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# Introduction to Ophthalmology

## Professional Enrichment Course

### Spring 2021

<u>Course Dates:</u>	March 31, April 7, 21, 28 Wednesdays, 6:00-8:00 PM
<u>Maximum Students:</u>	20
<u>Class Year:</u>	MS1
<u>Course Director:</u>	Evan Waxman, MD, PhD Associate Professor of Ophthalmology
<u>Contact Information:</u>	Joshua Ong Ong.Joshua@medstudent.pitt.edu
<u>Registration:</u>	Denise Downs, Office of Medical Education ddowns@medschool.pitt.edu

#### Description:

Ophthalmology is a unique medical field in which students receive little exposure during the course of medical school. However, eye complaints are prevalent in many clinical settings, and it is highly beneficial to have some knowledge about the most common eye problems, regardless of your future specialty. In this elective, we will teach students about the ophthalmic history and physical examination, and we will provide a basic introduction to the techniques of slit lamp, refraction, and retinoscopy. Students will also discuss common ocular pathology, such as cataracts, glaucoma, conjunctivitis, and retinopathies in a case-based format. Additionally, students will have the opportunity to gain exposure to ophthalmic surgery by spending time in the operating room. At the end of the mini-elective, we hope that students will have gained a strong foundation in basic ophthalmology.

#### Course Objectives:

1. To review the basic components of an ophthalmic history, including the chief complaint, history of present illness, past ocular history, and a pertinent review of systems.
2. To teach and practice proper eye examination techniques
3. To teach and practice the appropriate format of ophthalmic patient presentations
4. To give students a general overview of slit lamp, refraction, and retinoscopy techniques and uses in clinical practice
5. To discuss common ocular pathology cases
6. To introduce students to ophthalmic surgery through shadowing experiences in the operating room and hands-on practice in the wet lab

#### Requirements for Certificate:

- Attendance and participation in all four sessions
- One day of shadowing in the OR (students will be provided with a schedule of options)
- Review all assigned readings in *OphthoBook*\* (free online resource)

#### Prerequisites: None

Social Distancing Plan: During didactic sessions, students and instructors will be socially distanced in a large room while wearing masks. The number of students and instructors allowed in an exam room will be limited to 4. All students and instructors will wear masks at all times and use gloves when handling equipment and slit lamp spit shields. Students will also work at their own station in the wet lab while wearing the appropriate protective equipment.

\*Root T. *OphthoBook* - the free ophthalmology textbook for new students. Tim Root - Virtual Eye Professor. <https://timroot.com/ophthobook/>. Published 2017. Accessed August 3, 2018

## COURSE OUTLINE

### Introduction to Ophthalmology

March 31, April 7, 21, 28

Wednesdays, 6:00-8:00 PM

#### Course Director:

Evan Waxman, MD, PhD

Associate Professor of Ophthalmology

#### Faculty:

Evan Waxman, MD, PhD

Residents: Julia Shatten, MD, M.Ed; Caroline Vloka, MD

Students: Joshua Ong, Medical Student

#### Location:

Eye and Ear Institute, 9<sup>th</sup> Floor Conference Room

### Session 1: Introduction to the Ophthalmic History and Physical Examination

1. The session will start with an overall introduction to the field of ophthalmology and its subspecialties. Students will be taught the basics of the ophthalmic H&P and will practice the exam on each other. The proper format of ophthalmology presentations will also be discussed.
2. **Recommended reading:** *OphthoBook* Chapters 1 & 2 ([Eye History and Physical](#), [Anatomy of the Eye](#))

### Session 2: Anterior Eye Pathologies

1. Students will discuss cases related to the anterior segment of the eye, such as cataracts, glaucoma, and corneal ulcers. Students will be taken to clinic rooms to learn how to perform slit lamp examination and refraction.
2. **Recommended reading:** *OphthoBook* Chapters 3 & 10 ([Introduction to Glaucoma](#), [Introduction to the Lens and Cataract Surgery](#))

### Session 3: Posterior Eye Pathologies

1. Students will discuss cases related to the posterior segment of the eye, such as retinal detachment and diabetic retinopathy. Students will be taken to clinic rooms to learn how to perform the dilated fundus examination on each other, which will involve each student having one eye dilated.
2. **Recommended reading:** *OphthoBook* Chapter 4 ([Beginner's guide to the Retina](#))

### Session 4: Eye Emergencies and Surgical Simulation

1. Students will discuss the evaluation of traumatic eye injuries and simple eye infections. Afterwards, students will be taken to the wet lab to have individual hands-on surgical simulation.
2. **Recommended reading:** *OphthoBook* Chapters 5 & 8 ([Eye Infections](#), [Common Eye Trauma](#))

### Session 5: Operating Room Experience (Students will schedule individually)

1. Students will be paired with a current ophthalmology resident to shadow in the operating room. Students can also be provided with a list of available attending surgeons whom they can contact and arrange a time to observe on their own.
2. **Recommended reading:** Review any assigned material and chapters related to the scheduled case