PATHO-BIOLOGICAL SCIENCES (PATH-BIO)

PATH-BIO 150 — CONTEMPORARY TOPICS AND CAREERS IN THE VETERINARY SCIENCES
1 credit.

Designed to expose students to topics of importance to the animal health field as well as introduce them to the academic and professional options they will face as undergraduates. Enroll Info: None
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2017

PATH-BIO/PATH 210 — HIV: SEX, SOCIETY AND SCIENCE
3 credits.

HIV kills three million people per year, more than any other infectious disease. We will learn about the transmission, immunology, virology, vaccinology and societal impact of this virus. Six of the world’s leading HIV scientists will give guest lectures. Enroll Info: HS biol crse. Open to all Undergrads
Requisites: None
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
L&S Credit: Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2017

PATH-BIO 299 — INDEPENDENT STUDY
1-3 credits.

Enroll Info: Freshmen or Sophomore or Junior standing written consent of instructor
Requisites: Consent of instructor
Repeatable for Credit: Yes, unlimited number of completions

PATH-BIO/ENTOM/M M & I/ZOOLOGY 350 — PARASITOLOGY
3 credits.

The biology of water-borne, food-borne, soil-borne and vector-borne parasites of animals including humans. Parasites are explored in the context of transmission, associated disease, diagnosis and treatment options, and environmental, cultural and socioeconomic drivers of disease epidemiology. Enroll Info: None
Requisites: ZOOLOGY/BIOLOGY 101 and 102, or ZOOLOGY/BIOLOGY/BOTANY 152 or ZOOLOGY 153, or BIOCORE 381
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit: Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2018

PATH-BIO/M M & I/ZOOLOGY 351 — PARASITOLOGY LABORATORY
2 credits.

Optional laboratory component of Med AHABS 350. Emphasis on experiments involving live animal parasites, including: trematodes, tapeworms, gapeworms, hookworm, ascarids, trichina, filaria, trypanosomes, coccidia, and malaria. Enroll Info: None
Requisites: cons reg in AHABS 350
Course Designation: Breath - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit: Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No

PATH-BIO 370 — ADDRESSING CONTROVERSY: THE SCIENCE, ETHICS, AND PUBLIC DISCUSSION OF ANIMAL RESEARCH
3 credits.

Addresses the science, ethics, history, and communication strategies associated with the use of animals in research. Seeks to identify and employ common ground among those with different perspectives to enable students to make good decisions about this contentious topic. Enroll Info: None
Requisites: Satisfied Communications A requirement and (ZOOLOGY/BIOLOGY 101, ZOOLOGY/BIOLOGY/BOTANY 152, or BIOCORE 383)
Course Designation: Breath - Either Humanities or Natural Science Level - Intermediate
L&S Credit: Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No

PATH-BIO/HORT 500 — MOLECULAR BIOLOGY TECHNIQUES
3 credits.

The objective of the course is to familiarize students with recombinant DNA technology. This will be accomplished through lectures as well as hands on exposure to methodologies used in molecular biology laboratories. Enroll Info: BIOCHEM 501 or 621 or GENETICS 466 or Bact 303, 304 or cons inst
Requisites: None
Course Designation: Level - Intermediate
L&S Credit: Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2018

PATH-BIO 510 — VETERINARY IMMUNOLOGY
3 credits.

Current concepts in basic and clinical immunology with special emphasis on domesticated species and aspects of immunology important to students of veterinary medicine. Enroll Info: Vet Med st, basic crse in microbiology, or cons inst
Requisites: Declared in Veterinary Medicine program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2017
**PATH-BIO 512 — INTRODUCTION TO VETERINARY EPIDEMIOLOGY**
2 credits.

This course introduces basic concepts and approaches to population problems in veterinary medicine. Methods appropriate to investigation of disease outbreaks, surveillance of animal disease and production and the design of epidemiological studies of the determinants of disease are presented. Enroll Info: Vet Med st or cons inst

**Requisites:** Declared in Veterinary Medicine program

**Course Designation:** Grad 50% - Counts toward 50% graduate coursework requirement

**Repeatable for Credit:** No

**Last Taught:** Fall 2017

**PATH-BIO 513 — VETERINARY VIROLOGY**
2 credits.

Basic and clinical concepts of the viruses and diseases they cause in domesticated species. Enroll Info: Vet Med st, basic crse in microbiology, or cons inst

**Requisites:** Declared in Veterinary Medicine program

**Course Designation:** Grad 50% - Counts toward 50% graduate coursework requirement

**Repeatable for Credit:** No

**Last Taught:** Fall 2017

**PATH-BIO 514 — VETERINARY PARASITOLOGY**
3 credits.

Basic veterinary parasitology with emphasis on biology, diagnosis, pathophysiology, treatment and management of parasitic infections of veterinary importance. Enroll Info: Vet Med st or cons inst

**Requisites:** Declared in Veterinary Medicine program

**Course Designation:** Grad 50% - Counts toward 50% graduate coursework requirement

**Repeatable for Credit:** No

**Last Taught:** Spring 2018

**PATH-BIO 515 — REGULATORY VETERINARY MEDICINE AND PUBLIC HEALTH**
2 credits.

Introduction to the preventive aspects of veterinary medicine as they relate to zoonoses, environmental hygiene and safety of foods of animal origins. Enroll Info: Vet Med st or cons inst

**Requisites:** Declared in Veterinary Medicine program

**Repeatable for Credit:** No

**Last Taught:** Spring 2018

**PATH-BIO 517 — VETERINARY BACTERIOLOGY AND MYCOLOGY**
4 credits.

Emphasis of the course is on the pathogenesis of bacterial and fungal diseases of animals. The laboratories will familiarize students with the methods used to identify representative bacterial and fungal pathogens. Enroll Info: Enrollment in the vet med pro curric or cons inst

**Requisites:** Declared in Veterinary Medicine program

**Course Designation:** Grad 50% - Counts toward 50% graduate coursework requirement

**Repeatable for Credit:** No

**Last Taught:** Fall 2017

**PATH-BIO 525 — ACTIVE, INTEGRATED LEARNING I**
1 credit.

Active Learning experience highlighting problem solving and critical thinking that horizontally and vertically integrates material from other veterinary medicine courses by using exercises constructed in the context of clinical cases or scenario. Enroll Info: Yr 1 Vet Med crses

**Requisites:** None

**Repeatable for Credit:** No

**Last Taught:** Fall 2017

**PATH-BIO 526 — ACTIVE, INTEGRATED LEARNING II**
1 credit.

A Active Learning experience highlighting problem solving and critical thinking that horizontally and vertically integrates material from other veterinary medicine courses by using exercises constructed in the context of clinical cases or scenario. Enroll Info: Yr 1 Vet Med crses

**Requisites:** None

**Repeatable for Credit:** No

**Last Taught:** Spring 2018

**PATH-BIO/M & I/MICROBIO 528 — IMMUNOLOGY**
3 credits.

Development and functions of immune response in animals; a comprehensive study of experimental humoral and cellular immunity. Enroll Info: Two sem chem and one sem zoology or gen biology

**Requisites:** None

**Course Designation:** Level - Intermediate

**L&S Credit:** Counts as Liberal Arts and Science credit in L&S

**Repeatable for Credit:** No

**Last Taught:** Fall 2017

**PATH-BIO/M & I 529 — IMMUNOLOGY LABORATORY**
2 credits.

Selected techniques illustrating concepts of cellular and humoral immunity as a supplement to Immunology 528. Enroll Info: Two sem of chem and one sem of zoology or gen biology. Jr or Sr st; cons inst

**Requisites:** Junior standing

**Course Designation:** Level - Intermediate

**L&S Credit:** Counts as Liberal Arts and Science credit in L&S

**Repeatable for Credit:** No

**Last Taught:** Spring 2011

**PATH-BIO 559 — VETERINARY GENERAL PATHOLOGY**
2 credits.

General mechanisms of disease at the cellular, tissue, organ, and organismal levels. Cell injury and cell death, neoplasia, inflammation, circulation, and genetics. Enroll Info: None

**Requisites:** Declared in Veterinary Medicine program

**Repeatable for Credit:** No

**Last Taught:** Fall 2017
PATH-BIO 560 — VETERINARY SYSTEMIC PATHOLOGY I  
2 credits.
Morphological manifestations of disease in animals. Diseases and disease processes will be discussed by organ system, stressing important diseases in domestic animals. Students should take both Veterinary Systemic Pathology I and II. Enroll Info: Vet Med st, PATH-BIO 559, or cons inst  
Requisites: Declared in Veterinary Medicine program  
Repeatable for Credit: No  
Last Taught: Fall 2017

PATH-BIO 561 — VETERINARY SYSTEMIC PATHOLOGY II  
4 credits.
Morphological manifestations of disease in animals. Diseases and disease processes will be discussed by organ system, stressing important diseases in domestic animals. Students should take both Veterinary Systemic Pathology I and II. Enroll Info: Vet Med st, PATH-BIO 560, or cons inst  
Requisites: Declared in Veterinary Medicine program  
Repeatable for Credit: No  
Last Taught: Spring 2018

PATH-BIO 562 — VETERINARY CLINICAL PATHOLOGY  
4 credits.
Concepts and techniques of clinical pathology with emphasis on those procedures that are important in the diagnosis of animal diseases. Enroll Info: None  
Requisites: Declared in Veterinary Medicine program  
Repeatable for Credit: No  
Last Taught: Spring 2018

PATH-BIO 660 — VETERINARY NECROPSY ROTATION  
1 credit.
The course is designed to provide experience with necropsy procedures in all animal species and in developing interpretive skills by participating in the School of Veterinary Medicine/Veterinary Medical Teaching Hospital diagnostic anatomic pathology service under the guidance of the faculty for half days during the two week rotation. Enroll Info: None  
Requisites: Declared in Veterinary Medicine program  
Repeatable for Credit: No  
Last Taught: Summer 2018

PATH-BIO 673 — EUKARYOTIC MICROBIAL PATHOGENESIS  
3 credits.
An advanced course focusing on the molecular, cellular and biochemical mechanisms found in fungal and protozoan pathogens of humans. A combination of lectures and student presentations will be employed. Enroll Info: Cons inst. MMI 740 PATH 750 recommended  
Requisites: Graduate/professional standing  
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement  
Repeatable for Credit: No  
Last Taught: Spring 2018

PATH-BIO 699 — DIRECTED STUDY  
1-5 credits.
Projects in the laboratory and/or through library work in specific subject area under the direct guidance of faculty member. Enroll Info: None  
Requisites: Consent of instructor  
Course Designation: Level - Advanced  
L&S Credit: Counts as Liberal Arts and Science credit in L&S  
Repeatable for Credit: Yes, unlimited number of completions  
Last Taught: Summer 2018

PATH-BIO/M & I 720 — ADVANCED IMMUNOLOGY: CRITICAL THINKING  
3 credits.
Advanced course focusing on current questions in immunological research. Course explores immunology topics including genetic, cellular, and molecular features of immune system fundamental to regulation of immune responses. Course format: discussion of research articles and exposure to research seminars. Enroll Info: MMB/A/Bact 528 or equiv  
Requisites: Graduate standing and M M & I/PATH-BIO/M M & I/MICROBIO 528  
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement  
Repeatable for Credit: No  
Last Taught: Fall 2016

PATH-BIO/M & I 750 — HOST-PARASITE RELATIONSHIPS IN VERTEBRATE VIRAL DISEASE  
3 credits.
Lecture. Detailed study of the pathogenesis of vertebrate viral disease, stressing viral invasion, dissemination, mechanisms of disease production and resistance, and transmission. Enroll Info: MICROBIO/ONCOLOGY/PL PATH 640 or PATH-BIO 513; and Microbio/MMI/PATH-BIO/M M & I/MICROBIO 528; or consent of instructor  
Requisites: Graduate/professional standing  
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement  
Repeatable for Credit: No  
Last Taught: Spring 2018

PATH-BIO/M & I 773 — EUKARYOTIC MICROBIAL PATHOGENESIS  
3 credits.
An advanced course focusing on the molecular, cellular and biochemical mechanisms found in fungal and protozoan pathogens of humans. A combination of lectures and student presentations will be employed. Enroll Info: Cons inst. MMI 740 PATH 750 recommended  
Requisites: Graduate/professional standing  
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement  
Repeatable for Credit: No  
Last Taught: Spring 2012
PATH-BIO 775 — EXTERNSHIP
1-24 credits.

This course is an elective for fourth year veterinary medical students which offers faculty coordinated experience in the veterinary medical profession outside the School. Enroll Info: Vet Med st or cons inst
Requisite: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2018

PATH-BIO/M M & I/MICROBIO 790 — IMMUNOLOGY OF INFECTIOUS DISEASE
3 credits.

Immunobiology and immunogenetics of resistance to infectious disease agents of man and animals; immunoregulatory mechanisms associated with evasion of host immunity. Enroll Info: MMI 720 or equiv, MMI 740 or equiv, cons inst
Requisite: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2015

PATH-BIO 799 — PRACTICUM IN VETERINARY SCIENCE TEACHING
1-3 credits.

Instructional orientation to teaching at the higher education level in the agricultural and life sciences, direct teaching experience under faculty supervision, experience in testing and evaluation of students, and the analysis of teaching performance. Enroll Info: None
Requisite: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2018

PATH-BIO 875 — SPECIAL TOPICS
1-6 credits.

Will vary depending on course focus. Enroll Info: None
Requisite: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2012

PATH-BIO 920 — THESIS RESEARCH SEMINAR
1 credit.

Enroll Info: None
Requisite: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2016

PATH-BIO 930 — ADVANCED SEMINAR
1 credit.

Enroll Info: None
Requisite: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2018

PATH-BIO 990 — RESEARCH
1-12 credits.

Enroll Info: None
Requisite: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions