

# PRE-HEALTH PROFESSIONS

## PROGRAM OVERVIEW

Students interested in pre-health professions such as medicine, dentistry, pharmacy, optometry, veterinary medicine, or physician assistant school should select a major that best suits their interest, however, most pre-professional students major in biology, biochemistry, exercise science, or psychology. Admission requirements, such as a second semester of English and organic chemistry can be added to any of the above majors to satisfy admission to medical and other professional schools.

Our program is designed so the first two years of study consist of core courses required for all pre-health professions, while the last two years involve mainly specialty courses and completion of the major. Should a student start in one of these programs and then decide not to pursue professional school placement, students will be well-prepared for the job market.

## CAREERS AND PLACEMENT

Due to the work of faculty advisors, along with the flexibility and academic strength of Capital's program, students have been highly successful in being admitted to a variety of schools and programs in recent years, including Indiana University, University of Michigan, The Ohio State University, University of Alabama, University of Toledo, and many others. Most graduate health professions require the same basic preparation as medical schools, which include the fundamentals of science (biology, chemistry, and physics) within the context of a well-rounded education.

## EXPERIENTIAL LEARNING

All allied health schools recommend and/or require as much volunteer and internship experience as possible. This is especially true of veterinary medicine and physician assistant programs. Opportunities exist for students to hear career speakers, including Capital alumni currently enrolled in professional programs, and to be involved in community service projects through the Life Science/Biology organization.

## AS A GRADUATE, YOU WILL BE PREPARED TO:

- Demonstrate a working knowledge of the core areas of biology including molecular, genetic, microbiological, organismal, evolutionary, and ecological as they apply to the diverse nature of the field
- Retrieve, critically evaluate, and explain information from the relevant scientific literature
- Use the scientific method to formulate research questions and hypotheses
- Use appropriate data collection and computational analysis tools (including laboratory equipment and statistical analyses) to collect and analyze scientific data individually and collaboratively
- Communicate biological information effectively and appropriately for the discipline to different audiences in multiple formats
- Conduct actions and experiments responsibly and ethically

## WHAT ARE OUR GRADS DOING NOW?

- Medical School, Dental School, Veterinary School, and School of Optometry, The Ohio State University
- Medical School, Wright State, University of Cincinnati, University of Chicago, Indiana University, AT Still University, and University of Toledo
- Physician Assistant Program, Ohio University Medical School, University of Dayton, Mount St. Joseph University, and University of Mount Union
- Medical School and Optometry School, University of Alabama

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## DENTISTRY

Dentistry is the field of medicine that specialize in the teeth and associated tissues. Dentists earn a doctor of dental science degree and practice either solo or in a group setting. They also may be employed by the public health service or the military. Dental school is four years, followed by optional specialty training or practice.

## VETERINARY MEDICINE

Veterinary physicians treat non-human patients, from cats and dogs to exotic animals in zoos. Four years of study after the undergraduate degree are required to earn the doctor of veterinary medicine degree. Opportunities for specialty training are available in addition to private practice. Veterinarians often work for the government and industry as food and public health inspectors, as well as in zoos, aquaria, and animal parks.

## PHARMACY

Pharmacists study drugs and drug interactions in the human body and help to educate the public about drug interactions and effectiveness. Many pharmacists work for pharmaceutical companies, as well as hospitals and pharmacies. A doctor of pharmacy degree requires four years of study after an undergraduate degree.

## OPTOMETRY

An optometrist earns a doctor of optometry degree and studies the human eye and its function. Optometry school requires four years of study. Optometrists are employed by private industry, as well as hospitals and clinics. They may also be self-employed and open their own practice.

## PHYSICIAN ASSISTANT

Physician assistants practice medicine under the supervision of physicians and surgeons. They may treat injuries, prescribe most medications, and perform routine patient care. A master's degree is required and takes 2.5 years to complete.

## PUBLIC HEALTH

This is a growing interdisciplinary field that provides training to professionals who keep people safe from diseases that threaten our communities. Specialty areas include epidemiology, biostatistics, health education, environmental health, and health services administration. A master's degree is required and takes 2.5 years to complete.

## ENTRANCE EXAMS

Each type of professional school has its own entrance exam, which are typically taken at the end of the junior year and prior to submitting graduate school applications. Detailed information about exam content and registration forms are available from the program director. These exams include the DAT, PCAT, OAT, and GRE.

## Four-Year Sample Schedule in Preparation for Veterinary Medical School

### First Year Fall

15 credit hours  
Foundations of Biology I - 4  
Principles of Chemistry I - 4  
Math - 3  
Biology Seminar - 1  
Signature Learning - 3

### Second Year Fall

16 credit hours  
Organic Chemistry I - 4  
Genetics - 4  
Career Seminar - 1  
Language - 4  
Signature Learning - 3

### Third Year Fall

17 credit hours  
Comparative  
Anatomy - 4  
General Physics I - 4  
Biochemistry - 3  
Research Methods - 3  
Intro to Psychology - 3

### Fourth Year Fall

13 credit hours  
Ecology - 4  
Signature Learning - 3  
Research OR Internship - 2  
Dept. Seminar - 1  
Elective - 3

### First Year Spring

19 credit hours  
Foundations of Biology II - 4  
Principles of Chemistry II - 4  
Calculus I - 4  
Signature Learning - 3  
Signature Learning - 3

### Second Year Spring

17 credit hours  
Organic Chemistry II - 4  
Microbiology - 4  
Elective - 4  
Medical Terminology - 2  
Language - 4

### Third Year Spring

17 credit hours  
Animal Physiology - 4  
Elective - 4  
Research OR  
Internship - 3  
Signature Learning - 3

### Fourth Year Spring

18 credit hours  
Elective - 4  
Elective - 3  
Research OR Internship - 3  
Dept. Seminar - 1  
Cellular Biology - 4  
Signature Learning - 3

All courses subject to availability and advisor approval. All undergraduates must demonstrate that Signature Learning goals have been met.

