

Table of Elective Course BVS and VPE Program

BVS Program				
No	Subject Course	SCH	ECTS	LO of Course
1	FKH1302 Animal Behavior	2 (2-0)	3	<p>CLO1 Explain behavioral patterns and adaptive behavior.</p> <p>CLO2 Describe the behavioral system.</p> <p>CLO3 Describes parent behavior and parent-child interactions.</p> <p>CLO4 Explain the influence of hormones on animal behavior.</p> <p>CLO5 Describes social organization, communication and aggressive behavior.</p> <p>CLO6 Describe typical behavior in domestic animals.</p> <p>CLO7 Describe the contribution of animal behavioral science to animal welfare.</p>
2	FKH303 Laboratory Animal Health Management	2 (2-0)	3	<p>CLO1 Explains the definition, classification and types of laboratory animals.</p> <p>CLO2 Describes the various uses and uses of laboratory animals.</p> <p>CLO3-4 Describes the anatomy and physiology of laboratory animals such as fish, amphibians, rodents (especially rats and mice), rabbits, dogs, cats, pigs, horses, primates, poultry and ruminants.</p> <p>CLO5-6 Describes the management of laboratory animals in terms of facility management, animal health and biomedical waste treatment.</p> <p>CLO7 Explains the procedures for handling and administering drugs or test materials to laboratory animals.</p> <p>CLO8 Describe various experimental procedures or manipulations in laboratory animals.</p> <p>CLO9 Describes the types of samples and procedures for sample collection.</p> <p>CLO10 Describes various types of laboratory animal diseases accompanied by clinical symptoms, organ pathological changes.</p> <p>CLO11 Explain the conditions of pain, stress and distress that can be experienced by laboratory animals, and procedures for handling them through analgesia, anesthesia and euthanasia.</p> <p>CLO12 Combining activity plans for using the laboratory, raising animals and implementing ethical and welfare principles.</p> <p>CLO13-14 Record details of activities using laboratory animals for research, testing,</p>

				production or education purposes, and evaluate critical points in the application of ethical and animal welfare principles as well as their relationship to real problems in society.
3	FKH1304 Biomedical Instrumentation	2 (2-0)	3	<p>CLO1 Able to explain and evaluate the importance of and how to operate an ECG device to support operations, patient care and research in the field of veterinary biomedicine in surgery.</p> <p>CLO2 Able to explain the importance of and how to operate patient monitoring equipment to support operations, patient care and research in the biomedical field.</p> <p>CLO3 Able to explain the importance of and how to operate inhalation anesthetics to support operations, patient care and research in the biomedical field.</p> <p>CLO4 After taking this course, students can explain the importance of PCR techniques and use automatic amplifier machines.</p> <p>CLO5 After taking this course, students can explain the importance of electrophoresis and sequencing techniques to support laboratory diagnosis of animal diseases and research in the biomedical field.</p> <p>CLO6 After taking this course, students can explain the importance of chromatographic techniques to support laboratory diagnosis of animal diseases and research in the biomedical field.</p> <p>CLO7 After taking this course, students can explain the importance of spectrophotometric techniques to support laboratory diagnosis of animal diseases and research in the biomedical field.</p> <p>CLO8 Able to explain the importance of dental and oral care and how to operate dental equipment to support dental surgery and care activities.</p> <p>CLO9 Able to explain the importance of dental and oral care and how to operate dental equipment to support dental surgery and care activities.</p> <p>CLO10 Able to explain the importance of using mucous membrane examination equipment.</p> <p>CLO11 After taking this course, students are able to explain the function of the biosafety cabinet, how it works and its use in the biomedical field.</p>

				<p>CLO12 After following this course students are able to explain the functions, types, workings, and uses of incubators, sterilizers, and centrifuges in the biomedical field.</p> <p>CLO13 After following this course, students are able to explain the functions, parts, and working principles of using a microscope for biomedical research and diagnostic imaging.</p> <p>CLO14 After taking this course, students are able to explain: water treatment, purifier, and quality (grade) for clinical and research purposes.</p>
4	FKH305 Aquatic Animal Health Management	2 (2-0)	3	<p>CLO1 Be able to explain a general overview of aquatic animals relating to the definition and position in law as well as our interests as a veterinarian.</p> <p>CLO2 Be able to explain what is involved in the management of aquatic animal care. Students can determine the factors that cause disease and explain how to prevent it; Students can explain the management of maintenance of aquatic mammals and their habitat, species, development, and conservation.</p> <p>CLO3 Be able to explain the immune system in aquatic animals (fish and shrimp).</p> <p>CLO4 Be able to explain vaccination and immunostimulation in aquatic animals.</p> <p>CLO5 Be able to determine clinical symptoms and control disease aquatic animals (fish, shrimp, and aquatic mammals) caused by non-infectious factors (culture environment).</p> <p>CLO6 Be able to determine taxonomy, morphology, life cycle, pathogenesis, clinical symptoms, and control of aquatic animal diseases (fish, shrimp, and aquatic mammals) caused by ectoparasites and protozoa.</p> <p>CLO7 Be able to determine taxonomy, morphology, life cycle, pathogenesis, clinical symptoms, and control of diseases of aquatic animals (fish, shrimp, and aquatic mammals) caused by worms (Trematodes, Cestodes, Nematodes, and Acanthocephalans).</p> <p>CLO8 Be able to determine viral diseases in aquatic animals.</p> <p>CLO9 Be able to determine diseases in fish, shrimp and aquatic mammals caused by bacteria.</p> <p>CLO10 Be able to determine diseases in fish, shrimp and aquatic mammals caused by fungi.</p>

				<p>CLO11 Be able to recognize various organs and their importance in diagnostic pathology in various organ systems in aquatic animals (fish, shrimp, and aquatic mammals).</p> <p>CLO12 Be able to determine various pathological changes macroscopically, microscopically, and the pathogenesis of lesions in various organ systems in aquatic animals (fish, shrimp, and aquatic mammals).</p> <p>CLO13 Be able to determine various pathological changes macroscopic, microscopic, and pathogenesis of lesions in various organ systems in aquatic animals (fish, shrimp, and aquatic mammals).</p> <p>CLO14 Be able to solve and conclude problems related to aquatic animal health management.</p>
5	FKH1306 Wild Animal Health Management	2 (2-0)	3	<p>CLO1 Explain the biodiversity of Indonesia's wildlife (SL) and its conservation status.</p> <p>CLO2 Explain the design of wildlife cages as one of the elements of wildlife maintenance associated with promotive medical actions</p> <p>CLO3 Evaluate the need of wildlife nutrition with allometric scaling methods as one of the elements of wildlife husbandry associated with promotive medical actions</p> <p>CLO4 Explain preventive medical measures and the implementation of animal quarantine</p> <p>CLO5 Calculate the dose of animal drugs with allometric scaling methods</p> <p>CLO6 Explain the principle of animal immobilization</p> <p>CLO7 Explain the medical management of wildlife</p> <p>CLO8 Explaining diseases common to wildlife</p> <p>CLO9 Comparing normal and abnormal behavior in wildlife</p> <p>CLO10 Explain the role of wildlife in the concept of one health</p> <p>CLO11 Explain the principle of animal breeding</p> <p>CLO12 Explain the conservation design of the in situ</p> <p>CLO13 Explain the results of wildlife observations</p> <p>CLO14 Explain the management of animal transfer and transport</p>
6	FKH 1403 Poultry Health Management	2 (2-0)	3	<p>CLO1 Describes about basic principle of poultry health management</p> <p>CLO2 Describes physical facilities in poultry farm and transportation</p>

				<p>CLO3 Describes about the source of poultry diseases and explain the preventive action</p> <p>CLO4 Describes sanitation for the environment of poultry farm; e.g. control in rodents, insects and disposal management and and explain the disinfection program</p> <p>CLO5 Describes health management in broiler and laying farms; e.g. chick in, health management in production period and harvesting</p> <p>CLO6 Describes health management in hatchery division and breeding farm</p> <p>CLO7 Describes disease outbreak in poultry farm e.g. observation, quarantine procedure, treatment and eradication program</p> <p>CLO8 Disease diagnostic procedure in poultry diseases outbreak e.g. pathology examination, sampling method, and laboratory evaluation</p>
VPE Program				
1	Veterinary Products Industry Internship Syllabus Fkh 529	2 (0-2)	7.5	After completing VPE, students are able to demonstrate the technique of producing biomedical materials, especially vaccines and antisera along with monitoring the quality of their products, as well as animal care for antisera production and testing for vaccines.
2	FKH521 Horse Health Management Field Practice	2 (0-2)	7.5	After completing this practice, students are expected to have ability in diagnosing various cases of horse disease and to have skills in horse health services, as well as to have insight into horse farming for various activities using horses in human life.
3	Preferred Professional Internship / FKH 525	2 (0-2)	7.5	After completing this course, students are able to determine the diagnosis of disease and medical action; or the safety and quality of animal products.
4	Animal Quarantine Professional Internship FKH 528	2 (0-2)	7.5	<ol style="list-style-type: none"> 1. Able to explain the duties and functions of animal quarantine. 2. Able to explain administrative and service flow and animal quarantine actions. 3. Able to explain information systems and animal quarantine documents 4. Able to explain laboratory equipment related to conformity testing and safety of materials/objects 5. Able to communicate to the public and stakeholders about animal quarantine

5	Aquatic Animal Health Management Internship	2 (0-2)	7.5	After completing this internship, students are able to explain the management of maintenance and health of aquatic animals.
6	Laboratory animal management internship	2 (0-2)	7.5	After completing this internship, students are able to explain the management of maintenance and health of laboratory animals.
7	Wildlife Health Management Internship	2 (0-2)	7.5	After completing this internship, students are able to explain the management of the maintenance and health of wild animals.