

## BACHELOR OF SCIENCE DEGREE in ANIMAL AND VETERINARY SCIENCES

### Pre-Veterinary/Bioscience Medical Microbiology Concentration

Total Credit Hours Required: 120

(Effective Fall 2024)

First Year - Fall		First Year - Spring	
AVS 145 - Introduction to Animal Science	3	BIO 200 - Biology of Organisms	4
AVS 146 - Introduction to Animal Science Lab	1	CHY 122 - General Chemistry II	3
BIO 100 - Basic Biology	4	CHY 124 - General Chemistry Laboratory II	1
CHY 121 - General Chemistry I	3	ENG 101 - College Composition	3
CHY 123 - General Chemistry Laboratory I	1	General Education: Cultural Diversity and International Perspectives	3
MAT 116 - Introduction to Calculus	3		
ELH 117 - First-Year Success Seminar	1		
	<b>16</b>		<b>14</b>
Second Year - Fall		Second Year - Spring	
AVS 254 - Introduction to Animal Microbiomes	3	BIO 377 - Medical Physiology	3
BMB 300 - General Microbiology	3	CHY 252 - Organic Chemistry II*	3
BMB 305 - General Microbiology Laboratory	2	CHY 254 - Organic Chemistry Laboratory II*	2
ECO 154 - Small Business Economics and Management	3	PHY 111 - General Physics I	4
BMB 221 - Organic Chemistry	3	General Electives	3
BMB 222 - Laboratory in Organic Chemistry	1		
<b>or</b>			
CHY 251 - Organic Chemistry	3		
CHY 253 - Organic Chemistry Laboratory I	2		
	<b>15</b>		<b>15</b>
Third Year - Fall		Third Year - Spring	
BIO 250 - Concepts and Applications of Genetics	3	AVS 401 - Capstone in Animal Science I	3
CMJ 103 - Public Speaking	3	<b>or</b>	
ENG 315 - Research Writing in the Disciplines	3	BMB 491 - Biochemistry, Microbiology and Molecular Biology Research	3
<b>or</b>		BMB 322 - Biochemistry	3
ENG 317 - Business and Technical Writing	3	BMB 323 - Biochemistry Laboratory	2
PHI 235 - Biomedical Ethics	3	BMB 421 - Infectious Disease Laboratory	2
STS 132 - Principles of Statistical Inference Credits	3	BMB 420 - Infectious Disease	3
		<b>or</b>	
		AVS 437 - Animal Diseases	3
		PHY 112 - General Physics II	4
	<b>15</b>		<b>17</b>
Fourth Year - Fall		Fourth Year - Spring	
AVS 454 - DNA Sequencing Analysis Laboratory	2	AVS 402 - Capstone in Animal Science II	1
<b>or</b>		<b>or</b>	
AVS 455 - Animal Nutrition	3	BMB 491 - Biochemistry, Microbiology and Molecular Biology Research	1 - 6
<b>or</b>		BMB 455 - Virology	3

AVS 480 - Physiology of Reproduction	3	General Education: Artistic and Creative Expression	3
AVS 477 - Zoonoses and Animal Health	3	General Electives	5
<b>or</b>			
BMB 440 - Introductory Immunology	3		
General Education: Western Cultural Tradition	3		
General Education: Ethics	3		
General Electives	5		
	<b>17</b>		<b>12 - 17</b>

\* For students pursuing pre-vet requirements.

**Notes:**

<sup>1</sup>Most of our recent graduates who were accepted to colleges of veterinary medicine had accumulated at least 300 hours of experience under the supervision of a veterinarian.

<sup>2</sup>Several American Veterinary Medical Association-accredited veterinary colleges require BIO 335 - Human Anatomy, 4 credits and/or BIO 480 - Cell Biology, 3 credits. Check the specific requirements of the veterinary colleges that are on your preferred list.

**General Education Requirements - 18 total credits required**

Human Values and Social Contexts Sub-Categories	Course Taken	Credits
1. Western Cultural Tradition		3
2. Social Contexts and Institutions	CMJ 103 Public Speaking	3
	ECO 154 Small Business Economics and Management	3
3. Cultural Diversity and International Perspectives		3
4. Population and the Environment	AVS 254 Introduction to Animal Microbiomes	3
5. Artistic and Creative Expression		3

Ethics	Course Taken	
Ethics Course		3

**Revised: May 8, 2024**

*Curriculum is updated annually and is subject to change.*