

COLLEGE CATALOG

2013-2014



STATE UNIVERSITY OF NEW YORK
COLLEGE OF OPTOMETRY

The SUNY College of Optometry and the State University of New York reserve the right to change programs, policies, requirements, tuition or fees published in this catalog as needed. Changes are made in this publication yearly; those contained herein are listed as of June 1, 2013.

Announcement of changes is made within the College more frequently as the changes affect enrolled students.

This catalog is not to be regarded as a contract.

SUNY COLLEGE OF OPTOMETRY: AT A GLANCE

LOCATION: The College is located at 33 West 42nd Street, New York, New York, 10036, just opposite Bryant Park and the main branch of the New York City Public Library, in the very desirable mid-town Manhattan area. All classrooms, laboratories, library, research space and patient clinics of the college are located in an 18-story building.

HISTORY: Founded in 1970 by an act of the New York State Legislature, the College admitted its first students in 1971. The College also includes the University Eye Center, its clinical facility, the Schnurmacher Institute for Vision Research and the Center for Vision Care Policy.

ENROLLMENT: The College of Optometry enrolls approximately 340 total students in the OD Professional, PhD, OD/MS, and OD/PhD programs.

INFORMATION:

Address: Office of Admissions
33 West 42nd Street
New York, New York 10036

(For directions to the College, please see next to last page)

Office of Student Affairs and Admissions:

(212) 938-5500 or (800) 291-3937

or E-Mail: Admissions@sunyopt.edu

FAX: (212) 938-5504

Financial Aid: (212) 938-5500

Records and Registration: (212) 938-5500

Minority Programs: (212) 938-5500

Graduate Programs: (212) 938-5540

The College's Web-site: www.sunyopt.edu

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In compliance with Federal regulations, the College's Annual Security Report can be viewed at <http://www.sunyopt.edu/police/reports.shtml>

ACCREDITATION: The State College of Optometry is fully accredited by the Commission of Higher Education of the Middle States Association of Colleges and Secondary Schools and the Accreditation Council on Optometric Education of the American Optometric Association.

TO PROSPECTIVE NEW STUDENTS:

The State University of New York State College of Optometry, founded in 1971 by legislative act, is dedicated to the education of optometrists, to the advancement of eye and vision care through research and graduate education, and to the care of communities through the provision of comprehensive visual health services. The College is a center of excellence within the State University of New York (SUNY) system and is the only institution of its kind in New York State and the surrounding region. The College of Optometry attracts highly talented students with leadership potential, interested in optometry and in the health sciences, from across North America and abroad.



Doctors of Optometry, as primary eye care practitioners, provide approximately two-thirds of all eye care in the country and are prepared to meet the growing needs of the public. Optometry is an ever-changing and dynamic health care profession and, I assure you, provides our graduates with a breadth of career options and opportunities for lifelong growth and intellectual engagement.

The College's academic, professional and research programs are characterized by innovation, defined by their impact and are supported by a faculty of high quality and dedication. As an urban campus, the College strongly embraces its public service mission of clinical care by providing routine, medical and specialized eye care services to tens of thousands of patients each year. The University Eye Center (UEC), the College's patient care facility, had approximately 70,000 patient visits during the past academic year. In addition to primary eye care, the UOC is well known for its unique clinical services including traumatic brain injury, infant vision, pediatrics, visually-related learning disabilities, vision rehabilitation, ocular disease and special testing, vision therapy, specialty contact lenses and laser refractive surgery. Moreover, there is an extensive array of clinical satellites and extramural programs which further broaden the scope and diversity of the patient population, enhancing the clinical experience of our students and extending our reach to underserved populations. The University Eye Center is a unique resource for the New York metropolitan area and the nation.

A hallmark of the SUNY College of Optometry is its commitment to discovery and to leading the advancement of vision care through research. The College offers M.S. and Ph.D. graduate degree programs, both independently and in conjunction with the Doctor of Optometry degree. Basic and clinical science research is conducted by members of our faculty and professional staff associated with the College's Schnurmacher Institute for Vision Research. There are numerous opportunities for students to be involved in scholarly activities during their time at the College.

The SUNY College of Optometry is located in the heart of New York City at 33 West 42nd Street, opposite the historic New York Public Library and beautiful Bryant Park. The College's home is an 18 story facility, whose historical facade serves as a graceful reminder of the past and the entrance into a contemporary educational institution which affords students with professional, scientific and personal opportunity.

New York City, often referred to as the greatest city in the world, presents students with an unparalleled opportunity to grow intellectually and culturally given the range of resources found in the greater metropolitan area. The SUNY State College of Optometry is one of the finest institutions of its kind in the nation. We welcome students of talent and promise, and invite you to visit and investigate further SUNY's role in your future.

Sincerely,

David A. Heath, O.D., Ed..M.
President

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OPTOMETRY: THE CHOICE

Mission

A Tradition of Excellence

Why Students Choose SUNY Optometry

COLLEGE'S MISSION

The State University of New York, State College of Optometry excels, innovates, and leads in Optometry and Vision Science by:

- developing outstanding optometrists and vision scientists;
- making new discoveries that advance vision science and patient care;
- improving patients' lives by providing exceptional general and specialized optometric care;
- enhancing public health through education and service to a broad range of communities.

A TRADITION OF EXCELLENCE

The State University of New York, State College of Optometry had its origins in a small urban clinic established in New York City in 1956. The Optometric Center of New York provided patient care, professional education and clinical research for 15 years prior to the founding of the College in 1970. This urban clinic was to become the patient base for the College's four-year professional program. In 1976, the Optometric Center of New York changed its charter to become the College's endowing foundation and the clinic was renamed the University Eye Center.

Over the years, the College has become a national and international resource in professional and graduate education, patient care and vision science research. Students from around the country have enrolled in the professional and graduate programs, attracted by the caliber of the clinical and research facility and the diversity of the patient population. The University Eye Center is the largest outpatient vision care facility of its kind in the nation. The Adolph and Ruth Schnurmacher Institute for Vision Research has some of the country's most distinguished vision scientists who are engaged in major research into the complex human visual system.

The College, mindful of its roots, has taken bold steps to ensure that its tradition of excellence continues for future generations.

WHY STUDENTS CHOOSE SUNY OPTOMETRY

1. The total learning environment at the SUNY College of Optometry offers students an education which results in an average of 95% of SUNY students consistently passing the national written licensing exam the first time they take it.
2. This is due in large part to the many full-time PhD and OD faculty, complimented by an equally committed part-time faculty of OD's, MD's, and other dedicated educators who provide a rich student to faculty ratio.
3. SUNY's in-house clinic is one of the largest in the country and because its patient population is very diversified our graduates experience the optimal integration of theory and practice.
4. Because of SUNY's relatively small class size (88/class), the student faculty ratio is very rich.
5. Student interns at SUNY rotate through all specialty areas (including pathology and ocular disease, contact lenses, vision therapy, learning disabilities, infants/ pediatrics/ geriatrics, low vision, head trauma, and special testing) thus obtaining first hand experience in treating a diversified patient population.
6. As a result of legislation which has expanded the scope of optometric care in New York State, the college is able to provide its students with hands-on clinical training in the treatment of many ocular diseases, including glaucoma.

7. Because of SUNY Optometry's great location, students are also attracted to it because of it being in New York City.

Virtually all of SUNY's alumni are working within their profession and practicing in a manner consistent with their career objectives and the delivery of the best optometric care and services. SUNY graduates are represented in significant numbers and in numerous leadership positions in optometry's most prestigious organizations.

Optometry offers the opportunity for men and women to join a profession that is both personally challenging and financially rewarding. It is a dynamic profession and one which offers a broad range of career paths in urban, suburban and rural settings.

Upon graduation, students may choose to enter the profession in solo practice, with an associate, in a group practice, in an HMO setting, in a hospital, in a neighborhood clinic, etc. As optometric knowledge continues to broaden, the need for optometry educators and administrators is continually enhanced. For students interested in research, areas of advanced study include vision, bioscience and social sciences.

Students are exposed to a breadth of career options while they are in school. The faculty includes private practitioners, full-time clinicians, and research scientists. Also, fourth-year externships encourage students individually to experience optometry in clinical settings outside the College, all in well-supervised institutional locations.

THE ACADEMIC PROGRAMS (HEGIS CODE 1209)

Doctor of Optometry Degree Program Graduate Programs

Residency Programs

Continuing Professional Education

PROFESSIONAL PROGRAM: DOCTOR OF OPTOMETRY DEGREE HEGIS CODE 1209

The professional program leading to the Doctor of Optometry (OD) at SUNY Optometry is four years in duration. The curriculum integrates the basic biological and vision sciences that form the foundation of clinical practice, teaches the fundamentals of optometry, and develops critical thinking for clinical care and case decision-making. Patient care begins early and continues throughout all four years of the program with increasing responsibilities under the supervision of our clinical faculty at the University Eye Center (UEC) as well as through a minimum of two quarters during the fourth year at externship sites around the country.

The first two years of the program concentrate on students integrating basic biological and visual sciences with clinical practice, while developing and understanding the theory and fundamentals of ocular examination, treatment, and therapy. Students begin working in the UEC clinics in the first year and continue with greater responsibilities in subsequent years. Direct patient care begins in the spring of the second year. Third year integrates didactic and clinical teaching further, and students care for patients in primary care.

Clinical education in fourth year is delivered in four 12 week quarters. In the fourth year, students work as interns in various clinics in the UEC and elect up to three externships at various hospitals and other healthcare facilities as part of our externship program. Opportunities for rotations through one of the College's international clinical affiliates also exist. After the successful completion of the fourth year, the Doctor of Optometry (OD) degree is awarded. Once state licensing exams are passed, the graduate is qualified to begin practice.

Curriculum Features: Tracks and Integration

The curriculum in years one through three is delivered in two 16-week semesters each year. A ten week summer session starts year three.

The curriculum features 7 learning tracks:

Department of Biological and Vision Sciences

- Systemic and Ocular Health
- Refractive Conditions
- Visual Perception and Sensorimotor Control

Department of Clinical Education

- Clinical Examination – Optometric Theory and Procedures
- Public/Community Health
- Optometric Clinic
- Integrative Seminar

The Integrative Seminar Track is designed to help students integrate clinical knowledge and skills with the basic sciences that form the foundation of the profession. The Integrative Seminars provide small-group learning environments that use clinical case studies to improve critical thinking and problem-solving skills. In the third year, the Integrative Seminar is directly tied to the student's patient care assignments and takes place in the clinic in clinical care units called "pods", which are comprised of small groups of students and two clinical faculty supervisors.

CURRICULUM

FIRST YEAR

The scientific foundation for optometric practice is established in the first year. During this year, students are introduced to the profession of optometry, optometric theory and the elements of clinical practice. The program builds from the knowledge base acquired prior to professional school through prerequisites and sets the foundation for advanced didactic and clinical activities during the rest of the curriculum and into optometric practice. Integrative seminar helps students tie the basic and clinic sciences together.

FALL SEMESTER

Course Title	Dept*	Course#	Lec	Lab	Clinic	Credit Hours
Human Bioscience I	BVS	BVS-121FA	4.0	0.25	0.0	4.0
Gross Anatomy	BVS	BVS-106FA	2.5	2.0	0.0	3.5
Ocular Anatomy, Biochemistry & Physiology I	BVS	BVS-181FA	2.0	0.5	0.0	2.0
Integrated Optics I	BVS	BVS-131FA	4.0	1.0	0.0	4.5
Optometric Theory & Procedures I	CE	CEX-141FA	3.0	3.0	0.0	4.5
Integrative Seminar I	CE	CEI-1FA	1.0	2.0	0.0	2.0

SPRING SEMESTER

Course Title	Dept*	Course#	Lec	Lab	Clinic	Credit Hours
Human Bioscience II	BVS	BVS-122SA	3.0	0.25	0.0	3.0
Ocular Anatomy, Biochemistry & Physiology II	BVS	BVS-182SA	3.0	0.5	0.0	3.0
Integrated Optics II	BVS	BVS-132SA	3.5	1.0	0.0	4.0
Visual Function: Sensory (A)**	BVS	BVS-170SA	3.5	1.5	0.0	4.5
Visual Function: Sensory (B)**			4.0	1.5	0.0	
Optometric Theory & Procedures II	CE	CEX-142SA	3.0	3.0	0.0	4.5
Integrative Seminar II	CE	CEI-1SA	1.0	2.0	0.0	2.0

SECOND YEAR

The knowledge acquired in the first professional year sets the foundation for the second year. Basic knowledge acquired during this year generally is intended to enhance the primary care clinical skills of students. The Integrative Seminar in second year continues to integrate basic and clinical sciences and includes more direct clinical exposure. By the end of the second year, students will be able to perform a comprehensive eye examination and will have seen their first patients in the UEC.

FALL SEMESTER

Course Title	Dept*	Course#	Lec	Lab	Clinic	Credit Hours
Human Bioscience III	BVS	BVS-223FA	3.0	0.25	0.0	3.0
Microbiology	BVS	BVS-204FA	2.0	1.0	0.0	2.5
Pharmacology I	BVS	BVS-205FB	3.0	0.0	0.0	3.0
Integrated Optics III	BVS	BVS-233FA	3.5	1.0	0.0	4.0
Visual Function: Sensorimotor I	BVS	BVS-271FA	2.0	1.5	0.0	3.0
Optometric Theory & Procedures III	CE	CEX-243FA	2.0	3.0	0.0	3.5
Integrated Seminar III	CE	CEI-2FA	1.0	2.0	0.0	2.0

*BVS = Dept. of Biological and Vision Sciences

CE = Dept. of Clinical Education

** (A) module A runs the first 8 weeks of the semester. (B) module B runs the second 8 weeks of the semester

SPRING SEMESTER

Course Title	Dept*	Course#	Lec	Lab	Clinic	Credit Hours
Ocular Disease I	BVS	BVS-251SA	4.0	1.0	0.0	4.5
Pharmacology II	BVS	BVS-206SA	2.5	0.0	0.0	2.5
Contact Lenses I	BVS	BVS-261SA	2.5	1.5	0.0	3.0
Visual Function: Sensorimotor II	BVS	BVS-272SA	2.5	1.0	0.0	3.0
Children, Vision & Learning I	BVS	BVS-217SA	2.5	0.0	0.0	2.5
Optometric Theory & Procedures IV	CE	CEX-244SA	1.0	3.0	0.0	2.5
Integrated Seminar IV	CE	CEI-2SA	1.0	2.0	0.0	2.0

THIRD YEAR

In the third-year students continue to take didactic courses in areas of ocular disease, contact lenses, binocular vision, public health, and practice development. While course work continues, they are also providing patient care in the UEC in primary care. Students are assigned to small clinical teaching units – called pods – comprised of students and 2 doctors. Each pod meets weekly for a full day clinic session and includes an Integrative Seminar where patient care is discussed. Students are assigned to pods for 8 weeks to provide consistency in the clinical education experience and then are changed to expose the students to different doctors. Electives on special and advanced topics are offered in the third year summer and spring.

SUMMER

Course Title	Dept*	Course#	Lec	Lab	Clinic	Credit Hours
Integrative Seminar V	CE	CEI-3RA	0.0	1.0	0.0	0.5
Optometric Clinic I	CE	CEC-341RA	0.0	0.0	6.0	2.0
Epidemiology	CE	CEP-304RA	1.6	0.0	0.0	1.0
Neuroanatomy	BVS	BVS-315RA	3.6	1.0	0.0	3.0

FALL SEMESTER

Course Title	Dept*	Course#	Lec	Lab	Clinic	Credit Hours
Ocular Disease II	BVS	BVS-352FA	4.5	1.5	0.0	5.0
Contact Lenses II	BVS	BVS-362FA	2.0	1.5	0.0	3.0
Anomalies of Visual Sensorimotor Functions	BVS	BVS-370FA	4.5	2.5	0.0	6.0
Optometric Clinic II	CE	CEC-342FA	0.0	0.0	10.5	3.5
Integrated Seminar VI	CE	CEI-3FA	0.0	1.0	0.0	0.5

SPRING SEMESTER

Course Title	Dept*	Course#	Lec	Lab	Clinic	Credit Hours
Ocular Disease III	BVS	BVS-353SA	4.0	1.0	0.0	4.5
Children, Vision and Learning II	BVS	BVS-318SA	2.0	1.25	0.0	2.5
Optometric Clinic III	CE	CEC-343SA	0.0	0.0	10.5	3.5
Public Health	CE	CEP-310SA	2.5	0.0	0.0	2.5
Optometric Practice in a Changing Health Care Environment	CE	CEP-320SA	2.5	0.0	0.0	2.5
Integrated Seminar VII	CE	CEI-3SA	0.0	1.0	0.0	0.5

* BVS – Biological & Vision Sciences
CE - Clinical Education

FOURTH YEAR

Students request and are assigned to four clinical rotations in the fourth year. Rotations take place in a number of carefully selected internal and external sites in order to allow students to experience a greater variety of clinical environments. These environments expose the fourth-year student to a diversity of ocular and general conditions of patients of all ages and socioeconomic backgrounds. At least two must be at external clinical affiliates.

Course Title	Course#	Term	Hours	Credit Hours
Clinical Internship I	CEC-4401A	Summer	40	13.0
Clinical Internship II	CEC-4402A	Fall	40	13.0
Clinical Internship III	CEC-4403A	Winter	40	13.0
Clinical Internship IV	CEC-4404A	Spring	40	13.0
Clinical Seminar	CEI-4500A	1 quarter	2	2.0

COURSE DESCRIPTIONS FOR THE PROFESSIONAL PROGRAM

FIRST YEAR – FALL SEMESTER

Human Bioscience I BVS-121FA
Course Coordinator: J. Rapp 4.0 Credits

This course integrates histology, physiology and biochemistry. It begins with a discussion of the basic properties of water and how these properties affect living cells. This is followed by a discussion of basic thermodynamic principles as these apply to biological systems. We then consider each of the categories of biological macromolecules in detail - proteins (including glycoproteins and the oxygen-binding proteins, hemoglobin and myoglobin), enzymes (starting with a discussion of the basic principles of kinetics as these apply to enzyme-catalyzed reactions), carbohydrates and lipids; and how these macromolecular components contribute to the architecture and function of cell membranes.

This is followed by a basic discussion of metabolism including glycolysis, the tricarboxylic acid cycle, and electron transport and oxidative phosphorylation.

The basic structure and function of the eukaryotic cell, including cell signaling and transport, is then presented followed by a discussion of the histology, physiology and biochemistry of tissues beginning with epithelial, followed by connective tissue muscle and nervous tissues.

The cardiovascular system discussion will include the histology and physiological properties of cardiac muscle, cardiodynamics, blood structure and function and hemodynamics of the circulation.

Clinical correlations of various biochemical and physiological abnormalities will be presented throughout the course.

Gross Anatomy BVS-106FA
Course Coordinator: Victoria Harnik 3.5 Credits

The immediate objective of the human gross anatomy course is to introduce the student to the structural organization of the human body at the macroscopic level. The long-term objective of this course is to provide the student with the tools, time and place to become an independent, self-motivated learner who can confidently use morphological information (data) to interpret and solve biomedical problems at any point in his/her career. The course begins with the study of the thorax, and the basics of the peripheral nervous system. In depth study of the anatomical regions that surround or are responsible for the neurovascular supply of the orbit is followed by the gross anatomy and macroscopic structure of the orbit including the bony orbit, the fascial organization of the orbit, the extra-ocular muscles and their function, orbital neurovascular bundles, the functional fibers of the cranial nerves and the eye. The course is organized around

the laboratory; participation in the lab is required and assessed. During the laboratory, the class is broken up into teams of students who examine each of the stations that are arranged for each laboratory session. Discussions in the laboratory require students to verbalize the information gathered to foster students' synthesis of information and communication skills as future clinicians.

Ocular Anatomy, Biochemistry & Physiology I BVS-181FA
Course Coordinator: Richard Madonna 2.0 Credits

The OABP sequence is given as 2 courses in the Fall and Spring semesters of the first year. Modules are delivered that cover the anatomy, physiology and biochemistry of the eye, related visual structures and the visual pathway. The course is designed to emphasize the anatomy and underlying physiology of the eye and visual system particularly in relationship to a variety of important clinical conditions. Course material taught in histology, gross anatomy, neuroanatomy, and sensory visual function is heavily integrated into OABP and is emphasized throughout the course.

In OABP I we cover the anatomy and histological structure of the outer and middle coats of the eye, the physiology of corneal transparency and the fundamentals of the eyes regulation of fluid formation and flow. The course also includes segments on structure and function of the ocular appendages and the physiology and biochemistry of the tear film. The anatomy, development, molecular composition and metabolism of the lens are discussed in the context of changes in the lens that occur during aging, including the biochemistry of cataract formation. The neuroanatomical basis for pupillary and accommodative responses and their clinical context is also covered.

Integrated Optics I BVS-131FA
Course Coordinator: Steven Schwartz 4.5 Credits

Students learn the fundamentals of geometrical and visual optics as they apply to clinical practice. Topics covered include refraction at spherical and plane surfaces; image formation; thin and thick lenses; spherical ametropia; accommodation; astigmatism and cylindrical lenses; prisms; depth of field; magnification; retinal image size; reflection; and aberrations. Problem-solving skills are emphasized with the goal of developing an intuitive sense of optics that underlies successful clinical interventions. This is the first in a three-course sequence on clinical optics.

Optometric Theory and Procedures I CEX-141FA
Course Coordinator: Mark Rosenfield 4.5 Credits

This course will introduce the student to the following topics:

- The optometrist as a health care practitioner
- Clinical record keeping
- Vision screenings.
- Measurement and correction of refractive error
- Examination of the external and internal structures of the eye.
- Assessment of oculomotor function at distance and near
- Treatment of oculomotor abnormalities

Additionally, in the clinical laboratory, students will learn to observe patient's behavior, construct working hypotheses, carry out appropriate examination procedures and gather data to diagnose and correct refractive anomalies of the human eye.

Integrative Seminar I CEI-1FA
Course Coordinator: Susan Schuettenberg 2.0 Credits

Integrative Seminar I serves to teach the first year optometry student how the material in the first year curriculum relates to their role as health care providers. This will be achieved through a synthesis of lecture, clinical observation, case-based learning and small group discussion. Once a week, the entire class will attend a one-hour lecture with topics reflective of the ongoing course material being presented in other courses. For two additional hours per week, small seminar group observation and discussion will take place. The seminar meetings will reinforce the lecture concepts through clinical observation and case discussions relating to those observations. Lecture and small-group discussions will include the participation of both basic and clinical science

faculty in order to promote integration of the curricular material, and to show how the care provided is related to what is currently being learned. This will enable the future clinician to make informed clinical decisions, encourage critical thinking and promote lifelong independent learning.

FIRST YEAR – SPRING SEMESTER

Human Bioscience II BVS-122SA
Course Coordinator: Suresh Viswanathan 3.0 Credits

This course is a continuation of Human Bioscience I and will integrate the biochemistry, molecular biology, physiology and histology of organ systems, including gastrointestinal, respiratory and renal.

The discussion of nutrition will include the role of nutrients in maintaining health and nutritional implications in major systemic disease. This is followed by a discussion of the fundamental principles of molecular biology and the mechanism of transmission of genetic information, including nucleic acids, DNA, RNA, and protein metabolism; gene regulation; the cell cycle and its regulation; and recombinant DNA technology.

The discussion of the gastrointestinal system will include the histology of the GI tract and accessory organs and GI physiology. The discussion of the respiratory system will focus on histologic properties, the mechanics of respiration, O₂ and CO₂ transport through the blood and control of ventilation. Also the role of lungs in respiratory acidosis and alkalosis will be discussed.

Renal system histology and physiology will be discussed next, including glomerular filtration, renal handling of glucose, amino acids, electrolytes and renal compensation for metabolic acidosis and alkalosis.

Clinical correlations of various abnormalities will be presented throughout the course.

Ocular Anatomy, Biochemistry & Physiology II BVS-182SA
Course Coordinator: Richard Madonna 3.0 Credits

Part II is a continuation of OABP I. It begins with the study of the anatomy of the vitreous, retina, optic nerve and visual pathway with emphasis on the anatomical basis of diseases. The biochemistry of the visual process including the biochemistry and molecular biology of rhodopsin and cone pigments and the events that occur during the visual cascade will be studied including a discussion of color blindness, congenital night blindness and hereditary retinal degeneration. Nutritional and biochemical implications in age-related ocular disease will then be explored. Processing of visual information by the retina, lateral geniculate nucleus and visual cortex will be discussed next. The course ends with the study of the development of the eye and visual system and related developmental anomalies.

Integrated Optics II BVS-132SA
Course Coordinator: Philip Kruger 4.0 Credits

Students learn the fundamentals of wave optics and physiological optics as they apply to image formation and clinical practice. The course integrates optical, biological, perceptual and clinical aspects. Topics include model eyes, Purkinje images, interference, diffraction, scatter and polarization, blur of the retinal image, aberrations of the eye, modulation transfer function, contrast sensitivity, photometry, fiber-optic nature of cones, entoptic images, cues for ocular accommodation, quantum optics and lasers. The goal is an intuitive understanding of the optical aspects of vision as related to clinical care. This is the second in a three-course sequence on clinical optics.

Visual Function: Sensory

BVS-170SA

Course Coordinators:

4.5 Credits

Module A: Steven H Schwartz**Module B: Harold Sedgwick**

This course covers monocular sensory processes and visual perception. Topics include spatial and temporal visual processes; visual adaptation; color vision; psychophysical methodology; information processing; gross electrical potentials; basic visual development and senescence; form, space, and motion perception; visually-guided action; and basic visual-cognitive processes. Topics are discussed in terms of their normal function and clinically relevant deviations from normal. The anatomical and neurophysiological bases for visual performance are examined and related to clinical testing. Laboratories emphasize the measurement of these functions in assessing the visual capacities of individual patients and the demonstration of relevant visual phenomena.

Optometric Theory and Procedures II

CEX-142SA

Course Coordinator: Mark Rosenfield

4.5 Credits

This course is a continuation of Optometric Theory and Procedures I. This course will introduce the student to the following topics:

- The optometrist as a health care practitioner
- Clinical record keeping
- Vision screenings.
- Measurement and correction of refractive error
- Examination of the external and internal structures of the eye.
- Assessment of oculomotor function at distance and near
- Treatment of oculomotor abnormalities

Additionally, in the clinical laboratory, students will learn to observe patient's behavior, construct working hypotheses, carry out appropriate examination procedures and gather data to diagnose and correct refractive anomalies of the human eye.

Integrative Seminar II

CEI-1SA

Course Coordinator: Susan Schuettenberg

2.0 Credits

Integrative Seminar II is a continuation of Integrative Seminar I, with a slightly different emphasis. As the student gains a greater knowledge base and becomes more familiar with the practice of optometry, the seminar will show how the care provided is based on the student's foundation of knowledge. Clinical observations will continue, and be augmented by the provision of direct patient care during clinical screenings. Multiple lecturers will continue to address the group as a whole, which serves to place an emphasis on how the basic science courses form the foundation for the practice of optometry. By observing and discussing patient care strategies, utilizing critical thinking skills, and introducing the concept of evidence-based medicine and other resources, students will acquire the skills necessary for lifelong independent clinical learning and decision making.

SECOND YEAR – FALL SEMESTER**Human Bioscience III**

BVS-223FA

Course Coordinator: Suresh Viswanathan

3.0 Credits

This course begins with the histology and physiology of the endocrine system followed by the histology of the lymphoid system. As a logical progression, the next area is the study of basic immunology and pathology including the specifics of humoral and cell mediated immunity, hypersensitivity, and the complement pathways. In a continuum between immunology and pathology, the effect of stress on cells, the different types of cell death, and the host response to infection will be discussed. Basic pathologic mechanisms and patho-physiology as well as the general medical aspects of selected diseases, particularly those with important ocular manifestations are discussed.

Microbiology BVS-204FA
Course Coordinator: Ann Beaton 2.5 Credits
The course in Microbiology imparts knowledge about organisms that are responsible for causing human disease, in particular ocular disease. The course begins with basic immunology encompassing the specifics of innate and adaptive immunity, inflammation, humoral and cell mediated immunity, hypersensitivity, complement pathways and ocular immune privilege. The course includes information about bacteria, fungi, parasites and viruses and encompasses information about their structure, growth, genetics, classification, and pathogenesis always keeping in mind ocular implications. The material learned in Microbiology will be useful in clinical practice in terms of understanding how these pathogens are acquired, how they multiply, and how to avoid infection. There is an emphasis on understanding how organisms acquire antibiotic resistance and the public health implications for appropriate prescription and utilization of antibiotics. Organisms that play a role in ocular disease will be highlighted along with their clinical presentations. In addition, other important public health information in terms of immunizations and which disinfection techniques are most efficacious is imparted to students that may impact not only their clinical practice but their personal health and well-being.

Pharmacology I BVS-205FB
Course Coordinator: Miduturu Srinivas 3.0 Credits
A fundamental course in pharmacology designed to acquaint the student with general principles of drug action on organ systems, including the eye. The methods of administration, pharmacological actions, clinical applications and adverse effects of drugs in current clinical use will be considered in detail.

Integrated Optics III BVS-233FA
Course Coordinator: Christina Llerena-Law 4.0 Credits
Students obtain the knowledge and skills necessary to provide modern dispensing services. Optical and physical properties of ophthalmic prisms and lenses are covered in depth. Topics include lens materials, thickness, design, and enhancements; ophthalmic standards; verification; safety, absorptive, high prescription and special design lenses; vertical imbalance; magnifying devices, spectacle magnification and relative spectacle magnification; frame specification, design, selection and adjustment; and occupational eyewear. Laboratories are geared to developing skills in verification and dispensing.

Visual Function: Sensorimotor I BVS-271FA
Course Coordinator: Jordan Pola 3.0 Credits
This course is concerned with oculomotor behavior and physiology. It provides the student with a broad appreciation of the characteristics of eye movements and the functional properties of the mechanisms (e.g., neurophysiological networks, extraocular muscles) responsible for generating these movements. A central feature of the course is the utilization of control systems theory as a means to integrate and simplify some of the complexities of the oculomotor behavioral and physiological data. As well as lectures, the course includes laboratory studies of basic quantitative aspects of fast and slow eye movements, and also the manner in which simple functional models of the oculomotor system can account for both normal and abnormal eye movements.

Optometric Theory and Procedures III CEX-243FA
Course Coordinator: Joan K. Portello 3.5 Credits
This course introduces advanced diagnostic and therapeutic procedures as well as providing an overview of disorders of the anterior and posterior segments of the eye. Along with the skills covered in the Optometric Theory and Procedures I and II courses, the intern will become proficient with the slit lamp biomicroscope, the use of diagnostic pharmaceutical agents and applanation tonometry. Examination of the anterior and posterior segments will be performed using gonioscopy, binocular indirect ophthalmoscopy, contact and non-contact lens funduscopy. Additional diagnostic testing including laser interferometry, and ultrasonography will be reviewed. Students will learn to determine appropriate testing procedures, analyze and formulate treatment plans, and present cases for review.

Integrative Seminar III

CEI- 2FA

Course Coordinator: Teresa Lowe

2.0 Credits

This course is designed to facilitate the student's transition into clinical practice by using an integrative approach. The course serves as an educational vehicle for the student to develop clinical thinking in becoming a doctor of optometry.

In the Integrative Track, the student uses case studies for developing intellectual skills founded on informed clinical decision making, critical thinking, independent and collaborative learning.

The student develops a foundation for optometric practice by employing scientific knowledge, informational resources, and clinic participation. Through a synthesis of classroom teaching, case-based learning, group activities and clinic participation, the student will form an individualized patient evaluation, assessment and plan. The highest standards of professional conduct and responsibility will be emphasized throughout the course.

SECOND YEAR – SPRING SEMESTER**Ocular Disease I**

BVS-251SA

Course Coordinator: Mitchell Dul

4.5 Credits

The course is the first in a series of three courses detailing the pathogenesis, physiologic response, clinical manifestations, treatment, and rehabilitation of conditions of the body and eye in response to local and systemic pathologic processes (e.g., infection, trauma, neoplasm) and disorders (e.g., congenital) with emphasis on the conditions of the anterior segment of the eye, related systemic conditions, and the glaucomas.

Epidemiological data is included to allow students to differentiate between high-probability and/or high risk conditions and low probability and/or low risk conditions. Previous course work in anatomy, physiology, pathology, epidemiology, monocular sensory processing, pharmacology and systemic medicine will provide the student with the foundation for understanding the principles and practices covered in this course.

Pharmacology II

BVS-206SA

Course Coordinator: Diane T. Adameczyk

2.5 Credits

Pharmacology II is a course that is specific to ocular pharmacology, building on and integrating the material taught in Pharmacology I as it applies to ocular related conditions. This course covers the fundamentals of ocular pharmacology, ocular drugs, systemic drugs and how they are used to treat various ocular conditions, and their ocular effects. The student will learn the basic concepts of the drug, mechanism of action, drug-drug interactions, contraindications and its effects on the body, organs and various systems. The pharmacology as it relates to the drug's clinical utilization will be discussed.

Contact Lens I

BVS-261SA

Course Coordinator: David Libassi

3.0 Credits

This is the first half of an extensive course spanning two semesters on the art and science of prescribing contact lenses. This course will develop the principles of contact lens physiology and optics, and integrate them with your understanding of the cornea, tear film, and eyelid anatomy. Ocular measurements necessary for contact lens design will be correlated with on-eye evaluation of soft and rigid contact lenses. Oxygen requirements for safe lens wear will be contrasted for daily wear soft and rigid lenses, extended wear hydrogel lenses, and silicone-hydrogel lenses worn for continuous wear. This semester we will emphasize standard soft and rigid contact lens design, fitting and prescribing, as well as problem-solving in order to prepare you for fitting basic types of contact lenses as you start patient care. The laboratory sessions will support the lectures, providing the student with skills needed for lens handling, verification, pre-exam testing, lens selection, on-eye evaluation, patient education, patient instruction and problem solving.

Visual Function: Sensorimotor II BVS-272SA
Course Coordinator: Kenneth Ciuffreda 3.0 Credits
An analysis of the geometrical, psychophysical, and physiological sensory and motor aspects of binocular vision, including their clinical implications. Topics include visual direction and correspondence, binocular summation/averaging, rivalry, fusion, the horopter, stereopsis, optically-based perceptual distortions/adaptation and aniseikonia, fixation disparity, and vergence/accommodation motor/perceptual interactions. Laboratory sessions cover many of these topics.

Children's Vision and Learning I BVS-217SA
Course Coordinator: Robert Duckman 2.5 Credits
This behavioral and clinically oriented course is intended to give the second year student in the professional program a basic understanding of human development and development of basic visual anatomy and visual function. Such topics as refractive error, visual acuity, accommodation, binocularity, contrast sensitivity function, color vision, and ocular motility will be explored. Practical applications for clinical usage will be considered and normative data will be discussed. Anomalous development and pathologies will be presented. The student will be prepared for clinical interaction with infant, toddler and pediatric patients. The course will cover diagnostic methodologies that are applicable to these children, as well as management of their visual anomalies. Child abuse will be considered in terms of identification and reporting. Ocular medications for children will be discussed. Current clinical trials in pediatric optometry/ophthalmology will be presented. In addition, discussion of children with special needs will cover such developmental anomalies as Down Syndrome, Fragile-X Syndrome, Fetal Alcohol Syndrome, Cerebral Palsy, and Mental Retardation (ID=Intellectual Disability). The course will also include management of refractive error, binocular anomalies, pathology and pharmacological management in the pediatric patient.

Optometric Theory and Procedures IV CEX-244SA
Course Coordinator: Joan K. Portello 2.5 Credits
This course develops and enhances clinical diagnostic and treatment procedures taught in Optometric Theory and Procedures III, which will be emphasized together with a variety of additional diagnostic and therapeutic techniques. Credentialing for patient care is expected by the middle of the semester by receiving a passing score in the clinical competency examination. The course will provide an introduction to the primary care clinic, emphasizing patient visual and binocular analysis, ocular health assessment and development of assessment and plan by case analysis. This course will further foster the student's ability to solve clinical problems through critical thinking, utilizing evidence-based medicine and scientific knowledge.

Integrative Seminar IV CEI-2SA
Course Coordinator: Teresa Lowe 2.0 Credits
The course will be an extension of Integrative Seminar III. The format consisting of small group, lecture and clinic is maintained. Having acquired an increased knowledge and skills base, more complex critical thinking and clinical decision making skills will be stressed. There will be more emphasis placed on self-evaluation and self-learning as a means of professional development. Participation in patient examination will be increased. Each student will present a formal slide show based on a case including current literature.

THIRD YEAR – FALL SEMESTER (SUMMER SESSION)

Neuroanatomy BVS-315RA
Course Coordinator: Kalman Rubinson 3.0 Credits
The purpose of this course is to educate the student about the basic structure and function of the human central nervous system. This encompasses human neuroanatomy as well as some associated elements of neurophysiology and neurology. Beginning at the cellular level and spanning the nervous system from the periphery through spinal cord, brainstem and cerebrum, the course will cover all the major functional systems, their pathways and the consequence of pathology. The long-term objective is to provide the student of Optometry, as a professional healthcare provider, with the capability to

recognize neurological issues in his patients based on an understanding of the relationship of the visual system to the rest of the nervous system in health and disease. In addition to illustrated lectures, there will be laboratory studies of the human brain and small group conferences in which the clinical significance of neurological systems will be emphasized.

Epidemiology

CEP-304RA

Course Coordinator: Mark Sherstinsky

1.0 Credit

Epidemiology is the study of the distribution and determinants of health-related states or events in specified populations, and the application of this study to the control of health problems. As such, epidemiology is the basic science of public health and underpins the practice of health care at multiple levels (global, national, community and clinical). This course is designed to introduce optometry students to the background, basic principles, and methods of public health epidemiology, with an emphasis on clinical and public ocular health and vision. The overall course goals are to demonstrate the fundamental importance that the practice of public health research (which utilizes epidemiologic principles) has for clinical experience, and to allow for critical reading and evaluation of research in the medical and optometric literature. An understanding of epidemiological principles allows clinicians to make informed and efficacious decisions about patient health and optometric practice.

Integrative Seminar V

CEI-3RA

Course Coordinator: Julia Appel

0.5 Credit

Integrative Seminar V is a continuation of the prior Integrative Seminar courses where interns learn in small group settings how to apply information gained in the professional program curriculum to patient care. The emphasis will be on developing the ability to think critically and obtaining the skills necessary for independent, life long learning. The one-hour course will take place weekly as an extension of the intern's Primary Care clinic session. Attendance is mandatory. Two faculty members will be assigned to 6 interns. A team approach is encouraged where interns and faculty will meet together in a specific location on the clinic floor to facilitate patient care and learning for discussion, case analysis and presentation. A greater understanding of the nuances of patient management is sought via the modeling of patient care strategies, critical thinking and the inclusion of evidence-based medicine and existing resources.

Optometric Clinic I

CEC-341RA

Course Coordinator: Julia Appel

2.0 Credits

The third year clinical program (Optometric Clinic I, II, & III) provides the intern with a broad exposure to all facets of primary care optometry. Rotations are in the areas of primary care and in various specialty clinics. During these rotations, the intern will have patient-care responsibilities under the supervision of clinical faculty. The rotations are designed to allow the intern increasing levels of clinical responsibility and patient-care opportunities.

THIRD YEAR – FALL SEMESTER

Ocular Disease II

BVS-352FA

Course Coordinator: Scott Richter

5.0 Credits

This course is the second in a series of three courses detailing the pathogenesis, physiologic response, clinical manifestations, treatment and rehabilitation of conditions of the body and eye in response to local and systemic pathologic and developmental processes and disorders. Emphasis in Ocular Disease II is on the conditions of the posterior segment of the eye, related systemic conditions and the glaucomas and material is presented in a fashion that includes integration of ocular and systemic medical concepts as well as medical, surgical and rehabilitative management concepts. Epidemiological data is included to allow students to differentiate between high-probability and/or high-risk conditions and low probability and/or low risk conditions. Previous course work in anatomy, physiology, pathology, epidemiology, monocular sensory processing, pharmacology and systemic medicine will provide the student with the foundation for understanding the principles and practices covered in this course.

Contact Lenses II BVS-362FA

Course Coordinator: Kathryn Richdale 3.0 Credits

This course will introduce the principles of advanced contact lens fitting. The application of a variety of gas permeable, soft, and hybrid lens designs will be discussed. The course will teach students fitting techniques for corneal dystrophies/degenerations, presbyopia, aphakia, the post-surgical or traumatic eye, prosthetics, torics, and orthokeratology.

Anomalies of Visual Sensorimotor Function BVS-370FA

Course Coordinators: Audra Steiner/Ken Ciuffreda 6.0 Credits

This course will concentrate on the diagnosis and treatment of non-pathological binocular, accommodative, and oculomotor conditions including strabismus and amblyopia. The course will explain the historic and current role of vision therapy within optometry, epidemiology of functional vision disorders, and discuss current research. Students will become familiar and comfortable with appropriate testing, discussing findings with patients, and sharing information with other professionals. The course describes neurologic adaptations to strabismus and amblyopia and remediation of these special conditions. An associated lab will familiarize students with testing and allow them to understand how to design and implement a vision therapy program.

Optometric Clinic II CEC-342FA

Course Coordinator: Julia Appel 3.5 Credits

The third year clinical program (Optometric Clinic I, II, & III) provides the intern with a broad exposure to all facets of primary care optometry. Rotations are in the areas of primary care and in various specialty clinics. During these rotations, the intern will have patient-care responsibilities under the supervision of clinical faculty. The rotations are designed to allow the intern increasing levels of clinical responsibility and patient-care opportunities.

Integrative Seminar VI CEI-3FA

Course Coordinator: Julia Appel 0.5 Credit

Integrative Seminar VI continues to build on prior Integrative Seminar courses where interns learn in small group settings how to apply information gained in the professional program curriculum to patient care. The emphasis will be on developing the ability to think critically and obtaining the skills necessary for independent, life long learning. The one-hour course will take place as an extension of the intern's Primary Care clinic session for a total of 16 hours per semester. Attendance is mandatory. Two faculty members will be assigned to 6 interns. A team approach is encouraged where interns and faculty will meet together in a specific location on the clinic floor to facilitate patient care and learning for discussion, case analysis and presentation. A greater understanding of the nuances of patient management is sought via the modeling of patient care strategies, critical thinking and the inclusion of evidence-based medicine and existing resources.

THIRD YEAR – SPRING SEMESTER

Ocular Disease III BVS-353SA

Course Coordinator: Patricia Modica 4.5 Credits

This course is the third in a series of three courses detailing the pathogenesis, physiologic response, clinical manifestations, treatment and rehabilitation of conditions of the body and eye in response to local and systemic pathologic and developmental processes and disorders. Emphasis in Ocular Disease III is on the conditions of the neuro-ophthalmic and neurologic systems, including psychiatric conditions and acquired brain injury. It also integrates additional medical topics that include cardiac disease, endocrinology. Material is presented in a fashion that includes integration of ocular and systemic medical concepts as well as medical, surgical and rehabilitative management concepts. Epidemiological data is included to allow students to differentiate between high-probability and/or high-risk conditions and low probability and/or low risk conditions. Previous course work in neuro-anatomy, physiology, pathology, epidemiology, pharmacology and systemic medicine will provide the student with the foundation for understanding the principles and practices covered in this course

Children, Vision and Learning II

BVS-318SA

Course Coordinator: Robert Duckman

2.5 Credits

This behavioral and clinically oriented course is intended to give the third year student in the professional program an understanding of developmental processes involved in the understanding of the normal and abnormal development of visual-spatial concepts. An inclusive model of behavioral vision is presented. Clinical application of research in perceptual and cognitive development and new techniques used in infant evaluation with discussion of the practical aspects involved in examining children from birth to five years of age are presented. Models of spatial development developed by Piaget and Gesell are discussed along with the ideas of Kephart, Barsch, Getman, Trevathen, Rosner, and Corballis and Beale. Introduction to standardized visual-perceptual clinical tests and statistics involved with these are made. The relationship of the visual-perceptual cognitive skills and motor-based skills is also discussed. Review of research on the efficacy of perceptual training and communication skills in vision therapy is reviewed.

Optometric Practice in a Changing Health Care Environment

CEP-320SA

Course Coordinator: Richard Soden

2.5 Credits

Rapid changes in health care and in optometric practice make it essential that graduating students be well-versed in optometry's role in the public health system. The increased scope of optometric practice has made the Doctor of Optometry a significant part of the overall health care team. As a result, students will need to understand their own interests, goals and values so they may end up in a career path that is attractive to them. This course will provide each student with the knowledge, skills and background required for the development of a career plan. The student will become familiar with the various modes of practice available to a recent graduate. Key elements of health care reform, the role of optometry in the public health system and as a member of an interdisciplinary team, will be highlighted along with discussions of essential non-clinical factors (e.g. Medicare, Coding and Billing, etc.) that each graduate will be required to know regardless of their chosen career path. A key goal of the course is to encourage students to explore the various opportunities available to them within the Profession of Optometry and to prepare them for that path.

Public Health

CEP-310SA

Course Coordinator: Mort Soroka

2.5 Credits

This course introduces the student to major health policy issues and examines the role of government in the health care system. Much of government policy relates to the payment systems of Medicare and Medicaid and regulation. Health Care Reform legislation impacts on all financing programs; private and governmental. New organizational structures such as Accountable Care Organizations (ACO's), health care exchanges will impact on the delivery and quality of care. The course introduces basic principles (such as supply and demand, quality assurance) in health care economics. The economics of health care markets and provider payment systems especially managed care and third party programs and vision plans are covered. Of special emphasis is the role of optometry in the Medicare and Medicaid program and managed care and coding in third party programs. This course prepares optometry students to analyze and debate health care policy issues. Sessions are designed to help students understand how politics, economics, professional, social, and ethical values contribute to health policy development and implementation. Specific policy issues reviewed include inter-professional relations, licensure, board certification, professional standards, cost containment, equity and access to care, quality improvement, electronic medical records, complementary and alternative medicine, managed care systems, health care law, workforce and health care ethics. The course also addresses health law, health care reform, quality assurance, professional standards, clinical practice guidelines and regulation, disease management strategies, health disparities, and health literacy and emerging legislative efforts and initiatives within health care. The history of research ethics, Medical Research Oversight, Institutional Review Boards, Privacy and HIPAA are also discussed. An objective of the course is to provide the student with a familiarity of current issues with an understanding of the policies and programs facing the profession.

Integrative Seminar VII

CEI-3SA

Course Coordinator: Julia Appel

0.5 Credit

Integrative Seminar VII is a continuation of the prior Integrative Seminar courses where interns learn in small group settings how to apply information gained in the professional program curriculum to patient care. The emphasis will be on developing the ability to think critically and obtaining the skills necessary for independent, life long learning. The one hour course will take place as an extension of the intern's Primary Care clinic session for a total of 16 hours per semester. Attendance is mandatory. Two faculty members will be assigned to 6 interns. A team approach is encouraged where interns and faculty will meet together in a specific location on the clinic floor to facilitate patient care and learning for discussion, case analysis and presentation. A greater understanding of the nuances of patient management is sought via the modeling of patient care strategies, critical thinking and the inclusion of evidence-based medicine and existing resources.

Optometric Clinic III

CEC-343SA

Course Coordinator: Julia Appel

3.5 Credits

The third year clinical program (Optometric Clinic I, II, & III) provides the intern with a broad exposure to all facets of primary care optometry. Rotations are in the areas of primary care and in various specialty clinics. During these rotations, the intern will have patient-care responsibilities under the supervision of clinical faculty. The rotations are designed to allow the intern increasing levels of clinical responsibility and patient-care opportunities.

FOURTH YEAR**Clinical Seminar**

CEI-4500A

Course Coordinators: Patricia Modica/Rochelle Mozlin

2.0 Credits

Fourth year interns are required to complete one quarter of senior seminar. The seminar meets over 4 hours each week to provide a small group-learning environment focused on clinical case presentations derived from the participants' clinical experience. This grand-rounds format will provide a basis for integration and critical analysis of current clinical research with the goal of increasing the participants' understanding, use and communication of evidence-based clinical information.

**EXTERNAL ROTATIONS
PROGRAM
2013-2014**

EXTERNAL ROTATIONS PROGRAM

The fourth year of the professional program at the SUNY College of Optometry is devoted entirely to the Clinical Education Track and consists of a 4-quarter clinical rotation system that requires student optometrists to participate in external clinical site training as well as clinical rotations within the University Eye Center (UEC).

External clinical affiliations include hospitals, multidisciplinary practices, and private practices and provide experiences in primary, secondary and tertiary care settings. These experiences provide participants with a wide range of patient care opportunities.

Each student is required to complete a maximum of three external rotations. Each rotation lasts for one quarter of the academic year (approximately 12 weeks). In addition to externship sites, each student will be assigned at least one internship within the UEC that will provide a broad clinical experience. Students are guided to choose their rotations in a way that promotes balanced exposure to key areas of clinical care. These core experiences will include experiences in a multidisciplinary setting.

The external clinical education program is managed by the Director of Externships in addition to the external site supervisors at each location. Internal education is managed by the Fourth Year Instructor of Record. Both components are part of the Department of Clinical Education.

Externship sites for 2013-14

ABVI-Goodwill Low Vision Center (Rochester, NY)	ABVI-Goodwill Low Vision Center (Rochester, NY)
VA Medical Center (Tucson, AZ)	VA Medical Center (Tucson, AZ)
Aran Eye Associate (Coral Gables, FL)	Aran Eye Associate (Coral Gables, FL)
VA Medical Center (Newington, CT)	VA Medical Center (Newington, CT)
Bascom Palmer Eye Institute (Miami, FL)	Bascom Palmer Eye Institute (Miami, FL)
VA Medical Center (West Haven, CT)	VA Medical Center (West Haven, CT)
Capital Eye Consultants (Fairfax, VA)	Capital Eye Consultants (Fairfax, VA)
VA Medical Center (West Haven, CT) : Low Vision Rotation	VA Medical Center (West Haven, CT) : Low Vision Rotation
East New York Diagnostic and Treatment Center (Brooklyn, NY)	East New York Diagnostic and Treatment Center (Brooklyn, NY)
VA Medical Center (Wilmington, DE)	VA Medical Center (Wilmington, DE)
EZRA Medical Center (Brooklyn, NY)	EZRA Medical Center (Brooklyn, NY)
VA Medical Center (Jamaica Plain, MA)	VA Medical Center (Jamaica Plain, MA)
Family Vision Care & Vision Therapy (San Carlos, CA)	Family Vision Care & Vision Therapy (San Carlos, CA)
VA Medical Center (Baltimore, MD)	VA Medical Center (Baltimore, MD)
Family Vision Care Associates (White Plains, NY)	Family Vision Care Associates (White Plains, NY)
VA Medical Center (Perry Point, MD)	VA Medical Center (Perry Point, MD)
Keller Army Hospital (West Point, NY)	Keller Army Hospital (West Point, NY)
VA Medical Center (Lyons, NJ)	VA Medical Center (Lyons, NJ)
LV Prasad Eye Institute (India)	LV Prasad Eye Institute (India)
VA Medical Center (Brooklyn, NY)	VA Medical Center (Brooklyn, NY)
Naval Health Clinic Annapolis (Annapolis, MD)	Naval Health Clinic Annapolis (Annapolis, MD)

UNDERGRADUATE LEVEL COURSES

REQUIRED

General Biology with lab - one year*
General Chemistry with lab - one year*, ***
General Physics with lab - one year*
Organic Chemistry with lab - one year*, ***
Calculus - one semester or quarter**
English Composition & Literature - one year
Social Science - one year
General Psychology - one semester or quarter
Statistics - one semester or quarter

STRONGLY RECOMMENDED

Microbiology

RECOMMENDED

Biochemistry

*Advanced level courses which demonstrate the acquisition of the knowledge base expected from the above required courses may be substituted if approved by the Director of Admissions.

**Students must be able to apply elementary differential equations (particularly simple exponential process) to practical problems in science.

***Biochemistry may be substituted for one term of chemistry.

All of the above requirements should be met by enrollment in those courses specifically offered for departmental majors or pre-professional students and should not be brief or survey courses. Letter grades should be awarded for all required courses and all courses accepted as meeting prerequisites should be completed successfully with a grade of C or better. All applicants are required to take the Optometry Admission Test.

ADMISSIONS

It is the policy of SUNY State College of Optometry to take many facets of the student's background and skills into account in making an admission decision. The Committee on Admissions considers the quality of the undergraduate institution, type of program, progression of grades, standardized test scores, letters of recommendation, extracurricular activities, knowledge of the profession and personal interview.

Candidates' achievements, however, in the math and science prerequisite courses and on the Optometric Admission Test, are viewed as important measures of preparedness for optometric study. The College does not consider or discriminate on the basis of sex, race, national origin, or residency in its admissions policy. The College subscribes to the American Council on Education and the American Association of Collegiate Registrars Joint Statement on Principles and Practices in Admission.

To be considered as a candidate for admission to the professional program, a minimum of three years of undergraduate study is required (90 semester credits minimum) from an accredited institution; a baccalaureate degree is recommended. Specific courses must be completed at the undergraduate level before a student enters the professional program in optometry. (see margin)

APPLICATION REQUIREMENTS AND PROCEDURE

If you are considering applying for ROLLING ADMISSIONS you MUST apply through the COMMON APPLICATION, which is the application process required by all colleges of optometry. Consult the following website for details about the Common Application: www.optomcas.org. Following the completion of the Common Application applicants will be directed to SUNY's Supplemental Application.

For EARLY DECISION, a special application is available only from May 1 to July 1. See Early Decision below for details.

Please make sure you meet all requirements before you apply.

Applications are strongly recommended to be submitted as early in the application year as possible, even if all admission requirements have not been fully completed. While the deadline for submission of the application form is March 1st (unless an extension is provided by the Director of Admissions), the Committee on Admissions begins to make decisions much earlier in the year. Although most students apply using rolling admissions, applicants may also consider applying for early decisions, joint degree programs, transfer or advanced standing (see below).

Your application for admission will be considered if:

- A letter of recommendation must be prepared and sent by the Pre-professional Committee at the undergraduate school where you completed the majority of your pre-professional courses. If a Committee exist and can not submit a letter of recommendation, a letter from that Committee indicating why, is required. If there is no such committee at that undergraduate school, you must then also submit up to 3 letters of recommendation of your choice. Two of the four letters of recommendation must assess academic performance in the science areas.
- Official report of all Optometric Admissions Test (OAT) scores is provided. You are advised to take the OAT no later than the Fall of the application year; *OATs written after March 1 of the calendar year in which you wish to enroll will not be accepted for Rolling Admissions applicants. . The OAT will be offered at a Thomson Prometric (previously Sylvan) Center. For more details about the OAT and where to take it, go to their website at <https://www.ada.org/oat/index.html>*

- Official report of all scores achieved on the Scholastic Aptitude Test (SAT), if taken in high school, are to be submitted directly to SUNY optometry. If you took the American College Test (ACT) instead of the SAT in high school, please have these scores submitted. We will accept SAT and ACT scores submitted on an official high school transcript.

Official transcripts of **all** college courses taken to date are submitted by the institutions.

ROLLING ADMISSIONS

This is how the vast major of applicants apply to optometry school. All application material (application, transcripts, and letters of recommendation) must be submitted through the Common Application process found at www.optomcas.org. OAT and SAT/ACT scores must be submitted directly to the college. Applications can be submitted as early as July 15, (a year prior to entry) but no later than March 1 (of the year you plan to enter).

EARLY DECISION

This is designed for applicants with no more than 2 prerequisite courses still to be taken, have above average background and who wishes to obtain a commitment prior to entering their final undergraduate year. Applicants must have an overall and a prerequisite math and science GPA of at least 3.5, with no prerequisite grade below C, from a 4 year college or university, in order to be considered. Application must be submitted between May 1 and July 1, a year prior to matriculation ([download SUNY's paper application from our website](#)), along with a \$75 application fee. OATs must be taken no later than September 1 of that year and obtain scores of at least 340. All other application support documents (SAT scores, Transcript(s), and letters of recommendation from Pre-Professional Committee must be submitted by July 15 of that year. The Common Application (www.optomcas.org) must also be completed between July 15 and July 30. Students accepted through the Early Decision process will be required to submit a \$500. non-refundable deposit within a month of their acceptance. For EARLY DECISION, have all materials and documents sent directly from the sources to SUNY Optometry.

Instructions for Foreign applicants and those with foreign credentials (EXCEPT APPLICANTS ATTENDING ENGLISH LANGUAGE CANADIAN UNIVERSITIES):

In addition to the application and related materials which are required of all incoming students, you will need to have your high school and college records evaluated by WORLD EDUCATION SERVICES INC., P.O. Box 745, Old Chelsea Station, New York, New York 10113-0745, (212) 966-6395. This evaluation must be submitted directly to SUNY Optometry by World Education Services.

If English is your second language, you will be required to take the Test of English as a Foreign Language (TOEFL) if you've been in this country for less than 3 years or if the Admission Committee requires it of you. A score of 550 or greater is required. The exam is available by writing or phoning TOEFL, P.O. Box 6151, Princeton, New Jersey, 08541-6151, (609)-951-1100.

Along with these academic requirements, and of equal importance, is the need for applicants to meet certain **functional** standards.

One of the missions of the SUNY College of Optometry is to produce graduates fully qualified to provide quality comprehensive eye care services to the public. To fulfill this mission, this institution must ensure that students demonstrate satisfactory knowledge and skills in the provision of optometric care. Our Admission Committee, therefore, must consider a candidate's capacity to **function** effectively in both the academic and clinical environments, as well as a candidate's academic qualifications and personal attributes.

To provide guidance to those considering optometry as a profession, the Association of Schools and Colleges of Optometry (ASCO) has established **functional standards** for optometric education. The ability to meet these standards, along with other criteria established by SUNY Optometry, is necessary for graduation from our Doctor of Optometry program.

The **functional standards** for optometric education require that the candidate/student possess appropriate abilities in the following areas: 1) observation; 2) communication; 3) sensory and motor coordination; 4) intellectual-conceptual, integrative and quantitative abilities; and 5) behavioral and social attributes. Each of these areas is described below.

In any case where a student's abilities in one of these areas are compromised, he or she must demonstrate alternative means and/or abilities to meet the **functional** requirements. It is expected that seeking and using such alternative means and/or abilities shall be the responsibility of the student. Upon receipt of appropriate documentation of a disability, to the Office of Student Affairs, the College will be expected to provide reasonable assistance and accommodation to the student.

OBSERVATION ABILITIES

The student must be able to acquire a defined level of required knowledge as presented through lectures, laboratories, demonstrations, patient interaction and self-study. Acquiring this body of information necessitates the functional use of visual, auditory and somatic sensation enhanced by the functional 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 non-verbal 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

The student must be able to communicate effectively, efficiently and sensitively with patients and their families, peers, staff, instructors 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 non-verbal 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 utilize such abilities as measurement, calculation, reasoning, analysis, judgment, investigation, memory, numerical recognition 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

PERSONAL PRIVACY PROTECTION

Personal Privacy Protection Law requires this notice to be provided when collecting personal information from individuals. The information on the admission application will be used by the SUNY College of Optometry to evaluate your request for admission. Failure to provide the requested information could prevent your application from being processed. The official authority to request this information is found in section 355(2)(i) of the Education Law.

The application information will be maintained in the Student Affairs Office. The official responsible for the maintenance of the information is the Vice President for Student Affairs at SUNY College of Optometry, 33 West 42nd Street, New York, New York 10036.

For further information, applicants or potential applicants may telephone Admissions/Student Affairs at (212) 938-5500 or 1-800-291-3937 (outside New York City) between 9:00 a.m. and 5:00 p.m., Monday through Friday.

Potential candidates with questions or concerns about how their own conditions or disabilities might affect their ability to meet these **functional standards** are encouraged to meet with a counselor in the Office of Student Affairs prior to submitting an application.

Advanced Standing & Transfer Policy (Professional Program in OD)

Applicants who are enrolled in or are graduated from a first professional degree program and are applying to SUNY State College of Optometry. If the applicant is requesting to enter the curriculum beyond the first year level, the applicant is requesting consideration for advanced standing and may be asked to take additional tests.

All applicants must meet general admission requirements for the professional program. Applications are carefully reviewed to determine admissibility, the reason for applying and the appropriate level of placement in the professional program, if the student is requesting consideration for advanced standing.

Since the curricula of two schools of optometry may not be exactly the same, transferring to the SUNY College of Optometry is difficult. Students accepted for transfer may be required to satisfactorily repeat and/or complete additional courses at the College and/or meet other requirements as determined by the Dean for Academic Affairs in consultation with the Department Chairs.

Steps in the Admission Process for the Advanced Standing Applicant to the Professional (OD) Program

Students are admitted to the College only in the fall.

- 1) A. If an applicant is presently attending a USA college of Optometry he/she must compete SUNY's "Early Decision" Application (not the Common Application) found on the SUNY website. Deadline for submission of application is March 1 of the year you seek to matriculate.
B. If the applicant is not presently attending a USA college of Optometry he/she must complete the Common Application process followed by SUNY's Supplemental Application (see general "Rolling Admissions" above). Deadline for submitting the application is March 1 of the year you wish to matriculate.
- 2) All steps listed in the general admission process must be followed and the timelines adhered to.
- 3) Applicants must identify themselves on the application for admission as an advanced standing applicant.
- 4) The student must submit a statement with his/her admission application outlining the compelling reason for applying.
- 5) A complete syllabus of all professional level courses previously taken must be submitted.
- 6) A. If seeking to transfer from another accredited USA or Canadian school of optometry: submit from that school a transcript, at least two letters of recommendation from faculty, and a letter from the Dean or designee stating the student's academic standing and whether the student has been or is presently being considered for dismissal for cause.
B. If the applicant possesses a health profession degree from a foreign educational institution: Submit transcripts and at least two letters of recommendation from that institution and the results of Part I of the National Board of Examiners in Optometry exam. To receive information about that exam contact: National Board of Examiners in Optometry, on their web site at <http://www.optometry.org>.

JOINT DEGREE AFFILIATES

Adelphi University, Garden City, New York

Canisius College, Buffalo, New York

CUNY - Brooklyn College, Brooklyn, New York

CUNY - College of Staten Island, Staten Island, New York

CUNY - City College of New York, New York, New York

Fairleigh Dickinson University, New Jersey

Felician College, Lodi, NJ

Gettysburg College, Gettysburg, Pennsylvania

Ithaca College, Ithaca, New York

Lehigh University, Lehigh, Pennsylvania

Manhattan and Mount St. Vincent Colleges, New York, New York

Marymount College, Tarrytown, New York

Mount Saint Mary College, Newburgh, New York

Muhlenberg College, Allentown, Pennsylvania

New Jersey Institute of Technology, Newark, New Jersey

Pace University, New York, New York

Ramapo College of New Jersey

Sacred Heart University, Fairfield, Connecticut

St. John's University, Queens, New York

Sienna College, Loudonville, New York

SUNY - University Center at Albany, Albany, New York

SUNY - University Center at Binghamton, Binghamton, New York

SUNY Fredonia, Fredonia, New York

SUNY at Geneseo, Geneseo, New York

SUNY - State College at New Paltz, New Paltz, New York

SUNY - State College at Oneonta, Oneonta, New York

SUNY - State College at Oswego, Oswego, New York

SUNY - State College at Plattsburgh, Plattsburgh, New York

SUNY State College at Potsdam, Potsdam, New York

The College of New Jersey, Ewing, New Jersey

The Richard Stockton College of New Jersey, Pomona, New Jersey

Utica College of Syracuse University, Utica, New York

Wagner College, Staten Island, New York

Wilkes University, Wilkes Barre, Pennsylvania

Yeshiva University and Stern College, New York, New York

SPECIAL AFFILIATION AGREEMENTS WITH UNDERGRADUATE INSTITUTIONS JOINT DEGREE PROGRAM

The State University of New York, State College of Optometry, and 35 colleges and universities in New York State, New Jersey, Connecticut and Pennsylvania have established innovative affiliation agreements whereby students may complete a joint BS or BA degree and an OD degree in seven years.

Under this cooperative venture, selected academically talented high school seniors and college freshmen will be admitted to an approved joint-degree track at the undergraduate college and simultaneously to candidacy for admission to the professional optometry program at SUNY College of Optometry. After three years of undergraduate work at any of the 35 affiliated schools, upon maintaining the required academic standing, and meeting personal interview standards, the qualified student will be admitted to the SUNY College of Optometry. The student will receive his/her BS or BA degree from the undergraduate institution upon completion of the first year at the SUNY College of Optometry. An OD degree will be awarded after the last year of professional study.

The colleges and universities involved in the Affiliation Program as of June 2009 are listed to the left (additional affiliations are being developed). Students interested in this unique program are encouraged to call the Office of Student Affairs at (212) 938-5500 for more information.

RURAL SCHOLARS OPTOMETRY PROGRAM

A Rural Scholars Program aimed at easing the shortage of optometrists in rural areas is available to outstanding rural high school seniors. This two-two-four year program first recruits qualified students into the two year Associate of Science degree at the State University College of Agriculture and Technology at Cobleskill. Then, students transfer to the State University at Albany for two years in order to complete their Bachelors degree in Biology. The final four years of the program are spent at the SUNY College of Optometry in Manhattan, with the entire process culminating in a Doctor of Optometry degree. For more details on this innovative program contact the Admissions Office at any of the three institutions.

TUITION AND FEES (Professional Program)

Tuition and fees represent current charges as of July 1, 2013, and are subject to change with SUNY Board approval resolution.

For the 2013-2014 academic year, tuition and fees for students enrolled in the four year Optometry professional program are as follows:

	<u>Per Semester</u>	
New York State Resident Tuition	\$9,950.00	
Part-time (per credit hour)	829.00	
Non-New York Resident Tuition	19,105.00	
Part-time (per credit hour)	1,592.00	
College Fee	12.50	
Part-time (per credit hour)	0.85	
<u>Fees assessed on an annual basis, or as applicable</u>		
Technology Fee	270.00	Annual
Clinical Liability Fee (2 nd - 4 th years)	50.00	Annual
Orientation (1 st year)	50.00	Annual
Foreign Student Health Insurance	1,144.50	annual, as applicable
Late Payment	50.00	maximum, per statement
Student Activity Fee	130.00	annual

Students may also incur charges for replacing ID cards, returned checks, additional transcripts, library fees and fines, lost books; please see page 59.

MasterCard, Visa, American Express and Discover/ Novus credit cards are accepted, in addition to cash, checks and money orders. Please make checks payable to SUNY College of Optometry. Tuition and fees are subject to change; please contact the Bursar at (212) 938-5884 for up-to-date information.

Instruments: First year professional program approximately \$1,800. (due in early July) Second year professional program approximately \$2,100.

Books: First year approximately \$1100 (usually after classes start)

Room and Board: For the 2013-2014 academic year, the student is allowed a maximum allotment of \$21,060 for room and board for Financial Aid consideration.

Other Living Expenses: For the 2013-2014 academic year the student is allowed a maximum allotment of \$5,640 for all other living expenses for Financial Aid consideration.

It is recommended that a student make arrangements to have two months living expenses available for start-up costs.

FINANCIAL AID

PLEASE NOTE: FINANCIAL AID CANNOT BE DISBURSED UNTIL YOU HAVE ENROLLED IN AUGUST. INSTRUMENT EXPENSES AND START-UP LIVING EXPENSES WILL NOT COME FROM FINANCIAL AID.

Application Process

Students applying for financial aid will be required to submit the following:

1. SUNY-Optometry Application for Financial Aid
2. Free Application for Federal Student Aid (FAFSA)
3. A signed copy of student's federal tax forms are required. A signed copy of parent's federal tax forms may be required, or certification of non-filing status when applicable. Income tax transcript may be required.
4. Proof of non-taxable income as indicated on the application may be required
5. The Financial Aid Office reserves the right to request additional information and documentation as appropriate.

All Graduate and Professional students are considered independent. Parental information is required, however, to be considered for tuition waiver programs, HPSL loans and LDS loans.

The application deadline for financial aid is April 15, for the following academic year.

GRANTS

Grants are aid given to students generally on the basis of financial need. Grants do not need to be repaid.

Economically Disadvantaged First Professional Degree Students Program - The State University of New York awards between \$500 and \$5,000 based on funding and eligibility determined from the SUNY State College of Optometry Financial Aid Form and a Needs Analysis Form.

Graduate Opportunity Waiver - Partial tuition waivers are granted by the State University of New York to students who have participated in an undergraduate opportunity program such as EOP, HEOP, or SEEK. Determination is based on the Needs Analysis Form and eligibility requirements.

Graduate Diversity Scholarship – To be eligible a student must submit an essay and application each year demonstrating how they contribute to the diversity of the student body.

SCHOLARSHIPS

Scholarships are generally awarded on the basis of meritorious academic performance, need, or a combination of both. Scholarships do not need to be repaid.

Alumni Scholarships – Three \$1000 scholarships are given to students with the highest financial need and good academic standing.

Dr. Nathan and Laura Millman Scholarship - One to two scholarships given annually to a 2nd, 3rd or 4th year student based on outstanding academic performance.

Dr. Alden Haffner NYSOA Scholarship - Two \$2,000 scholarships given to students with high financial need and good academic standing.

OCNY Scholarships- Depending on funding, twelve OCNY scholarships are given to students with academic merit and financial need.

Petry Lomb Scholarship / Research Grant - A minimum of \$1000 is given to a student attending an accredited college of optometry who has financial need, is in good academic standing and has a sincere desire to practice Optometry in upstate New York. Preference is given to the area served by the Rochester Optometric Society.

Adolph and Ruth Schnurmacher Foundation and Charles and Mildred Schnurmacher Foundation Merit Scholarships - \$900 and \$1,100 grants are given to Canadian students.

Dr. Sanford and Clare Levy Scholarship sponsored by Central New York Community Foundation - Three to Four \$5,000 scholarships are given to students with the highest GPA's from certain Central New York Counties

The Scott Tasker Folsom Scholarship Fund - Dr. and Mrs. William Folsom have executed a trust to establish a permanent scholarship(s) in behalf of their son, to be known as the Scott Tasker Folsom Scholarship(s). The trust is a permanent endowment, the income from which will fund the scholarship(s) for professional students in optometry.

Dr. Jerome Weiss Scholarship Fund - Dr. and Mrs. Jerome Weiss, distinguished friends of the College, from Syracuse, New York, have established an endowment, the income from which will support one or more scholarships for professional students in optometry.

LOANS

Educational loans are generally lower interest alternatives to market rate loans. Many have federal or state subsidies and delayed interest and/or principal repayments until after the academic program is completed. Stafford, Perkins, and Health Professions Loan + LDS Programs require the student to qualify through the Need Analysis Process. Borrowers should be aware of the following rights and responsibilities they assume when they receive loans:

- 1) I must repay my loan(s) with all accrued interest and deducted fees even if I do not complete the program of study, am unable to obtain employment or am dissatisfied with the program of study at my school.
- 2) Unless my loans are consolidated, I have a maximum of 10 years to repay my Title IV loans.
- 3) I may prepay all or part of this loan without penalty.
- 4) The minimum monthly payment for this loan(s) is \$50.00, but may be more depending on the outstanding balance. The repayment of subsidized and unsubsidized will begin following a six or nine-month grace period.
- 5) I must notify my lender within ten business days, if I:
 - Change my name
 - Change my address
 - Change my telephone number
 - Change my separation date
 - Withdraw from school
 - Transfer to another school
 - Enroll for less than half time
- 6) I will be notified in writing, if my loan is transferred to a new holder and I must direct all future correspondence and payment to that new holder.
- 7) If I qualify, I may request a loan deferment from my lender.
- 8) If I am unable to make payments on my loan, and do not qualify for a deferment I may request forbearance from my lender.
- 9) If I fail to repay my student loan, I will be considered in default. As a result:
 - It may be reported to a National Credit Bureau and have a negative effect on my credit rating.
 - The entire loan amount, including accrued interest, may become immediately due and payable.
 - My federal and state income tax refunds may be withheld.
 - My wages may be garnished.
 - I may be ineligible to receive any additional federal or state financial aid funds.

Federal Subsidized Direct Stafford Loan Program - Up to \$8,500 per year at a fixed rate not to exceed 6.80%.

Federal Perkins Loan Program - Qualified students may be awarded between \$250 to \$2,500 each year at 5% interest.

Health Professions Student Loans - Qualified students may be awarded \$250 to \$4,000 at 5% interest. (Parental information is used to determine eligibility.)

Loans For Disadvantaged Students (LDS) - Qualified students may be awarded between \$250 - \$3,000 each year at 5% interest. (Parental information is used to determine eligibility.)

Federal Direct Unsubsidized Stafford Loan - Up to \$38,500 per year (minus the amount the student qualified for in the subsidized Stafford Loan) is available.

Emergency Loans - Emergency loans up to \$1000 are available from the Faculty Student Association to students who experience delays in processing financial aid.

These loans are limited in availability and can only be given to students who are awaiting financial aid.

EMPLOYMENT

Employment for students can be part time at the College. The hours are flexible and are scheduled around the Academic Program.

College Work/Study - \$500 to \$4,000 annually based on need can be made by the student while working at the college.

College Temporary Service Employment - Although not awarded as financial aid, students can be employed by an individual office or by a faculty researcher with College funds.

VETERANS BENEFITS

Department of Veterans Affairs (VA) Educational Benefits

Veterans may be eligible for VA educational benefits. For specific details, contact: Department of Veterans Affairs, 252 Seventh Avenue, N.Y., N.Y. 10001. (212) 620-6901; and/or Benefits for Veterans and Service Personnel (with service since 1/31/55, and their dependents), IS-1 Fact Sheet, January 1981, Veterans Administration, Washington, D.C. 20420

GRADUATE CENTER FOR VISION RESEARCH (GCR)

Vision Science is the study of the structures and processes involved in vision. It includes physics, chemistry, molecular biology, anatomy, physiology, neurosciences, behavioral sciences, and applied mathematics and engineering, as these subjects apply to the visual system.

Graduate students at SUNY Optometry may work towards either a PhD degree or MS degree in Vision Science. The Graduate Center for Vision Research administers these programs, which are designed for individuals holding a professional degree in a health science or a bachelor's degree in any discipline.

PROGRAMS

PhD in Vision Science Program

Doctoral students fulfill eighty semester-hour credits of seminars, tutorials and research as part of degree requirements. In addition, they are required to do two lab rotations in their first year and give a major oral presentation at the end of each year in the program. Intensive training in selected areas of research concentration forms the basis of the required graduate training. To advance to PhD candidacy, students must pass a qualifying examination in the form of an NRSA application that is approved by the student's Dissertation Committee. Upon completion of the PhD dissertation, an oral defense must be taken and passed. Following this, the PhD can be granted. Students accepted into the PhD program are typically full-time students. However, a limited number of part-time students are also accepted. The Graduate Policy Document outlines all current policies including: Admissions, Financial Aid, Awards, and Assistantships, Advisors, Registration and Maintenance of Matriculation, Grades and Probation, and Dismissal, Graduate Courses and Credit, Requirements for the PhD Degree.

Combined OD/PhD in Vision Science

Qualified students accepted to or working toward the OD degree may also apply for admission into the Graduate Program in Vision Science leading to the MS degree. Students entering this program follow the professional optometry curriculum while devoting summers fulltime and the academic year part-time to graduate seminars and research. In this manner, students are able to fulfill OD and MS degree requirements within four years of study. Master of Science students receive a broad background education in a variety of areas of vision science as well as basic training in the concepts and methods of research. Students may become acquainted with both basic and clinical vision science research. Forty semester-hour credits of courses and research are required to fulfill degree requirements along with writing and submitting a research paper for publication.

MS in Vision Science Program

Students in this program receive a broad background education in a variety of areas of vision science as well as basic training in the concepts and methods of research. Students may become acquainted with both basic and clinical vision science research. Forty semester-hour credits of courses and research are required to fulfill degree requirements along with writing and submitting an MS research paper for publication. The Graduate Policy Document outlines all current policies including: Admissions, Financial Aid, Awards, and Assistantships, Advisors, Registration and Maintenance of Matriculation, Grades and Probation, and Dismissal, Graduate Courses and Credit, Requirements for the MS Degree.

Combined OD/MS in Vision Science for Optometry Students

Qualified students accepted to or working toward the OD degree may also apply for admission into the Graduate Program in Vision Science leading to the MS degree. Students entering this program follow the professional optometry curriculum while devoting one or two summers fulltime and the academic year part-time to graduate seminars and research. In this manner, students are able to fulfill OD and MS degree

requirements within four years of study. Master of Science students receive a broad background education in a variety of areas of vision science as well as basic training in the concepts and methods of research. Students may become acquainted with both basic and clinical vision science research. Forty semester-hour credits of courses and research are required to fulfill degree requirements along with writing and submitting a research paper for publication.

CURRICULUM

The Core Curriculum for Ph.D. students consists of the following courses, Introduction to Vision Science: Proseminar Part I, Introduction to Vision Science: Proseminar Part II, Introduction to Statistics, Ethics in Research, and five elective graduate seminars or tutorials. In addition, all full-time students are required to attend research colloquia; journal club, to pass oral exams, to complete a two part dissertation proposal, and to complete and defend a PhD dissertation.

Students in the OD/MS or OD/PhD program take four regularly scheduled optometry program courses (Integrated Optics I; Visual Function: Sensory; Ocular Anatomy, Biochemistry and Physiology I and II) in place of Introduction to Vision Science: Proseminar Part I and Part II. OD/MS students are also required to take five elective courses at the 200 level and to attend at least six sessions of research colloquia, the journal club, or Academy or ARVO scientific conferences.

Core Curriculum

	Course#	Lec	Lab	Credit Hours
G100 Level Courses				
Ocular Anatomy, Biochemistry and Physiology I	GVS-181FA	3.0	1.0	2.0
Ocular Anatomy, Biochemistry and Physiology II	GVS-182SA	3.5	1.0	3.0
Integrated Optics	GVS-131FA			4.5
Visual Function: Sensory	GVS-170SA			4.5
G200 Level Courses				
Introduction to Statistics	GM201	3.0	0.0	2.0
Optics of the Eye	GM202	3.0	0.0	2.0
Spatial-temporal Processes: Basic Science and Clinical Applications	GM203B	3.0	0.0	2.0
Color Vision: Color Perception	GM204B	3.0	0.0	2.0
Color Vision: Basic Science and Clinical Applications	GM204C			2.0
Vegetative Physiology of the Eye	GM205	3.0	0.0	2.0
LGN and Cortex: Early Visual Processing of the Brain	GM207B	3.0	0.0	2.0
Ocular Motility: Oculomotor Systems	GM208B	3.0	0.0	2.0
Ocular Motility: Visuo-motor selection and decision processes	GM208C			2.0
Binocular Vision: Motor and Perceptual Aspects of Vergence Eye Movements	GM209C	2.0	2.0	2.0
Visual Perception: Depth Perception and Cue Combination	GM210B	3.0	0.0	2.0
Visual Perception: Perceptual Learning	GM210C	3.0	0.0	2.0
Visual Perception: Current Research on Clinical Conditions Affecting Space Perception	GM210D	3.0	0.0	2.0
Ocular Biochemistry: Biochemistry and Nutritional Implications in Ocular Health and Disease	GM211	3.0	0.0	2.0

Ocular Pharmacology	GM212	3.0	0.0	2.0
Ocular Pathology	GM213	3.0	0.0	2.0
Accommodation	GM214	2.0	2.0	2.0
Pre-dissertation Research	GM215			
Visual Physiology of the Eye: Etiology and Treatment of Myopia	GM216	3.0	0.0	2.0
Visual Development	GM218	3.0	0.0	2.0
Ethics in Research	GM219	1.0	0.0	1.0
Receptors and Cell Signaling Pathways: Introduction	GM220B	3.0	0.0	2.0
Receptors and Cell Signaling Pathways: Altered Responses in Ocular Disease	GM220C	3.0	0.0	2.0
Retinal Mechanism and Behavior	GM222			2.0
Proseminar: Introduction to Vision Science: Part I	GM230			6.0
Proseminar: Introduction to Vision Science: Part II	GM231			6.0
G300 Level Courses				
Independent Study	GE307			
G400 Level Courses				
Dissertation Research	GD401		variable	

COURSE DESCRIPTIONS

G100 Level Courses

Course Number: **GVS-181FA**
Course Title: **Ocular Anatomy, Biochemistry & Physiology I**
Credits: 2.0 Credits
Description: The Ocular Anatomy, Biochemistry and Physiology course covers the anatomy, physiology, and biochemistry of the globe, related visual structures, and the visual pathway. Part I begins with an anatomical overview of the eye and related structures, providing the student with an introduction to the basic structural features of the eye. This is followed by the anatomy of the fibrous tunic and the physiological basis for corneal transparency and how the cornea regulates its hydration and metabolism. Uveal anatomy and the physiology of the ocular fluids follow. The production of aqueous humor and its outflow through conventional and uveoscleral pathways leads to a discussion of intraocular pressure and its regulation. The neuroanatomical basis for papillary and accommodative responses and their clinical context follows. Finally, the anatomy, development, molecular composition and metabolism of the lens lead to a discussion of changes in the lens that occur during aging, including the biochemistry of cataract formation.

Course Number: **GVS-182SA**
Course Title: **Ocular Anatomy, Biochemistry & Physiology II**
Credits: 3.0 Credits
Description: OABP II is a continuation of OABP I. It begins with the study of the anatomy of the vitreous, retina, optic nerve, and visual pathway. The biochemistry of the visual process including the biochemistry and molecular biology of rhodopsin and cone pigments, and the events that occur during the visual cascade will be studied including a discussion of color blindness, congenital night blindness and hereditary retinal degeneration. Nutritional and biochemical implications in age-related ocular disease will then be explored. Processing of visual information by the retina, lateral geniculate nucleus and function of the ocular appendages and the physiology and biochemistry of the tear film. The course ends with the study of the development of the eye and visual system. Integration with material taught in Gross Human Anatomy and Neuroanatomy is integral to the understanding of the structure and function of the eye and is emphasized in the course.

Course Number: **GVS-131FA**
Course Title: **Integrated Optics**
Credits: 4.5 Credits
Description: This introductory course, which integrates elements of geometrical, physical and visual optics will prepare the student for the challenges for clinical practice, as well as the requirements of the National Boards. The lectures, in conjunction with the laboratories, will help the student develop and appreciation of the eye as an optical instrument, a practical understanding of the broad-based clinical applications of lenses, prisms and mirrors, and the basic consideration of lens design principles as applied to the eye and ophthalmic instruments. It will serve as a foundational information base and provide background knowledge for the higher level clinical and optometric courses and literature review. The

instructional sequence is: Introduction to light, optics of thin spherical and astigmatic lenses, optics of spherical refracting interfaces, optics of mirrors, optics of thick and thin prisms, fiber optics, Gaussian systems, Newtonian optics, system stops and field of view, introduction to Visual Optics and model eyes, axes and angles of the eye, and Purkinje-Sanson images.

Course Number: **GVS-170SA**
Course Title: **Visual Function: Sensory**
Credits: 2.0 Credits
Description: This course covers monocular sensory processes and visual perception. Topics include spatial and temporal visual processes; visual adaptation, color vision; psychophysical methodology; information processing; gross electrical potentials; basic visual action; and basic visual-cognitive processes. Topics are discussed in terms of their normal function and clinically relevant deviations from normal. The anatomical and neurophysiological bases for visual performance are examined and related to clinical testing. Laboratories emphasize the measurement of these functions in assessing the visual capacities of individual patients and the demonstration of relevant visual phenomena.

G200 Level Courses

Course Number: **GM201**
Course Title: **Introduction to Statistics**
Credits: 2.0 Credits
Description: The purpose is to give students an introductory, graduate, overview of some basic concepts and methods in statistical analysis. At the end of the course the student will have acquired the following knowledge and skills: (1) An understanding of experimental research design; (2) A thorough knowledge of hypothesis testing and sampling error; (3) The ability to perform and analyze the results of a simple t-test between or within groups; (4) The ability to perform and analyze the results using post-hoc tests of one-way and multi-way mixed ANOVAs; (5) The ability to perform and analyze the results of Pearson's r as well as ordinal and nominal correlation techniques; (6) An understanding of when and how to use non-parametric statistics.
Prerequisite: Undergraduate statistics or permission of instructor.

Course Number: **GM202**
Course Title: **Optics of the Eye**
Credits: 2.0 Credits
Description: This seminar examines the role of natural "aberrations" from the environment (optical vergence) and from refraction and chromatic dispersion across the extended pupil of the chambered vertebrate eye, especially the role of defocus and chromatic aberration. We consider the hypothesis that defocus and chromatic aberration specify optical vergence, distance and relative depth, monocularly and binocularly, as polychromatic blur across the retina in conjunction with polychromatic apodization across the exit pupil of the eye, and that modulation/phase across both retina and pupil are potential signals for accommodation, emmetropization and visual perception. Readings explore the nature of the retinal image, blur from diffraction, defocus and aberrations, the Stiles-Crawford effect, sensitivity of the visual system to wavefront spherical curvature (optical vergence) and chromostereopsis.

Prerequisite: Integrated Optics I or Proseminar: Introduction to Vision Science or the equivalent. Courses may be taken concurrently. Permission of Instructor

Course Number: **GM203B**
Course Title: **Spatio-temporal Processes: Basic Science & Clinical Applications**

Credits: 2.0 Credits

Description: A basic introduction to spatio-temporal processes for graduate students in vision science. Classic and contemporary papers in the areas of visual sensitivity, linear system analysis, retinal processing, and hyperacuity will be discussed. Clinical papers on contrast sensitivity, low vision, and chart design will also be included.

Prerequisites: Permission of instructor.

Course Number: **GM204B**
Course Title: **Color Vision: Color Perception**

Credits: 2.0 Credits

Description: This tutorial will build from fundamentals of aperture color matching to the most recent work on color appearance in material perception. It will require reading classical and recent papers on relevant topics. The goal of the course is to make students think in depth about research questions in all aspects of color perception. There will be an emphasis on the way ideas have developed about these topics, to give a context to present foci of interest. Each tutorial will focus on a specific topic and will be shaped by the background and interests of the student(s). Since the area covered is large and growing, students can take the tutorial more than once for credit. Topics covered include: (1) Color matching and the dimensionality problem; (2) Color adaptation to simple and complex fields; (3) Color induction from Mach bands to 3-D figural effects.; (4) Perception of illuminants and filters; (5) Color as a cue for object identification; (6) Color and perception of material qualities.

Prerequisites: Ph.D. Students or Permission of Instructor.

Course Number: **GM204C**
Course Title: **Color Vision: Basic Science and Clinical Applications**

Credits: 2.0 Credits

Description: A basic introduction to color vision for graduate students in vision science. Classic and contemporary papers on color vision models, the cone mosaic, retinal-thalamic pathways, cortical processing of color information, evolution of color vision, and comparative color vision will be discussed. Clinical papers on the genetics of inherited color vision anomalies, color vision standards, cerebral achromatopsia, and the use of color vision tests to screen for eye disease will also be included.

Prerequisites: Permission of instructor.

Course Number: **GM205**
Course Title: **Vegetative Physiology of the Eye**

Credits: 2.0 Credits

Description: Basic functions of the cornea and ciliary body will be discussed in detailed at the cellular and molecular levels in order to understand how these processes maintain normal ocular function. Topics include I. Aqueous Humor Dynamics and Intraocular Pressure (a) Role of Ciliary Process - in Aqueous Humor formation: (1) Secretion; (2) Passive mechanism; (b) Role of Trabecular Meshwork in Outflow of

	Aqueous Humor II. Corneal Physiology (a) Structure - Endothelium Barrier; (b) Metabolism; (c) Hydration and Maintenance of Steady State D)Relationship of hydration and corneal metabolism to transparency.
Prerequisites:	Permission of instructor.
Course Number:	GM207B
Course Title:	LGN and Cortex: Early Visual Processing of the Brain
Credits:	2.0 Credits
Description:	This tutorial will provide basic information on the role of thalamus and striate cortex visual processing. It will require reading classical and recent papers on topics related with thalamocortical processing. It will cover anatomy, physiology and computational models of sensory processing in the early visual pathway. The objectives of the course are to provide a basic understanding of the anatomy and physiology of the early visual pathway, become familiar with the most recent discoveries in this field and develop skills of critical thinking when reading the relevant scientific literature.
Prerequisites:	There is no specific prerequisite other than a genuine interest in the topics to be discussed and a willingness to read a large number of papers and write reports on the reading material. Open to PhD students or permission of instructor.
Course Number:	GM208B
Course Title:	Ocular Motility : Oculomotor Systems
Credits:	2.0 Credits
Description:	The main purpose of this course is to provide the student with an overall appreciation of the behavioral, functional and physiological characteristics of the oculomotor system. This involves a review of the various oculomotor subsystems (saccadic, smooth pursuit, fixation, vestibuloocular and optokinetic) and especially what sort of stimuli and central functional mechanisms are responsible for eye movements. In addition, the course will consider a variety of current issues about the perception of visual space at the time of saccadic and smooth pursuit movement.
Prerequisites:	Permission of instructor. Not open to first year optometry students.
Course Number:	GM208C
Course Title:	Ocular Motility: Visuo-motor selection and decision processes
Credits:	2.0 Credits
Description:	Visually-guided behavior requires selection of an object (or objects) as the goal for action. This tutorial investigates the neural processes underlying the visual selection of objects for action. Special emphasis is placed on saccadic eye movements, although smooth pursuit eye movements and visually-guided reaching movements are also considered.
Prerequisites:	Permission of Instructor. Students should have basic familiarity with the structure and function of the oculomotor system from the Ph.D. Proseminar course (or equivalent).
Course Number:	GM209C
Course Title:	Binocular Vision: Motor and Perceptual Aspects of Vergence Eye Movements
Credits:	2.0 Credits
Description:	The purpose of this course is to provide a comprehensive overview of the major components of human vergence and their interactions, both basic and clinical. This is done by first discussing each vergence component separately (disparity,

blur, proximal, and tonic), and then in the context of a static and dynamic interactive model. For each topic, classic paper/chapters, as well as more recent important advances, are discussed by the students. Topics include: overview of vergence; anatomy, physiology, neurology, and pharmacology; disparity drive; accommodative drive; proximal drive; tonic drive; models of vergence; vergence in disease; training of vergence.

Prerequisites: Professional Course: Visual Function Sensory Motor I & II and Permission of Instructor.

Course Number: **GM210B**
Course Title: **Visual Perception: Depth Perception and Cue Combination**
Credits: 2.0 Credits
Description:

This tutorial covers cues to depth and spatial layout and how they are combined by the visual system. Special emphasis is placed on binocular disparity as a cue for stereoscopic depth perception. Topics covered include: (1) Pictorial depth cues; (2) Utility of binocular vision; (3) Binocular vision: version and vergence; (4) Panum's fusional area; (5) Geometric horopter (Vieth-Mueller circle); (6) Empirical horopter; (7) Horizontal disparity: head-centric (vergence), absolute retinal, relative; (8) Geometric and Induced effects; (9) Relative depth disparity; (10) Binocular correspondence and correlation; (11) Coordinate systems: Helmholtz, Fick, Hess, Harms, polar, direction circles; (12) Development of stereoscopic vision in infancy; (13) Neural basis of disparity detection in V1 and MT cells; (14) Optimal (Bayesian) cue combination; (15) Robust weighting of redundant cues.

Prerequisites: PhD students or Permission of Instructor.

Course Number: **GM210C**
Course Title: **Visual Perception: Perceptual Learning**
Credits: 2.0 Credits
Description:

This tutorial covers known forms of perceptual learning: learning to discriminate (differentiation), recalibration (including contingent recalibrations), cue reweighting, and cue recruitment. It is taught in a tutorial format: each week, students are given a list of papers to read and an essay topic about which to write. Essays are read aloud during the tutorial meeting and critiqued for both content and style. Topics covered include: (1) Plasticity as a general concept; (2) Discrimination theory: differentiation versus assimilation; (3) Neuronal correlates of improved perceptual discrimination in cortex; (4) Effects of task and difficulty; (5) Eureka effect; (6) Importance of cognitive representation to learning; (7) Sensory recalibration: gain control across sensory channels; (8) Sensory-motor Recalibration; (9) Negative adaptation aftereffects and normalization; (10) Contingent aftereffects; (11) Adaptations that optimize encoding, transmission, and representation efficiency; (12) Sensory deprivation during development: neural adaptations and deficits; (13) Altered sensory innervation during development: neural adaptations; (14) Neural correlates of perceptual learning in cortex; (15) Associative learning in perception.

Prerequisites: PhD Students or Permission of Instructor.

Course Number: **GM210D**
 Course Title: **Visual Perception: Current Research on Clinical Conditions Affecting Visual Space Perception**
 Credits: 2.0 Credits
 Description: Many clinical conditions impair patients' abilities to visually perceive the spatial layout of their environment and to safely carry out visually-guided spatial-motor activities. Research into such impairments and their remediation has been increasing in recent years, in part due to increasing technical capabilities to conduct such research. In addition to producing a better understanding of these impairments and their potential for remediation, such research can also lead to a better understanding of the basic processes underlying perception and action in complex spatial environments. This seminar aims at a close reading and critical examination of some recent research in this area.

Prerequisites: Permission of Instructor.

Course Number: **GM211**
 Course Title: **Ocular Biochemistry : Biochemical and Nutritional Implications in Ocular Health and Disease**
 Credits: 2.0 Credits
 Description: Topics include general nutritional considerations, age-related macular degeneration, age-related cataract, relationship to chronic systemic disease (cardiovascular disease, hypertension, diabetes). Course objectives are to:

- 1) Describe general nutritional concepts and parameters as these relate to the maintenance of health and the development of disease;
- 2) Explain the role of nutrition in the development of AMD and the interactions between diet, other environmental parameters and genetic characteristics;
- 3) Analyze predictive models that have been developed for AMD which include genetic, demographic and environmental variables;
- 4) Explain the role of nutrition in the development of ARC and the interactions between diet, other environmental parameters and genetic characteristics;
- 5) Delineate common mechanisms that apply to age-related ocular disease and chronic systemic disease.

Prerequisites: Permission of Instructor. The prerequisite for this seminar is material on general and ocular nutrition now presented in the professional courses Human Bioscience II and Ocular Anatomy, Biochemistry and Physiology II (spring semester, 1st year). For combined OD/MS students, this seminar is for 2nd year students on.

Course Number: **GM212**
 Course Title: **Ocular Pharmacology**
 Credits: 2.0 Credits
 Description: This seminar will examine the mechanisms of action of pharmacological agents used to treat disorders associated with the visual system. The seminar focuses on existing treatment modalities and their mechanisms, and the identification of novel treatment options based on new studies. The students are required to read both classic and recent papers on topics including wet and dry forms of age-related macular degeneration, cataracts, glaucoma and corneal wound healing and present their views to the class. At the end of the course the student will have acquired knowledge and an understanding of the (1) Important signaling pathways in angiogenesis, the genetic factors involved in age-related

Prerequisites:	macular degeneration, old and new strategies used for the management of neovascularization in wet AMD, and for the management of dry AMD; (2) Pathophysiology of cataract formation with specific emphasis on anti-oxidant molecules and ways to delay the progression of senile cataracts; (3) Current state of knowledge of drugs used to treat glaucoma; (4) Drugs used to treat disorders involving cornea. Permission of Instructor.
Course Number:	GM213
Course Title:	Ocular Pathology
Credits:	2.0 Credits
Description:	This seminar will introduce the students to the pathophysiology of diabetic retinopathy. The seminar will look at the underlying molecular, cellular and biochemical processes that occur to the retinal circulation in the diabetic individual. The objective is to have a better understanding of diabetic retinopathy at the molecular and cellular level. Topics include: retinal and choroidal circulation; review of autoregulation, and factors that influence blood flow in the microcirculation; review of the stages of diabetic retinopathy; role of autoregulation, the endothelins, renin angiotensin system, (RAS) and nitric oxide and hyperglycemia on the retinal microcirculation.; role of VEGF and other cytokines in the pathophysiology of diabetic retinopathy.
Prerequisites:	Permission of Instructor.
Course Number:	GM214
Course Title:	Accommodation
Credits:	2.0 Credits
Description:	The purpose of the course is to provide a comprehensive overview of the major components and related aspects of the human accommodative system, both normal and abnormal, all within the context of various static and dynamic bioengineering models of the system. Blur, disparity, proximal and tonic components are reviewed, first separately, and then interactively, both physiologically and mathematically in their description and analyses. In addition, the physiology, neurology, anatomy, and pharmacology are discussed in detail. Topics include: overview of accommodation; anatomy, physiology, neurology, and pharmacology; blur drive; disparity drive; proximal drive; tonic drive; models of accommodation; accommodative in disease; training of accommodation.
Prerequisites:	Permission of Instructor.
Course Number:	GM215
Course Title:	Pre-dissertation Research
Credits:	1 credit per 2 hours of research per week
Description:	PhD Students completing their first year lab rotations and MS Students
Course Number:	GM216
Course Title:	Visual Physiology of the Eye: Etiology & Treatment of Myopia
Credits:	2.0 Credits
Description:	This course will evaluate theories of myopia etiology and discuss both the effectiveness of current methods of treatment and potential therapies to reduce this highly prevalent condition.
Prerequisites:	Permission of Instructor.

Course Number: **GM218**
Course Title: **Visual Development**
Credits: 2.0 Credits
Description: One or more of the following topics will be explored throughout the term (students decide which topics they would like to research): a) Development of Visual Acuity; b) Development of Contrast Sensitivity Function; c) Development of Binocular Sensory Function; d) Development of Ocular Motility; e) Development of Accommodation; f) Development of Visual Fields; g) Development of Refractive Error and Emmetropization; h) Development of Color Vision; i) Development of Accommodative/Vergence Interactions.
Prerequisites: Permission of Instructor. Students should have taken the professional course Children's Vision and Learning I.

Course Number **GM219**
Course Title: **Ethics in Research**
Credits: 1.0 Credit
Description: This is a seminar for Graduate students examining the Responsible Conduct of Research. Topic Areas will include, but not be limited to: cheating, dishonesty, and whistle blowing; proprietorship of research information and data; plagiarism; informed consent; massaging" data; retrospective studies; bias in research design; authorship; institutional responsibility towards ongoing research monitoring.
Upon completion of this course, Students will demonstrate:
(1) A heightened sensitivity to the code of ethical conduct required in biomedical research; (2) Understanding all of the IRB review process, including federal and local requirements involved in the conduct of human subject research, and in particular the 'consent process;' (3) Understanding all aspects of the IACUC process, including federal and local requirements for laboratory animal care and use; (4) Familiarity with the skills needed to identify critical aspects of human and animal ethical dilemmas and resolve them in a rationale and responsible manner. These will consist primarily of case studies and presentations; (5) Misconduct in Science, including the role of graduate students, faculty, authorship, and misrepresentation of scientific data.
Prerequisite: None.

Course Number **GM220B**
Course Title: **Receptors and Cell Signaling Pathways: Introduction**
Credits: 2.0 Credits
Description: This course is intended to provide general introduction to the field of signal transduction, tracing the steps between a ligand binding to its specific receptor and its ultimate cellular biological effects. There is no required textbook. Instead we will be referring to the current scientific literature for reference material. Course grade will be based on classroom presentations of assigned scientific articles and a take home exam. Along the way, many structural, functional, and regulatory relationships among the various hormones, cytokines, their receptors, effector systems, enzymes, signal integrators and signal propagators, transcription factors, etc. will be encountered. At the end of the course, the student should possess knowledge about the nature of endocrine, paracrine, and autocrine signaling, about the key structural domains involved in signal transduction from the cell membrane to its nucleus, about the basic principles of signal transmission used by growth factors, peptide hormones,

Prerequisite:	steroids, cytokines, and about cross-talk between the various signaling systems. Permission of Instructor.
Course Number:	GM220C
Course Title:	Receptors and Cell Signaling Pathways: Altered Responses in Ocular Disease
Credits:	2.0 Credits
Description:	This seminar begins by covering topics related to receptor control of responses related to the maintenance of ocular health. In order to understand how such control is elicited, we will initially discuss receptor mediated cell signaling pathways that elicit control of responses needed for the preservation of ocular transparency and visual acuity. Such an endeavor entails introducing differences between receptor types and how their activation by ligands is transduced to elicit control of cell proliferation, differentiation, apoptosis, secretion and other responses needed to combat environmental stresses such as pathogenic invasion. After this material is introduced, class participation starts by having two presenters each week assigned discussing how dysregulated receptor and signaling can lead to specific disease states. I will offer to the class each week relevant scientific articles which are to be presented by two different class members. These papers are chosen from the vast literature describing: a) injury-induced corneal opacification; b) lens cataractogenesis; c) open and closed angle glaucoma; d) age related wet and dry macular degeneration. The discussions will be focused on understanding the current state of knowledge describing how disrupted receptor and cell signaling activation can manifest each of these pathophysiological conditions.
Prerequisite:	Permission of Instructor.
Course Number:	GM222
Course Title:	Retinal Mechanism and Behavior
Credits:	2.0 Credits
Description:	The purpose of these tutorials is to review in depth some of the classical issues of retinal physiology, and refer them to current research. Students will meet with the instructor in groups of 1-3. Each lesson one student will be required to write an in-depth review of the topic for that week. The other students shall then offer their contributions. Open ended discussion led by the instructor will then further explore the topic. At the end of the course, each student will be required to write a professional-style review of a given topic to be approved by the instructor. Topics covered included: relating physiology to perception; measuring receptors; the use of interference fringes in vision research; retinal arrays and receptive fields; early studies of primate ganglion and LGN cells; the X and Y cell story; neurometric analysis; correlations and waves in the retina; contrast gain controls and contrast adaptation in the retina; how specific are chromatic and luminance mechanisms?; color coding strategies for the retina and cortex; the nature of visual adaptation.
Prerequisite:	PhD students only or Permission of Instructor.

Course Number: **GM230**
Course Title: **Proseminar: Introduction to Vision Science: Part I**
Credits: 6.0 Credits
Description: This course is Part 1 of a year-long course designed to give a basic introduction to the eye. The emphasis will be to provide a background to the physiology, biophysics and neurobiology of the eye. Lecturers will impart basic information and ideas and also stress current foci of research interest. There will also be an emphasis on introducing research methods and their pitfalls. At the end of the course the student will have acquired the following knowledge and skills:
1) Background knowledge of eye vegetative anatomy
2) Basic knowledge of membrane biophysics and synaptic transmission
3) Basic appreciation of the concepts of physiological optics
4) Structure and function of the front of the eye (lens, cornea)
5) Knowledge of basic retinal anatomy, how this is manifest in the primate retina, basics of color vision
6) Methodology of vision research, both from a biochemical/ pharmacological and systems/neurobiological perspective
7) Basic knowledge of the main forms of retinal disease.
Prerequisite: PhD students only. Permission of Instructor.

Course Number: **GM231**
Course Title: **Proseminar: Introduction to Vision Science: Part II**
Credits: 6.0 Credits
Description: This seminar gives a basic introduction to post-retinal visual processes and perception. The emphasis will be to provide a background to the functional neurobiology of the cortex. The seminar is aimed at students in the PhD program. Lecturers will impart basic information and ideas and also stress current foci of research interest. There will also be an emphasis on introducing research methods and their pitfalls. These topics will then be further pursued in the tutorial program.
Prerequisite: PhD. students only. Permission of Instructor.

G300 Level Courses

Course Number: **GE307**
Course Title: **Independent Study**
Credits: 1 credit per 2 hours of independent study per week.

G400 Level Courses

Course Number: **GD401**
Course Title: **Dissertation Research**
Credits: 1 credit per 2 hours of research per week.
Description: PhD Students working on doctoral dissertation.

GRADUATE ADMISSIONS OVERVIEW

Vision Science is the study of the structures and processes involved in vision. It includes physics, chemistry, anatomy, physiology, behavioral sciences, applied mathematics and engineering, as these subjects apply to the visual system.

The Graduate Program in Vision Science is designed for individuals holding a professional degree in a health science or a bachelor's degree in any discipline. Students in the graduate program may work towards either a PhD degree or MS degree in Vision Science.

The Graduate Program is administered by the Associate Dean for Graduate Studies and Research. Recommendations concerning admissions, curriculum, tuition waivers and graduate assistantships, course and standing, and student advisors are made by the Committee on Graduate Program Policy, Admissions and Standing. Student records are maintained in the Office of Student Affairs..

PhD in Vision Science

4 to 5 year research program:

PhD students participate in a series of seminars, tutorials and research tailored to the interests of the students. Intensive training in selected areas of research and completion of a doctoral dissertation form the basis of graduate training. PhD students are eligible for financial support through graduate student stipends, tuition waivers, grants and fellowships.

OD/PhD in Vision Science

Minimum 6 years:

Students follow the optometry curriculum while devoting summers and academic year elective time to graduate seminars and research. At the end of the third year of the OD program, students work full time towards their PhD degree. Upon completion of all PhD requirements, students return to the OD program to complete clinical requirements. The students are supported in their work through stipends and fellowships.

OD/MS in Vision Science

4 years:

Qualified OD students may also apply for admission into the Graduate Program in Vision Science leading to the joint OD/MS degree. Typically, elective time during the regular academic year and summers is devoted to graduate courses and research. In this manner, students are able to fulfill OD and MS degree requirements within 4 years. Financial support for the dual degree program comes through fellowships and tuition waivers. Students who are accepted into the OD/MS program do not pay any additional tuition for the MS degree portion of the program during the four years they are also enrolled in the OD program.

Requirements for Admissions

- To be considered for admission to the Graduate Program in Vision Science an applicant must have completed the following requirements: Baccalaureate or professional degree
- Graduate Record Examination (general aptitude tests institutional code 2897) for all students applying to the full-time PhD program as well any student applying to the OD/PhD program. The site also provides info on test locations and dates. http://www.ets.org/gre/revised_general/register
- OATs may be substituted for the GRE only for optometry students applying for admission into the OD/MS in Vision Science.
- Standardized test scores are heavily emphasized in admission decisions. The most recent scores carry the most weight. The math scores carry more weight than verbal scores; and scores are not used in decisions regarding advanced standing.

ABOUT OUR RESEARCH

SUNY Optometry has nationally and internationally recognized faculty engaged in cutting-edge research in eye and vision science. The College is committed to expanding its research efforts and, as such, continues to search for new outstanding vision scientists to bring on board.

Research at the college is organized under the Graduate Center for Vision Research (GCVR). The GCVR oversees all programs supporting basic, translational, and clinical research on the eye and vision at the college, including the college's graduate programs for PhD and MS students as well as OD-MS and OD-PhD joint degree programs.

Currently research investigations can be classified in the following areas:

Cell Biology and Ocular Pharmacology

This group studies the functioning of various components of the eye, using primarily cell and molecular biology approaches. Research interests of this group include: cornea and cell signaling pathways, gap junctions and the interactions of tear proteins and the cornea.

Visual Optics

This group studies accommodation; wavefront aberrations of the eye; pupil dynamics; optics and composite prismatic; binocular vision; optical visual control of eye growth and emmetropization; and development of refractive errors.

Visual Neurophysiology

This group studies the neural basis of visual function using electrophysiological and computational methods. Research interests include color processing by retinal and cortical neurons, evolution of color vision, 3-D shape extraction by cortical neurons, neural connectivity, cortical feedback of LGN, effective state of neural responses, neural effects of glaucoma, control of eye-movements, etc.

Vision and Visual Perception

This group focuses on functional aspects in human vision ranging from low-level detection to high-level perception. Research interests include color vision, visual adaptation, spatio-temporal vision, space perception, 3-shape perception, visual learning, visual rehabilitation, reading, eye movements, visual deficits due to glaucoma and diabetes, etc.

Clinical Research

Clinician scientists and researchers at the college conduct research studies with our patient population at the University Eye Center. Areas of research studies include vision rehabilitation, binocular vision, imaging, disease, contact lenses, presbyopia, myopia, amblyopia, traumatic brain injury.

Research at the College is funded by a variety of sources including the NIH, NSF, Department of Defense, the Schnurmacher Institute for Vision Research, and industry.

GRADUATE FACULTY ADVISORS

Jose-Manuel Alonso, MD, PhD
Functional Circuitry of the Thalamus and Cortex

Benjamin Backus, PhD
Learning in Visual Perception

Alexandra Benavente-Perez, PhD, McOpt, MS
Visual control of eye growth, Alzheimer's disease and glaucoma, biometric and physiological factors in human ocular perfusion

Stewart Bloomfield, PhD
Functional Roles of Gap Junctions in Retinal Physiology and Pathology

Kenneth Ciuffreda, OD, PhD
Abnormal Oculomotor Systems/Head Trauma

Jeffrey Cooper, OD, MS
Convergence Insufficiency

Robert H. Duckman, OD, MS
Amblyopia

Mitchell Dul, OD, MS
Perimetry/Visual Fields/Psychophysics/Glaucoma

Ralph Gundel, OD
Contact Lens and Cornea and Keratoconus

Philip B. Kruger, OD, PhD
Stimuli for Accommodation/Wavefront Abberation

Robert McPeck, PhD
Neural Mechanisms Underlying Attention and Visually-Guided Actions

Tracy Nguyen, OD, PhD
Corneal Diseases

Jordan Pola, PhD
The Control of Smooth Pursuit Eye Movement

Joan K. Portello, OD, MPH, MS
Computer Vision Syndrome

Peter Reinach, PhD
Cornea Cell Signaling/Corneal Wound Healing

Kathryn Richdale, OD, PhD
Patient-Based Research in Presbyopia and Contact Lenses

Mark Rosenfield MC Optom, PhD
Myopia and Retinal Defocus

Danielle Rutner, OD, MS
Visual Rehabilitation

Steven H. Schwartz, OD, PhD
Psychophysical Investigations of Glaucoma

Harold A. Sedgwick, PhD
Perception of Spatial Layout in Low Vision

Jerome Sherman, OD
Ocular Disease

Miduturu Srinivas, PhD
Gating and Pharmacology of Lens Gap Junction Channels

David Troilo, PhD
Visual Development, Accommodation, Refractive Error, Myopia

Suresh Viswanathan, BOpt, MS, PhD, FAAO
Retinal ganglion cell function/glaucoma

Qasim Zaidi, PhD
Color Perception/Three-Dimensional Shape Perception

THE PROFESSIONAL OD PROGRAM WITH AN MPH AND MBA OPTIONS

Affiliated MPH Program at SUNY Health Sciences Center in Brooklyn

The recent establishment of a Masters in Public Health (MPH) program at the SUNY Health Sciences Center in Brooklyn presents an opportunity for professional program students and faculty at SUNY College of Optometry to earn the MPH degree. Professional program students and holders of the OD degree will be given credit toward the MPH that will reduce their total credit requirement for the program to 36 credits. The OAT will be used instead of GRE scores. Current SUNY Optometry students can complete both the OD and MPH concurrently during the course of the 4 year OD program.

It is estimated that the total tuition for the program will be approximately \$9,000. Courses will be held at the SUNY Health Sciences Center in Brooklyn during the late afternoons or evenings to accommodate professional program students from this College and from the medical and nursing programs at Brooklyn.

Baruch College MBA in Conjunction with OD

The College of Optometry has an arrangement with Baruch College of the City University of New York whereby qualified optometry students can apply for admission into Baruch's well-respected MBA in Healthcare Administration program. This unique educational opportunity provides the basis for careers that combine clinical care and management roles.

While the part-time MBA in Healthcare Administration program is normally three years in duration, SUNY Optometry students may complete both the OD and MBA in four or five years. In option 1, which takes a total of four years, the final three years of optometry school are completed in conjunction with the three-year MBA program. In option 2, a five-year program, the first year of the MBA curriculum may be spread out over the second and third years of optometry school. The fourth year of optometry curriculum is divided into two years, with the final two years of the MBA program completed during this time.

MBA courses are generally given on Tuesday and Thursday evenings. Certain courses may be offered during the summer.

For both options, students should apply during the first year of optometry school. SUNY Optometry will support the applications of those candidates it believes can excel in both programs. Please note that the final decision with regard to admission into the MBA program is made by Baruch College. Financial aid is coordinated by both institutions.

For more information on the MBA admissions requirements, application deadline, and curriculum, please consult MBA in Healthcare Administration. Students considering this program should contact Dr. Stewart Bloomfield, Associate Dean for Graduate Studies and Research (Phone 212-938-5541).

Fellowship Programs

FELLOWSHIP IN CLINICAL MANAGEMENT AND HEALTH CARE ADMINISTRATION

The College of Optometry offers a unique program leading to a certificate of completion in "CLINICAL MANAGEMENT AND HEALTH CARE ADMINISTRATION." This 90 hour program can be offered within one full-year or over the course of two years for Fellows also enrolled in the MBA degree in Health Care from Baruch College in New York City.

The mission of the Fellowship program is to train optometrists to administer clinical optometric programs in an era of inter-disciplinary health care and managed care.

The program consists of the following areas: (1) 30 hour orientation to the University Eye Center; (2) 60 hours of seminars in finance, managing clinical programs under multiple reimbursement structures, outpatient program management, privileging and credentialing, hospital administration, performance standards, outcome measures, disease management, and managed care. In addition, research is conducted on a regular basis under the supervision of the Vice President for Clinical Affairs. All fellowship recipients are also required to submit a minimum of two papers for publication in peer-reviewed journals prior to receiving their certificate of completion.

RESIDENCY PROGRAMS

The College has a rich history in clinical residency education. The Residency in Vision Therapy was the first year-long program in the country. Residencies provide the opportunity to gain increased knowledge and clinical training for the newly graduated optometrist in a particular area of vision care.

Throughout the year, residents participate in grand rounds, workshops and/or a series of lectures and seminars at the College. Emphasis is placed on the development of the residents' didactic and clinical teaching skills. Each resident is required to present a minor and major presentation and submit a paper of publishable quality. SUNY's unique didactic program provides all affiliated residencies the opportunity to interact with residents and faculty at sites other than their own. All residencies are one-year in duration and are either accredited or in the process of accreditation by the Accreditation Council on Optometric Education (ACOE). The starting date for all residency programs is July 1. At the completion of the residency program, SUNY confers a Certificate of Advanced Clinical Competency.

For additional information on SUNY State College of Optometry's Affiliated Residency Programs, you may contact:

Dr. Diane T. Adamczyk
Director of Residency Education
Toll Free Phone: 877-829-1024 E-mail: dadamczyk@sunyopt.edu
SUNY State College of Optometry
33 West 42nd Street
NY, NY 10036

Additional information on Residency Programs can be obtained from the Association of Schools and Colleges of Optometry (ASCO) website at: <http://www.opted.org>.

APPLICATION INSTRUCTIONS FOR RESIDENCY PROGRAMS

All candidates must follow the guidelines established by ORMatch. This matching service is utilized for all SUNY affiliated programs with the exception of the program at the U.S. Military Academy at West Point.

(Please see Program Descriptions for further information)

**Residency in Cornea and Contact Lenses
SUNY State College of Optometry, NYC**

Program Supervisor:

Dr. David Libassi

Phone: (212) 938-5872, Fax: (212) 938-4146, E-mail: dlibassi@sunyopt.edu

Description of Program: This 12 month program is designed to enhance the individual's understanding of contact lens design and application, as well as their potential impact on corneal physiology. Through direct patient encounter and supervision of third and fourth year interns, the Cornea and Contact Lens resident will gain experience primarily in the fitting of rigid gas permeable and custom soft contact lenses. The resident will work along side senior Specialty Contact Lens Clinical faculty with extensive experience in fitting all lens designs. The resident will fit, manage and follow clinical cases of keratoconus, irregular cornea, post corneal transplant, rigid and soft prosthetic lenses, high myopia, high astigmatism, pediatric aphakia, as well as some disposable soft spherical and toric lenses. Additional clinical time is scheduled each week for the resident to work with a corneal specialist on the diagnosis and management of patients suffering with anomalies of the cornea.

Educational Opportunities: Didactic educational requirements are primarily fulfilled by the SUNY Friday Program. This program of weekly seminars by select academic and clinical faculty is designed to reinforce the residents' broad clinical experiences. In addition, the contact lens resident will attend an off-campus two day clinical educational program in the fitting and management of ocular prosthetics. Certification of prosthetic training and subsequent patient care at the university provides the resident with a rare and desirable clinical skill. Finally, residents are encouraged to attend and participate in the American Academy of Optometry yearly educational meeting.

Teaching Responsibilities: The resident will have direct clinical teaching responsibilities, give both minor and major presentations to other residents and selected faculty, as well as present seminars to the third and/or fourth year students.

Research Responsibilities: Working directly with the program supervisor, and the coordinator for clinical research, the resident will be responsible for conducting his/her own publishable research or actively participating as co-investigator/co-author for an on-going project. Such research will likely involve both clinical as well as laboratory research skills.

Length of Program: 12 Months

Starting Date: July 1

Number of Positions: 1

Compensation Level: \$37,288

Benefits: There is optional participation in a health insurance plan including prescription drug coverage, with a contribution from the employee, depending on the option chosen. Dental care and vision coverage is available through the union representing this position. Residents earn sick leave and annual leave at the rate of 1.25 days per month. Twelve paid holidays per calendar year.

Required Hours Per Week: 40 Hrs

On Call Responsibilities:

Approximately 4 wks/year rotating
with other residents

Application Deadline: February 1

Use ORMatch: Yes

Accreditation Status: Fully
Accredited by ACOE

Further information on the program and application procedures can be obtained by contacting:

Dr. David Libassi

SUNY State College of Optometry

33 West 42nd Street, New York, NY 10036

**Residency in Family Practice/Ocular Disease Optometry
East New York Diagnostic And Treatment Center, Brooklyn, NY**

Program Supervisor:

Dr. Lloyd Haskes

Phone: (718) 240-0445, Fax: (718) 240-0564, E-mail:lhaskes@sunyoapt.edu

Description of Program: In this multi-disciplinary medical setting, the resident provides eye care for patients of all ages with a diverse range and high rate of ocular and systemic disorders. The resident also provides direct care under ophthalmologic supervision, observes surgeries, and observes patient care in various non-ophthalmic medical departments. The resident manages all cases and coordinates inter-disciplinary care when necessary. Individuals who complete the program are prepared to develop and operate a full-scope urban eye care service.

Educational Opportunities: Case conferences are provided by the program and on-site supervisors. The resident participates in a college sponsored didactic program which includes seminars and workshops at SUNY Optometry, and joint grand rounds with residents in other college-affiliated programs throughout the year.

Teaching Responsibilities: During the second half of the program, the resident participates in the clinical education of fourth year externs from SUNY Optometry.

Scholarly Activity: Working with the program supervisor, residents are required to present one minor and one major presentation and write at least one paper of publishable quality. In addition, there is an opportunity to attend and participate in academic conferences.

Length of Program: 12 Months

Starting Date: July 1

Number of Positions: 1

Compensation Level: \$37,288

Benefits: There is optional participation in a health insurance plan including prescription drug coverage, with a contribution from the employee, depending on the option chosen. Dental care and vision coverage is available through the union representing this position. Residents earn sick leave and annual leave at the rate of 1.25 days per month. Twelve paid holidays per calendar year.

Required Hours Per Week: 40 Hrs

Accreditation Status: Fully

Accredited by ACOE

Application Deadline: February 1

Use ORMatch: Yes

Further information on the program and application procedures can be obtained by contacting:

Dr. Lloyd Haskes

East New York Diagnostic & Treatment Center, Eye Clinic

2094 Pitkin Avenue, Brooklyn, NY 11207

**Residency in Family Practice Optometry
United States Military Academy, Keller Army Hospital, West Point, NY**

Program Supervisor:

Dr. Stefan Kochis

Phone: (845) 938-2021, E-mail: stefan.m.kochis.mil@mail.mil

Description of Program: This 12 month program, based at the U.S. Military Academy at West Point, NY, is available to active duty Army Optometrists and recent graduates with an obligated commitment to the U.S. Army. The clinic population is composed of cadets, faculty, staff, active duty dependents, and retirees. The program provides advanced clinical training for military optometrists. This program employs full scope

optometry with a significant portion in the fitting and management of contact lenses and contact lens complications. The resident will also rotate through ophthalmology and consult with other hospital specialty clinics. The resident spends approximately 15% of the time at SUNY in a joint didactic program with other SUNY residents.

Educational Opportunities: The residency program includes rotations with ophthalmology and interaction with other hospital clinics. The resident will attend optometry conferences (military and civilian) as well as army courses specific to medical and optometric interest.

Teaching Responsibilities: Teaching skills are developed by assignment with optometry interns.

Research Responsibilities: Minor presentation, major presentation, and publishable paper required. Opportunities for research available.

Prerequisites: O.D. and obligated commitment to the U.S. Army through the Health Professions Scholarship Program and/or ROTC.

Length of Program: 12 Months

Number of Positions: 1

Starting Date: July 1

Compensation Level: Military Pay

Benefits: Full health coverage, regular military benefits, 30 days leave/year (15 days can be taken during the residency year)

Required Hours Per Week: 45 Hrs

Application Deadline: February 1

Accreditation Status: Fully

Use ORMatch: No

Accredited by ACOE

Further information on the program and application procedures can be obtained by contacting:

Dr. Stefan Kochis
Optometry Clinic
Keller Army Hospital, Building #606
West Point, NY 10996

Residency in Low Vision Rehabilitation

SUNY State College of Optometry, NYC/The Lighthouse International, NYC

Program Supervisor:

Dr. Rebecca Marinoff
Phone: (212) 938-5937, E-mail: rmarinoff@sunyopt.edu

Description of Program: This 12 month program is a cooperative endeavor between the Lighthouse International of NYC and the College. It is designed to provide the individual with advanced and concentrated clinical and didactic experience in all aspects of low vision rehabilitation. Residents will also be involved in both coordination and consultation of patient care with other rehabilitation, medical, and social services. Additional responsibilities will include participation in research, the preparation of a publishable paper, and the development of an understanding of the management of a low vision service and the political and social forces influencing the mode of care delivery. Individuals who complete the program are expected to be able to deliver a high level of clinical care, serve as teachers in optometric institutions, and serve in a leadership role in optometric and service agencies and organizations involved in low vision care.

Educational Opportunities: In addition to weekly seminars, through directed self-study, the resident will gain an in-depth understanding of low vision rehabilitation theory and its application to practice in varied clinical-care settings.

Teaching Responsibilities: The resident will have direct clinical teaching responsibilities and be a teaching assistant in the lab portion of the low vision course.

Research Responsibilities: Working directly with the program supervisor and other faculty members, the resident will be responsible for conducting his/her own publishable research or actively participating as co-investigator/co-author for an ongoing project.

Length of Program: 12 Months
Starting Date: July 1

Number of Positions: 1
Compensation Level: \$37,288

Benefits: There is optional participation in a health insurance plan including prescription drug coverage, with a contribution from the employee, depending on the option chosen. Dental care and vision coverage is available through the union representing this position. Residents earn sick leave and annual leave at the rate of 1.25 days per month. Twelve paid holidays per calendar year.

Required Hours Per Week: 40 Hrs
On Call Responsibilities:
Approximately 4 wks/year rotating
with other residents

Application Deadline: February 1
Use ORMatch: Yes
Accreditation Status: Fully
Accredited by ACOE

Further information on the program and application procedures can be obtained by contacting:

Dr. Rebecca Marinoff
SUNY State College of Optometry
33 West 42nd Street, New York, NY 10036

Residency in Ocular Disease
SUNY, State College of Optometry, NYC

Program Supervisor:

Dr. Sherry Bass
Phone: (212) 938-5865, Fax: (212) 938-5819, E-mail: sbass@sunyopt.edu

Description of Program: The Residency in Ocular Disease at the State University of New York, State College of Optometry will provide the resident with training and education necessary to deliver advanced ophthalmic care that meets the visual needs of a diverse population of patients having ocular disease. Residents will have responsibilities in patient care, community outreach and patient education, clinical education and research. The residents will be expected to provide a full range of ophthalmic patient care services with emphasis in the differential diagnosis and treatment of ocular disease and visual pathway dysfunction. Residents will also have opportunities to provide eye care in a hospital setting, co-manage refractive surgery patients and observe ocular surgical procedures. Residents will be members of a multi-disciplinary health care team and be responsible for appropriate utilization of facility resources and personnel. Training is accomplished through direct patient care, seminars, grand rounds, and independent study.

Educational Opportunities: Case conferences are provided by the program and on-site supervisors. The resident participates in a college sponsored program which includes workshops at SUNY Optometry and joint Grand Rounds with residents in other college affiliated programs throughout the year.

Teaching Responsibilities: The Resident Will Have Direct Clinical Teaching Responsibilities, Give Both Minor and Major Presentations to Other Residents and Selected Faculty, as Well as Present Seminars to the Third And/or Fourth Year Students.

Research Responsibilities: Working directly with the program supervisor, and the coordinator for clinical research, the resident will be responsible for conducting his/her own publishable research or actively participating as co-investigator/co-author for an on-going project. Such research will likely involve both clinical as well as laboratory research skills.

Length of Program: 12 Months
Starting Date: July 1

Number of Positions: 4
Compensation Level: \$37,288

Benefits: There is optional participation in a health insurance plan including prescription drug coverage, with a contribution from the employee, depending on the option chosen. Dental care and vision coverage is available through the union representing this position. Residents earn sick leave and annual leave at the rate of 1.25 days per month. Twelve paid holidays per calendar year.

Required Hours Per Week: 40 Hrs
On Call Responsibilities:
Approximately 4 wks/year rotating
with other residents

Application Deadline: February 1
Use ORMatch: Yes
Accreditation Status: Fully
Accredited by ACOE

Further information on the program and application procedures can be obtained by contacting:

Dr. Sherry Bass
SUNY State College of Optometry
33 West 42nd Street
New York, NY 10036

**Residency in Ocular Disease / Primary Eye Care Optometry
Department. Of V.A., New York Harbor Health Care System, NY**

Program Supervisor:

Dr. Evan Canellos
Phone: (718) 836-6600, ext. 6497, Fax: (718) 630-3573,
E-mail:evan.canellos@med.va.gov

Description of Program: The goal of this residency program is to enhance the clinical skills of recent graduates with emphasis on delivering primary care optometry within a multi disciplinary environment and treating and managing a host of ocular diseases. There are 3 positions for the program, with equal time spent at each hospital. The St. Albans V.A. Hospital sits on thirty acre campus-like site in Queens, New York, near Kennedy Airport. It is about three miles from the Nassau County border and twenty miles from both the Brooklyn V.A. Medical Center and Manhattan. The Brooklyn V.A. Medical Center is located at the base of the Verazzano Bridge, adjacent to Fort Hamilton in the Bay Ridge section of Brooklyn. The St. Albans V.A. Extended Care Center, a division of the Brooklyn V.A. Medical Center has 225 beds serving as an out-patient clinic, domiciliary and an intermediate and extended care facility. The Brooklyn V.A.M.C. is a 275 bed acute care medical and teaching center. The Optometry section provides primary eye care to inpatients and outpatients at the St. Albans V.A. Extended Care Center and the Brooklyn V.A.M.C.

Educational Opportunities: Conferences and seminars are held weekly. Ophthalmologic Grand Rounds, Retina Clinic, and conferences are held weekly at the Brooklyn VAMC and SUNY, Downstate Medical School. The resident participates in a college sponsored program which includes seminars at SUNY Optometry and joint Grand Rounds with residents in other college affiliated programs throughout the year. Residents have the opportunity to rotate through other clinics in the hospital through the PRIME program ex. general medicine, hematology /oncology rheumatology, and thyroid/diabetes clinic. Residents also have the opportunity to observe various

ophthalmologic surgery, ex. Cataract extraction, trabeculectomy, etc.

Teaching Responsibilities: The resident acts as clinical instructor for fourth year optometry students who rotate through the facility.

Research Responsibilities: Each resident is expected to write a publishable paper.

Length of Program: 12 Months

Number of Positions: 4

Starting Date: July 1

Compensation Level: \$36,042

Benefits: Eligible to participate in the Federal Employees Health Benefits Program and Federal Employees Group Life Insurance. The resident's portion of the health and life insurance premium depends on the plan and coverage selected. Residents earn 13 days sick leave and 13 days annual leave.

Required Hours Per Week: 40 Hrs

Application Deadline: February 1

Accreditation Status: Fully

Use ORMatch: Yes

Accredited by ACOE

Further information on the program and application procedures can be obtained by contacting:

Dr. Evan Canellos

Dept. of Veterans Affairs

New York Harbor Health Care System

Optometry Section/Surgical Service 112 800 Poly Place

Brooklyn, NY 11209

Residency in Pediatric Optometry

SUNY State College of Optometry, NYC

Program Supervisor:

Dr. Marilyn Vricella

Phone: (212) 938-4143, Fax: (212) 938-5819, E-mail: mvrice@sunyopt.edu

Description of Program: This program encompasses both primary and secondary pediatric care. Emphasis is placed upon visual development and its importance in society. Areas of concern include infants and toddlers, preschool and school-age children. The resident will experience multi-disciplinary child care which will include ocular pathology, general pediatrics, children with special needs, special testing, strabismus/amblyopia, and outreach programs.

Educational Opportunities: Graduate level seminars are presented to the resident. Close interaction with clinical faculty in varied clinical settings provides the resident with enhanced clinical skills and knowledge base.

Teaching Responsibilities: The resident serves as a clinical instructor for interns in the Pediatric Clinics of SUNY.

Research Responsibilities: The resident may interact with faculty members regarding scholarly activity. Each resident is required to complete a publishable paper by the end of the program.

Length of Program: 12 Months

Number of Positions: 2

Starting Date: July 1

Compensation Level: \$37,288

Benefits: There is optional participation in a health insurance plan including prescription drug coverage, with a contribution from the employee, depending on the option chosen. Dental care and vision coverage is available through the union representing this position. Residents earn sick leave and annual leave at the rate of 1.25

days per month. Twelve paid holidays per calendar year.

Required Hours Per Week: 40 Hrs

On Call Responsibilities:

Approximately 4 wks/year rotating with other residents

Application Deadline: February 1

Use ORMatch: Yes

Accreditation Status: Fully

Accredited by ACOE

Further information on the program and application procedures can be obtained by contacting:

Dr. Marilyn Vricella
SUNY State College of Optometry
33 West 42nd Street
New York, NY 10036

Residency in Primary Eye Care Optometry

SUNY, State College of Optometry, NYC

Program Supervisor:

Dr. Susan P. Schuettenberg

Phone: 212-938-4161, Fax: 212-938-5819 E-mail: sschuettenberg@sunyopt.edu

Description of Program: The residency in Primary Eye Care Optometry provides a broad based clinical experience in all aspects of Primary Care. The residents expand their clinical knowledge by rotating through the SUNY Primary Care Clinic in order to experience a wide variety of patient types. This includes patients requiring contact lens care, diagnosis of binocular anomalies, diagnosis, management & treatment of glaucoma, retinal disease, and emergency eye care needs. In addition, the resident rotates through the SUNY Glaucoma Institute, and experiences urban clinical patient care at Woodhull Hospital in Brooklyn. The resident gains experience in refractive surgery co-management by rotating through TLC laser center in Manhattan. In a teaching capacity, the resident instructs 2nd year interns in the Methods laboratory and supervises third year interns in the Primary Care clinic. Additionally, the resident can pursue specific clinical interests in vision therapy, low vision, pediatric and infant eye care, head trauma, retina, neuro-optometry, cornea and specialty contact lens clinics.

Educational Opportunities: The resident is encouraged to attend graduate level seminars and workshops, SUNY sponsored continuing education events, and national optometric conferences. In addition, close interaction with clinical faculty in varied clinical settings provides the resident with enhanced clinical skills and knowledge base. Moreover, there is the opportunity for optometric research, if the resident desires.

Teaching Responsibilities: The resident serves as an instructor to 2nd year optometry interns in their methods sequence and as a clinical instructor with 3rd year Primary Care interns.

Scholarly Responsibilities: Residents are required to present one minor and one major optometric lecture. The resident is required to write at least one paper of publishable quality by the end of the residency.

Length of Program: 12 Months

Starting Date: July 1

Number of Positions: 2

Compensation Level: \$37,288

Benefits: There is optional participation in a health insurance plan including prescription drug coverage, with a contribution from the employee, depending on the option chosen. Dental care and vision coverage is available through the union representing this position. Residents earn sick leave and annual leave at the rate of 1.25 days per month. Twelve paid holidays per calendar year.

Required Hours Per Week: 40 Hrs **Application Deadline:** February 1
On Call Responsibilities: **Use ORMatch:** Yes
Approximately 4 wks/year rotating **Accreditation Status:** Fully
with other residents Accredited by ACOE

Further information on the program and application procedures can be obtained by contacting:

Dr. Susan P. Schuettenberg
SUNY State College of Optometry
33 West 42nd Street, New York, NY 10036

**Residency in Primary Eye Care/Ocular Disease Optometry
Department Of Veterans Affairs, New Jersey Health Care System Lyons, NJ**

Program Supervisor:

Dr. Malinda Cafiero
Phone: (908) 647-0180, x4512, E-mail: malinda.cafiero@med.va.gov
Dr. Cathy Marques
Phone: (973) 676-1000, x3917, E-mail: cathy.marques@va.gov

Description of Program: This is a full-scope optometric program in a multi-disciplinary setting with emphasis on assessment and therapeutic management of ocular disease at the Lyons Campus and low-vision at the East Orange Campus. Training is accomplished through direct patient care, seminars, grand rounds, and independent study. Clinical experience in optometry will be enhanced by rotations in other medical specialties such as radiology, neurology, endocrinology, psychiatry, and others. Individuals who complete the program should attain a high level of proficiency in the diagnosis and management of ocular disease and ocular-systemic disease.

Educational Opportunities: The resident will follow a curriculum, which includes seminars and lectures in topics related to optometric medicine. The resident will participate in the total primary health care delivery program and integrate with other medical and health care professionals at the Lyons and East Orange Campuses.

Teaching Responsibilities: The resident participates in the clinical education of fourth year externs from Pennsylvania College of Optometry, SUNY College of Optometry and the University of Houston.

Research Responsibilities: One Paper of Publishable Quality Is Required.

Length of Program: 12 Months **Number of Positions:** 3
Starting Date: July 1 **Compensation Level:** \$36,042

Benefits: Eligible to participate in the Federal Employees Health Benefits Program and Federal Employees Group Life Insurance. The resident's portion of the health and life insurance premium depends on the plan and coverage selected. Residents earn 13 days sick leave and 13 days annual leave.

Required Hours Per Week: 40 Hrs **Application Deadline:** February 1
Accreditation Status: Fully **Use ORMatch:** Yes
Accredited by ACOE

Further information on the program and application procedures can be obtained by contacting:

Dr. Malinda Cafiero
Dept. of Veterans Affairs
New Jersey Health Care System
Lyons Campus
151 Knollcroft Road
Lyons, NJ 07939

**Residency in Ocular Disease/Primary Eye Care
VA Hudson Valley Health Care System, NY**

Program Supervisor:

Dr. Nancy Wong
(914) 737-4400, ext.2014, Fax: (914) 788-4373, E-mail: nancy.wong@va.gov

Description of Program: This is a primary care optometric program with heavy emphasis on the diagnostic assessment and therapeutic management of ocular disease. This program seeks to provide the resident with advanced didactic knowledge and concentrated clinical experience in a hospital setting. Individuals who complete the program are expected to attain a high level of proficiency in the diagnosis and management of ocular disease including those conditions associated with systemic diseases.

Educational Opportunities: The resident will follow a curriculum which includes seminars and lectures in topics related to optometric medicine as well as demonstrate proficiency in clinics such as internal medicine, neurology, infectious disease and vascular. The resident will assist in the provision of care in external satellite clinics run by the VA.

Teaching Responsibilities: The resident participates in the clinical education of fourth year externs from SUNY, Indiana University, NEWENCO, and Illinois Colleges of Optometry.

Research Responsibilities: The resident may participate in ongoing research projects. The resident is responsible for the preparation of one major lecture and one paper of publishable quality.

Length of Program: 12 Months
Starting Date: July 1

Number of Positions: 4 Paid, 1
Without Compensation
Compensation Level: \$36,042

Benefits: Eligible to participate in the Federal Employees Health Benefits Program and Federal Employees Group Life Insurance. The resident's portion of the health and life insurance premium depends on the plan and coverage selected. Residents earn 13 days sick leave and 13 days annual leave.

Required Hours Per Week: 40 Hrs
Accreditation Status: Fully
Accredited by ACOE

Application Deadline: February 1
Use ORMatch: Yes

Further information on the program and application procedures can be obtained by contacting:

Dr. Nancy Wong
The VA Hudson Valley Health Care System, P.O. 100,
Montrose, NY 10548
Attention: Optometry 620/123

**Residency in Primary Eye Care/Vision Therapy And Low Vision Rehabilitation
Northport V.A. Medical Center, Northport, NY**

Program Supervisor:

Dr. Michael McGovern

Phone: (631) 261-4400 x 2136, Fax: (631) 266-6056,

E-mail: michael.mcgovern@va.gov

Description of Program: The residency program at Northport VAMC is designed to provide the graduate optometrist with an excellent training experience through direct clinical care and extensive didactic and scholarly activities. The clinical component of the residency program involves direct patient care and rotations through various clinics throughout the hospital. There are two main components of the program: rehabilitation and hospital-based primary eye care. The **rehabilitative orthoptics** component consists of the diagnosis and treatment of visual problems secondary to aging, stroke, TBI and a variety of systemic/ocular conditions, in the construct of a multidisciplinary health team model. Residents also provide care in the hospital's Center of Balance, a unique multidisciplinary program in which patients with vestibular and balance problems are evaluated and treated by Optometry, Audiology, and Physical Medicine and Rehabilitation Services. The **low vision rehabilitation** components consist of diagnostic exams and treatment of patients with low vision/legal blindness in both an outpatient setting and through our comprehensive VICTORS Program (low vision, rehabilitation, social work, etc.). As this is a hospital based program, the opportunity to interact with medical, social service, nursing and other specialized care practitioners at the hospital is available. The emphasis of the **primary eye care** component is the involvement of the residents in the Primary Health Care model and will emphasize the optometrist as the "Primary Eye Care Provider". The residents will be exposed to clinical experiences in the diagnosis and treatment of refractive and binocular conditions, ocular pathology and the ocular consequences of systemic disease and medications. The didactic and scholarly activities component of the program includes morning lectures by staff, journal club, various lecturing responsibilities, attending professional meetings, and participation in the comprehensive educational program sponsored by our affiliate.

Educational Responsibilities: The resident will follow a curriculum that includes lectures and clinical care of patients within primary care, ocular disease, vision therapy, head trauma, vestibular and low vision clinics. Residents must also fulfill all of the educational requirements of the SUNY Friday Program.

Teaching Responsibilities: The resident will present lectures within the Optometry Service, as well as to other practitioners, staff, and patient groups within the hospital. The resident will have the opportunity to partake in the teaching of fourth year externs.

Research Responsibilities: The resident is required to complete a Minor Presentation, Major Presentation, and a paper of publishable quality.

Length of Program: 12 Months

Starting Date: July 1

Number of Positions: 4

Compensation Level: \$36,042

Benefits: Eligible to participate in the Federal Employees Health Benefits Program and Federal Employees Group Life Insurance. The resident's portion of the health and life insurance premium depends on the plan and coverage selected. Residents earn 13 days sick leave and 13 days annual leave. Low rent dormitory housing is available.

Required Hours Per Week: 40 Hrs

On Call Responsibilities:

Approximately 4 wks/year rotating with other residents

Application Deadline: February 1

Use ORMatch: Yes

Accreditation Status: Fully Accredited by ACOE

Further information on the program and application procedures can be obtained by contacting:

Dr. Michael McGovern
Northport VA Medical Center
Optometry Services (123)
79 Middleville Road
Northport, NY 11768

**Dr. Irwin B. Suchoff Residency Program in Vision Therapy and Rehabilitation
SUNY State College of Optometry, NYC**

Program Supervisor:

Dr. M.H. Esther Han , Phone: (212) 938-5879, Fax: (212) 938-4065,
E-mail: mhan@sunyo.edu

Description of Program: The program emphasizes the diagnosis and treatment of binocular vision and visual perceptual disorders. The residents also rotate through other clinics at SUNY, including Pediatrics, Primary Care, Ocular Disease, Special Testing, Infants Vision, Head Trauma/rehabilitation, Children with Special Needs, and may include Contact Lenses and Low Vision. In the Vision Therapy Service, residents gain experience working with visual perceptual deficits, developmental vision Anomalies, general binocular and eye Movement skill deficiencies, and complex Strabismus.

Educational Opportunities: Special graduate level courses are presented to the residents by various faculty members on topics such as: Amblyopia and Strabismus, Rehabilitative Optometry, Optometric Intervention in the Learning Disabled Population, Clinical Teaching, and Behavioral Optometry.

Teaching Responsibilities: Residents serve as teaching assistants in Third Year Vision Therapy Laboratories. They serve as clinical instructors in vision therapy and pediatric clinics as well as at external screening sites.

Research/Scholarly Responsibilities: The residents may work with a faculty research person of their choice during the course of their program. Residents are also required to complete a publishable paper by the end of the program.

Length of Program: 12 Months

Starting Date: July 1

Number of Positions: 4

Compensation Level: \$37,288

Benefits: There is optional participation in a health insurance plan including prescription drug coverage, with a contribution from the employee, depending on the option chosen. Dental and vision coverage is available through the union representing this position. Residents earn sick leave and annual leave at the rate of 1.25 days per month. Twelve paid holidays per calendar year.

Required Hours Per Week: 40 Hrs

On Call Responsibilities:

Approximately 4 wks/year rotating
with other residents

Application Deadline: February 1

Use ORMatch: Yes

Accreditation Status: Fully
Accredited by ACOE

Further information on the program and application procedures can be obtained by contacting:

Dr. M.H. Esther Han
SUNY State College of Optometry
33 West 42nd Street, New York, NY 10036

**Residency In Vision Rehabilitation (Acquired Brain Injury)/ Primary Eye Care Optometry
SUNY State College of Optometry, NYC**

Program Supervisor:

Dr. Allen Cohen, Phone: (212) 938-4110
E-mail: acohen@sunyopty.edu

Description of Program: This 12 month program provides advanced clinical training in diagnosis, treatment and vision rehabilitation of patients with acquired brain injury (ABI). The resident will be involved in consultation, referral, and interdisciplinary management of care with rehabilitation, medical, and social service professionals. . Emphasis is placed upon the interdisciplinary approach to diagnosing and managing patients with oculomotor as well as ocular health conditions relating to ABI.

Educational Opportunities: Graduate level seminars on topics relating to acquired brain injury, as well as off-campus experience in departments of rehabilitation medicine at local teaching hospitals will be provided. Training will include direct patient care in the Head Trauma Center. Close interaction with clinical faculty in varied clinical setting provides the resident with enhanced clinical skills and knowledge base.

Teaching Responsibilities: The resident serves as a clinical instructor for fourth year externs in the Head Trauma Unit at SUNY.

Research Responsibilities: The resident, if interested, is required to participate in clinical research project, and complete a publishable paper by the end of the program.

Length of Program: 12 Months

Starting Date: July 1

Number of Positions: 1

Compensation Level: \$37,288

Benefits: There is optional participation in a health insurance plan including prescription drug coverage, with a contribution from the employee, depending on the option chosen. Dental care and vision coverage is available through the union representing this position. Residents earn sick leave and annual leave at the rate of 1.25 days per month. Twelve paid holidays per calendar year.

Required Hours Per Week: 40 Hrs

On Call Responsibilities:

Approximately 4 wks/year rotating with other residents

Application Deadline: February 1

Use ORMatch: Yes

Accreditation Status: Fully Accredited by ACOE

Further information on the program and application procedures can be obtained by contacting:

Dr. Allen Cohen
SUNY State College of Optometry
33 West 42nd Street
New York, NY 10036

**Residency In Ocular Disease Optometry
Fromer Eye Centers, Bronx, NY**

Program Supervisor:

Dr. Diane Calderon, Phone: (718) 741-3200, E-mail: dcalderon@fromereye.com

Description of Program: The residency in Ocular Disease at Fromer Eye Centers will provide the resident with advanced clinical training and education necessary to deliver comprehensive ophthalmic care that meets the needs of a diverse population of patients having ocular disease. The resident will have responsibilities in patient care and patient education. They will also participate in emergency care as part of their on-call duties.

The resident will be expected to provide a full range of ophthalmic patient care services with emphasis in the differential diagnosis and treatment of ocular disease and visual pathway dysfunction. They will have the opportunity to work alongside ophthalmologists specializing in retina, glaucoma, cornea, oculoplastics and pediatrics. They will provide pre- and post-operative care as well as co-manage refractive surgery patients and observe ocular surgical procedures. The resident will be a member of a multi-disciplinary healthcare team and be responsible for appropriate utilization of the practice's resources and personnel. Training will be accomplished through direct patient care, seminars, grand rounds and independent study. As a member of the FEC staff, the resident will also be expected to attend and participate in FEC staff meetings, trainings and retreats. These sessions will expose the resident to the inner workings and management intricacies of private practice.

Educational Opportunities: Formal case conferences will be provided by the SUNY Friday program. The Friday Program includes workshops at SUNY Optometry and joint Grand Rounds with residents in other college-affiliated programs. The resident will be required to attend a minimum of thirty five (35) hours of Grand Rounds and/or workshops in addition to the Core Curriculum. The resident will also be expected to read and review literature as part of a monthly Journal Club as well as participate in weekly case discussions administered by the on site residency supervisors.

Scholarly Activity: Working with the program supervisor, residents are required to present one minor and one major presentation and write one paper of publishable quality. In addition, there is the opportunity to attend and participate in academic conferences.

Length of Program: 12 Months

Starting Date: July 1

Number of Positions: 1

Compensation Level: \$38,000

Benefits: All full-time Residents are eligible for health insurance coverage under various options provided by the Practice. Optional coverage may be purchased by the Resident for their eligible dependents including domestic partners and payment of such premium would be through payroll deductions for their convenience. Vacation time is earned on a prorated and accrued basis throughout the year at a rate of 1.25 days per month. The following paid holidays are recognized by the Practice: New Year's Day, Memorial Day, July 4th, Labor Day, Thanksgiving Day, and Christmas Day. The practice provides the Resident with Medical Malpractice Insurance, occurrence type policy, with minimum levels consisting of \$1 million/\$3 million which specifically is intended to cover services rendered by Resident at the practice only.

Required Hours Per Week: 40 Hrs

On Call Responsibilities:

2 months/year

Application Deadline: February 1

Use ORMatch: Yes

Accreditation Status: Fully

Accredited by ACOE

Further information on the program and application procedures can be obtained by contacting:

Dr. Diane Calderon

Fromer Eye Center

3130 Grand Concourse, Suite 1J

Bronx, NY 10458

**Residency In Primary Eye Care/Ocular Disease Optometry
Bronx-Lebanon Hospital Center, Bronx, NY**

Program Supervisor:

Dr. Lily Zhu-Tam, Phone: (347) 326-0730, E-mail: lztam@bronxleb.com

Description of Program: This program will provide the resident with a rich clinical learning experience through its diverse patient base in the underserved South and Central Bronx communities in both hospital and community-based clinical settings. The resident will have the opportunity to provide primary eye care to patients of all ages, co-manage patients with complex ocular diseases with ophthalmology sub-specialists at the Bronx-Lebanon Hospital Center, utilize advanced ophthalmic equipment and technology, and observe ophthalmic surgical procedures. Daily lectures provided by Ophthalmology Attendings at the Bronx-Lebanon Hospital Center as well as weekly seminars consisting of case conferences, fluorescein conferences, journal club meetings, and SUNY's Friday Program will be available for the resident. After completing the program, the resident will have acquired a high level of clinical competency in providing full-scope optometric care as well as advanced didactic education. Graduates of this residency program will possess the skills necessary to thrive in the areas of patient care, optometric education, and leadership within hospital-based as well as private clinical settings.

Educational Opportunities: The resident will attend lectures given by the Ophthalmology Attendings at the hospital every morning, as well as participate in weekly journal club, fluorescein conference or case conference with Optometry Attendings. In addition, the resident will attend SUNY's didactic programs.

Scholarly Activity: Working with the program supervisor, residents are required to present one minor and one major presentation and write one paper of publishable quality. In addition, there is the opportunity to attend and participate in academic conferences.

Length of Program: 12 Months

Number of Positions: 2

Starting Date: July 1

Compensation Level: \$38,000

Benefits: Health, dental, retirement, and disability benefits offered through the hospital. Paid vacation, sick, and personal leave also given. The hospital observes 8 paid holidays per year.

Required Hours Per Week: 40 Hrs

Application Deadline: February 1

On Call Responsibilities:

Use ORMatch: Yes

3-4 days per month on a rotating basis

Accreditation Status: Fully

Accredited by ACOE

Further information on the program and application procedures can be obtained by contacting:

Dr. Lily Zhu-Tam
Bronx-Lebanon Hospital Center
1650 Selwyn Avenue, Suite 1C
Bronx, NY 10457

CONTINUING PROFESSIONAL EDUCATION

The College offers a variety of courses throughout the year that will assist the optometrist in keeping abreast of the latest scientific and technological advances and thinking within the profession. Courses are offered which enable practitioners to expand their knowledge and skills in order to better serve their patients. Continuing education courses are varied in their duration, subject matter, location and structure. They range from full-day symposia on specific topics to extended in-depth presentations and workshops given over a series of weeks. The courses are offered to the Optometric Community both nationally and internationally. Most courses are approved by those states requiring continuing education credits for re-licensure. Lists of courses being offered, tuition and other information are available through the Office of Continuing Professional Education.

THE REQUIREMENTS AND COLLEGE POLICIES

Academic Policies
Fees and Payment
Policies
Financial Aid
Information
Student Life policies
Institutional Policies

ACADEMIC INFORMATION AND POLICIES

It is the objective of the SUNY College of Optometry to provide a sound educational experience with emphasis on the needs of students as individuals while they pursue a rigorous course of study. In addition to the academic and formal learning opportunity, it is expected that the faculty, staff, curriculum, and atmosphere will combine to foster the growth of the student, as a person, with understanding and maturity as well as technical expertise. Students are admitted with the expectation that all courses will be completed for graduation. The entire faculty and staff embraces the responsibility for educating, supporting and assisting students whenever possible.

Course Description

Abbreviated course descriptions are presented in the College catalog. At the beginning of each course, students will be provided with a full outline or syllabus indicating the course objective and goals, a listing of required and recommended readings, grading policy and examinations to be given, a listing of course topics to be covered, and a statement of classroom attendance requirements.

Attendance

Attendance may be used as a criterion for grading in any course. Instructors are required to present to students a clear statement of their attendance policy and may require attendance. Attendance in clinic is mandatory and procedures exist for dealing with anticipated absences. Appropriate penalties or disciplinary action for failure to follow procedures relating to clinic absences are established and communicated to students by the Department of Clinical Sciences.

Examinations

Examinations during the academic quarter are given at the discretion of the instructor. A final examination period is designated at the end of each term. A midterm week is designated for first-year students in the fall term, and a suggested midterm week is designated for all subsequent classroom terms. All examinations are conducted according to a code adopted by the Educational Policy Committee and approved by the Dean. This policy includes the process for dealing with unethical conduct relating to examinations. Copies of the code and policy adopted in this area are distributed to all students through the Student Handbook when they enter the program. Additional copies are available upon request in the Office of Student Affairs.

Grades

The following designations are used to report grades at the end of each term:

- A - Excellent (4.0)
- B - Above average (3.0)
- C - Average; minimally competent (2.0)
- D - Below Average; marginally competent (1.0)
- F - Failure
- X - Credit by exemption
- P - Pass; satisfactory
- U - Failure; unsatisfactory
- NC- No Credit
- W - Withdrawal

Temporary Grades:

- I - Incomplete
- J - In Progress

All "I" grades must be removed by the end of the fourth week of the next academic term in which the student is required to attend class.

A "J" grade is assigned when a course is scheduled for a period of time which extends over more than one term. When the course is completed, the "J" grade is replaced by a permanent grade.

All "F" or "U" grades require that students satisfy requirements, as assigned by the instructor, equivalent to those of the failed course. The student must meet such requirements before the end of the 4th week in the following term in which the student is enrolled full-time. The student must take the initiative with the instructor so as to complete all assignments within the prescribed time. The original "F" or "U" grade will remain on the transcript.
Students receive, by mail, a grade report at the end of each term.

Academic Progress and Degree Requirement

Doctor of Optometry (OD): For graduation, a student must pass all courses in the program with a cumulative grade point average of 2.0 or better and not be on probation. All students register for identical course work and must complete all course work in order to maintain satisfactory progress. Each term, the academic records of all students are reviewed in accordance with a defined process listed under Academic Review for Advancement.

Master of Science (MS) in Vision Science: For graduation, a student must complete 60 quarter hours of credit, at a 3.0 level or above, with a minimum of 30 hours of course work at a G200 level or above. The student must complete a minimum of nine hours of research, complete a paper in publishable form, based on the research and approved by the Master of Science Thesis Committee. A comprehensive examination must be successfully completed not later than twelve full-time quarters after entering the program.

Doctor of Philosophy (PhD) in Vision Science: A student may be admitted to candidacy for the PhD program upon completion of all Masters Degree in Vision Science requirements. The student must successfully complete an examination in a specialty area, 120 quarter hours of credit and submit and successfully defend a dissertation based on original research. The dissertation must be completed and defended within five years of admission to candidacy.

Optometry-Vision Science (OD/PhD) Program: For graduation, a student must complete all the requirements for the PhD in Vision Science and all the requirements for the OD degree. Each degree is conferred independently of the other. Typically, the first three years of the program have both optometry and graduate vision science requirements taken concurrently. Following that, a two-three year period of intense PhD work is completed. The last year of the program involves clinical study needed to fulfill requirements for the OD degree.

Academic Review for Advancement

The faculty for each professional year meets with the Dean of Academic Affairs at the conclusion of each term to review the students' academic performance. When a student's performance is less than satisfactory for normal advancement to the next term, the faculty may recommend probation, retention, retention with condition, dismissal, or a formal indication of concern to the Faculty Committee on Course and Standing for the professional or graduate programs. The Committee on Course and Standing considers recommendations on an individual basis and in turn recommend actions to the Dean for Academic Affairs. The graduate Committee on Course and Standing makes its recommendations through the Associate Dean for Graduate Programs.

Decisions rendered by the Dean may be appealed to the President.

Academic Probation: Professional Program

The Dean for Academic Affairs, in consultation with the Committee on Course and Standing, may place a student on academic probation if the student's current level of achievement is deemed seriously deficient. Consideration of a recommendation of academic probation is mandatory, however, under the following conditions:

1. the term grade point average is below 2.0; or
2. the cumulative grade point average, is below 2.0; or
3. two grades of "F" are earned in an academic term; or
4. three grades of "D" or below are earned in an academic term; or
5. the student fails any clinical course in the third or fourth year.

Academic Probation: Graduate Programs

Beginning at the end of the second academic term in the graduate programs, a student who has a cumulative GPA of less than 3.00, or who has received a grade of "D" or "F" in any graduate course in the term just completed, shall be placed on academic probation. A student may also be placed on academic probation if he or she is judged not to be making "satisfactory progress" toward the degree for which he or she is a candidate. A student who is on academic probation for two consecutive terms, or fails to meet the conditions specified when placed on probation, may be considered for dismissal from the graduate programs.

Academic Dismissal

Academic dismissal is reserved for those situations where the student is deemed incapable of fulfilling institutional or academic requirements in a timely manner.

Disciplinary Action

Students are subject to disciplinary action, including dismissal from the College, for actions deemed inappropriate according to the Student Rules of Conduct. These are distributed to all students in the Handbook when they enter the program. Additional copies are available in the Office of Student Affairs.

Leave of Absence

Upon petition by a student in good standing up to, a one-year leave may be granted by the Dean for Academic Affairs in the professional program or the Associate Dean in the graduate programs.

Exemption from Course Requirements

Exemption from course requirements may be sought and is considered at the discretion of the course instructor and the Dean for Academic Affairs. The basis of the determination is evidence of prior satisfactory completion of equivalent course work, or the passing of a substantive examination.

Special Student Status

Special students are those students who attend the College on a part-time basis and pay tuition on a per credit basis. All requests by individuals for special student status should be initiated through the Office of Student Affairs.

Auditing of Courses

Permission to audit a course may be granted by the instructor and Dean for Academic Affairs for a period not to exceed one academic quarter.

Degrees

SUNY confers the degrees: Doctor of Optometry (OD), Master of Science in Vision Science (MS), and Doctor of Philosophy in Vision Science (PhD). The conferral of degrees will be to students who satisfactorily complete all academic requirements and are not on probation.

National Board Examination for the Doctor of Optometry

The National Board examinations are required by most state optometric licensing boards. Students are expected to take Part I, the Basic Science portion of the examination, during their 3rd year.

Students are expected to take Part II, the Clinical Science portion, in December of the fourth year and Part III, the Patient Care portion, in the Spring of their fourth year. All students who take the examinations offered by the National Board of Examiners in Optometry (NBEO) will be expected to request, on the NBEO application form, that scores be sent to SUNY State College of Optometry. All scores will be kept confidential and will only be used for conducting institutionally approved educational research. Such studies will only report statistical information and will not, in any way, identify individuals. Requests for exceptions to this policy should be directed to the Dean for Academic Affairs.

The National Board examination is not required by the College for students to advance in or graduate from the Doctor of Optometry program nor is passing the National Board examination a standard for determining a student's readiness for advancement or graduation.

Licensure for the Doctor of Optometry Program

Each state has regulations and requirements which govern the licensure of optometry. Satisfactory completion of the OD Program will be required to qualify for state licensing examinations in each of the 50 states and in their jurisdictions. Further information on State Board Examinations and licensure can be obtained from the Student Affairs Office.

Commencement

Commencement exercises will be held annually at the conclusion of the spring quarter. All candidates for degrees must file an "Intention of Participation and Graduation Information Form" by March 15 of the year in which they plan to graduate.

Miscellaneous Fees

Replacement ID fee	\$ 3.00
Transcripts per copy after first copy	5.00
Returned check fee	20.00

See:

http://www.sunyopt.edu/library/about_the_library/borrowing_library_materials for library fines and fee amounts.

Payment Procedures

Payment in full is required on or before the first day of each term unless officially deferred by the Office of Student Affairs for students in the Optometry program or by the Office of Graduate Studies for students in the Graduate program.

Delinquent Accounts

Students who have neither paid in full nor received official deferments by the end of the month in which tuition and fees are due, in addition to incurring a late fee, will be subject to action according to State University Administrative Policy. This includes being denied subsequent registration as a student of the College and being denied release of official transcripts.

Refund Policy

The College of Optometry shall apply University-wide policy and federal financial aid regulations regarding tuition liability and refunds to students canceling their registration. Liability is computed in accordance with the following schedule:

Tuition Refund Schedule for Withdrawals:

If Withdrawal Occurs During:	Quarter-based Your Tuition Refund Is:	Semester-based Your Tuition Refund is:
1 st Week of Classes	100% of Tuition Paid	100% of Tuition Paid
2 nd Week of Classes	50% of Tuition Paid	70% of Tuition Paid
3 rd Week of Classes	30% of Tuition Paid	50% of Tuition Paid
4 th Week of Classes	No Refund	30% of Tuition Paid
5 th Week and later	No Refund	No Refund

FINANCIAL AID INFORMATION AND POLICIES

There are a number of federal, state and institutional programs to assist students in financing their education. These programs include grants, work opportunities, scholarships and loans.

Students who apply for and secure educational loans are encouraged to keep within manageable borrowing levels. Counseling is available to assist students in applying for student financial aid, financial planning, and calculating and considering manageable debt levels.

Financial Aid Packaging Policy

Federal government guidelines are used to "package" or formulate aid policy for students at SUNY. This procedure assumes that a student or the student's family is responsible for the financial obligations incurred while attending the SUNY College of Optometry. If funds beyond those available through family resources are needed to pay educational costs, the College will review the student's eligibility for an array of available financial aid programs.

The College determines eligibility for a Federal Stafford Loan. This need-based loan is federally subsidized and based on the student's and family's ability to pay as determined by a federally mandated formula of needs analysis.

The financial aid office evaluates a student for the Federal Perkins Loan, Health Professions Student Loan, College Work/Study, tuition waivers and scholarships, through the Free Application for Federal Student Aid. Financial need must be demonstrated and parental financial information is required to determine need for campus-based and institutional aid.

The student also may be considered for an Unsubsidized Federal Stafford Loan which is based only on educational expenses remaining after other financial aid is awarded.

Information on private loans through banks and alternative loan programs is also available in the financial aid office.

Many students will be required to complete verification in order to be evaluated for Title IV (Stafford, Perkins, College Work/Study) funds. This requires complete financial disclosure from the student.

Adherence to our schedule guarantees prompt processing of financial aid packages.

Application Process

Students applying for financial aid will be required to submit the following:

- 1) SUNY-Optometry Application for Financial Aid;
- 2) Free Application for Federal Student Aid (FAFSA);
- 3) Independent students: signed copy of student's federal tax forms; signed copy of parent's federal tax forms (may be required); certification of non-filing status, when applicable.
- 4) Proof of non-taxable income as indicated on the application may be required;

The Financial Aid Office reserves the right to request additional information and documentation as appropriate.

All Graduate and Professional students are considered independent. Parental information is required, however, to be considered for tuition waiver programs, HPSL loans and LDS loans.

The following criteria must be met in order to be considered for aid:

- Satisfactory academic progress must be maintained;
- Student must not be in default of previous student loans, payment loans or consolidation loans;
- Student must not owe a refund on Pell, SEOG, SSIG or Byrd Scholarship Programs;
- Male students must be registered for Selective Service.
- Any outstanding debts to the College must be satisfied before receiving additional aid.

REMEMBER: Loans from the government and private sources are debts that must be repaid. It is important that students keep accurate records which indicate what they have borrowed and the repayment terms. Students are advised to use these resources judiciously, borrowing only what they need. The government is enforcing strict repayment of student loans, and failure to meet one's obligations may result in federal prosecution and irreparable damage to one's personal credit record.

The application deadline for financial aid is **APRIL 15** for the following academic year.

Disbursement of Student Financial Aid

The Business Office will notify the student when aid has arrived and been processed, and, if necessary, that a student endorsement is required. The Business Office encourages students to avail themselves of using direct deposit as a means of receiving your financial aid disbursement. Please see the Bursar to fill out a request form and for further information. Refunds will usually be ready within approximately 5 business days after the aid is processed.

All Stafford Loans will be disbursed electronically.

Standards of Satisfactory Progress for the Determination of Eligibility for Student Financial Aid *

The following are the minimum acceptable standards of satisfactory academic progress, for each professional year **as it relates to financial aid eligibility**. The College reserves the right to determine when a student is making satisfactory academic progress, if recommended to continue the current curriculum in a regular or special status by the Faculty Committee on Course and Standing.

Professional Year	Cumulative GPA
First	1.00 (D)
Second	1.50
Third	1.75
Fourth	2.00 (C)

STUDENT LIFE POLICIES

Mandatory Health Policy

All SUNY College of Optometry students will be required to provide proof of adequate immunization against measles, mumps and rubella as a condition of enrollment at the College. The mandatory health policy was instituted to comply with New York State Public Health Law 2165, which was passed in June 1989, requiring full-time students attending colleges and universities in New York State to demonstrate proof of immunity against measles, mumps and rubella. Proof of immunity consists of a certificate of immunizations signed by a physician or health care provider which documents measles, mumps and rubella immunity. The certificate must specify the type of vaccine and the dates (month, day, year) of administration, or the date of disease diagnosis, if any, or the date of serologic testing and results, if any. A student health record from a previously attended school, which properly documents the immunization history previously described, is acceptable as proof of immunity.

Requirements for registration and attendance include completion of the University medical report containing the following information:

- medical history
- physical examination
- tuberculin test (within one year)
- if tuberculin positive, chest x-ray
- recording the results date and place of examination
- two doses of measles vaccine, and one dose each of mumps vaccine and rubella vaccine or serological evidence of antibodies.

If a student does not comply, or does not present acceptable evidence of compliance, the College must refuse to allow the student to continue in attendance.

Though, at the time of publication of this catalogue, Hepatitis B vaccination (3 shots) is not required it is strongly recommended.

The University Eye Center is licensed as a Diagnostic and Treatment Center regulated by the New York State Hospital Code in accordance with Public Health Law Section 2803. The health information collected in the health form is pertinent to regulations governing your role as a student-provider of health care services at the University Eye Center. These regulations are in place to assure freedom from a health impairment which is of potential risk to patients. When the student begins this health provider role in the University Eye Center and at satellite programs in the third year, there will be a requirement to supplement the appropriate and necessary information originally provided on the mandatory health form.

College Policy On Drug And Alcohol Abuse

American society is harmed in many ways by alcohol abuse and other substance use. Decreased productivity, serious health problems, breakdown in communications and strained societal resources are all results of substance abuse. Education and learning are especially impaired; use and abuse amongst students inhibits their educational development and may adversely affect patient care. The State University of New York, College of Optometry, is committed to the development and maintenance of a drug free environment. In accordance with the Drug-Free Work Place Act of 1988 and the Drug-Free Schools and Communities Act Amendments of 1989, the College will not tolerate the abuse of alcohol, the unlawful possession, distribution and use of controlled substances and alcohol on college premises.

The complete policy, guidelines and procedure, will be distributed through the student handbook to each student, and prospective students upon request, including a description of the applicable laws, legal sanctions, health risks and college and community resources for prevention and treatment.

Personal Safety Policy

Sensitive crimes, such as sexual assault, are felonies which too often go unreported on college campuses and victims do not receive the attention or support they deserve. Therefore, the SUNY College of Optometry seeks to educate its students and college community on prevention and support services that relate to this crime.

The SUNY College of Optometry will provide information to our college community regarding sexual assault and other personal safety issues annually. College offices such as Student Affairs and University Police, will refer possible victims to local support agencies and assist them with the reporting of the crime with local authorities. The President will take measures as deemed appropriate, after due process, and careful consideration, with respect to any member of the College community involved with sexual assault or any other sensitive crime.

Student Right To Know

The College complies with Public Law 101-542, The Student Right To Know and Campus Security Act, as amended by Public law 102-26, of the Higher Education Technical Amendment Act of 1991. The statutes address the annual disclosure to students of information regarding graduation rates, college safety, security policy and procedures, crime statistics and prevention programs. This information can be found in the student handbook and on the college website at <http://www.sunyopt.edu/police/reports.shtml>. Prospective students may also obtain a copy of student right-to-know information and safety policy upon written request to the Office of Student Affairs.

Family Educational Rights Privacy Act Of 1974

The College's policy follows the spirit and letter of all federal and state laws concerning access to student records.

Within certain statutory limitations, students upon reasonable notice may review their "education records" containing information directly related to themselves. Students will be afforded opportunities to challenge the accuracy of factual information in their records.

In the event that a student challenges a record, the student will be offered a hearing by a College official who has no personal involvement in the matter challenged. The student will be afforded a full and fair opportunity to present evidence on the matter challenged and shall receive a decision in writing within a reasonable time (not more than 45 days) after the conclusion of the hearing. Should the student fail to appear at the hearing or request a hearing date prior to the date set for the hearing, a decision shall be issued on the facts available.

Students wishing to inspect their records shall direct their request to the office concerned with those records.

Information concerning a student, other than "directory information" will not be shared with any individual without written approval of the student, with the following exceptions:

- The College will cooperate with all legal authorities in every way appropriate, in accordance with all federal and state laws. The office receiving a request for such cooperation shall immediately seek approval for the release of the requested information from the Records Access Officer.
- Student records may circulate within the College for disclosure to those with appropriate educational interest. This permits the sharing of student records with the College administration for purposes of academic programming, fiscal planning and related matters.

Although the following are part of the education record, students do not have access to:

Letters or statements of recommendation submitted in confidence or school records prior to January 1, 1975, provided these records are not used by the school for other than the original intended purpose. Financial records of the parents of the students or any information directly related to the parents' financial status.

Policy of Non-Discrimination

It is the policy of this institution to provide equal employment and educational opportunities to all and to ensure that no discrimination occurs against any employee or student on the basis of race, color, religion, sex, sexual orientation, national origin, age or disability. This policy includes all aspects of recruitment, hiring, training, promotions, and all other terms and conditions of employment as well as admissions, access to programs, and all other services and privileges of student status. Affirmative Action will be taken to ensure that traditionally disadvantaged, protected classes of employees and students are given an equitable opportunity for progress.

STUDENT AFFAIRS AND ACTIVITIES

Admissions

The Office of Admissions coordinates the College's recruitment and admissions program to the College's academic programs. All documents submitted for purposes of consideration for admission, or questions related to admissions, should be directed to this office.

Orientation

The orientation program is an annual event for the first year class, which is designed to familiarize the student with the academic demands of the curriculum, college policies and student life. It also provides a forum to introduce optometric organizations that offer important perspectives about the profession and the College. Orientation is planned by a student/staff committee that selects and coordinates various activities which include lectures, tours and social events.

Records and Registration

The Office of the Registrar coordinates the scheduling of courses and maintains all official student records which include transcripts, health forms, etc. Any student information changes should be directed to this office. Additional functions include the preparation and dissemination of the Academic Calendar, student health forms and National and State Board information.

Financial Aid

The Financial Aid Office administers all federal, state and institutional programs available to assist students in financing their education. Counseling is available in financial planning, including budgets, loan alternatives and other financial options.

Student Housing

The College does not maintain housing facilities. Since housing is such an important issue, time is taken during an applicant's visit to the College for a personal interview to discuss housing needs. A Student Housing Committee functions to assist each admitted student with housing arrangements. Students set their priorities regarding cost, space, distance and area, and the Student Housing Committee assists the student in locating and securing suitable housing to meet specific needs.

Student Health

The College requires each student matriculating in a degree program to complete and submit to the Office of Student Affairs a health form which contains general health information, a complete immunization record, and a current tuberculin test.

The Office of Student Affairs offers counseling to students about health programs and can make referrals to health practitioners and clinics when specific services are required.

All students are encouraged to maintain adequate health insurance coverage for themselves and their dependents. Health insurance is available through the American Optometric Student Association. Further information and application forms are available in the Office of Student Affairs.

Students are recommended to have an optometric examination upon entering the College. Optometric examinations are offered by appointment in the University Eye Center.

Counseling

The Director of Student Services is available to all students for personal and academic counseling. An additional referral service is also available for particular assistance in the New York City area.

Tutoring

The Vice President for Student Affairs administers a peer program to assist students in their academic studies through individual and group tutorials. Students are urged to seek tutoring as soon as the need is recognized, or if recommended by faculty to do so.

Minority Recruitment and Retention Program

A continuing objective of the College is the identification, recruitment, admission and retention of qualified students from under-represented groups in the profession of optometry. As in other health professions, African-Americans, Hispanic-Americans and Native-Americans are significantly underrepresented in optometry. The College has developed and adopted a minority assistance plan for the purpose of providing the necessary support and services to assist minority students meet program demands.

Foreign Students

All services, including advising and processing of required documents, are the responsibility of the Vice President for Student Affairs. All foreign students are required to enroll in a mandatory health insurance plan made available to all foreign students and their families through the State University of New York.

STUDENT LIFE

SUNY Optometry students are a select group of talented, skilled and highly motivated individuals. They represent a diversity of cultures, backgrounds, states and countries of residence. SUNY brings together a group capable of, and interested in, making a significant impact on the educational experience, the College and the profession.

Although meeting the rigorous academic demands of the curriculum must remain a distinct priority, many of the students find it of interest and value to be involved in student and college governance. There are many opportunities for students to participate through the Student Council, college committees, clubs and organizations.

STUDENT GOVERNMENT

All students become members of the student organization of the College with the payment of a student activity fee. Annually, all students participate in elections to select a president, vice-president, secretary and treasurer. As well, each class elects three class officers as representatives to Student Council.

The Student Council officers consist of the president, vice president, secretary, treasurer and the officers of each class. The Student Council president serves as chief spokesperson on student views and issues and as the College's representative to the State University of New York's Student Assembly. The Vice President serves as a member of the College Council. The student activity fee is collected by the Business Office and is used to subsidize student activities approved by the Student Council.

Expenditure of these funds is under the direction of the Faculty Student Association. Funds are divided in a prescribed manner between Student Council, classes and student organizations.

The Council, led by its elected president, is responsible for the coordination of student input into the College's administrative structure. The College recognizes the need for its students to develop leadership and organizational skills as part of the total educational experience.

The State University of New York, State College of Optometry, is not responsible for any commitments made by any student organization. Continued sanction of any student organization depends upon proper fulfillment of all its obligations.

COLLEGE COMMITTEES

The College is committed to student participation in college governance. Students serve in a variety of committees involved in many aspects of college governance. Appointments to college committees are made upon recommendation of the Student Council to the Vice President for Student Affairs. Recommendations of the Vice President for Student Affairs are made to the President who makes appointments to all college committee seats.

SUPPORTING THE COLLEGE AND ACADEMIA

The Clinical Experience

The Harold Kohn Vision
Science Library

The Schnurmacher Institute for
Vision Research

The Center for Vision Care
Policy

The Center for Economic
Development

The Ophthalmic Standards
Laboratory

Optometric Center of New York
Beyond SUNY

THE CLINICAL EXPERIENCE

UNIVERSITY EYE CENTER

*Its outpatient vision care service to the
community and its value as an
educational resource have
contributed to University Eye Center's
reputation for excellence*

The University Eye Center is one of the largest Optometric clinical facility in the nation. It is also the clinical teaching and community service facility of the State University of New York, State College of Optometry.

At the University Eye Center (UEC), students, interns, externs, residents and clinical faculty look beyond the eye to see the whole patient. They share an awareness that good vision is a combination of an elaborate set of actions and reactions involving not only the eye itself, but a multitude of bodily systems. Each plays a vital role in our ability to see. Each can influence how we interpret and relate to our visual environment. The University Eye Center provides quality vision care to ambulatory and hospitalized patients, and includes health education, early diagnosis and treatment of ocular disease and visual disorders. The University Eye Center provides vision care in its clinical services and in its programs within its contracted affiliated sites and extramural programs.

The University Eye Center has a strong commitment to community service. It sponsors community outreach programs and brings vision care services to underserved communities and to men, women and children with specific vision care needs.

Primary Care Services

This service is the entry point for patients age 12 and over. Patients receive a complete visual examination, including testing for eye diseases such as glaucoma and evaluation of the functioning of the visual system.

Pediatrics

The Pediatrics Unit provides primary care services to children from 5 through 12 years of age. Children receive a complete visual examination for nearsightedness, farsightedness and astigmatism, for lazy eyes and crossed-eyes, learning-related vision problems, and for eye diseases. Upon completion of an initial evaluation, children are either followed within the service or referred for further evaluation to a team of specialists in the Learning Disabilities Unit, the Vision Therapy Unit, the Contact Lens Unit or the Ocular Disease Unit with the University Eye Center.

Children With Special Needs

There are a number of children who face the world with physical and emotional challenges, and compromise special population whose developing visual system encounters additional demands. For these children, we have established a Children With Special Needs Unit. Children up to 18 years old are cared for in visual rehabilitative care. In most instances, interaction with other professionals, such as occupational, physical and speech therapists, in addition to early intervention programs is highly desirable and pursued, as indicated.

Infant's Vision Unit

The Infants Vision Units serves the visual needs of children from birth to four years. Specialized testing techniques are utilized enabling early diagnosis, intervention and preventative vision care.

Ocular Disease and Special Testing Service

This is a multidisciplinary outpatient service staffed by optometrists, ophthalmologists, registered nurses, and neurologist. Patients are evaluated for the presence of ocular disease or other disorders of the visual system. Treatment of ocular disease is provided by the attending staff.

CIBA Glaucoma Institute for Clinical Research and Education and Outpatient Surgery Center

The Ocular Disease and Special Testing Service includes the CIBA Glaucoma Institute for Clinical Research and Education and the Outpatient Surgery Center.

In the Outpatient Surgery Center, procedures are performed by incumbent professional personnel and existing staff members, who provide all required services, keeping costs to a minimum. Here, selected patients can undergo argon and YAG laser procedures, fluorescein angiography (retinal photography using contrast) and numerous other procedures.

The University Eye Center has been recognized nationally for outstanding and innovative educational opportunities and for the excellence of its clinical programs. Now, the University Eye Center is also the only non-hospital based optometric institution in the Country to support an on-site Outpatient Surgery Center and an *Institute* devoted exclusively to glaucoma clinical research and education, both of which make significant contributions to the College's *Missions* of education, patient care, research and public service.

The Laser Eye Institute

Established in 2002, the Laser Eye Institute is devoted to providing the highest quality patient care, research and education in laser refractive surgeries. The Institute brings together highly qualified optometrists and ophthalmologist using state-of-the-art technology made possible by a generous grant from Bausch and Lomb.

Low Vision Service

This service treats patients with impaired vision caused by congenital or acquired abnormalities which affects the eyes, the nerves to the eye or areas of the brain associated with the visual system. In many instances, patients are prescribed telescopic and microscopic lenses and/or visual aids which raise the level of useful vision.

Vision Therapy Service

This service diagnoses and treats patients having functional vision disorders such as amblyopia (lazy eye), strabismus (turned eye), or poor eye-hand coordination, focusing problems, perceptual difficulties, and eye movement disorders.

Within this service is the **Learning Disabilities Unit** which utilizes a combination of optometric, psychological and educational testing procedures to evaluate children and adults with learning problems. This unit works closely with schools and other agencies to coordinate the patient's treatment. The Learning Disabilities Unit is designed to perform differential diagnoses in the interest of helping children and adults fulfill their educational, learning and work potential as well as their social and emotional development.

The Raymond J. Greenwald Rehabilitation Center serves individuals who have visual limitations related to neurological disorders, or traumatic brain injury, through ongoing collaborative treatment with allied professionals throughout the metropolitan area.

Specialty Contact Lens Service

This service functions in the capacity of either an entry point or a referral service for patients seeking specialty contact lens or prosthetic eye care services. Patients in this service are typically those with nearsightedness, farsightedness, astigmatism, presbyopia or keratoconus. Specialized services include providing lenses for disfigured eyes, aphakic patients, infants, in addition to providing tinted or special form lenses for cosmetic as well as therapeutic applications.

University Eyewear

The University Eye Center boasts an attractive state-of-the-art Eyewear Center which is available to all patients. Within the Eyewear Center is a wide selection of frames. This service offers the latest in designer eyewear.

CONTRACTED AFFILIATED SITES

As part of its continuing effort to provide quality vision care and clinical education in a variety of communities, the University Eye Center has a number of extra mural clinical and satellite sites in the metropolitan New York area to provide clinical faculty, externs and residents to service the needs of those various sites and populations.

School-based Services

Similar to the homebound elderly programs, the University Eye Center continues to provide eye care to the children throughout the metropolitan New York area. A faculty supervisor and intern visit affiliated schools, utilizing the latest state-of-the art portable equipment, provide eye care and vision screening services to these pediatric patient populations. The programs, while labor intensive, provide an essential service to the pediatric patients while they are attending school, concurrently offering a unique educational service for the optometry student. The children and their families may be referred to the University Eye Center for more extensive care.

Homebound Elderly Program

The University Eye Center provides professional eye care services to the homebound elderly in the metropolitan New York area. An optometrist visit the patient in his or her home. The program addresses the total health care and social needs of the patient.

Psychiatric Centers, Hospitals & Diagnostic Centers, Specialized Outreach Programs, Children with Special Needs and other Specialized Population.

The University Eye Center also has a long history of developing relationships with other agencies and institutions in an effort to render comprehensive, professional vision and eye care services to New York area residents. A new affiliation with Woodhall Hospital and Medical Center, has afforded a unique opportunity for interns and residents. The eyecare service for the hospital, which consists of optometrists and ophthalmologists, is administered by the University Eye Center. The service has a sizable diabetic and pediatric population.

The University Eye Center's role as a major teaching institution and referral center incorporates the latest technology and guidelines for management of routine and complicated vision care problems. The Center has, over the years, applied the clinical expertise of the faculty to addressing the eye care and visual needs of infants, children and adults in a number of institutions in the City. In addition to the broad spectrum of services provided to adults and children in the general public, the University Eye Center has also focused educationally and clinically on providing services to several special patient populations. This is demonstrated by the inclusion of didactic and clinical elements in the curriculum which address the special circumstances and visual needs of geriatric patients, learning disabled individuals, adults with low vision and children with special needs.

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The University Eye Center also provides eye and vision care to

- in- and out-patients at a number of psychiatric centers,
- a variety of free-standing and other hospitals and diagnostic & treatment centers affiliated with the New York City Health and Hospitals Corporation, and
- several specialized outreach programs, including children with special needs and other specialized patient populations throughout the City of New York.

HAROLD KOHN VISION SCIENCE LIBRARY

The Kohn Library holds approximately 40,000 volumes and 2,000 audiovisual resources including slide sets, videos, audiocassettes, CD-ROMs and DVDs. In addition, the Library maintains an extensive collection of print journals, both current and past. The Kohn Library also has a comprehensive web site with links to reference works, optometry and ophthalmology organizations and resources, and electronic journals and databases. The Library's holdings can be searched from computers in the Library or electronically via our web site.

Among our many electronic databases are ScienceDirect, which provides access to over 2,500 full-text journals, an online index to the optometric and ophthalmic literature, and a variety of health, business, social science and general academic databases provided by SUNY's Office of Library and Information Services and the New York State Library. Research and information requests are handled by two professional librarians who are available to assist patrons with print and electronic literature searches. Also available are printed and online instruction sheets to help patrons utilize the many resources offered.

The Library has two computer labs and an additional bank of computers from which patrons can access the Internet, electronic mail, and a variety of other applications. The Gladys Kohn Audiovisual Suite houses equipment for viewing slides and videocassettes, and a Multimedia Room features state-of-the-art scanners, computers, and printers. In addition, the Library has on display a privately maintained collection of historic optometric equipment.

SCHNURMACHER INSTITUTE FOR VISION RESEARCH

The Institute for Vision Research was founded in 1983 in response to the growing need for scientific knowledge about the visual system and methods of improving visual function. The Institute was renamed the Adolph and Ruth Schnurmacher Institute for Vision Research in 1984 to honor the Schnurmacher's generosity that made possible the establishment of an Institutional endowment. The graduate faculty researchers, their post-docs, and students associated with the Institute are engaged in a wide variety of vision research projects. The SIVR coordinates a colloquium series, supports collaborative clinical research, small clinical research projects and innovative vision science pilot research.

CENTER FOR VISION CARE POLICY

This research unit of the College conducts policy studies and health services research. Established in 1985, the Center has completed numerous descriptive and evaluative studies on regional and national policy issues related to Managed care, Medicare, Medicaid, Workforce requirements for vision care, and the organization and delivery of vision care services. Its publications and position papers serve to inform policy makers in government, business and labor, as well as leaders in optometry, about vision care policy issues.

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THE OPTOMETRIC CENTER OF NEW YORK

The Optometric Center of New York is a (501)(c)(3) tax-exempt, not-for-profit charitable organization, established in 1956, which serves as the campus-related foundation of the SUNY State College of Optometry. Its purpose is to support patient care, scholarships and research at the SUNY College of Optometry, its clinical facility, the University Eye Center, and the Schnurmacher Institute for Vision Research. The foundation is supported by the generosity of its Board of Trustees, the College's faculty, alumni, friends, area corporations, other foundations, and New York State optometrists.

BEYOND SUNY

ALUMNI ASSOCIATION

The Alumni Association was organized and established in 1973. It now represents more than 1800 graduates of the four-year and graduate programs and 500 graduates of the residency programs. In addition, alumni of the Columbia University optometric program have joined SUNY's Association.

Each year the Alumni Association sponsors educational and social meetings, publishes a newsletter, Focal Point, and awards scholarships to students in financial need who display professional and academic promise. Financial support is also given to student-run organizations. During the Association's Annual Fund Campaign, alumni are solicited for contributions to the Association in order to continue existing programs and initiate new ones.

The Executive Board of the Association is an active group and meets approximately four times a year during the academic year. The Alumni Association is also an active member of SUNY's Confederation of Alumni Associations.

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Scott Morrison, Assistant Clinical Professor, B.A., Queens College, O.D., State University of New York, State College of Optometry

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AWARDED BY THE
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NAME/DEGREE/DATE

Adams, Anthony J., Doctor of Science, 1998
 Alpern, Mathew, Doctor of Science, 1988
 Bailey, Ian L., Doctor of Science, 2005
 Baldwin, William Russell, Doctor of Science,
 1998
 Barlow, Horace Basil, Doctor of Science, 1999
 Bartlett, Jimmy D., Doctor of Science, 2002
 Borish, Irvin M., Doctor of Science, 1984
 Charman, W. Neil, Doctor of Science, 2004
 Cole, Barry L., Doctor of Science, 2006
 Delucas, Lawrence J., Doctor of Science, 1997
 Dobrof, Rose, Doctor of Humane Letters, 1996
 Enoch, Jay M., Doctor of Science, 1993
 Faye, Eleanor E., Doctor of Science, 1991
 Fein, Rashi, Doctor of Letters, 1996
 Feinbloom, William, Doctor of Science
 (Posthumously), 1985
 Flom, Merton Clyde, Doctor of Science, 1995
 Freddo, Thomas F., Doctor of Science, 2004
 Freidus, Elizabeth, Doctor of Letters, 1990
 Fry, Glenn Anselm, Doctor of Science, 1981
 Getman, Gerald Nathan, Doctor of Science, 1986
 Ginsburg, Eli, Doctor of Humane Letters, 1995
 Gund, Gordon, Doctor of Humane Letters, 2008
 Harwerth, Ronald S., Doctor of Science, 2000
 Heath, Gordon G., Doctor of Letters, 1997
 Held, Richard, Doctor of Science, 2010
 Hill, Richard M., Doctor of Science, 1996
 Hofstetter, Henry W., Doctor of Science, 1991
 Holden, Brien A., Doctor of Science, 1994
 Hopping, Richard Lee, Doctor of Science, 1995
 Howard, Ian P., Doctor of Science, 2009
 Hubel, David H., Doctor of Science, 2004
 Hurvich, Leo M., Doctor of Science, 1989
 Jameson, Dorothea, Doctor of Science, 1989
 Johnson, Chris A., Doctor of Science, 2005
 Julesz, Bela, Doctor of Science, 2000
 Kaufman, Lloyd, Doctor of Science, 1993
 Kizer, Kenneth W., Doctor of Science, 2006
 Kupfer, Carl, Doctor of Science, 1992
 Legge, Gordon E., Doctor of Science, 2008
 Leibowitz, Herschel W., Doctor of Science, 1991
 Levi, Dennis Michael, Doctor of Science, 1998
 Marchi, Lorraine H., Doctor of Humane Letters,
 2002
 Miles, Frederick A., Doctor of Science, 2011
 Morgan, Meredith W., Doctor of Science, 1989
 Movshon, Joseph Anthony, Doctor of Science,
 2012
 Newsome III, William Thomas, Doctor of Science,
 2012
 Peli, Eli, Doctor of Science, 2006
 Pepper, Claude, Doctor of Humane Letters
 (Posthumously), 1989
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 Pokorny, Joel, Doctor of Science, 2001
 Qu, Jia, Doctor of Science, 2013
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 Robson, John, Doctor of Science, 2011
 Sivak, Jacob G., Doctor of Science, 2007
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 Smith, Vivianne C., Doctor of Science, 2001
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 Teller, Davida Y., Doctor of Science, 1992
 Thibos, Larry N., Doctor of Science, 2003
 Wallis, Norman E., Doctor of Science, 2001
 Webb, Robert H., Doctor of Science, 2003
 Weisel, Torsten N., Doctor of Science, 1994
 Westheimer, Gerald, Doctor of Science, 1990
 Wild, Bradford W., Doctor of Science, 1994
 Williams, David R., Doctor of Science, 2007

Rochelle Mozlin, Associate Clinical Professor, B.A., State University of New York at Albany, O.D., New England College of Optometry

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TRANSPORTATION

The College is located at 33 West 42nd St. between 5th and 6th Avenues in midtown Manhattan.

TO THE COLLEGE

The College is located two blocks west of Grand Central Station, nine blocks north of Penn Station, and three blocks east of the Port Authority Bus Terminal. The College is easily accessible by public transportation. Bus service connects from all three major airports to midtown Manhattan.

TO NYC BY PLANE, TRAIN OR BUS

If you are arriving in New York by air, there are several methods for traveling to the city from Kennedy, LaGuardia and Newark airports. We have condensed your options into a list of the most convenient and accessible.

Greyline Bus Tours

(212) 315-3006

Links Kennedy Airport (\$19.00 fare) with Port Authority Bus Terminal, and Grand Central Station 6:00 a.m. - midnight, running every 15-30 minutes. Travel time is approximately 60-75 minutes.

Links LaGuardia Airport (\$15.00 fare) with Grand Central Station. 6:45 a.m. - midnight, running every 15-20 minutes. Travel time is approximately 30-45 minutes.

Coach USA

(212) 964-6233

Links Newark Airport (\$12.00 fare) with Port Authority Bus Terminal, running every 30 minutes. Travel time is approximately 30 minutes.

New Jersey Transit

(newjerseytransit.com)

(971) 762-5100

Links Newark Airport (\$11.55 fare) with Pennsylvania Station, running every 15-30 minutes. Connect to Monorail for departure terminals. Travel time is approximately 30-40 minutes.

If you do take an express bus into the City from the airports, it is best to get off at Grand Central Station, which is located on 42nd Street & Park Avenue. From Grand Central Station to the College is a short 5 minute walk.

If you arrive into the City by train at either Grand Central or Pennsylvania Stations, or by bus at Port Authority Bus Terminal, it is a 5-15 minute walk to the College.

TAXIS

Operate 24 hours Approximate fares to Manhattan are: Kennedy Airport \$45.00/ La Guardia Airport \$19-22.00/Newark Airport \$55-60.00 plus tolls.

TO NYC BY AUTOMOBILE

If you are arriving in New York City by car, traffic is funneled into Manhattan by bridges, tunnels, parkways and expressways.

From the Northwest (upstate NY), the New York State Thruway (I-87 & I-287) leads to Manhattan's east and west sides. From the Northeast (MA, CT etc.), the New England Thruway (I-95) also leads to the east or west sides.

From the West (NJ, PA), the Bergen Passaic Expressway (I-80) leads to Manhattan via the George Washington Bridge. From the South (NJ, MD etc.) the New Jersey Turnpike (I-95) leads into the Holland Tunnel to lower Manhattan or the Lincoln Tunnel to midtown Manhattan.

A tour of the College can be arranged by contacting the Office for Student Affairs.

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State University of New York at Buffalo
State University of New York at Stony Brook

COLLEGES OF ARTS AND SCIENCE

Empire State College
State University College at Brockport
State University College at Buffalo
State University College at Cortland
State University College at Fredonia
State University College at Geneseo
State University College at New Paltz
State University College at Old Westbury
State University College at Oneonta
State University College at Oswego
State University College at Plattsburgh
State University College at Potsdam
State University College at Purchase

CENTERS FOR HEALTH SCIENCES

Health Science Center at Brooklyn
Health Science Center at Syracuse
College of Optometry at New York City
Health Science Center at Buffalo *
Health Science Center at Stony Brook *

COLLEGES OF TECHNOLOGY

Agricultural and Technical College at Alfred
Agricultural and Technical College at Canton
Agricultural and Technical College at Cobleskill
Agricultural and Technical College at Delhi
Agricultural and Technical College at Farmingdale
Agricultural and Technical College at Morrisville

SPECIALIZED COLLEGES

College of Environmental Science and Forestry
at Syracuse
Maritime College at Fort Schuyler
College of Technology at Utica/Rome
Fashion Institute of Technology at New York City **

STATUTORY COLLEGES***

College of Agriculture and Life Sciences
at Cornell University
College of Ceramics at Alfred University
College of Human Ecology at Cornell University
School of Industrial and Labor Relations
at Cornell University
College of Veterinary Medicine at Cornell University

COMMUNITY COLLEGES

(Locally-sponsored, two-year colleges under the program of State University)
Adirondack Community College at Glens Falls
Broome Community College at Binghamton
Cayuga County Community College at Auburn
Clinton Community College at Plattsburgh
Columbia-Greene Community College at Hudson
Community College of the Finger Lakes
at Canandaigua
Corning Community College at Corning
Dutchess Community College at Poughkeepsie
Erie Community College at Williamsville, Buffalo
and Orchard Park
Fashion Institute of Technology at New York City **
Fulton-Montgomery Community College
at Johnstown
Genesee Community College at Batavia
Herkimer County Community College at Herkimer
Hudson Valley Community College at Troy
Jamestown Community College at Jamestown
Jefferson Community College at Watertown
Mohawk Valley Community College at Utica
Monroe Community College at Rochester
Nassau Community College at Garden City
Niagara County Community College at Sanborn
North Country Community College at Saranac Lake
Onandaga Community College at Syracuse
Orange County Community College at Middletown
Rockland Community College at Suffern
Schenectady County Community College
at Schenectady
Suffolk County Community College at Selden,
Riverhead and Brentwood
Sullivan County Community College
at Loch Sheldrake
Tompkins Cortland Community College at Dryden
Ulster County Community College at Stone Ridge
Westchester Community College at Valhalla

* The Health Sciences Centers at Buffalo and Stony Brook are operated under the administration of the respective University Centers.

** While authorized to offer such baccalaureate and master's degree programs as may be approved pursuant to the provisions of the Master Plan, in addition to the associate degree, the Fashion Institute of Technology is financed and administered in the manner provided for community colleges.

***These operate as "contract colleges" on the campuses of independent universities



STATE UNIVERSITY OF NEW YORK
COLLEGE OF OPTOMETRY