

# PRE-OPTOMETRY

## Introduction

Students interested in a career in optometry may pursue any major along with completing specific prerequisites. Optometry schools typically require a minimum of 90 credit hours be completed at the undergraduate level and many prefer the bachelor degree be completed prior to enrolling. Students must gain a thorough understanding of the profession through a range of shadowing experiences, demonstrate a commitment to service, and earn a competitive score on the Optometry Admission Test (OAT). Students should work with the Pre-Health advisor beginning in the first college year to select appropriate coursework based on their schools of interest and plan appropriate co-curricular experiences.

Students applying to optometry schools complete an in-house application process to receive a letter of evaluation from the Health Science Advisory and Recommendation Committee in support of their application to optometry school. In addition to the information in this section, please check the general information at the pre-medical and pre-health section of the catalog (<http://catalog.canisius.edu/undergraduate/academics/curricular-information/pre-professional-programs/pre-medical-pre-health-professions/>).

## Joint and Early Assurance Programs

Canisius maintains a relationship with SUNY College of Optometry which allows students to gain early acceptance into optometry school. Highly qualified students may apply while in high school and be admitted into this 3+4 program upon enrolling at Canisius as first-year students. Current students may apply during during the first year. Students wishing to apply while in high school as well as current students should contact the Program Director. Competitive SAT or ACT scores are required for early acceptance. Students in this program complete the Core Curriculum or the All College Honors Program and three years of the Chemistry Health Track major or a Biology major.

## Recommended Pre-Optometry Courses

Academic admission requirements vary by optometry school, but usually include the following courses:

### English

One year of English composition or the Honors Program equivalent:

Code	Title	Credits
Select one of the following:		
Option 1:		
ENG 111	Academic Writing	3
ENG 112	Writing about Literature	3
Option 2:		
HON 101	Honors English	3
	and an Honors Literature course	3

### Biology

At least one year of general biology with laboratory. Most schools also require a semester each of anatomy, physiology and microbiology:

Code	Title	Credits
One Year of General Biology		
BIO 111 & 111L	Introductory Biology I and Introductory Biology Laboratory I	4
BIO 112 & 112L	Introductory Biology II and Introductory Biology Laboratory II	4
One Year of Anatomy & Physiology		
BIO 114 & 114L	Human Anatomy and Physiology I and Human Anatomy and Physiology I Laboratory	4
BIO 115 & 115L	Human Anatomy and Physiology II and Human Anatomy and Physiology II Laboratory	4
or		
BIO 324 & 324L	Human Anatomy and Human Anatomy Lab	4
BIO 340 & 340L	Physiology and Physiology Laboratory	4
One Semester of Microbiology		
BIO 307 & 307L	Microbiology and Microbiology Laboratory	4

## Chemistry

One year of general chemistry and one year of organic chemistry with laboratories:

Code	Title	Credits
CHM 111 & 111L	General Chemistry I and General Chemistry I Laboratory	4
CHM 112 & 112L	General Chemistry II and General Chemistry II Laboratory	4
CHM 227 & 227L	Organic Chemistry I and Organic Chemistry I Laboratory	4
CHM 228 & 228L	Organic Chemistry II and Organic Chemistry II Laboratory	4

## Biochemistry

One semester of biochemistry. A student's major may dictate the option they should select:

Code	Title	Credits
Select one of the following:		
Option 1:		
BIO 211	Biochemistry and Cell Biology I	3
BIO 212	Biochemistry and Cell Biology II	3
Option 2:		
BCH 301	Introduction to Biochemistry	3
BCH 302	Cellular Biochemistry	3
Students may take both BIO211/BIO212 or one or both courses of BCH301/BCH 302		

## Physics

One year of introductory physics with laboratory. A student's major may dictate the option they should select:

Code	Title	Credits
Select one of the following:		
Option 1:		

PHY 201 & 201L	College Physics I and College Physics I Laboratory	4
PHY 202 & 202L	College Physics II and College Physics II Laboratory	4
Option 2:		
PHY 223 & 223L	General Physics for Physical Science Majors I and General Physics for Physical Science Majors I Laboratory	4
PHY 224 & 224L	General Physics for Physical Science Majors II and General Physics for Physical Science Majors I Laboratory	4

## Mathematics

One semester of statistics and one semester of calculus. SUNY Optometry will accept one semester of pre-calculus (MAT 109). Some optometry schools suggest one year of calculus (MAT 111-MAT 112):

Code	Title	Credits
Calculus		
MAT 111	Calculus I	4
Statistics		
PSY 201	Basic Statistics for Behavioral Sciences	3 or 4
or MAT 141	Inferential Statistics and Computers for Science	

## Psychology

One semester of psychology (PSY 101 or PSY 102 or PSY 203). SUNY Optometry does not require a psychology course:

Code	Title	Credits
PSY 101	Introduction to Psychology I <sup>1</sup>	3
or PSY 102	Introduction to Psychology II	
or PSY 203	Lifespan Developmental Psychology	

<sup>1</sup> Or an upper-level psychology course may be substituted

## Additional Pre-Optometry Courses

Some schools recommend additional coursework. Two courses from sociology and/or the humanities are recommended. Sociology (SOC 110) is recommended.

## Elective Courses

HRP 101 allows students to explore different health professions.

HRP 111 introduces students to medical terminology.

HRP 201 and HRP 202 allow students to explore areas of medicine in more depth.

HRP 498 is an internship in medical informatics. A medical scribe internship is also available.

HRP 498A is a medical (and vision) service learning trip.