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.
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. Open to all Undergrads.
Requisites: HS biol crse.
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2017

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

Requisites: Freshmen or Sophomore or Junior standing written consent of instructor
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2017

PATH-BIO/ENTOM/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.
Requisites: BIOLOGY/ZOOLOGY/BIOLOGY 101 and 102, or BIOLOGY/BOTANY/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: Fall 2017

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

Optional laboratory component of Zoology/Med Micro/AHABS 350.
Emphasis on experiments involving live animal parasites, including: trematodes, tapeworms, gapeworms, hookworm, ascarids, trichina, filaria, trypansomes, coccidia, and malaria.
Requisites: cons reg in Zoo/MMI/AHABS 350
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 2011

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.
Requisites: BIOCHEM 501 or 621 or GENETICS 466 or Bact 303, 304 or cons inst
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 2017

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.
Requisites: Vet Med st, basic crse in microbiology, or cons inst
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.
Requisites: Vet Med st or cons inst
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.
Requisites: Vet Med st, basic crse in microbiology, or cons inst
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.
Requisites: Vet Med st or cons inst
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2017

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.
Requisites: Vet Med st or cons inst
Repeatable for Credit: No
Last Taught: Spring 2017

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.
Requisites: Enrollment in the vet med pro curric or cons inst
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2017

PATH-BIO 526 — ACTIVE, INTEGRATED LEARNING II
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.
Requisites: Yr 1 Vet Med crses
Repeatable for Credit: No
Last Taught: Spring 2017

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

Development and functions of immune response in animals; a comprehensive study of experimental humoral and cellular immunity.
Requisites: Two sem chem and one sem zoology or gen biology
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 M & I 529 — IMMUNOLOGY LABORATORY
2 credits.

Selected techniques illustrating concepts of cellular and humoral immunity as a supplement to Immunology 528. Jr or Sr st; cons inst
Requisites: Two sem of chem and one sem of zoology or gen biology
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.
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.
Requisites: Vet Med st, Path-Bio 559, or cons inst
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.
Requisites: Vet Med st, Path-Bio 560, or cons inst
Repeatable for Credit: No
Last Taught: Spring 2017
**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.

**Requisites:** Declared in Veterinary Medicine program

**Repeatable for Credit:** No

**Last Taught:** Spring 2017

**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.

**Requisites:** Declared in Veterinary Medicine program

**Repeatable for Credit:** No

**Last Taught:** Fall 2017

**PATH-BIO 675 — SPECIAL TOPICS**

1-5 credits.

Topics vary.

**Requisites:** Cons inst

**Repeatable for Credit:** Yes, unlimited number of completions

**Last Taught:** Fall 2017

**PATH-BIO 681 — SENIOR HONORS THESIS**

2-4 credits.

**Requisites:** Honors program candidacy

**Course Designation:** Honors - Honors Only Courses (H)

**Repeatable for Credit:** No

**Last Taught:** Fall 2017

**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.

**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:** Fall 2017

**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.

**Requisites:** MMI/AHABS/Bact 528 or equiv

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

**Repeatable for Credit:** No

**Last Taught:** Fall 2016

**PATH-BIO 740 — PATHOBIOLOGICAL SCIENCES RESEARCH ROTATION**

2-16 credits.

Conduct of a mini-research project in which hypothesis development, experimental design, experimentation, data analysis and written and oral presentation of findings are key elements.

**Requisites:** Declared in Veterinary Medicine program

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

**Repeatable for Credit:** No

**Last Taught:** Spring 2015

**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.

**Requisites:** Oncol/MICROBIO/ONCOLOGY/PL PATH 640 or Path-Bio 513; and Microbio/MMI/Path-Bio 528; or consent of instructor

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

**Repeatable for Credit:** No

**Last Taught:** Spring 2016

**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. MMI 740 PATH 750 recommended

**Requisites:** Cons inst.

**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.

**Requisites:** Vet Med st or cons inst

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

**Repeatable for Credit:** Yes, unlimited number of completions

**Last Taught:** Fall 2017

**PATH-BIO/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.

**Requisites:** MMI 720 or equiv, MMI 740 or equiv, cons inst

**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.

Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2017

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

Will vary depending on course focus.

Requisites: Graduate or 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.

Requisites: Graduate or 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.

Requisites: Graduate or professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2017

PATH-BIO 990 — RESEARCH
1-12 credits.

Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2017