John F. Hardesty, MD, Department of Ophthalmology and Visual Sciences

The John F. Hardesty, MD, Department of Ophthalmology and Visual Sciences has a strong legacy and is a national leader in clinical ophthalmology and research. It is ranked among the top ten best overall programs in the United States, and it is also considered one of the top ten best research programs by U.S. News & World Report. Our ophthalmology department is fourth in National Institutes of Health funding for research and has one of the nation’s largest ophthalmology research faculty. The department’s mission is as follows: “As world leaders in patient care, teaching and research, we strive to touch lives and preserve and restore vision through innovation and compassionate service.” We hope that students will join us to enrich their medical education and to experience the collaborative culture of ophthalmology.

Although only a small percentage of physicians in the United States specialize in ophthalmology, there is no doubt that all physicians need a basic understanding of the eye and what it can reveal about a patient’s condition. In a recent article published in the journal Ophthalmology, it was stated that “ophthalmology-related issues arise in the diagnosis and treatment of inpatients and outpatients on internal medicine, pediatrics, trauma surgery, neurology, endocrinology, neurosurgery, otolaryngology, dermatology, oncology, and rheumatology services.”

The article went on to state that “[m]ost primary care program directors believe fewer than 50% of incoming residents have sufficient ophthalmology skills when entering the internship period of medical education. Ophthalmoscopy is one of many ophthalmic skills in which there seems to be a gap in the training of medical students. [A study] demonstrated that emergency medicine physicians often do not perform an ophthalmoscopic examination when it is indicated, and when they do, they are unlikely to detect abnormal findings. This presents a serious issue, because patients with visual impairments are more likely to be hospitalized, and from 2006 through 2011, there were 12 million eye-related emergency department visits nationwide. If they are unable to view or interpret fundus findings with either an ophthalmoscope or fundus photography, the students must know when it is necessary to refer their patients to an ophthalmologist for further evaluation.” In other words, even if a physician does not plan to make ophthalmology their career, deepening their knowledge of this field will enhance their skills as a physician in any field.

At Washington University School of Medicine, medical students under the Legacy Curriculum begin ophthalmology-based instruction during the first year with examination of the eye and a lecture on various aspects of ocular disease. During the second year, students receive a refresher lecture and lab on direct ophthalmoscopy as well as a lecture on ophthalmic manifestations of systemic disease and primary ocular disease. During the third year, students are given the opportunity during the surgery clerkship to spend four weeks on the ophthalmology services; in addition, there are lectures given to students during the Internal Medicine rotations. During the fourth year, a four-week intensive clinical rotation is tailored to students interested in pursuing ophthalmology as a career. Research electives are available under the guidance of numerous ophthalmology faculty members for fourth-year students. Newer medical students under the Gateway Curriculum have the option of choosing ophthalmology for a three-week-long clinical experience during their first-year procedural Immersion. More intensive clinical rotations will be available in later phases of the new curriculum.


Website: http://ophthalmology.wustl.edu

Faculty

Our staff includes full-time university attending physicians for all subspecialties in ophthalmology, including ocular tumors, oculoplastics and uveitis. We have a very healthy mix of senior established faculty and junior members.

Todd Margolis, MD, PhD (https://ophthalmology.wustl.edu/people/todd-margolis-md-phd/)
Alan A. and Edith Wolff Distinguished Professor and Chairman

Kevin Ko, MBA (https://ophthalmology.wustl.edu/people/kevin-ko-mba/)
Executive Director of Business Affairs

P. Kumar Rao, MD, MBA (https://physicians.wustl.edu/people/p-kumar-rao-md/)
Professor and Vice Chair for Clinical Affairs

Daniel Kerschensteiner, MD (https://kerschensteinerlab.wustl.edu/)
Bernard Becker Professor of Ophthalmology and Visual Sciences
Vice Chair for Research
Co-Director of the Neuroscience PhD Program
Rajendra S. Apte, MD, PhD (https://physicians.wustl.edu/people/rajendra-s-apte-md-phd/)
   Paul A. Cibis Distinguished Professor of Ophthalmology and Visual Sciences
   Vice Chair for Innovation and Translation

Carla Siegfried, MD (https://physicians.wustl.edu/people/carla-j-siegfried-md/)
   Jacquelyn E. and Allan E. Kolker, MD, Distinguished Professor of Ophthalmology and Visual Sciences
   Vice Chair for Diversity, Equity and Professionalism

R. Lawrence Tychsen, MD (https://wuphysicians.wustl.edu/for-patients/find-a-physician/lawrence-tychsen/)
   Pediatric Ophthalmology Director

Visit our website for more information about our faculty (https://ophthalmology.wustl.edu/contact-us/department-contacts/) and their appointments.

A

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   Doctor of Optometry, Illinois College of Optometry, 1981

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   Assistant Professor of Clinical Ophthalmology and Visual Sciences
   Bachelor of Arts, University of Missouri Kansas City, 1994
   Doctor of Medicine, University of Missouri Kansas City, 1994

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   Professor of Ophthalmology and Visual Sciences (primary appointment)
   Professor of Developmental Biology
   Professor of Medicine
   Vice Chair - Translation and Innovation
   Paul A. Cibis Distinguished Professor of Ophthalmology and Visual Sciences
   Doctor of Medicine, University of Bombay, 1993
   Doctor of Philosophy, University of Texas Southwest, 1997

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   Associate of Arts, School Not Listed, 1949
   Doctor of Medicine, School Not Listed, 1954

B

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   Master of Business Administration, University of Miami, 2015
   Doctor of Medicine, University of Miami, 2016

Steven Bassnett, Ph.D.
   Professor of Ophthalmology and Visual Sciences (primary appointment)
   Professor of Cell Biology and Physiology
   Grace Nelson Lacy Distinguished Professorship in Ophthalmology
   Bachelor of Science, University of Wales, 1982
   Doctor of Philosophy, University of East Anglia, 1987

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   Doctor of Optometry, School Not Listed, 1975

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   Master of Arts, Washington University in St Louis, 1950
   Doctor of Philosophy, Washington University in St Louis, 1951
   Doctor of Medicine, University of Chicago, 1955

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   Master of Arts, Washington University in St Louis, 1987
   Doctor of Medicine, Washington University in St Louis, 1987

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   Associate Professor of Occupational Therapy
   Doctor of Medicine, University of Chicago, 1999

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   Doctor of Optometry, University of Missouri in St Louis, 1984

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   Doctor of Medicine, Washington University in St Louis, 1967

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Doctor of Optometry, University of Missouri Columbia, 1992

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Doctor of Medicine, Washington University in St Louis, 1992

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Doctor of Medicine, Boston University, 1992

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Doctor of Medicine, University of Miami, 2007

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Doctor of Philosophy, State University of New York, 1992

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Assistant Professor of Developmental Biology
Doctor of Philosophy, Medical College of Wisconsin, 2013

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Patient Safety Officer (Adult) - Clinical Adult Division
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Doctor of Optometry, University of Missouri in St Louis, 1991

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Doctor of Optometry, Indiana University Bloomington, 2011

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Doctor of Philosophy, University of Cincinnati, 1982

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Bachelor of Science, University of Missouri Columbia, 1977
Doctor of Optometry, State University of New York, 1981

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Master of Science, State University of New York, 2009
Doctor of Medicine, Rosalind Franklin University, 2013

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Master of Arts, Washington University in St Louis, 1972
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Doctor of Optometry, University of Missouri in St Louis, 1994

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Doctor of Medicine, University of Illinois Chicago, 2009

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Director - Medical Student Education
Director - Clinical Pediatric Division
Doctor of Medicine, Washington University in St Louis, 2013

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Doctor of Optometry, Southern California College of Optometry, 1977

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Doctor of Optometry, Illinois College of Optometry, 1981

James Liu, M.D.
Assistant Professor of Ophthalmology and Visual Sciences
(primary appointment)
Doctor of Medicine, Washington University in St Louis, 2015

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Bachelor of Science, University of Florida, 1980
Doctor of Medicine, University of Florida, 1985

Gregg T Lueder, M.D.
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Professor of Pediatrics
Bachelor of Science, Iowa State University, 1981
Doctor of Medicine, University of Iowa, 1985

M
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Doctor of Medicine, University of California Irvine, 2014
Lisa Marie Mackey, O.D.
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Bachelor of Arts, University of Kansas, 1989
Doctor of Optometry, University of Missouri Columbia, 1993

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Bachelor of Science, Stanford University, 1977
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Doctor of Medicine, University of California San Francisco, 1984

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Doctor of Medicine, University of Alabama (Duplicate of University of Alabama in Tuscaloosa), 1949

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Doctor of Optometry, Northern Illinois University, 1950

Robert L Mobby, O.D.
Adjunct Instructor in Ophthalmology and Visual Sciences
Doctor of Optometry, Illinois College of Optometry, 1958

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Bachelor of Science, University of Virginia, 2005
Doctor of Philosophy, Washington University in St Louis, 2014
Doctor of Medicine, Washington University in St Louis, 2014

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Master of Arts, Harvard University, 1978
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Doctor of Medicine, Saint Louis University, 2000

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Doctor of Medicine, West Virginia University, 1997

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Doctor of Philosophy, Emory University, 2009  
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R

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null, New York University, 2006  
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Doctor of Medicine, University of Southern California, 1995

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Doctor of Medicine, Cornell University, 2014

Juan Gomez Rodriguez  
Adjunct Assistant Professor of Ophthalmology

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Bachelor of Science, Valparaiso University (Duplicate of Valparaiso University), 1983  
Doctor of Optometry, University of Missouri Columbia, 1987

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Bachelor of Arts, University of Michigan (Duplicate of University of Michigan Ann Arbor), 1959  
Doctor of Medicine, Washington University in St Louis, 1963

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Assistant Professor of Clinical Ophthalmology and Visual Sciences  
Bachelor of Arts, Williams College, 1986  
Doctor of Medicine, University of Utah, 1991

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Bachelor of Science, Lamar University, 1962  
Doctor of Medicine, Washington University in St Louis, 1966

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Assistant Professor of Genetics  
Bachelor of Science, Davidson College, 2008  
Doctor of Philosophy, Washington University in St Louis, 2018

S

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Bachelor of Arts, Amherst College, 1992  
Doctor of Medicine, Columbia University, 1997

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Arsham Sheybani, M.D.
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Doctor of Medicine, Washington University in St Louis, 1986

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Doctor of Philosophy, University of London, 1983

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Doctor of Medicine, Saint Louis University, 1978

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Doctor of Medicine, University of Missouri Kansas City, 2015

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Vice Chair - Division of Ophthalmology
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Bachelor of Arts, University of Missouri Kansas City, 1989
Doctor of Medicine, University of Missouri Kansas City, 1989

Charles D Signorelli, O.D.
Adjunct Instructor in Ophthalmology and Visual Sciences
Bachelor of Science, School Not Listed, 1957
Doctor of Optometry, School Not Listed, 1957

Morton Edward Smith, M.D.
Professor Emeritus of Ophthalmology and Visual Sciences
Associate Dean Emeritus for Post-Graduate Education
College Park, 1956
College Park, 1960

Claud Randall Snowden, O.D.
Adjunct Instructor in Ophthalmology and Visual Sciences
Bachelor of Science, Illinois College of Optometry, 1972
Doctor of Optometry, Illinois College of Optometry, 1974

Craig H Sorce, O.D.
Adjunct Instructor in Ophthalmology and Visual Sciences
Bachelor of Arts, Southern Illinois University (Duplicate of Southern Illinois University Carbondale), 1988
Doctor of Optometry, University of Missouri Columbia, 1992

Florentina Soto Lucas, Ph.D.
Associate Professor of Ophthalmology and Visual Sciences
(secondary appointment)
Doctor of Philosophy, University of Alicante, 1992

Mark H Spurrier, M.D.
Instructor in Clinical Ophthalmology and Visual Sciences
Bachelor of Arts, Kansas State University, 1976
Doctor of Medicine, Washington University in St Louis, 1980

Joseph Steska, O.D.
Assistant Professor of Ophthalmology and Visual Sciences
(secondary appointment)
Doctor of Optometry, Illinois College of Optometry, 2009

Arthur Waldo Stickle, M.D.
Assistant Professor Emeritus of Clinical Ophthalmology and Visual Sciences
Doctor of Medicine, University of Oklahoma, 1943

Michael Vincent Stock, M.D.
Instructor in Ophthalmology and Visual Sciences (primary appointment)
Doctor of Medicine, Washington University in St Louis, 2012

James F Strieter, B.B.A., O.D.
Adjunct Instructor in Ophthalmology and Visual Sciences
Bachelor of Science, School Not Listed, 1953
Doctor of Optometry, School Not Listed, 1954
Master of Business Administration, Southern Illinois University Edwardsville, 1988

Leanne Denise Stunkel, M.D.
Assistant Professor of Ophthalmology and Visual Sciences
(secondary appointment)
Assistant Professor of Neurology
Bachelor of Arts, Johns Hopkins University, 2008
Doctor of Medicine, Cornell University, 2014

Brian Patrick Sumner, O.D.
Adjunct Instructor in Ophthalmology and Visual Sciences
Doctor of Optometry, Illinois College of Optometry, 1978

Kenneth V Swanson
Instructor in Clinical Ophthalmology and Visual Sciences

Paul M Tesser, Ph.D., M.D.
Associate Professor of Clinical Ophthalmology and Visual Sciences
Bachelor of Science, Massachusetts Institute of Technology, 1981
Doctor of Philosophy, State University of New York at Stonybrook, 1990
Doctor of Medicine, State University of New York at Stonybrook, 1991

Matthew A Thomas, M.D.
Professor of Clinical Ophthalmology and Visual Sciences
Bachelor of Science, Harvard University, 1977
Doctor of Medicine, Harvard University, 1991

Linda Mei-Lin Tsai, M.D.
Professor of Ophthalmology and Visual Sciences (primary appointment)
Bachelor of Arts, Northwestern University, 1990
Doctor of Medicine, Northwestern University, 1995

Robert Lawrence Tychsen, M.D.
Professor of Ophthalmology and Visual Sciences (primary appointment)
Professor of Neuroscience
Professor of Ophthalmology and Visual Sciences in Pediatrics
John F Hardesty MD Distinguished Professor of Ophthalmology and Visual Sciences
Bachelor of Science, Georgetown University, 1975
Doctor of Medicine, Georgetown University, 1979

Gregory Paul Van Stavern, M.D.
Professor of Ophthalmology and Visual Sciences (primary appointment)
Professor of Neurology
Robert C. Drews Distinguished Professor in Ophthalmology
Bachelor of Science, La Salle University, 1989
Doctor of Medicine, Pennsylvania State University, 1993

Gary Lee Vogel, O.D.
Adjunct Instructor in Ophthalmology and Visual Sciences
Bachelor of Arts, University of Iowa, 1970
Main Campus), 1977

James J Wachter, O.D.
Adjunct Instructor in Ophthalmology and Visual Sciences
Bachelor of Arts, Saint Louis University, 1987
Bachelor of Science, Illinois College of Optometry, 1990
Doctor of Optometry, Illinois College of Optometry, 1991

Donald E Walter, O.D.
Adjunct Instructor in Ophthalmology and Visual Sciences
Bachelor of Science, University of Houston, 1971
Doctor of Optometry, University of Houston, 1972

William Lee Walter, M.D.
Assistant Professor of Clinical Ophthalmology and Visual Sciences
Bachelor of Arts, De Paul University, 1950
Main Campus), 1954

Stephen R Waltman, M.B.A., M.D.
Professor of Clinical Ophthalmology and Visual Sciences
Master of Business Administration, Washington University in St Louis, 1900
Bachelor of Science, Massachusetts Institute of Technology, 1961
Doctor of Medicine, Yale University, 1964

Stephen Alan Wexler, M.D.
Professor of Ophthalmology and Visual Sciences (Pending Executive Faculty Approval) (primary appointment)
Bachelor of Science, University of Michigan Ann Arbor, 1977
Doctor of Medicine, University of Michigan Ann Arbor, 1982

Richard Harris Wieder, M.D.
Associate Professor of Ophthalmology and Visual Sciences (primary appointment)
Bachelor of Science, University of Illinois, 1982
Doctor of Medicine, University of Illinois, 1986

Philip Raymond Williams, Ph.D.
Assistant Professor of Ophthalmology and Visual Sciences (primary appointment)
Assistant Professor of Neuroscience
Doctor of Philosophy, Washington University in St Louis, 2009

Michael L Wolf, O.D.
Adjunct Instructor in Ophthalmology and Visual Sciences
Bachelor of Science, University of Missouri Columbia, 1979
Doctor of Optometry, University of Missouri Columbia, 1987

Ming-Fong Agnes Wong, Ph.D., M.D.
Adjunct Professor of Ophthalmology and Visual Sciences
Bachelor of Arts, Boston University, 1990
Doctor of Medicine, McGill University, 1994
Doctor of Philosophy, University of Toronto, 2001

Research Electives
Ophthalmology and Visual Sciences Research Electives

During the fourth year, opportunities exist for many varieties of advanced clinical or research experiences. Below is a list of faculty that have ongoing research projects that involve medical students. If a student is interested in working with a faculty member that is not listed below, they can contact the faculty directly to see if there are any research opportunities in their lab.

All residents are encouraged to pursue projects in laboratory or clinical investigation. Research familiarizes the resident with the limitations of laboratory methodology, provides a background for evaluating the literature, helps to develop critical thinking, and allows for a better informed choice for career goals. The type of project is the choice of the resident, and a wide range of opportunities are available. An annual Rosenbaum Research Award of $1,000 is presented to the resident who performs the most exciting research. The department emphasizes basic science research as well as clinical research. Basic science research currently involves five principal areas: Neurobiology, Immunology, Molecular Biology, Pharmacology/Physiology, and Clinical Studies and Outcomes Research. There are many opportunities for research in clinical areas as well.
Further descriptions of our research labs can be found on the Research Opportunities page (https://ophthalmology.wustl.edu/research-opportunities/) of the Department of Ophthalmology & Visual Sciences website.

Basic Science Research

- Dr. Steven Bassnett (https://ophthalmology.wustl.edu/items/bassnett-lab/): Pseudoexfoliation syndrome and glaucoma; refractive development; mouse models of ectopia lentis
- Dr. Shiming Chen (https://ophthalmology.wustl.edu/items/chen-lab/): Bedside to bench: phenotype-genotype correlations of CRX retinopathies
- Dr. Mae Gordon (https://ophthalmology.wustl.edu/items/gordon-lab/) and Dr. Philip Ruzycki (https://ophthalmology.wustl.edu/people/philip-ruzycki-phd/): Microbiome assays of normal eyes and eyes presenting with conjunctivitis
- Dr. Lynn Hassman (https://physicians.wustl.edu/people/lynn-m-hassman-md-phd/): Single-cell transcriptomics of ocular inflammatory cells in uveitis
- Dr. Todd Margolis (https://ophthalmology.wustl.edu/items/margolis-lab/): Regulation of latent infection with herpes simplex virus
- Dr. Joshua Morgan (https://sites.wustl.edu/morganlab/): Downstream circuit degeneration in a mouse glaucoma model
- Dr. Philip Williams (https://sites.wustl.edu/williams/home/): Retinal ganglion cell degeneration and axon regeneration in mouse glaucoma
- Dr. Alan Shiels (https://ophthalmology.wustl.edu/people/alan-shiels-phd/): Molecular genetics of pediatric cataracts and associated eye disorders
- Dr. Carla Siegfried (https://ophthalmology.wustl.edu/people/carla-siegfried-md/): Differential gene expression and mitochondrial function studies of trabecular meshwork cells; racial disparities of open-angle glaucoma
- Dr. Margaret Reynolds (https://ophthalmology.wustl.edu/people/margaret-reynolds-md/): Occupational therapy interventions for patients with low vision; inherited eye diseases; retinopathy of prematurity; refractive surgery; autism spectrum disorder
- Dr. Todd Margolis (https://ophthalmology.wustl.edu/people/todd-margolis-md-phd/): Clinical studies of patients with ocular graft-versus-host disease and superior limbic keratoconjunctivitis, including role of the ocular surface microbiome; pathology studies of autonomic innervation of corneal buttons from patients with herpes simplex virus and herpes zoster ophthalmicus
- Dr. P. Kumar Rao (https://physicians.wustl.edu/people/p-kumar-rao-md/): Vitreous proteomics
- Dr. Lawrence Tychsen (https://ophthalmology.wustl.edu/items/tychsen-lab/): Amblyopia; eye movements; pediatric refractive surgery
- Dr. Gregory P. Van Stavern (https://ophthalmology.wustl.edu/people/gregory-van-stavern-md/): Opportunities in neuro-ophthalmology
- Dr. Carla Siegfried (https://ophthalmology.wustl.edu/people/carla-siegfried-md/): Ethical issues in patient care; outcomes in glaucoma care
- Dr. Leanne Stunkel (https://ophthalmology.wustl.edu/people/leanne-stunkel-md/): Opportunities in neuro-ophthalmology; diagnostic errors in medicine

Quality Improvement Research

- Dr. Phil Custer (https://ophthalmology.wustl.edu/people/philip-custer-md-facs/): Resident-initiated patient safety and quality improvement projects

Translational Research

- Dr. Robi Maamari (https://ophthalmology.wustl.edu/people/robi-maamari-md/): Translational research opportunities for those interested in the development of ophthalmic diagnostic devices (i.e., image-based diagnostics)

Courses

Curriculum courses (p. 12) for Ophthalmology and Visual Sciences are listed below.


Gateway Curriculum

Under the new Gateway Curriculum, medical students spend their four years split among three phases. Phase 1 involves the first 16 months of medical school. During Phase 1, students participate in three Procedural Immersions, which are three-week-long clinical and surgical experiences. The primary goals of the Procedural Immersions are to socialize the student to different clinical settings, to hone their clinical skills, and to allow them to explore the impact of society and health systems on an individual patient’s health. This 360-degree approach to early
clinical exposure allows students to view practicing medicine through physician, patient, and systems lenses. In these rotations, medical students will often focus on longitudinal patient care by following a specific patient from the time they arrive until they leave and seeing how all health care team members are involved in that patient's visit. During the Ophthalmology Procedural Immersion, students spend time in the University Eye Clinic and in the pediatric and adult subspecialty clinics and operating rooms, and they attend rounds with an inpatient consult team. This early exposure to clinical experience helps students to contextualize the classroom and clinical learning that they continue with over the next two phases.

The basic and clinical science of ophthalmology is taught in Phase 1 during Module 7: Brain and Behavior. During this module, the students will spend time learning about eye anatomy and physiology, the visual pathways in the brain, and the mechanisms of extraocular movements. The students participate in interactive case sessions that reinforce the material and encourage students to practice their critical thinking and eye examination skills.

During Phase 3, medical students will have opportunities to participate in electives in ophthalmology and advanced clinical rotations in ophthalmology. These will allow students to obtain further experience in clinical ophthalmology to strengthen their clinical knowledge and examination skills. The students will work closely with the ophthalmology residents and review the differential diagnosis of the “red eye,” the interpretation of an ophthalmologic consult note, and the handling of ocular emergencies. During this rotation, there is again emphasis on the use of the ophthalmoscope. Additional clinical skills introduced to rotating students include the use of the slit lamp and indirect ophthalmoscopy.

Legacy Curriculum: Fourth Year

The Ophthalmology Sub-Internship Rotation occurs during this time. During the month of June during their fourth year, students interested in pursuing a career in ophthalmology are encouraged to complete this intensive four-week rotation. Students will have personal indirect ophthalmoscopy lenses available for use on the rotation. Formal didactic sessions and workshops will be used to teach students how to perform a detailed ophthalmic history and exam, including the mastery of advanced slit lamp techniques and indirect fundoscopy. Students present a case at the department's grand rounds. By the end of the rotation, students will be expected to function at the level of a first-year ophthalmology resident.

Curriculum Courses

M50 Ophth 801 Ophthalmology Subinternship

This elective is for senior students who plan to apply for a residency in Ophthalmology. In accordance with any subinternship, medical students will be expected to function at the level of a beginning first-year ophthalmology resident on this rotation. The students will rotate through the resident eye clinic and the subspecialty clinics of the full time faculty of the Washington University Medical School Department of Ophthalmology and Visual Sciences (e.g., neuro-ophthalmology service, cornea/external disease service, etc.). Students may opt to check out indirect ophthalmoscopy lenses that may be used for the month to facilitate the acquisition of fundoscopy skills. During the rotation, the student's responsibilities range from observation to working at a resident level and completing full eye examinations. There will be a rigorous academic curriculum for the rotation, including a weekly case presentation, weekly attendance at grand rounds, and a mix of medical student-oriented and resident-oriented conferences. On day one, students will receive a rotating call schedule for the entire month. A medical student is expected to be present at all times to assist the primary call ophthalmology resident during the rotation. By the end of the four-week rotation, the student is expected to be proficient in taking an ocular history and performing a complete eye exam including slit lamp biomicroscopy and indirect ophthalmoscopy. All students interested in this senior elective must contact Course Director in March of year WUMS-III. The final grade of the student is determined by input from the director of the particular service(s) through which the student rotated, plus the case presentations.

M50 Ophth 805 Ophthalmology

The Ophthalmology elective is designed to provide a foundational experience in clinical and surgical ophthalmology for medical students. Time will be divided between the University Eye Service clinic, adult inpatient consults, pediatric ophthalmology, and other ophthalmology subspecialties ophthalmology (e.g., Glaucoma, Cornea, or Retina). The amount of time at each location will depend on the length of the rotation and the student's specific interests. There are didactic sessions with Dr. Andrew Lee and Dr. Cynthia Montana during which the students present their own cases. In addition, there are continuing opportunities to attend educational conferences. At the end of the experience, the student is expected to be familiar with the routine eye exam, common eye conditions and their treatment, and the use of the slit lamp and ophthalmoscope.

M50 Ophth 816 Away Rotation in Ophthalmology

This four-week elective is for senior students from medical schools across the United States who are in good standing at their home institution and who are planning to apply for a residency in ophthalmology. To enroll in this elective, students must first apply online for the elective via the visiting student application service (VSAS). These applications will be reviewed and invitations will then be sent to individuals to enroll in the elective. Due to large demand, not all eligible away students will be accepted for the rotation. The dates for this elective are not flexible. The students will rotate through the resident eye clinic and the subspecialty clinics of the full time faculty of the Washington University Medical School Department of Ophthalmology and Visual Sciences (e.g., neuro-ophthalmology service, cornea/external disease service, etc.). In exchange for a refundable deposit, students may opt to check-out indirect ophthalmoscopy lenses that may be used for the month to facilitate the acquisition of fundoscopy skills. During the rotation, the student's responsibilities range from observation (including observing surgery) to working at a resident level and completing
full eye examinations. Didactics will include weekly case presentation sessions, weekly attendance at grand rounds, and a mix of medical student-oriented and resident-oriented conferences. Also, there will be medical student-oriented workshops to learn the basics of the slit lamp and indirect ophthalmoscopy. On day one, students will receive a schedule of conferences that they are expected to attend during the month. By the end of the four-week rotation, the student is expected to be proficient in taking an ocular history and performing a complete eye exam including slit lamp biomicroscopy and indirect ophthalmoscopy.

**M50 Ophth 900 Research Elective - Ophthalmology**
Research opportunities may be available. If interested, please contact the Department of Ophthalmology.