



Microbiology and Cell Biology
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Preveterinary Students:

Welcome to the preveterinary curriculum at Montana State University!

The primary goal in preveterinary advising is to guide you in the selection of courses and other activities that will allow you to complete the prerequisites for successful application to a college of veterinary medicine. We also strongly encourage students to complete a baccalaureate degree.

Requirements for admission to veterinary schools may be fulfilled in any major. If you are uncertain of the degree/major that best suits your interests, the preveterinary advisors will help guide you in your selection of courses for admission to veterinary school and explore the undergraduate degrees available.

There are currently a total of 32 U.S. Veterinary Schools. **The requirements for admission to these schools are unique to each school.** It is to your advantage to complete coursework that meets the entry requirements for as many schools as possible. You may review the requirements for each school through the website for the American Association of Veterinary Medical Colleges; <http://www.aavmc.org>.

Montana is part of the WIMU Regional Veterinary Medicine Program with Washington State University. Please visit the webpage at <http://wimu.montana.edu> for more information. Montana residents can apply for admission to this program after completing their undergraduate pre-requisite courses. Students in the WIMU program will complete their first year of study here on the MSU campus and the next 3 years at Washington State University College of Veterinary Medicine. Montana currently supports an average of 10 students per year through this program.

Montana residents may also apply for admission to veterinary school through a contract agreement with WICHE (Western Interstate Commission for Higher Education). Montana residents will competitively apply for admission to this program after completing their undergraduate pre-requisite courses. Information on the current status of this program in Montana may be obtained through the webpage for the Commissioner for Higher Education <http://mus.edu/PSEP/default.asp>.

Regardless of your degree program, an advisor in the preveterinary curriculum will be available to you as long as you are planning to apply for admission to a college of veterinary medicine. You are encouraged to use the materials attached to this letter as a guide throughout your preveterinary education.

Please feel free to contact us when questions or problems arise.

Sincerely,

Jamie Arndt, DVM
Teaching Professor
Pre-veterinary Advisor
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PREVETERINARY COURSE REQUIREMENTS

Admission criteria and tuition classification vary among veterinary schools. Residency implications for admission and tuition should be carefully considered when selecting your undergraduate course work and the number of veterinary schools you will qualify for.

The following outline is designed for an application to the **WIMU Regional Program in Veterinary Medicine**. Read carefully all information following the listing of the required courses. In general, higher level science courses will substitute for those listed. If there is any question, check with your advisor. If you are applying to other schools or any of the schools participating in the WICHE program, be sure to contact each school for those specific requirements.

| 1. Chemistry | | Credits |
|---------------------|-------------------------------|---------|
| CHMY 141&142 | General Chemistry I | 3/1 |
| CHMY 143&144 | General Chemistry II | 3/1 |
| CHMY 211&212* | Elements of Organic Chemistry | 4/1 |
| BCH 380 | Biochemistry | 5* |

**Many veterinary schools require two semesters of organic chemistry*

If your background is not strong in chemistry, you can consider taking CHMY 121N as a preparatory course before taking CHMY 141N. This is not usually done, but it is an option. CHMY 121N is not required for the preveterinary curriculum but does count as an elective. Some undergraduate degree curricula and veterinary programs may require two semesters of organic chemistry: CHMY 321 and 323 or equivalent.

| 2. Biology* | | Credits |
|--------------------|-----------------------|--|
| BIOB 170IN | Prin of Bio Diversity | 4 |
| BIOB 160 | Prin of Living System | 4 or BIOB 260 Molecular and Cellular Biology |
| BIOB 375 | General Genetics | 3 or ANSC 322 Animal Breeding and Genetics |

| 3. Mathematics | | Credits |
|-----------------------|------------------|---------|
| M 161Q | College Calculus | 4 |

| 4. Statistics | | Credits |
|----------------------|-----------------------|---------|
| STAT 216Q | Elementary Statistics | 3 |

| 5. Physics* | | Credits |
|--------------------|-------------------|---------|
| PHSX 205 | College Physics I | 4 |

**Many veterinary schools require two semesters of physics PHSX 207*

| 6. English and Communications | | Credits |
|--------------------------------------|------------------|---------|
| WRIT 101W | Freshman Writing | 3 |
| COMX 111US | Communications | 3 |

8. **Electives**

WSU requires 27 General Education Requirements and electives. MSU core only provides 21 General education requirements. The general education requirements concern only those students who have not obtained a B.S. degree or have plans to obtain a degree before entering the professional program.

Recommended Electives

Remaining electives are recommended to be in Biotechnology/Animal Systems, Animal Science, Biology, Microbiology, Chemistry, Business courses, or possibly other areas. Many veterinary schools require upper division animal physiology (BIOO 412) and Microbiology (BIOM 360). Be sure to follow up prior to applying to veterinary school that you have completed all requirements. **Electives should be used to obtain credits in the curriculum you choose for a degree.** Keep this in mind because once you decide on a degree curriculum, proper selection of electives can make it easier for you to complete your preveterinary requirements and your degree requirements simultaneously.

SELECTING AND COMPLETING A DEGREE CURRICULUM

While a student cannot “major” in preveterinary curriculum, this curriculum allows student access to an academic advisor so they can strategically plan for an application to veterinary school.

There are several degree curricula that can be completed while simultaneously fulfilling the preveterinary requirements. Examples of these are: Microbiology/Preveterinary Track; Biotechnology/Animal Systems; Animal Science; Cell Biology and Neuroscience; Ecology, and Chemistry. Students have successfully obtained admission to veterinary school through a variety of other majors, including English, Art, and Business.

Students should transfer into their chosen degree program no later than their second semester of freshmen year. Throughout the remainder of their time at MSU, a pre-veterinary advisor will continue to advise students in the application process and tactics for a successful admission to veterinary school.

Be sure to follow the degree requirements for your chosen major and pay attention to the core requirements along with the necessary upper division credits required.

PREVETERINARY CLUB AT MSU

Students are encouraged to join and support the activities of the preveterinary club. Programs sponsored by the club will benefit students in preparation for admission to a college of veterinary medicine and are an indication of interest in veterinary medicine. Meetings are held in Linfield Hall 125 at 6:00 pm the first and 3rd Wednesday of each month. Check the website on Facebook at <http://www.facebook.com/prevetmsu> for important updates and meeting notes.

SCHOLARSHIPS

The College of Agriculture offers many different undergraduate scholarships through an application procedure. Contact the Associate Dean's office of the College of Agriculture in Linfield Hall or the College of Agriculture website for the appropriate application forms.

APPLYING FOR ADMISSION TO A COLLEGE OF VETERINARY MEDICINE

Applications are processed through the Veterinary Medical College Application Service (VMCAS) at <http://aavmc.org/vmcas>. Supplemental applications may be obtained by contacting the individual schools as early as June in the year you plan to apply. All requirements do not have to be completed at the time of application, simply by the time you would enter the professional program the next fall.

The criteria used by veterinary colleges for evaluation of applicants include:

1. Grade Point Average
 - Overall GPA
 - Requirement GPA
 - Last 45 semester hour GPA
2. GRE Scores: Currently (2023) WIMU/Washington State University, Colorado State University and Oregon State University DO NOT REQUIRE the GRE.
3. Personal development and leadership
 - Extracurricular activities, leadership and community involvement
4. Veterinary medical exposure: the number of hours varies from 500-1500.
 - Check with the individual vet school
 - Diversity of experiences in the profession is preferred.
5. Animal experience
6. Recommendations: **3 letters of recommendation**
 - Veterinarian
 - Academic Advisor or Professor
 - Personal Character
 - When requesting a recommendation from an individual it is advisable to provide them with an up-to-date resume outlining your experiences and awards and a copy of your transcripts.
 - Provide a brief letter of intent on why you want to become a veterinarian.
 - Check with your evaluator on the best email and address to be entered.

OTHER HELPFUL INFORMATION

Grade point average (GPA) is **one of many** criteria used in screening applications. The average GPA for students accepted to veterinary schools in the past 4 years has been between 3.6 and 3.8. Grades received in the preveterinary curriculum are used as a measure of the probability that a student will be able to handle the extensive course load in veterinary school. In addition to grades received in courses, the selection committee will examine a student's course load. Therefore, plan to carry at least an average load (15-18 credits).

How to calculate GPA: Take the number of credits of the class, multiply by grade earned which equals quality points. Then divide the quality points by number of credits and it will equal GPA. A good website for calculating is <http://www.back2college.com/raisegpa.htm>. You can also use DegreeWorks to calculate how different grades will affect your GPA.

Veterinary schools are very interested in well-rounded individuals who have shown a commitment to the profession. Leadership roles and extracurricular activities will support that commitment.

Student activities, awards and honors earned in high school may be placed in the “extra-curricular activities” section on the veterinary school application form. It is advisable that a designated file or disc be used to help catalog all of that information. Keep track of ALL volunteer activities or extra-curricular activities that you have done no matter how small.

WIMU Regional Program in Veterinary Medicine:

This program is a regional veterinary program in conjunction with Washington State University College of Veterinary Medicine. Students who apply and are selected will spend their first year on the MSU-Bozeman campus and years 2 through 4 at WSU in Pullman, WA. The Doctor of Veterinary Medicine will be conferred by Washington State University College of Veterinary Medicine.

Western Interstate Commission for Higher Education (WICHE) veterinary schools participating with Montana residents include Washington State University (after WIMU is filled you can roll over); Colorado State University; Oregon State University; Midwestern Veterinary School.

Montana residents must be certified as “eligible” to receive financial support for this program via the Professional Student Exchange Program. Eligibility for the PSEP program provides in-state tuition rates while attending years 2 through 4 at Washington State University. In order to qualify, you must have been a Montana resident for 2 years and be certified by the state certifying officer.