

VETERINARY MEDICINE BIOMEDICAL (VMB)

VMB 110, PREVETERINARY MEDICINE, 1 Credit

Introduction to the profession's role in society. Graded P/N.

Equivalent to: VM 110

VMB 112, THE ONE HEALTH PARADIGM AND AUDIENCE CONNECTIONS, 3 Credits

Present, discuss and communicate current research papers and ongoing projects in concise, audience appropriate formats using techniques from entrepreneurship, grant proposal writing and Hollywood storytelling.

This course is repeatable for 6 credits.

VMB 401, RESEARCH AND SCHOLARSHIP, 1-16 Credits

This course is repeatable for 16 credits.

VMB 415, ONE HEALTH IN PRACTICE, 3 Credits

One health is the concept that human, animal and environmental health are all intertwined. Utilizes current one health issues such as disease outbreaks and antimicrobial resistance to encourage students from diverse fields to develop interdisciplinary collaboration and communication skills. CROSSLISTED as BHS 415/VMB 415.

Equivalent to: BHS 415

VMB 499, SPECIAL TOPICS, 1-16 Credits

Special studies course to allow different instructors the ability to teach a new class or one time class. Graded P/N.

This course is repeatable for 16 credits.

VMB 501, RESEARCH, 1-16 Credits

Graded P/N.

Equivalent to: VM 501

This course is repeatable for 16 credits.

VMB 503, THESIS, 1-12 Credits

Equivalent to: VM 503

This course is repeatable for 999 credits.

VMB 504, WRITING AND CONFERENCE (NON-THESIS), 1-9 Credits

This course is repeatable for 9 credits.

VMB 505, READING AND CONFERENCE, 1-16 Credits

Graded P/N.

Equivalent to: VM 505

This course is repeatable for 16 credits.

VMB 507, SEMINAR, 1-16 Credits

Graded P/N.

Equivalent to: VM 507

This course is repeatable for 16 credits.

VMB 512, THE ONE HEALTH PARADIGM AND AUDIENCE CONNECTIONS, 3 Credits

Present, discuss and communicate current research papers and ongoing projects in concise, audience appropriate formats using techniques from entrepreneurship, grant proposal writing and Hollywood storytelling.

This course is repeatable for 6 credits.

VMB 517, VETERINARY PHYSIOLOGY, 5 Credits

Physiology of body fluids, muscles, membranes, intermediary metabolism, cardiovascular system, and metabolism.

Equivalent to: VM 517

VMB 518, VETERINARY PHYSIOLOGY, 5 Credits

Physiology of gastrointestinal, endocrine and reproductive systems.

Prerequisite: VMB 517 with C or better

Equivalent to: VM 518

VMB 519, VETERINARY PHYSIOLOGY, 4 Credits

Physiology of respiratory and renal systems and acid-base balance.

Prerequisite: VMB 518 with C or better

Equivalent to: VM 519

VMB 521, ANIMAL MODELS, 3 Credits

Selection/use criteria for models describing animal or human diseases or processes with emphasis on experimental design, validation, transgenic technology, population dynamics, husbandry, and ethics.

VMB 523, ZONOSSES, 3 Credits

Interactive examination of the molecular basis of diseases that are transmissible between animals and humans. Emphasis on bacterial, viral and parasitic pathogens of animals and humans.

VMB 601, RESEARCH, 1-16 Credits

Graded P/N.

Equivalent to: VM 601

This course is repeatable for 16 credits.

VMB 603, THESIS, 1-16 Credits

Equivalent to: VM 603

This course is repeatable for 999 credits.

VMB 604, WRITING AND CONFERENCE (NON-THESIS), 1-9 Credits

This course is repeatable for 9 credits.

VMB 605, READING AND CONFERENCE, 1-16 Credits

Equivalent to: VM 605

This course is repeatable for 16 credits.

VMB 606, PROJECTS, 1-16 Credits

Graded P/N.

Equivalent to: VM 606

This course is repeatable for 16 credits.

VMB 607, SEMINAR, 1-16 Credits

One-credit section; VMB 607 Sect. 1. Graded P/N.

Equivalent to: VM 607

This course is repeatable for 16 credits.

VMB 611, VETERINARY GROSS ANATOMY, 4 Credits

Systematic and topographic study and dissection of the dog, cat, horse, ruminant, pig, and chicken.

Equivalent to: VM 611

VMB 612, VETERINARY GROSS ANATOMY, 4 Credits

Systematic and topographic study and dissection of the dog, cat, horse, ruminant, pig, and chicken.

Equivalent to: VM 612

VMB 613, VETERINARY GROSS ANATOMY, 4 Credits

Systematic and topographic study and dissection of the dog, cat, horse, ruminant, pig, and chicken.

Equivalent to: VM 613

VMB 614, VETERINARY MICROSCOPIC ANATOMY, 4 Credits

Structure and development of cells, tissues, organs, and organ systems of animals.

Equivalent to: VM 614

VMB 615, VETERINARY MICROSCOPIC ANATOMY, 3 Credits

Structure and development of cells, tissues, organs, and organ systems of animals.

Equivalent to: VM 615

VMB 616, VETERINARY NEUROSCIENCES, 4 Credits

Structural and functional relationships of the nervous system and organs of special sense with emphasis on general clinical application.

VMB 620, VETERINARY IMMUNOLOGY, 5 Credits

Clinical and diagnostic aspects of immunological mechanisms, serological reactions; hypersensitivity, allergy, and disorders of the immune system.

Equivalent to: VM 620

VMB 621, GENERAL PATHOLOGY, 4 Credits

General principles of pathology, cell injury and death, inflammation and tissue repair, abnormalities of cell growth, and structures and mechanisms of disease.

Equivalent to: VM 621

VMB 622, PATHOLOGY LABORATORY, 1 Credit

Laboratory instruction to complement VMB 621.

Prerequisite: VMB 611 (may be taken concurrently) with C or better

Equivalent to: VM 622

VMB 624, ANTIBIOTIC STEWARDSHIP, 1 Credit

Elective course for students to learn about significant aspects of antibiotic resistance. Intended to become part of the "One Health Program", resulting in the ability to create a plan for effective antibiotic stewardship as it relates to human, animal, and environmental health.

VMB 627, ORNAMENTAL FISH MEDICINE, 2 Credits

An introduction to the basic principles of ornamental fish medicine including basic husbandry, handling and clinical procedures. This is a 1-week intensive course held at the Hatfield Marine Science Center in Newport, Oregon. Graded P/N.

VMB 630, MECHANISMS OF DISEASE, 3 Credits

Cellular and molecular events that contribute to the pathogenesis of disease in animals, including humans. Host interactions with infectious agents and the environment.

Equivalent to: VM 630

VMB 631, MATHEMATICAL MODELING OF BIOLOGICAL SYSTEMS, 3 Credits

The use of mathematical modeling in biological sciences is studied. A variety of modeling techniques are covered including implementing the methods computationally.

VMB 640, SEMINARS IN LABORATORY ANIMAL MEDICINE, 2 Credits

Prepares students for careers in laboratory animal medicine. Provides a review of medical conditions, diagnosis and treatment of research animals.

VMB 641, SEMINARS IN LABORATORY ANIMAL MEDICINE, 2 Credits

Prepares students for careers in laboratory animal medicine. Provides a review of medical conditions, diagnosis and treatment for research animals.

VMB 642, SEMINARS IN LABORATORY ANIMAL MEDICINE, 2 Credits

Prepares students for careers in laboratory animal medicine. Provides a review of medical conditions, diagnosis and treatment for research animals.

VMB 651, SELECTED TOPICS IN VETERINARY MEDICINE, 3 Credits

Topics vary; check Schedule of Classes for particular topics.

Equivalent to: VM 651

VMB 652, CANCER SYSTEMS BIOLOGY, 3 Credits

Overview of systems biology approaches that are being used to study cancer, with an emphasis on omics techniques and fundamental mechanisms in the origination and progression of cancer. Discussion-based, with each class session focused on a contemporary research article in the field of cancer systems biology.

VMB 653, VETERINARY VIROLOGY, 4 Credits

Virology for the professional and graduate student.

VMB 659, VETERINARY BACTERIOLOGY AND MYCOLOGY, 5 Credits

Veterinary bacteriology and mycology for the veterinary graduate student.

VMB 660, VETERINARY PARASITOLOGY, 5 Credits

A study of the parasitic diseases of domestic animals with an emphasis on diagnosis and treatment. Fundamentals in host-parasite interactions, taxonomy and life cycle strategies are covered.

VMB 663, VETERINARY DIAGNOSTIC PATHOLOGY, 6 Credits

Practical hands-on course training students in the diagnostic pathology utilizing case material received at the OSU Veterinary Diagnostic Lab. Graded P/N.

VMB 664, COMPARATIVE MICROSCOPIC PATHOLOGY, 1 Credit

Case-based discussion course to train participants in the recognition, description, and pathogenesis of a wide variety of disease processes with an emphasis on microscopic features. Graded P/N.

This course is repeatable for 4 credits.

VMB 665, READINGS IN VETERINARY PATHOLOGY, 1 Credit

Group discussions of assigned readings central to understanding of veterinary pathology, including recent advances. Graded P/N.

This course is repeatable for 6 credits.

VMB 666, VETERINARY MEDICINE AND PUBLIC HEALTH, 3 Credits

Covers aspects of veterinary medicine that affect human health. An understanding of the contribution of the veterinary profession to human (public) health will enable students to play an effective role in this area, regardless of career direction.

VMB 669, INTRODUCTION TO GRANT PROPOSAL WRITING, 2 Credits

To introduce students to the fundamentals of writing grant proposals to the National Institute of Health (NIH), different funding mechanisms, as well as the grant reviewing process. CROSSLISTED as PHAR 669/VMB 669.

Equivalent to: PHAR 669

This course is repeatable for 20 credits.

VMB 670, INTRODUCTION TO SYSTEMS BIOLOGY, 2 Credits

Students will gain a high-level overview of systems biology and bioinformatics, with an emphasis on biomedical applications, integration of '-omics' approaches, and biological networks.

VMB 671, MOLECULAR TOOLS, 3 Credits

Intended for personnel with some scientific background who are seeking basic- and advanced-level molecular biology knowledge and who wish to become involved with molecular biology-related and biotechnological research. CROSSLISTED as MCB 671/VMB 671.

Equivalent to: MCB 671

Available via Ecampus

VMB 672, MOLECULAR APPROACH TO CANCER, 1 Credit

Overview of cancer pathogenesis and current molecular techniques to diagnose and treat various neoplasms is provided. Content will include both veterinary and human data and concepts. Discussion/Lab. Graded P/N.

VMB 673, COMPARATIVE IMMUNOLOGY, 3 Credits

Examines immune system function in animals other than mice and men with a focus on adapting cutting-edge technologies.

VMB 674, VACCINES AND NEW THERAPIES, 3 Credits

Provides students with a cohesive understanding of the basic research behind the discovery of new therapeutic targets and scientific advancements used in development of vaccines and new therapies.

VMB 699, SPECIAL TOPICS, 1-16 Credits

This course is repeatable for 99 credits.

VMB 701, RESEARCH, 1-16 Credits

Equivalent to: VM 701

This course is repeatable for 16 credits.

VMB 705, READING AND CONFERENCE, 1-16 Credits

Equivalent to: VM 705

This course is repeatable for 16 credits.

VMB 706, PROJECTS, 1-16 Credits

Equivalent to: VM 706

This course is repeatable for 16 credits.

VMB 711, VETERINARY GROSS ANATOMY, 4 Credits

Systematic and topographic study and dissection of the dog, cat, horse, ruminant, pig, and chicken.

Equivalent to: VM 711

VMB 712, VETERINARY GROSS ANATOMY, 4 Credits

Systematic and topographic study and dissection of the dog, cat, horse, ruminant, pig, and chicken.

Equivalent to: VM 712

VMB 713, VETERINARY GROSS ANATOMY, 4 Credits

Systematic and topographic study and dissection of the dog, cat, horse, ruminant, pig, and chicken. Lec/lab.

Equivalent to: VM 713

VMB 714, VETERINARY MICROSCOPIC ANATOMY, 4 Credits

Structure and development of cells, tissues, organs, and organ systems of animals.

Equivalent to: VM 714

VMB 716, VETERINARY NEUROSCIENCES, 4 Credits

Structural and functional relationships of the nervous system and organs of special sense with emphasis on general clinical application.

Equivalent to: VM 716

VMB 717, VETERINARY PHYSIOLOGY, 5 Credits

Physiology of body fluids, excretion, respiration, acid-base balance, blood, muscle, bone, cardiovascular system, digestion, metabolism, endocrine system, reproduction, and lactation.

Equivalent to: VM 717

VMB 718, VETERINARY PHYSIOLOGY, 5 Credits

Physiology of body fluids, excretion, respiration, acid-base balance, blood, muscle, bone, cardiovascular system, digestion, metabolism, endocrine system, reproduction, and lactation.

Equivalent to: VM 718

VMB 719, VETERINARY PHYSIOLOGY, 4 Credits

Physiology of body fluids, excretion, respiration, acid-base balance, blood, muscle, bone, cardiovascular system, digestion, metabolism, endocrine system, reproduction, and lactation. Lec/lab.

Equivalent to: VM 719

VMB 720, VETERINARY IMMUNOLOGY, 5 Credits

Clinical and diagnostic aspects of immunological mechanisms, serological reactions, hypersensitivity, allergy, and disorders of the immune system. Lec/lab.

Equivalent to: VM 720

VMB 721, VETERINARY PATHOLOGY, 5 Credits

Basic mechanisms and concepts relating to reaction of cells and tissues to disease, with emphasis on cellular and tissue degeneration, inflammatory reaction, circulatory disturbance and neoplasia. Lec/lab.

Equivalent to: VM 721

VMB 722, RESEARCH READING SKILLS FOR VETERINARY STUDENTS, 1 Credit

Training in critical evaluation of biomedical and clinical research studies, and understanding of laboratory diagnostic methods.

VMB 723, VETERINARY LEADERSHIP: INCLUSION, REFLECTION, DEVELOPMENT, 1 Credit

Focusing on diversity and inclusion, self-compassion, and effective interpersonal communication in relationship to fostering leadership in veterinary medicine. Graded P/N.

This course is repeatable for 10 credits.

VMB 724, ANTIBIOTIC STEWARDSHIP, 1 Credit

Elective course for students to learn about significant aspects of antibiotic resistance. Intended to become part of the "One Health Program", resulting in the ability to create a plan for effective antibiotic stewardship as it relates to human, animal, and environmental health.

VMB 726, PET BIRD AND SMALL MAMMAL MEDICINE AND SURGERY, 2 Credits

Medicine and surgery of pet birds and small animals. Graded P/N.

VMB 727, ORNAMENTAL FISH MEDICINE, 2 Credits

An introduction to the basic principles of ornamental fish medicine including basic husbandry, handling and clinical procedures. Graded P/N.

VMB 728, SPECIAL ANIMAL MEDICINE, 4 Credits

Diagnosis, treatment, and management of special animals, including the common laboratory animals.

Equivalent to: VM 728

This course is repeatable for 8 credits.

VMB 729, LAB ANIMAL/PRIMATE MEDICINE AND SURGERY, 3-12 Credits

Designed to provide hands-on experience with a variety of laboratory animal species including primates, rodents, ungulates, fish, and reptiles. May be repeated up to 4 times for 3, 6, 9 or 12 credits per term. 12 credits maximum apply toward graduation. Graded P/N.

This course is repeatable for 12 credits.

VMB 736, DIAGNOSTIC CLINICAL PATHOLOGY, 2 Credits

One week clinical experience in clinical pathology, cytology, urinalysis, clinical chemistry interpretation and hematology. Lec/lab.

Equivalent to: VM 736

VMB 740, VETERINARY INTEGRATED PROBLEM SOLVING, 1 Credit

The first of three 1-credit courses in problem solving and integration of clinical cases and basic sciences in the veterinary curriculum.

Equivalent to: VM 740

VMB 742, VETERINARY INTEGRATED PROBLEM SOLVING, 1 Credit

The third of three 1-credit courses in problem solving and integration of clinical cases and basic sciences in the veterinary curriculum. Graded P/N.

Equivalent to: VM 742

VMB 745, COMMUNICATIONS FOR VETERINARIANS, 1 Credit

Communications and problem solving for the third-year veterinary student. Graded P/N.

VMB 749, WILDLIFE SAFARI, 2 Credits

Clinical training in the care of exotic and zoo animal species. Graded P/N.

VMB 750, SYSTEMIC PATHOLOGY I, 4 Credits

Examines the principles of system and organ responses to injury and the consequent effects of these changes on the host.

Equivalent to: VM 7500

VMB 751, SYSTEMIC PATHOLOGY II, 5 Credits

Examines the principles of system and organ responses to injury and the consequent effects of these changes on the host.

Equivalent to: VM 751

VMB 753, VETERINARY VIROLOGY, 4 Credits

Virology for the professional DVM student.

Equivalent to: VM 753

VMB 756, ADVANCED CLINICAL PATHOLOGY, 1 Credit

One-week rotation in advanced clinical pathology: cytology, hematology and clinical chemistry interpretation. Graded P/N.

Prerequisite: VMB 736 with C or better

VMB 759, VETERINARY BACTERIOLOGY AND MYCOLOGY, 5 Credits

Bacteriology and mycology for the professional DVM student.

Equivalent to: VM 759

VMB 760, VETERINARY PARASITOLOGY, 5 Credits

A study of the parasitic diseases of domestic animals with an emphasis on diagnosis and treatment. Fundamentals in host-parasite interactions, taxonomy and life cycle strategies are covered.

Equivalent to: VM 760

VMB 761, VETERINARY PHARMACOLOGY, 2 Credits

Fundamentals of pharmacology as related to veterinary medicine presented in a systems-oriented approach with drug therapy in domestic animals.

Equivalent to: VM 761

VMB 762, VETERINARY PHARMACOLOGY II, 4 Credits

Fundamentals of pharmacology as related to veterinary medicine presented in a systems-oriented approach with drug therapy in domestic animals.

Equivalent to: VM 762

VMB 763, VETERINARY CLINICAL PATHOLOGY, 4 Credits

Clinical pathology for the professional DVM student.

Equivalent to: VM 763

VMB 765, VETERINARY TOXICOLOGY, 4 Credits

A study of toxic agents, mechanisms of action, toxicosis and treatments, especially as related to domestic and wild animals, with principles of toxicity testing, clinical diagnosis, and identification of poisonous plants. Lec/lab.

Equivalent to: VM 765

VMB 766, EPIDEMIOLOGY AND PUBLIC HEALTH, 3 Credits

Examination of the application of epidemiology to the field of veterinary medicine and the study of important veterinary public health issues.

Equivalent to: VM 766

VMB 768, BASIC HISTOPATHOLOGY, 1 Credit

A rotation in histopathology at the Veterinary Diagnostic Laboratory.

Emphasis is placed on case evaluation, diagnosis and report writing of biopsies of all species. Graded P/N.

Prerequisite: VMB 751 with C or better

VMB 769, ANIMAL GENOMICS, 1 Credit

Discussion about the dog and cow genomes, susceptibility to diseases, and the possibilities and techniques for treatment of medical conditions by gene transfer and modification.

VMB 772, INTERNATIONAL VETERINARY MEDICINE, 2 Credits

Veterinary students work with veterinarians and domestic animals in international settings. Graded P/N.

This course is repeatable for 4 credits.

VMB 774, LABORATORY ANIMAL MEDICINE, 6 Credits

Clinical experience related to diagnosis, treatment, and management of laboratory animals. Graded P/N.

Equivalent to: VM 774

VMB 786, ADVANCED HISTOPATHOLOGY, 2 Credits

A rotation in histopathology at the Veterinary Diagnostic Laboratory. Emphasis is placed on case evaluation, diagnosis and report writing of biopsies of all species.

VMB 795, DIAGNOSTIC SERVICES, 2 Credits

Students will perform service duty in the necropsy area of the Veterinary Diagnostic Laboratory and will perform necropsies on delivered specimens. Other activities.