 752 Advanced Contact Lens Topics I (2 cr.)** P: V 633 Applications of contact lenses. This course covers the fitting and care of patients requiring specialty contact lenses and more difficult cases including, but not limited to, correcting astigmatism, tinted and cosmetic lenses, fitting the presbyopic patient, fitting infants and children, fitting keratoconic patients, fitting postsurgical and other distorted corneas; haptic lenses, cosmetic shells, and prosthetic eyes.

**OPT–V 754 Optometric Profession (Public Health, Policy, Legal, History and Ethical Issues) (2 cr.)** Introduction to the fundamentals and principles of public health; an overview of public and community health problems, planning, and care, with special attention to optometric and other visual aspects of variously identified segments of the community. Includes considerations of quality, efficiency, economics, and regulation of vision and health care delivery and utilization.

**OPT–V 756 Clinical Assessment I (1 cr.)** P: V 680. C: V 745. Introduction to clinical reasoning and formulation of differential diagnostic protocols for investigation of various visual problems.

**OPT–V 757 Clinical Assessment II (1 cr.)** P: V 756. A continuation in the clinical reasoning and formulation of differential diagnostic protocols for investigation of various visual problems.

**OPT–V 758 Advanced Clinical Concepts in Binocular Vision and Pediatrics (1.5 cr.)** P: V 666, V 680, V 781. The goal of this course is to provide the students with advanced knowledge in the areas of binocular vision and pediatrics. Topics covered will include clinical cases involving amblyopia, strabismus, infants, and vision therapy among others. Classes will be a mixture of case presentations and lecture. Students will have an enhanced understanding of how to diagnose and treat patients with these disorders upon completion of the course.

**OPT–V 759 Business Aspects of Optometry (2 cr.)** The business of optometric practices and career opportunities and aspects of optometry.

**OPT–V 780 Clinical Skills Enhancement-3rd (2–2.5 cr.)** Increased supervision provided by clinical faculty for students having difficulty in areas of clinical performance.

**OPT–V 781 Pediatric Optometry (3 cr.)** P: V 666. Specialized diagnosis and management strategies for the infant and child. Topics to include refractive and binocular vision anomalies, disease, pharmacology and an Optometrist's role in assessment and management of visual perception, learning disabilities and reading problems. Communication with parents, educators and other professionals.

**OPT–V 786 Optometry Clinic (3 cr.)** P: V 680 with a minimum grade of C. Clinical practice in visual analysis, patient care, and optometric procedures. Case discussion and student evaluation on a daily basis. Patient care includes assisting patients with selection of suitable eye wear.

**OPT–V 787 Optometry Clinic (3 cr.)** P: V 786 with a minimum grade of C. A continuation of V 786. Clinical practice in visual analysis, patient care, and optometric procedures. Case discussion and student evaluation on a daily basis. Patient care includes assisting patients with selection of suitable eye wear.

**OPT–V 788 Optometry Clinic (3 cr.)** P: V 787 with a minimum grade of C. Clinical practice in visual analysis, patient care, and optometric procedures. Case discussion and student evaluation on a daily basis, case presentation by student interns. Patient care includes assisting patients with selection of suitable eye wear.

**OPT–V 789 Optometry Clinic (3 cr.)** P: V 788 with a minimum grade of C. Continuation of V 788. Clinical practice in visual analysis, patient care, and optometric procedures. Case discussion and student evaluation on a daily basis, case presentation by student interns. Patient care includes assisting patients with selection of suitable eye wear.

**OPT–V 880 Clinical Skills Enhancement-4th year (5–10 cr.)** Increased supervision provided by clinical faculty for students having difficulty in areas of clinical performance.

**OPT–V 884 Optometry Clinic-Arranged (5 cr.)** P: P: V 680, V 786, V 787, V 788, and V 789, as well as successful completion of all lecture and laboratory courses through the third professional year of study. Advanced clinical optometric training with emphasis on optometric specialties such as contact lens care, ocular disease diagnosis/management, binocular vision analysis/therapy, and pediatrics.

**OPT–V 885 Optometry Clinic (10 cr.)** P: V 680, V 786, V 787, V 788, and V 789, as well as completion of all lecture and laboratory courses through the third professional year of study. Advanced clinical optometric training with emphasis on optometric specialties such as contact lens care, ocular disease diagnosis/ management, binocular vision analysis/ therapy, and pediatrics.

**OPT–V 887 Extension Clinic (10 cr.)** P: V 680, V 786, V 787, V 788, and V 789, as well as completion of all lecture and laboratory courses through the third professional year of study. An intensive, hands-on patient care experience at a large urban optometry clinic in Indianapolis. Includes experience in primary care as well as specialty services.

**OPT–V 888 External Clinic (10 cr.)** P: V 680, V 786, V 787, V 788, and V 789, as well as completion of all lecture and laboratory courses through the third professional year of study. An intensive, hands-on patient care experience at an affiliated external clinical site such as a military hospital, Veterans Administration medical facility, or referral eye center.

## Residencies

After completing the Doctor of Optometry Program graduates may wish to further their clinical expertise by completing a residency in a specialty area. Residencies allow graduates to focus and expand their knowledge in a specific area of

Optometry. Residency programs offer the opportunity to treat many challenging cases with guidance from top clinicians who are experts in the field.

"My decision to do the cornea and contact lenses residency at IU is the best decision I made, coming out of optometry school. Everything from the faculty, facilities, patient experiences and other opportunities are top notch and the education I have gained in the twelve short months here is invaluable!" states Kevin Cassar, O.D.

Residencies provide the graduate with a level of expertise that expands their career opportunities. These opportunities may include interdisciplinary practices, clinical and hospital settings, as well as teaching opportunities in schools and colleges of optometry.

The Indiana University School of Optometry offers residencies in the areas of Contact Lenses and Cornea, Ocular Disease, Binocular Vision/Pediatrics, and Primary Care. The School also offers affiliated residencies in Primary Care and Ocular Disease located in Illinois, Kentucky, and West Virginia.

Indiana University directs all residencies through the office of Steven A. Hitzeman, O.D., F.A.A.O., Director of Residencies, School of Optometry, Indiana University, 800 E. Atwater Avenue, Bloomington, IN 47405-3680; (812) 855-4979. For information or applications, please contact the individual program coordinator or the office of the director of residencies. Information can also be found at the school's [Web site](#).

### **IU School of Optometry Residencies**

#### **Cornea and Contact Lenses**

Indiana University School of Optometry  
800 E. Atwater Avenue Bloomington, IN 47405-3680  
(812) 855-5446  
Program Coordinator: Susan Kovacich, O.D.,  
[skovach@indiana.edu](mailto:skovach@indiana.edu)  
Positions Available: 1

#### **Ocular Disease**

Indiana University School of Optometry  
800 E. Atwater Avenue Bloomington, IN 47405-3680  
(812) 855-5941  
Program Coordinator: Jane Ann Grogg, O.D.,  
F.A.O.O. [jgrogg@indiana.edu](mailto:jgrogg@indiana.edu)  
Positions Available: 1

#### **Pediatric Optometry**

Indiana University School of Optometry  
800 E. Atwater Avenue Bloomington, IN 47405-3680  
(812) 856-1964  
Program Coordinator: Don W. Lyon, O.D., F.A.A.O.,  
[dwllyon@indiana.edu](mailto:dwllyon@indiana.edu)  
Positions Available: 1

#### **Primary Care**

IU School of Optometry  
803 N. Monroe Bloomington, IN 47404  
(812) 855-1671  
Program Coordinator: Patricia Henderson, O.D.,  
[henderso@indiana.edu](mailto:henderso@indiana.edu)  
Positions Available: 1

Guanajuato, MX  
Centro de Rehabilitacion Visual

Hacienda de Silao #900  
Fraccionamiento La Hacienda Carr.  
Gto.Silao Cuota  
Silao, Gto, Mexico 36100  
Dr. Jennifer Page, [jgpage@indiana.edu](mailto:jgpage@indiana.edu)  
Positions Available: 1

### **IU-Affiliated Residencies**

#### **Ocular Disease**

Bennett & Bloom Eye Centers  
4010 Dupont Circle  
Suite 380  
Louisville, KY 40201  
(502) 895-0040  
Director: Lee Peplinski, O.D. [drp@eyecenters.com](mailto:drp@eyecenters.com),  
[admin@eyecenters.com](mailto:admin@eyecenters.com)  
Positions Available: 1

#### **Ocular Disease**

Huntington VA Medical Center  
Optometry Service (123)  
1540 Spring Valley Drive  
Huntington, WV 25704  
(304) 429-6755 x 2696  
Program Coordinator: Matthew G. Cordes, O.D.,  
[Matthew.Cordes@med.va.gov](mailto:Matthew.Cordes@med.va.gov)  
Positions Available: 3

#### **Ocular Disease**

University of Kentucky Medical Center  
Department of Ophthalmology  
E 309 Kentucky Clinic  
740 S. Limestone Drive  
Lexington, KY 40536-0284  
(859) 323-5867 X 259  
Program Coordinator: Cliff M. Caudill, O.D.,  
[Cmcaud2@email.uky.edu](mailto:Cmcaud2@email.uky.edu)  
Positions Available: 1

#### **Primary Eye Care**

Illiana Health Care System  
1900 E. Main Street  
Danville, IL 61832  
(217) 554-4587  
Program Coordinator: Stephen Boyer, O.D.,  
[Stephen.Boyer@med.va.gov](mailto:Stephen.Boyer@med.va.gov)  
Positions Available: 1

Lexington VA Medical Center

12250 Leestown Rd.  
Lexington, KY 40511  
Dr. Michelle Chen Lynch, [MichelleLynch@va.gov](mailto:MichelleLynch@va.gov)  
Positions Available: 3

#### **Refractive and Ocular Surgery**

Wang Vision Institute  
1801 West End Avenue Ste 1150  
Nashville, TN 37203  
(615) 321-8881  
Program Supervisor: Helen Boerman, O.D.,  
[drboerman@wangvisioninstitute.com](mailto:drboerman@wangvisioninstitute.com)  
Positions Available: 1

### **Honors & Awards**

Indiana University Doctor of Optometry (OD) students are eligible for a number of awards and honors, including cash,

plaques, equipment, expense-paid trips, and other visible rewards of excellence. Some awards require a specific application, while other awards are made without students knowing they were being considered. Some are decided solely by the Awards & Honors Committee, some by a consensus of clinical faculty, some by a vote of instructors, staff, and peers, while others are nationwide competitions. The Office of Student Administration works closely with the Awards & Honors Committee to inform students (typically by e-mail) of opportunities, deadlines, etc. Please direct any questions to the Office of Student Administration in OP 310, by phone at 812-855-1917 or at [ubopt@indiana.edu](mailto:ubopt@indiana.edu).

It is important to note that some awards, especially those offered by ophthalmic companies, might vary from year to year. Students must submit an appropriate paper for consideration, have achieved overall academic excellence, have exhibited a particular clinical proficiency or have financial need. Specific application requirements and details for each award will be made available to the students via e-mail or student mailboxes when announced.

All Doctor of Optometry students must complete the V889 Special Project course which often results in a final research paper, depending on the project. These papers, as well as papers written for other classes or purposes, may be eligible for a number of awards.

**IN ADDITION**, many state affiliates of the American Foundation for Vision Awareness and the American Optometric Association offer scholarships to students who are residents of that state. These are mentioned via e-mail messages or posted flyers. Remember to research funding resources on the Internet.

#### Fourth Year

**Andrya Lowther:** Awarded to a student in good academic standing and with a record of humanitarianism or service to community. The recipient is a current 3rd or 4th year and is selected by the Awards and Honors Committee. (\$500)

**Brett Swanda:** entering 4th student with an accumulative gpa 3.2, demonstrates financial need, and the attitude and work ethic of Brett Swanda. (\$500)

**COVD Award for Excellence in Vision Therapy** by The College of Optometrists in Vision Development: recognizes the COVD student member who is graduating and has demonstrated a strong interest and clinical skills in the area of vision therapy. (plaque)

**Jack Bennett Humanitarian Award** by the Indiana Optometric Association: This award recognizes distinguished contributions in service to humanity and the profession of optometry. The recipient is a current 3rd or 4th year who demonstrates the qualities of leadership, the dedication to community and professional service, and the humanitarian citizenship characterized by the late Dean Jack W. Bennett. Nominations are solicited from the 3rd and 4th year classes, faculty, staff or community service organization. The recipient is determined by the Awards & Honors Committee. (plaque and recognition at the IOA Annual Convention in April)

**John P. Davey Memorial Award** by the Indiana Chapter of the American Academy of Optometry: Outstanding paper on a clinical topic. Winner is selected by the Awards & Honors Committee. Deadline is approximately February 1. (\$250)

**Roy E. Denny Award** by the Indiana Chapter of the American Academy of Optometry: Outstanding paper on a clinical topic. Winner is selected by the Awards & Honors Committee. Deadline is approximately February 1. (\$250)

**J. Thomas Eade, O.D. Fund:** Preference of the donor is to support students involved in humanitarian optometric endeavors as it relates to their clinical experience. \$400 awarded to each 4th year student rotating through the IU Guanajuato, Mexico, clinic to defray travel costs.

**Essilor Optical Corneal Reflection Pupilometer Award:** Outstanding student based on nominations from various faculty and dispensary staff. (pupilometer and plaque)

**William Feinbloom Low Vision Award** by Designs for Vision, Inc: Excellence in low vision course work and low vision clinic care. Submit low vision case report typically around February 1. (plaque and low vision trial set valued at \$2,500)

**Heart of America Contact Lens Society:** Applicant must have completed at least one Contact Lens class and submit a publishable paper on the topic of any aspect of contact lenses or optometry. He/she must also be a resident of one of the following states: Oklahoma, Kansas, Nebraska, Iowa, Illinois, Missouri, or Arkansas. Applicant must also submit a short essay on the topic of "Why I chose optometry as a profession" and three letters of recommendation. Deadline is around November 15. (\$2,000 per national winner; five winners total)

**Dr. Henry Hofstetter Scholarship Award:** Leadership and service to their class. Nominations are solicited from 4th year students by the Awards & Honors Committee around February. (\$500 and plaque)

**David J. Kerko Low Vision Award** by Winchester Optical Company: Student must have a grade of C or better in low vision and have had a rotation through a low vision clinic. Nominations by low vision faculty. (Corning Medical Optics Dem Kit of CPF filters)

**David H. Kolack, O.D.** Award by the family of David H. Kolack, O.D. ('69): Awarded to the graduating OD student with the highest grade point average. (\$1,250)

**Marchon Eyewear Practice Management Award** by Marchon: Outstanding clinical and dispensing skills. Nominations by clinical faculty and dispensary staff. (\$500 and plaque)

**Robert W. Bumbleberg:** Given to a 3rd or 4th year student based on academic excellence and financial need. (\$1000)

**Silver Medal Award** by Beta Sigma Kappa, the international optometric honor society: Awarded to the highest grade point average in the graduating class who is a current Beta Sigma Kappa member. (Engraved medallion)

**Varilux Student Grant Award Program** by Essilor of American and Varilux: Third- & fourth-year students submit case reports on patients with Varilux lenses. Maximum length is 2,000 words. Turn in papers to Office of Student Administration. Deadline is around March 1. (\$500 to IU winner and entry into national competition)

**Vistakon Award of Excellence** by Vistakon and the American Optometric Foundation: Excellence in clinical

contact lens patient care and a commitment to serve the individual needs of patients. (\$1000 and plaque)

**Wal-Mart Foundation Scholarship:** One recipient for each of the following classes: 2nd, 3rd, and 4th year. Must be a current or previous employee of Wal-Mart, Sam's Club or an affiliated optometrist; have a minimum 3.0 grade point average, and demonstrated financial need through a personal statement. (\$1,000 to each of three recipients)

### Third Year

**Alice J. Bennett Fellowship:** Given to a 3rd year student who is in good standing and demonstrates financial need. The recipient is determined by the Awards & Honors Committee. (\$500)

**Andrya Lowther:** Awarded to a student in good academic standing and with a record of humanitarianism or service to community. The recipient is a current 3rd or 4th year and is selected by the Awards and Honors Committee. (\$500)

**Barbara (Bobbie) Abrams Scholarship in Optometry:** Awarded to a 3rd year student with exceptional academic performance and financial need. Selection by the Awards and Honors Committee. (\$1000)

**Carl Zeiss Vision Fellowships** by the AOF: Successful candidates will exemplify the highest level of commitment to clinical excellence and the profession of optometry. Evidence of the student's achievements will include, but not be limited to:

- Commitment to independent optometric practice
- Evidence of active participation in community &/or research with focus on ophthalmic optics or public health initiative
- Evidence of active participation in optometric student leadership and professional organizations

**Charles R. Shick Scholarship:** Awarded to a third year student whose primary area of interest and/or study is contact lenses. Recipient determined by the Awards and Honors Committee

**Jack W. Bennett Endowed Scholarship:** Given to a 3rd year student who is in good standing and demonstrates financial need. The recipient is determined by the Awards & Honors Committee. (\$2000)

**Jack Bennett Humanitarian Award** by the Indiana Optometric Association: This award recognizes distinguished contributions in service to humanity and the profession of optometry. The recipient is a current 3rd or 4th year who demonstrates the qualities of leadership, the dedication to community and professional service, and the humanitarian citizenship characterized by the late Dean Jack W. Bennett. Nominations are solicited from the 3rd and 4th year classes, faculty, staff or community service organization. The recipient is determined by the Awards & Honors Committee. (plaque and recognition at the IOA Annual Convention in April)

**Dr. Seymour Galina Grant** by the American Optometric Association: Third-year students are eligible to apply. Must submit a paper not exceeding 1500 words on the following topic: "The qualities I have developed through my financial planning/work experience during and/or before optometry school which I believe will be most useful to me establishing an ethical/professional optometric practice." Applicant must

exhibit financial need and submit through the Student Administration Office; must also be an AOSA member in good standing. Deadline is around mid-May. (\$2500)

**Heart of America Contact Lens Society:** Applicant must have completed at least one Contact Lens class and submit a publishable paper on the topic of any aspect of contact lenses or optometry. He/she must also be a resident of one of the following states: Oklahoma, Kansas, Nebraska, Iowa, Illinois, Missouri, or Arkansas. Applicant must also submit a short essay on the topic of "Why I chose optometry as a profession" and three letters of recommendation. Deadline is around November 15. (\$2,000 per national winner; five winners total)

**John Hitchcock Memorial Scholarship:** Awarded to a 3rd year student. The recipient is determined by the Awards & Honors Committee. (\$400)

**Robert W. Bumbleberg:** Given to a 3rd or 4th year student based on academic excellence and financial need.(\$1000)

**Rogers W. Reading Endowed Award:** Awarded to a 3rd year student whose primary interest and/or area of study is binocular vision. The recipient is determined by the Awards & Honors Committee. (\$400)

**Dr. and Mrs. Lewis Scott Scholarship:** Awarded to a 3rd year student. The recipient is determined by the Awards & Honors Committee. (\$2,000)

**Joseph Elmer Sidwell and Trula Sidwell Hardy Scholarship:** Awarded to a 2nd or 3rd year student. The recipient is determined by the Awards & Honors Committee. (\$1,000)

**Varilux Student Grant Award Program by Essilor of American and Varilux:** Third- & fourth-year students submit case reports on patients with Varilux lenses. Maximum length is 2,000 words. Turn in papers to Office of Student Administration. Deadline is around March 1. (\$500 to IU winner and entry into national competition)

**Vision Service Plan Scholarship:** Five students demonstrating excellence in primary eye care services and also in the top half of the class are nominated by clinical faculty to compete. Nominees are interviewed by the Awards & Honors Committee and the Committee selects two. (\$2,000 and a plaque to each of the two recipients)

**Wal-Mart Foundation Scholarship:** One recipient for each of the following classes: 2nd, 3rd, and 4th year. Must be a current or previous employee of Wal-Mart, Sam's Club or an affiliated optometrist; have a minimum 3.0 grade point average, and demonstrated financial need through a personal statement. Deadline is approximately February 1. (\$1,000 to each of three recipients)

### Second Year

**Joseph Elmer Sidwell and Trula Sidwell Hardy Scholarship:** Awarded to a 2nd or 3rd year student. The recipient is determined by the Awards & Honors Committee. (\$1,000)

**Wal-Mart Foundation Scholarship:** One recipient for each of the following classes: 2nd, 3rd, and 4th year. Must be a current or previous employee of Wal-Mart, Sam's Club or an affiliated optometrist; have a minimum 3.0 grade point average, and demonstrated financial need through a personal



statement. Deadline is approximately February 1. (\$1,000 to each of three recipients)

### First Year

**American Foundation for Vision Awareness** – Indiana Affiliate: Awarded to a first-year optometry student who is an Indiana resident with intentions of practicing in Indiana, willingness to continue to serve the community's vision and vision awareness needs, and good academic progress. The recipient is selected by the Awards and Honors Committee. Recognition at the IOA Annual Convention in April. Deadline is approximately November 1 (\$750)

**Class of 1959 Scholarship:** Given to the top entering student based on academic rank, OAT scores and personal criteria as selected by the Awards & Honors Committee. Renewable each year (maximum of 4 years) provided that the student maintains a 3.20 cumulative grade point average. (\$300)

**Paul Pietsch Scholarship:** Awarded to the top student in Neuroanatomy. This is the student with the highest course grade in Ocular Biology. Faculty of record provides student name. (\$500)

### Other

**Antoinette M. Molinari Memorial Scholarship** by the American Optometric Foundation: Awarded to an exceptional student with extraordinary financial need. Students from each school/college of optometry are eligible to apply every five years. IU students may apply in 2002, 2007, 2012, etc. Any OD student within the regionally accepted schools for that year may apply. The recipient is selected by the AOF. Deadline is March 1 - <http://www.aaopt.org/aof/scholarship>. (\$5,000)

**E.F. Wildermuth Foundation Harriet Slaughter Scholarship:** Scholarship support for students in the IU School of Optometry in good academic standing. Awards determined by the Awards and Honors Committee

## Financial Aid

To apply for federal financial assistance, students need to file the Free Application for Federal Student Aid (FAFSA) between January 1 and March 1 each year. They may also file after March 1, but may not be considered for all the aid possible, depending on funding. Students may file the FAFSA at the [Web site](#).

To be eligible for federal financial aid, a student must:

- be a U.S. citizen or eligible noncitizen
- have a valid social security number
- register with the Selective Service, if required
- not be in default or owe an overpayment on previous federal aid
- be admitted to an IU degree program
- make satisfactory academic progress

More information on eligibility requirements, the application process, and specific financial aid programs can be found at the Web site [www.indiana.edu/~sfa](http://www.indiana.edu/~sfa).

### Borrowing

Financing an optometric education can be a long-term investment if a student needs to borrow money. Students must understand the implications of receiving student loans,

such as the obligation to repay them with interest once they obtain their degrees. There are several student loan programs available to doctoral optometric students:

- Federal Stafford
- Federal Perkins Loan
- Federal Health Professions Loan (students must provide parent data on the FAFSA to be considered for this loan)
- Federal PLUS Loan for graduate students

There are other sources for loans (along with state and association assistance programs) that students can fully research to obtain funding. Information can be obtained from the American Optometric Association as well as from local and state optometric associations.

### Other Programs

Other federal aid programs include Federal Veterans Benefits and Military Health Professions scholarships. In addition, other options include:

- Teaching Assistantships
- Educational Opportunity Fellowships

Other scholarships and awards through the School of Optometry are listed in the "Student Honors and Awards" section in this bulletin. Applications and information about these programs can be obtained from the Office of Student Administration. A free search for other scholarships, not from the school, is available on line at [www.fastweb.com](http://www.fastweb.com).

### Financial Aid Contact

Please contact the School of Optometry's Associate Director of Financial Aid with questions or concerns at School of Optometry, 800 E. Atwater Avenue, Indiana University, Bloomington, Indiana 47405-3680; e-mail [jmgngri@indiana.edu](mailto:jmgngri@indiana.edu) for in-person or telephone appointments, which can be scheduled by calling the Office of Student Administration at (812) 855-1917. Information regarding other sources of financial aid is available on the School of Optometry's Web site at [www.opt.indiana.edu](http://www.opt.indiana.edu).

## Graduate Program in Vision Science (MS, PhD)

Vision scientists study the eye and how we see as well as both the pathogenesis of visual dysfunction and the amelioration of visual disabilities. Vision science is multidisciplinary, and can include the study of biochemistry, biophysics, engineering, epidemiology, molecular biology, cell biology, neuroscience, optics, ophthalmology, optometry, pathology, physiology, psychology, statistics, and any other discipline that relates to the eye and its problems. Both the M.S. and Ph.D. degrees provide breadth through a variety of courses offerings. The thesis based M.S. and Ph.D. degrees also add depth to the training of vision scientists through original research leading to a thesis or a dissertation.

### Admission

The degree requirements for admission are flexible in order to accommodate students who come to vision science from a variety of backgrounds. A bachelor's degree (or equivalent) in science is required, and this should include course work appropriate to the area of vision science in which the student

wishes to pursue research. Detailed admission criteria are listed with the description of the degrees.

## **Degree Requirements**

### **Non-thesis Master of Science Degree**

#### **Admission Requirements**

The typical candidate for this program would be a practitioner who has an undergraduate degree in optometry or its equivalent and licensed or license eligible to practice optometry in their home country. GRE results will be required and in addition all non-native English speakers entering the program must have taken the Test of English as a Foreign Language (TOEFL) within the last 5 years. Non-typical candidates can also be considered for admission. However, they should first correspond with the Associate Dean of Graduate Programs before applying.

#### **Curriculum**

A total of 40 credit hours are required. Most of the courses will be based on the didactic courses in the School of Optometry's Doctorate of Optometry curriculum. Core courses will provide a breadth of background and also provide training in teaching methods, epidemiology, research design and writing and will be required to attend weekly research seminars. These core courses will add up to 15 credit hours. Electives totaling 25 credit hours will concentrate on one or two specialty areas in Optometry. Prior to registration for courses in the first semester the student will meet with the Associate Dean for Graduate Programs or a faculty mentor appointed by the Associate Dean to identify specialty areas, and to obtain advice on electives.

### **Thesis-based Master of Science Degree**

#### **Course Requirements**

A total of 30 credit hours is required, of which 15 must be didactic hours in vision science or in approved substitutes. Students holding the O.D. degree, or enrolled in the O.D. program, may apply up to 4 credit hours to this requirement of 15 didactic credit hours.

#### **Thesis Requirements**

Early in the program, students participate in a research project under the direction of a faculty advisor. The advisor is chosen by the student after consultation with the director of the graduate program. Research toward the thesis is guided by the advisor and a committee. After completion of the thesis, at least three members of the graduate faculty give it final approval.

### **Doctor of Philosophy Degree**

#### **Course Requirements**

A total of 90 credit hours is required, of which 30 must come from didactic courses with grades of B or higher. Students holding the O.D. degree, or enrolled in the O.D. program, may apply up to 6 credit hours to this requirement of 30 didactic credit hours. When the grade point average of a student falls below 3.0, the student will be placed on academic probation.

Each semester, students are required to register for and participate in the weekly Vision Science Seminar (V 765) known as "Oxyopia." Participation implies that the seminar will be taken for credit and that students will make presentations.

During the first year students will be required to take a Special topics course in Vision Science (V768), Ocular BiolDogy 1 (V540) and either Geometric and Visual Optics 1 (V521) or Systems Approach to Biomedical Science (V542). During the second semester students will Take Vision Science 1 (V560) and either V523 or V543 as well as a special seminar (V768). Students believing they have met these requirements may apply to the Associate Dean for Graduate Programs with an alternative program.

#### **Minor Requirements**

Students will select at least one minor subject in any relevant field of study, subject to approval by their advisory committee.

The requirements for the minor are determined by the department or program offering the minor.

### **Vision Science Ph.D. Degree Requirements**

In order to ensure adequate progress toward the Ph.D. degree, all students must achieve the following milestones. Typically these should be met at the end of years 1, 2, and 3 of the program. In addition, students who are expected to teach must pass Test of English Proficiency for International Associate Instructor Candidates (TEPAIC).

#### **Advancement to Second-Year Exam**

At the end of the first year in the program each student must pass a written examination covering a wide selection of vision science topics in order to advance to the second year of the program. By this time, students should also have demonstrated an appropriate command of spoken and written English.

#### **Advancement to Third Year**

By the end of the second year all students should have identified the area of study and the specific experiments that will eventually constitute their Ph.D. thesis. This requirement will be met by submitting a formal abstract describing the proposed experiments to the Graduate Program coordinator.

This abstract must be accompanied by written approval of the Ph.D. advisor.

#### **Advancement to Candidacy**

By the end of the third year, each student must complete a written and oral qualifying examination. These examinations are administered by the student's advisory committee. The written component is the dissertation proposal, and can be in the form of a grant application. The requirement of 30 credit hours of didactic course work must be fulfilled before the qualifying examination. After successful completion of the qualifying exam, each student will be advanced to candidacy for the Ph.D. degree. Participation in the Ph.D. program will be terminated if a student fails the qualifying examination twice.

The final milestone is completion of the dissertation.

#### **Completion of Dissertation**

After completion of the written dissertation, it is presented and defended at a scheduled seminar meeting. The dissertation must be approved by the student's research committee.

### **IU University Graduate School**

The Indiana University Graduate School provides a guide to the preparation of theses and dissertations. Related forms may be acquired from the IU School of Optometry Office of

Student Administration. See Website at [www.graduate.indiana.edu/preparing-theses-and-dissertations.php](http://www.graduate.indiana.edu/preparing-theses-and-dissertations.php).

### Ph.D. Minor in Vision Science

Students from other departments who wish to minor in vision science should complete Introduction to Vision Science I and II (VSCI-V 700 and 701) and at least one other course from the following list below.

### Courses

- **OPTV 595** First-Year Research (5 cr.)
- **OPTV 695** Second-Year Research (5 cr.)
- OPTV 703 Refractive Anomalies I (3 cr.) Optics and epidemiology of refractive anomalies of the human eye.
- OPTV 704 Refractive Anomalies II (3 cr.) Development, progression, and management of myopia.
- OPTV 705 Ocular Surface Biology (4 cr.) Basic biology and physiology of the ocular surface, including the cornea, conjunctiva, and tear film.
- OPTV 706 Ocular Surface II: Current Issues (4 cr.) Current issues affecting the ocular surface, including contact lenses, disease, and surgery.
- OPTV 707 Retinal Imaging (23 cr.) The fundamental methods used in imaging the human retina will be examined, including types of illumination and delivery methods, optical techniques for detection, interaction of light and tissues, systems integration, and selection of imaging modalities based on scientific goals.
- **OPTV 716** The Visual Pathways (4 cr.) P: Permission of the instructor. For students in the visual sciences, comprehensive study of the human optic pathways.
- OPTV 717 Noninvasive Assessment of Visual Function (3 cr.) Focuses on the clinical application of psychophysical techniques for the detection and diagnosis of visual anomalies and ocular disease.
- OPTV 718 Visual Functions in Low Vision (3 cr.) Studying behavioral aspects of visual function measurements in the low-vision population.
- OPTV 723 The Eye as an Optical Instrument (4 cr.) P: V 521/523 or equivalent.
- OPTV 764 Cellular and Molecular Aspects of Ocular Disease and Injury (4 cr.) Study of selected reports dealing with corneal wound healing, the cataractous lens, and retinal degenerations.
- OPTV 765 Vision Sciences Seminar (1 cr.) Students in the Ph.D. program in Vision Science are required to take this seminar and make a presentation annually.
- OPTV 767 Electrophysiology of Vision (3 cr.) Review of techniques of recording neural events, development of a neural hypothesis, experimental testing of hypothesis, writing and presenting of data and conclusions.
- OPTV 768 Special Topics in Vision Science (4 cr.) Covers topics that are not offered on a regular basis. Possible topics include cell and molecular biology as it relates to the eye and vision, Computer Programming for the Lab, Comparative studies of the vertebrate eye, current research, experimental design, optical and ophthalmic instruments, pathology, and pharmacology. This course may be taken for credit more than once when different topics are covered.
- OPTV 773 Classics in Physiological Optics (1 cr.) Study of selected scientific articles of early contributors to our understanding of ocular motility, monocular and binocular functions, the optics of the eye, and ocular physiology.
- OPTV 783 Monocular Sensory Aspects of Vision (4 cr.) P: V 664 or equivalent. Analysis of visual stimulus and its perception in color, form, brightness, motion, etc.
- OPTV 784 Binocular Sensory Aspects of Vision (4 cr.) P: V666 or equivalent. A study of perceptual phenomena and responses facilitated by binocular vision.
- OPTV 785 The Vertebrate Eye (3 cr.) Comparative anatomy of the vertebrate retina. Primate retina used as a model. Accommodative mechanisms discussed. Laboratory exercises required.
- OPTV 791 Quantitative Methods for Vision Research (3 cr.) Introduction to communication theory approach to problems in vision. Topics include the sensory nerve code, representation of nerve messages by orthogonal functions, sampling theorem, linear filters, Fourier analysis in one and two dimensions, analysis of directional data, stochastic processes, and signal detection theory.
- OPTV 792 Ethical Issues in Scientific Research (1 cr.) This required course explores the ethical issues and dilemmas raised by research in the biological sciences. This course is typically offered in the summer and must be completed by the second year in the graduate program.
- OPTV 793 Critical Evaluation of Peer Reviewed Publications in Vision Science (1 cr.) This course provides experience to students to critically evaluate literature in the area of vision research. Students will meet for two hours each week for an eight week period. Evaluation will be based on attendance, reading assignments and class participation.
- OPTV 795 Third-Year Research (5 cr.)
- OPTV 799 M.S. Thesis Research (10 cr.)
- OPTV 801 Basic Experimental Design and Methods in Vision Science (3 cr.) An introduction to basic research skills in vision science.
- OPTV 899 Ph.D. Dissertation Research (12 cr.)
- OPTV 754 The Motility of the Eye (4 cr.) P: V 665 or equivalent. Quantitative and qualitative study of eye movements and myologic reflexes, monocular and binocular, and related phenomena.

#### OPT-V 595 First-Year Research (1–5 cr.)

#### OPT-V 695 Second-Year Research (1–5 cr.)

**OPT-V 700 Introduction to Vision Science I (4 cr.)** The first of a two-semester sequence of courses that provides a comprehensive introduction to vision science. The course is designed for graduate students enrolled in Vision Science, but is also suitable for students from other disciplines who are interested in the eye and vision.

**OPT-V 701 Introduction to Vision Science II (4 cr.)** The second of a two-semester sequence of courses on vision science. V 700 and this course constitute a breadth requirement for Ph.D. students in Vision Science.

**OPT-V 703 Refractive Anomalies I (3 cr.)** Optics and epidemiology of refractive anomalies of the human eye.

**OPT-V 704 Refractive Anomalies II (3 cr.)** Development, progression, and management of myopia.

**OPT-V 705 Ocular Surface Biology (4 cr.)** Basic biology and physiology of the ocular surface, including the cornea, conjunctiva, and tear film.

**OPT-V 706 Ocular Surface II: Current Issues (4 cr.)** Current issues affecting the ocular surface, including contact lenses, disease, and surgery.

**OPT-V 707 Retinal Imaging (2-3 cr.)** The fundamental methods used in imaging the human retina will be examined, including types of illumination and delivery methods, optical techniques for detection, interaction of light and tissues, systems integration, and selection of imaging modalities based on scientific goals.

**OPT-V 716 The Visual Pathways (4 cr.)** P: Permission of the instructor. For students in the visual sciences, comprehensive study of the human optic pathways.

**OPT-V 717 Noninvasive Assessment of Visual Function (3 cr.)** Focuses on the clinical application of psychophysical techniques for the detection and diagnosis of visual anomalies and ocular disease.

**OPT-V 718 Visual Functions in Low Vision (3 cr.)** Studying behavioral aspects of visual function measurements in the low-vision population.

**OPT-V 723 The Eye as an Optical Instrument (4 cr.)** P: V 663 or equivalent.

**OPT-V 764 Cellular and Molecular Aspects of Ocular Disease and Injury (4 cr.)** Study of selected reports dealing with corneal wound healing, the cataractous lens, and retinal degenerations.

**OPT-V 765 Vision Sciences Seminar (1 cr.)** Students in the Ph.D. program in Vision Science are required to take this seminar and make a presentation annually.

**OPT-V 767 Electrophysiology of Vision (3 cr.)** Review of techniques of recording neural events, development of a neural hypothesis, experimental testing of hypothesis, writing and presenting of data and conclusions.

**OPT-V 768 Special Topics in Vision Science (1-4 cr.)** Covers topics that are not offered on a regular basis. Possible topics include cell and molecular biology as it relates to the eye and vision, comparative studies of the vertebrate eye, current research, experimental design, optical and ophthalmic instruments, pathology, and pharmacology. This course may be taken for credit more than once when different topics are covered.

**OPT-V 773 Classics in Physiological Optics (1 cr.)** Study of selected scientific articles of early contributors to our understanding of ocular motility, monocular and binocular functions, the optics of the eye, and ocular physiology.

**OPT-V 783 Monocular Sensory Aspects of Vision (4 cr.)** P: V 664 or equivalent. Analysis of visual stimulus and its perception in color, form, brightness, motion, etc.

**OPT-V 784 Binocular Sensory Aspects of Vision (4 cr.)** P: V666 or equivalent. A study of perceptual phenomena and responses facilitated by binocular vision.

**OPT-V 785 The Vertebrate Eye (3 cr.)** Comparative anatomy of the vertebrate retina. Primate retina used as a model. Accommodative mechanisms discussed. Laboratory exercises required.

**OPT-V 791 Quantitative Methods for Vision Research (3 cr.)** Introduction to communication theory approach to problems in vision. Topics include the sensory nerve code, representation of nerve messages by orthogonal functions, sampling theorem, linear filters, Fourier analysis in one and two dimensions, analysis of directional data, stochastic processes, and signal detection theory.

**OPT-V 792 Ethical Issues in Scientific Research (1 cr.)** This required course explores the ethical issues and dilemmas raised by research in the biological sciences.

**OPT-V 793 Critical Evaluation of Peer Reviewed Publications in Vision Science (1 cr.)** This course provides experience to students to critically evaluate literature in the area of vision research. Students will meet for two hours each week for an eight week period. Evaluation will be based on attendance, reading assignments and class participation.

**OPT-V 795 Third-Year Research (1-5 cr.)**

**OPT-V 799 M.S. Thesis Research (1-10 cr.)**

**OPT-V 801 Basic Experimental Design and Methods in Vision Science (3 cr.)** An introduction to basic research skills in vision science.

**OPT-V 899 Ph.D. Dissertation Research (1-12 cr.)**

**OPT-V 754 The Motility of the Eye (4 cr.)** P: V 665 or equivalent. Quantitative and qualitative study of eye movements and myologic reflexes, monocular and binocular, and related phenomena.

## Financial Aid & Fellowships

A graduate student enrolled in the Vision Science Program may be eligible for fee remission awards and for fellowship and assistantship awards.

Indiana University assistance includes the Graduate Scholars Fellowship, Women in Science Graduate Fellowship, the Ronald E. McNair Graduate Fellowship, and the Educational Opportunity Fellowship. To be considered for one of these fellowships, a student should contact the Indiana University School of Optometry Office of Student Administration. Most aid programs need to be applied for in the fall semester to be available for Fall admission.

Additional information regarding eligibility may be found at the University Graduate school [Web site](#).

In addition, a graduate student may apply for [Ezell Fellowships of the American Optometric Foundation](#), 6110 Executive Boulevard, Suite 506, Rockville, MD 20852; (301) 984-4734.

For other financial aid, grants-in-aid, and fellowships, refer to the University Graduate School Bulletin.

Information is also available on the [School of Optometry](#).

## Optician/Technician Program (AS)

The IU School of Optometry offers a two-year program leading to the Associate of Science (A.S.) degree in Optometric Technology/Opticianry. Students completing the program are qualified to begin careers as optometric technicians and/or opticians. This course of study offers an excellent entry point into one of the most interesting areas in the health care field.

The program takes four semesters to complete, if the student has not taken any previous college courses. The general, nontechnical courses, such as English composition, may be completed either before or after the technical courses. An additional option allows a student to become a laboratory optician by completing courses in lens surfacing and fabrication (Opticians' Laboratory Concentration).

### Accreditation

The Optician/Technician Program is accredited by the [Accreditation Council on Optometric Education](#) and by the [Commission on Opticianry Accreditation](#).

### Mission and Goals

#### Programmatic Mission

To educate and train individuals to be optometric technicians and opticians.

#### Programmatic Goals

- **Teaching:** The overall goal for teaching is to develop a program recognized for excellence and innovation in opticianry and optometric technology.
- **Clinics:** To provide students with the clinical experience needed to develop competence in patient care by working with a diverse and varied patient population.
- **Optical Teaching Laboratory:** To provide students with the optical laboratory experience needed to develop competency in the fabrication of a diversity of spectacle lens prescriptions.
- **Physical Plant:** To provide students with a pleasant, environmentally safe learning environment that has both basic and state-of-the-art equipment in sufficient quantity to foster maximum learning.
- **Student Administration:** To enroll a full class of students with a diversity of backgrounds and assure that upon graduation they are appropriately prepared for and successfully placed within the ophthalmic marketplace.

## Admission

Applications must be submitted to both Indiana University (if not currently enrolled) and the Optician/Technician Program. A new class begins each fall, but students with previous college experience may be able to begin the program in the spring semester by taking one optician/technician course (TOPT V 153) and completing general education requirements. Early graduation is possible, if the student chooses to attend summer sessions.

Students planning to apply for admission to the Optician/Technician Program should complete courses in

high school required for admission to Indiana University. Admission standards can be found in the section of this bulletin entitled "Undergraduate Admissions Policy." In most cases, current IU students with a cumulative GPA of 2.0 or above and who are in good standing can expect to be admitted to the Optician/ Technician Program.

Requests for additional information and application forms should be directed to Office of Student Administration, School of Optometry, 800 E. Atwater Avenue, Indiana University, Bloomington, Indiana 47405-3680; (812) 855-1917; fax (812) 8554389; e-mail [iubopt@indiana.edu](mailto:iubopt@indiana.edu). Also see [www.opt.indiana.edu](http://www.opt.indiana.edu).

## Degree Requirements

The non-TOPT-V-lettered courses are offered outside of the School of Optometry and may be taken before or after completing the V-lettered technology courses.

### First Year

#### First Semester

TOPT-V 111	Basic Optics	5
TOPT-V 151	Ophthalmic Procedures 1	4
TOPT-V 174	Office Procedures	4
TOPT-V 201	Anatomy and Physiology of the Eye	3
	Total	16

#### Second Semester

TOPT-V 121	Ophthalmic Lens Finishing	4
TOPT-V 131	Ophthalmic Optics	5
TOPT-V 153	Ophthalmic Dispensing	4
TOPT-V 251	Ophthalmic Procedures 2	3
	Total	16

### Optional Summer Session

Completing courses during the summer session leads to early graduation.

- Clinic Practicum
- Other requirements

### Second Year

#### First Semester

TOPT-V 210	Fabrication Practicum (or C121 Public Speaking, C122 Interpersonal Communication, or Business Studies 1)	3
TOPT-V 221	Ophthalmic Lens Surfacing and Optics	4

TOPT-V 232	Contact Lens Methods and Procedures	4
TOPT-V 254	Clinic Practicum <sup>1</sup>	4
ENG-W 131	Elementary Composition <sup>2</sup>	3
	Total	18

### Second Semester

TOPT-V 211	Fabrication Practicum II (or Business Studies <sup>1</sup> )	3
TOPT-V 255	Clinic Practicum <sup>2</sup>	3
TOPT-V 256	External Clinics	3
HPER-H 160	First Aid and Emergency Care <sup>3</sup>	3
	Social & Historical Studies elective <sup>4</sup>	3
	Total	15

Minimum total credit hours required for A.S. degree: 65

Note: All Optician/Technician V-lettered courses must be completed within four years of matriculation; any exceptions require a written petition to the Academic Review Committee.

1 Business studies courses should be chosen from a list provided by your optometry academic advisor.

2 Other means of completing the composition requirement exist. Consult the College of Arts and Sciences Bulletin or an undergraduate advisor for details on these options.

3 Standard first aid with adult CPR course through the American Red Cross may be substituted for H 160 with your advisor's approval. No credit hours are earned in the Red Cross course. Consequently, 3 credit hours of a general elective must be completed to achieve a total of 65 credit hours required for graduation. Substitution is granted after students present their Red Cross certification card to the Office of Student Administration.

4 The 3 credit hours may be selected from courses acceptable for the social and historical studies (S&H) requirement, as listed in the College of Arts and Sciences Bulletin. Please note that this requirement may be fulfilled concurrently by selecting either Economics E 201 Introduction to Microeconomics or E 202 Introduction to Macroeconomics in the business studies group requirements. However, a minimum of 65 credit hours is required for graduation.

### Pass/Fail Restrictions:

No course listed as required for graduation may be taken Pass/Fail. This includes courses within the School of Optometry as well as those requirements which are selected by the student from generalized groups of courses offered outside the School of Optometry. Examples of such courses are the Business Studies and the Social and Historical Studies requirements. Any other courses outside the curriculum may be taken Pass/Fail.

### Opticians' Laboratory Concentration

Students may elect to take the Opticians' Laboratory Concentration in lieu of C 121 or C 122 and a 3 credit hour business studies elective or 6 credit hours of business studies elective courses. The Opticians' Laboratory Concentration includes practical experience in all aspects of the optical laboratory and a study of the optics necessary to understand lens surfacing. Students must earn a grade of C- or above in all three concentration courses: V 210 Fabrication Practicum I, V 211 Fabrication Practicum II, and V 221 Ophthalmic Lens Surfacing and Optics.

In the event that enrollment limits are exceeded for the Opticians' Laboratory Concentration courses, admission to V 210 and V 211 may require permission to enroll. Decisions will be made by the program director and the optical laboratory management.

In certain instances, a student may take V 210 Fabrication Practicum I as early as the summer following the completion of the first year of Optician/Technician Program studies. Because V 221 is a prerequisite or corequisite for V 211 Fabrication Practicum II, the student must then enroll in V 221 Ophthalmic Lens Surfacing and Optics the following fall semester.

### Academic Regulations

Academic standards are listed in the Optician/Technician Program's student handbook and are the same as listed in the University Division Planner.

### Certification

#### Optician

Graduates of the Optician/Technician Program may become certified in the opticianry field. The National Opticianry Competency Examination (NOCE) is spectacle-related and given by the American Board of Opticianry (ABO). This exam consists of questions on the skills and knowledge required for competency in ophthalmic dispensing. The Contact Lens Registry Examination (CLRE) is given by the National Contact Lens Examiners (NCLE) for certification in contact lens dispensing. Both written exams are offered twice a year, in May and November, at numerous sites across the country. One or both certifications may be required by the state in which the optician plans to locate as some states require optician licensing. Many of these states use the ABO and/or NCLE certification exams as part of their licensing process.

For more information regarding certification, contact: American Board of Opticianry, ABO/NCLE, 6506 Loisdale Road, Suite 209, Springfield, VA 22150; (703) 719-5800; fax (703) 719-9144; [www.abo.org](http://www.abo.org); e-mail: [mail@abo-ncle.org](mailto:mail@abo-ncle.org).

#### Optometric Technician

Graduates of the Optician/Technician Program may also become certified through a program offered by the American Optometric Association, National Council on Paraoptometric Education. The certification program consists of three levels; however, graduates of the program or students in their last semester of study in the IU Optician/Technician Program will be allowed to skip the first level and be eligible to sit for the second- or third-level written exams. They will be exempt from taking the practical exam, which is part of the third-level testing. Certification, while not required, is recognized in the optometry field as an assurance of the basic knowledge

necessary to perform the functions of an optometric technician.

For more information, contact: American Optometric Association, National Council on Paraoptometric Education, 243 N. Lindbergh Boulevard, St. Louis, MO 63141-7881; (314) 991-4100 or 800-365-2219; fax (314) 991-4101; [www.aoa.org](http://www.aoa.org).

## Career Information

**Opticians** fill eyewear prescriptions. Their training includes dispensing eye wear, selecting frames, taking facial measurements, and choosing the best lens style for the patient. They take the order written by the eye doctor, produce the lenses with the correct prescription, and shape the lenses to fit the frame.

**Optometric technicians** must know how to take facial measurements and how to select and adjust frames. In addition, they learn business procedures and may be responsible for managing the doctor's office. They work closely with the eye doctor as part of the eye care team. Their tasks include measuring visual acuity, color vision, depth perception, field of vision, and pressures within the eye. They assist in various contact lens procedures and also teach contact lens patients to insert, remove, and care for their contact lenses.

### Employment

Most opticians and optometric technicians are employed in the optical industry or by optometrists, opticians, and ophthalmologists. Some are employed as managers of optical dispensaries or laboratories. Graduates of the Optician/ Technician Program may also work in an optical laboratory or for a lens, frame, contact lens, or instrument company.

### Placement

The school's placement service is available online! Both opportunity providers and seekers can post their information directly to the Web via online forms. Providers or seekers can also search profiles/opportunities by geographic area.

Positions listed are designed to support both students and alumni. This service is available at [www.opt.indiana.edu](http://www.opt.indiana.edu). Look for the Job Placement tab. Currently, the demand for opticians and technicians is very high.

## Honors and Awards

### Graduation with Honors

The Associate of Science in Optometric Technology/Opticianry degree is granted with distinction to students who have demonstrated laudatory scholarship in their studies and graduate within the top 10 percent of their graduating class. The specific honor is noted on the graduate's diploma. The Optician/Technician cumulative program grade point average and the corresponding citations are 3.70, with distinction; 3.80, with high distinction; 3.90, with highest distinction.

### Awards and Recognitions

Each year, many awards are presented to School of Optometry students. Periodically, students will receive notices regarding eligibility and application deadlines. Inquiries should be directed to the School of Optometry's Office of Student Administration or to the faculty chairperson

of the Awards and Honors Committee. The actual list of awards may vary from year to year and not all awards are presented each year.

### Second-Year Optician/Technician Students

- Essilor of America Award of Excellence
- Indiana University Optometry Alumni Association Awards:
  - (1) Technician of the Year and
  - (2) Optician of the Year
- Robert G. Corns, O.D., Scholarship for Optician/Technician Students

## Financial Aid

The Indiana University Bloomington Office of Student Financial Assistance offers information and assistance concerning a variety of grants, loans, and other student financial aid. These include but are not limited to Federal Pell Grants, SSACI grants for Indiana residents, Federal Direct Student Loans, and the Federal Work-Study Program.

Application for student financial aid is made by completing the Free Application for Federal Student Aid (FAFSA) at [www.fafsa.ed.gov](http://www.fafsa.ed.gov) and having the information sent to IU Bloomington at School Code 001809. Apply between January 1 and March 1 each year for the academic year beginning in late August. The March 1 date is an actual deadline for Indiana state grants and a priority date for other types of federal aid. If you file after March 1, you will still be considered for Pell Grant and Federal Direct Loans, but you may miss out on other valuable financial aid opportunities.

The IU Office of Student Financial Assistance is located in Room 208, Franklin Hall, Bloomington, IN 47405; (812) 855-0321; Web site: [www.indiana.edu/~sfa](http://www.indiana.edu/~sfa). The School of Optometry also has its own part-time financial aid administrator available for in-person or telephone appointments. You may make contact by phone at (812) 855-1917 or by e-mail at [iuoptfa@indiana.edu](mailto:iuoptfa@indiana.edu).

## Courses

- Optician/Technician Program
- Cross-Listed Courses

### Optician/Technician Program Courses

V131, V151, V153, V251, V254, V255, and V256 must each be completed with a final grade of C- or above for graduation. A grade of C- or above in V121 is a prerequisite for V210, but not required for graduation. V201 Anatomy and Physiology of the Eye is strongly recommended.

**TOPT-V 111 Basic Optics (5 cr.)** Lectures and Laboratory exercises concerning basic optical principles with the addition of geometrical/theoretical optics.

**TOPT-V 121 Ophthalmic Lens Finishing (4 cr.)** P: V 111. Lecture and laboratory instruction in the finishing of ophthalmic lenses, including lens selection, decentration, orientation, and mounting. Related lens topics such as lens safety requirements and absorptive lens characteristics are also included. Students must demonstrate the ability to

produce a spectacle lens prescription that is both visibly pleasing and optically sound.

**TOPT–V 131 Ophthalmic Optics (5 cr.)** P: V 111. Must be completed with a final grade of C- or above. Optical characteristics and design of standard ophthalmic, single vision, multifocal, absorptive, coated, occupational, low vision, and sports vision lenses; prescription verification; prismatic effects; and lens decentration.

**TOPT–V 151 Ophthalmic Procedures 1 (4 cr.)** Must be completed with a final grade of C- or above. Techniques and theory used in optometric practice, including case history, visual acuity, refractive errors, keratometry and ophthalmometry, visual fields, color vision, eye movements, binocular vision, accommodation, convergence and divergence, visual axis deviation, strabismus, visual pathway, and pupillary reflexes.

**TOPT–V 153 Ophthalmic Dispensing (4 cr.)** Must be completed with a final grade of C- or above. Areas of study will include frame types and parts; facial measurements for fitting; functional and cosmetic aspects of frame selection; and frame alignment, adjusting, and repair.

**TOPT–V 174 Office Procedures (4 cr.)** Office procedures as applied to an ophthalmic practice, including telephone etiquette, appointment systems, bookkeeping, payroll records, third-party systems, recalls, computers, and other business management methods.

**TOPT–V 201 Anatomy and Physiology of the Eye (3 cr.)** The cell; the structure and function of the visual system, including the eye, the orbit and adnexa; the visual pathway; the nervous system and brain; ocular motility; ocular reflexes. This course satisfies the Breadth of Inquiry: Natural and Mathematical Sciences (N&M) requirement in the IU Bloomington General Education Common Ground curriculum.

**TOPT–V 210 Fabrication Practicum I (3 cr.)** P: V 131 and a grade of C- or above in V 121. Students are offered practical experience in all phases of the operation of a prescription optical laboratory. Theory in ophthalmic prescription work is combined with the development of skills necessary to assure that finished eyewear will be both optically correct and aesthetically pleasing. A grade of C- or above in C 121 is a prerequisite for this course, but is not required for graduation.

**TOPT–V 211 Fabrication Practicum II (3 cr.)** P: V 210. C: V 221. Students are offered practical experience in all phases of the operation of a prescription optical laboratory. Theory in ophthalmic prescription work is combined with the development of skills necessary to assure that finished eyewear will be both optically correct and aesthetically pleasing.

**TOPT–V 221 Ophthalmic Lens Surfacing and Optics (4 cr.)** P: V 121, V 131. Theory and practice of ophthalmic optics, spectacle lens surfacing, and selected topics of interest to the ophthalmic community. Subjects include single vision, multifocal and progressive addition lenses, base curves, lens thickness, application of prism, correction of vertical imbalance, high-powered lens prescriptions, aspheric lenses, and aniseikonia.

**TOPT–V 232 Contact Lens Methods and Procedures (4 cr.)** P: V 131. Contact lens patient evaluation; instruction

in insertion, removal, and hygiene; lens design, ordering, verification, and modification; lens materials, care products, and complications; an introduction to specialty lenses.

**TOPT–V 251 Ophthalmic Procedures 2 (3 cr.)** P: C- or above in V 151. Must be completed with a final grade of C- or above. Further principles and techniques used in ophthalmic practice, including glaucoma and tonometry, hypertension and measurement of blood pressure, diabetes, ocular pathology, ocular pharmacology, biomicroscopy, vision screening, blindness and partial sight, low-vision aids.

**TOPT–V 254 Clinic Practicum 1 (4 cr.)** P: V 121 and a grade of C- or above in V 131 and V 153. Must be completed with a final grade of C- or above. Clinical experience in frame selection, dispensing, adjustment, verification, and repair of eyewear.

**TOPT–V 255 Clinic Practicum 2 (3 cr.)** P: V121 and a grade of C- or above in V 131, V 151, V 153, and V 251. Must be completed with a final grade of C- or above. Practical application of technical and managerial skills learned in courses and laboratories by assisting clinicians and instructors in the optometry clinics.

**TOPT–V 256 External Clinics (3 cr.)** P: V 121 and a grade of C- or above in V 131, V 151, V 153, and V 251. Practical application of clinical skills by assisting clinicians and consultants in the external clinics.

**TOPT–V 269 Selected Studies (3 cr.)** The student selects a clinical area of interest for further study.

**TOPT–V 275 Topical Seminar (1 cr.)** Selected topics of interest.

## Cross Listed Courses

**CMCL–C 121 Public Speaking (3 cr.)** Theory and practice of public speaking; training in thought processes necessary to organize speech content; analysis of components of effective delivery and language. Department of Communication and Culture, College of Arts and Sciences

**CMCL–C 122 Interpersonal Communication (3 cr.)** S & H Introduction to the study of communication, culture, identity, and power. Each student does original primary research. Topics range from groups in North Africa to high school and college students in San Francisco and Philadelphia, and issues such as gendered language, slang, verbal play, and institutional language. Department of Communication and Culture, College of Arts and Sciences

**HPER–H 160 First Aid and Emergency Care (3 cr.)** Lecture and demonstration on first-aid measures for wounds, hemorrhage, burns, exposure, sprains, dislocations, fractures, unconscious conditions, suffocation, drowning, and poisons, with skill training in all procedures. Introduction to CPR included. School of Health, Physical Education, and Recreation (HPER)

**ENG–W 131 Elementary Composition (3 cr.)** Offers instruction and practice in the reading, writing, and critical thinking skills required in college. Emphasis is on written assignments that require synthesis, analysis, and argument based on sources. Department of English, College of Arts and Sciences



## Organizations

The principal organizations open to, and governed by, students in the School of Optometry are the following:

### American Optometric Student Association, Indiana University School of Optometry Chapter (AOSA)

All optometry students are eligible for membership in the IU chapter of this national organization. This organization serves as a source of information about changes in the field of optometry, provides a variety of learning experiences for students, and represents students in many allied organizations. Through its Board of Trustees, local chapters help to shape national policies on optometric education.

### Indiana University Optometric Student Association (IUOSA)

All optometry students are eligible for membership in the IUOSA, which is affiliated with the American Optometric Student Association. The association is active in current student affairs, sponsors social events, and provides suggestions and assistance to the dean and faculty.

### Indiana University National Optometric Student Association (NOSA)

The IU membership of NOSA comprises representatives of minority groups among the student body. The local chapter is a student affiliate of the National Optometric Association. The association sponsors an awards ceremony each year and aids the school in a variety of ways.

### Beta Sigma Kappa

A chapter of this international honorary optometric society was established at Indiana University in 1983. The organization is open to optometry students with outstanding scholastic achievements and is dedicated to research and exemplary optometric practice.

### Student Volunteer Optometric Services to Humanity (SVOSH)

This organization provides eye care to individuals, usually in developing countries, who are otherwise unable to obtain this care for themselves. SVOSH collects and catalogs used eyeglasses, which are then distributed during an eye-care trip to an area of need.

### Fellowship of Christian Optometrists

FCO is an organization that promotes, furthers, and maintains Christian fellowship among optometry students. Activities include discussions of current topics of interest led by guest speakers, the establishment of an ongoing eye clinic at an overseas mission, and screening missions to Third World countries.

### Gold Key International Optometric Honor Society

This organization was created to recognize leadership in optometric schools and has been recognized by the AOSA as the highest honor for leadership a student of optometry can achieve. Gold Key recognizes leadership in the class, the school, and the optometric profession.

### Private Practice Club

This club provides business information through guest speakers and workshops regarding optometric private practices for the use of IU optometry students. Through facebook we hope to remind members of upcoming meetings, share pictures and links, and gain feedback.

### Optometric Extension Program

OEP aims to help students learn more about these binocular vision and vision therapy through club meetings, guest speakers, and conferences

## Policies & Procedures

### Indiana University School of Optometry Student Immunization Policy

All students entering the Indiana University School of Optometry must meet the immunization requirements of both the University and Indiana Code 20-12-71. Students must provide documentation of the following immunizations:

- two measles, one mumps, and one rubella
- tetanus/diphtheria within the past 10 years
- tuberculin skin test within six months of the first semester

The School of Optometry requires the following additional immunizations:

- annual tuberculin skin test
- hepatitis B immunization series

## Faculty

For the most up-to-date information, visit the [IU School of Optometry faculty listing](#) on the World Wide Web.

### Primary Faculty

- **Bedwell, Anna** (Indiana University, 2010), Visiting Clinical Assistant Professor of Optometry
- **Begley, Carolyn G., M.S.** (Indiana University, 1979), O.D. (1983), Professor of Optometry
- **Bonanno, Joseph A., O.D.** (University of California, Berkeley, 1981), Ph.D. (1987), Professor of Optometry and Dean of the School of Optometry
- **Bradley, Arthur, Ph.D.** (University of California, Berkeley, 1983), Professor of Optometry
- **Braun, Mark W., M.D.** (Indiana University, 1975), M.S. (1997), Professor of Medical Pathology (part-time), Director of Medical Pathology, Medical Sciences Program, and Professor of Optometry (part-time)
- **Brooks, Clifford W., O.D.** (Indiana University, 1971), Professor of Optometry and Executive Associate Dean for Academic Affairs and Student Administration
- **Burns, Stephen A., Ph.D.** (The Ohio State University, 1977), Professor of Optometry and Associate Dean of Graduate Programs
- **Candy, T. Rowan, B.Sc.** (University of Wales, 1989), Ph.D. (University of California, Berkeley, 1997), Associate Professor of Optometry
- **Elsner, Ann E., Ph.D.** (University of Oregon, 1981) Professor of Optometry and Associate Dean for Research

- **Goss, David A., O.D.** (Pacific University, 1974), Ph.D. (Indiana University, 1980), Professor of Optometry
- **Gray, Jason, O.D.** (Indiana University, 2007), Visiting Clinical Assistant Professor of Optometry
- **Grogg, Jane Ann, O.D.** (Indiana University, 1994), Clinical Associate Professor of Optometry and Chief of Advanced Ocular Disease
- **Hassan, Shirin E., Ph.D.** (Queensland University of Technology, 2001), Assistant Professor of Optometry
- **Henderson, Patricia A., O.D.** (Indiana University, 1985), Clinical Associate Professor of Optometry
- **Himebaugh, Nikole L., O.D.** (Indiana University, 1995), Ph.D. (Indiana University, 2007), Visiting Lecturer, School of Optometry
- **Hitzeman, Steven A., O.D.** (Indiana University, 1976), Clinical Associate Professor and Director of Residency Programs
- **Horner, Douglas G., O.D.** (Pacific University, 1974), M.S. (University of Houston, 1983), Ph.D. (1987), Associate Professor of Optometry
- **Jarrard, Paula D., M.S.** (University of Southern Indiana, 2006), Adjunct Clinical Lecturer, Indiana University School of Optometry, Bloomington, IN, and Adjunct Clinical Lecturer, School of Optometry
- **Kohne, Kimberly, O.D.** (University of Missouri, St. Louis, College of Optometry, 2004), Clinical Assistant Professor of Optometry and Chief of Primary Care in Bloomington
- **Kollbaum, Elli J., O.D.** (Indiana University, 1997), Clinical Associate Professor of Optometry, Chief of External Rotations, Low Vision and Vision Rehabilitation
- **Kollbaum, Peter S., O.D.** (Indiana University, 1999), M.S. (Indiana University Purdue University at Indianapolis, 2007), Ph.D. (Indiana University, 2007) Assistant Professor of Optometry
- **Kovacich, Susan, O.D.** (Indiana University, 1987), Clinical Associate Professor of Optometry and Chief of Contact Lens Services.
- **Lyon, Don W., O.D.** (Indiana University, 1999), Clinical Associate Professor of Optometry, Chief of Binocular Vision and Pediatric Services
- **Malinovsky, Victor E., O.D.** (Indiana University, 1973), Clinical Professor of Optometry
- **Marshall, Edwin C., O.D.** (Indiana University, 1971), M.S. (1979), M.P.H. (University of North Carolina, 1982), Vice President for Diversity, Equity, and Multicultural Affairs; Indiana University, Professor of Optometry and Adjunct Professor of Public Health, School of Medicine
- **McConnaha, Debra L., O.D.** (Indiana University, 1984), Adjunct Clinical Lecturer
- **Meetz, Richard E., O.D.** (Indiana University, 1976), M.S. (University of Michigan, 1988), Clinical Associate Professor of Optometry
- **Miller, Donald T., Ph.D.** (University of Rochester, 1995), Professor of Optometry
- **Nam, Jayoung, Ph.D.** (Indiana University, 2007) M.S. (Ewha Womans University, 2000), and Assistant Scientist of Optometry
- **Page, Jennifer G., O.D.** (Indiana University, 2002), Clinical Assistant Professor of Optometry and Director of Guanajuato Mexico Eye Care Clinic
- **Peabody, Todd, O.D.** (Indiana University, 2003), Clinical Assistant Professor of Optometry
- **Petrig, Benno, Ph.D.** (ETJ Zurich, Switzerland, 1980) Optical Engineer and Senior Scientist of Optometry
- **Pence, Neil A., O.D.** (Indiana University, 1979), Lecturer in Optometry, Associate Dean for Clinical and Patient Care Services
- **Perotti, Jeffrey, O.D.** (Indiana University, 1997), Clinical Assistant Professor of Optometry
- **Pickel, Jr., Merle K., O.D.** (Indiana University, 1970), Optometrist, Brown County Eye Care Center, Nashville, IN, and Adjunct Professor, School of Optometry
- **Pickel, Sandra A.S., A.B.O.C., B.G.S., C.P.O.T.** (Indiana University, 1982), Lecturer in Optometry and Director of the Optician/Optomeric Technician Program
- **Plass, Deborah J., O.D.** (Indiana University, 1996), Clinical Assistant Professor of Optometry
- **Port, Nicholas L., Ph.D.** (University of Minnesota, Minneapolis, 1997), Assistant Professor of Optometry
- **Sansone, Jacqueline M., O.D.** (The Ohio State University College of Optometry, 1992), Adjunct Clinical Lecturer
- **Soni, P. Sarita, O.D.** (Indiana University, 1976), M.S. (1978), Professor of Optometry and Associate Vice President and Vice Provost for Research, Indiana University
- **Srinivas, S.P., M.S.** (I.I.T., India, 1982), Ph.D. (Drexel University, 1987), Associate Professor of Optometry
- **Sutton, Bradley M., O.D.** (Indiana University, 1993), Clinical Associate Professor of Optometry, and Chief of Primary Care in Indianapolis
- **Swanson, William, Ph.D.** (University of Chicago, 1984), Professor of Optometry
- **Thibos, Larry N., Ph.D.** (University of California, Berkeley, 1975), Professor of Optometry
- **Tonekaboni, Khashayar, O.D.** (Southern College of Optometry, 1987), Clinical Assistant Professor of Optometry
- **Torbit, Julie K., O.D.** (Indiana University, 1993), Clinical Associate Professor of Optometry
- **Viswanathan, Suresh, M.S.** (Pacific University, 1992), Ph.D. (University of Houston, 2000), Associate Professor of Optometry
- **Waltz, Kevin L., O.D.** (Indiana University, 1981), M.D. (Meharry Medical College, 1987), Adjunct Clinical Professor of Optometry

## Faculty Emeriti

- **Borish, Irvin Max, O.D.** (Northern Illinois College of Optometry, 1934), L.L.D. (Indiana University, 1968), Professor Emeritus of Optometry
- **DeVoe, Robert D., Ph.D.** (Rockefeller University, 1961), Professor Emeritus of Optometry
- **Egan, Elizabeth, A.M.** (Indiana University, 1959), Optometry Librarian Emerita – contacted DOF; pending answer
- **Everson, Ronald W., O.D.** (Chicago College of Optometry, 1954), M.S. (Indiana University, 1959), Associate Professor Emeritus of Optometry
- **Freeman, Douglas, M.A.** (Indiana University, 1972), M.L.S. (1974), Associate Librarian Emeritus of Optometry

- **Gerstman, Daniel R., O.D.** (Indiana University, 1969), M.S. (1971), Associate Professor Emeritus of Optometry and Adjunct Professor of Optometry
- **Guth, Sherman L., Ph.D.** (University of Illinois, 1963), Professor Emeritus of Psychology, College of Arts and Sciences
- **Hafner, Gary S., Ph.D.** (Indiana University, 1972), Professor Emeritus of Optometry and Adjunct Professor Emeritus of Anatomy, Medical Sciences Program
- **Hegeman, Sally L., Ph.D.** (University of California, San Francisco, 1969), Associate Professor Emerita of Optometry
- **Lowther, Gerald E., O.D.** (The Ohio State University, 1967), M.S. (1969), Ph.D. (1972), Professor Emeritus of Optometry
- **Riley, Hubert D., O.D.** (Indiana University, 1971), Assistant Professor Emeritus of Optometry
- **Shick, Charles R., O.D.** (Indiana University, 1958), Professor Emeritus of Optometry
- **Wilson, Graeme, M.Sc.** (The University of Manchester, 1965), Ph.D. (University of California, Berkeley, 1972), Professor Emeritus of Optometry
- **Case, Aaron W., O.D.** (Indiana University, 2006), Optometrist, Northern Indiana Health Care System-Ft Wayne VA, Fort Wayne, IN, and Adjunct Clinical Assistant Professor, School of Optometry
- **Caudill, Cliff, O.D.** (University of Alabama at Birmingham School of Optometry, 1995), Assistant Professor, Department of Ophthalmology, University of Kentucky, Lexington, KY, and Adjunct Clinical Assistant Professor, School of Optometry
- **Colander, Brian, O.D.** (Illinois College of Optometry, 2005), Staff Optometrist, Huntington VA Medical Center, Huntington, WV, and Adjunct Clinical Assistant Professor, School of Optometry
- **Cordes, Matthew G., O.D.** (Illinois College of Optometry, 1999), Staff Optometrist, Huntington VA Medical Center, Huntington, WV, and Adjunct Clinical Associate Professor, School of Optometry
- **Crutchfield, Barbara, O.D.** (Indiana University, 1990), Assistant Professor, University of Kentucky Department of Ophthalmology, Lexington, KY, and Adjunct Clinical Assistant Professor of Optometry, School of Optometry
- **Dankovich, Michael A., O.D.** (Indiana University, 1995), Optometrist, Eye Associates of Southern Indiana, Jeffersonville, IN, and Adjunct Clinical Assistant Professor, School of Optometry
- **Den Beste, Brian P., O.D.** (Illinois College of Optometry, 1980), Director, The Eye Foundation/LaserVue Orlando, FL, and Adjunct Clinical Professor, School of Optometry
- **Dierker, Damon, O.D.**, (Indiana University, 2002), Optometrist, Eye Surgeons of Indiana, Indianapolis, IN, and Adjunct Clinical Assistant Professor, School of Optometry
- **Diller, Rebecca S., O.D.** (Ohio State University, 1999), Clinic Director, Dayton VA Medical Center, Dayton, OH, and Adjunct Clinical Assistant Professor, School of Optometry
- **Eiden, Steven B., O.D.** (Illinois College of Optometry, 1981), President and Medical Director, Optometrist, North Suburban Vision Consultants, Deerfield, IL and Adjunct Clinical Associate Professor, School of Optometry
- **Egenmaier, Walter H., O.D.** (University of Alabama, Birmingham, 1982), Optometrist, EyeCare Consultants, Evansville, IN, and Adjunct Clinical Associate Professor, School of Optometry
- **Faley, Monica L., O.D.** (Ferris State College, 1995), Optometrist, Pinion Health Center, Pinon, AZ, and Adjunct Clinical Assistant Professor, School of Optometry
- **Freeman, Vivianle, O.D.** (University of Alabama-Birmingham, 2000), Clinical Optometrist, Offutt Air Force Base, Bellevue, NE, and Adjunct Clinical Assistant Professor, School of Optometry
- **Fries, Patti L., O.D.** (University of Missouri, St. Louis, 2002), Optometrist, University of Nebraska Medical Center, Omaha, NE, and Adjunct Associate Professor, School of Optometry
- **Gay, Dax Alan, O.D.** (University of Missouri – St. Louis, 1998), Optometrist, Illiana Healthcare System, Danville, IL, and Adjunct Clinical Associate Professor, School of Optometry

## Adjunct Faculty

- **Ajajian, Paul C., O.D.** (New England College of Optometry, 1980), Director, Omni Eye Services of Atlanta, Atlanta, GA, and Adjunct Clinical Professor, School of Optometry
- **Balius, Emilio H., O.D.** (University of Houston College of Optometry, 1991), Optometrist, Aran Eye Associates, Miami, FL, and Adjunct Assistant Professor, School of Optometry
- **Black Pugh, Jessica L., O.D.** (Indiana University, 2003), Optometrist, Eye Associates of Southern Indiana, Jeffersonville, IN, and Adjunct Assistant Professor, School of Optometry
- **Boerman, Helen, O.D.** (State University of New York, 2003), Optometrist, Wang Vision Institute, Nashville, TN, and Adjunct Clinical Assistant Professor, School of Optometry
- **Bowersox, Daniel M., O.D.** (University of Missouri-St. Louis, 1993), Optometrist, Bowersox Vision Center, Shelbyville, KY and Adjunct Clinical Assistant Professor, School of Optometry
- **Bowman, Ronny G., O.D.** (Southern College of Optometry, 1995), Optometrist, Keesler Air Force Base, MS, and Adjunct Clinical Assistant Professor, School of Optometry
- **Boyer, Stephen P., O.D.** (Pennsylvania College of Optometry, 1992), Chief of Optometry Services, Illiana Health Care System, Danville, IL, and Adjunct Clinical Associate Professor, School of Optometry
- **Brafman, Shana B., O.D.** (Illinois College Of Optometry, 2007), Optometrist, North Suburban Medical Center, Thornton, CO, and Adjunct Clinical Assistant Professor, School of Optometry
- **Carter, Randy B., O.D.** (Indiana University, 1983), Clinical Director, The Eye Institute of Utah, Salt Lake City, UT, and Adjunct Clinical Associate Professor, School of Optometry

- **Goen, Terry M., O.D.** (Indiana University, 1984), Chief, Optometry Section, Pensacola Veterans Administration Medical Center, Pensacola, FL, and Adjunct Clinical Associate Professor, School of Optometry
- **Graf, Frank, O.D.** (Pennsylvania College of Optometry, 1978), Clinical Assistant Professor, Department of Ophthalmology, University of Nebraska, and Adjunct Clinical Associate Professor, School of Optometry
- **Gray, Douglas R., O.D.** (Indiana University, 2000), Ireland Army Community Hospital, Fort Knox, KY, and Adjunct Clinical Assistant Professor, School of Optometry
- **Groppel, Piper G., O.D.** (Indiana University-Purdue University Indianapolis, 2004), Roudebush VA Medical Center, Indianapolis, IN, and Adjunct Clinical Assistant Professor, School of Optometry
- **Hall, Carolyn W., O.D.** (Southern College of Optometry, 1993), Clinical Optometrist, Eye Associates of Southern Indiana, New Albany, IN, and Adjunct Clinical Associate Professor, School of Optometry
- **Hanlon, Brady P., O.D.** (Indiana University, 2004) Staff Optometrist, VA Northern Indiana Health Care System, Fort Wayne, IN, and Adjunct Clinical Assistant Professor, School of Optometry
- **Holbrook, Steven E., O.D.** (Indiana University, 1985), Optometrist, The Eye Center of Southern Indiana, Bloomington, IN, and Adjunct Clinical Assistant Professor, School of Optometry
- **Huck, Chad, O.D.** (Indiana University, 1985), Clinic Director, The Eye Center of Southern Indiana, Bloomington, IN, and Adjunct Clinical Assistant Professor, School of Optometry
- **Johnson, Stephanie R., O.D.** (Nova Southeastern University, 2005), Optometrist, Ireland Army Hospital, Fort Knox, KY, and Adjunct Clinical Assistant Professor, School of Optometry
- **Jordan, Curtis Allen, M.D.** (Indiana University, 1984), Eye Associates of Southern Indiana, Jeffersonville, IN, and Adjunct Clinical Assistant Professor, School of Optometry
- **Jung, Jean, O.D.** (SUNY State College of Optometry, 1992), Optometrist, VA Hudson Valley Health Care System, New York, NY, and Adjunct Clinical Associate Professor, School of Optometry
- **Kinnaird, Charles W., O.D.** (Nova Southeastern University, 1994), Optometrist, Westside VA Medical Center, Chicago, IL and Adjunct Clinical Associate Professor, School of Optometry
- **Lifferth, Austin, O.D.** (Indiana University, 2003), Optometrist, Bennett and Bloom Eye Centers, Louisville, KY, and Adjunct Clinical Assistant Professor, School of Optometry
- **Light, Dennis J., O.D.** (Ohio State University, 1992), Staff Optometrist, Dayton VAMC, Dayton, OH and Adjunct Clinical Assistant Professor, School of Optometry
- **Lynch, Michelle T., O.D.** (Indiana University, 2004), Staff Optometrist, Lexington VA Medical Center, Lexington, KY, and Adjunct Clinical Assistant Professor, School of Optometry
- **Marciniak, Michelle M., O.D.** (Illinois College of Optometry, 2003), Optometrist, Jesse Brown VA Medical Center, Chicago, IL, and Adjunct Clinical Assistant Professor, School of Optometry
- **McDonald, Anthony, O.D.** (Pennsylvania College of Optometry, 1982), Optometrist, McDonald Eyecare Associates, Lakeville, MN, and Adjunct Clinical Assistant Professor, School of Optometry
- **McSoley, John, O.D.** (New England College of Optometry, 1991), Director of Optometry Services, Bascom Palmer Eye Institute, Miami, FL, and Adjunct Clinical Assistant Professor, School of Optometry
- **Melton, Norman R., O.D.** (Pennsylvania College of Optometry, 1981), Optometrist, Charlotte Eye Ear Nose & Throat Associates, P.A., and Adjunct Assistant Professor, School of Optometry
- **Moyle, Wendy E., O.D.** (Michigan College of Optometry, 1997), Optometrist, Northern Indiana Health Care System- VAMC, Ft. Wayne, IN, and Adjunct Clinical Associate Professor, School of Optometry
- **Noblitt, Randall L., O.D.** (Indiana University, 1986), Center Director, John Kenyon Eye Center, Louisville, KY, and Adjunct Clinical Associate Professor, School of Optometry
- **O'Neill, Patrick W., O.D.** (Ferris State University, 1982), Staff Optometrist, River Valley Vision Center, Northfield, MN, and Adjunct Clinical Associate Professor, School of Optometry
- **Payne, Susan H., Ph.D.** (Southern College Of Optometry, 2000), Advanced Ambulatory Low Vision Clinic Director, Tampa, VA, and Adjunct Clinical Assistant Professor, School of Optometry
- **Peplinski, Lee S., O.D.** (Ferris State University, 1989), Consultative Optometrist, Bennett-Bloom Eye Center, Louisville, KY, and Adjunct Clinical Associate Professor, School of Optometry
- **Petkovich, Steven T., O.D.** (Illinois College of Optometry, 1997), Staff Optometrist, Roudebush VA Medical Center, Indianapolis, IN, and Adjunct Clinical Assistant Professor, School of Optometry
- **Quan, Amy J., O.D.** (State University of New York, 2004), Optometrist, Perry Point VAMC, MD, and Assistant Clinical Adjunct Assistant Professor, School of Optometry
- **Racette, Lyne, Ph.D.** (Carleton University, 2010), Assistant Professor, IU Ophthalmology, Bloomington, IN, and Adjunct Assistant Professor, School of Optometry
- **Risch, Judy D., O.D.** (Indiana University, 1990), Optometrist, Richmond Eye Institute, Richmond, IN, and Adjunct Clinical Associate Professor, School of Optometry
- **Rivera-Ortiz, Angel L.,** (Inter American University of Puerto Rico, 1998), Optometrist, VA Tallahassee Outpatient Clinic, Tallahassee, FL, and Adjunct Clinical Assistant Professor, School of Optometry
- **Rivron, Elaine C., M.S.** (Melbourne University, 1976), Adjunct Lecturer in Optometry
- **Rone, Ashley K., O.D.** (Indiana University, 2007) Director Student Programs, Lexington, VA, and Adjunct Clinical Assistant Professor, School of Optometry
- **Salituro, Sam M., O.D.** (Illinois College of Optometry, 1992), Research Optometrist, Wesley-Jessen Corp.,

- Des Plaines, IL, and Adjunct Clinical Associate Professor, School of Optometry
- **Schamerloh, Sara L., O.D.** (Indiana University, 1987), Chief of Optometry, Northern Indiana Health Care System VAMC, Fort Wayne, IN, and Adjunct Clinical Associate Professor, School of Optometry
  - **Seibert, Donald A., O.D.** (Pennsylvania College of Optometry, 1986), Optometrist, Huntington VA Medical Center, Huntington, WV, and Adjunct Clinical Associate Professor, School of Optometry
  - **Seng, Traci L., O.D.** (Michigan College of Optometry at Ferris State University, 1997), Clinical Optometrist, VA Northern Indiana Health Care System, Fort Wayne, IN, and Adjunct Clinical Assistant Professor, School of Optometry
  - **Shorter, Patrick D., O.D.** (Southern College Of Optometry, 2004), Director of Optometry Clinical Operations, Wright Patterson Air Force Base, OH, and Adjunct Clinical Assistant Professor, School of Optometry
  - **Simpson, Matthew C., O.D.** (Indiana University, 2007), Optometrist, Huntington, VA, and Adjunct Clinical Assistant Professor, School of Optometry
  - **Smith, Rebekah A., O.D.** (New England College of Optometry, 2009), Optometrist, Kessler Air Force Base, MS, and Adjunct Clinical Assistant Professor, School of Optometry
  - **Stewart, James B., O.D.** (Indiana University, 1985), Director of Optometry, Muncie Eye Center, Muncie, IN, and Adjunct Clinical Associate Professor, School of Optometry
  - **Strako, Darin L., O.D.** (Illinois College of Optometry, 2000), Optometrist, North Suburban Vision Consultants, Deerfield, IL and Adjunct Clinical Associate Professor, School of Optometry
  - **Suhr, Christopher L., O.D.** (Nova University, 2006), Optometrist, Richey, FL, and Adjunct Clinical Assistant Professor, School of Optometry
  - **Staats, Julie M. O.D.** (The Ohio State University College of Optometry, 2004), Optometrist, Veteran's Affairs Medical Center, Dayton, OH, and Adjunct Clinical Assistant Professor, School of Optometry
  - **Swearingen, Lindsay M., O.D.** (Indiana University, 2001), Optometrist, Eye Associates of Southern Indiana, Jeffersonville, IN, and Adjunct Clinical Assistant Professor, School of Optometry
  - **Sztipanovits, Dora, O.D.** (University of California, 2008), Optometrist, Wang Vision Institute, Nashville, TN, and Adjunct Clinical Assistant Professor, School of Optometry
  - **VanCleve, Stephan A., O.D.** (Indiana University, 1963), Clinic Director, EyeCare Consultants, Evansville, IN, and Adjunct Clinical Associate Professor, School of Optometry
  - **Vandervort, Robert S., O.D.** (Indiana University, 1979), Center Director, Omaha Eye and Laser Institute, Omaha, NE, and Adjunct Clinical Assistant Professor, School of Optometry
  - **Wong, Vivian M. W., O.D.** (University of Waterloo, 2009), Research Associate, Adjunct Clinical Assistant Professor, School of Optometry
  - **Wilson, Steven M., O.D.** (Indiana University, 1981), Optometrist, American Eye Institute, New Albany, IN, and Adjunct Clinical Associate Professor, School of Optometry
  - **Yealy, Ryan W., O.D.** (Pennsylvania College of Optometry, 2009), Optometrist, Ft. Knox, KY, and Adjunct Clinical Assistant Professor, School of Optometry