



SUNY COLLEGE OF OPTOMETRY  
GRADUATE CENTER  
FOR VISION RESEARCH

# MASTER OF SCIENCE (MS) IN VISION SCIENCE STUDENT HANDBOOK

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## THE GRADUATE CENTER FOR VISION RESEARCH (GCVR)

The Master of Science (MS) in Vision Science program is housed in the Graduate Center for Vision Research (GCVR) at SUNY College of Optometry. Students enrolled in the MS program conduct original research across the many areas of vision science studies with our research faculty, from molecular biology and genetics, to clinical problems related to ocular disease and vision loss. This handbook provides information and details about the program. Any questions regarding the program can be directed to the Graduate Program Administrator or the Associate Dean for Graduate Studies and Research. The GCVR can be reached by phone at 212-938-5540, or in-person, located at 33 West 42<sup>nd</sup> Street, 17<sup>th</sup> Floor.

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## ORIENTATION

Prior to the start of the first semester in the MS in Vision Science program, students meet with the Associate Dean for Graduate Studies and Research and the Graduate Program Administrator for orientation. During orientation, students will learn more about the program requirements, policies and procedures, and will be given the opportunity to ask questions.

Graduate students are expected to be familiar with the [SUNY Optometry Student Handbook](#), which provides information about SUNY Optometry policies and facilities, including grievance procedures.

## REGISTRATION

Prior to registration, students consult with their Graduate Research Advisor. Once they have selected graduate course(s) to enroll in with their advisor, the Graduate Program Administrator will register them. Students are responsible for checking to ensure that they have met the required prerequisites for each course they wish to register for. The Registrar is located in the Office of Student Affairs, 11th floor, and is responsible for maintaining the official transcript for each graduate student.

### **OD/MS Students**

OD/MS students are allowed to register for up to 12 credits each semester. The amount will vary based on the student's workload and capacity. An [OD/MS Student Sample Plan of Study](#) is included at the end.

### **Residency/MS Students**

Residency/MS students must be registered for 12 credits each semester. A [Residency/MS Student Sample Plan of Study](#) is included at the end.

## CURRICULUM REQUIREMENTS

Completion of at least 40 graduate credits from the required Core Curriculum, Advanced Topic Seminars, and Research.

*Exemptions from required courses:* A student may, on the basis of previous work, request an exemption either from a required course in the core curriculum, or from a required prerequisite or co-requisite that is needed for a core curriculum course or an advanced topic seminar. Requests should be made by petition in writing to the Associate Dean for Graduate Studies and Research.

To qualify for the MS degree, students must pass the following professional program courses which are designated as GM100 Level courses. OD/MS students complete these courses in their first year of the OD program. Residency/MS students may transfer credits from their OD degree to satisfy these requirements.

- GVS-131FB- Integrated Optics I
- GVS-170SB- Visual Function: Sensory
- GVS-181FC- Ocular Anatomy, Biochemistry & Physiology I
- GVS-182SC- Ocular Anatomy, Biochemistry & Physiology II

Students must also pass the following required graduate courses:

- GM201- Introduction to Statistics and Statistical Computing
- GM240- Research Survival Skills
- GM241- Vision Science Journal Club for MS Students
- GM219- Scientific Integrity and Ethics in Research

Students must complete four (4) advanced topic seminar courses (GM200-level or above):

- GM251- Oculomotor Systems
- GM252- Sensory Physiology and Perception
- GM253- Optics, Refractive Error, and Maturation of the Optical System
- GM254- Ocular Bioscience

With approval of the student's Graduate Research Advisor and the Associate Dean for Graduate Studies and Research, students may substitute an academic (non-research) course, such as Independent Study or a course in the PhD program, for one of the required Advanced Topic seminars.

With approval from the student's Graduate Research Advisor and the Associate Dean for Graduate Studies and Research, a student may substitute an academic (non-research) course, such as Independent Study or a course in the PhD program, for one of the required Advanced Topic Seminars. If the student chooses to do an Independent Study, a complete syllabus for an Independent Study must be submitted and approved by the Associate Dean for Graduate Studies and Research before the course begins.

Students must complete a minimum of 16.25 research credits in the following course. A student may divide the 16.25 credits into each semester however they choose. This will generally be dependent upon a student's workload and capacity each semester:

- GM215-Pre-Dissertation Research

## DEGREE PROGRAM REQUIREMENTS

1. Completion of the Master's Program Curriculum requirements
2. A cumulative grade point average of at least a 3.00
3. **Selecting a Graduate Research Advisor:** Every MS student must have a Graduate Research Advisor, whose role is to help the student plan their course of study, to direct the student's Master's thesis research, and assist in providing periodic assessments of the students' progress. The Graduate Research Advisor is selected by the student from a list of qualified graduate faculty, normally chosen when the student applies for the MS degree. A Graduate Research Advisor Selection Form must be filed with the GCVR Office no later than the end of an MS student's first semester (Fall for Residency/MS and Spring for OD/MS). MS Students need to meet with their Graduate Research Advisor 2x/month to discuss progress.
4. **Master's Thesis Committee:** In consultation with their Graduate Research Advisor, a Master's student will invite at least two members of the graduate faculty to serve on their thesis committee. With approval of the Associate Dean for Graduate Studies and Research, a student may choose a faculty member at the college who is not part of the graduate faculty, to serve on their thesis committee. Since one role of the thesis committee is to resolve any conflicts that may arise between a student and their Graduate Research Advisor, a member other than the advisor should be named committee chairperson. A Master's Thesis Committee Form must be filed with the GCVR Office no later than the end of an MS student's second semester (Spring for Residency/MS and Fall for OD/MS). This committee shall be approved by the Associate Dean for Graduate Studies and Research. The thesis committee may, if it desires, make use of consultants not on the committee.
5. **Master's Thesis Committee Progress Report:** By no later than the end of an MS student's second semester (Spring for Residency/MS and Fall for OD/MS), the student must write a brief thesis proposal and meet with the committee members to discuss the project and obtain approval and submit a Master's Thesis Committee Progress Report to the Associate Dean for Graduate Studies and Research. As a proposal, it is anticipated that changes may be made as the research project is executed; students should inform committee members of any significant changes in the project as it progresses.

Students are expected to meet with their full Thesis Committee at least once per year in order to discuss the project and assess progress. After each meeting, a Master's Thesis Progress Report will be completed by the committee chairperson and submitted to the Associate Dean for Graduate Studies and Research.

6. **Written Master's Thesis:** Each student must submit a final written thesis based upon completion of their research activities, which must be approved by the student's thesis committee.

Suggested Written Thesis Outline

- a. Abstract
- b. Table of Contents
- c. Introduction
- d. Significance
- e. Methodology
- f. Results
- g. Discussion

Required Technical Formatting

- Single sided document
  - Legible font in size 11 or 12 point
  - 1.5-inch left margin and other 3 margins at 1-inch
  - Double-spaced throughout
  - Successive page numbers
    - Title page is page i, but the number is not shown
    - Number ii, iii, iv, through table of contents
    - Number 1, 2, 3... for all pages of the rest of the dissertation
  - Start each chapter on a new page
  - Paragraphs indented
  - Quotes- single spaced
  - Figures or figure legends embedded in the text
  - Proper citations as applicable
7. **Oral Thesis Presentation:** In addition to the written Master's thesis, students are required to present their work orally in the form of a scheduled talk to the College community, including the thesis committee, followed by a question and answer period. A satisfactory oral presentation, as judged by the student's thesis committee, is a requirement of the MS degree. The oral presentation may be scheduled before submission of the written thesis.

Following the successful presentation and approval of the written thesis, all members of the Master's Thesis Committee sign the Master's Thesis Cover Page, indicating their approval of the written and oral presentation. Approval of the thesis by the committee must be unanimous.

## GRADUATION AND COMMENCEMENT

The MS degree is awarded two times a year, near the end of the Fall and Spring semesters. Students may attend the Commencement ceremony, held once a year at the end of the Spring semester, irrespective of when their degree was awarded. The GCVR and the Office of the Registrar shall examine the student's credentials and, if all the requirements have been completed, shall recommend that the student be awarded the degree of Master's of Science in Vision Science contingent on the approval of the thesis after the student's oral presentation.

All requirements for the MS degree must be completed within 5 years of starting the program. OD/MS students are strongly advised to finish their graduate course work and thesis research data collection prior to the summer of their 4th Year in the OD program. OD/MS students who do not complete the MS degree by time of graduation for the OD degree will need to register for 1 credit the next semester and will be responsible for tuition costs and fees.

## PHD IN VISION SCIENCE PROGRAM

MS Students have the option of extending their studies by applying to the PhD in Vision Science program. Interested students need to speak to the Associate Dean for Graduate Studies and Research by January of their OD graduating year.

## SUNY OPEN ACCESS REPOSITORY (SOAR) AND DISSERTATION

SOAR is a digital repository tool used by the College to collect, preserve, and distribute completed Master's Theses and Doctoral Dissertations. It facilitates digital preservation and scholarly communication while promoting open access. Upon receiving approval for graduation, students complete the [Thesis/Dissertation Submission Form](#). On the form, students can request a bound, physical copy of their thesis/dissertation, at no cost.

## OD/MS STUDENT SAMPLE PLAN OF STUDY

### **YEAR 1**

#### *Fall Semester*

GVS-131FB- Integrated Optics I (3 credits)

GVS-181FC- Ocular Anatomy, Biochemistry & Physiology I (3.5 credits)

Apply to MS program

#### *Spring Semester*

GVS-170SB- Visual Function: Sensory (2.5 credits)

GVS-182SC- Ocular Anatomy, Biochemistry & Physiology II (1.75 credits)

GM240- Research Survival Skills (1 credit)

GM241- Vision Science Journal Club for MS Students (1 credit)

Selection of Graduate Research Advisor

### **YEAR 2**

#### *Summer Semester*

GM215- Pre-dissertation Research (9 credits)

GM201- Introduction to Statistics and Statistical Computing (2 credits)

GM219- Scientific Integrity and Ethics in Research (1 credit)

#### *Fall Semester*

GM215- Pre-dissertation Research (3 credits)

GM251, 252, 253, or 254- Advanced Topics Seminar (2 credits)

Selection of Master's Thesis Committee

Annual Thesis Committee Progress Report

#### *Spring Semester*

GM251, 252, 253, or 254- Advanced Topics Seminar (2 credits)

GM215- Pre-dissertation Research (3 credits)

### **YEAR 3**

#### *Summer Semester*

GE307- Independent Study (2 credits)

#### *Fall Semester*

Annual Thesis Committee Progress Report

#### *Spring Semester*

GM215- Pre-dissertation Research (2 credits)

### **YEAR 4**

#### *Summer Semester*

GM215- Pre-dissertation Research (2 credits)

#### *Fall Semester*

Annual Thesis Committee Progress Report

#### *Spring Semester*

Completion of written thesis & Master's Thesis Presentation



## RESIDENCY/MS STUDENT SAMPLE PLAN OF STUDY

### **YEAR 1**

#### *Fall Semester*

TR credits from OD degree to satisfy professional program course requirements

GM215- Pre-dissertation Research (10 credits)

GM251, 252, 253, or 254- Advanced Topics Seminar (2 credits)

Selection of Graduate Research Advisor

#### *Spring Semester*

GM215- Pre-dissertation Research (8 credits)

GM240- Research Survival Skills (1 credit)

GM241- Vision Science Journal Club for MS Students (1 credit)

GM251, 252, 253, or 254- Advanced Topics Seminar (2 credits)

Selection of Master's Thesis Committee

Annual Thesis Committee Progress Report

### **YEAR 2**

#### *Summer Semester*

GM215- Pre-dissertation Research (9 credits)

GM201- Introduction to Statistics and Statistical Computing (2 credits)

GM219- Scientific Integrity and Ethics in Research (1 credit)

#### *Fall Semester*

GM215- Pre-dissertation Research (10 credits)

GM251, 252, 253, or 254- Advanced Topics Seminar (2 credits)

Annual Thesis Committee Progress Report

#### *Spring Semester*

GM215- Pre-dissertation Research (10 credits)

GM251, 252, 253, or 254- Advanced Topics Seminar (2 credits)

Completion of written thesis & Master's Thesis Presentation