

**INFORMATION FOR UNDERGRADUATE STUDENTS**  
**majoring in**  
**PATHOBIOLOGY and VETERINARY SCIENCE**

Welcome to the Department of Pathobiology and Veterinary Science, College of Agriculture and Natural Resources, University of Connecticut!

Our department has three major functions: Teaching (undergraduate and graduate), Research, and Service.

The department faculty members have DVM, MD and Ph.D. degrees (many with dual degrees and some with board certifications in veterinary specialties (pathology)), and research interests in animal and human diseases. The department houses the Connecticut Veterinary Medical Diagnostic Laboratory, consisting of Diagnostic Pathology (animal necropsy (autopsy) and biopsy), and the Diagnostic Testing Services Laboratory, which provides laboratory testing of animal specimens for various diseases. Most faculty members have active research programs and teach undergraduate or graduate courses; some also conduct diagnostic and extension work.

Pathobiology and Veterinary Science majors acquire strong training in biomedical sciences and have many career options. Many PVS students are pre-veterinary, pre-dental or pre-medical students. Others pursue graduate work in the biomedical sciences. Others become technicians in research or commercial laboratories after graduation. Coursework options can be tailored to better prepare you for your career goals; discuss this with your academic advisor.

Minors are available in Aquaculture, Food Science (Food Safety), Molecular and Cell Biology, Agricultural Biotechnology and other areas

**All Pathobiology and Veterinary Science undergraduates need to fulfill certain requirements in order to graduate. These include:**

- 1. University General Education Requirements** (see University General Catalog). These require that you take courses in varied disciplines (listed as **Content Areas 1-4**) in order to assure that you receive a well-rounded education. The Content Areas are: Arts and Humanities (6 credits), Social Sciences (6 credits) Diversity and Multiculturalism (6 credits) and Science and Technology (2 courses).

There are also **Competency Course** requirements: 2 writing ("W") courses, one of which must be a PVS "W" course, Quantitative Competency (requiring 2 "Q" courses), Information Literacy Competency (taught within other courses), Computer Technology Competency (taught within other courses) and Second Language Competency (3 years of a High School foreign language or 2 semesters of a second language at UCONN).

To find a current list of courses fulfilling specific general education requirements access your "Degree Process" report in the peoplesoft system and look under general education requirements.

- 2. College of Agriculture and Natural Resources requirements:**  
The CANR requires that students take 36 credits of advanced (greater than 1000 level) coursework (with at least a 2.0 grade point average); 15 of these 2000 or above level credits must be in the College of Agriculture and Natural Resources (all of your Pathobiology and Veterinary Science courses count here).

- 3. Pathobiology and Veterinary Science major requirements:**  
**All students must pass:**  
PVS 1000 (Old # 113) (Biomedical Issues in Pathobiology) – Fall Semester; Suggested Freshmen Year  
PVS 2100 (Old # 200) (Anatomy and Physiology of Animals) – Fall Semester; Suggested Sophomore Year  
PVS 3100 (Old # 296) (Histologic Structure and Function) – Fall Semester; Suggested Junior/Senior Year  
PVS 4300 (Old # 297) (Principles of Pathobiology) – Spring Semester; Senior Year

**plus 1 of the following:**

PVS 2301 (Old # 202) (Health and Disease Management of Animals) – Spring Semester  
PVS 3201 or 3201 W (Old # 248 and 248 W) (Principles of Animal Virology) – Fall Semester  
PVS 3341 (Old # 252) (Pathobiology of the Avian Species) – Fall Semester, Odd Years  
PVS 4351 (Old # 256) (Diseases of Finfish and Shellfish) – May summer session

**plus 1 of the listed courses from each of the following 3 areas:**

Biochemistry (MCB 2000 or 3010) (Old # 203 or 204) – Either Semester

Microbiology (MCB 2610) (Old # 229) – Either Semester

Genetics (MCB 2410 (Old # 200) – Either Semester or ANSC 3121 (Old # 217) - Fall Semester)

**plus 1 of the following courses:**

Nutrition: Nutritional Sciences 1165 (Old # 165) (Fundamentals of Nutrition) – Either Semester or

Animal Science 2111 (Old # 216) (Principles of Nutrition & Feeding of Animals) – Fall Semester

Immunology: MCB 3212 (Old # 211) (Basic Immunology) – Fall Semester or

Allied Health: MLS 3121W (Old # 208 W) (Immunology for the Medical Laboratory Sciences) – Spring Semester

Cell Biology: MCB 2210 (Old # 210) (Cell Biology) – Fall Semester

**plus 1 “W” Course in PVS:**

PVS 3201 W (Old # 248 W) (Principles of Animal Virology) – Fall Semester

PVS 3094 W (Old # 295 W) (Seminar) – Either or Both Semesters

**4. Pre-veterinary, pre-medical and pre-dental students must also fulfill professional school requirements.**

Veterinary, medical and dental school requirements are generally met by following the basic Pathobiology and Veterinary Science guidelines. These requirements vary somewhat according to the individual school requirements. Our brochure "Suggested Pathobiology Curriculum" marks the commonly required courses for veterinary schools with asterisks. More specific information regarding veterinary school requirements is available in a general guide called "Veterinary Medical School Admissions Requirements" (Purdue University Press), available at the UCONN CO-OP or at your advisor's office. Your advisor can also provide information regarding medical and dental school requirements. **ADVISORY NOTE: All students should meet with their advisor at least once each semester to discuss pre-registration plans and to gain approval to remove the bar block for online registration. We recommend students meet with advisors at least twice during the semester to discuss progress toward their degree, areas of interest in employment or further educational opportunities, independent study possibilities or areas of concern.**

It helps to outline your potential schedule (particularly required courses) several years in advance. While this may seem tedious, if you make a "master plan" of when you will take required courses, electives, etc., at the onset, you'll be able to fit things in more easily and balance your workload optimally; this usually results in better performance. Keep in mind that some courses are only offered in alternate years, or only one semester per year, and many require prerequisite courses. If you use the "Suggested Pathobiology Curriculum" as a guide, planning will be easier. It is generally advisable to limit your course load to no more than 15 credits per semester. You need 12 credits per semester to remain a full time student (necessary for financial aid packages and scholarships). Some people choose to take an occasional summer school or intersession course to allow some regular semesters of less than 15 credits, while still graduating on schedule.

Many courses fulfill more than one requirement. For example, if you take Path 3201W (Old # 248 W) (Virology), it will count as a PVS (major) course, a CANR 2000 or above level course, and a W (writing) course. Some General Education classes can fulfill more than one requirement. If you choose classes that fulfill more than one requirement, you'll have more opportunity to take electives that interest you.

All CANR students are required to complete a "plan of study" form at the beginning of their final semester. The version of this form needed will depend on when you first matriculated in the College of Agriculture and Natural Resources. This form is necessary for graduation; it lists which courses you have taken to fulfill the various requirements. Plan of Study forms are available from the Office of Academic Programs in the College of Agriculture and Natural Resources (WBY 211) and at [www.myagnr.uconn.edu](http://www.myagnr.uconn.edu). Through peoplesoft you have access to your "degree progress report", a summary of your completed coursework and remaining requirements for graduation. It will point out any deficiencies, which you may then discuss with your advisor.

**SUGGESTED CURRICULUM -- PATHOBIOLOGY MAJOR**

**Note:** PVS majors must fulfill: General Education (University) Requirements, College of Agriculture and Natural Resources (CANR) Requirements, Pathobiology and Veterinary Science (major) Requirements, and veterinary or medical school requirements (if applicable). Many courses will fulfill more than one requirement. Refer to the 'CANR Undergraduate Plan and Record of Study' for details.

**The following is a suggested sequence of courses for pre-veterinary/ pre-medical students; it should be modified according to the needs of individual students. Aim for an average of 15 credits per semester. A minimum of 12 credits/semester is necessary to be considered a full time student.**

**First Semester — Choose 15 credits-including biology from the following:** **Credits**

1.	English 1010*or 1101*(Old # 110)	Academic Writing	4
	1101*(Old # 111)	Writing Through Literature	4
2.	Biology 1107* (Old # 107) or	Principles of Biology	4
	Biology 1108(Old # 108)		
3.	PVS 1000 (Old # 113)	Biomedical issues in Pathobiology	2
4.	Animal Science 1001** (pre-vet only) (Old # 120)	Introduction to Animal Science	3
5.	Math 1060Q (Old # 109Q) or	Pre-calculus	4
	Math 1120Q (Old # 112)	Introductory Calculus	4
6.	General Education Requirement		variable
7.	INTD 1800 (PVS section)	First Year Experience for PVS Majors	1

A general education requirement or Chemistry course may be taken in place of Animal Science 1001\*\* (Old # 120)

Consider Group 1 (language) course if requirement not met in high school.

**Second Semester — Choose 15 credits-including biology and chemistry from the following:** **Credits**

1.	Biology 1108* (Old #108) or	Principles of Biology	4
	Biology 1107* (Old # 107)		
2.	Chemistry 1127Q* or	General Chemistry I	4
	Chemistry 1124Q* (Old #127, 124)	General Chemistry	4
3.	Mathematics 1060Q* (Old # 109) or	Pre-calculus	3
	Mathematics 1120Q*(Old # 112) or	Introductory Calculus I	4
	Mathematics 1131Q** (Old # 113)	Calculus I (for those with previous calculus)	4
4.	General education requirement	Content area 1-4	variable
5.	English 1010* (Old # 110) or	Academic Writing	4
	English 1101* (Old # 111)	Writing Through Literature	4

(English should be taken if not taken previously)

Consult with your advisor regarding which General Chemistry series (Chem 1127, 1128 vs Chem 1124, 1125, 1126) is most appropriate for you.

**Third Semester — Choose 15 credits-including biology and chemistry from the following:** **Credits**

1.	PVS 2100 (Old # 200)	Anatomy and Physiology of Animals	4
2.	Chemistry 1128*(Old # 128) or	General Chemistry	4
	Chemistry 1125 (Old # 125) or		4
	Chemistry 2443* (Old # 243)•	Organic Chemistry	3
3.	Physics 1201Q*(Old # 121)	General Physics	4
4.	Mathematics 1060Q* (Old # 106) or	Algebra & Trigonometry	3
	Mathematics 1120Q*(Old # 112) or	Introductory Calculus I	4
	Mathematics 1131Q** (Old # 113)	Calculus I (for those with previous calculus)	4
5.	Communication Sciences 1100** (Old # 105)	Principles of Public Speaking	3
	or General Education Requirements		

**Fourth Semester— Choose 15 credits:** **Credits**

1.	PVS 2100 (Old # 202) or	Health & Disease Management of Animals	3
2.	Chemistry 1126 *(Old # 126) or	General Chemistry	4
	Chemistry 2443* (Old # 243)• or	Organic Chemistry I	3
	Chemistry 2444*(Old # 244)•	Organic Chemistry II	3
3.	Chemistry 2445*(Old # 245)• or	Organic Chemistry Laboratory	3
	Physics 1202Q*(Old # 122)	General Physics	4
4.	Mathematics 1060Q* (Old # 109) or	Pre-calculus	3
	Mathematics 1120Q*(Old # 112) or	Introductory Calculus I	4
	Mathematics 1131Q** (Old # 113)	Calculus I (for those with previous calculus)	4
5.	Statistics 1100 QC*(Old # 110QC) or	Statistics	4
	General Education Requirements		

(Note: Vet school math requirements vary; most require 1 or 2 semesters of Math, some specify Calculus;

Consult with your advisor to determine which Math series is most appropriate for you). Also, Some veterinary schools require business and or economics courses. These courses may also fulfill general education requirements. Medical schools often suggest Psychology courses, such as PSYC 1100, 1101 (Old # 132, 133) and sociology course work.)

<b>Fifth Semester — Choose 15 credits :</b>			<b>Credits</b>
1.	PVS 3201(Old # 248) or PVS 3201W(Old # 248W) PVS 3341 (Old # 252)	Principles of Animal Virology Principles of Animal Virology W Pathology of the Avian Species	3 3 3
2.	MCB 2000* (Old # 203) or MCB 3010) (Old # 204) *	Introduction to Biochemistry Biochemistry	4 5
3.	Chemistry 2444 (Old # 244) or Chemistry 2445*(Old # 245) or Physics 1202Q (Old # 122)	Organic Chemistry Organic Chemistry Laboratory General Physics	3 3 4
4.	Animal Science 2111** (Old # 216) or Nutrition 1165 (Old # 165) <u>or</u> General Education Req./ electives	Principles of Nutrition & Feeding of Animals Fundamentals of Nutrition	3 3 variable
5.	Consider Path 3094W (Old # 295)	Pathobiology Seminar	2
6.	MCB 2410 (Old # 200) or ANSC 217 or Consider PVS 299 Independent Study	Human Genetics Animal Breeding and Genetics	3 3 variable

<b>Sixth Semester—Choose 15 credits:</b>			<b>Credits</b>
1.	MCB 2610* (Old # 229)	Fundamentals of Microbiology	4
2.	Pathobiology Elective °		variable
3.	General Education Req./elective	Consider Business or Economics course**	3
4.	Consider Path 3094W (Old # 295) (Seminar)		2
5.	Consider Path 3099 (Old # 299) (Independent Study)		Variable

<b>Seventh Semester— Choose 15 credits:</b>			<b>Credits</b>
1.	PVS 3100 (or other PVS elective) (Old # 296)	Histologic Structure and Function	4
2.	MCB 3212 (Old # 211) or MCB 2000* (Old # 203) or MCB 3010) (Old # 204) *	Basic Immunology Introduction to Biochemistry Biochemistry	3 4 5
3.	General Education Requirement or Elective		variable
4.	W course or Elective		variable
5.	Consider Path 3094W (Old # 295W) (Seminar)		2
6.	Consider Path 3099 (Old # 299) (Independent Study)		

<b>Eighth Semester — Choose 15 credits:</b>			<b>Credits</b>
1.	PVS 4300(Old # 297)	Principles of Pathobiology	3
2.	PVS Elective °		variable
3.	Elective- Make sure skill course and Gen. Ed. Requirements and electives are complete		variable
4.	Elective		variable
5.	Consider Path 3094W (Old # 295W) (Seminar)		2
5.	Consider Path 3099 (Old # 299) (Independent Study)		variable

\*Required by most vet schools

\*\*Required by some vet schools

- Notes: 1. If **NOT** planning advanced degree or professional school, CHEM 2241-2242 (Old # 141,142) may be substituted for Chemistry 2443-2445 (Old # 243, 244).
- 2. Most veterinary schools require 2 semesters of English. Pre-vet students should consider taking an English course as one of their "W" requirements, as well as the general education requirement of English 1010 or 1101 (Old# 110, 111).

**°PVS Courses**

- PVS 1000(Old # 113) Biomedical Issues in Pathobiology – (2 cr.) Fall Semester
- PVS 2100 (Old # 200) Anatomy and Physiology of Domestic Animals – (4 cr.) Fall Semester
- PVS 2301 (Old # 202) Health and Disease Management of Animals – (3 cr.) Spring Semester
- PVS 3201 or 3201W (Old # 248 or 248W) Principles of Animal Virology – (3 cr.) Fall Semester
- PVS 3341 (Old # 252) Pathobiology of the Avian Species – (3 cr.) Fall Semester, odd years
- PVS 4351 (Old # 256) Diseases of Finfish and Shellfish – (3 cr.) May Semester session
- PVS 3094W (Old # 295W) Seminar Series (may be taken more than once) (2 cr.) Both Semesters
- PVS 3100 (Old # 296) Histologic Structure and Function – (4 cr.) Fall Semester
- PVS 3099 (Old # 299) Independent Study – (1-4 cr.) Arrange with instructor

**PLEASE NOTE:**

- ⇒ If students have not had three years of a single foreign language in high school, they must complete two semesters of a foreign language in college.
- ⇒ Select courses to assure that all general education, CANR and skill course requirements have been met.
- ⇒ Veterinary school requirements vary slightly between schools. Pre-vet students entering 6th semester should consult vet school admission guidebook for details.

## FAVORITE ELECTIVES FOR PATHOBIOLOGY AND VETERINARY SCIENCE MAJORS

ANSC 1001 (Old # 120)	Introduction to Animal Science	Fall	3 Credits
ANSC 3323(Old # 229)	Animal Embryology & Biotechnology	Fall	3 Credits
ANSC 3343, 3343W (Old # 253 or 253W)	Animal Food Products	Fall	3/4 Credits
ANSC 3313 (Old # 222)	Growth Biology and Metabolism in Domestic Livestock	Spring	3 Credits
ANSC 4341 (Old # 224)	Microbiology and Safety Lab	Spring	3 Credits
ANSC 4642 (Old # 227)	Food Microbiology Lab	Spring, even yrs	1 Credit
ANSC 3272 ANSC (Old # 269)	Laboratory Animal Science	Spring	3 Credits
ANSC 3122 (Old # 219)	Reproductive Physiology	Spring	4 Credits
AH 3175(Old # 226)	Environmental Health	Fall	3 Credits
AH 3021(Old # 221)	Environment, Genetics and Cancer	Spring, even yrs	3 Credits
AH 3237(Old # 237)	Women's Health and Care	Both	3 Credits
PVS 3094W(Old #PVS 295W)	PVS Seminar	Both	2 Credits
PVS 379(Old #PVS 379)	Microbiology of Atypical Bacteria (Instructor permission required)		2 Credits
EEB 4274(Old # 283)	Introduction to Animal Parasitology	Fall, alt yrs	4 Credits
EEB 4251, 4251W (Old # 284, 284W)	Medical Entomology	Spring, alt yrs	3 Credits
MCB 3633(Old # 233)	Pathogenic Microbiology	Fall	4 Credits
MCB 3416(Old # 290)	Forensic Applications of DNA Science	Fall	3 Credits
MCB 3011(Old # 205)	Human Metabolism and Disease	Fall, alt yrs	2 Credits
MCB 3022W (Old # 222W)	Human Disease and Development of Therapeutic Agents	Fall	3 Credits
MCB 3414(Old # 214)	Experiments in DNA Identification	Spring	2 Credits
MCB 4219(Old #219)	Developmental Biology	Spring	3 Credits
MARN or MCB 3636 (Old # 236)	Marine Microbiology	Spring	3 Credits
NRME 2315 (Old # 217)	North American Wildlife	Fall	3 Credits
PHAR 1001 (Old # 150)	Toxic Chemicals and Health	Spring	3 Credits
ARE 1110(Old # 110)	Population, Food and the Environment	Both	3 Credits
ARE 1150 (Old # 150)	Principles of Agriculture and Resource Economics	Both	3 Credits
COMS 1100 (Old # 105)	Principles of Public Speaking	Both	3 Credits
EKIN 1160(Old # 160)	Courses in Lifetime Sports Program	Both	1 Credit
INTD 1820 (Old #182)	FYE Faculty/Student Seminar	Both	1 Credit
INTD 1820(Old # 298)	Special Topics/Mini Medical School	Both	Variable
AASI 3214 (Old #214)	Medicinal Plants of Asian Origin and Culture	Fall	3 Credits
AASI 3216 (Old #216)	Asian Medical Systems	Spring	3 Credits
PNB 3279 (Old # 279)	Insight into Dental Science and Clinical Medicine	Spring	1 Credit
MCB 4327 (Old # 327)	Lab Techniques in functional Genomics	Both	1 Credit

(If you find a great course that enhances the Pathobiology major, let your advisor know so we can add it to the list!)

