

# Optometry

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**School of Optometry** (<http://optometry.berkeley.edu>)

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**Residency Supervisor: A. Mika Moy, OD**

**Chair, Graduate Group in Vision Science: Karsten Gronert, PhD**

**Department Websites: Optometry** (<http://optometry.berkeley.edu>) , **Vision Science** (<http://bulletin.berkeley.edu/departmentsandsubjects/optometry/%20http://vision.berkeley.edu>)

## Overview

The School of Optometry provides professional training in the art and science of vision care. Drawing upon the principles of anatomy, optics, physiology, and psychology, the four-year professional program leads to the degree of Doctor of Optometry, which qualifies one to take national and state board examinations.

Doctors of Optometry are health care professionals. Optometry is a primary health care profession that encompasses the prevention and remediation of disorders of the vision system through examination, diagnosis, treatment, and/or management of visual efficiency, eye health, and related systemic manifestations. Optometry graduates are able to diagnose patients with ocular disease or systemic diseases with ocular manifestations. Recent changes in optometry laws across the United States have expanded the scope of optometric practice, giving practitioners responsibility for nonsurgical pharmaceutical treatment of eye disorders and diseases.

Doctors of Optometry are educated in the sciences of anatomy, chemistry, physics, mathematics, neurology, bacteriology, microbiology, disease processes and detection, pharmacology, behavioral science, social science, public health, and many other related fields. The school provides four years of comprehensive training in vision care aimed at training primary eye care practitioners. The first year emphasizes advanced study of sciences which form the background of optometry, such as ocular anatomy, medical physiology and biochemistry, ocular pathology, physiology, microbiology and virology, neuroanatomy, the psychology of vision, vision science, geometric optics, ophthalmic optics, pharmacology, and theoretical and practical optics. The second and third years are devoted to the science of optometry and the acquisition of skills in

examination procedures. Although clinic participation is involved in all four years, active responsibility for patient care begins in the spring preceding the third year. The fourth year is devoted to primary care practice of optometry and the detailed study of specialized areas, including contact lenses, binocular and infant vision, vision functions, ocular disease, vision of the elderly, and low vision.

Optometry offers a wide variety of interesting, challenging, and rewarding careers in private practice, in hospitals and other health organizations, and in public service. The education acquired at the School of Optometry provides today's Doctors of Optometry with the knowledge and skill necessary to meet the challenges of providing vision care.

For further information about the School of Optometry, please consult our website. (<http://optometry.berkeley.edu>)

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## Optometric Residency Program

A one-year Optometric Residency program is available to Doctors of Optometry seeking advanced optometric training. Areas of clinical study include binocular vision, cornea and contact lens, low vision, ocular disease, pediatrics, and primary care.

Successful completion of the program leads to the awarding of the Optometric Residency Certificate.

For further information about the Optometric Residency Program, please contact the Director of Residency Programs at the Tang Eye Center, 2222 Bancroft Way, Berkeley, CA 94720-2020; or send an e-mail to [cwilmer@berkeley.edu](mailto:cwilmer@berkeley.edu).

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## Vision Science Graduate Program (PhD Degree)

The Graduate Program in Vision Science leads to a PhD degree. The program is administered by the Group in Vision Science, representing cross-disciplinary faculty from the School of Optometry and the Departments of Psychology, Computer Science, Molecular and Cell Biology, Neuroscience, and Bioengineering, among others. The faculty is distinguished in their accomplishments and diverse in their areas of expertise. Research facilities available to graduate students in vision science are among the best in the world.

The Graduate Program in Vision Science provides training in a wide variety of topics pertaining to vision. These include the optics of the eye, molecular and cell biology of the eye, anatomy and neurophysiology of the retina and visual pathways, computational vision, clinical aspects of vision, and more. The graduate program is designed to prepare students for academic careers in research and teaching in vision science, optometry, ophthalmology, bioengineering, psychology, biology, and other related disciplines. It also prepares students for research careers in industrial settings in related areas.

Admission to this program requires a bachelor's degree in a relevant discipline (such as biology, computer science, engineering, or psychology) or a doctoral degree in medicine or optometry.

For further details about the requirements for the Vision Science Graduate Program, go to the website . (<http://vision.berkeley.edu>) To contact our admissions office, please e-mail [vision@berkeley.edu](mailto:vision@berkeley.edu) or write to Graduate Student Affairs Officer, Group in Vision Science, University of California, Berkeley, 380 Minor Hall #2020, Berkeley, CA 94720-2020.

**OPTOM 10 The Eye and Vision in a Changing Environment 2 Units****Department:** Optometry**Course level:** Undergraduate**Term course may be offered:** Spring**Grading:** Letter grade.**Hours and format:** 2 hours of Lecture per week for 15 weeks.

Course covers introduction to the basis of common sight-reducing visual disorders with major public health implications for society--e.g., myopia, cataracts, diabetic hypertensive eye disorders, developmental disorders (e.g., lazy eye), and environmentally induced disease and disorders (solar eye burns, cataracts). Major approaches to the prevention, diagnosis, and treatment of common disorders will be addressed in terms of the biological and optical sciences underlying the treatment or prevention. Impact of eye care on society and health and care delivery will be reviewed.

Instructor: Adams

**OPTOM C10/UGIS C10 The Eye and Vision in a Changing Environment 2 Units****Department:** Optometry; Undergrad Interdisciplinary Studies**Course level:** Undergraduate**Term course may be offered:** Spring**Grading:** Letter grade.**Hours and format:** 2 hours of Lecture per week for 15 weeks.

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Instructor: Adams

**OPTOM 39B Freshman/Sophomore Seminar 2 - 4 Units****Department:** Optometry**Course level:** Undergraduate**Terms course may be offered:** Fall and spring**Grading:** The grading option will be decided by the instructor when the class is offered.**Hours and format:** 2 to 4 hours of Seminar per week for 15 weeks.**Prerequisites:** Priority given to freshmen and sophomores.

Freshman and sophomore seminars offer lower division students the opportunity to explore an intellectual topic with a faculty member and a group of peers in a small-seminar setting. These seminars are offered in all campus departments; topics vary from department to department and from semester to semester. No prerequisites. Enrollment limits are set by the faculty, but the suggested limit is 25.

Course may be repeated for credit when topic changes.

**OPTOM 84 Sophomore Seminar 1 or 2 Units****Department:** Optometry**Course level:** Undergraduate**Terms course may be offered:** Fall, spring and summer**Grading:** The grading option will be decided by the instructor when the class is offered.

**Hours and format:** 1 hour of seminar per week per unit for 15 weeks. 1 and 1 half hours of seminar per week per unit for 10 weeks. 2 hours of seminar per week per unit for 8 weeks. 3 hours of seminar per week per unit for 5 weeks.

**Prerequisites:** At discretion of instructor.

Sophomore seminars are small interactive courses offered by faculty members in departments all across the campus. Sophomore seminars offer opportunity for close, regular intellectual contact between faculty members and students in the crucial second year. The topics vary from department to department and from semester to semester. Enrollment limits are set by the faculty, but the suggested limit is 25.