

## Course Description BVS Program

### 1. FKH1101 Veterinary Profession and Animal Welfare 2(1-1)

This course discusses the duties and authorities of the veterinary profession and its role in society related to animal health, veterinary public health, and animal welfare; The discussion emphasis the duties and responsibilities of the profession related to the implementation and protection of animal welfare. Furthermore, students will study the definition and scope of animal welfare and various animal welfare concepts, including the Five Freedom Principles and 3Rs; and animal welfare issues that often occur in livestock, companion animals, experimental animals, and wildlife in ex situ conservation.

Fadjar Satrija (Koord), Agik Suprayogi, Ligaya I.T.A. Tumbelaka, Ni Wayan Kurniani Karja, Huda S. Darusman, Aulia Andi Mustika, Heru Setijanto, Sri Murtini, Andriyanto, Chaerul Basri, Herwin Pisestyani, Denny Widaya Lukman, Hadri Latif

### 2. FKH1201 Scientific Methodology 2(1-1)

Precondition: IPB1106, STK1111

This course explains scientific philosophy and ethics, ethics in the use of animals in research and education, procedures for literature study and scientific writing, research/activity design and proposal writing, data, and presentation, writing abstracts, summaries and conclusions, scientific publications and popular scientific articles and oral and poster presentations.

I Ketut Mudite Adnyane (Koord), Nurhidayat, Fadjar Satrija, Sri Murtini, Wasmen Manalu, Upik Kesumawati

### 3. FKH1301 Aquatic Animal Health Management 2(2-0)

Precondition: IPH1221, IPH1222

This course discusses the definition of aquatic animals related to Animal Husbandry and Animal Health Law, classifications and habitats of aquatic animals, and their benefits. Furthermore, students will also learn about various types of infectious and non-infectious diseases that are often found and their immune systems and how to prevent and treat the disease.

Agustin Indrawati (Koord), Risa Tiuria, Dewi Ratih, Okti Nadia Poetri, Arifin Budiman Nugraha, Titiek Sunartatie, Mawar Subangkit, Vetnizah Juniantito

**4. FKH1401 Veterinary Legislation and Ethics 2(2-0)**

Precondition: IPH 1232, IPH 1324, KRP 1414, KRP 1423

This course explains veterinary ethics and various laws and regulations that apply to the administration of animal health and the practice of veterinary medicine

Srihadi Agungpriyono (Koord), Rahmat Hidayat, Heru Setijanto, Bambang Pontjo Priosoeryanto, Trioso Purnawarman

**5. FKH1405 Colloquium 1(0-1)**

Precondition: FKH1201

This course explains and practices being able to present research plans/final assignments in scientific forums.

Herwin Pisestyani (Koord: ex officio Komdik)  
and Team Teaching of School of Veterinary and Biomedical Sciences

**6. FKH1406 Seminar 1(0-1)**

Precondition: FKH1201

This course explains and practices being able to present scientific writings both orally and on posters in scientific forums

Team Teaching of School of Veterinary and Biomedical Sciences

**7. FKH1407 Undergraduate Thesis 5(0-5)**

Precondition: All Courses

This course explains and practices being able to design, carry out scientific activities in the form of research or internships or case studies, and literature studies and then write them in scientific writing in Indonesian or English properly and correctly.

Wahono Esthi Prasetyaningtyas (Koord, ex officio Komdik)  
and Team Teaching of School of Veterinary and Biomedical Sciences

## **Enrichment Course (8-14)**

### **8. FKH1302 Animal Behavior 2(2-0)**

Precondition: AFF 1211, AFF1221

This course studies aspects of animal behavior, especially livestock/pets. Topics covered include domestication, behavior patterns, behavioral systems, social interactions, and behavioral deviance. Also discussed is the typical behavior of farm animals such as cows, goats, sheep, chickens, and pets.

Heru Setijanto (Koord), Hera Maheshwari, Supratikno

### **9. FKH1303 Laboratory Animal Health Management 2(2-0)**

Precondition: AFF1221

This course discusses the definition, classification, anatomy, physiology, and the appropriate use of each type of animal as a model animal. Furthermore, students will learn about various types of diseases that are often found in laboratory animals and how to handle and prevent them.

Sri Estuningsih (Koord), Kusdiantoro Mohammad, Fitriya Nur Annisa Dewi

### **10. FKH1304 Biomedical Instrumentation 2(2-0)**

Precondition: BIO102, FIS104

This course explains the functions and uses of various kinds of supporting equipment and how to operate each tool and its application to animals in an integrative and comprehensive way to support veterinary medicine.

Rr. Soesatyoratih (Koord), Wahono Esthi Prasetyaningtyas, Kusdiantoro Mohamad,  
Ni luh Putu Ika Mayasari

### **11. FKH1305 Tropical Animal Health Management 3(2-1)**

Precondition: AFF1221

This course will provide an explanation of the concept of tropical livestock health management that outlines the definition and characteristics of the ecology and bioclimatology of tropical areas, adaptation physiology, livestock management and its environmental impacts, biosecurity, animal welfare, sustainable livestock health management, characteristics of healthy and sick livestock, and the introduction of tropical animal diseases and their handling.

Agik Suprayogi, Fadjar Satrija, Andriyanto, Huda Shalahudin Darusman, Agus Wijaya,  
Aulia Andi Mustika, Ridi Arif, Sri Murtini

**12. FKH1402 Wild Animal Health Management 2(2-0)**

Precondition: AFF1111, AFF1221

This course explains the definition, classification, anatomy, physiology and habitat of wildlife. Furthermore, students will learn about various types of diseases that are often found in wild animals and how to handle and prevent them.

Ligaya I.T.A. Tumbelaka (Koord), Muhamad Agil, Riki Siswandi

**13. FKH1403 Poultry Health Management 2(2-0)**

Precondition: KRP1341

This course is an understanding of poultry health management. The discussion will be performed on basic principles of poultry health management; interaction among disease agents (microorganisms as a source of infection), host and environment; physical facilities; poultry transportation, the principle of sanitation; prevention and control actions for poultry diseases; disinfection actions, health management of broiler, laying, hatchery, and breeding farms; vaccination and monitoring program; outbreak investigation; quarantine procedures; and diagnostic management in poultry diseases.

Ekowati Handharyani (Koord), Agus Setiyono, Trioso Purnawarman, Retno Damayanti Soejodono

**14. FKH1404 Animal Health and Environmental Management 2(2-0)**

Precondition: AFF 1222, IPH 1221, IPH 1222, NTP 1271

This course explains the concept of tropical animal health management which outlines the definition and characteristics of tropical ecology and bioclimatology, adaptation and management of animals and their environmental impacts, biosecurity, animal welfare, management of animal health (livestock, pets, wild and aquatic) in a sustainable manner.

Koekoeh Santoso (Koord), Trioso Purnawarman, Bambang Purwantara,  
Ligaya I.T.A. Tumbelaka, Agustin Indrawati, Budhy Jasa Widyananta

**15. AFF1111 Veterinary Anatomy I 3(2-1)**

Precondition: BIO1102

This course describes the animal locomotion system, the functional structure of neurons, the central nervous system, the peripheral nervous system, and the autonomic nervous system. In addition, it also discusses the morphology of *integumental communa*e which includes skin and nails, and their derivatives, as well as sense organs, including eyes, ears, nose, and tongue.

Chairun Nisa (Koord), Nurhidayat, Srihadi Agungpriyono, Heru Setijanto, Savitri Novelina,  
Supratikno, Danang Dwi Cahyadi

**16. AFF1212 Veterinary Histology I 2(1-1)**

Precondition: BIO1102

This course explains the basics of histology and the approach methods used in studying histology, especially the structures and components that tissues, organs, and organ systems in the body such as cells, epithelial tissue, connective tissue, fat tissue, bone and cartilage, blood, muscles, and nerves are given to support the understanding of each subject.

Adi Winarto (Koord), Tutik Wresdiyati, I Ketut Mudite Adnyane, Sri Rahmatul Laila

**17. AFF1221 Veterinary Physiology I 3(2-1)**

Precondition: BIO1102, KIM1104

This course is given to students who already have basic knowledge of biology, physics, and chemistry. This course presents the basic functions and the concepts of cells and the principles in biological control systems through a discussion of various animal physiologic systems. Lectures will cover the scope of physiology, cell structure and function, physiological concepts and principles of nervous systems, sensory system, endocrine system, muscle physiology, and blood and body defense system. Each topic will include a discussion of deviations in physiological function that will cause the occurrence of a disease or disorder. At the end of the course, students can integrate all the topics obtained and can form the basis of veterinary science.

Isdoni (Koord), Wasmen Manalu, Agik Suprayogi, Aryani Sismin Satyaningtijas, Hera Maheshwari, Damiana Rita Ekastuti, Koekoeh Santoso, Ronald Tarigan, Pudji Achmadi

**18. AFF1213 Embryology and Developmental Genetics 3(2-1)**

Precondition: BIO 1102

This course studies the origin and process of animal growth and development, starting from the process of gamete formation (gametogenesis), fertilization (fertilization), embryonic development (embryogenesis) and organ development (organogenesis), structure and function of organs in a system, including the nervous system, circulatory system, urogenital system, digestive and respiratory systems, muscle and skeletal development, as well as the development of the head, integument, and sensory organs. In addition, also discussed the influence of genetic and environmental factors on growth and development.

Mokhamad Fahrudin (Koord), Arief Boediono, Kusdiantoro Mohamad, Wahono Esthi Prasetyaningtyas

**19. AFF1214 Veterinary Anatomy II 3(2-1)**

Precondition: AFF1111

This course will explain the anatomy of system organs of animals including blood and lymph circulation, respiration, digestion, genitalia, and urinary, and endocrine organs. This course also explains the anatomy of avian organs that have some different structures compared to other animals.

Savitri Novelina (Koord), Nurhidayat, Srihadi Agungpriyono, Heru Setijanto, Chairun Nisa', Supratikno, Danang Dwi Cahyadi

**20. AFF1215 Veterinary Histology II 2(1-1)**

Precondition: AFF1212

This course explains the basic understanding of organology, histology of organs that make up systems in the body such as the circulatory system, lymphatic and immune systems, respiratory system, digestive system, urinary system, reproductive system, endocrine system, as well as the integumentary system, eyes and ears.

Tutik Wresdiyati (Koord), Adi Winarto, I Ketut Mudite Adnyane, Sri Rahmatul Laila

**21. AFF1222 Veterinary Physiology II 3(2-1)**

Precondition: AFF1221

This course explains basic knowledge of biology, physics, chemistry, Physics, and physiology I. This course combines the functions of each cell and organ in a single functional system that is carried out in a coordinated and integrated manner. The systems discussed are the cardiovascular system, respiratory system, digestive system, metabolism, growth and thermoregulation, kidney and osmoregulation as well as reproduction and lactation. The deepening of physiological processes is carried out through practicum. Each topic will also include a discussion of deviations in the physiologic function that will result in the occurrence of a disease or disorder. At the end of the lecture, students are expected to be able to integrate all the topics obtained and can become the basis for knowledge of veterinary science.

Aryani Sismin Satyaningtjas (Koord), Wasmen Manalu, Agik Suprayogi, Hera Maheshwari, Damiana Rita Ekastuti, Isdoni, Koekoeh Santoso, Pudji Achmadi, Ronald Tarigan

**22. AFF1223 Medical Biochemistry 2(2-0)**

Precondition: BIK1201

This course describes the basics of biochemistry, enzymology, nutrient metabolism (carbohydrate, lipid, and protein) and their integration, formation of body tissue, free radicals

and antioxidants, and the metabolism and detoxication of drugs. A comprehensive discussion about the disturbance of biochemical processes that cause diseases is included in each topic.

Ronald Tarigan (Koord), Hera Maheshwari, Arief Boediono, Tutik Wresdiyati, Mokhamad Fahrudin, Wasmen Manalu, Huda Shalahudin Darusman, Setyo Widodo, Sus Derthi Widhyari, Min Rahminiwati

**23. AFF1216 Topography Anatomy 3(2-1)**

Precondition: AFF1214

This course studies the topographical anatomy of the elements or organs in areas of the body of domestic animals, especially the forelegs and hind legs, the head and neck of horses and dogs.

Nurhidayat (Koord), Srihadi Agungpriyono, Heru Setijanto, Chairun Nisa', Savitri Novelina, Supratikno, Danang Dwi Cahyadi

**24. AFF1331 Pharmacology I 2(2-0)**

Precondition: AFF1222

This course provides basic knowledge of drugs (pharmacology) which consists of pharmacology scope, the general principle of drugs action, how drugs work on systems and organs (pharmacodynamics), the fate of drugs in the body (pharmacokinetics), and drug interactions as the basis for selecting, and making a combination of drugs that will be used clinically.

Aulia Andi Mustika (Koord), Min Rahminiwati, Huda Shalahudin Darusman, Andriyanto, Siti Sa'diah, Diah Nugrahani Pristihadi

**25. AFF1332 Pharmacology II 3(2-1)**

Precondition: AFF1331

This course explains the basics of chemotherapy followed by chemotherapy drugs, such as antimicrobials, antiparasitic, antineoplastic, immunopharmacology, and discussion of several important poisons, therapeutic use of drugs, in the field of veterinary and animal husbandry such as growth promoters, lust synchronization, and so on.

Min Rahminiwati (Koord), Andi Aulia Mustika, Huda Shalahudin Darusman, Siti Sa'diah, Andriyanto, Diah Nugrahani Pristihadi

**26. AFF1432 Veterinary Toxicology 2(1-1)**

Precondition: AFF1332

This course explains the basics of toxicology, poisoning chemicals, plant poisoning, pesticide poisoning, food poisoning, metalloids, and chemical poisoning radioactivity, carcinogenic and teratogenic substances, environmental toxicology, and legislation toxic material.

Andriyanto (Koord), Min Rahminiwati, Huda Shalahudin Darusman, Siti Sa'diah, Andi Aulia Mustika, Diah Nugrahani Pristihadi

**27. IPH1221 Veterinary Bacteriology and Mycology 3(2-1)**

Precondition: BIO1102, KIM104

This course provides a basic understanding of bacteria and fungi as well as its role as an agent of infectious disease. The description includes history, characteristics, classification, growth and reproduction, metabolism, genetics, virulence factors; the working mechanisms of antibacterial and antifungal materials; as well as the basic principles of laboratory diagnostics.

Titiek Sunartatie (Koord), Eko Sugeng Pribadi, Usamah Afiff, Rahmat Hidayat, Safika, Dordia Anindita Rotinsulu, Aprilia Hardiati, Novericko Ginger Budiono

**28. IPH1222 Veterinary Virology 2(1-1)**

Precondition: BIO1102, KIM1104

This course provides basic knowledge about viruses in their physical, chemical, and biological characteristics, their mechanism of reproduction (virus propagation) and their role as the cause of animal diseases, and their role in life in general. The course is enriched with laboratory practicums that study virus isolation and identification techniques, including culturing techniques and serological identification.

Sri Murtini (Koord), Surachmi Setiyaningsih, Joko Pamungkas, Okti Nadia Poetri, Ni Luh Putu Ika Mayasari

**29. IPH1231 Veterinary Parasitology: Ectoparasites 2(1-1)**

Precondition: BIO1102

This course discusses the concepts of parasites and parasitism, the factors that influence them, and various types of ectoparasites that are important for animal/community health, ranging from classification, morphology, habitat and life cycle, the behavior of importance, as well as philosophy and ways of controlling them. Collection, processing, and identification techniques are also discussed at the end of the lecture.

Upik Kesumawati (Koord), Susi Soviana, Akhmad Arif Amin, Supriyono

**30. IPH1331 Veterinary Parasitology: Endoparasites 3(2-1)**

Precondition: BIO1102

This course covers the basic concepts of parasites and parasitism, taxonomy, morphology, and biology, as well as diseases caused by protozoa and helminth infections in domestic, wildlife, and aquatic animals that are economically and/or publicly relevant. The pathogenesis, clinical signs, distribution, and control of the disease are all discussed. The purpose of the practicum is to help students comprehend the identification, confirmation, and control of endoparasites.

Elok Budi Retnani (Koord), Fadjar Satrija, Yusuf Ridwan, Risa Tiuria, Umi Cahyaningsih, Arif Budiman Nugraha, Ridi Arif



**31. IPH1323 Medical Immunology 2(2-0)**

Precondition: IPH1221, IPH1222

Basic knowledge of the body's response to antigen (microorganism and non-microorganism), infection mechanism, antigen-antibody reaction, hypersensitivity, abnormality of the immune response, serological test and vaccine, and vaccination.

Ni Luh Putu Ika Mayasari (Koord), Okti Nadia Poetri, Retno Damayanti Soedjoedono,  
I Wayan Teguh Wibawan

**32. IPH1311 Public Health Science 1(1-0)**

Precondition: KPM1131, STA1211, IPH 1221, IPH 1222

This Course discussed the meaning of public health, veterinarians' role in public health, the interaction between disease agents, host, and environment, and efforts to increase health. This course discusses various types and sources of environmental contamination, and its impact on the public. Other than that, the application of biosecurity and a healthy market, healthy housing, good occupational health, food safety assurance system, antimicrobial resistance, along with one health and eco-health concept in public health will be discussed.

Hadri Latif (Koord), Mirnawati Bachrum Sudarwanto, Trioso Purnawarman,  
Denny Widaya Lukman, Etih Sudarnika, Chaerul Basri, Herwin Pisestyani

**33. IPH1312 Hygiene of Food of Animal Origin 3(2-1)**

Precondition: PH1311, IPH1221, IPH1222

This course discussed the hygiene of food of animal origin, specifically milk, meat, eggs, honey, swiftlet bird's nest, and fish, including the composition, characteristics, good practices in producing and handling, application of animal welfare, important microorganisms in food of animal origin, and the spoilage or adulteration. Furthermore, it discusses health problems related to the consumption of milk and its products, some milk processing, and subclinical mastitis from the veterinary public health points of view.

Denny Widaya Lukman (Koord), Mirnawati Bachrum Sudarwanto, Trioso Purnawarman,  
Hadri Latif, Chaerul Basri, Herwin Pisestyani

**34. IPH1324 Bacterial and Mycal Diseases 3(2-1)**

Precondition: IPH1221

This course discussed the infectious diseases of bacterial and fungal origin which are socio-economically and politically important (strategic diseases) in Indonesia and the world of international animal health.

In this course, the topics that will be given include: etiology, disease symptoms, pathogenesis, diagnosis, epidemiology, prevention and treatment eradication of infectious diseases.

Usamah Afiff (Koord), Titiek Sunartatie, Rahmat Hidayat, Agustin Indrawati, Safika, Dordia Anindita Rotinsulu, Aprilia Hardiati, Novericko Ginger Budiono

**35. IPH1325 Viral Disease 2(1-1)**

Precondition: IPH1222

This course discussed the diseases caused by viruses that are socio-economically and politically important (strategic diseases) in Indonesia and the world of international animal health. The discussion of this course covers etiology, disease symptoms, pathogenesis, diagnosis, epidemiology, prevention, and eradication.

Surachmi Setiyaningsih (Koord), Joko Pamungkas, Sri Murtini, Ni Luh Putu Ika Mayasari

**36. IPH1413 Zoonoses 2(2-0)**

Precondition: IPH1324, IPH1325

This course discusses the nature of the cause of disease, epidemiology, mode of transmission, pathogenesis, prevention, and control, current trends, and problems of diseases caused by bacteria, viruses, worms, protozoa, rickettsia, fungi, and prions that can be transmitted from animals to humans or vice versa. The discussion is prioritized on diseases found in Indonesia, which threaten public health and are economically detrimental.

Trioso Purnawarman (Koord), Mirnawati Bachrum Sudarwanto, Denny Widaya Lukman, Hadri Latif, Chaerul Basri, Herwin Pisestyani

**37. IPH1414 Veterinary Epidemiology and Economics 3(2-1)**

Precondition: STA1211, IPH1324, IPH1325

Discusses the concept of Veterinary Epidemiology which includes the meaning, objectives and interests of epidemiology in the field of veterinary medicine; the concept and ecology of disease in populations; disease measurement techniques and disease data management in the population; observational and molecular studies in animal disease investigations; diagnostic test technique; survey techniques, monitoring and surveillance of animal diseases; outbreak investigations; analysis of the risk of imports of animals and animal products, and; planning and economic analysis of animal disease control programs.

Abdul Zahid (Koord), Chaerul Basri, Ardilasunu Wicaksono, Etih Sudarnika

**38. KRP1311 Veterinary Clinical Diagnostic 3(2-1)**

Precondition: AFF 1216, AFF 1222, AFF 1223

This course discusses the systematics of performing a physical examination on animals to evaluate their condition to diagnose functional abnormalities, as well as to conduct sampling for laboratory evaluation.

Retno Wulansari (Koord), Setyo Widodo, Sus Derthi Widhyari, Anita Esfandiari, Leni Maylina, Agus Wijaya, Arief Purwo Mihardi, Fitriya Nur Annisa Dewi

**39. KRP1321 Veterinary General Surgery 3(2-1)**

Precondition: AFF 1216

This course can explain an aseptic operating environment, the use of operating equipment, operating support equipment, operating room, peri, post and intraoperative patient care as well as anesthetic management and monitoring and pain management and physiotherapy methods in animals.

Budhy Jasa Widyananta (Koord), Rr. Soesatyoratih, Deni Noviana, R. Harry Soehartono, Gunanti, Riki Siswandi, Dwi Utari Rahmiati

**40. KRP1341 General Pathology 3(2-1)**

Precondition: AFF 1215, AFF 1222

This course explains the basic cell and tissues changes and reactions in the process and mechanisms of various diseases in various animal species including degenerations, necroses, pigmentation disorders, circulatory disorders, disturbances of growth, neoplasia, inflammation, wound healing process, disorders of immune system, and diseases causes by internal and external factors.

Bambang Pontjo Priosoeryanto (Koord), Sri Estuningsih, Eva Harlina, Agus Setiyono, Ekowati Handharyani, Vetrizah Juniantito, Mawar Subangkit

**41. KRP1331 Reproductive Science and Technology 3(2-1)**

Precondition: AFF1213

This course studies the physiology and integral coordination functions of the reproductive organs of female and male animals, the mechanism of integration of the work of the reproductive endocrine glands and their hormones, which are directed as the basis for the application of reproductive technology methods (bio) as well as the handling of midwifery and countermeasures of breeding in the framework of animal development and breeding.

Ligaya I.T.A Tumbelaka (Koord), R. Iis Arifiantini, Iman Supriatna, Amrozi, Bambang Purwantara, Muhammad Agil, Dedi Rahmat Setiadi, Ni Wayan Kurniani Karja, Mohamad Agus Setiadi, Judi, Mokhamad Fakhurul Ulum

**42. KRP1342 Veterinary Systemic Pathology I 2(2-0)**

Precondition: KRP1341

This course explains the causes, stages of disease occurring in cells and tissues macroscopically and microscopically in various organ systems of organ systems of circulation, respiration, digestion, skin, liver, and pancreas, as well as eyes and ears associated with their clinical importance in various animal species.

Eva Harlina (Koord), Agus Setiyono, Sri Estuningsih, Ekowati Handharyani, Bambang Pontjo Priosoeryanto, Vetrizah Juniantito, Mawar Subangkit

**43. KRP1341 General Pathology 3(2-1)**

Precondition: AFF 1215, AFF 1222

This course explains the basic cell and tissues changes and reactions in the process and mechanisms of various diseases in various animal species including degenerations, necroses, pigmentation disorders, circulatory disorders, disturbances of growth, neoplasia, inflammation, wound healing process, disorders of immune system, and diseases causes by internal and external factors.

Bambang Pontjo Priosoeryanto (Koord), Sri Estuningsih, Eva Harlina, Agus Setiyono, Ekowati Handharyani, Vetrizah Juniantito, Mawar Subangkit

**44. KRP1331 Reproductive Science and Technology 3(2-1)**

Precondition: AFF1213

This course studies the physiology and integral coordination functions of the reproductive organs of female and male animals, the mechanism of integration of the work of the reproductive endocrine glands and their hormones, which are directed as the basis for the application of reproductive technology methods (bio) as well as the handling of midwifery and countermeasures of breeding in the framework of animal development and breeding.

Ligaya I.T.A Tumbelaka (Koord), R. Iis Arifiantini, Iman Supriatna, Amrozi, Bambang Purwantara, Muhammad Agil, Dedi Rahmat Setiadi, Ni Wayan Kurniani Karja, Mohamad Agus Setiadi, Judi, Mokhammad Fakhrol Ulum

**45. KRP1342 Veterinary Systemic Pathology I 2(2-0)**

Precondition: KRP1341

This course explains the causes, stages of disease occurring in cells and tissues macroscopically and microscopically in various organ systems of organ systems of circulation, respiration, digestion, skin, liver, and pancreas, as well as eyes and ears associated with their clinical importance in various animal species.

Eva Harlina (Koord), Agus Setiyono, Sri Estuningsih, Ekowati Handharyani, Bambang Pontjo Priosoeryanto, Vetrizah Juniantito, Mawar Subangkit

**46. KRP1312 Veterinary Internal Disease 1**

**2(2-0)**

Precondition: KRP1311

This subject explains about some abnormalities that happened on the sick animal. The abnormalities discussion are as follows : cause, clinical symptoms, clinical and laboratory diagnosis, differential diagnosis, prognosis and treatment of the abnormalities that have characteristics, such as, hereditary, congenitally and acquired or acquire on some systems as follows : skin and hair, eyes and ears organ system, respiration, circulation, and digestive systems.

Agus Wijaya (Koord), Setyo Widodo, Retno Wulansari, Anita Esfandiari, Sus Derthi Widhyari, Leni Maylina, Fitriya Nur Annisa Dewi, Arief Purwo Mihardi

**47. KRP1322 Veterinary Advanced Surgery I**

**2(1-1)**

Precondition: KRP1321

This course discusses surgical diseases; urinaria, genitalia, digestion, eyes, ears, orthopedics, and cosmetics in small animals, especially dogs and cats, more specifically regarding the preoperative, surgical and postoperative stages of the surgical procedure.

Gunanti (Koord), Rr. Soesetyoratih, Deni Noviana, Budhy Jasa Widyananta, Dwi Utari Rahmiati

**48. KRP1332 Obstetrics and Infertility Science**

**3(2-1)**

Precondition: KRP1331, IPH1221, IPH1221

Students are able to explain the process of pregnancy and birth with all the aspects that accompany it in livestock and pets, pathology of pregnancy, postpartum treatment and its complications, teratology, reproductive surgery, various aspects of mastery in animals include reproductive efficiency, postpartum period abnormalities, anatomical and functional disorders of male and female reproduction, the role of the environment and nutrition in a reproductive function, and group reproductive management.

Mokhamad Fakhrol Ulum (Koord), Iman Supriatna, Amrozi, Bambang Purwantara, Mohamad Agus Setiadi, Ni Wayan Kurniani Karja, Judi, Muhamad Agil, Ligaya I.T.A. Tumbelaka, Dedi Rahmat Setiadi

**49. KRP1443 Veterinary Systemic Pathology II 3(2-1)**

Precondition: KRP1342

This course covers the causes of disease and stages of disease formation (pathogenesis), as well as macroscopical and microscopic morphological alterations in organs and tissues of varied neuronal, lymphoreticular, urinary, genital, endocrine, bone, and muscle organ systems.

Vetnizah Juniantito (Koord), Bambang Pontjo Priosoeryanto, Eva Harlina,  
Sri Estuningsih, Agus Setiyono, Ekowati Handharyani, Mawar Subangkit

**50. KRP1414 Veterinary Internal Medicine II 2(2-0)**

Precondition: KRP1312

This course learning acquired diseases in domestic animals. The main disorder topic elucidated is disease name, cause, pathogenesis, clinical sign, diagnosis (clinical and laboratory), differential diagnosis, prognosis, and therapy in genital, urinary, endocrine, metabolism, musculoskeletal, hemopoietic, and nerves systems.

Setyo Widodo (Koord), Agus Wijaya, Retno Wulansari, Anita Esfandiari,  
Sus Derthi Widhyari, Leni Maylina

**51. KRP1423 Veterinary Advanced Surgery II 2(1-1)**

Precondition: KRP1321

This course discusses cases of surgical disease and recognizes various surgical techniques based on region, anesthesia, fractures, and tumors in large animals.

R. Harry Soehartono (Koord), Budhy Jasa Widyananta, Riki Siswandi, Dwi Utari Rahmiati

**52. KRP1424 Veterinary Radiology 2(1-1)**

Precondition: KRP1321

This course discusses the use of electromagnetic radiation and sound waves in the diagnosis of animal diseases. This course also explains radiation physics as the basis for radiographic diagnosis, *pulse-echo principles* in ultrasound diagnosis, radiographic and ultrasound equipment, quality control of radiographic films, shooting positions, use of contrast media, interpretation of radiographic results of the head, extremities, thorax, and abdomen. Vertebrae, and abdomen, and general principles and interpretation of abdominal ultrasonography in small animals.

Deni Noviana (Koord), Rr. Soesatyoratih, R. Harry Soehartono, Budhy Jasa Widyananta, Gunanti,  
Riki Siswandi, Dwi Utari Rahmiati

**53. KRP1313 Veterinary Clinical Pathology 2(1-1)**

Precondition: AFF1222, AFF1223, KRP1341

This course will discuss physical, cellular, and biochemical abnormalities of metabolites in various excrete of the animal body, including blood, urine, feces, and the cause and effect of such abnormalities.

Arief Purwo Mihardi (Koord), Sus Derthi Widhyari, Anita Esfandiari, Leni Maylina,  
Fitriya Nur Annisa Dewi

**54. KRP1444 Poultry Pathology 2(2-0)**

Precondition: KRP 1441

This course explains the gross pathology (macroscopic) and histopathological changes (microscopic) in various infectious and non-infectious diseases that attack poultry (chicken and various types of birds) as well as their handling and prevention.

Sri Estuningsih (Koord), Bambang Pontjo Priosoeryanto, Eva Harlina,  
Vetnizah Juniantito, , Agus Setiyono, Ekowati Handharyani, Mawar Subangkit

**55. KRP1415 Clinical Dietetics 2(2-0)**

Precondition: NTP1271, KRP1414, KRP1423, KRP1322

This course explains about the clinical dietetics of domesticated animals, based on their risk factors, diseases as well as organ abnormality. In general, each topic covered in this course will discuss the following: definition, etiology, symptoms, clinical manifestation, pathophysiology, clinical and laboratory diagnostics, differential diagnosis, therapeutic and clinical dietetics solution (dietary management).

Sus Derthi Widhyari(Koord), Setyo Widodo, Agus Wijaya, Retno Wulansari, Anita Esfandiari,  
Leni Maylina, Fitriya Nur Annisa Dewi, Arief Purwo Mihardi

**56. KRP1416 Veterinary Clinical Demonstration 1(0-1)**

Precondition: KRP1414, KRP1322, KRP1423

This course explains various topics of livestock and companion animals based on the type of disease or organ damage. In general, the clinical demonstration topic discussed is the case of essential diseases in various domestic animals directly in the field, in the laboratory and or through audiovisual including definitions, causes, symptoms and clinical manifestations, the pathophysiology of disease/disorders, diagnosis (clinical and laboratory), differential diagnosis, as well as therapy in pets based on the type of disease or organ damage.

Anita Esfandiari (Koord), Setyo Widodo, Agus Wijaya, Retno Wulansari, Sus Derthi Widhyari,  
Leni Maylina, Fitriya Nur Annisa Dewi, Arief Purwo Mihardi, Ietje Wientarsih, Bayu Febram Prasetyo, Rini  
Madyastuti, Deni Noviana, Rr Soesatyoratih, Gunanti, Harry Soehartono, Budhi Jasa Widyananta

## **57. KRP1451 Pharmaceutical Preparation and General Therapy 2(1-1)**

Precondition: AFF1332

This course studies the general theory of veterinary pharmaceutical dosage forms, basic principles of veterinary pharmaceutical dosage forms, circulating veterinary drug classes, distribution and control of veterinary drugs, problems of veterinary pharmaceutical dosage forms, formulations, manufacturing methods and Good manufacturing practices for veterinary drugs (*Cara Pembuatan Obat Hewan yang Baik/CPOHB*), application of aerosol preparations, sterile preparations, veterinary cosmetics, natural medicines, and non-pharmaceutical therapy.

Lina Noviyanti Sutardi (Koord), Ietje Wientarsih, Bayu Febram Prasetyo, Rini Madyastuti Purwono,  
Setyo Widodo