Subject name	**Basics of animal husbandry (Modul-13)**
Subject/module code	Im406
Semester(s) in which the subject is taught.	*8- semestr*
Responsible teacher	*Sanayeva Lola Shukurbayevna. Candidate of Biological Sciences, Acting Associate Professor.*
Language of instruction	*Uzbek*
Link to curriculum	*Optional*
Teaching hours (including contact hours, independent study)	Total hours-180. Lecture hours-40 Practical hours-50 Independent study hours-90
ECTS	*6*
Prerequisites/Relationship to disciplines	Zoology
Objectives/learning outcomes of the subject	The purpose of teaching the subject is to convey to students the tasks set for breeding work in animal husbandry, methods for improving existing breeds and creating new breeds, systems, types. The individual development of livestock and poultry, its laws, exterior, interior and constitution, productivity and its accounting, evaluation methods, selection, mating, understanding of the breed, their improvement and the use of breeding methods in creating new breeds, herds, systems and families. They also provide information about diseases occurring in livestock and other agricultural animals, methods of combating infections. The task of the subject is to convey to students the individual development of livestock and poultry, its laws, exterior, interior and constitution, productivity and its accounting, evaluation methods, selection, mating, understanding of the breed, their improvement and the use of breeding methods in creating new breeds, herds, systems and families. To convey to students the tasks of breeding in livestock breeding, methods of improving existing breeds and creating new breeds, systems, and types.
Kurs mazmuni (mavzulari)	**I.Main theoretical part (lectures).** Topic 1. The importance of livestock in the national economy, its status and development prospects. The origin of farm animals and their domestication Topic 2 - the laws of growth and development. The basics and methods of breeding. Breeding work in livestock. The exterior, interior and constitution of farm animals. The periods of growth and development of farm animals, factors affecting growth and development. Topic 3 - Breeding of farm animals, breeding methods, crossbreeding and hybridization. Inbreeding. Breeding by system and family. Topic 4. Fundamentals of feeding farm animals. Cattle breeding. Technology and hygiene of milk and meat production. Topic 5: Feeding farm animals, Nutrition of feeds, Assessment of the nutritional value of feeds depending on nutrients, Concept of feeds, Feeding various farm animals and poultry. Topic 6: Cattle productivity, Cattle breeds, Biological characteristics of cattle. System and methods of keeping cows. Milking methods. Production of cattle meat in dairy and meat cattle breeding. Breeding work in cattle breeding. Topic 7: Basics of product production in sheep breeding. The importance of sheep breeding in the national economy. Biological characteristics of sheep. Biological characteristics of sheep. Sheep productivity. Breeds of sheep bred in Uzbekistan. Breeding of sheep, Sheep breeding and fattening on pastures Topic 8: Basics of product production in horse breeding and camel breeding.

	Horse and camel breeds planned for breeding in Uzbekistan. Horse and camel breeding techniques. Equestrian sports. Topic 9 Meat and milk productivity of horses. Milking methods of mare. Fattening and fattening of horses on pasture. Products made from mare and camel milk and their importance. Topic 10. Pig breeding, Fundamentals of poultry production. Biological characteristics of pigs. Pig productivity. Pig breeds. Pig breeding. Fattening of pigs. Topic 11 Poultry productivity, Poultry breeds, Process of consumer egg production, Industrial poultry production. Topic 12. Rabbit farming and beekeeping. Origin and biological characteristics of rabbits and bees Topic 13 Biological characteristics of rabbits, Origin regions of rabbits, products obtained from rabbits, rabbit breeds. Technology of rabbit care. Topic 14 Products obtained in beekeeping. Technology of bee care. Honey, wax, propolis, bee pollen and other products. Topic 14. Pathological changes in livestock. Pathology. Etiology and pathogenesis. Topic 15. Diagnostics and pharmacology in livestock. Clinical diagnostics. Understanding pharmacology. Basic pharmacological agents. Antiseptics. Types of drugs. Topic 16. Surgery in livestock. Surgical diseases. Castration. Traumatism. Bone diseases. Topic 17. Mammary gland diseases in livestock. Acute, severe and chronic mastitis. Mastitis in various animals. Mastitis prophylaxis. Topic 18. Obstetrics and gynecology in livestock. Assistance in normal childbirth. Pathology of childbirth. Postpartum pathological conditions. Topic 19. Internal non-communicable diseases in livestock. Diseases of the circulatory system. Respiratory system diseases. Digestive system diseases. Topic 20. Infectious diseases in livestock. General information about infections. Infection prevention. Epizootic work. Basic prevention of infectious diseases. Types of infectious diseases. **II. Instructions and recommendations for practical training** Practical training is a lesson to consolidate theoretical material under the guidance of a teacher. The main purpose of the seminars is to discuss the most complex theoretical issues of the course, to study them methodologically and methodically. In the seminar, the knowledge obtained as a result of independent extracurricular work on primary sources, documents, additional literature is deepened, systematized and controlled. Practical training involves the active work of students - presentations with theses or lectures, oral answers to the teacher's questions, collective discussion of course problems. The topic of the seminar is common to the entire group of students, and if the teacher has not distributed questions for personal preparation, then everyone must prepare answers to all the questions. The messages or reports presented at the seminar are discussed, students make additions and comments. Thus, seminars teach students the ability to clearly express their thoughts, argue their own conclusions, conduct scientific debates, and take into account the points of view of opponents. In addition, during the seminar, questions and rules that were not sufficiently understood and mastered are identified. Preparation for practical exercises requires a high level of independent activity from the student. The answer must be complete and clear, while correctly expressing and justifying your point of view, and

	working freely with the concepts and categories of this discipline. **II. Instructions and recommendations for practical exercises.** 1. The importance of livestock in the national economy, its status and development prospects. 2. The origin of farm animals and their domestication 3. The laws of growth and development of farm animals. 4. Principles and methods of breeding. Breeding work in livestock farming 5. Principles of feeding farm animals. 6. Technology and hygiene of milk and meat production 7. Cattle productivity, Cattle breeds, Biological characteristics of cattle 8. Principles of product production in sheep farming 9. Principles of product production in horse breeding and camel breeding 10. Pig breeding, Principles of poultry production 11. Rabbit breeding and beekeeping. 12. Origin and biological characteristics of rabbits and bees 13. Pathological changes in livestock. 14. Diagnostics and pharmacology in livestock. 15. Surgery in livestock. 16. Mammary gland diseases in livestock. 17. Obstetrics and gynecology in livestock. 18. External infectious diseases in livestock 19. External non-communicable diseases in livestock 20. Internal non-communicable diseases in livestock. 21. Infectious diseases in livestock**.** **III. Independent learning and independent work.** The competence of independent learning serves students' independent self-development, increasing the effectiveness of professional activities. Students perform independent work on their own through a mobile device, in the traditional form under the guidance of a teacher, and in the electronic form under the guidance of a teacher**.** **Recommended topics for independent study:** 1. The state and development prospects of cattle breeding in Uzbekistan. 2. An innovative approach to meeting the demand for livestock products in Uzbekistan. 3. Studying hematological indicators in cattle breeds. 4. Diagnosis of cattle for blackleg. 5. Care of migratory birds in poultry farming. 6. The importance of breeding work in animal husbandry and breeding. 7. Care of animals that produce fur products in livestock farming. 8. Diseases and pests of silkworms. 9. Healthy and effective wintering of bee colonies. 10. Infectious and parasitic diseases of poultry. 11. Determination of the level of immune activity of cattle vaccinated against infectious diseases. 12. Determination of the level of immune activity of poultry vaccinated against infectious diseases. 13. Fish farming using innovative technologies. 14. Problems of developing steppe livestock farming. 15. Diet for rabbits. 16. Horse breeding and camel breeding in Uzbekistan. 17. Main products obtained from goats. 18. Classification of poultry. 19. Increasing labor productivity in livestock farming. 20. Non-communicable and infectious diseases of fish.

Exam form	It is important to assess the theoretical and practical knowledge of students when conducting current control, intermediate control and final control in the subject. **1. Current control** Current control is evaluated with a total of 30 points based on the hours (pairs) allocated for seminar classes during the semester. The results of mastering seminar classes in total are evaluated with 30 points on a 100-point system. **2. Intermediate control**. Intermediate controls are held once during the semester based on the hours of lecture classes. Intermediate control is evaluated with 20 points on a 100-point system. The intermediate control work includes an independent educational assignment. Students who have scored 60% of the points allocated for intermediate and current control are allowed to take the final control. **3. Final control**. The final control is carried out in the form of a written or test. The student's mastery of the final examination is evaluated with 50 points on a 100-point system, and students who score 60% of the points allocated for the final examination are considered to have mastered the subject..
Educational outcomes and exam requirements	Complete mastery of theoretical and methodological concepts on the subject, correct reflection of the results of the analysis, independent thinking about the processes being studied, and completion of assignments in current and intermediate forms of assessment, as well as assignments for final assessment. The student must have passed the current control, intermediate control and independent learning assignments in the relevant subject within the established period. A student who has not passed the current control, intermediate control and independent learning assignments, as well as who has scored points in the range of “0-29.9” for these assignments and types of control, will not be included in the final type of control. Also, a student who has missed 25 or more percent of the classroom hours allocated to the subject without an excuse will be expelled from this subject, will not be admitted to the final exam and will be considered not to have mastered the relevant credits in this subject. A student who has not passed the final exam or has not passed the final exam and has scored in the range of "0-29.9" for this type of exam is considered an academic debtor..
Recommended readings	Main literature 1. I.M.Maqsudov, O.R.Kuchchiyev, U.Khodzhayev Methodical manual for conducting practical classes in the subject “Fundamentals of Animal Husbandry” Tashkent 2013. 2. T.Sh.Akmalkhonov, S.Sh.Isamukhamedov., U.T.Khodzhayev., B.Sh.Yusupov. “Practical classes in animal husbandry” Textbook. Tashkent - 2009. 3. T.Kh.Ikromov. Fundamentals of animal husbandry. Textbook. Tashkent. “Sharq”, 2001. Additional literature 1. Muratov D.M. Practicum in the zoology of vertebrate animals. Textbook for students of biology specialties of pedagogical institutes. T., “0 ‘qituvati”, 1980, 2. Naumov S.P. Zoology of vertebrates. Textbook for students of biology majors of pedagogical institutes. T., “0 ‘qituvati”, 1995 Information sources 1. https://unilibrary.uz/

	2. www.ziyouz.uz 3. Information resource center (jdpu.uz) 4. Information resource center (jdpu.uz) 5. Information resource center (jdpu.uz www.ziyouz.uz